ADVANTAGE ENVIRONMENTAL CONSULTANTS, LLC

Corrective Action Plan – Draft

Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Rosedale, Maryland 21237

MDE OCP Case No. 10-0339-BA
Facility ID No. 3975

AEC Project Number: 05-056RF064

Prepared for:
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1.0 INTRODUCTION

1.1 Project Overview

As required in Maryland Department of the Environment (MDE) Oil Control Program (OCP) correspondence, dated June 15, 2010, Advantage Environmental Consultants, LLC (AEC) has prepared this Corrective Action Plan (CAP) which presents the design of a dual-phase enhanced fluid recovery (EFR) system for the property located at 7950 Pulaski Highway in Rosedale, Maryland. The MDE OCP Case Number is 10-0339-BA. The MDE Facility Identification Number is 3975.

1.2 Site Description and Previous Work History

The Site is situated in a commercial/residential area located northwest of the intersection of Chesaco Avenue and Pulaski Highway, in the Rosedale area of Baltimore County, Maryland. The Site is developed with a convenience store/gasoline fueling station and associated asphalt- and concrete-paved areas and landscaped areas. The Site currently operates four, 10,000-gallon, fiber-glass reinforced plastic, underground storage tanks (USTs) which distribute fuel to four product dispensers. All four USTs contain gasoline and were installed in 1993. A tank top upgrade was performed in 2007 and double walled piping was installed on the UST system.

The surrounding properties include residences to the north, and commercial properties to the south, east and west. A retaining wall separates the Site and the northern adjoining residence (1205 Chesaco Avenue). The surface elevation difference between the two properties ranges from approximately 2 to 10 feet which increases in a westerly direction. A topographic Site Vicinity Map is included as Figure 1 and a Site Features Map is included as Figure 2 in Appendix A.

On December 15, 2009, the MDE OCP opened a case in response to a report of evidence of a petroleum spill at 1205 Chesaco Avenue, which adjoins the Site to the north. The Baltimore County Fire Department (BCFD) initially responded to a 911 call from the 1205 Chesaco Avenue resident and reportedly observed approximately 1.5 inches of gasoline in the basement dewatering sump at this residence. The dewatering sump had discharged petroleum impacted water onto the backyard, which then migrated via overland flow to a neighboring driveway (1207 Chesaco Avenue). At that time, basement dewatering sumps at adjacent residences were checked by the BCFD for the presence of liquid-phase hydrocarbons (LPH) and field screened for vapor-phase hydrocarbons (VPH). No LPH or VPH were detected at the adjacent residences. The 1205 Chesaco residence has been unoccupied since the release was reported.

The UST observation wells (tank pit (TP) wells) and UST over-fill containment sumps at the Site were gauged by the MDE Emergency Response Division (ERD). LPH was observed in both TP wells and one of the containment sumps. The fuel dispensers were shut down on December 15, 2009, until the leak could be located and repaired. A tank test determined that a leak had occurred from an “O” ring at the top of the check valve of the pump on the regular-grade gasoline UST. A subsequent review of inventory records showed a loss of approximately 5,400 gallons of gasoline.

LPH recovery from both TP wells and the residential basement dewatering sump began the day the spill was reported. Six wells (MW-1, MW-2, MW-6, MW-7, MW-8, and MW-9) were installed on the Site surrounding the UST field. Three wells (MW-3, MW-4, and MW-5) were installed off-site in the driveway along the southern border of the 1205 Chesaco Avenue property. The well locations are illustrated on Figure 3 in Appendix A.

The wells were constructed using 4-inch outside diameter (OD) poly vinyl chloride (PVC) screen and riser. All wells were screened to within two feet of the ground surface. The remainder of each well was constructed with solid PVC riser. No split-spoon samples were collected so these wells were not logged. All soil cuttings produced during the recovery well installation were stockpiled on plastic sheeting on the Royal Farms property prior to disposal.

LPH recovery activities began at the Site and the 1205 Chesaco Avenue property on December 15, 2009. The LPH recovery activities were performed with a vacuum truck. Initially, petroleum recovery activities were performed using 2-inch diameter vacuum hoses connected to a five port manifold. AEC modified the extraction method using a “stinger” tube which was lowered into the wells to a depth of approximately two-feet below the static water level. The stinger tube was sealed at the well head with a rubber fernco boot to allow for both fluid and vapor extraction. This modification was implemented on December 24, 2009.

Between December 15 and 18, 2009 LPH recovery activities were conducted continuously (24-hours per day). Between December 19, 2009 and January 7, 2010 these activities were conducted 7 days a week (8-hours per day), on wells with LPH present. The MDE authorized a modification to this schedule via email (January 8, 2010) to 5 days a week (8-hours per day). The MDE authorized a second modification to this schedule via email (February 5, 2010) to 3 days a week (4-hours per day), with LPH hand-bailing events two days a week. The MDE issued a schedule modification on June 11 2010, changing the EFR events from 4-hours per day to 8-hours per day, with monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 manifolded concurrently. On July 19, 2010, another recovery well (MW-14) was added to the EFR events. The MDE authorized another schedule modification on August 23, 2010, to eliminate the LPH hand-bailing events. As of October 1, 2010, an estimated total of 124,974 gallons of fluid have been extracted from the Site. 4,313 gallons of this material is estimated to be LPH.

On December 15, 2009, AEC began daily indoor air screening activities in the basement level of the 1205 Chesaco Avenue residence. Indoor air has been screened with a photoionization detector (PID) for volatile organic compounds (VOCs), and a multi-gas meter for carbon monoxide, hydrogen sulfide, lower explosive limit, and percent oxygen. Indoor air screening results indicated acceptable levels for all screened parameters within the basement level of the 1205 Chesaco Avenue residence.

On December 16, 2009, petroleum-impacted soils were excavated near the 1205 Chesaco Avenue sump effluent discharge area. The area of the excavation was approximately 5 feet wide by 15 feet long by 2 feet deep. Approximately 35.5 tons of soil (including soil cuttings generated during the installation of recovery wells) was transported and disposed of at Soil Safe, Inc. of Brandywine Maryland on December 24, 2009.

Upon completion of the soil excavation activities (December 17, 2009), AEC collected five confirmatory soil samples from the excavation. One sample was collected from each of the four sidewalls and one sample was collected from the center of the excavation floor.

The results of the sump discharge area soil excavation's confirmatory soil sample laboratory analyses identified no benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), naphthalene, total petroleum hydrocarbons (TPH) gasoline range organics (GRO), or TPH diesel range organics (DRO) concentrations in any of the confirmatory soil samples with the exception of sample C-5 (bottom sample). BTEX (1,285 micrograms per kilogram (µg/kg)), naphthalene (80 µg/kg), and TPH GRO (6 milligrams per kilogram (mg/kg)) were detected in soil sample C-5 at concentrations less than their respective MDE Residential Cleanup Standards for Soil (i.e., Generic Numeric Cleanup Standards for Groundwater and Soil – Interim Final Guidance Update No. 2.1 – June, 2008). MTBE and TPH DRO were not detected in confirmatory soil sample C-5 at concentrations exceeding their respective laboratory detection limits.

In order to treat the dewatering sump effluent originating from the residence, the excavation area was lined with plastic sheeting and an approximately 8-inch thick lift of granular activated carbon (GAC) was placed in the excavation. In addition, absorbent booms and silt fence line the northern and western perimeter of the excavation area.

On December 17, 2009, a temporary soil vapor extraction (SVE) system was installed to remove petroleum vapors from the foundation of the 1205 Chesaco Avenue residence. The system consisted of a subsurface horizontal piping run along the southern length of the basement foundation. Piping was also run to the three off-site monitoring wells (MW-3, MW-4, and MW-5) and the basement dewatering sump. On January 7, 2010, two vapor phase GAC absorbers were added to the system between the vacuum blower and the effluent stack. The temporary SVE system has operated continuously since start-up on December 18, 2009, with the exception of March 24, 2010 to April 14, 2010 when the system was down due to a damaged carbon drum.

AEC has received an Air Quality General Permit to Construct for Soil Vapor Extraction and Groundwater Air Stripping, dated February 12, 2010. AEC began a 14-day pilot study in accordance with the referenced permit on February 22, 2010. Results of the 14-day pilot study were provided to the MDE on April 2, 2010.

On December 18, 2009, the dewatering sump and pump were removed from the basement at the 1205 Chesaco Avenue residence. An explosion-proof pump and a larger dewatering sump were installed as the replacement for the original system. A vapor tight sump lid was installed to contain vapors and to allow venting to the temporary SVE system. On January 4, 2010, an exhaust fan was installed within the sump area enclosure. An absorbent pad is maintained in the dewatering sump and is visually inspected on a daily basis. To date, no more than a very light LPH sheen has been intermittently observed within the dewatering sump.

Water samples were collected from the sumps in the basements of the 1207, 1209, and 1209½ residences on December 23, 2009. Samples were collected from the sumps using disposable HDPE bailers. In addition, two samples were collected of the sump water originating from 1205 Chesaco Avenue residence. One of the samples was collected directly from the sump effluent line that drains to the area where contaminated soil was excavated (sample collected January 21, 2010). The second sample was collected after the sump effluent had passed through the GAC bed within the excavation (sample collected February 18, 2010). This sample was collected at the down-slope end of the GAC bed via a temporary slotted plastic sump. The dewatering sump pump was cycled a number of times to create flow within the GAC bed and once the temporary slotted plastic sump was adequately filled with water the sample was collected.

The results of the sump water sample laboratory analysis identified no BTEX, MTBE, naphthalene, TPH GRO, or TPH DRO concentrations in any of the sump water samples with the exception of sample Sump-1205 and the treated sump water sample Sump-1205. Benzene (85 micrograms per liter (µg/L)), toluene (1,500 µg/L), ethylbenzene (300 µg/L), total xylenes (2,800 µg/L), naphthalene (600 µg/L), TPH GRO (15 milligrams per liter (mg/L)), and TPH DRO (7.1 mg/L) were detected in sump water sample Sump-1205. All of the aforementioned constituents, with the exception of MTBE, ethylbenzene and total xylenes were detected at concentrations greater than their respective MDE Cleanup Standards for Type I and II Aquifers; however, no potable wells are located within the vicinity of the Site. MTBE was not detected in sample Sump-1205 at a concentration exceeding its laboratory detection limit.

Toluene (15 µg/L), total xylenes (110 µg/L), naphthalene (600 µg/L), 1,3,5-trimethylbenzene (16 µg/L), 1,2,4-trimethylbenzene (20 µg/L), and TPH GRO (0.5 mg/L) were detected in treated sump water sample Sump-1205. All of the aforementioned constituents, with the exception of TPH GRO were detected at concentrations less than their respective MDE Cleanup Standards for Type I and II Aquifers; however, no potable wells are located within the vicinity of the Site. Benzene, ethylbenzene, MTBE, and TPH DRO were not detected in the treated sample Sump-1205 at a concentration exceeding their respective laboratory detection limits.

Between January 22 and 28, 2009, AEC performed a subsurface investigation, including the collection of soil samples from 24 boring locations, in order to delineate the extent of hydrocarbon impact to soil. Temporary piezometers were installed in all of the borings in order to delineate the extent of LPH and dissolved-phase hydrocarbon (DPH) impact.

Nine borings were advanced on the Site (B-1 through B-9); twelve borings were advanced on the 1205 Chesaco Avenue property (B-10 through B-19, B-23 and B-24); and, three borings were advanced on the 1207 Chesaco Avenue property (B-20 through B-22). The borings were advanced to depths ranging from 12 feet to 25 feet bgs. A map illustrating the soil boring/temporary piezometer locations is included as Figure 3 in Appendix A.

Static groundwater was measured at depths within the temporary piezometers ranging from 0.15 feet below ground surface (bgs) in boring B-21 to 17.06 feet bgs in boring B-9. The temporary piezometers were gauged a number of times following installation. The maximum measurable LPH thicknesses were detected in the following on-site temporary piezometers: B-2 at a thickness of 2.43 feet on January 30, 2010; B-6 at a thickness of 0.13 feet on January 29, 2010; and, B-9 at a thickness of 5.71 feet on January 28, 2010. The maximum measurable LPH thickness encountered in an off-site piezometer was in B-11 at a thickness of 4.38 feet on March 24, 2010 on the 1205 Chesaco Avenue property. Additionally, a LPH sheen was observed in B-10 on March 24, 2010. All of the other temporary piezometers did not contain LPH during any of the gauging events. The temporary piezometers were abandoned on April 14, 2010 by a Maryland-licensed well driller.

Soil samples were collected from each boring at the time of drilling activities, and groundwater samples were collected from the temporary piezometers using a disposable high-density polyethylene (HDPE) bailer between February 1 and 5, 2010. At least 7 days elapsed between piezometers installation and sample collection. Temporary piezometers which contained LPH were not sampled.

The results of the soil sample laboratory analyses identified varying concentrations of BTEX, naphthalene, TPH GRO, and TPH DRO in soil samples collected from the Site (borings B-1 through B-9). None of the aforementioned constituents were detected in soil sample B-1-12' at concentrations exceeding their respective laboratory detection limits. None of the aforementioned constituents were detected at concentrations exceeding their respective MDE Non-Residential Cleanup Standards for Soil.

The results of the soil sample laboratory analyses identified varying concentrations of BTEX, naphthalene, TPH GRO, and TPH DRO in soil samples collected from the off-site properties (borings B-10 through B-24). None of the aforementioned constituents were detected in soil samples B-16-4', B-17-7', B-18-7', B-20-2', B-21-3', and B-24-9' at concentrations exceeding their respective laboratory detection limits. None of the detected concentrations of the aforementioned constituents were greater than their respective MDE Residential Cleanup Standards for Soil.

The results of the groundwater sample laboratory analyses identified varying concentrations of BTEX, naphthalene, TPH GRO, and TPH DRO in groundwater samples collected from the Site (B-1, B-3, B-4, B-5, B-7, and B-8). None of the aforementioned constituents were detected in groundwater sample B-1 at concentrations exceeding their respective laboratory detection limits. It should be noted that sufficient water for the analysis of TPH DRO in groundwater sample B-5 was not available. Some of the detected concentrations of the aforementioned constituents were greater than their respective MDE Cleanup Standards for Type I and Type II Aquifers; however, no potable wells are present in the vicinity of the Site.

The results of the groundwater sample laboratory analyses identified varying concentrations of BTEX, naphthalene, TPH GRO, and TPH DRO in groundwater samples collected from the off-site properties (B-10 and B-12 through B-24). None of the aforementioned constituents were detected in groundwater sample B-20 at concentrations exceeding their respective laboratory detection limits. Some of the detected concentrations of the aforementioned constituents were greater than their respective MDE Cleanup Standards for Type I and Type II Aquifers; however, no potable wells are present in the vicinity of the Site.

This work is discussed in greater detail in a Site Characterization Report, prepared by AEC and dated February 23, 2010.

1.3 Site Topography

According to the United States Geological Survey (USGS) 7.5 Minute Series Baltimore East, MD Topographic Quadrangle (produced in 1974), the Site elevation is approximately 50 feet above mean sea level (msl). Surface drainage at the Site is generally to the northwest towards an unnamed tributary of Back River located approximately 800 feet northwest of the Site at its closest point. Back River drains into the Chesapeake Bay. No surface water bodies are present on the Site. The site area topography is illustrated on Figure 1 in Appendix A.

2.0 SUMMARY OF SUPPLEMENTAL SUBSURFACE INVESTIGATION

2.1 Introduction

A Supplemental Subsurface Investigation was performed in order to satisfy certain requirements discussed in a meeting with the MDE on April 20, 2010, and to supplement AEC's initial Subsurface Investigation Work Plan, dated December 28, 2009. The investigative methods and procedures for this supplemental subsurface investigation were performed in accordance with AEC's Supplemental Subsurface Investigation Work Plan, dated May 4, 2010, and the MDE's Work Plan Approval letter dated June 15, 2010. In addition, indoor air quality (IAQ) was assessed in the 1207 Chesaco Avenue residence, in accordance with AEC's 1207 Chesaco Avenue Indoor Air Investigation Work Plan, dated July 1, 2010.

The purpose of the subsurface investigation was to further delineate LPH and DPH impact on the Site and down-gradient properties. Specifically, the eastern portion of the Site and the 1205 Chesaco Avenue property was investigated for LPH impact along Chesaco Avenue (B-30 through B-32); the southern portion of the Site (south and west of the dispenser islands) was investigated for DPH impact (B-25 through B-28); and, the western end of the 1207 Chesaco Avenue property where the 1205 sump discharge flows into a grass area was investigated for DPH impact (B-29). These areas were investigated on July 2 and 12, 2010 using direct-push (DP) technology, with the installation of temporary piezometers.

Permanent groundwater monitoring wells were installed at the 1205 Chesaco Avenue property (MW-10) and 1207 Chesaco Avenue property (MW-11 and MW-12) on July 15, 2010, and at the Site (MW-13 and MW-14) on July 16, 2010. Additionally, water samples were collected from the sumps at the four residences located north of the Site (1205, 1207, 1209, and 1209½) between June 30 and July 15, 2010, and IAQ was assessed at 1207 Chesaco Avenue on August 20 and 21, 2010.

2.2 Description of Investigative Methods

2.2.1 Temporary Piezometer Installation Procedures

AEC contracted Vironex, of Bowie, MD, to advance eight borings, with associated temporary piezometer installation, using a track-mounted hydraulic DP drilling rig. On July 2, 2010, DP borings B-25 through B-28 were advanced on the Site to a depth of 25 feet bgs, and DP boring B-29 was advanced on the southwestern portion of 1207 Chesaco Avenue property to a depth of 20 feet bgs. On July 12, 2010, DP borings B-30 and B-31 were advanced to a depth of 25 feet bgs, and DP boring B-32 to a depth of 15 feet bgs in the Chesaco Avenue right-of-way. At the time of installation and development of B-30, adequate groundwater was not flowing into the piezometer. As such, B-32 was installed approximately three-feet southeast of B-30, in order to intercept the groundwater interface as a contingency if groundwater did not flow into B-30. However, upon gauging approximately 24-hours after installation, a groundwater level consistent with surrounding monitoring wells and piezometers was observed in B-30. As such, a groundwater sample was not collected from B-32. DP boring/temporary piezometer locations are depicted on Figure 3 of Attachment A.

The temporary piezometers were constructed of 1-inch diameter PVC well screen and casing. The screened section of each temporary piezometer was installed to at least 2-feet above the static water level. A sand filter pack was placed to 1-foot above the top of the screen. A 1-foot thick bentonite seal was placed above the sand by dropping bentonite pellets into the annular space and hydrating in place. Each temporary piezometer was secured with a PVC cap.

Prior to arriving at the Site and between each soil boring, all hand augers, core barrels, cutting shoes, probe rods, tips, sleeves, pushrods, samplers, tools, and other down hole equipment were washed using a water rinse. Fuel, lubricants, and other similar substances were handled in a manner consistent with accepted safety procedures and standard operating practices. Public utility clearances were obtained prior to the initiation of the sampling program. This entailed contacting Miss Utility at least 72-hours prior to drilling activities. All drilling work was performed by a State of Maryland-licensed well driller and appropriate well permits were obtained from Baltimore County.

An AEC Field Geologist logged the geologic conditions of the borings and field screened soil cores for VOCs using a photoionization detector (PID). No petroleum odors or PID response was observed at B-25, B-26, and B-29. Slight petroleum odors and low PID response (approximately 30 parts per million (ppm)) was noted between seven and 13-feet bgs in B-27. Heavy petroleum odors and a PID reading of 518 ppm were observed between 12 and 13 feet bgs at B-28. Elevated PID readings were noted observed throughout B-30 and B-31, with the highest reading at approximately 15-feet bgs (398 ppm) in B-30, and at approximately five-feet bgs (5,000 ppm) in B-31. However, no apparent petroleum odors were observed in B-30 and B-31. As these borings were completed during an 8-hour EFR event, in the vicinity of the vac-truck exhaust stack, the elevated PID readings may be due to residual VOCs in the ambient air from the exhaust. No soil was recovered from boring B-32.

Soil samples were collected from each boring, with the exception of DP boring B-32. All soil samples were collected from above the water table. The criteria for selecting the soil samples were based on elevated PID readings or evidence of impact in soil. Boring logs are presented in Appendix B.

The temporary piezometers were developed within one week of installation. At least five well volumes of water were removed from each temporary piezometer as part of the development process. If a temporary piezometer was bailed dry, the piezometer was emptied of water five times over a period not exceeding one hour. All development water was containerized and disposed of using a vac-truck. Prior to the collection of groundwater samples, AEC purged at least three well volumes from each temporary piezometer. Purge water was handled in the same manner as the development water, as discussed above. Samples were collected using dedicated, disposable high-density polyethylene (HDPE) disposable bailers. New sections of nylon rope were used for the pre-cleaned disposal bailers at each sample location. In addition, a clean pair of new, disposable nitrile gloves was worn each time a soil and/or groundwater sample was collected.

The analytical laboratory provided pre-preserved sample containers, where appropriate. Sample labels were firmly attached to the container side with the following information legibly and indelibly written on the labels: facility name; sample identification; sampling date and time; preservatives added; and sample collector's initials. After the samples were sealed and labeled, they were packaged to await transportation to Anabell Laboratories, Inc., of Gaithersburg, MD. The following packaging procedures were followed: samples were packaged to prevent leakage or vaporization from the containers; samples were cushioned to avoid breakage; and, ice was added to the cooler to keep the samples cool.

The soil and groundwater samples were analyzed for TPH DRO and GRO using Environmental Protection Agency (EPA) Analytical Method 8015B, and VOCs, including fuel oxygenates, using EPA Analytical Method 8260.

Temporary piezometers B-25 through B-29 were developed on July 7, 2010, and sampled on July 9, 2010. Temporary piezometers B-30 through B-32 were developed on July 12, 2010, and samples were obtained from B-30 and B-31 on July 14, 2010. A groundwater sample was not obtained from B-32. The temporary piezometers were properly abandoned by a State of Maryland-licensed well driller on August 13, 2010.

Temporary piezometers were gauged periodically with an interface probe. No evidence of LPH was observed in any of the piezometers during these periodic gauging events. Piezometer gauging data is provided in Appendix C as Table 1.

2.2.2 Monitoring Well Installation and Development Procedures

On July 15, 2010, monitoring well borings were advanced using hollow stem auger (HSA) methods on the central portion of the 1205 Chesaco Avenue property (MW-10) and along the southeastern portion of the 1207 Chesaco Avenue property (MW-11 and MW-12). On July 16, 2010 monitoring well borings were advanced using HSA methods on the southeastern portion of the Site (MW-13), and along the central portion of the northern border of the Site (MW-14). Monitoring well locations are depicted on Figure 3 of Attachment A. Soil samples were obtained using a split-spoon sampler and Standard Penetration Testing (SPT) procedures. The sampling interval for the borings was on 5-feet centers from the surface to the termination depth of the boring.

Each split-spoon sample was visually inspected, lithologically logged, and scanned with a PID. No petroleum odors or PID response was observed in soils obtained from HSA borings MW-10, MW-11, MW-12, and MW-13. Strong petroleum odors and elevated PID readings were observed in soils obtained from HSA boring MW-14, with the heaviest odors and highest PID readings occurring at approximately six-feet bgs (9,157 ppm) and 16-feet bgs (7,225 ppm). No soils samples from the HSA borings were submitted for laboratory analysis.

The on-Site wells were constructed using 4-inch diameter PVC slotted screen and riser, and the off-Site wells were constructed using 2-inch diameter PVC slotted screen and riser. Based on historic groundwater levels at the Site and vicinity, the screen length for the on-Site monitoring wells were approximately 27-feet and the riser length was approximately three feet; and the screen length for the off-Site monitoring wells was approximately 17-feet and the riser length was approximately 3-feet. A sand filter pack was placed to 1-foot above the top of the screen, and a 1-foot thick bentonite seal was placed above the sand by dropping bentonite pellets into the annular space and hydrating in place. The remainder of the annular space above the bentonite seal was grouted to the surface and a flush-mounted, bolt-down, steel manhole set in concrete was installed at the surface. The PVC well heads are secured with a locking cap. Boring logs and well construction diagrams are included in Appendix B.

On July 19, 2010, the monitoring wells were developed using surge block and aggressive bailing techniques. At least five well volumes of water were removed from each well as part of the development process. If a monitoring was bailed dry, the well was emptied of water five times over a period not to exceed two hours. Development water was handled in the same manner as discussed in Section 2.2.1.

Prior to arriving at the Site and between each soil boring, all hand augers, core barrels, cutting shoes, probe rods, tips, sleeves, pushrods, samplers, tools, and other down hole equipment were cleaned using a water rinse. Fuel, lubricants, and other similar substances were handled in a manner consistent with accepted safety procedures and standard operating practices.

2.2.3 Well Head Elevation Survey and Groundwater Level Gauging Procedures

The relative elevations of the top of the well casings for the new monitoring wells were determined to within 0.01-feet using a rod and transit. An existing monitoring well was used for the elevation reference point. Groundwater levels within each monitoring well were measured using an interface probe accurate to 0.01-feet. The interface probe was cleaned (Liquinox and water rinse) prior to use in each well. No LPH was observed in the newly installed monitoring wells, with the exception of MW-14. Monitoring well gauging data from August and September 2010 is provided in Appendix C as Table 2.

2.2.4 Monitoring Well Groundwater Sampling and Analysis Procedures

Groundwater samples were collected from the entire monitoring well network, with the exception of wells exhibiting LPH. As such, groundwater samples were not collected from MW-2, MW-5, and MW-14. Prior to the collection of groundwater samples, AEC purged at least three well volumes from each monitoring well. Monitoring well purge water was handled in the same manner as the temporary piezometer purge water, as discussed above. After purging, the wells were allowed to recharge for a period of at least one-hour prior to sampling. The samples were collected using a dedicated, disposable, HDPE bailer. The analytical laboratory provided pre-preserved sample containers, where appropriate. The sample collection, labeling, packaging, and transportation procedure/methodology was the same as discussed above.

The groundwater samples were analyzed for TPH DRO and GRO using EPA Analytical Method 8015B, and VOCs, including fuel oxygenates, via EPA Analytical Method 8260.

2.2.5 Investigation Derived Waste Management Procedures

Investigation-derived soil was containerized in 55-gallon drums, labeled (date of generation, site name/address, source, and contents), and, staged on the Site. The drums were removed from the Site by Soil Safe on September 10, 2010, and transported and disposed according to applicable United States Department of Transportation (USDOT), EPA, and MDE regulations. Soil disposal manifests are provided as Appendix D.

2.2.6 Sump Groundwater Sampling and Analysis Procedures

On June 30, 2010, groundwater samples were collected from the sumps at the 1205, 1207, and 1209½ Chesaco Avenue properties. The 1209 Chesaco Avenue sump was observed to be dry at the time of the June 30, 2010 sampling event. A groundwater sample was obtained from 1209 Chesaco Avenue sump on July 15, 2010. Prior to sampling, each sump was emptied of standing water and allowed to fill from the underlying backfill. The samples were collected using a dedicated, disposable, HDPE bailer. The analytical laboratory provided pre-preserved sample containers, where appropriate. The sample collection, labeling, packaging, and transportation procedure/methodology was the same discussed above.

The sump groundwater samples were analyzed for TPH DRO and GRO using EPA Analytical Method 8015B, and VOCs, including fuel oxygenates, via EPA Analytical Method 8260.

2.2.7 Indoor Air Quality Sampling and Analysis Procedures

On August 20 and 21, 2010, three IAQ samples were obtained from the 1207 Chesaco Avenue residence. The samples were collected from the basement (IAQ-01), the first level (IAQ-02), and the second level (IAQ-03) of the residence. In addition, background ambient air samples were collected from the eastern (AA-02) and western (AA-01) sides of the exterior of the residence.

The first floor and basement was vacant during the 24-hour testing period. Due to health issues, the second floor tenant was unable to vacate the unit during the 24-hour testing period. As far as practical within the constraints of the tenant's activities, the residences were closed for at least 12- to 24-hours before the sampling period began and the use of pressure difference causing equipment (i.e., exhaust fans, and Heating Ventilation Air Conditioning (HVAC) systems) were suspended during this time and during the sampling. However, the air conditioner was observed to be on at the time of arrival to sample the second floor.

Prior to sampling activities the occupants of the building were interviewed using the Occupied Dwelling Questionnaire for Indoor Air Assessment Survey. Completed copies of this survey are provided as Attachment E. As part of this process an inventory of materials containing VOCs was prepared. AEC temporarily relocated these materials off-site during the 24-hour test period. In order to minimize the potential for sample interference from either gasoline UST refueling and/or EFR vacuum truck operations the test period was scheduled during a time when neither of these activities was scheduled to occur.

The samples were collected using six liter SUMMA canisters with an attached 24-hour mass flow controller. The flow controller contains a restrictor that regulates the airflow over the 24-hour period into the negatively pressured canister. The SUMMA canisters were positioned two- to five-feet above floor level in either the kitchen or bathroom of the apartment units and in a central location of the basement.

The analytical laboratory provided pre-cleaned, negative pressurized SUMMA canisters and dedicated 24-hour sample regulators. Sample labels were attached to the container, and the following information was legibly and indelibly written on the labels: Facility name, Sample identification, Sampling date and time, and Sample collector's initials. After the samples were collected and labeled, they were packaged for transport to Maryland Spectral Services, of Baltimore, MD, for analysis. The indoor air samples were analyzed for VOCs using EPA Analytical Method TO-15.

2.3 Supplemental Investigations Activities Results

2.3.1 Sump Water Sample Analytical Data

The results of the sump water sample laboratory analysis identified no BTEX, MTBE, naphthalene, TPH GRO, or TPH DRO concentrations in the sump water samples collected, with the exception of 1205-Sump and 1209-Sump. Benzene (34 µg/L), toluene (95 µg/L), ethylebenzene (57 µg/L), total xylenes (960 µg/L), naphthalene (270 µg/L), and TPH GRO (1.1 µg/L) were detected in the sump water sample 1205-Sump. All of the aforementioned constituents, with the exception of benzene and TPH GRO were detected at concentrations below their respective MDE Cleanup Standards for Type I and II Aquifers; however, no potable wells are located within the vicinity of the Site. MTBE was not detected in sample 1205-Sump at a concentration exceeding its laboratory detection limit. MTBE (32 µg/L) was detected in the sump water sample 1209-Sump at a concentration above its MDE Cleanup Standard for Type I and II Aquifers; however, no potable wells are located within the vicinity of the Site. BTEX, naphthalene, TPH GRO and TPH DRO were not detected in sample 1209-Sump at a concentrations exceeding their respective laboratory detection limit.

The results of the sump water sample laboratory analyses are illustrated on the Sump Water Quality Map included as Figure 4 in Appendix A. The results of the sump water sample laboratory analyses are summarized in Table 3 included in Appendix C. Additional VOCs were detected in sump sample Sump-1205, which can be seen in copies of the completed laboratory analytical reports and chain-of-custody forms, provided in Appendix F.

2.3.2 Soil Sample Analytical Data

Soil samples were collected from all of the direct push borings, with the exception of B-32, and soil samples were not collected from the HSA borings. The results of the soil sample laboratory analyses identified no VOCs, TPH GRO, or TPH DRO in the soil samples collected (B-25-8’, B-26-8’, B-27-7’, B-28-5’, B-29-5’, B-30-15’, and B-31-5’).

The results of the soil sample laboratory analyses, in addition to previously collected analytical data, are illustrated on the Soil Quality Maps included as Figure 5 (BTEX/MTBE) and Figure 6 (TPH) in Appendix A. The results of the soil sample laboratory analyses are summarized in Table 4 included in Appendix C. Copies of the completed laboratory analytical reports and chain-of-custody form are provided in Appendix F.

2.3.3 Groundwater Sample Analytical Data

The results of the groundwater sample laboratory analyses identified varying concentrations of BTEX, MTBE, naphthalene, TPH GRO, and TPH DRO in groundwater samples collected from the temporary piezometers at the Site (B-25, B-26, B-27, and B-28). Total BTEX concentrations ranged from below laboratory detection limit (BDL) in sample B-25 to 380 µg/L in sample B-28. MTBE was not detected at concentrations above its laboratory detection limit in any of the groundwater samples collected from the on-Site temporary piezometers. Naphthalene concentrations ranged from BDL in sample B-25 to 140 µg/L in sample B-28. TPH GRO concentrations ranged from 1.1 mg/L in samples B-25 and B-26 to 1.8 mg/L in sample B-28. TPH DRO concentrations ranged from BDL in samples B-25 and B-26 to 0.9 mg/L in sample B-27.

The results of the groundwater sample laboratory analyses identified MTBE (9.4 µg/L), TPH GRO (1.1 mg/L), and naphthalene (5 µg/L) in the groundwater sample collected from the western portion of the 1207 Chesaco Avenue property (B-29), where the 1205 Chesaco Avenue sump discharge water collects. With the exception of TPH GRO, these concentrations are below their respective MDE Cleanup Standards for Type I and II Aquifers; however, no potable wells are located within the vicinity of the Site. BTEX and TPH DRO were not detected at concentrations above their respective laboratory detection limits from B-29.

The results of the groundwater sample laboratory analyses did not identify BTEX, TPH GRO, TPH DRO, or naphthalene above their respective laboratory detection limits in groundwater collected from the temporary piezometers located in the Chesaco Avenue right-of-way (B-30 and B-31). MTBE was detected in sample B-31 at a concentration of 48 µg/L, and was not identified at a concentration above its laboratory detection limit in sample B-30. The concentration of MTBE identified in sample B-31 is above its MDE

Cleanup Standards for Type I and II Aquifers; however, no potable wells are located within the vicinity of the Site.

The results of the groundwater sample laboratory analyses identified varying concentrations of BTEX, MTBE, naphthalene, TPH GRO, and TPH DRO in groundwater samples collected from the monitoring wells at the Site (MW-1, MW-6, MW-7, MW-8, MW-9, and MW-13). Total BTEX concentrations ranged from 15 µg/L in sample MW-13 to 49,000 µg/L in sample MW-1. MTBE concentrations ranged from BDL in samples MW-1, MW-6, MW-7, and MW-13 to 240 µg/L in sample MW-8. Naphthalene concentrations ranged from 23 µg/L in sample MW-13 to 3,900 µg/L in sample MW-1. TPH GRO concentrations ranged from BDL in samples MW-9 and MW-13 to 86 mg/L in sample MW-1. TPH DRO concentrations ranged from BDL in samples MW-9 and MW-13 to 12 mg/L in sample MW-7. Some of the detected concentrations of the aforementioned constituents were greater than their respective MDE Cleanup Standards for Type I and Type II Aquifers; however, no potable wells are present in the vicinity of the Site.

The results of the groundwater sample laboratory analyses identified varying concentrations of BTEX, MTBE, naphthalene, TPH GRO, and TPH DRO in groundwater samples collected from the monitoring wells located at off-Site properties (MW-3, MW-4, MW-10, MW-11, and MW-12). Total BTEX concentrations ranged from BDL in sample MW-12 to 47,100 µg/L in sample MW-4. MTBE concentrations ranged from BDL in sample MW-12 to 310 µg/L in samples MW-11. Naphthalene concentrations ranged from BDL in samples MW-10 and MW-12 to 8,600 µg/L in sample MW-4. TPH GRO concentrations ranged from BDL in samples MW-10, MW-11 and MW-12 to 30 mg/L in sample MW-4. TPH DRO concentrations ranged from BDL in samples MW-10, MW-11 and MW-12 to 8 mg/L in sample MW-4. Some of the detected concentrations of the aforementioned constituents were greater than their respective MDE Cleanup Standards for Type I and Type II Aquifers; however, no potable wells are present in the vicinity of the Site.

The results of the groundwater sample laboratory analyses are illustrated on the Groundwater Quality Map included as Figure 7 in Appendix A. The results of the piezometer and monitoring well groundwater sample laboratory analyses are summarized in Table 5 and 6, respectively, included in Appendix C. Copies of the completed laboratory analytical reports and chain-of-custody forms are provided in Appendix F.

2.3.4 Indoor Air Quality Sample Data

Low level petroleum constituent vapors were detected in the three IAQ samples collected from the 1207 Chesaco Avenue Residence (IAQ-1, IAQ-2, and IAQ-3). However, the detected analytes present in the IAQ samples were generally only slightly higher than the concentrations observed in the two ambient air samples collected (AA-01 and AA-02). The IAQ sample results were submitted to the MDE upon receipt, and mitigation measures were not deemed necessary by the MDE.

The results of the IAQ sample laboratory analyses are summarized in Table 7, included in Appendix C. Copies of the completed laboratory analytical reports and chain-of-custody forms are provided in Appendix F.

3.0 CONCEPTUAL MODEL

3.1 Geology and Hydrology

Based on a review of the boring logs for all subsurface borings completed on the Site, the soils generally consist of inter-bedded sand, silt, clay and gravel deposits. Specifically, lithologic variations of silty sand and sandy silt are found to depths between 1 and 12 feet bgs. In some of the borings a gravel component is found in the assorted variations between 2 and 12 feet bgs. A clay component is evident in most of the borings below 12 feet bgs. The soil was observed to be moist in some of the borings at depths as shallow as 5 feet bgs. Saturated soil was observed in some of the borings below 5.5 feet bgs.

A representative groundwater level monitoring event which included all of the monitoring wells associated with the site was conducted on September 13, 2010. Depth to groundwater ranged from 3.36 feet bgs in MW-10 to 14.01 feet bgs in MW-7. A groundwater gradient map was developed using the September 13, 2010 data and is provided as Figure 8 in Appendix A. Groundwater flow is shown to be generally towards the north. There appears to be a groundwater divided on the Site which exhibits both northeast and northwest flow components. The hydraulic gradient between MW-13 and MW-11 was 0.026 feet per foot during this gauging event. Figure 3 in Appendix A illustrates the locations of all of the monitoring wells installed as part of the various subsurface investigations.

Groundwater recovery/slug tests were conducted on two monitoring wells, MW-2 and MW-5, on February 2 and 3 2010, respectively. Prior to conducting the recovery/slug tests, depth to water was measured in each well (static water level). A vacuum-truck was then used to rapidly lower the water-level in each well. Water-level recovery measurements were recorded using a water level gauge accurate to 0.01 feet for a period of 52 minutes in MW-2 and 28 minutes in MW-5. Both tests realized at least 80 percent recovery to static water levels.

The groundwater level recovery data gathered during these tests was used to estimate hydraulic conductivity (*K*), transmissivity (*T*) and average linear velocity (*V*) parameters of the surrounding formation. The following describes the meaning and derivation of these parameters.

The data obtained from the testing was analyzed using the aquifer testing program AQTESOLV for Windows, v4.50. Bouwer and Rice (1976) for unconfined aquifers with steady-state flow, and Hvorslev (1951) for a fully or partially penetrating well in a homogeneous, anisotropic confined aquifer were the selected analysis methods.

The AQTESOLV output showed that the hydraulic conductivity on the Site ranges from 0.0011 feet/minute (ft/min) in MW-2 to 0.00067 ft/min in MW-5. The average Site-wide hydraulic conductivity for both analysis methods is 0.0009 feet/min (1.27 ft/day). This average hydraulic conductivity value is consistent with the encountered lithology (silty clay and silty sand) as compared to ranges of hydraulic conductivity values in the literature (Freeze and Cherry, 1979).

Based on the results of the recovery/slug test analysis and the observed on-site lithology, the average linear velocity is estimated to be 0.000072 feet/min (0.104 ft/day). The average linear velocity was estimated using the average Site-wide hydraulic conductivity (0.0009 feet/min); a groundwater gradient of 0.012 feet per foot; and, an effective porosity of 15 percent. The effective porosity value (sand-silt mixture) was estimated from the literature (Freeze and Cherry, 1979).

In order to determine the rate of LPH recovery in select monitoring wells at the Site, AEC conducted LPH bail-down tests on MW-2, MW-5 and MW-7 on February 12, 2010. Based on the data collected, it was projected that 80 percent LPH recovery would occur at 53 hours in MW-2, 2.9 hours in MW-5 and 13.2 hours in MW-7. In order to normalize the LPH recovery rate with respect to LPH thickness in each well, the volume of static LPH removed was calculated. This value was divided by the 80 percent recovery estimate to determine the recovery rate in gallons per hour. The specific recovery rates for each well were 0.04 gallon/hour (gal/hr) in MW-2, 0.03 gal/hr in MW-5, and 0.01 gal/hr in MW-7. These values are in general agreement with respect to static LPH thickness verses time of recovery.

3.2 Liquid-Phase Hydrocarbons

During the representative gauging event conducted on September 13, 2010, LPH was detected in the following wells: MW-2 (0.01 feet), MW-4 (0.08 feet), MW-7 (<0.01 feet), and MW-14 (0.43 feet). The other wells did not indicate measurable LPH during this gauging event.

Historically, LPH has also been detected in the following wells: TP-1 at thicknesses ranging from 0.00 to 0.51 feet, TP-2 at thicknesses ranging from 0.00 to 0.46 feet, MW-1 at thicknesses ranging from 0.00 to 0.82 feet, MW-2 at thicknesses ranging from 0.00 to 7.17 feet, MW-3 at thicknesses ranging from 0.00 feet to 0.04 feet, MW-4 at thicknesses ranging from 0.00 to 2.61 feet, MW-5 at thicknesses ranging from 0.00 to 6.58 feet, MW-6 at thicknesses ranging from 0.00 to 0.77 feet, MW-7 at thicknesses ranging from 0.00 feet to 0.54 feet, and MW-14 at thicknesses ranging from 0.04 to 0.57 feet.

In addition, LPH had also been detected in the following piezometers, installed during AEC's February 2010 Subsurface Investigation: B-2 (2.43 feet), B-6 (0.13 feet), B-9 (5.71 feet), B-10 (<0.01 feet) and B-11 (4.38 feet). LPH was not detected in the temporary piezometers installed as part of AEC's recent Supplemental Subsurface Investigation (B-25 through B-32).

Historical gauging data, dating back to December 2009, has indicated a significantly diminishing trend of LPH thickness in the monitoring well network associated with the Site. Based on this data it is suspected that LPH impact consists of an approximately 6,000-square foot, oval-shaped plume which extends in a south-north fashion from the southern perimeter of the tank pit and north of the dispenser islands to beneath the southern portion of the 1205 Chesaco Avenue residential structure; and in an west-east fashion from the asphalt-paved area east of the Site building to the easternmost Site border, along Chesaco Avenue.

Figure 9 (Appendix A), LPH Distribution Map, illustrates the LPH thicknesses on the September 13, 2010 gauging event, the maximum LPH thicknesses during all of the gauging events, and the suspected limits of LPH.

3.3 Dissolved-Phase Hydrocarbons

AEC's July 2010 sampling of the monitoring well network indicates BTEX concentrations ranging from BDL (MW-12) to 49,000 µg/L (MW-1); MTBE concentrations ranging from BDL (MW-4, MW-6, MW-7, MW-12, and MW-13) to 310 µg/L (MW-3 and MW-10); TPH GRO concentrations ranging from BDL (MW-9, MW-10, MW-11, MW-12 and MW-13) to 86 mg/L (MW-1); and TPH DRO concentrations ranging from BDL (MW-9, MW-10, MW-11, MW-12, and MW-13) to 12 mg/L (MW-7). This data is illustrated on the Groundwater Quality Map included as Figure 8 in Appendix A.

Based on historical groundwater sampling performed at the Site, dating back to January 2009, DPH impact is estimated to consist of a circular-shaped, approximately 15,000-square foot plume, encompassing the eastern and central portions of the Site and 1205 Chesaco Avenue property, ending on the western portion of the aforementioned properties. The northernmost extent of the DPH plume is suspected to end on the southern portion of the 1207 Chesaco Avenue property and extend to the southern border of the Site, along Pulaski Highway.

3.3 Adsorbed-Phase Hydrocarbons

AEC's January and July 2010 soil sampling indicates BTEX concentrations ranging from BDL (B-1-12', B-16-4', B-17-7', B-18-7', B-20-2', B-21-3', B-24-9', B-25-8', B-26-8', B-27-7', B-28-5', B-29-5', B-30-15', B-31-5') to 35,800 µg/kg (B-6-11'). MTBE was not detected in any of the soil samples submitted for laboratory analysis at a concentration exceeding its laboratory detection limit.

TPH GRO was identified in direct push boring soil samples B-2-11" (18 mg/kg), B-5-12' (4.2 mg/kg), B-6-11' (140 mg/kg), B-7-5' (0.6 mg/kg), B-8-13' (5 mg/kg), B-9-8' (0.9 mg/kg), B-10-9' (1.4 mg/kg), B-11-15' (2.5 mg/kg), B-12-3' (1 mg/kg), B-13-8' (16 mg/kg), B-14-5' (0.5 mg/kg), and B-23-5' (0.7 mg/kg). TPH GRO was not detected in any of the other soil samples submitted for laboratory analysis at a concentration exceeding its laboratory detection limit. TPH DRO was identified in DP boring soil samples B-5-12' (33 mg/kg), B-8-13' (20 mg/kg), B-10-9' (11 mg/kg), B-11-15' (17 mg/kg), B-13-8' (110 mg/kg), and B-23-5' (12 mg/kg). TPH DRO was not detected in any of the other soil samples submitted for laboratory analysis at a concentration exceeding its laboratory detection limit.

The laboratory analytical data discussed above is illustrated on the Soil Quality Maps included as Figure 5 (BTEX/MTBE) and Figure 6 (TPH) in Appendix A.

Based on the laboratory analytical data referenced above, absorbed-phase hydrocarbon (APH) impact consists of a an approximately 11,000-square foot, roughly circular shape, which extends from the dispenser islands to beneath the central portion of the 1205 Chesaco Avenue residential structure; and from the eastern side of the Site building to the eastern border of the Site, along Chesaco Avenue. The lateral extent of the APH impact is predominantly between 5- and 13-feet bgs.

3.4 Vapor-Phase Hydrocarbons

Vapor inhalation risk to the 1207 Chesaco Avenue residence was assessed in August 2010. Low level petroleum constituent vapors (benzene, toluene, m,p-xylenes, etc.) were detected in the three IAQ samples collected from the 1207 Chesaco Avenue residence (IAQ-1, IAQ-2, and IAQ-3). However, the detected analytes present in the IAQ samples were generally only slightly higher than the concentrations observed in the two ambient air samples collected (AA-01 and AA-02). As such, vapor-phase hydrocarbons (VPH) are not a concern in the 1207 Chesaco Avenue residential structure at this time.

VPH impact to the Site building and 1205 Chesaco Avenue residential structure have not been assessed. However, VPH impact to the Site building is possible based on the identification of LPH and elevated DPH levels within close proximity to the eastern side of the structure, and VPH impact to the 1205 Chesaco Avenue residence is possible based on the suspected existence of LPH underneath this structure.

A Site Conceptual Model cross-section, illustrating lithology, groundwater level and quality, is provided as Figure 10 in Appendix A.

4.0 RISK DETERMINATION SUMMARY

4.1 Introduction

The MDE OCP produced the Maryland Environmental Assessment Technology (MEAT) for Leaking Underground Storage Tanks (LUSTs) document (2003) to provide guidance in the event of a release of a hazardous substance from regulated UST systems. According to the MEAT document, the OCP requires the potential risk be measured at every facility that has a reported release in order to establish cleanup goals and to determine if remediation is necessary. The OCP evaluates risk by a "Seven Risk Factor" process. The seven factors that require consideration include LPH, Current and Future Use of Impacted Groundwater, Migration of Contamination, Human Exposure, Environmental Ecological Exposure, Impact to Utilities and Other Buried Services, and Other Sensitive Receptors. The following sections of this report state each of the seven risk factors, and presents AEC's evaluation of each factor as it pertains to the Site.

4.2 Liquid Phase Hydrocarbons

"*LPH refers to a regulated substance that is present as a non-aqueous phase liquid. When LPH is found on-site, the liquid product must be removed to the maximum extent possible. OCP has determined this to be sheen. (MEAT for LUSTs, 2003)."*

Historical gauging data, dating back to December 2009, has indicated a significantly diminishing trend of LPH in the monitoring well network associated with the Site. Based on this data it is suspected that LPH impact consists of an approximately 6,000-square foot, oval-shaped plume which extends in a south-north fashion from the southern perimeter of the tank pit and north of the dispenser islands to the beneath the southern portion of the 1205 Chesaco Avenue residential structure; and in an west-east fashion from the asphalt-paved area east of the Site building to the easternmost Site border, along Chesaco Avenue.

Figure 9 (Appendix A), LPH Distribution Map, illustrates the LPH thicknesses on the September 13, 2010 gauging event, the maximum LPH thicknesses during all of the gauging events, and the suspected limits of LPH.

4.3 Current and Future Use of Impacted Groundwater

"If the groundwater impacted by the release is used for direct consumption within a half mile of the site or the site is located within an approved wellhead protection zone, a site assessment and CAP must be designed. Other uses of groundwater that would warrant remediation include industrial, agricultural, and surface water augmentation. If known, future use of the groundwater must be taken into consideration. If site-specific future use is unsure, regional trends must be considered. Generally, if future use is not clear, a more conservative approach to cleanup is applied (MEAT for LUSTs, 2003)."

A potable well survey has not been completed for the Site and vicinity; however, based on the heavily developed nature of the Site and vicinity, as well as direct observation of properties adjoining the Site, no potable wells are anticipated to exist within ½ mile of the Site. Furthermore, the Site and surrounding area are served by municipal water.

4.4 Migration of Contamination

"The ability of contamination to migrate off-site or to migrate to a receptor is a critical measure. If it can be demonstrated that the contamination is stationary and site conditions restrict the potential for migration, the need for cleanup may be reduced (MEAT for LUSTs, 2003)."

The subsurface investigations at the Site have indicated that petroleum constituents have migrated away from the release point across the northern and eastern Site boundaries. This is demonstrated by the existence of LPH and dissolved phase petroleum constituents detected in several off-site wells and piezometers.

4.5 Human Exposure

"Any exposure to the public warrants site corrective action. There are several exposure pathways that must be considered. These pathways include but are not limited to inhalation, ingestion, and dermal contact (MEAT for LUSTs, 2003)."

Direct dermal contact, inhalation, and/or the ingestion of petroleum impacted groundwater is possible as impacted water in the dewatering sump at 1205 Chesaco Avenue is discharged to the ground surface near the northern boundary of the 1205 Chesaco Avenue property. However, a sump discharge GAC treatment system is scheduled to be installed in order to remove petroleum constituents prior to discharge to the ground surface. Surface drainage at the Site is generally to the northwest towards an unnamed tributary of Back River, located approximately 800 feet northwest of the Site at its closest point. The tributary of Back River is not expected to be impacted by the Site's release.

Dermal contact and/or ingestion of impacted soil is unlikely as the entire Site area is paved with asphalt, gravel or concrete and soil impact is greatest at or near the water table which ranges from approximately 5 to 12 feet bgs. With the exception of construction excavation work, no complete dermal contact, inhalation, and/or ingestion of impacted soil exposure pathway is anticipated.

Vapor inhalation risk to the 1207 Chesaco Avenue residence was assessed in August 2010, and determined to not be a concern at this time. Vapor inhalation risk to the Site building and 1205 Chesaco Avenue residential structure have not been assessed. However, vapor inhalation risk to the Site building is possible based on the identification of LPH and elevated DPH levels within close proximity to the eastern side of the structure, and vapor inhalation risk to the 1205 Chesaco Avenue residence is possible based on the suspected existence of LPH underneath this structure.

4.6 Environmental Ecological Exposure

"The need to protect the natural resources of the State is mandated by Maryland law. If there is exposure to animal or plant life from the petroleum release or the degradation of a natural resource, corrective action is warranted (MEAT for LUSTs, 2003)."

AEC did not observe any signs of staining or vegetative stress in the grass-covered areas surrounding the Site or off-site properties. The most proximal natural surface body of water to the Site, an unnamed tributary of Back River located approximately 800 feet northwest of the Site at its closest point, is not expected to be impacted by the Site's release. AEC does not consider this release to represent a threat to animals or plant life in the vicinity of the Site.

4.7 Impact to Utilities and Other Buried Services

"The responsible party must correct adverse effects to utilities. Utility materials have been known to degrade from contact with petroleum products. Utilities may also act as conduits that lead to the migration of contamination. Migration along utilities may cause vapor impacts or other issues at nearby structures (MEAT for LUSTs, 2003)."

Electricity and communications service is supplied to the Site via overhead utilities located along Chesaco Avenue and Pulaski Highway. Based on observations made during Site investigation activities (miss utility markings and water meter/sewer manholes), the Site and vicinity are connected to the municipal water and sewer systems. Municipal water and sewer services are provided to the Site and vicinity by the Baltimore City/County Department of Public Works. Electric and natural gas utilities are provided to the Site and vicinity by Baltimore Gas & Electric (BGE). A Site Utilities Map is included as Figure 11 in Appendix A. Stormwater drains via sheet-flow into trench drains located near the Chesaco Avenue entrance to the Site, which connects to the stormwater system along Chesaco Avenue.

Depth to groundwater at the Site in the vicinity of the subsurface utilities is approximately 11 to 13 feet bgs. Depth to groundwater at the 1205 Chesaco Avenue residence is approximately 5 to 6 feet bgs. Utility trenches on the Site are not expected to be affected by the petroleum impact due to the fact that they are unlikely to be located at a depth greater than 3 to 4 feet bgs. Off-Site down-gradient utility depths and their potential to be affected by the petroleum release have yet to be established.

It should be noted that on September 7, 2010, the BCFD and MDE ERD responded to a report of gasoline odors in the Chesaco Hall portion (basement level) of St. Clements School. Reportedly, the odors were strongest in the girl's lavatory, and were believed to originate from a floor drain, connected to the sanitary sewer system. As such, AEC is currently investigating the possiblility of intrusion of petroleum contaminated water into the sanitary sewer line servicing St. Clements School. The investigative methods and procedures for the sanitary sewer investigation are outlined in AEC's St. Clements School Environmental Investigation Work Plan, dated September 15, 2010, and the

MDE's Work Plan Approval letter dated September 21, 2010. The results of this investigation will be provided under separate cover.

Based on the reported petroleum odors at St Clements School, impact to utilities and other buried services down-gradient from the Site may be a concern.

4.8 Other Sensitive Receptors

"Sensitive receptors such as surface water, historic structures, and subways are an indication that a site may warrant corrective action (MEAT for LUSTs, 2003)."

Natural surface bodies of water, historic structures, and subways are not located at the Site; as such, these receptors are not a concern. Additional sensitive receptors in the vicinity of the Site location were not observed during the site assessment. Based on the lack of receptors in the site vicinity that the UST release could possibly have affected, the release does not appear to pose a risk to other sensitive receptors.

4.9 Summary

Based on the results from the recent subsurface investigation and monitoring efforts and the evaluation of the seven risk factors, AEC has established that risk exists for the following MDE Risk Factors:

- Liquid Phase Hydrocarbons
- Migration of Contamination
- Human Exposure
- Impact to Utilities and Other Buried Services

AEC has not identified any risk associated with these remaining MDE Risk Factors:

- Current and Future Use of Impacted Groundwater
- Environmental Ecological Exposure
- Other Sensitive Receptors

The existence of LPH, both on- and off-Site will necessitate the removal of this material. In context of the proposed clean-up technology to be presented below, APH impact will also be addressed as part of the LPH recovery efforts.

The Site vicinity is serviced by municipal water, and upon removal of LPH within the source area it is expected that the off-Site dissolved phase plume will naturally attenuate prior to becoming a risk to additional off-Site receptors.

5.0 EFR PILOT STUDY

In order to determine the radius of influence for individual EFR extraction points, EFR pilot studies were conducted on monitoring wells MW-5 and MW-6 on September 13, 2010 and MW-14 on September 3, 2010. The September 13, 2010 studies were each conducted for 60 minutes. The September 3, 2010 study was conducted for 130 minutes. The EFR studies were accomplished using a vac-truck as the vacuum application source. A stinger tube extending to a depth of approximately 4 feet below the static groundwater level was placed in each extraction well. The wellhead was then sealed with a rubber boot to eliminate short-circuiting.

Prior to and during the MW-14 pilot study groundwater levels were measured in each well using a oil/water interface probe. Also measured during all of the studies were vacuum readings and air-flow rates. The vacuum readings were collected using magnehelic differential vacuum gauges attached to the well heads. The air-flow rates were measured at the vac-truck effluent stack. A summary of these measurements are provided in Appendix G.

The EFR studies were initiated with vacuums of 48-, 60- and 85-inches of water applied to extraction wells MW-6, MW-14 and MW-5, respectively. The initial vacuums applied to each well remained relatively stable throughout the duration of the studies. Each respective vacuum reading represents the maximum, non-diluted, applied vacuum to the extraction wells.

Vacuum influence readings were recorded at minimum 10-minute intervals from the vacuum monitoring points throughout each study. Field observations indicated that the vacuum influences in the observation wells generally stabilized approximately 30 minutes after the test was initiated with minor fluctuations.

Recorded vacuum influence occurred in each of the observation wells, with the exception of MW-11, during the MW-5 pilot study, and MW-8 during the MW-6 pilot study. Vacuum influence observations occurred in wells located at distances ranging from 30 to 40 feet from the extraction wells used for the studies. The greatest recorded vacuum influence in each observation well ranged from 0.45 inches of water observed in MW-3 during the MW-5 pilot study to 0.57 inches of water observed in MW-7 during the MW-6 pilot study. Vacuum influence versus distance for each pilot study is presented graphically in figures presented in Appendix G. As the figures demonstrate, an effective vacuum influence of 0.1 inches of water may be expected at a distance of approximately 30 feet from the recovery wells with 65 inches of water vacuum applied.

Air velocity was measured using a Extech Model 407119A Hot Wire Anemometer. Vapor recovery flow rates for each pilot study calculated from recorded air velocity readings remained constant throughout the studies at a rate of approximately 50 cubic feet per minute (cfm). Applied vacuum was stable throughout each study at approximately 65 inches of water.

Gauging of the monitoring wells prior to initiation of the MW-14 pilot study and at regular intervals throughout the study indicate that the groundwater elevation decreased in all of the surrounding monitored wells (i.e., MW-1, MW-2, MW-3, MW-5 and MW-10. Groundwater elevation decreases ranged from 1.05 feet (MW-10) to 1.29 feet (MW-5). At the conclusion of the MW-14 pilot study, approximately 257 gallons of groundwater had been recovered for an average recovery rate of 1.97 gallons per minute (gpm).

Based on the pilot study vacuum influence data, a radius of influence (ROI) of 25 feet has been developed. This ROI represents the anticipated distance from an extraction point where at least 0.1 inches of water column is applied. The 0.1 inch of water column vacuum has been determined through extensive studies to be a reasonable value concerning effective ROI for EFR and soil vapor extraction.

6.0 PLANNED REMEDIATION ACTIVITIES

6.1 Remediation Plan Summary

The remediation approach proposed in this CAP is based upon data collected from the EFR pilot studies performed in September 2010, as well as site characterization investigations, review of historical well gauging/sampling data, and vac-truck EFR performance characteristics. These results indicate that both the LPH and DPH plumes are both similar in size and configuration (i.e., the dissolved phase plume appears to not have significantly migrated away from the LPH plume). There are low levels of dissolved-phase compounds detected in down gradient positions, but these levels are not significant in concentration.

Based on the presence of LPH, in-situ chemical oxidation (ISCO), in-situ bioremediation, and air-sparging. will not be effective means of remediation. Based upon feasibility and the past effectiveness of the vac-truck EFR work, the recommended remedial approach consists of using dual-phase EFR technology to remediate both soil and groundwater.

The results of the EFR pilot study performed from the recovery points indicate that high-vacuum recovery would effectively remove LPH and APH from the subsurface. By mitigating the hydrocarbon presence and achieving hydraulic control over the remediation zone, the future impact to downgradient receptors should be reduced. Secondarily, the significant vacuum influence observed during the EFR test, as well as the recorded air flow and expected mass hydrocarbon recovery rates, indicate that the application of vapor extraction via high vacuum extraction should: directly withdraw residual VPH from the soil pore spaces; mobilize sorbed phase hydrocarbons within the soil pore spaces; potentially accelerate aerobic degradation by delivering oxygen into the vadose and artificial vadose zones thereby stimulating indigenous microbiological hydrocarbon degradation in these zones; and, potentially mitigate dissolved phase hydrocarbons in groundwater through volatilization where the groundwater is not directly recovered.

6.2 Target Cleanup Zone

The dual-phase EFR system will address LPH and APH impacted soil within the defined remediation zone illustrated on Figure 12 in Appendix A. The boundaries of this zone were developed using the monitoring and temporary piezometers which currently and historically contained LPH. The extent of the EFR application footprint dimensions is approximately 14,000-square feet.

To establish hydraulic control of the remediation zone in relation to the capture zone dimensions, the addition of three enhanced fluid recovery wells will be required. This is in addition to the six existing monitoring (MW-2, MW-4, MW-5, MW-7, MW-8, and MW-14). The existing wells and the proposed enhanced fluid recovery wells are identified on

Figure 12 in Appendix A. Additional EFR wells will be installed if cleanup criteria are not achieved or, if during well installation procedures, additional LPH areas are identified.

7.0 REMEDIATION SYSTEM DESIGN

7.1 Remediation System Design Summary

The proposed remediation system is designed to recover APH from subsurface soils and remove DPH and LPH from extracted groundwater via vertical recovery wells. By depressing the groundwater table, additional soils are exposed to soil vapor extraction. By using EFR, both liquid and vapor phase recovery should be maximized. The remediation system will be designed to treat recovered groundwater at a rate of 30 gpm and vapors at a rate of 350 cfm. Pilot studies have indicated that a recovery well flow rate of 2 gpm is adequate in depressing the water table for effective EFR operation. The proposed number of recovery wells is nine which equates to a system flow rate of 18 gpm which is within the capacity of the system design flow rates.

System equipment will be stationed at the southeastern corner of the Site property (equipment compound). The system control panel and electrical panel will be mounted on the outside of the system building. The interior of the system building will house a liquid ring dual phase extraction pump, phase separation tanks, an integrated oil-water separator and air-stripper for LPH and dissolved phase hydrocarbon removal, a poly sump, two fluid transfer pumps, two activated carbon canisters connected in series for final groundwater treatment, and a flow totalizer to record total volume of groundwater treated. The equipment and wiring in the treatment room is rated for explosive environments. The exterior of the equipment compound will contain a catalytic oxidation unit for vapor treatment, and two activated carbon canisters connected in series for contingency vapor treatment.

Total fluids and soil vapors will be extracted from the nine vertical extraction wells by a skid-mounted liquid ring vacuum pump. Extracted fluids and vapors from the recovery wells will pass through primary and secondary vapor knock-out tanks for separation of recovered liquid and vapor phases. Separated liquids will be directed to a poly transfer sump via a transfer pump then to an oil-water separator/air stripper for groundwater and LPH separation. The LPH will be directed to a storage tank for collection, and the stripped water will be directed through two carbon vessels connected in series for final polishing prior to discharge. Should the air pressure from the stripper blower fall below a set-point (i.e. the blower is not operating), or should a high liquid level condition occur, an electrical relay into the system control panel will read an alarm condition and will shut power off for all system components and indicate an alarm condition.

The transfer sump is equipped with a high level alarm switch and a level differential control switch. When the water level in the sump reaches a set level, the level differential control switch becomes activated and signals the control panel to actuate the transfer pump. The air stream from the liquid ring pump will be routed for treatment by a catalytic oxidation unit for off-gas control. A fail safe control device will be installed within the catalytic oxidation unit so that should an operating fault occur within the oxidation unit, the system control panel will disable the recovery and treatment process. This will ensure that untreated vapors do not escape into the atmosphere. The air stripper off-gases will be discharged directly into the air. During remote startup procedures the vapor stream will be temporarily directed through the vapor phase carbon vessels. Items concerning discharge streams and allowable emissions are discussed under the permitting section of this CAP. System drawings illustrating the piping and instrumentation are supplied as Figure 12 in Appendix A.

7.2 Equipment Information and Specifications

The following section provides information about each major component of the remedial system. Equipment summaries are supplied that detail the equipment functions, operations, and the suggested supplier and/or manufacturer information. Equipment manufacturer and model numbers are supplied only as reference. Equipment of equal operations and capacities manufactured by others may be substituted.

7.3 System Control Panel & Logic Components

The control panel contains the logic and drive components for the remedial equipment. The control panel will control operation of the transfer pumps, the liquid ring pump, and the air stripper blower, including motor starters. Each motor starter will be equipped with thermal protection. Logic components will be required as follows:

1) Transfer pump on/off liquid differential float switches will be installed within the knock-out tanks, poly transfer sump, and oil-water separator/air stripper sump. Each transfer pump will be able to be controlled by hand/off/auto switches at the control panel.

2) High level alarm floats will be installed within the knock-out tanks, oil-water separator, poly transfer sump, LPH holding tank, and air stripper sump. When a high alarm condition occurs, the control panel will disable operations to the liquid ring pump and the transfer pumps.

3) The air stripper will be equipped by the manufacturer with either a low air flow switch and/or a low pressure switch. When an alarm condition signifying the air stripper air flow conditions are not being met, the control panel will disable the liquid ring and transfer pumps.

4) The common line serving the liquid phase carbon vessel series will be equipped with a high pressure switch. The set point of the high pressure switch will be dependent upon the design pressure allowed by the carbon vessels installed. When a high pressure condition occurs at the carbon treatment, the control panel will disable the system.

5) The knock-out tanks will be equipped with a low level float switch. The low level float switch ensures that an adequate seal-water supply is available for the liquid ring pump. Should a low level alarm occur, the control panel will disable the liquid ring pump.

6) The catalytic oxidation unit will be provided with an independent control panel. The independent control panel for the oxidation unit will contain alarm output terminals

signifying low/high air flow conditions and operating temperature faults. Wiring from the oxidation unit to the control panel will be installed so that the system control panel may disable the liquid ring pump should the oxidation unit shut down.

The controls will also include a telemetry system with 8 analog inputs and 4 digital outputs. The system will have an integrated data logger and a surge suppression system. The telemetry controls will be capable of remote startup and shutdown operations and real time operations monitoring.

7.4 Liquid Ring Vacuum/Knock-Out Tanks and Transfer Pump

Dual phase extraction (liquid and vapor) from the vertical wells will be performed using a Model TRSC 100-700 Travaini Liquid Ring Vacuum Pump. The vacuum pump, knock-out tanks and transfer pump are package supplied and skid mounted. The liquid ring pump is equipped with a 40 HP, 230/460/3/60 Class I, Group D, explosion proof motor. The liquid ring pump should be capable of providing an air flow rate of 500 acfm at up to 20 inches of mercury applied vacuum.

7.5 Oil-Water Separator and Low Profile Air Stripper

The integrated oil-water separator/low profile air stripper is manufactured by MKE Inc. (model SA50HE-2 Stripperator). Influent from the air/water separator (knock-out tank) is evacuated via a transfer pump and flows into the inlet of the oil-water separator through a diffusion baffle. The influent then passes through a cross corrugated coalescing media and product skimming weir. A rotary pipe skimmer collects separated floating product which gravity feeds into the storage tank.

Separated water flows to an effluent chamber of the separator, and then by gravity to the low profile type air stripper portion of the system which is equipped with a regenerative blower. The chamber fills to a set level before flowing through a sheen baffle and out of the separator. The system is equipped with a high level alarm switch. The flow rate of the integrated oil-water separator-low profile air stripper is rated for a flow rate of 50 gpm. The oil-water separator portion of the system will be vented.

Groundwater is evacuated from the air stripper sump by a system transfer pump. The air stripper will be equipped with a low flow pressure switch to shut-down the system in the event of stripper blower malfunction.

7.6 Groundwater Carbon Polishing

The air stripper transfer pump evacuates treated groundwater collected in the air stripper sump through the carbon vessels for final treatment before discharge. Granular activated carbon vessels will be connected in a series of two for final polishing prior to discharge. The carbon treatment line will be capable of treating between 25 and 30 gpm. A high pressure switch will be installed.

7.7 Catalytic Oxidation Unit

The catalytic oxidation unit will be a MKE Model 350E electric oxidizer. The unit has a design flow rate of 350 cfm. The thermal oxidation unit installed at the site will have the following options: skid mounted; equipped with an independent control panel with alarm output terminals to be wired to the system control panel; a flame arrestor; and, a minimum stack height of 12 feet above ground surface. The unit will be supplied with an air-water separator knock-out tank to minimize condensed fluids from entering the burner or vapor phase carbon canisters. The vapor treatment line will also include two vapor phase carbon canisters (model VF-400) for odor control and vapor capture when the oxidizer is off and during remote restart conditions.

7.8 Remediation System Compound

The remediation equipment will be stored within an 8.5 foot wide by 16 foot long by 9 foot high fully insulated aluminum/steel enclosure. The enclosure will be rated for explosive environments (XP). Lockable access ways will be installed on the enclosure. The oxidizer and vapor phase carbon canisters will be stored outside of the enclosure. A privacy fence will be erected surrounding the remedial compound to prevent access and tampering by unauthorized individuals and to provide aesthetics.

7.9 Ancillary Items

Other items to be installed with the remediation system include electric service, electrical components, plumbing, and valves. The remediation system will be supplied with an independent 400 amp, three phase electric service/panel and meter. The interior of the enclosure will be equipped with an XP heater and thermostat, an XP ventilation fan, a XP lighting fixture, and XP switches or receptacles for each motor. XP wiring will be within rigid conduit/seal-offs, or as applicable according to local fire codes. All motors/pump equipment will be installed so that the equipment may be easily pulled for servicing (i.e. flexible hanger couplings).

The recovery lines from the wells will be manifolded into a common line. All plumbing will be performed so that 'quickconnect' type fittings are installed prior to and after each equipment item. Piping will be standard schedule 40 PVC. Elbows and couplings will be pressure type fittings.

7.10 Subsurface Piping &Trenching

Subsurface recovery piping will be installed to nine recovery wells shown on Figure 12 in Appendix A. Some of the existing monitoring wells will be converted to recovery wells. Road grade vaults will be installed over each recovery well. The depth of the trenching will be 40 inches. Two-inch schedule 40 PVC piping will be inserted into each recovery well (stinger tube) and connected to the well head with a sanitary seal. A flow adjustment valve will be attached to each stinger tube inside the well vault. The sanitary seal will also have an ambient relief fitting with a valve inside the well vault. The stinger tube depths will be adjustable and are expected to be set at approximately 4- to 6-feet below static water levels. Two-inch schedule 40 PVC recovery piping will be used to connect each well head to 4-inch diameter schedule 40 PVC header lines. It is anticipated that four to five recovery wells will be connected to each of two header lines. The two header lines will transit to the compound and be connected to a 6-inch schedule 40 PVC trunk line. All underground piping will be emplaced within the trenching with a minimum of 36 inches of cover. All piping connections will be accomplished using primed and glued pressure couplings. The piping will be set in a bed of 10 inches of pea gravel (4 inches below and 6 inches above). Native soils may be backfilled into the trench in six to eight inch lifts and compacted. The remainder of the trench will be completed by placing three to four inches of stone as sub base and four inches of finished asphalt to the surface. Trenching and well vault details are shown on Figures 14 and 15 in Appendix A.

8.0 SAMPLING AND MAINTENANCE PROGRAM

8.1 Groundwater Monitoring Procedures

Quarterly groundwater monitoring will be conducted to evaluate the effectiveness of the remediation activities. The groundwater samples will be collected from the monitoring/recovery wells and analyzed according to EPA protocols. Groundwater samples will be collected from the wells by first gauging and purging at least three well volumes using a stainless steel bailer which will be cleaned prior to use in each well.

After purging, each well will be allowed to recharge for a period of at least one hour prior to sampling. The samples will be collected using a dedicated disposable sampling bailer. The samples will be transferred directly into the appropriate sample containers. The sample from each location will be placed in 40 milliliter glass jars with Teflon-lined septa and preserved with hydrochloric acid, and amber glass liter bottles, as appropriate. Once collected, the samples will be placed on ice in a cooler to await shipment to the laboratory.

All groundwater monitoring/recovery wells and tank pit observation wells which do not contain LPH will be analyzed for VOCs including fuel oxygenates per EPA Analytical Method 8260, as well as TPH DRO and TPH GRO per EPA Analytical Method 8015B.

8.2 Indoor Air Quality Monitoring Procedures

Quarterly IAQ monitoring will be conducted in the 1205 and 1207 Chesaco Avenue residences and the Site building to evaluate the effectiveness of the remediation activities.

Three indoor air samples will be obtained from the 1207 Chesaco Avenue residence. The samples will be collected in the basement, the first level, and the second level of the residence. One indoor air sample will be obtained from the basement of the 1205 Chesaco Avenue residence, and one indoor air sample will be obtained from the Site building. In addition, a background ambient air sample will be collected from a location yet to be determined.

The 1205 and 1207 Chesaco Avenue samples will be collected using six liter SUMMA canisters with an attached 24-hour mass flow controller, and the Site building sample will be collected using a six liter SUMMA canister with an attached 8-hour mass flow controller. The flow controller contains a restrictor that regulates the airflow over the respective sampling period into the negatively pressured canister. The SUMMA canisters will be positioned two to five feet above floor level, away from doors and windows, and HVAC intake and effluent vents.

The analytical laboratory will provide pre-cleaned, negative pressurized SUMMA canisters and dedicated sample regulators. Sample labels will be firmly attached to the container side, and the following information will be legibly and indelibly written on the labels: Facility name, Sample identification, Sampling date and time, and Sample collector's initials. After the samples are collected and labeled, they will be packaged for transport to the laboratory. The indoor air samples will be analyzed for VOCs using EPA Analytical Method TO-15.

8.3 Operation and Maintenance Procedures

The treatment system will operate on a continual basis with the exception of shutdowns for equipment maintenance. Routine inspections of the remedial operations will be performed in order to ensure proper operation and to evaluate system effectiveness.

The system will be inspected daily for the first week of operation and weekly thereafter for the first month. The daily and weekly visits will be used to adjust and optimize the system operation. Following the first month and system optimization, monitoring of the Site and the remediation system will be conducted on a monthly basis. During Site visits the following activities will be performed:

- Gauge the monitoring well network with an interface probe to verify the presence/absence of LPH;
- Collect an airflow measurement and VPH concentration readings from the vapor control device influent and effluent streams using a calibrated PID to ensure proper operation;
- Verify that the dual-phase EFR system is operating properly;
    - Control panel inspection
    - Pump operations
    - Sump probes
    - Fail safe switch operation
    - Flow totalizer operation
    - All equipment serviced in accordance with manufacturer's specifications
- Record flow totalizer reading;
- Collect groundwater samples from the influent and effluent of the airstripper and the carbon vessels to be analyzed in accordance with applicable discharge permit requirements;
- Replace and interchange carbon canisters prior to hydrocarbon breakthrough, as required; and
- Remove LPH from storage tank, as necessary.

9.0 PERMITS, SUBMITTALS, AND SCHEDULING

9.1 Permitting

Construction and EFR activities will be performed in compliance with the appropriate operating permits required by the State of Maryland and Baltimore County. Permits will be renewed as necessary, and additional permits will be obtained as required if additional remediation activities are proposed in the future. The following presents the anticipated permit requirements:

System Construction - All applicable building permits will be appropriated. Applicable permits may include building permits for the equipment shelter and fence, grading, trenching and sediment control permits, and electrical permits. All work will be performed by properly licensed State of Maryland contractors.

Surface Water Discharge - The groundwater will be treated and discharged to the Baltimore County sanitary sewer or storm water system located to the east of the Site. Prior to discharge the necessary approvals will be received from the Baltimore County Department of Public Works. A Notice of Intent (NOI) to discharge will be submitted to the MDE in accordance with the MDE's current National Pollutant Discharge Elimination System (NPDES) modified General Discharge Permit (GDP). Results of NPDES permit required monitoring will be submitted to the MDE in quarterly Discharge Monitoring Reports (DMRs), as required.

Off-gas Vapor Emissions - Vapor emission point sources (catalytic oxidation unit and air stripper off-gas) will be operated in compliance with the MDE Air and Radiation Management Administration ARMA General Permit for SVE and Groundwater Air Strippers. Emissions from each point source will be held below the permit thresholds listed below:

- Parameter: Permit Limit
- Total VOC: 20 lbs/day
- Benzene: 0.02 lbs/hr

The vapor emission point sources will be periodically evaluated to determine whether the potential emissions warrant continued off-gas treatment via catalytic oxidation or through vapor phase granular activated carbon units prior to discharge to the atmosphere.

9.2 Submittals

AEC will receive, review and accept all environmental submittals (e.g., bills of lading, disposal manifests, etc) from other contractors. Within 30 days after off-site disposal of impacted, regulated material, the contractors will be required to submit copies of all documentation, including but not limited to, bills of lading, materials shipping records, or waste manifests to AEC.

A construction schedule detailing the remedial action activities and 5-day notification to begin will be forwarded to the MDE prior to beginning the work. Within 30 days of completing the CAP activities for the Site, a CAP Implementation Report shall be prepared and submitted to the MDE for review and approval. At a minimum, each report will include a detailed description of the remedial activities performed; volume of liquids removed; maps depicting sampling locations, groundwater flow before, during, and subsequent to vacuum activities, analytical testing results; laboratory reports of analysis; and conclusions and recommendations.

Quarterly groundwater performance and confirmation sampling progress reports will be prepared for the Site. Groundwater gradient and groundwater quality maps, and post-treatment graphs showing groundwater concentration changes over time will be prepared for each VOC. Quarterly reports will be submitted to the MDE within 30 days of the receipt of the laboratory analytical results.

9.3 Scheduling

The following is the anticipated schedule for completion of the installation and startup of the CAP remedy (i.e., permanent EFR installation) using the current approach:

- Submittal of CAP - October 15, 2010.
- MDE completes review of CAP – November 30, 2010
- Complete EFR system installation – January 30, 2011

The elapsed time between CAP submittal and the completion of EFR system installation is 3.5 months.
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APPENDIX A

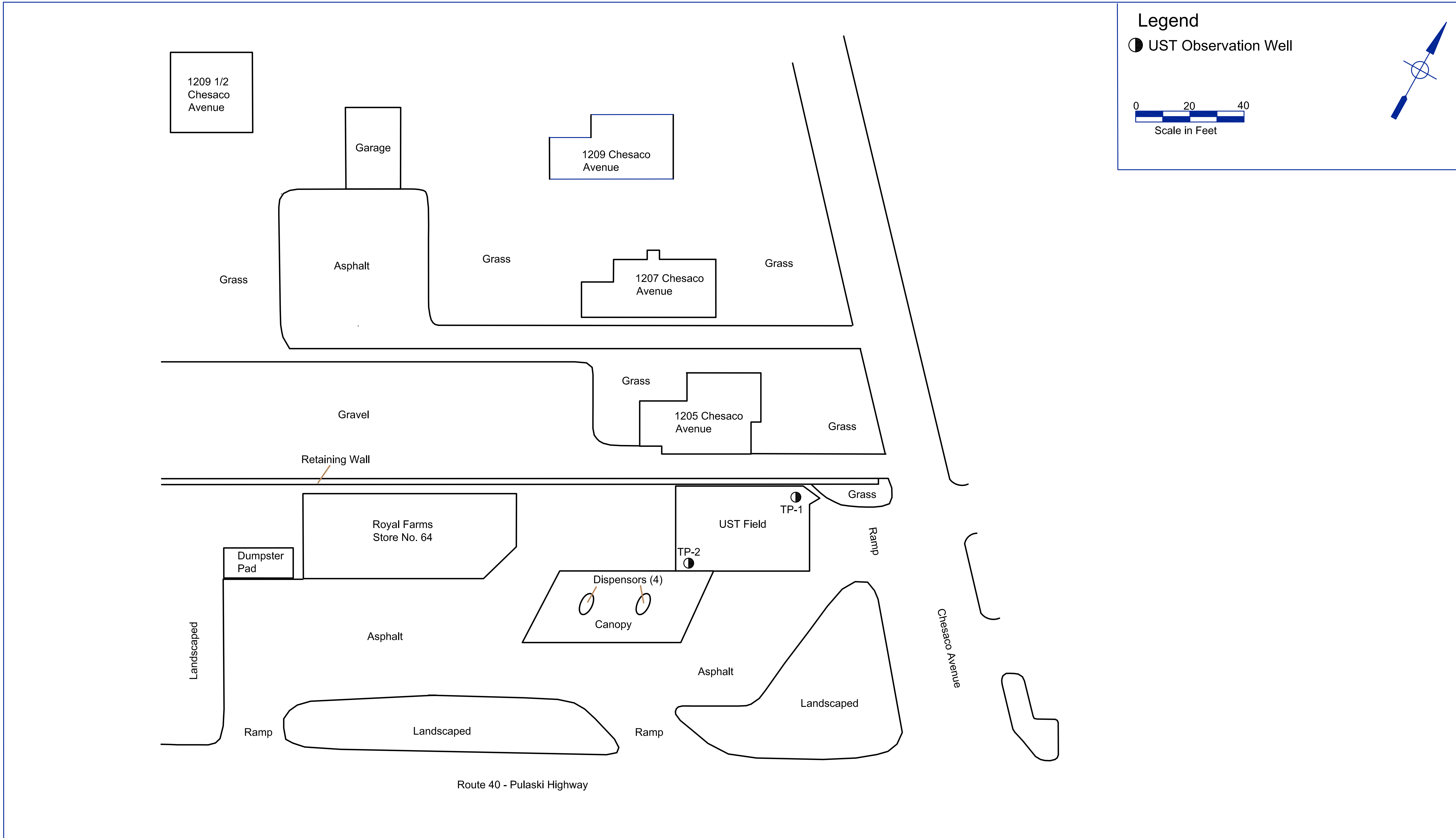
FIGURES

USGS Topographic Quad Map, Baltimore East, MD, 1974

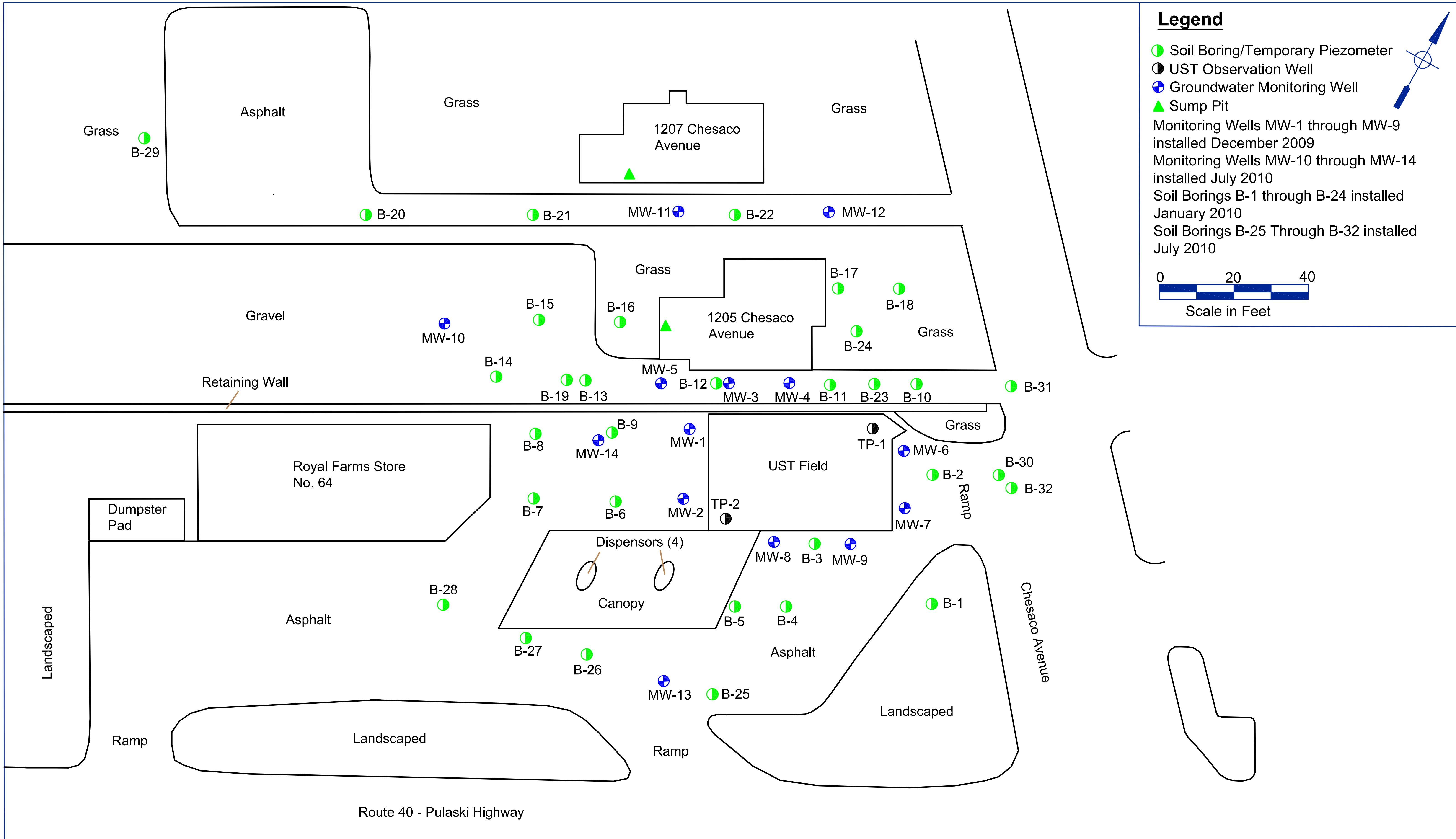
Advantage Environmental Consultants, LLC
8610 Washington Boulevard, Suite 217
Jessup, MD 20794
(301) 776-0500 Office
(301) 776-1123 Fax

Figure 1 - Site Vicinity Map
Royal Farms Store 64
7950 Pulaski Highway
Baltimore, Maryland 21237

Work Order No.:	Report Date:	Drawn By:
05-056	12/2009	WEG



Advantage Environmental Consultants, LLC 8610 Washington Blvd. Suite 217 Jessup, MD 20794 Phone 301-776-0500 Fax 301-776-1123	Project No.: 05-056	Drawn by: JSS	Figure 2 - Site Features Map Royal Farms No. 64 7950 Pulaski Highway Baltimore, MD 21237
	Task No.: RF64	Date: 2-3-10	
	File: Site Features	Revision No.: 1	



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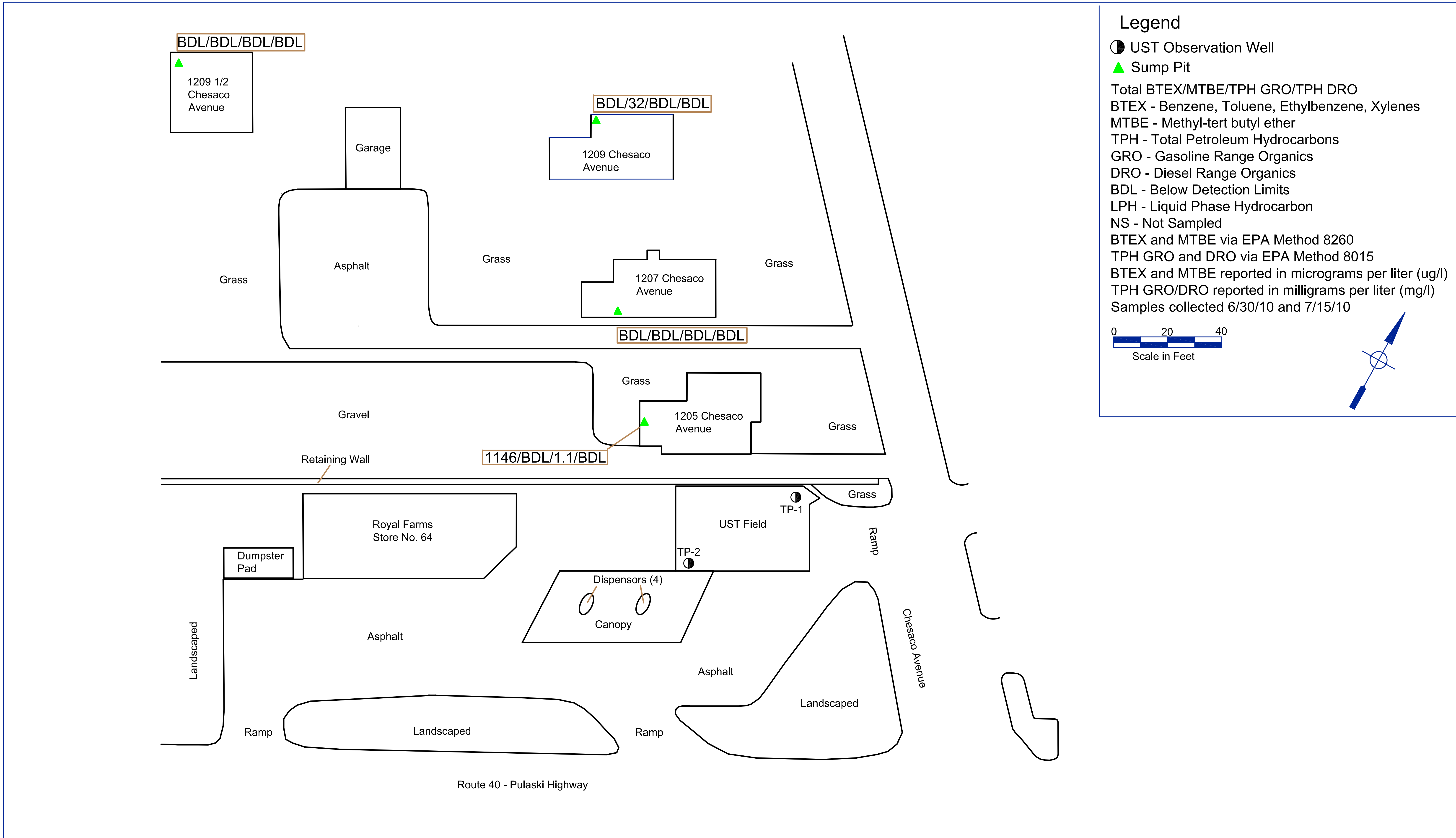
8610 Washington Blvd. Suite 217
Jessup, MD 20794
Phone 301-776-0500 Fax 301-776-1123

Project No.: 05-056	Drawn by: TER
Task No.: RF64	Date: 10-4-10
File: Proposed	Revision No.: 1

Figure 3 - Piezometer / Monitoring Well Location Map
Royal Farms No. 64
7950 Pulaski Highway
Baltimore, MD 21237



Project No.: 05-056	Drawn by: JSS	Figure 4 - Sump Water Quality Map Royal Farms No. 64 7950 Pulaski Highway Baltimore, MD 21237
Task No.: RF64	Date: 10-3-10	
File: Site Features	Revision No.: 1	

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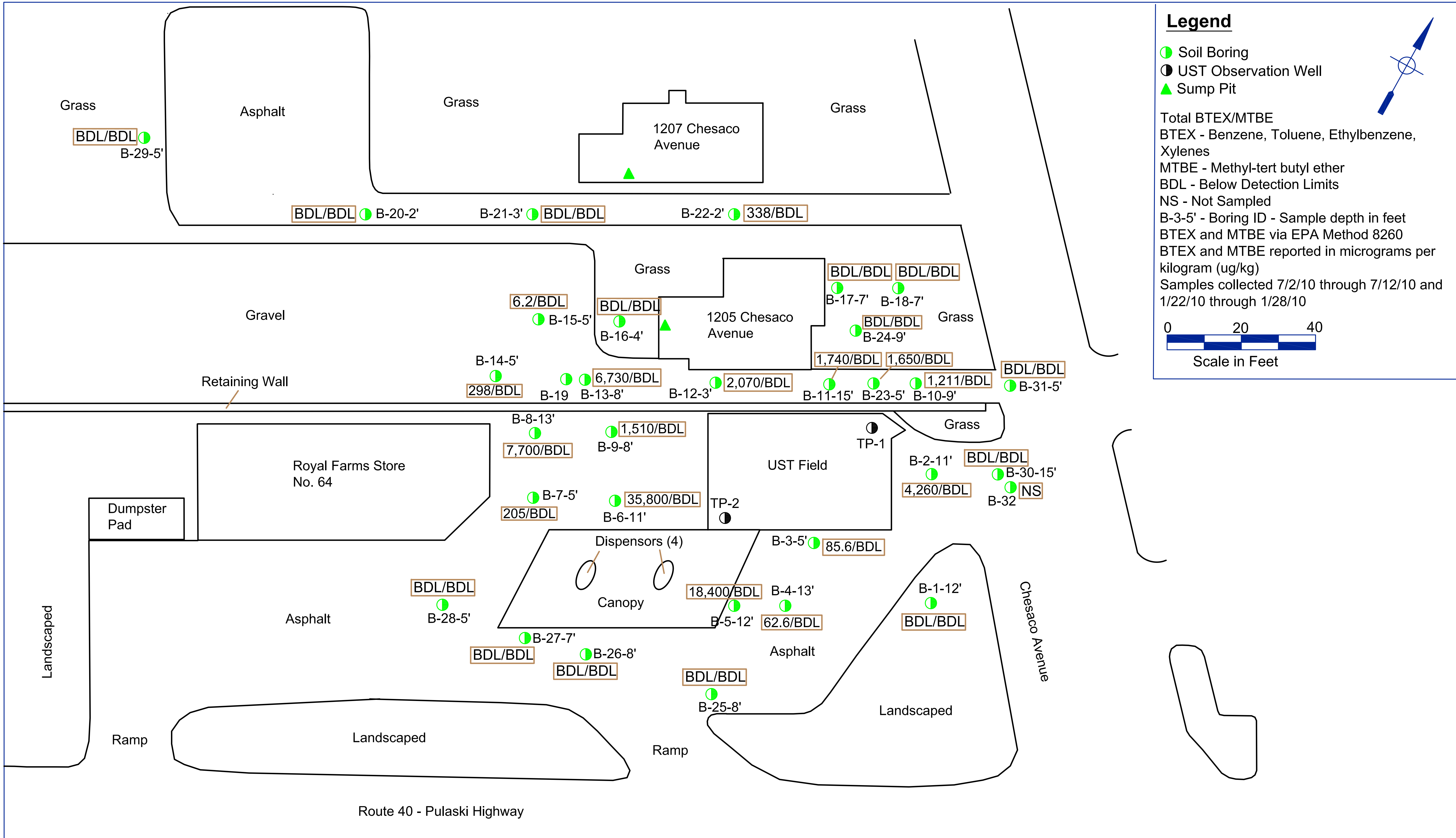

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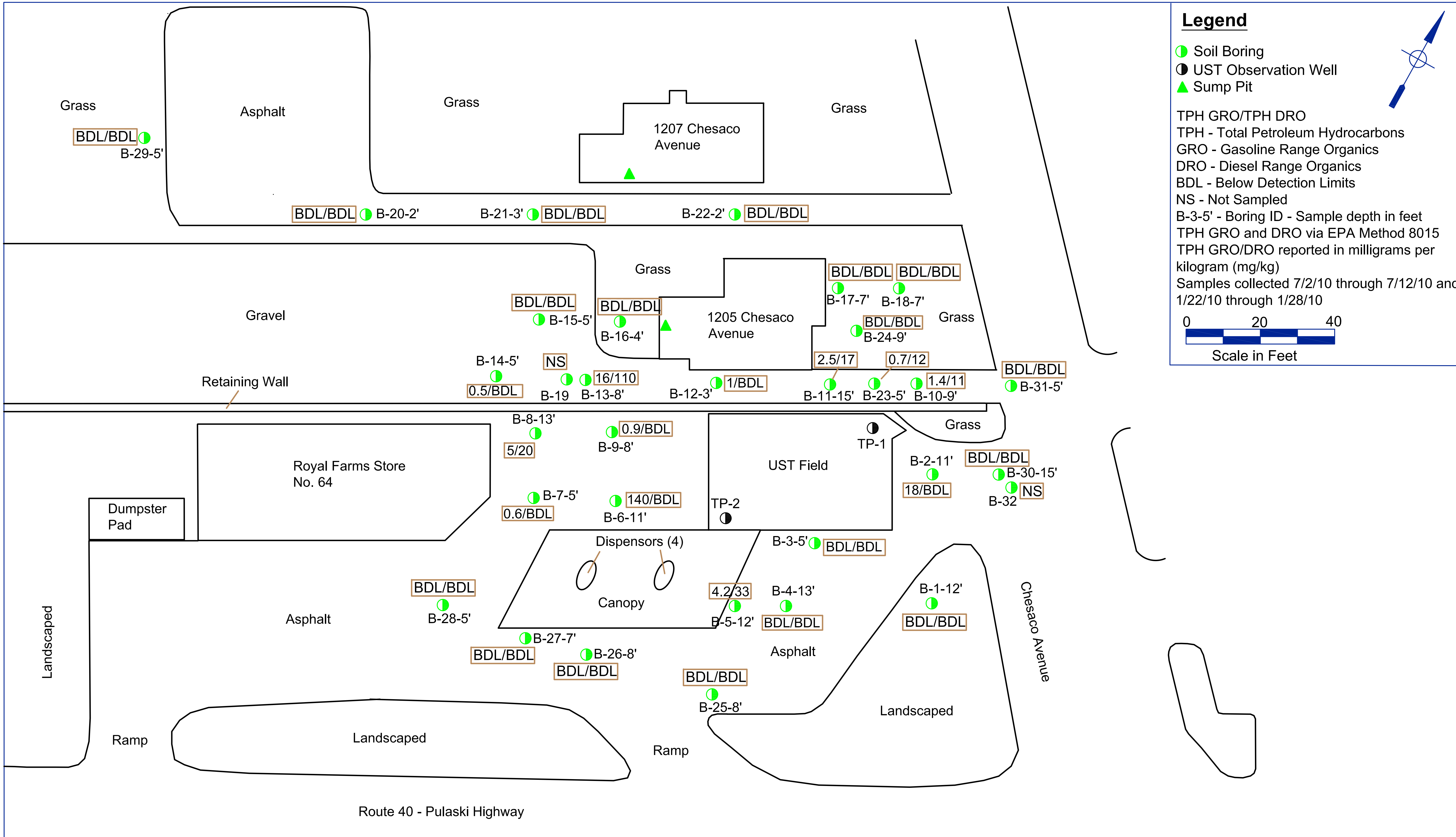
Project No.: 05-056	Drawn by: TER
Task No.: RF64	Date: 10-4-10
File: Proposed	Revision No.: 1

Figure 5 -Soil Quality Map - BTEX and MTBE
Royal Farms No. 64
7950 Pulaski Highway
Baltimore, MD 21237



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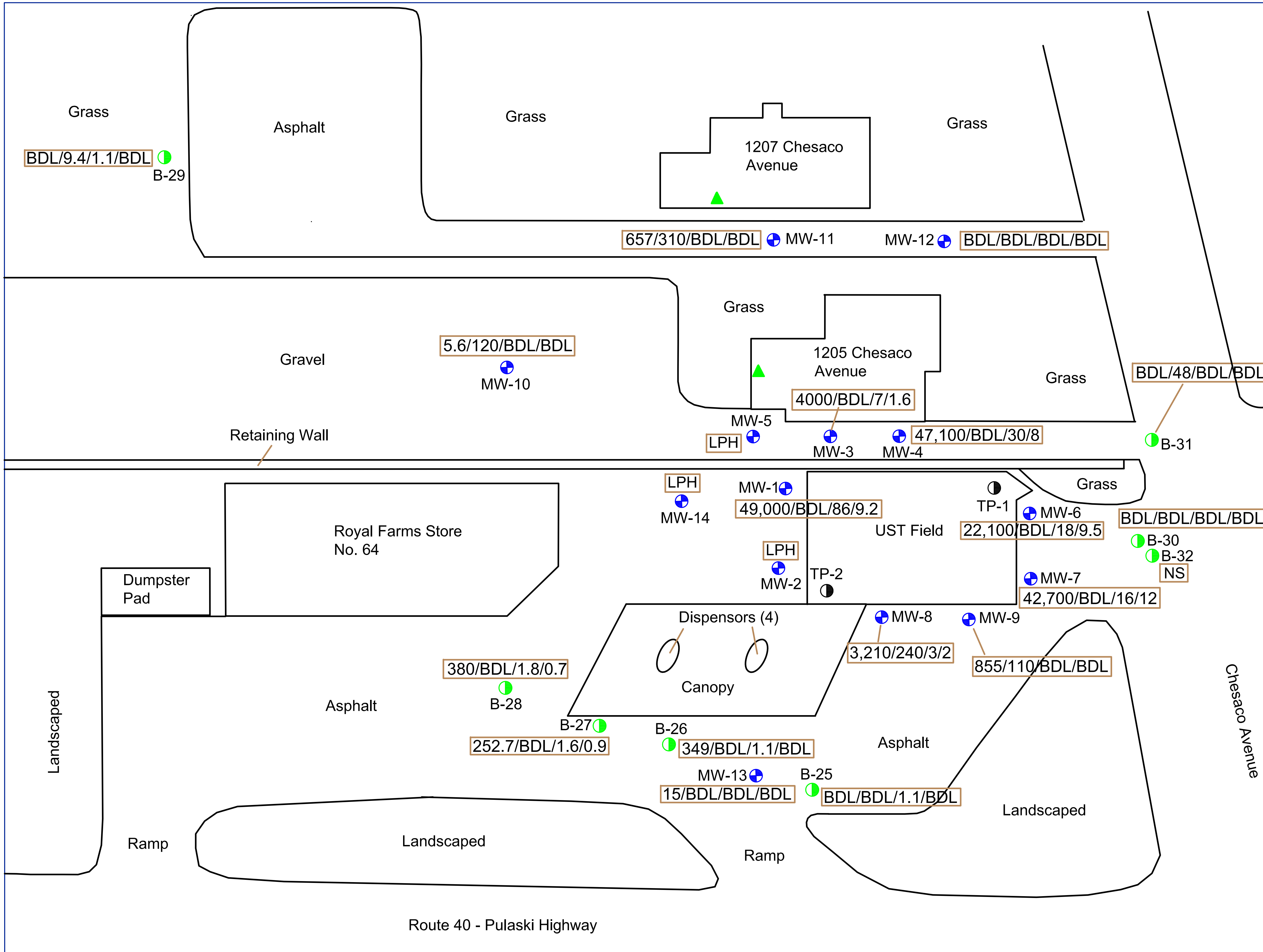
Task No.: RF64	Date: 10-4-10
File: Proposed	Revision No.: 1

Figure 6 -Soil Quality Map - TPH GRO and TPH DRO
Royal Farms No. 64
7950 Pulaski Highway
Baltimore, MD 21237



Legend

- Temporary Piezometer
- UST Observation Well
- Groundwater Monitoring Well
- Sump Pit

Total BTEX/MTBE/TPH GRO/TPH DRO
BTEX - Benzene, Toluene, Ethylbenzene, Xylenes
MTBE - Methyl-tert butyl ether
TPH - Total Petroleum Hydrocarbons
GRO - Gasoline Range Organics
DRO - Diesel Range Organics
BDL - Below Detection Limits
LPH - Liquid Phase Hydrocarbon
NS - Not Sampled
BTEX and MTBE via EPA Method 8260
TPH GRO and DRO via EPA Method 8015
BTEX and MTBE reported in micrograms per liter (ug/l)
TPH GRO/DRO reported in milligrams per liter (mg/l)
Samples collected 7/9/10 through 7/22/10

0 20 40
Scale in Feet

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File: Proposed	Revision No.: 1

Figure 7 - Groundwater Quality Map
Royal Farms No. 64
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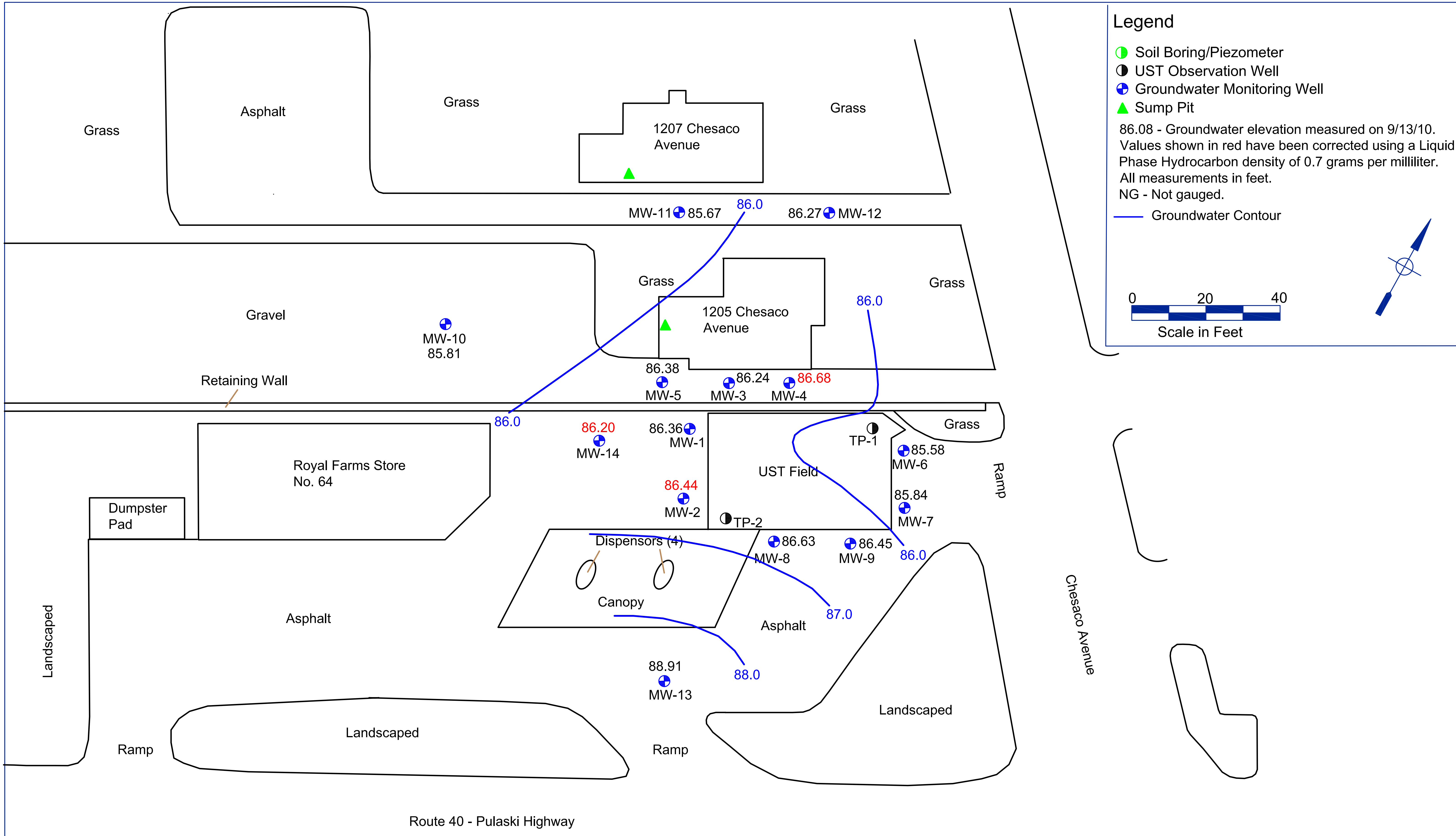
Baltimore, MD 21237



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Task No.: RF64	Date: 10-4-10
File: Grad 1	Revision No.: 1

Figure 8 - Groundwater Gradient Map
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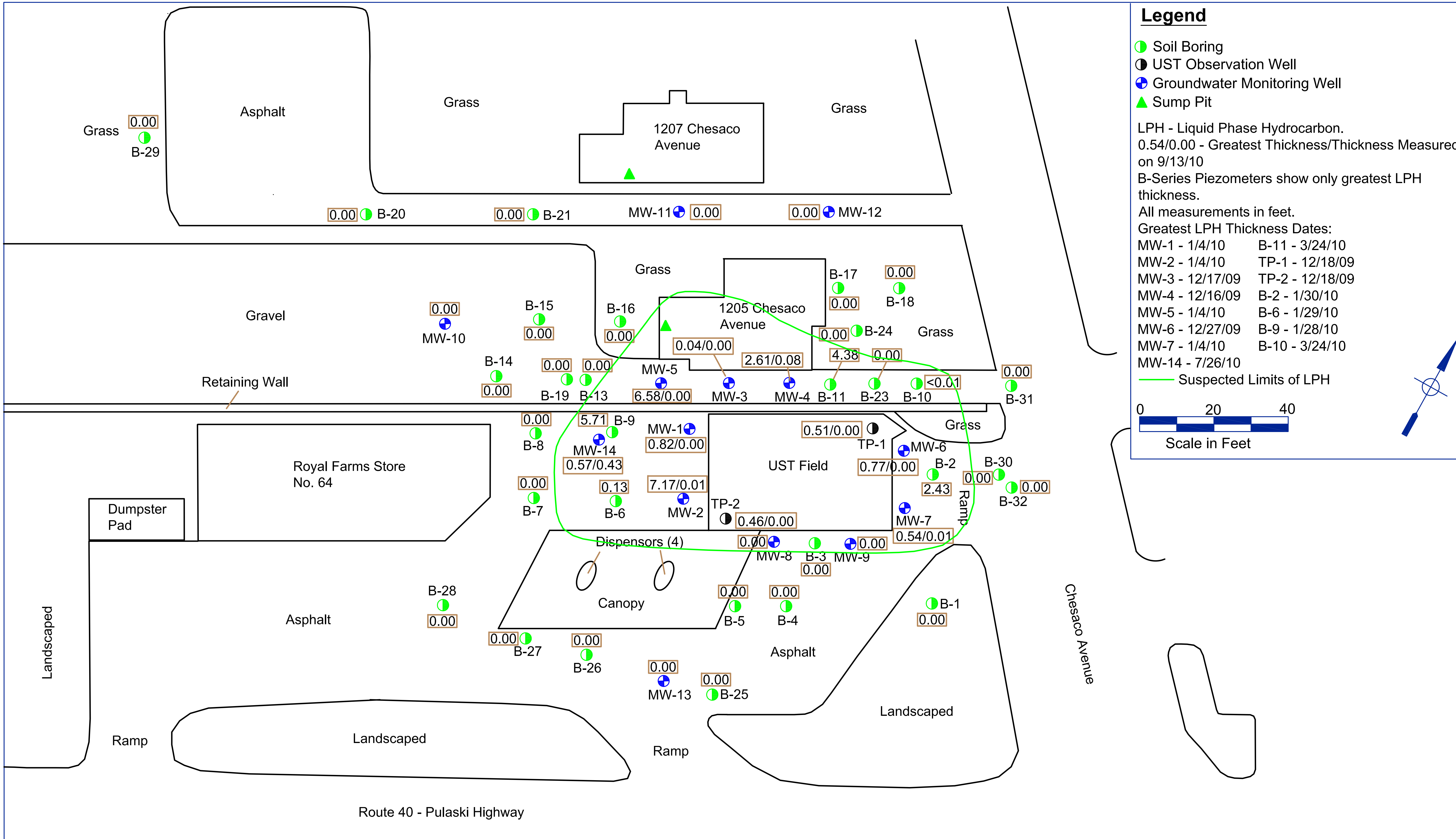
7950 Pulaski Highway
Baltimore, MD 21237



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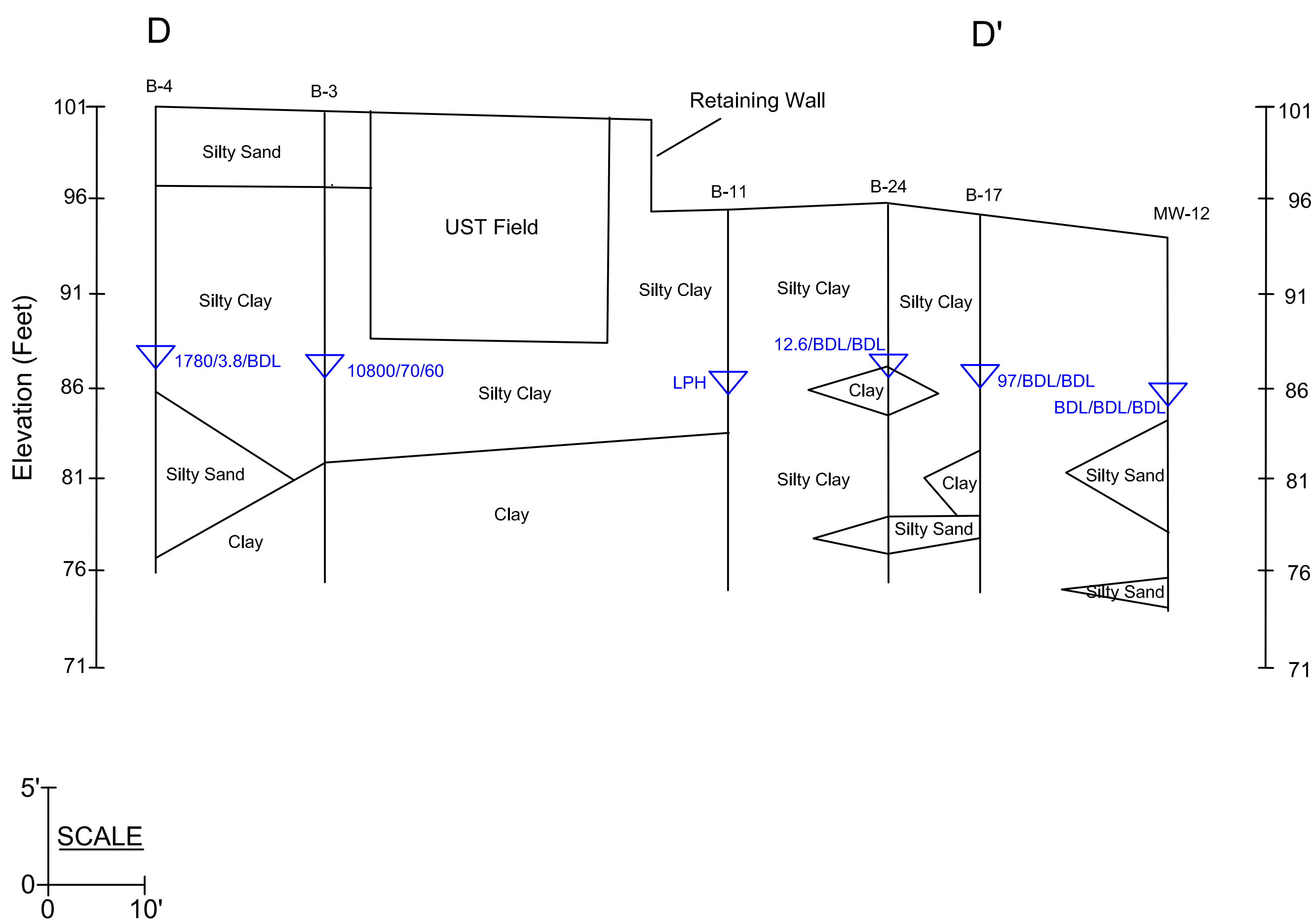
Phone 301-776-0500 Fax 301-776-1123

Project No.: 05-056	Drawn by: TER	Figure 9 - Liquid Phase Hydrocarbon Distribution Map Royal Farms No. 64 7950 Pulaski Highway Baltimore, MD 21237
Task No.: RF64	Date: 10-4-10	
File: Proposed	Revision No.: 1	

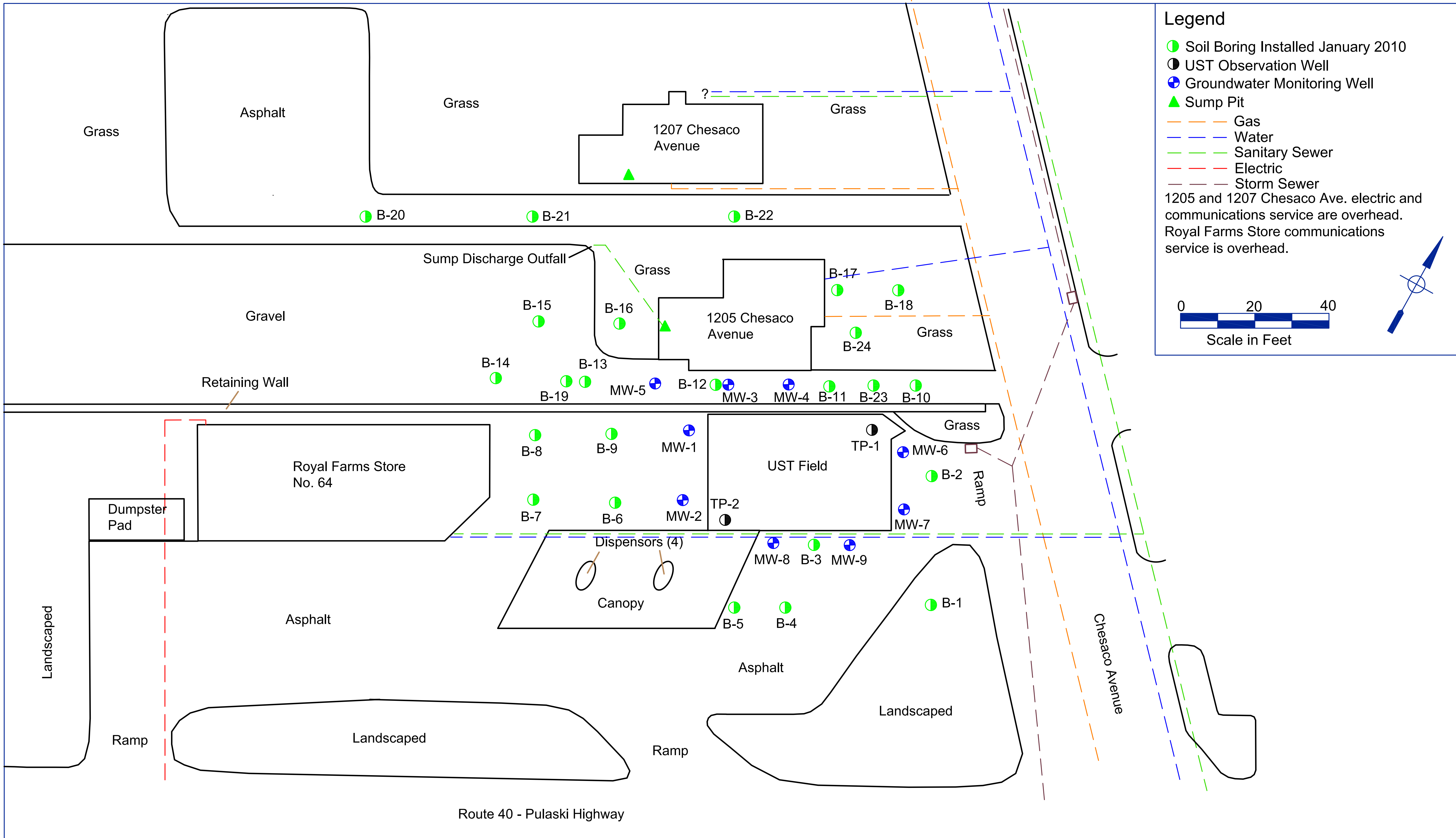


Groundwater Samples Collected 2-1-10 through 2-5-10 and 7-9-10 through 7-22-10
2340/1.2/30 = Total BTEX/TPH GRO/TPH DRO concentration.
Total BTEX in micrograms per liter (ug/l)
TPH GRO and DRO in milligrams per liter (mg/l)
Samples Analyzed by EPA Method 8260 (BTEX) and 8015 (TPH)
BDL = Below Detection Limits
LPH = Liquid Phase Hydrocarbon

Legend

Screen
B=Boring/Temporary Piezometer
MW=Monitoring Well
Water Level 2-2-2010

Advantage Environmental Consultants, LLC 8610 Washington Boulavard, Suite 217 Jessup, Maryland 20794 301-776-0500	Drawn by: JSS	Checked by: JSS	Figure 10 - Conceptual Model Cross Section Royal Farms No. 64 7950 Pulaski Highway Baltimore, Maryland 21237
	Date: 2-15-10	Revision: First	



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Project No.: 05-056	Drawn by: JSS
Task No.: RF64	Date: 2-3-10
File: Site Features	Revision No.: 1

Figure 11 - Site Utilities Map
Royal Farms No. 64
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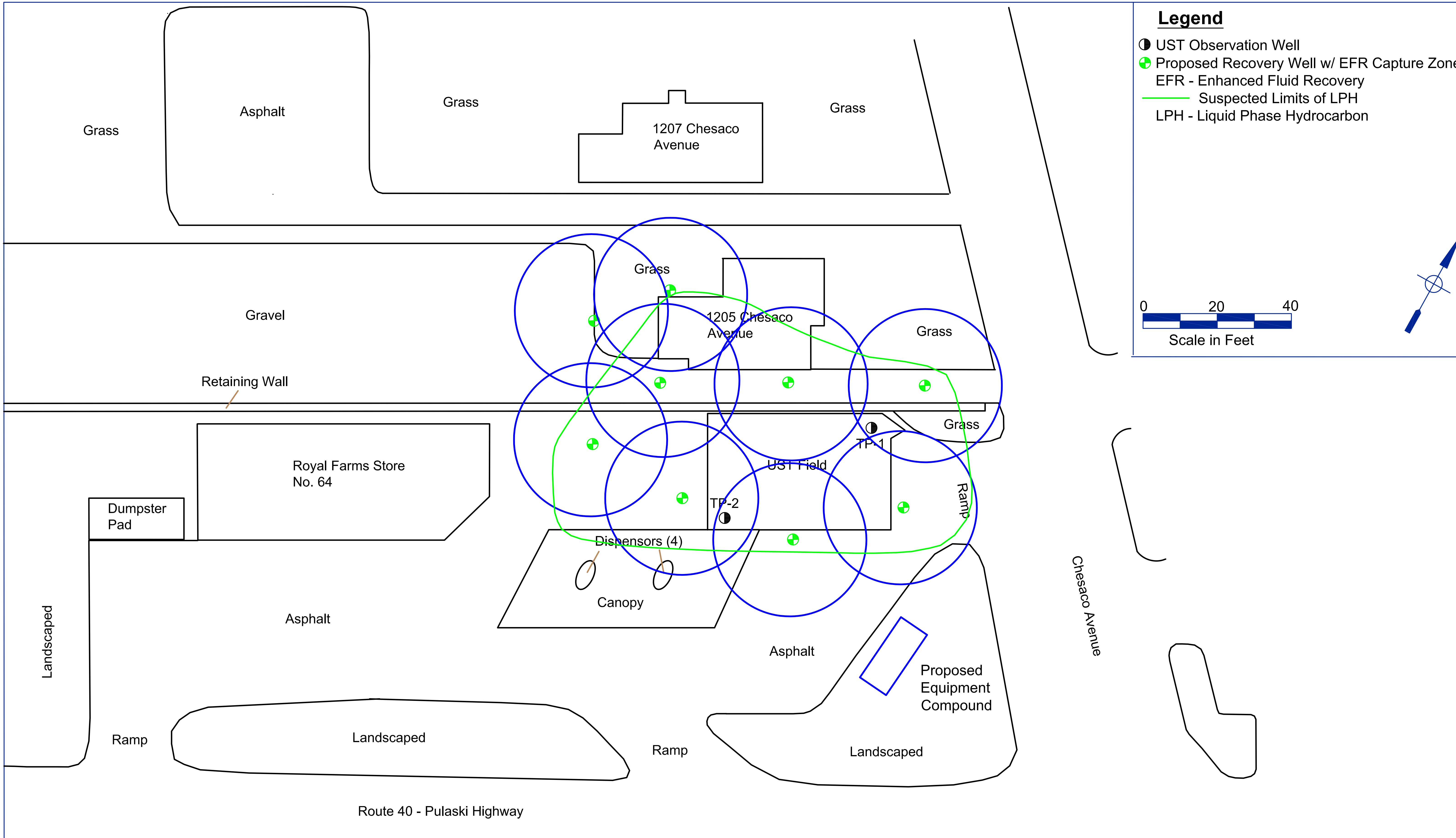
Baltimore, MD 21237



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Task No.: RF64	Date: 7-27-10
File: Proposed	Revision No.: 1

Figure 12 - Proposed Remediation Zone Map
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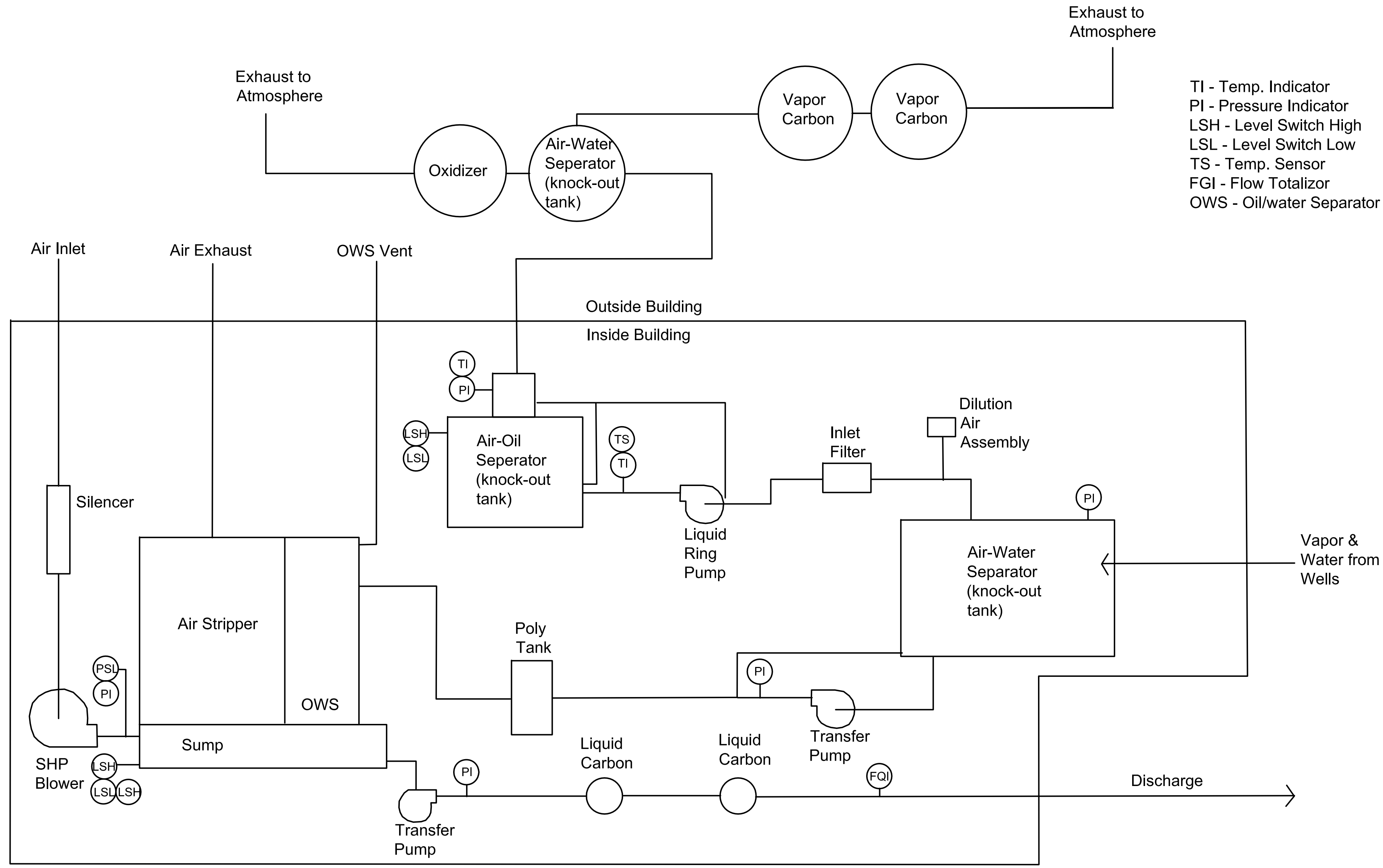
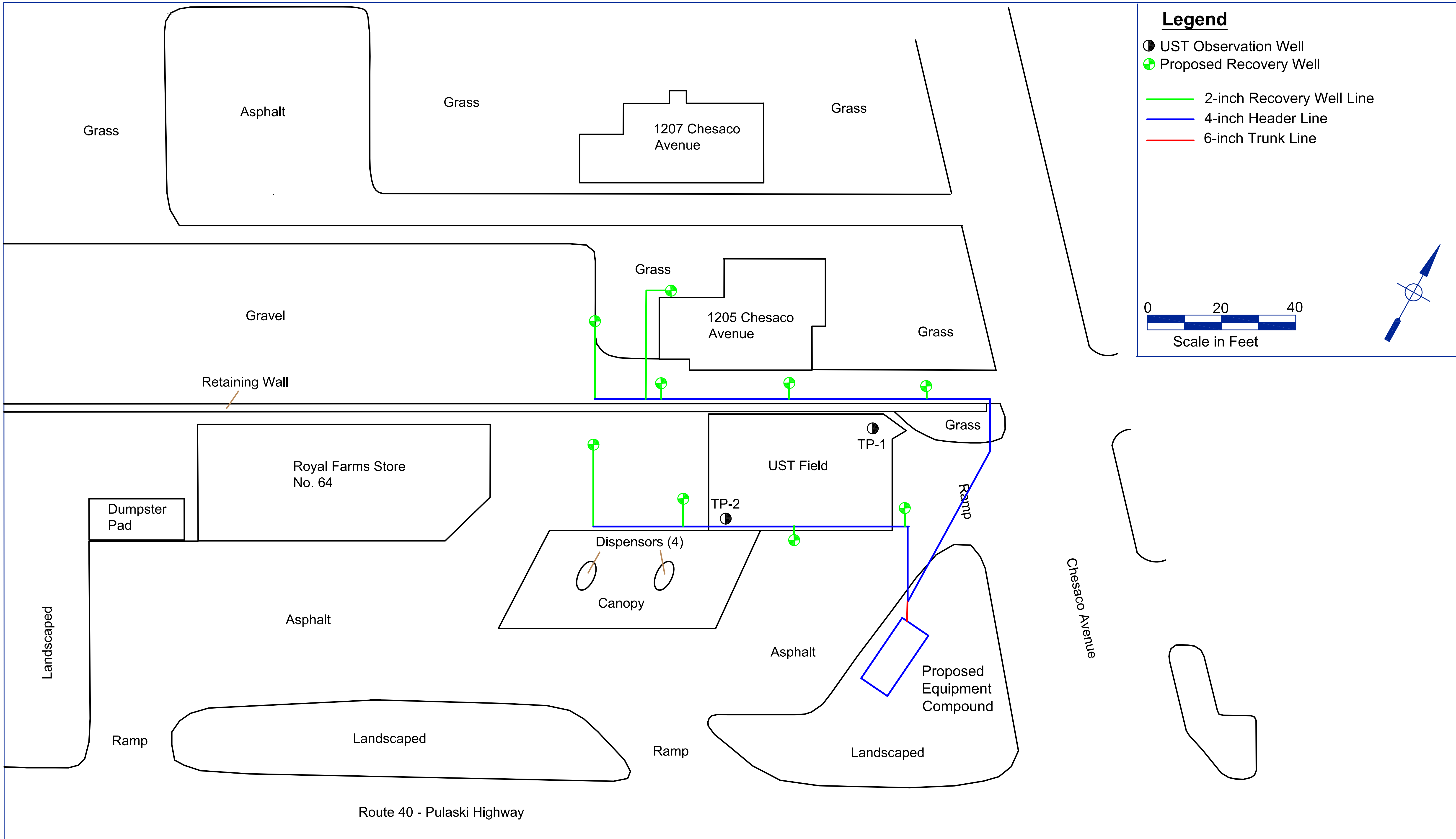
Baltimore, MD 21237

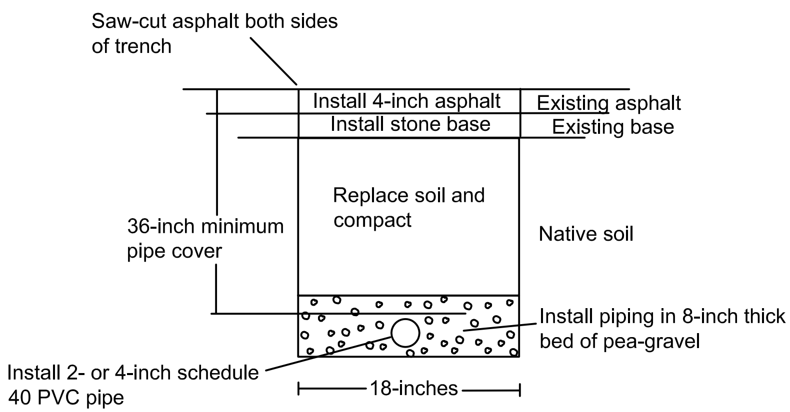


Advantage Environmental Consultants, LLC 8610 Washington Boulavard, Suite 217 Jessup, Maryland 20794 301-776-0500	Drawn by: JSS	Checked by: JSS	Figure 13 - Process & Instrumentation Diagram Royal Farms No. 64 7950 Pulaski Highway Baltimore, Maryland 21237
	Date: 10-4-10	Revision: First	

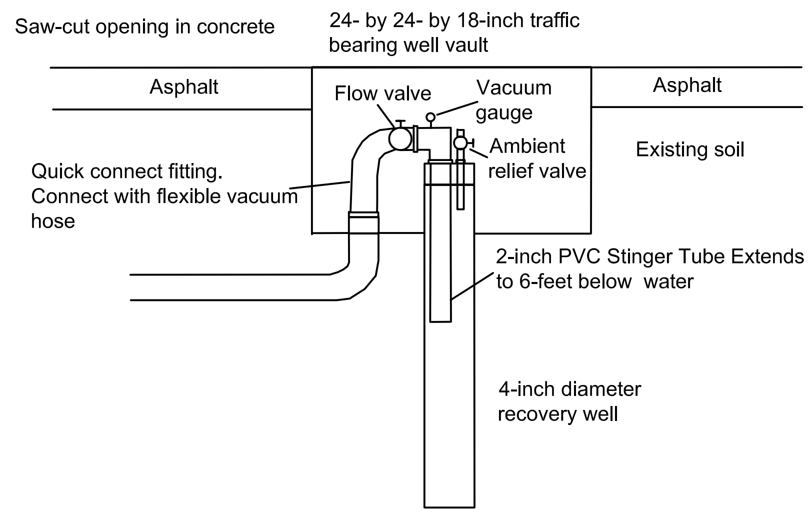


Advantage Environmental Consultants, LLC 8610 Washington Blvd. Suite 217 Jessup, MD 20794 Phone 301-776-0500 Fax 301-776-1123	Project No.: 05-056	Drawn by: TER	Figure 14 - Proposed Trench Configuration Map Royal Farms No. 64 7950 Pulaski Highway Baltimore, MD 21237
	Task No.: RF64	Date: 7-27-10	
	File: Proposed	Revision No.: 1	

Trench Section (Typical)



Well Head Set Up (Typical)



Advantage Environmental Consultants, LLC 8610 Washington Boulavard, Suite 217 Jessup, Maryland 20794 301-776-0500	Drawn by: JSS	Checked by: JSS	Figure 15 - Vault and Trench Details Royal Farms No. 64 7950 Pulaski Highway Baltimore, Maryland 21237
	Date: 10-4-10	Revision: First	

APPENDIX B

BORING LOGS AND MONITORING WELL CONSTRUCTION DIAGRAMS

Boring / Well Completion Report

Boring / Well ID: B-25	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/2/2010	**Date Work Ended:** 7/2/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: Geoprobe	**Drilling Fluid:** N/A
Boring Diameter (inches): 2.25	**Drilling Contractor:** Vironex

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	1	Asphalt and gravel sub base	0.0 @1’		
1	3	Orangish brown/grey silty CLAY (CL) w/some sand, stiff,	0.0 @ 4’		
		moist	0.0 @ 5’		
3	7.5	Reddish brown/orange silty SAND (SM), med. stiffness,	0.0 @ 8’		
		moist	0.0 @ 9’		
7.5	8	Dk, grey (possibly stained) silty CLAY (CL), stiff, moist	0.0 @ 12’		7.5-8’
8	12	Orangish brown silty CLAY (CL), stiff, moist	0.0 @ 13’		
12	20	Orangish brown silty CLAY (CL), w/ some sand and	0.0 @ 16’		
		gravel, saturated and very loose @ 12’	0.0 @ 18’		
20	25	Orangish brown silty SAND (SM), saturated, very loose	0.0 @ 20’		
		(no recovery 20-24’)	0.0 @ 21’		
			0.0 @ 25’		
		Boring terminated @ 25’ bgs			

Water Level of Completed Well

First water (ft. bgs): 9.65	**Date/Time Measured:** 7/2/10@ 0930
Static Water (ft. bgs): 9.45	**Date/Time Measured:** 7/6/10@ 0825

Boring Location Sketch

See Figure 3

Well Construction Details

Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	6.04
Depth to Top of Sand Pack (ft. bgs)	6.04
Depth to Bottom of Sand Pack (ft. bgs)	21.04
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	8.04
Depth to Top of Screen (ft. bgs)	8.04
Depth to Bottom of Screen (ft. bgs)	21.04
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Page 1 of Page 1	Boring / Well Completion Report	
Boring / Well ID: B-26	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/2/2010	**Date Work Ended:** 7/2/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: Geoprobe	**Drilling Fluid:** N/A
Boring Diameter (inches): 2.25	**Drilling Contractor:** Vironex

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	1	Asphalt and gravel sub base	0.0 @ 1’		
1	8	Orangish brown/reddish brown silty SAND (SM), dry, med.	0.0 @ 4’		
		stiffness	0.0 @ 5’		
8	12	No Recovery	0.0 @ 8’		7.5-8’
12	14	Orangish brown silty CLAY (ML) w/ some sand and	0.0 @ 13’		
		gravel, wet, moist	0.0 @ 16’		
14	16	Orangish brown silty CLAY (ML) w/ some grey mottling,	0.0 @ 17’		
		stiff, dry	0.0 @ 20’		
16	17	Orangish brown silty CLAY (ML), wet, loose	0.0 @ 21’		
17	21	Orangish brown silty SAND (SM), wet, very loose	0.0 @ 24’		
21	25	Reddish brown silty CLAY (ML), stiff, dry	0.0 @ 25’		
		Boring terminated @ 25’			

Water Level of Completed Well

First water (ft. bgs): 9.90	**Date/Time Measured:** 7/2/10 @ 1047
Static Water (ft. bgs): 9.04	**Date/Time Measured:** 7/6/10 @ 0830

Well Construction Details

Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	3.01
Depth to Top of Sand Pack (ft. bgs)	3.01
Depth to Bottom of Sand Pack (ft. bgs)	25.01
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	5.01
Depth to Top of Screen (ft. bgs)	5.01
Depth to Bottom of Screen (ft. bgs)	25.01
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Boring / Well Completion Report

Boring / Well ID: B-27	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/2/2010	**Date Work Ended:** 7/2/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: Geoprobe	**Drilling Fluid:** N/A
Boring Diameter (inches): 2.25	**Drilling Contractor:** Vironex

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	1	Asphalt and gravel sub base	0.0 @ 1’		
1	8	Orangish brown/tan silty SAND (SM), loose, moist	0.0 @ 4’	Slight	
8	12	Brown silty SAND (SM), moist, loose, slight petroleum	0.0 @ 5’	Slight	
		staining	31.7 @ 7’		6.5-7’
12	16	Orangish brown silty CLAY (ML), with grey mottling, stiff,	0.0 @ 9’		
		moist	0.0 @ 12’		
16	24	Orangish brown silty SAND (SM), wet, very loose, 20%	28.8 @ 13’		
		recovery	0.0 @ 16’		
24	25	Grey silty CLAY (ML), stiff, moist	0.0 @ 20’		
			0.0 @ 21’		
		Boring terminated @ 25’	0.0 @ 25’		

Water Level of Completed Well

First water (ft. bgs): 7.81	**Date/Time Measured:** 7/2/10 @ 1310
Static Water (ft. bgs): 8.61	**Date/Time Measured:** 7/6/10 @ 0832

Well Construction Details

Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	1.71
Depth to Top of Sand Pack (ft. bgs)	1.71
Depth to Bottom of Sand Pack (ft. bgs)	23.71
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	3.71
Depth to Top of Screen (ft. bgs)	3.71
Depth to Bottom of Screen (ft. bgs)	23.71
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Page 1 of Page 1	Boring / Well Completion Report	
Boring / Well ID: B-28	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/2/2010	**Date Work Ended:** 7/2/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: Geoprobe	**Drilling Fluid:** N/A
Boring Diameter (inches): 2.25	**Drilling Contractor:** Vironex

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	1	Asphalt and gravel sub base	0.0 @ 1'		
1	5	Dk. Brown silty CLAY (ML), stiff, dry	2.6 @ 5'		
5	8	Dk. Brown silty CLAY (ML) w/ some gravel, stiff, dry	2.0 @ 12'		4.5-5'
		20% recovery	586 @ 13'		
8	12	Dk. Brown silty Clay (ML), wet, med. stiffness 20%	0.0 @ 16'		
		recovery	0.0 @ 17'		
12	13	Dk. Brown silty CLAY (ML), loose, wet, heavy staining	0.0 @ 20'	Heavy	
13	16	Orangish brown silty CLAY (ML), stiff, moist	0.0 @ 21'		
16	25	Orangish brown silty SAND (SM), very loose, saturated	0.0 @ 24'		
		Boring terminated @ 25'			

Water Level of Completed Well

First water (ft. bgs): 9.25	**Date/Time Measured:** 7/2/10 @1420
Static Water (ft. bgs): 8.62	**Date/Time Measured:** 7/6/10 @0834

Well Construction Details

Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	3.21
Depth to Top of Sand Pack (ft. bgs)	3.21
Depth to Bottom of Sand Pack (ft. bgs)	25.21
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	5.21
Depth to Top of Screen (ft. bgs)	5.21
Depth to Bottom of Screen (ft. bgs)	25.21
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Boring / Well Completion Report

Boring / Well ID: B-29	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/2/2010	**Date Work Ended:** 7/2/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: Geoprobe	**Drilling Fluid:** N/A
Boring Diameter (inches): 2.25	**Drilling Contractor:** Vironex

Depth from Surface		Description			
Feet	Feet	Soil Classification	PID	Odor Comments	Sample Interval
0	1	Dk. Brown organics (OL) w/ gravel and sand, dry, loose	0.0 @ 1’		
1	8	Orangish brown silty CLAY (ML) w/ some grey mottling,	0.0 @ 4’		
		stiff, dry	0.0 @ 5’		
8	15	Reddish brown silty SAND (SM) w/ some clay, saturated,	0.0 @ 8’		
		very loose	0.0 @ 9’		
15	20	Reddish brown silty CLAY (ML), moist, stiff	0.0 @12’		
			0.0 @ 13’		
		Boring terminated @ 20’	0.0 @ 16’		
			0.0 @ 17’		
			0.0 @ 20’		

Water Level of Completed Well

First water (ft. bgs): 6.81	**Date/Time Measured:** 7/2/10 @1530
Static Water (ft. bgs): 7.35	**Date/Time Measured:** 7/6/10 @0815

Boring Location Sketch

See Figure 3

Well Construction Details

Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	1.22
Depth to Top of Sand Pack (ft. bgs)	1.22
Depth to Bottom of Sand Pack (ft. bgs)	20.22
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	3.22
Depth to Top of Screen (ft. bgs)	3.22
Depth to Bottom of Screen (ft. bgs)	20.22
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Page 1 of Page 1	Boring / Well Completion Report	
Boring / Well ID: B-30	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/12/2010	**Date Work Ended:** 7/12/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway		**City / State:** Rosedale, MD

Geologic Log

Drilling Method: Geoprobe | **Drilling Fluid:** N/A

Boring Diameter (inches): 2.25 | **Drilling Contractor:** Vironex

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	0.5	Asphalt/Gravel(GP)	0		
0.5	2	White Sand/Gravel (GM)	37 @ 2’		
2	8	Brown Silty CLAY (CL), soft	90 @ 8’		
8	12	Reddish Brown CLAY (CL), stiff w/ grey mottles	217 @ 11’		
12	14.5	Grey/Brown Silty CLAY (CL)	179 @ 13’		
14.5	15	Grey Clayey SILT (ML), moist	398 @ 15’		15’
15	18.5	Brown Silty CLAY (CL), soft	108 @ 16’		
18.5	22	Red/brown Silty CLAY (CL), stiff w/ grey mottles	133 @ 20’		
22	24	Reddish Brown Sandy CLAY (CL) w/ gravel	86.9 @ 23		
24	25	Brown Sandy CLAY (CL), soft	79.2 @ 25’		
		Boring terminated at 25’			

Water Level of Completed Well	
First water (ft. bgs): 19.62	**Date/Time Measured:** 7/12/10@0950
Static Water (ft. bgs): 10.45	**Date/Time Measured:** 7/13/10@0905

Boring Location Sketch

See Figure 3

Well Construction Details	
Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	5.52
Depth to Top of Sand Pack (ft. bgs)	5.52
Depth to Bottom of Sand Pack (ft. bgs)	22.52
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	7.52
Depth to Top of Screen (ft. bgs)	7.52
Depth to Bottom of Screen (ft. bgs)	22.52
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Boring / Well Completion Report

Boring / Well ID: B-31	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/12/2010	**Date Work Ended:** 7/12/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: Geoprobe	**Drilling Fluid:** N/A
Boring Diameter (inches): 2.25	**Drilling Contractor:** Vironex

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	0.5	Asphalt/Gravel (GP)	0		
0.5	2	White Sand/Gravel (GM)	154 @ 2’		
2	6	Brown Silty CLAY (CL), soft	5,000 @ 5’		5’
6	9	Reddish Brown Silty CLAY (CL), stiff w/ gravel	333 @ 6’		
9	12	Light Brown Clayey SAND (SC) w/ gravel	156 @ 9’		
12	15	Brown CLAY (CL) w/ grey/red mottles	118 @ 13’		
15	19	Brown Sandy CLAY (CL), soft	98 @ 17’		
19	25	Reddish Brown CLAY (CL), stiff w/ grey mottles	100 @ 21’		
		Boring terminated at 25’			

Water Level of Completed Well

First water (ft. bgs): 8.91	**Date/Time Measured:** 7/12/10@1140
Static Water (ft. bgs): 13.24	**Date/Time Measured:** 7/13/10@0910

Well Construction Details

Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	5.10
Depth to Top of Sand Pack (ft. bgs)	5.10
Depth to Bottom of Sand Pack (ft. bgs)	7.10
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	9.10
Depth to Top of Screen (ft. bgs)	9.10
Depth to Bottom of Screen (ft. bgs)	24.10
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Page 1 of Page 1	**Boring / Well Completion Report**	
Boring / Well ID: B-32	**Permit Number:** BA-95-3453	**Permit Date:** 6/25/10
Date Work Began: 7/12/2010	**Date Work Ended:** 7/12/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log					
Drilling Method: Geoprobe		**Drilling Fluid:** N/A			
Boring Diameter (inches): 2.25		**Drilling Contractor:** Vironex			
Depth from Surface		**Description**			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	15	No Recovery	N/A		
		Boring terminated at 15’			

Water Level of Completed Well	
First water (ft. bgs): 11.07	**Date/Time Measured:** 7/12/10@1220
Static Water (ft. bgs): 9.79	**Date/Time Measured:** 7/13/10@0915

Well Construction Details	
Well Diameter (inches)	1
Depth to Top of Bentonite Seal (ft. bgs)	0.25
Depth to Bottom of Bentonite Seal (ft. bgs)	0.97
Depth to Top of Sand Pack (ft. bgs)	0.97
Depth to Bottom of Sand Pack (ft. bgs)	2.97
Depth to Top of Solid Casing (ft. bgs)	0.15
Depth to Bottom of Solid Casing (ft. bgs)	4.97
Depth to Top of Screen (ft. bgs)	4.97
Depth to Bottom of Screen (ft. bgs)	14.97
Solid Casing and Screen Material	Schedule 40 PVC
Screen Slot Size	10

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Boring / Well Completion Report

Boring / Well ID: MW-10	**Permit Number:** BA-95-3462	**Permit Date:** ???
Date Work Began: 7/15/2010	**Date Work Ended:** 7/15/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: HSA	**Drilling Fluid:** N/A
Boring Diameter (inches): 4.25	**Drilling Contractor:** Connelly & Associates

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	4	Reddish Brown Silty CLAY (CL) w/ gravel, moist	0		
4	6	Orangish Brown Silty CLAY (CL), stiff and moist w/ some	0		Split Spoon
		grey mottling			
6	9	Orangish Brown/Reddish Brown Silty CLAY (CL), moist	0		
9	11	Reddish Brown Silty CLAY (CL), stiff and moist w/ trace	0		Split Spoon
		sand and some gravel			
11	14	Reddish Brown Sandy SILT (SM), w/ some clay, wet	0		
14	16	Reddish Brown Sandy CLAY (CL) w/ some silt, stiff, wet	0		Split Spoon
16	18	Reddish Brown Sandy SILT (SM) w/ some clay, wet			
18	20	Reddish Brown Silty CLAY (CL), stiff and wet w/ some			
		grey mottling			
		Boring Terminated at 20’			

Water Level of Completed Well

First water (ft. bgs): 3.50	**Date/Time Measured:** 7/15/10@1030
Static Water (ft. bgs):	**Date/Time Measured:**

Well Construction Details

Well Diameter (inches)	
Depth to Top of Bentonite Seal (ft. bgs)	
Depth to Bottom of Bentonite Seal (ft. bgs)	
Depth to Top of Sand Pack (ft. bgs)	
Depth to Bottom of Sand Pack (ft. bgs)	
Depth to Top of Solid Casing (ft. bgs)	
Depth to Bottom of Solid Casing (ft. bgs)	
Depth to Top of Screen (ft. bgs)	
Depth to Bottom of Screen (ft. bgs)	
Solid Casing and Screen Material	
Screen Slot Size	

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Page 1 of Page 1	**Boring / Well Completion Report**	
Boring / Well ID: MW-11	**Permit Number:** BA-95-3463	**Permit Date:** ???
Date Work Began: 7/15/2010	**Date Work Ended:** 7/15/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log					
Drilling Method: HSA		**Drilling Fluid:** N/A			
Boring Diameter (inches): 4.25		**Drilling Contractor:** Connelly & Associates			
Depth from Surface		**Description**			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	0.5	Asphalt	0		
0.5	4	Beige Silty CLAY (CL), loose, moist	0		
4	6	Reddish Brown Silty CLAY (CL) w/ some grey mottling,	0		Split Spoon
		stiff, moist			
6	9	Beige Silty CLAY (CL), moist	0		
9	11	Orangish Brown Silty CLAY (CL), stiff, moist	0		Split Spoon
11	14	Reddish Brown Silty CLAY (CL), moist	0		
14	16	Reddish Brown Silty CLAY (CL), stiff, dry	0		Split Spoon
16	18	Orangish Brown Silty CLAY (CL) stiff, moist	0		
18	20	Orangish Brown Sandy SILT (SM), medium stiffness, wet	0		Split Spoon
		Boring terminated at 20’			

Water Level of Completed Well	
First water (ft. bgs): 7.81	**Date/Time Measured:** 7/15/10@1630
Static Water (ft. bgs):	**Date/Time Measured:**

Well Construction Details	
Well Diameter (inches)	
Depth to Top of Bentonite Seal (ft. bgs)	
Depth to Bottom of Bentonite Seal (ft. bgs)	
Depth to Top of Sand Pack (ft. bgs)	
Depth to Bottom of Sand Pack (ft. bgs)	
Depth to Top of Solid Casing (ft. bgs)	
Depth to Bottom of Solid Casing (ft. bgs)	
Depth to Top of Screen (ft. bgs)	
Depth to Bottom of Screen (ft. bgs)	
Solid Casing and Screen Material	
Screen Slot Size	

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Boring / Well Completion Report

Boring / Well ID: MW-12	**Permit Number:** BA-95-3464	**Permit Date:** ???
Date Work Began: 7/15/2010	**Date Work Ended:** 7/15/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log

Drilling Method: HSA	**Drilling Fluid:** N/A
Boring Diameter (inches): 4.25	**Drilling Contractor:** Connelly & Associates

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	0.5	Asphalt	0		
0.5	4	Brown/Orangish Brown Silty CLAY (OL) w/ some organics,	0		
		moist			
4	6	Orangish Brown Silty CLAY (CL), stiff, moist	0		Split Spoon
6	9	Orangish Brown Silty CLAY (CL), moist	0		
9	11	Orangish Brown Silty CLAY (CL) w/ some sand, stiff, wet	0		Split Spoon
11	14	Orangish Brown Silty CLAY (CL) w/ some sand, wet	0		
14	16	Reddish Brown Silty CLAY (CL) w/ some sand, stiff, wet	0		Split Spoon
16	18	Reddish Brown Silty CLAY (CL), wet	0		
18	20	Orangish Brown Sandy SILT (SM), medium stiffness, wet	0		Split Spoon
		Boring Terminated at 20’			

Water Level of Completed Well

First water (ft. bgs): 6.0	**Date/Time Measured:** 7/15/20@1900
Static Water (ft. bgs):	**Date/Time Measured:**

Well Construction Details

Well Diameter (inches)	
Depth to Top of Bentonite Seal (ft. bgs)	
Depth to Bottom of Bentonite Seal (ft. bgs)	
Depth to Top of Sand Pack (ft. bgs)	
Depth to Bottom of Sand Pack (ft. bgs)	
Depth to Top of Solid Casing (ft. bgs)	
Depth to Bottom of Solid Casing (ft. bgs)	
Depth to Top of Screen (ft. bgs)	
Depth to Bottom of Screen (ft. bgs)	
Solid Casing and Screen Material	
Screen Slot Size	

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Page 1 of Page 1	Boring / Well Completion Report	
Boring / Well ID: MW-13	**Permit Number:** BA-95-3465	**Permit Date:** ???
Date Work Began: 7/16/2010	**Date Work Ended:** 7/16/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway	**City / State:** Rosedale, MD	

Geologic Log					
Drilling Method: HSA		**Drilling Fluid:** N/A			
Boring Diameter (inches): 6.25		**Drilling Contractor:** Connelly & Associates			
Depth from Surface		**Description**			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	1	Asphalt and ???	0		
1	4	Orangish Brown Silty CLAY (CL), dry	0		
4	6	Orangish Brown Silty SAND (SM), loose, dry	0		Split Spoon
6	9	Brown Clayey SILT (MH), moist	0		
9	10	Brown Clayey SILT (MH) w/ some petroleum staining	0	Slight	Split Spoon
10	11	Orangish Brown Clayey SILT (MH), stiff, moist	0		Split Spoon
11	14	Orangish Brown Silty CLAY (CL), moist	0		
14	16	Gravelly SAND (SW)	0		Split Spoon
16	19	Orangish Brown Silty CLAY (CL), moist	0		
19	19.5	Grayish Brown Silty CLAY (CL), loose, moist	0		Split Spoon
19.5	21	Reddish Brown CLAY (CL), stiff, moist	0		Split Spoon
21	24	Reddish Brown Silty CLAY (CL), moist	0		
24	26	Reddish Brown Silty CLAY (CL) w/ some gravel, moist	0		Split Spoon
26	28	Reddish Brown Silty CLAY (CL), stiff, moist	0		
28	30	Beige Silty CLAY (CL), stiff, moist	0		Split Spoon

Water Level of Completed Well	
First water (ft. bgs): 14.60	**Date/Time Measured:** 716/10@1200
Static Water (ft. bgs):	**Date/Time Measured:**

Well Construction Details	
Well Diameter (inches)	
Depth to Top of Bentonite Seal (ft. bgs)	
Depth to Bottom of Bentonite Seal (ft. bgs)	
Depth to Top of Sand Pack (ft. bgs)	
Depth to Bottom of Sand Pack (ft. bgs)	
Depth to Top of Solid Casing (ft. bgs)	
Depth to Bottom of Solid Casing (ft. bgs)	
Depth to Top of Screen (ft. bgs)	
Depth to Bottom of Screen (ft. bgs)	
Solid Casing and Screen Material	
Screen Slot Size	

Boring Location Sketch

See Figure 3

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
GM - Silty gravels, gravel-sand-silt mixtures. GC - Clayey gravels, gravel-sand-clay mixtures. SW - Well-graded sands and gravelly sands, little or no fines
SP - Poorly graded sands and gravelly sands, little or no fines. SM - Silty sands, sand-silt mixtures. SC - Clayey sands, sand-clay mixtures.
ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

Boring / Well Completion Report

Boring / Well ID: MW-14	**Permit Number:** BA-95-3466	**Permit Date:** ???
Date Work Began: 7/16/2010	**Date Work Ended:** 7/16/2010	**AEC Project No.:** 05-056 RF-64
Address: 7950 Pulaski Highway		**City / State:** Rosedale, MD

Geologic Log

Drilling Method: HSA	**Drilling Fluid:** N/A
Boring Diameter (inches): 6.25	**Drilling Contractor:** Connelly & Associates

Depth from Surface		Description			
Feet	**Feet**	**Soil Classification**	**PID**	**Odor Comments**	**Sample Interval**
0	0.5	Asphalt	0		
0.5	4	Orangish Brown Silty CLAY (CL), w/ some petroleum	6,257@4’		
		staining, moist			
4	6	Heavily stained Silty CLAY (CL) w/ some gravel, medium	9,157@6’	Strong	Split Spoon
		Stiffness, moist			
6	9	Dark Brown Silty CLAY (CL) w/ some staining, moist	1,872	Slight	
9	11	Greyish Brown Silty CLAY (CL), stiff, moist	1,143@11’		Split Spoon
11	14	Dark Brown Silty CLAY (CL), moist	2,505@14’		
14	15.5	Grey Clayey SILT (SM), stiff, moist	1,975@15’	Strong	Split Spoon
15.5	16	Reddish Brown Clayey SILT (MH), wet	7,225@16’		Split Spoon
16	19	Reddish Brown Clayey SILT (MH), wet	9,999		
19	21	Reddish Brown Silty SAND (SM), loose, wet	1,975@18’		Split Spoon
21	24	Reddish Brown Silty SAND (SM), med stiffness, saturated	1,999@21’		
24	25	Reddish Brown Silty SAND (SM), loose, wet	0		Split Spoon
25	26	Orangish Brown Silty CLAY (CL), medium stiffness, wet	291@26’		Split Spoon
26	28	Reddish Brown Silty SAND (SM), saturated	0		
28	30	Orangish Brown Silty SAND (SM), loose, wet	0		Split Spoon
		Boring terminated at 30’			

Water Level of Completed Well

First water (ft. bgs): 15.18	**Date/Time Measured:** 7/16/10@1530
Static Water (ft. bgs):	**Date/Time Measured:**

Boring Location Sketch

See Figure 3

Well Construction Details

Well Diameter (inches)	
Depth to Top of Bentonite Seal (ft. bgs)	
Depth to Bottom of Bentonite Seal (ft. bgs)	
Depth to Top of Sand Pack (ft. bgs)	
Depth to Bottom of Sand Pack (ft. bgs)	
Depth to Top of Solid Casing (ft. bgs)	
Depth to Bottom of Solid Casing (ft. bgs)	
Depth to Top of Screen (ft. bgs)	
Depth to Bottom of Screen (ft. bgs)	
Solid Casing and Screen Material	
Screen Slot Size	

GW - Well-graded gravels and gravel-sand mixtures, little or no fines. GP - Poorly graded gravels and gravel-sand mixtures, little or no fines.
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ML - Inorganic silts, very fine sands, rock flour, silty or clayey fine sands. CL - Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays.
OL - Organic silts and organic silty clays of low plasticity. MH - Inorganic silts micaceous or diatomaceous fine sands or silts, elastic silts.
CH - Inorganic clays or high plasticity, fat clays. OH - Organic clays of medium to high plasticity. PT - Peat, muck, and other highly organic soils

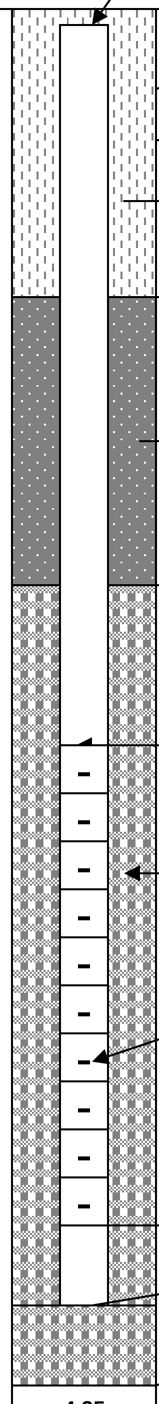
Monitoring Well Installation Report: 1205 Chesaco Avenue, Rosedale, Maryland 21237	**PROJECT #: 05-056RF064**	***Advantage Environmental Consultants, LLC***
DRILLING CONTRACTOR: **Connelly & Asssoc.** **AEC SUPERVISOR:** **Tony Rubino**	**WELL ID:** **MW-10**	**DATE BEGUN:** **7/15/2010** **DATE FINISHED:** **7/15/2010**

Reference Points & Elevations

WATER LEVEL (ft): **2.85**
DEPTH OF WELL (ft): **20'**
DRILLING METHOD: **Split Spoon**

TOP OF RISER CASING (ft): **89.17**

GROUND SURFACE (ft): **N/A**



SURFACE CASING DIA. (in.): **4.25"**
MATERIAL TYPE: **Steel Manhole Cover**

BACKFILL TYPE: **Grout**

RISER CASING DIA. (in.): **2"**
MATERIAL TYPE: **PVC**

ANNULAR SEAL
MATERIALTYPE: **Bentonite**

FILTER MATERIAL TYPE: **No. 2 Sand**

SCREEN DIA. (in.): **2"**
SCREEN MATERIALTYPE: **PVC**
SCREEN SLOT SIZE: **0.20**

	DEPTH (ft)	ELEV. (ft)
TOP OF SEAL (FT):	1.0	88.17
BOTTOM OF SEAL (FT):	2.0	87.17
TOP OF SCREEN (FT):	3.0	86.17
BOTTOM OF SCREEN (FT):	20.0	69.17
BOTTOM OF SUMP (FT):	N/A	N/A
BOTTOM OF HOLE (FT)	20.0	69.17

DATE DEVELOPED: **7/19/10**

METHOD DEVELOPED: **Surge Block & Aggressive Bailing**

4.25
BOREHOLE DIAMETER (in)

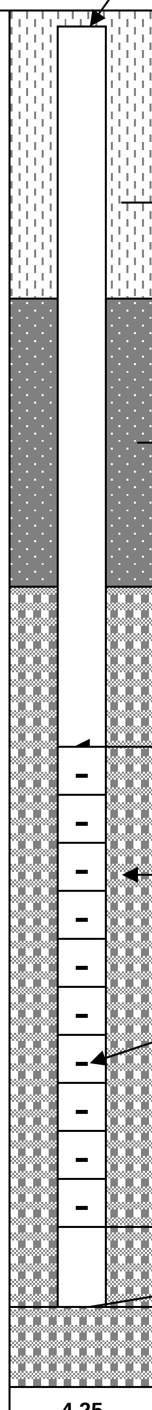
Monitoring Well Installation Report: 1207 Chesaco Avenue, Rosedale, Maryland 21237	PROJECT #: 05-056RF064	*Advantage Environmental Consultants, LLC*
DRILLING CONTRACTOR: Connelly & Assoc. AEC SUPERVISOR: Tony Rubino	WELL ID: MW-11	DATE BEGUN: 7/15/2010 DATE FINISHED: 7/15/2010

Reference Points & Elevations

WATER LEVEL (ft): 4.95
DEPTH OF WELL (ft): 20'
DRILLING METHOD: Split Spoon

TOP OF RISER CASING (ft): 91.08

GROUND SURFACE (ft): N/A



SURFACE CASING DIA. (in.): 4.25"
MATERIAL TYPE: Steel Manhole Cover

BACKFILL TYPE: Grout

RISER CASING DIA. (in.): 2"
MATERIAL TYPE: PVC

ANNULAR SEAL
MATERIALTYPE: Bentonite

FILTER MATERIAL TYPE: No. 2 Sand

SCREEN DIA. (in.): 2"
SCREEN MATERIALTYPE: PVC
SCREEN SLOT SIZE: 0.20

	DEPTH (ft)	ELEV. (ft)
TOP OF SEAL (FT):	1.0	90.08
BOTTOM OF SEAL (FT):	2.0	89.08
TOP OF SCREEN (FT):	3.0	88.08
BOTTOM OF SCREEN (FT):	20.0	71.08
BOTTOM OF SUMP (FT):	N/A	N/A
BOTTOM OF HOLE (FT)	20.0	71.08

DATE DEVELOPED: 7/19/10

METHOD DEVELOPED: Surge Block & Aggressive Bailing

4.25
BOREHOLE DIAMETER (in)

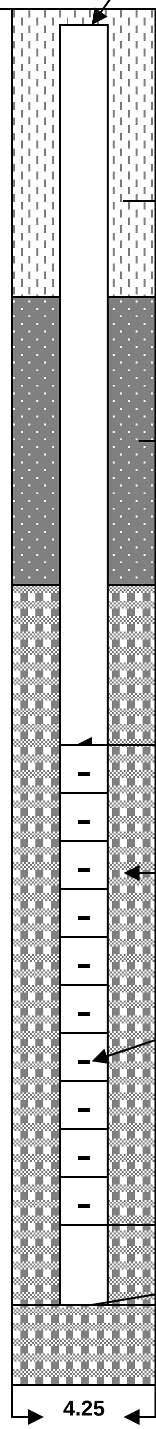
Monitoring Well Installation Report: 1207 Chesaco Avenue, Rosedale, Maryland 21237	**PROJECT #: 05-056RF064**	***Advantage Environmental Consultants, LLC***
DRILLING CONTRACTOR: **Connelly & Assoc.** **AEC SUPERVISOR:** **Tony Rubino**	**WELL ID:** **MW-12**	**DATE BEGUN:** **7/15/2010** **DATE FINISHED:** **7/15/2010**

Reference Points & Elevations

WATER LEVEL (ft): 6.88
DEPTH OF WELL (ft): 20'
DRILLING METHOD: Split Spoon

TOP OF RISER CASING (ft): 93.71

GROUND SURFACE (ft): N/A



SURFACE CASING DIA. (in.): 4.25"
MATERIAL TYPE: Steel Manhole Cover

BACKFILL TYPE: Grout

RISER CASING DIA. (in.): 2"
MATERIAL TYPE: PVC

ANNULAR SEAL
MATERIALTYPE: Bentonite

FILTER MATERIAL TYPE: No. 2 Sand

SCREEN DIA. (in.): 2"
SCREEN MATERIALTYPE: PVC
SCREEN SLOT SIZE: 0.20

	DEPTH (ft)	ELEV. (ft)
TOP OF SEAL (FT):	1.0	92.71
BOTTOM OF SEAL (FT):	2.0	91.71
TOP OF SCREEN (FT):	3.0	90.71
BOTTOM OF SCREEN (FT):	20.0	73.71
BOTTOM OF SUMP (FT):	N/A	N/A
BOTTOM OF HOLE (FT)	20.0	73.71

DATE DEVELOPED: 7/19/10

METHOD DEVELOPED: Surge Block & Aggressive Bailing

4.25

BOREHOLE DIAMETER (in)

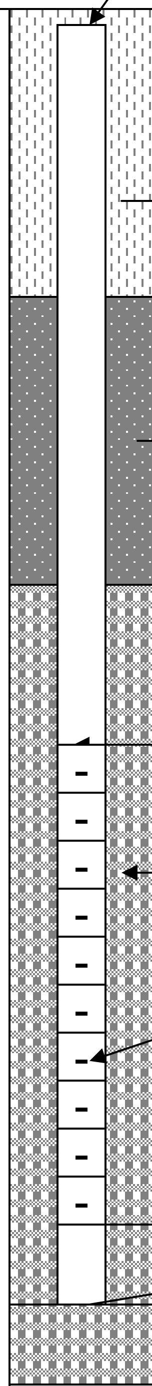
Monitoring Well Installation Report: 7950 Pulaski Highway, Rosedale, Maryland 21237	**PROJECT #: 05-056RF064**	***Advantage Environmental Consultants, LLC***
DRILLING CONTRACTOR: Connelly & Assoc. **AEC SUPERVISOR: Tony Rubino**	**WELL ID: MW-13**	**DATE BEGUN: 7/16/2010** **DATE FINISHED: 7/16/2010**

Reference Points & Elevations

WATER LEVEL (ft): 10.42
DEPTH OF WELL (ft): 30'
DRILLING METHOD: Split Spoon

TOP OF RISER CASING (ft): 99.80

GROUND SURFACE (ft): N/A



SURFACE CASING DIA. (in.): 6.25"
MATERIAL TYPE: Steel Manhole Cover

BACKFILL TYPE: Grout

RISER CASING DIA. (in.): 4"
MATERIAL TYPE: PVC

ANNULAR SEAL
MATERIALTYPE: Bentonite

FILTER MATERIAL TYPE: No. 2 Sand

SCREEN DIA. (in.): 4"
SCREEN MATERIALTYPE: PVC
SCREEN SLOT SIZE: 0.20

	DEPTH (ft)	ELEV. (ft)
TOP OF SEAL (FT):	1.0	98.80
BOTTOM OF SEAL (FT):	2.0	97.80
TOP OF SCREEN (FT):	3.0	96.80
BOTTOM OF SCREEN (FT):	30.0	69.80
BOTTOM OF SUMP (FT):	N/A	N/A
BOTTOM OF HOLE (FT)	30.0	69.80

DATE DEVELOPED: 7/19/10

METHOD DEVELOPED: Surge Block & Aggressive Bailing

6.25

BOREHOLE DIAMETER (in)

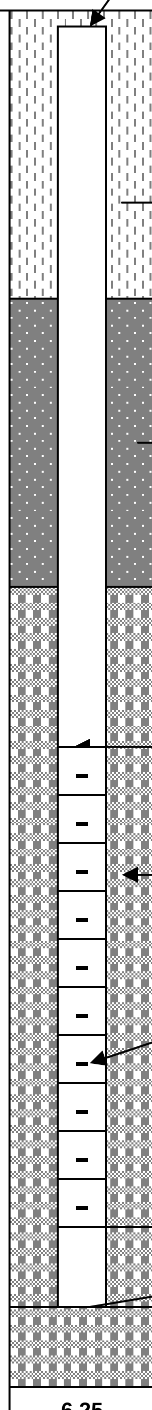
Monitoring Well Installation Report: 7950 Pulaski Highway, Rosedale, Maryland 21237	**PROJECT #: 05-056RF064**	***Advantage Environmental Consultants, LLC***
DRILLING CONTRACTOR: Connelly & Assoc. **AEC SUPERVISOR: Tony Rubino**	**WELL ID: MW-14**	**DATE BEGUN: 7/16/2010** **DATE FINISHED: 7/16/2010**

Reference Points & Elevations

WATER LEVEL (ft): 13.38
DEPTH OF WELL (ft): 30'
DRILLING METHOD: Split Spoon

TOP OF RISER CASING (ft): 99.24

GROUND SURFACE (ft): N/A



SURFACE CASING DIA. (in.): 6.25"
MATERIAL TYPE: Steel Manhole Cover

BACKFILL TYPE: Grout

RISER CASING DIA. (in.): 4"
MATERIAL TYPE: PVC

ANNULAR SEAL
MATERIALTYPE: Bentonite

FILTER MATERIAL TYPE: No. 2 Sand

SCREEN DIA. (in.): 4"
SCREEN MATERIALTYPE: PVC
SCREEN SLOT SIZE: 0.20

	DEPTH (ft)	ELEV. (ft)
TOP OF SEAL (FT):	1.0	98.24
BOTTOM OF SEAL (FT):	2.0	97.24
TOP OF SCREEN (FT):	3.0	96.24
BOTTOM OF SCREEN (FT):	30.0	69.24
BOTTOM OF SUMP (FT):	N/A	N/A
BOTTOM OF HOLE (FT)	30.0	69.24

DATE DEVELOPED: 7/19/10

METHOD DEVELOPED: Surge Block & Aggressive Bailing

6.25

BOREHOLE DIAMETER (in)

APPENDIX C

TABLES

Table 1 - Piezometer Gauging Summary
Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Rosedale, Maryland 21237

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
B-25	7/6/2010	9.45	9.45	100.09	90.64	90.64	90.64	0.00	
	7/72010	9.45	9.45	100.09	90.64	90.64	90.64	0.00	
	7/9/2010	9.56	9.56	100.09	90.53	90.53	90.53	0.00	
	7/12/2010	NG	NG	NG	NG	NG	NG	NG	
	7/13/2010	9.58	9.58	100.09	90.51	90.51	90.51	0.00	
	7/14/2010	NG	NG	NG	NG	NG	NG	NG	
	7/15/2010	9.65	9.65	100.09	90.44	90.44	90.44	0.00	
	7/16/2010	9.52	9.52	100.09	90.57	90.57	90.57	0.00	
	7/19/2010	10.16	10.16	100.09	89.93	89.93	89.93	0.00	
	7/22/1010	10.33	10.33	100.09	89.76	89.76	89.76	0.00	
	7/27/2010	10.42	10.42	100.09	89.67	89.67	89.67	0.00	
	7/29/2010	10.38	10.38	100.09	89.71	89.71	89.71	0.00	
	8/3/2010	10.61	10.61	100.09	89.48	89.48	89.48	0.00	
	8/5/2010	10.62	10.62	100.09	89.47	89.47	89.47	0.00	
B-26	7/6/2010	9.04	9.04	100.15	91.11	91.11	91.11	0.00	
	7/72010	9.03	9.03	100.15	91.12	91.12	91.12	0.00	
	7/9/2010	9.07	9.07	100.15	91.08	91.08	91.08	0.00	
	7/12/2010	NG	NG	NG	NG	NG	NG	NG	
	7/13/2010	9.10	9.1	100.15	91.05	91.05	91.05	0.00	
	7/14/2010	NG	NG	NG	NG	NG	NG	NG	
	7/15/2010	9.19	9.19	100.15	90.96	90.96	90.96	0.00	
	7/16/2010	9.08	9.08	100.15	91.07	91.07	91.07	0.00	
	7/19/2010	9.24	9.24	100.15	90.91	90.91	90.91	0.00	
	7/22/1010	9.48	9.48	100.15	NG	NG	NG	NG	
	7/27/2010	9.65	9.65	100.15	90.50	90.50	90.50	0.00	
	7/29/2010	9.58	9.58	100.15	90.57	90.57	90.57	0.00	
	8/3/2010	9.62	9.62	100.15	90.53	90.53	90.53	0.00	
	8/5/2010	9.60	9.6	100.15	90.55	90.55	90.55	0.00	
B-27	7/6/2010	8.61	8.61	99.92	91.31	91.31	91.31	0.00	
	7/72010	8.61	8.61	99.92	91.31	91.31	91.31	0.00	
	7/9/2010	8.65	8.65	99.92	91.27	91.27	91.27	0.00	
	7/12/2010	NG	NG	NG	NG	NG	NG	NG	
	7/13/2010	8.77	8.77	99.92	91.15	91.15	91.15	0.00	
	7/14/2010	NG	NG	99.92	NG	NG	NG	NG	
	7/15/2010	8.86	8.86	99.92	91.06	91.06	91.06	0.00	
	7/16/2010	8.00	8	99.92	91.92	91.92	91.92	0.00	
	7/19/2010	8.95	8.95	99.92	90.97	90.97	90.97	0.00	
	7/22/1010	9.17	9.17	99.92	90.75	90.75	90.75	0.00	
	7/27/2010	9.27	9.27	99.92	90.65	90.65	90.65	0.00	
	7/29/2010	9.24	9.24	99.92	90.68	90.68	90.68	0.00	
	8/3/2010	9.38	9.38	99.92	90.54	90.54	90.54	0.00	
	8/5/2010	9.35	9.35	99.92	90.57	90.57	90.57	0.00	
B-28	7/6/2010	8.62	8.62	99.24	90.62	90.62	90.62	0.00	
	7/72010	8.61	8.61	99.24	90.63	90.63	90.63	0.00	
	7/9/2010	9.41	9.41	99.24	89.83	89.83	89.83	0.00	
	7/12/2010	NG	NG	NG	NG	NG	NG	NG	
	7/13/2010	8.82	8.82	99.24	90.42	90.42	90.42	0.00	
	7/14/2010	NG	NG	99.24	NG	NG	NG	NG	
	7/15/2010	8.86	8.86	99.24	90.38	90.38	90.38	0.00	
	7/16/2010	8.78	8.78	99.24	90.46	90.46	90.46	0.00	
	7/19/2010	8.05	8.05	99.24	91.19	91.19	91.19	0.00	
	7/22/1010	9.04	9.04	99.24	90.20	90.20	90.20	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	7/27/2010	9.13	9.13	99.24	90.11	90.11	90.11	0.00	
	7/29/2010	9.05	9.05	99.24	90.19	90.19	90.19	0.00	
	8/3/2010	9.24	9.24	99.24	90.00	90.00	90.00	0.00	
	8/5/2010	9.04	9.04	99.24	90.20	90.20	90.20	0.00	
B-29	7/6/2010	7.35	7.35	87.31	79.96	79.96	79.96	0.00	
	7/72010	7.58	7.58	87.31	79.73	79.73	79.73	0.00	
	7/9/2010	7.83	7.83	87.31	79.48	79.48	79.48	0.00	
	7/12/2010	NG	NG	NG	NG	NG	NG	NG	
	7/13/2010	6.71	6.71	87.31	80.60	80.60	80.60	0.00	
	7/14/2010	NG	NG	NG	NG	NG	NG	NG	
	7/15/2010	6.25	6.25	87.31	81.06	81.06	81.06	0.00	
	7/16/2010	6.18	6.18	87.31	81.13	81.13	81.13	0.00	
	7/19/2010	7.06	7.06	87.31	80.25	80.25	80.25	0.00	
	7/22/1010	7.10	7.1	87.31	80.21	80.21	80.21	0.00	
	7/27/2010	7.57	7.57	87.31	79.74	79.74	79.74	0.00	
	7/29/2010	7.68	7.68	87.31	79.63	79.63	79.63	0.00	
	8/3/2010	7.71	7.71	87.31	79.60	79.60	79.60	0.00	
	8/5/2010	7.67	7.67	87.31	79.64	79.64	79.64	0.00	
B-30	7/12/2010	19.62	19.62	98.80	79.18	79.18	79.18	0.00	
	7/13/2010	10.45	10.45	98.80	88.35	88.35	88.35	0.00	
	7/14/2010	9.31	9.31	98.80	89.49	89.49	89.49	0.00	
	7/15/2010	12.05	12.05	98.80	86.75	86.75	86.75	0.00	
	7/16/2010	11.85	11.85	98.80	86.95	86.95	86.95	0.00	
	7/19/2010	12.00	12	98.80	86.80	86.80	86.80	0.00	
	7/22/1010	10.96	10.96	98.80	87.84	87.84	87.84	0.00	
	7/27/2010	13.29	13.29	98.80	85.51	85.51	85.51	0.00	
	7/29/2010	13.28	13.28	98.80	85.52	85.52	85.52	0.00	
	8/3/2010	13.46	13.46	98.80	85.34	85.34	85.34	0.00	
	8/5/2010	13.26	13.26	98.80	85.54	85.54	85.54	0.00	
B-31	7/12/2010	8.91	8.91	97.24	88.33	88.33	88.33	0.00	
	7/13/2010	13.24	13.24	97.24	84.00	84.00	84.00	0.00	
	7/14/2010	13.02	13.02	97.24	84.22	84.22	84.22	0.00	
	7/15/2010	13.32	13.32	97.24	83.92	83.92	83.92	0.00	
	7/16/2010	13.36	13.36	97.24	83.88	83.88	83.88	0.00	
	7/19/2010	13.17	13.17	97.24	84.07	84.07	84.07	0.00	
	7/22/1010	13.42	13.42	97.24	83.82	83.82	83.82	0.00	
	7/27/2010	13.47	13.47	97.24	83.77	83.77	83.77	0.00	
	7/29/2010	13.45	13.45	97.24	83.79	83.79	83.79	0.00	
	8/3/2010	13.54	13.54	97.24	83.70	83.70	83.70	0.00	
	8/5/2010	13.40	13.4	97.24	83.84	83.84	83.84	0.00	
B-32	7/12/2010	11.07	11.07	99.22	88.15	88.15	88.15	0.00	
	7/13/2010	9.79	9.79	99.22	89.43	89.43	89.43	0.00	
	7/14/2010	9.57	9.57	99.22	89.65	89.65	89.65	0.00	
	7/15/2010	10.79	10.79	99.22	88.43	88.43	88.43	0.00	
	7/16/2010	9.91	9.91	99.22	89.31	89.31	89.31	0.00	
	7/19/2010	9.50	9.5	99.22	89.72	89.72	89.72	0.00	
	7/22/1010	9.70	9.7	99.22	89.52	89.52	89.52	0.00	
	7/27/2010	9.81	9.81	99.22	89.41	89.41	89.41	0.00	
	7/29/2010	9.86	9.86	99.22	89.36	89.36	89.36	0.00	
	8/3/2010	9.87	9.87	99.22	89.35	89.35	89.35	0.00	
	8/5/2010	9.84	9.84	99.22	89.38	89.38	89.38	0.00	

NG = Not Gauged

Table 2 - Historic Monitoring Well Gauging Data (August and September 2010)
Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Baltimore, Maryland 21237

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
MW-1	8/2/2010	12.61	12.61	98.98	86.37	86.37	86.37	0.00	
	8/3/2010	12.91	12.91	98.98	86.07	86.07	86.07	0.00	
	8/4/2010	12.60	12.60	98.98	86.38	86.38	86.38	0.00	
	8/5/2010	12.88	12.88	98.98	86.10	86.10	86.10	0.00	
	8/6/2010	12.64	12.64	98.98	86.34	86.34	86.34	0.00	
	8/9/2010	12.71	12.71	98.98	86.27	86.27	86.27	0.00	
	8/10/2010	12.82	12.82	98.98	86.16	86.16	86.16	0.00	
	8/11/2010	12.77	12.77	98.98	86.21	86.21	86.21	0.00	
	8/12/2010	12.59	12.59	98.98	86.39	86.39	86.39	0.00	
	8/13/2010	12.02	12.02	98.98	86.96	86.96	86.96	0.00	
	8/16/2010	12.22	12.22	98.98	86.76	86.76	86.76	0.00	
	8/17/2010	12.60	12.60	98.98	86.38	86.38	86.38	0.00	
	8/18/2010	12.22	12.22	98.98	86.76	86.76	86.76	0.00	
	8/19/2010	12.01	12.01	98.98	86.97	86.97	86.97	0.00	
	8/20/2010	11.90	11.90	98.98	87.08	87.08	87.08	0.00	
	8/23/2010	12.07	12.07	98.98	86.91	86.91	86.91	0.00	
	8/25/2010	12.25	12.25	98.98	86.73	86.73	86.73	0.00	
	8/27/2010	12.48	12.48	98.98	86.50	86.50	86.50	0.00	
	8/30/2010	12.69	12.69	98.98	86.29	86.29	86.29	0.00	
	9/1/2010	12.61	12.61	98.98	86.37	86.37	86.37	0.00	
	9/3/2010	12.71	12.71	98.98	86.27	86.27	86.27	0.00	
	9/8/2010	12.78	12.78	98.98	86.20	86.20	86.20	0.00	
	9/10/2010	13.00	13.00	98.98	85.98	85.98	85.98	0.00	
	9/13/2010	12.62	12.62	98.98	86.36	86.36	86.36	0.00	
	9/15/2010	12.81	12.81	98.98	86.17	86.17	86.17	0.00	
	9/17/2010	12.90	12.90	98.98	86.08	86.08	86.08	0.00	
	9/20/2010	12.94	12.94	98.98	86.04	86.04	86.04	0.00	
	9/22/2010	13.09	13.09	98.98	85.89	85.89	85.89	0.00	
	9/24/2010	13.90	13.90	98.98	85.08	85.08	85.08	0.00	
	9/27/2010	12.09	12.09	98.98	86.89	86.89	86.89	0.00	
	9/29/2010	11.94	11.94	98.98	87.04	87.04	87.04	0.00	
MW-2	8/2/2010	12.75	12.75	99.42	86.67	86.67	86.67	0.00	Sheen
	8/3/2010	13.12	13.12	99.42	93.20	93.20	93.20	0.00	
	8/4/2010	12.77	12.77	99.42	86.65	86.65	86.65	0.00	Sheen
	8/5/2010	13.11	13.11	99.42	86.31	86.31	86.31	0.00	Sheen
	8/6/2010	12.83	12.82	99.42	86.59	86.60	86.60	0.01	
	8/9/2010	14.19	14.07	99.42	85.23	85.35	85.31	0.12	
	8/10/2010	13.00	13.00	99.42	93.03	93.03	93.03	0.00	Sheen
	8/11/2010	12.98	12.92	99.42	86.44	86.50	86.48	0.06	
	8/12/2010	12.82	12.82	99.42	86.60	86.60	86.60	0.00	Sheen
	8/13/2010	12.26	12.26	99.42	87.16	87.16	87.16	0.00	
	8/16/2010	12.50	12.40	99.42	86.92	87.02	86.99	0.10	
	8/17/2010	12.91	12.91	99.42	93.61	93.61	93.61	0.00	
	8/18/2010	12.49	12.43	99.42	86.93	86.99	86.97	0.06	
	8/19/2010	12.73	12.73	99.42	86.69	86.69	86.69	0.00	
	8/20/2010	11.47	11.47	99.42	87.95	87.95	87.95	0.00	
	8/23/2010	12.52	12.52	99.42	86.90	86.90	86.90	0.00	Sheen
	8/25/2010	12.71	12.71	99.42	86.71	86.71	86.71	0.00	Sheen
	8/27/2010	12.90	12.90	99.42	86.52	86.52	86.52	0.00	Sheen
	8/30/2010	12.88	12.88	99.42	86.54	86.54	86.54	0.00	Sheen
	9/1/2010	12.97	12.97	99.42	86.45	86.45	86.45	0.00	Sheen
	9/3/2010	12.92	12.92	99.42	86.50	86.50	86.50	0.00	Sheen
	9/8/2010	12.93	12.93	99.42	86.49	86.49	86.49	0.00	Sheen
	9/10/2010	13.20	13.20	99.42	86.22	86.22	86.22	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	9/13/2010	12.99	12.98	99.42	86.43	86.44	86.44	0.01	
	9/15/2010	13.19	13.19	99.42	86.23	86.23	86.23	0.00	Sheen
	9/17/2010	13.15	13.15	99.42	86.27	86.27	86.27	0.00	
	9/20/2010	13.16	13.15	99.42	86.26	86.27	86.27	0.01	
	9/22/2010	13.30	13.30	99.42	86.12	86.12	86.12	0.00	Sheen
	9/24/2010	13.41	13.41	99.42	86.01	86.01	86.01	0.00	Sheen
	9/27/2010	12.31	12.31	99.42	87.11	87.11	87.11	0.00	Sheen
	9/29/2010	12.89	12.89	99.42	86.53	86.53	86.53	0.00	Sheen
MW-3	8/2/2010	6.22	6.22	92.50	86.28	86.28	86.28	0.00	
	8/3/2010	6.57	6.57	92.50	85.93	85.93	85.93	0.00	
	8/4/2010	6.23	6.23	92.50	86.27	86.27	86.27	0.00	
	8/5/2010	6.56	6.56	92.50	85.94	85.94	85.94	0.00	
	8/6/2010	6.32	6.32	92.50	86.18	86.18	86.18	0.00	
	8/9/2010	6.39	6.39	92.50	86.11	86.11	86.11	0.00	
	8/10/2010	6.50	6.50	92.50	86.00	86.00	86.00	0.00	
	8/11/2010	6.41	6.41	92.50	86.09	86.09	86.09	0.00	
	8/12/2010	6.17	6.17	92.50	86.33	86.33	86.33	0.00	
	8/13/2010	5.60	5.60	92.50	86.90	86.90	86.90	0.00	
	8/16/2010	5.81	5.81	92.50	86.69	86.69	86.69	0.00	
	8/17/2010	6.33	6.33	92.50	86.17	86.17	86.17	0.00	
	8/18/2010	5.47	5.47	92.50	87.03	87.03	87.03	0.00	
	8/19/2010	6.02	6.02	92.50	86.48	86.48	86.48	0.00	
	8/20/2010	5.86	5.86	92.50	86.64	86.64	86.64	0.00	
	8/23/2010	6.01	6.01	92.50	86.49	86.49	86.49	0.00	
	8/25/2010	6.19	6.19	92.50	86.31	86.31	86.31	0.00	
	8/27/2010	6.40	6.40	92.50	86.10	86.10	86.10	0.00	
	8/30/2010	6.40	6.40	92.50	86.10	86.10	86.10	0.00	
	9/1/2010	6.46	6.46	92.50	86.04	86.04	86.04	0.00	
	9/3/2010	6.42	6.42	92.50	86.08	86.08	86.08	0.00	
	9/8/2010	6.46	6.46	92.50	86.04	86.04	86.04	0.00	
	9/10/2010	6.63	6.63	92.50	85.87	85.87	85.87	0.00	
	9/13/2010	6.26	6.26	92.50	86.24	86.24	86.24	0.00	
	9/15/2010	6.64	6.64	92.50	85.86	85.86	85.86	0.00	
	9/17/2010	6.47	6.47	92.50	86.03	86.03	86.03	0.00	
	9/20/2010	6.62	6.62	92.50	85.88	85.88	85.88	0.00	
	9/22/2010	6.77	6.77	92.50	85.73	85.73	85.73	0.00	
	9/24/2010	6.85	6.85	92.50	85.65	85.65	85.65	0.00	
	9/27/2010	5.08	5.08	92.50	87.42	87.42	87.42	0.00	
	9/29/2010	6.29	6.29	92.50	86.21	86.21	86.21	0.00	
MW-4	8/2/2010	7.29	7.29	93.77	86.48	86.48	86.48	0.00	
	8/3/2010	7.64	7.64	93.77	86.13	86.13	86.13	0.00	
	8/4/2010	6.57	6.57	93.77	87.20	87.20	87.20	0.00	
	8/5/2010	7.61	7.61	93.77	86.16	86.16	86.16	0.00	
	8/6/2010	7.32	7.32	93.77	86.45	86.45	86.45	0.00	
	8/9/2010	7.35	7.35	93.77	86.42	86.42	86.42	0.00	
	8/10/2010	7.50	7.50	93.77	86.27	86.27	86.27	0.00	
	8/11/2010	7.41	7.41	93.77	86.36	86.36	86.36	0.00	
	8/12/2010	6.67	6.67	93.77	87.10	87.10	87.10	0.00	
	8/13/2010	6.29	6.29	93.77	87.48	87.48	87.48	0.00	
	8/16/2010	6.47	6.47	93.77	87.30	87.30	87.30	0.00	
	8/17/2010	7.19	7.19	93.77	86.58	86.58	86.58	0.00	
	8/18/2010	7.00	7.00	93.77	86.77	86.77	86.77	0.00	
	8/19/2010	6.74	6.74	93.77	87.03	87.03	87.03	0.00	
	8/20/2010	6.83	6.83	93.77	86.94	86.94	86.94	0.00	
	8/23/2010	7.01	7.01	93.77	86.76	86.76	86.76	0.00	
	8/25/2010	7.21	7.21	93.77	86.56	86.56	86.56	0.00	Sheen
	8/27/2010	7.37	7.37	93.77	86.40	86.40	86.40	0.00	
	8/30/2010	7.37	7.37	93.77	86.40	86.40	86.40	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	9/1/2010	7.44	7.44	93.77	86.33	86.33	86.33	0.00	
	9/3/2010	7.46	7.45	93.77	86.31	86.32	86.32	0.01	
	9/8/2010	7.57	7.49	93.77	86.20	86.28	86.26	0.08	
	9/10/2010	7.61	7.61	93.77	86.16	86.16	86.16	0.00	
	9/13/2010	7.15	7.07	93.77	86.62	86.70	86.68	0.08	
	9/15/2010	7.66	7.66	93.77	86.11	86.11	86.11	0.00	Sheen
	9/17/2010	7.42	7.42	93.77	86.35	86.35	86.35	0.00	
	9/20/2010	7.57	7.56	93.77	86.20	86.21	86.21	0.01	
	9/22/2010	7.73	7.73	93.77	86.04	86.04	86.04	0.00	Sheen
	9/24/2010	7.90	7.90	93.77	85.87	85.87	85.87	0.00	
	9/27/2010	6.51	6.51	93.77	87.26	87.26	87.26	0.00	Sheen
	9/29/2010	7.01	7.01	93.77	86.76	86.76	86.76	0.00	Sheen
MW-5	8/2/2010	6.00	5.26	91.96	85.96	86.70	86.48	0.74	
	8/3/2010	6.01	5.85	91.96	85.95	86.11	86.06	0.16	
	8/4/2010	5.65	5.53	91.96	86.31	86.43	86.39	0.12	
	8/5/2010	5.91	5.84	91.96	86.05	86.12	86.10	0.07	
	8/6/2010	5.82	5.55	91.96	86.14	86.41	86.33	0.27	
	8/9/2010	6.10	5.56	91.96	85.86	86.40	86.24	0.54	
	8/10/2010	5.90	5.73	91.96	86.06	86.23	86.18	0.17	
	8/11/2010	5.71	5.61	91.96	86.25	86.35	86.32	0.10	
	8/12/2010	5.30	5.25	91.96	86.66	86.71	86.70	0.05	
	8/13/2010	4.66	4.66	91.96	87.30	87.30	87.30	0.00	
	8/16/2010	4.89	4.89	91.96	87.07	87.07	87.07	0.00	Sheen
	8/17/2010	5.62	5.62	91.96	86.34	86.34	86.34	0.00	
	8/18/2010	4.85	4.85	91.96	87.11	87.11	87.11	0.00	Sheen
	8/19/2010	5.11	5.11	91.96	86.85	86.85	86.85	0.00	
	8/20/2010	5.04	5.04	91.96	86.92	86.92	86.92	0.00	
	8/23/2010	5.26	5.26	91.96	86.70	86.70	86.70	0.00	Sheen
	8/25/2010	5.53	5.51	91.96	86.43	86.45	86.44	0.02	
	8/27/2010	5.67	5.67	91.96	86.29	86.29	86.29	0.00	Sheen
	8/30/2010	5.71	5.71	91.96	86.25	86.25	86.25	0.00	Sheen
	9/1/2010	5.80	5.79	91.96	86.16	86.17	86.17	0.01	
	9/3/2010	5.81	5.80	91.96	86.15	86.16	86.16	0.01	
	9/8/2010	5.70	5.69	91.96	86.26	86.27	86.27	0.01	
	9/10/2010	5.73	5.73	91.96	86.23	86.23	86.23	0.00	
	9/13/2010	5.58	5.58	91.96	86.38	86.38	86.38	0.00	
	9/15/2010	5.96	5.94	91.96	86.00	86.02	86.01	0.02	
	9/17/2010	5.45	5.45	91.96	86.51	86.51	86.51	0.00	
	9/20/2010	5.91	5.88	91.96	86.05	86.08	86.07	0.03	
	9/22/2010	6.01	6.01	91.96	85.95	85.95	85.95	0.00	Sheen
	9/24/2010	6.14	6.14	91.96	85.82	85.82	85.82	0.00	Sheen
	9/27/2010	4.94	4.91	91.96	87.02	87.05	87.04	0.03	
	9/29/2010	5.43	5.43	91.96	86.53	86.53	86.53	0.00	
MW-6	8/2/2010	13.36	13.36	99.15	85.79	85.79	85.79	0.00	
	8/3/2010	13.59	13.59	99.15	85.56	85.56	85.56	0.00	
	8/4/2010	13.34	13.34	99.15	85.81	85.81	85.81	0.00	
	8/5/2010	13.55	13.55	99.15	85.60	85.60	85.60	0.00	
	8/6/2010	13.37	13.37	99.15	85.78	85.78	85.78	0.00	
	8/9/2010	13.45	13.45	99.15	85.70	85.70	85.70	0.00	
	8/10/2010	13.52	13.52	99.15	85.63	85.63	85.63	0.00	
	8/11/2010	13.48	13.48	99.15	85.67	85.67	85.67	0.00	
	8/12/2010	13.37	13.37	99.15	85.78	85.78	85.78	0.00	
	8/13/2010	12.95	12.95	99.15	86.20	86.20	86.20	0.00	
	8/16/2010	13.07	13.07	99.15	86.08	86.08	86.08	0.00	
	8/17/2010	13.42	13.42	99.15	85.73	85.73	85.73	0.00	
	8/18/2010	13.27	13.27	99.15	85.88	85.88	85.88	0.00	
	8/19/2010	13.30	13.30	99.15	85.85	85.85	85.85	0.00	
	8/20/2010	13.13	13.13	99.15	86.02	86.02	86.02	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	8/23/2010	13.21	13.21	99.15	85.94	85.94	85.94	0.00	
	8/25/2010	13.35	13.35	99.15	85.80	85.80	85.80	0.00	
	8/27/2010	13.51	13.51	99.15	85.64	85.64	85.64	0.00	
	8/30/2010	13.51	13.51	99.15	85.64	85.64	85.64	0.00	
	9/1/2010	13.55	13.55	99.15	85.60	85.60	85.60	0.00	
	9/3/2010	13.51	13.51	99.15	85.64	85.64	85.64	0.00	
	9/8/2010	13.55	13.55	99.15	85.60	85.60	85.60	0.00	
	9/10/2010	13.71	13.71	99.15	85.44	85.44	85.44	0.00	
	9/13/2010	13.57	13.57	99.15	85.58	85.58	85.58	0.00	
	9/15/2010	13.72	13.72	99.15	85.43	85.43	85.43	0.00	
	9/17/2010	13.68	13.68	99.15	85.47	85.47	85.47	0.00	
	9/20/2010	13.71	13.71	99.15	85.44	85.44	85.44	0.00	
	9/22/2010	13.81	13.81	99.15	85.34	85.34	85.34	0.00	
	9/24/2010	13.89	13.89	99.15	85.26	85.26	85.26	0.00	
	9/27/2010	13.42	13.42	99.15	85.73	85.73	85.73	0.00	
	9/29/2010	13.51	13.51	99.15	85.64	85.64	85.64	0.00	
MW-7	8/2/2010	13.68	13.68	99.85	86.17	86.17	86.17	0.00	
	8/3/2010	14.42	14.42	99.85	85.43	85.43	85.43	0.00	
	8/4/2010	13.49	13.49	99.85	86.36	86.36	86.36	0.00	
	8/5/2010	14.29	14.29	99.85	85.56	85.56	85.56	0.00	
	8/6/2010	13.80	13.80	99.85	86.05	86.05	86.05	0.00	
	8/9/2010	13.85	13.85	99.85	86.00	86.00	86.00	0.00	
	8/10/2010	14.07	14.07	99.85	85.78	85.78	85.78	0.00	
	8/11/2010	13.93	13.93	99.85	85.92	85.92	85.92	0.00	
	8/12/2010	13.84	13.84	99.85	86.01	86.01	86.01	0.00	
	8/13/2010	13.30	13.30	99.85	86.55	86.55	86.55	0.00	
	8/16/2010	13.56	13.56	99.85	86.29	86.29	86.29	0.00	
	8/17/2010	14.24	14.24	99.85	85.61	85.61	85.61	0.00	
	8/18/2010	13.63	13.63	99.85	86.22	86.22	86.22	0.00	
	8/19/2010	14.16	14.16	99.85	85.69	85.69	85.69	0.00	
	8/20/2010	13.53	13.53	99.85	86.32	86.32	86.32	0.00	
	8/23/2010	13.57	13.57	99.85	86.28	86.28	86.28	0.00	
	8/25/2010	13.79	13.79	99.85	86.06	86.06	86.06	0.00	
	8/27/2010	13.96	13.96	99.85	85.89	85.89	85.89	0.00	
	8/30/2010	13.92	13.92	99.85	85.93	85.93	85.93	0.00	
	9/1/2010	14.01	14.01	99.85	85.84	85.84	85.84	0.00	
	9/3/2010	13.93	13.93	99.85	85.92	85.92	85.92	0.00	
	9/8/2010	13.98	13.98	99.85	85.87	85.87	85.87	0.00	
	9/10/2010	14.22	14.22	99.85	85.63	85.63	85.63	0.00	
	9/13/2010	14.01	14.01	99.85	85.84	85.84	85.84	0.00	
	9/15/2010	14.21	14.21	99.85	85.64	85.64	85.64	0.00	
	9/17/2010	14.17	14.17	99.85	85.68	85.68	85.68	0.00	
	9/20/2010	14.20	14.20	99.85	85.65	85.65	85.65	0.00	
	9/22/2010	14.40	14.40	99.85	85.45	85.45	85.45	0.00	
	9/24/2010	14.52	14.52	99.85	85.33	85.33	85.33	0.00	
	9/27/2010	13.75	13.75	99.85	86.10	86.10	86.10	0.00	
	9/29/2010	13.97	13.97	99.85	85.88	85.88	85.88	0.00	
MW-8	8/2/2010	13.58	13.58	100.10	86.52	86.52	86.52	0.00	
	8/3/2010	13.61	13.61	100.10	86.49	86.49	86.49	0.00	
	8/4/2010	13.25	13.25	100.10	86.85	86.85	86.85	0.00	
	8/5/2010	13.59	13.59	100.10	86.51	86.51	86.51	0.00	
	8/6/2010	13.27	13.27	100.10	86.83	86.83	86.83	0.00	
	8/9/2010	13.32	13.32	100.10	86.78	86.78	86.78	0.00	
	8/10/2010	13.45	13.45	100.10	86.65	86.65	86.65	0.00	
	8/11/2010	13.48	13.48	100.10	86.62	86.62	86.62	0.00	
	8/12/2010	13.30	13.30	100.10	86.80	86.80	86.80	0.00	
	8/13/2010	12.67	12.67	100.10	87.43	87.43	87.43	0.00	
	8/16/2010	12.75	12.75	100.10	87.35	87.35	87.35	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	8/17/2010	13.35	13.35	100.10	86.75	86.75	86.75	0.00	
	8/18/2010	13.04	13.04	100.10	87.06	87.06	87.06	0.00	
	8/19/2010	13.18	13.18	100.10	86.92	86.92	86.92	0.00	
	8/20/2010	12.85	12.85	100.10	87.25	87.25	87.25	0.00	
	8/23/2010	12.93	12.93	100.10	87.17	87.17	87.17	0.00	
	8/25/2010	13.16	13.16	100.10	86.94	86.94	86.94	0.00	
	8/27/2010	13.38	13.38	100.10	86.72	86.72	86.72	0.00	
	8/30/2010	13.36	13.36	100.10	86.74	86.74	86.74	0.00	
	9/1/2010	13.45	13.45	100.10	86.65	86.65	86.65	0.00	
	9/3/2010	13.38	13.38	100.10	86.72	86.72	86.72	0.00	
	9/8/2010	13.42	13.42	100.10	86.68	86.68	86.68	0.00	
	9/10/2010	13.69	13.69	100.10	86.41	86.41	86.41	0.00	
	9/13/2010	13.47	13.47	100.10	86.63	86.63	86.63	0.00	
	9/15/2010	13.70	13.70	100.10	86.40	86.40	86.40	0.00	
	9/17/2010	13.67	13.67	100.10	86.43	86.43	86.43	0.00	
	9/20/2010	13.69	13.69	100.10	86.41	86.41	86.41	0.00	
	9/22/2010	13.84	13.84	100.10	86.26	86.26	86.26	0.00	
	9/24/2010	13.95	13.95	100.10	86.15	86.15	86.15	0.00	
	9/27/2010	13.31	13.31	100.10	86.79	86.79	86.79	0.00	
	9/29/2010	13.46	13.46	100.10	86.64	86.64	86.64	0.00	
MW-9	8/2/2010	13.92	13.92	100.25	86.33	86.33	86.33	0.00	
	8/3/2010	14.16	14.16	100.25	86.09	86.09	86.09	0.00	
	8/4/2010	13.85	13.85	100.25	86.40	86.40	86.40	0.00	
	8/5/2010	13.59	13.59	100.25	86.66	86.66	86.66	0.00	
	8/6/2010	13.84	13.84	100.25	86.41	86.41	86.41	0.00	
	8/9/2010	13.85	13.85	100.25	86.40	86.40	86.40	0.00	
	8/10/2010	13.97	13.97	100.25	86.28	86.28	86.28	0.00	
	8/11/2010	13.89	13.89	100.25	86.36	86.36	86.36	0.00	
	8/12/2010	13.79	13.79	100.25	86.46	86.46	86.46	0.00	
	8/13/2010	13.22	13.22	100.25	87.03	87.03	87.03	0.00	
	8/16/2010	13.36	13.36	100.25	86.89	86.89	86.89	0.00	
	8/17/2010	13.91	13.91	100.25	86.34	86.34	86.34	0.00	
	8/18/2010	13.66	13.66	100.25	86.59	86.59	86.59	0.00	
	8/19/2010	13.73	13.73	100.25	86.52	86.52	86.52	0.00	
	8/20/2010	13.47	13.47	100.25	86.78	86.78	86.78	0.00	
	8/23/2010	13.44	13.44	100.25	86.81	86.81	86.81	0.00	
	8/25/2010	13.67	13.67	100.25	86.58	86.58	86.58	0.00	
	8/27/2010	13.74	13.74	100.25	86.51	86.51	86.51	0.00	
	8/30/2010	13.72	13.72	100.25	86.53	86.53	86.53	0.00	
	9/1/2010	13.78	13.78	100.25	86.47	86.47	86.47	0.00	
	9/3/2010	13.76	13.76	100.25	86.49	86.49	86.49	0.00	
	9/8/2010	13.73	13.73	100.25	86.52	86.52	86.52	0.00	
	9/10/2010	13.97	13.97	100.25	86.28	86.28	86.28	0.00	
	9/13/2010	13.80	13.80	100.25	86.45	86.45	86.45	0.00	
	9/15/2010	14.01	14.01	100.25	86.24	86.24	86.24	0.00	
	9/17/2010	13.94	13.94	100.25	86.31	86.31	86.31	0.00	
	9/20/2010	13.94	13.94	100.25	86.31	86.31	86.31	0.00	
	9/22/2010	14.10	14.10	100.25	86.15	86.15	86.15	0.00	
	9/24/2010	14.20	14.20	100.25	86.05	86.05	86.05	0.00	
	9/27/2010	NG	NG	NG	NG	NG	NG	NG	
	9/29/2010	13.71	13.71	100.25	86.54	86.54	86.54	0.00	
MW-10	8/2/2010	3.18	3.18	89.17	85.99	85.99	85.99	0.00	
	8/3/2010	3.47	3.47	89.17	85.70	85.70	85.70	0.00	
	8/4/2010	3.18	3.18	89.17	85.99	85.99	85.99	0.00	
	8/5/2010	3.45	3.45	89.17	85.72	85.72	85.72	0.00	
	8/6/2010	3.23	3.23	89.17	85.94	85.94	85.94	0.00	
	8/9/2010	3.29	3.29	89.17	85.88	85.88	85.88	0.00	
	8/10/2010	3.40	3.40	89.17	85.77	85.77	85.77	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	8/11/2010	3.33	3.33	89.17	85.84	85.84	85.84	0.00	
	8/12/2010	3.15	3.15	89.17	86.02	86.02	86.02	0.00	
	8/13/2010	2.57	2.57	89.17	86.60	86.60	86.60	0.00	
	8/16/2010	2.85	2.85	89.17	86.32	86.32	86.32	0.00	
	8/17/2010	3.22	3.22	89.17	85.95	85.95	85.95	0.00	
	8/18/2010	3.02	3.02	89.17	86.15	86.15	86.15	0.00	
	8/19/2010	3.10	3.10	89.17	86.07	86.07	86.07	0.00	
	8/20/2010	2.84	2.84	89.17	86.33	86.33	86.33	0.00	
	8/23/2010	2.93	2.93	89.17	86.24	86.24	86.24	0.00	
	8/25/2010	3.10	3.10	89.17	86.07	86.07	86.07	0.00	
	8/27/2010	3.29	3.29	89.17	85.88	85.88	85.88	0.00	
	8/30/2010	3.29	3.29	89.17	85.88	85.88	85.88	0.00	
	9/1/2010	3.34	3.34	89.17	85.83	85.83	85.83	0.00	
	9/3/2010	3.30	3.30	89.17	85.87	85.87	85.87	0.00	
	9/8/2010	3.37	3.37	89.17	85.80	85.80	85.80	0.00	
	9/10/2010	3.55	3.55	89.17	85.62	85.62	85.62	0.00	
	9/13/2010	3.36	3.36	89.17	85.81	85.81	85.81	0.00	
	9/15/2010	3.55	3.55	89.17	85.62	85.62	85.62	0.00	
	9/17/2010	3.51	3.51	89.17	85.66	85.66	85.66	0.00	
	9/20/2010	3.53	3.53	89.17	85.64	85.64	85.64	0.00	
	9/22/2010	3.67	3.67	89.17	85.50	85.50	85.50	0.00	
	9/24/2010	3.75	3.75	89.17	85.42	85.42	85.42	0.00	
	9/27/2010	3.08	3.08	89.17	86.09	86.09	86.09	0.00	
	9/29/2010	3.21	3.21	89.17	85.96	85.96	85.96	0.00	
MW-11	8/2/2010	5.26	5.26	91.95	86.69	86.69	86.69	0.00	
	8/3/2010	5.57	5.57	91.95	86.38	86.38	86.38	0.00	
	8/4/2010	5.30	5.30	91.95	86.65	86.65	86.65	0.00	
	8/5/2010	5.54	5.54	91.95	86.41	86.41	86.41	0.00	
	8/6/2010	5.33	5.33	91.95	86.62	86.62	86.62	0.00	
	8/9/2010	5.39	5.39	91.95	86.56	86.56	86.56	0.00	
	8/10/2010	5.49	5.49	91.95	86.46	86.46	86.46	0.00	
	8/11/2010	5.43	5.43	91.95	86.52	86.52	86.52	0.00	
	8/12/2010	5.23	5.23	91.95	86.72	86.72	86.72	0.00	
	8/13/2010	4.53	4.53	91.95	87.42	87.42	87.42	0.00	
	8/16/2010	4.84	4.84	91.95	87.11	87.11	87.11	0.00	
	8/17/2010	5.31	5.31	91.95	86.64	86.64	86.64	0.00	
	8/18/2010	5.12	5.12	91.95	86.83	86.83	86.83	0.00	
	8/19/2010	5.12	5.12	91.95	86.83	86.83	86.83	0.00	
	8/20/2010	4.95	4.95	91.95	87.00	87.00	87.00	0.00	
	8/23/2010	5.04	5.04	91.95	86.91	86.91	86.91	0.00	
	8/25/2010	5.22	5.22	91.95	86.73	86.73	86.73	0.00	
	8/27/2010	5.34	5.34	91.08	85.74	85.74	85.74	0.00	
	8/30/2010	5.33	5.33	91.08	85.75	85.75	85.75	0.00	
	9/1/2010	5.40	5.40	91.08	85.68	85.68	85.68	0.00	
	9/3/2010	5.36	5.36	91.08	85.72	85.72	85.72	0.00	
	9/8/2010	5.41	5.41	91.08	85.67	85.67	85.67	0.00	
	9/10/2010	5.60	5.60	91.08	85.48	85.48	85.48	0.00	
	9/13/2010	5.41	5.41	91.08	85.67	85.67	85.67	0.00	
	9/15/2010	5.60	5.60	91.08	85.48	85.48	85.48	0.00	
	9/17/2010	5.56	5.56	91.08	85.52	85.52	85.52	0.00	
	9/20/2010	5.58	5.58	91.08	85.50	85.50	85.50	0.00	
	9/22/2010	5.72	5.72	91.08	85.36	85.36	85.36	0.00	
	9/24/2010	5.80	5.80	91.08	85.28	85.28	85.28	0.00	
	9/27/2010	5.35	5.35	91.08	85.73	85.73	85.73	0.00	
	9/29/2010	5.25	5.25	91.08	85.83	85.83	85.83	0.00	
MW-12	8/2/2010	7.21	7.21	93.71	86.50	86.50	86.50	0.00	
	8/3/2010	7.41	7.41	93.71	86.30	86.30	86.30	0.00	
	8/4/2010	7.24	7.24	93.71	86.47	86.47	86.47	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	8/5/2010	7.42	7.42	93.71	86.29	86.29	86.29	0.00	
	8/6/2010	7.28	7.28	93.71	86.43	86.43	86.43	0.00	
	8/9/2010	7.32	7.32	93.71	86.39	86.39	86.39	0.00	
	8/10/2010	7.39	7.39	93.71	86.32	86.32	86.32	0.00	
	8/11/2010	7.37	7.37	93.71	86.34	86.34	86.34	0.00	
	8/12/2010	7.22	7.22	93.71	86.49	86.49	86.49	0.00	
	8/13/2010	6.45	6.45	93.71	87.26	87.26	87.26	0.00	
	8/16/2010	6.18	6.18	93.71	87.53	87.53	87.53	0.00	
	8/17/2010	6.94	6.94	93.71	86.77	86.77	86.77	0.00	
	8/18/2010	6.84	6.84	93.71	86.87	86.87	86.87	0.00	
	8/19/2010	6.88	6.88	93.71	86.83	86.83	86.83	0.00	
	8/20/2010	6.77	6.77	93.71	86.94	86.94	86.94	0.00	
	8/23/2010	6.94	6.94	93.71	86.77	86.77	86.77	0.00	
	8/25/2010	7.08	7.08	93.71	86.63	86.63	86.63	0.00	
	8/27/2010	7.26	7.26	93.71	86.45	86.45	86.45	0.00	
	8/30/2010	7.27	7.27	93.71	86.44	86.44	86.44	0.00	
	9/1/2010	7.34	7.34	93.71	86.37	86.37	86.37	0.00	
	9/3/2010	7.31	7.31	93.71	86.40	86.40	86.40	0.00	
	9/8/2010	7.37	7.37	93.71	86.34	86.34	86.34	0.00	
	9/10/2010	7.54	7.54	93.71	86.17	86.17	86.17	0.00	
	9/13/2010	7.44	7.44	93.71	86.27	86.27	86.27	0.00	
	9/15/2010	7.58	7.58	93.71	86.13	86.13	86.13	0.00	
	9/17/2010	7.58	7.58	93.71	86.13	86.13	86.13	0.00	
	9/20/2010	7.61	7.61	93.71	86.10	86.10	86.10	0.00	
	9/22/2010	7.70	7.70	93.71	86.01	86.01	86.01	0.00	
	9/24/2010	7.78	7.78	93.71	85.93	85.93	85.93	0.00	
	9/27/2010	7.67	7.67	93.71	86.04	86.04	86.04	0.00	
	9/29/2010	7.12	7.12	93.71	86.59	86.59	86.59	0.00	
MW-13	8/2/2010	10.73	10.73	99.8	89.07	89.07	89.07	0.00	
	8/3/2010	10.95	10.95	99.8	88.85	88.85	88.85	0.00	
	8/4/2010	10.63	10.63	99.8	89.17	89.17	89.17	0.00	
	8/5/2010	10.95	10.95	99.8	88.85	88.85	88.85	0.00	
	8/6/2010	10.78	10.78	99.8	89.02	89.02	89.02	0.00	
	8/9/2010	10.84	10.84	99.8	88.96	88.96	88.96	0.00	
	8/10/2010	10.93	10.93	99.8	88.87	88.87	88.87	0.00	
	8/11/2010	10.87	10.87	99.8	88.93	88.93	88.93	0.00	
	8/12/2010	10.81	10.81	99.8	88.99	88.99	88.99	0.00	
	8/13/2010	10.44	10.44	99.8	89.36	89.36	89.36	0.00	
	8/16/2010	10.52	10.52	99.8	89.28	89.28	89.28	0.00	
	8/17/2010	10.90	10.90	99.8	88.90	88.90	88.90	0.00	
	8/18/2010	10.69	10.69	99.8	89.11	89.11	89.11	0.00	
	8/19/2010	10.72	10.72	99.8	89.08	89.08	89.08	0.00	
	8/20/2010	10.54	10.54	99.8	89.26	89.26	89.26	0.00	
	8/23/2010	10.60	10.60	99.8	89.20	89.20	89.20	0.00	
	8/25/2010	10.71	10.71	99.8	89.09	89.09	89.09	0.00	
	8/27/2010	10.84	10.84	99.8	88.96	88.96	88.96	0.00	
	8/30/2010	10.85	10.85	99.8	88.95	88.95	88.95	0.00	
	9/1/2010	10.89	10.89	99.8	88.91	88.91	88.91	0.00	
	9/3/2010	10.84	10.84	99.8	88.96	88.96	88.96	0.00	
	9/8/2010	10.89	10.89	99.8	88.91	88.91	88.91	0.00	
	9/10/2010	11.05	11.05	99.8	88.75	88.75	88.75	0.00	
	9/13/2010	10.89	10.89	99.8	88.91	88.91	88.91	0.00	
	9/15/2010	11.08	11.08	99.8	88.72	88.72	88.72	0.00	
	9/17/2010	11.04	11.04	99.8	88.76	88.76	88.76	0.00	
	9/20/2010	11.10	11.10	99.8	88.70	88.70	88.70	0.00	
	9/22/2010	11.20	11.20	99.8	88.60	88.60	88.60	0.00	
	9/24/2010	11.27	11.27	99.8	88.53	88.53	88.53	0.00	
	9/27/2010	10.99	10.99	99.8	88.81	88.81	88.81	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	9/29/2010	10.95	10.95	99.8	88.85	88.85	88.85	0.00	
MW-14	8/2/2010	12.75	12.60	99.24	86.49	86.64	86.60	0.15	
	8/3/2010	13.17	13.14	99.24	86.07	86.10	86.09	0.03	
	8/4/2010	12.81	12.74	99.24	86.43	86.50	86.48	0.07	
	8/5/2010	13.15	13.11	99.24	86.09	86.13	86.12	0.04	
	8/6/2010	13.01	12.85	99.24	86.23	86.39	86.34	0.16	
	8/9/2010	12.97	12.85	99.24	86.27	86.39	86.35	0.12	
	8/10/2010	13.21	13.02	99.24	86.03	86.22	86.16	0.19	
	8/11/2010	13.12	12.95	99.24	86.12	86.29	86.24	0.17	
	8/12/2010	12.98	12.80	99.24	86.26	86.44	86.39	0.18	
	8/13/2010	12.34	12.25	99.24	86.90	86.99	86.96	0.09	
	8/16/2010	12.51	12.40	99.24	86.73	86.84	86.81	0.11	
	8/17/2010	12.99	12.91	99.24	86.25	86.33	86.31	0.08	
	8/18/2010	12.71	12.57	99.24	86.53	86.67	86.63	0.14	
	8/19/2010	12.81	12.72	99.24	86.43	86.52	86.49	0.09	
	8/20/2010	12.66	12.50	99.24	86.58	86.74	86.69	0.16	
	8/23/2010	12.99	12.49	99.24	86.25	86.75	86.60	0.50	
	8/25/2010	12.94	12.70	99.24	86.30	86.54	86.47	0.24	
	8/27/2010	13.07	12.87	99.24	86.17	86.37	86.31	0.20	
	8/30/2010	12.95	12.85	99.24	86.29	86.39	86.36	0.10	
	9/1/2010	13.09	12.95	99.24	86.15	86.29	86.25	0.14	
	9/3/2010	13.16	12.90	99.24	86.08	86.34	86.26	0.26	
	9/8/2010	13.37	12.81	99.24	85.87	86.43	86.26	0.56	
	9/10/2010	13.50	13.15	99.24	85.74	86.09	85.99	0.35	
	9/13/2010	13.34	12.91	99.24	85.90	86.33	86.20	0.43	
	9/15/2010	13.31	13.15	99.24	85.93	86.09	86.04	0.16	
	9/17/2010	13.44	13.09	99.24	85.80	86.15	86.05	0.35	
	9/20/2010	13.22	13.08	99.24	86.02	86.16	86.12	0.14	
	9/22/2010	13.41	13.27	99.24	85.83	85.97	85.93	0.14	
	9/24/2010	13.42	13.38	99.24	85.82	85.86	85.85	0.04	
	9/27/2010	12.69	12.39	99.24	86.55	86.85	86.76	0.30	
	9/29/2010	12.99	12.82	99.24	86.25	86.42	86.37	0.17	
TP-1	8/2/2010	9.95	9.95	NM	NM	NM	NM	0.00	
	8/3/2010	9.96	9.96	NM	NM	NM	NM	0.00	
	8/4/2010	9.92	9.92	NM	NM	NM	NM	0.00	
	8/5/2010	9.92	9.92	NM	NM	NM	NM	0.00	
	8/6/2010	9.92	9.92	NM	NM	NM	NM	0.00	
	8/9/2010	9.95	9.95	NM	NM	NM	NM	0.00	
	8/10/2010	9.96	9.96	NM	NM	NM	NM	0.00	
	8/11/2010	9.96	9.96	NM	NM	NM	NM	0.00	
	8/12/2010	9.87	9.87	NM	NM	NM	NM	0.00	
	8/13/2010	9.62	9.62	NM	NM	NM	NM	0.00	
	8/16/2010	9.46	9.46	NM	NM	NM	NM	0.00	
	8/17/2010	9.50	9.50	NM	NM	NM	NM	0.00	
	8/18/2010	9.45	9.45	NM	NM	NM	NM	0.00	
	8/19/2010	9.41	9.41	NM	NM	NM	NM	0.00	
	8/20/2010	9.44	9.44	NM	NM	NM	NM	0.00	
	8/23/2010	9.61	9.61	NM	NM	NM	NM	0.00	
	8/25/2010	9.72	9.72	NM	NM	NM	NM	0.00	
	8/27/2010	9.81	9.81	NM	NM	NM	NM	0.00	
	8/30/2010	9.91	9.91	NM	NM	NM	NM	0.00	
	9/1/2010	9.99	9.99	NM	NM	NM	NM	0.00	
	9/3/2010	10.00	10.00	NM	NM	NM	NM	0.00	
	9/8/2010	10.05	10.05	NM	NM	NM	NM	0.00	
	9/10/2010	10.12	10.12	NM	NM	NM	NM	0.00	
	9/13/2010	9.95	9.95	NM	NM	NM	NM	0.00	
	9/15/2010	10.00	10.00	NM	NM	NM	NM	0.00	
	9/17/2010	9.99	9.99	NM	NM	NM	NM	0.00	

Well ID	Date	Depth to Water	Depth to LPH	TOC Elevation	Water Elevation	LPH Elevation	Corrected Water Elevation	LPH Thickness	Comments
	9/20/2010	10.00	10.00	NM	NM	NM	NM	0.00	
	9/22/2010	10.05	10.05	NM	NM	NM	NM	0.00	
	9/24/2010	10.10	10.10	NM	NM	NM	NM	0.00	
	9/27/2010	9.99	9.99	NM	NM	NM	NM	0.00	
	9/29/2010	9.88	9.88	NM	NM	NM	NM	0.00	
TP-2	8/2/2010	10.68	10.68	NM	NM	NM	NM	0.00	
	8/3/2010	10.69	10.69	NM	NM	NM	NM	0.00	
	8/4/2010	10.64	10.64	NM	NM	NM	NM	0.00	
	8/5/2010	10.65	10.65	NM	NM	NM	NM	0.00	
	8/6/2010	10.65	10.65	NM	NM	NM	NM	0.00	
	8/9/2010	10.67	10.67	NM	NM	NM	NM	0.00	
	8/10/2010	10.68	10.68	NM	NM	NM	NM	0.00	
	8/11/2010	10.68	10.68	NM	NM	NM	NM	0.00	
	8/12/2010	10.60	10.60	NM	NM	NM	NM	0.00	
	8/13/2010	10.36	10.36	NM	NM	NM	NM	0.00	
	8/16/2010	10.18	10.18	NM	NM	NM	NM	0.00	
	8/17/2010	10.22	10.22	NM	NM	NM	NM	0.00	
	8/18/2010	10.16	10.16	NM	NM	NM	NM	0.00	
	8/19/2010	10.14	10.14	NM	NM	NM	NM	0.00	
	8/20/2010	10.17	10.17	NM	NM	NM	NM	0.00	
	8/23/2010	10.33	10.33	NM	NM	NM	NM	0.00	
	8/25/2010	10.45	10.45	NM	NM	NM	NM	0.00	
	8/27/2010	10.54	10.54	NM	NM	NM	NM	0.00	
	8/30/2010	10.64	10.64	NM	NM	NM	NM	0.00	
	9/1/2010	10.71	10.71	NM	NM	NM	NM	0.00	
	9/3/2010	10.73	10.73	NM	NM	NM	NM	0.00	
	9/8/2010	10.77	10.77	NM	NM	NM	NM	0.00	
	9/10/2010	10.85	10.85	NM	NM	NM	NM	0.00	
	9/13/2010	10.67	10.67	NM	NM	NM	NM	0.00	
	9/15/2010	10.73	10.73	NM	NM	NM	NM	0.00	
	9/17/2010	10.71	10.71	NM	NM	NM	NM	0.00	
	9/20/2010	10.74	10.74	NM	NM	NM	NM	0.00	
	9/22/2010	10.78	10.78	NM	NM	NM	NM	0.00	
	9/24/2010	10.83	10.83	NM	NM	NM	NM	0.00	
	9/27/2010	10.70	10.70	NM	NM	NM	NM	0.00	
	9/29/2010	10.61	10.61	NM	NM	NM	NM	0.00	

All measurements in feet
NG = Not Gauged
NM = Not Measured
LPH = Liquid Phase Hydrocarbon
NA = Not Applicable
TOC = Top of Casing Elevation
Corrected water elevation based on LPH density of 0.7 grams per milliliter
*Change in TOC elevation due to well casing maintenance

Table 3 - Sump Groundwater Analytical Results
Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Rosedale, MD 21237

House No	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
1205	6/30/2010	34	95	57	960	1146	BDL	1.1	BDL
1207	6/30/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1209 1/2	6/30/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1209	7/15/2010	BDL	BDL	BDL	BDL	BDL	32	BDL	BDL
Type I and II Aquifers		**5**	**1000**	**700**	**10000**	**NRS**	**20**	**0.047**	**0.047**

TPH GRO and DRO results in parts per million or mg/l

BTEX and MTBE results in parts per billion or ug/l

BDL = Below Detection Limits

B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene

MTBE = Methyl-tert-butyl-ether

TPH GRO = Total Petroleum Hydrocarbons Gasoline Range Organics

TPH DRO = Total Petroleum Hydrocarbons Diesel Range Organics

NS = Not Sampled

Some compounds may have been detected but are not tabulated on this spreadsheet.

See laboratory analytical results reports for full results.

J Denotes Estimated Value

MDE Standards (Generic Numeric Cleanup Standards for Groundwater and Soil - Interim Final Guidance Update No. 2.1 - June 2

NRS = No Regulatory Standard

Table 4 - Soil Boring Analytical Results
Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Rosedale, MD 21237

Sample ID	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
B-25 8'	7/2/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-26 8'	7/2/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-27 7'	7/2/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-28 5'	7/2/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-29 5'	7/2/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-30 15'	7/12/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-31 5'	7/12/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-32	7/12/2010	NS	NS	NS	NS	NS	NS	NS	NS
Type I and II Aquifers		**52**	**8200**	**10000**	**20000**	**NRS**	**720**	**620**	**620**

TPH GRO and DRO results in parts per million or mg/l
BTEX and MTBE results in parts per billion or ug/l
BDL = Below Detection Limits
B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene
MTBE = Methyl-tert-butyl-ether
TPH GRO = Total Petroleum Hydrocarbons Gasoline Range Organics
TPH DRO = Total Petroleum Hydrocarbons Diesel Range Organics
NS = Not Sampled
Some compounds may have been detected but are not tabulated on this spreadsheet.
See laboratory analytical results reports for full results.
J Denotes Estimated Value
MDE Standards (Generic Numeric Cleanup Standards for Groundwater and Soil - Interim Final Guidance Update No. 2.1 - June 2
NRS = No Regulatory Standard

Table 5 - Piezometer Groundwater Analytical Results
Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Rosedale, MD 21237

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
B-25	7/9/2010	BDL	BDL	BDL	BDL	BDL	BDL	1.1	BDL
B-26	7/9/2010	130	62	93	64	349	BDL	1.1	BDL
B-27	7/9/2010	29	6.7	190	27	252.7	BDL	1.6	0.9
B-28	7/9/2010	70	BDL	190	120	380	BDL	1.8	0.7
B-29	7/9/2010	BDL	BDL	BDL	BDL	BDL	9.4	1.1	BDL
B-30	7/14/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B-31	7/14/2010	BDL	BDL	BDL	BDL	BDL	48	BDL	BDL
B-32	7/14/2010	NS	NS	NS	NS	NS	NS	NS	NS
Type I and II Aquifers		**5**	**1000**	**700**	**10000**	**NRS**	**20**	**0.047**	**0.047**

TPH GRO and DRO results in parts per million or mg/l

BTEX and MTBE results in parts per billion or ug/l

BDL = Below Detection Limits

B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene

MTBE = Methyl-tert-butyl-ether

TPH GRO = Total Petroleum Hydrocarbons Gasoline Range Organics

TPH DRO = Total Petroleum Hydrocarbons Diesel Range Organics

NS = Not Sampled

Some compounds may have been detected but are not tabulated on this spreadsheet.

See laboratory analytical results reports for full results.

J Denotes Estimated Value

MDE Standards (Generic Numeric Cleanup Standards for Groundwater and Soil - Interim Final Guidance Update No. 2.1 - June 2

NRS = No Regulatory Standard

Table 6 - Monitoring Well Groundwater Analytical Results
Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Rosedale, MD 21237

Well No.	Date	B	T	E	X	Total BTEX	MTBE	TPH GRO	TPH DRO
MW-1	7/22/2010	7,600	23,000	2,800	15,600	49000	BDL	86	9.2
MW-2	7/22/2010	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	7/22/2010	200	1,700	330	1,770	4000	BDL	7	1.6
MW-4	7/22/2010	5,200	22,000	2,900	17,000	47100	BDL	30	8
MW-5	7/22/2010	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	7/22/2010	3,300	9,200	1,500	8,100	22100	BDL	18	9.5
MW-7	7/22/2010	7,100	19,300	2,200	14,100	42700	BDL	16	12
MW-8	7/22/2010	870	1,400	200	740	3210	240	3	2
MW-9	7/22/2010	200	150	35	470	855	110	BDL	BDL
MW-10	7/22/2010	BDL	5.6	BDL	BDL	5.6	120	BDL	BDL
MW-11	7/22/2010	140	280	31	206	657	310	BDL	BDL
MW-12	7/22/2010	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-13	7/22/2010	BDL	15	BDL	BDL	15	BDL	BDL	BDL
MW-14	7/22/2010	NS	NS	NS	NS	NS	NS	NS	NS
Type I and II Aquifers		**5**	**1000**	**700**	**10000**	**NRS**	**20**	**0.047**	**0.047**

TPH GRO and DRO results in parts per million or mg/l
BTEX and MTBE results in parts per billion or ug/l
BDL = Below Detection Limits
B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene
MTBE = Methyl-tert-butyl-ether
TPH GRO = Total Petroleum Hydrocarbons Gasoline Range Organics
TPH DRO = Total Petroleum Hydrocarbons Diesel Range Organics
NS = Not Sampled
Some compounds may have been detected but are not tabulated on this spreadsheet.
See laboratory analytical results reports for full results.
J Denotes Estimated Value
MDE Standards (Generic Numeric Cleanup Standards for Groundwater and Soil - Interim Final Guidance Update No. 2.1 - June 2
NRS = No Regulatory Standard

Table 7 - 1207 Chesaco Avenue Indoor Air Quality (IAQ) Analytical Results
Gasoline Fueling Station – Royal Farms #64
7950 Pulaski Highway, Rosedale, MD 21237

Analyte	IAQ-01	IAQ-02	IAQ-03	AA-01	AA-02
Acetone	16.70 L	14.60 L	15.00 L	6.70 L	6.50 L
Benzene	2.71	2.00	2.72	1.16	1.21
Chloroform	1.23	0.97 U	1.47	0.97 U	0.97 U
Chloromethane	1.09	1.17	2.31	1.10	1.06
p-Dichlorobenzene	16.60	1.20 U	2.10	1.20 U	1.20 U
Dichlorodifluoromethane	2.62	2.68	2.38	2.43	2.44
Ethyl Acetate	4.77	10.10	4.82	3.50	3.02
Freon 113	1.50 U	3.40	1.70	1.50	1.50 U
Heptane	1.09	1.05	0.98	0.82 U	0.82 U
Hexane	3.60	6.20	3.70	3.10	2.90
Methylene Chloride	14.40 BL	11.10 BL	7.80 BL	5.20 U	5.20 U
Methyl Ethyl Ketone	3.04	4.79	3.30	1.83	2.17
Naphthalene	1.40	1.20	1.10 U	1.10 U	1.10 U
Toluene	4.56	4.88	9.96	3.32	3.11
Trichlorofluoromethane	2.30	4.60	1.70	1.50	1.50
1,2,4-Trimethylbenzene	0.98 U	0.98 U	2.53	0.98 U	0.98 U
1,3,5-Trimethylbenzene	0.98 U	0.98 U	1.26	0.98 U	0.98 U
2,2,4-Trimethylpentane	1.74	2.59	2.16	1.95	1.99
m- & p-Xylenes	1.70 U	1.70 U	2.60	1.70 U	1.70 U

All results reported in micrograms per cubic meter (µg/m3) or parts per billion (ppb)
All detected analytes are represented above
L = suspect artifact
U = less than reported quantitation limit
B = detected in laboratory blank

APPENDIX D

SOIL DISPOSAL MANIFEST

Log Number 15

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name Royal Farms

Address 7950 Pulaski Hiway

Rosedale, MD 21237

Phone No.

Shipping Location

Address SAME

Phone No.

Approval Number WS2000

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

GROSS 21.53 T
TARE ~~21.53~~ T
NET ~~0.00~~ T
10:30AM 09/14/2010

21.53	GROSS
11.67	TARE
4.50	NET
	TONNAGE

(14) Drums

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Anthony B Rl... — Anthony B Lusino — 9/10/10

Generator Authorized Agent Name — Signature — Shipment Date

TRANSPORTER

Transporter Name Clean Venture

Address 2931 Whittington Ave

Balto. MD

Driver Name (Print) Chuck Wajtek

Vehicle License No./State AM789 U NS

Truck Number ST-19

I hereby certify that the above named material was picked up at the generator site listed above.

[signature] — 9/10/10

Driver Signature — Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jose Po... — 9/14/10

Driver Signature — Delivery Date

DESTINATION

Site Name Soil Safe
16001 Mattawoman Drive
Brandywine, MD 20613
(240) 238-...

Phone No.

Address

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Theresa McIntire — 9/14/10

Name of Authorized Agent — Signature — Receipt Date

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

APPENDIX E

COMPLETED OCCUPIED DWELLING QUESTIONNAIRES FOR INDOOR AIR ASSMENT SURVEY

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 8-19-10

1. Name: Margaret Zuby

   Address: 1207 Chesaco Ave

   Balt. MD 21237

   Home Phone: 410-682-2155 Work Phone: ______

2. What is the best time to call to speak with you? ______ At: Work ❑ or Home ☑?

3. Are you the Owner ❑, Renter ☑, Other ❑ (please specify)______ of this Home/Structure?

4. Total number of occupants/persons at this location? 1
   Number of children? — Ages?______

5. How long have you lived at this location? ______

General Home Description

6. Type of Home/Structure (check only one): Single Family Home ❑, Duplex ❑, Condominium❑, Townhouse ❑, Other ❑ 1st Floor/Basement

7. Home/Structure Description: number of floors 2
   Basement? Yes ☑ No ❑
   Crawl Space? Yes ❑ No ☒
   If Yes, under how much of the house's area? ____%

8. Age of Home/Structure: 1951 years, Not sure/Unknown ❑

9. General Above-Ground Home/Structure construction (check all that apply):
   Wood ❑, Brick ☒, Concrete ❑, Cement block ❑, Other ❑______

10. Foundation Construction (check all that apply): ?
    Concrete slab ❑
    Fieldstone ❑
    Concrete block ❑

Belowgrade - Basement

Elevated above ground/grade ❑
Other____________________________

11. What is the source of your drinking water (check all that apply)?
Public water supply ☒
Private well ❑
Bottled water ❑
Other, please specify ______________________________

12. Do you have a private well for purposes other than drinking?
Yes ❑ No ☒
If yes, please describe what you use the well for:__________________________

13. Do you have a septic system? Yes ❑ No ☒ Not used ❑ Unknown ❑

14. Do you have standing water outside your home (pond, ditch, swale)? Yes ❑ No ☒

Basement Description, please check appropriate boxes.
<u>If you do not have a basement</u> go to question 23.

15. Is the basement finished ❑ or unfinished ☒?
16. If finished, how many rooms are in the basement? 1
How many are used for more than 2 hours/day?__________
17. Is the basement floor (check all that apply) concrete ☒, tile ❑, carpeted ❑, dirt ❑, other❑(describe)________________________?
18. Are the basement walls poured concrete ❑, cement block ❑, stone ❑, wood ❑, brick ❑, other❑ ____?
19. Does the basement have a moisture problem (check one only)?
Yes, frequently (3 or more times/yr) ❑
Yes, occasionally (1-2 times/yr) ❑
Yes, rarely (less than 1 time/yr) ❑
No ☒

20. Does the basement ever flood (check one only)?
Yes, frequently (3 or more times/yr) ❑
Yes, occasionally (1-2 times/yr) ❑
Yes, rarely (less than 1 time/yr) ❑
No ❑

21. Does the basement have any of the following? (check all that apply) Floor cracks ❑, Wall cracks ❑, Sump ❑, Floor drain ❑, Other hole/opening in floor ❑ (describe)_______

22. Are any of the following used or stored in the basement (check all that apply)
Paint ☐ Paint stripper/remover ☐ Paint thinner ☐
Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐
Laundry spot removers ☒ Drain cleaners ☐ Pesticides ☐

23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes ☐ No ☒
If yes, please specify what was done, where in the home, and what month:
____
____

24. Have you installed new carpeting in your home within the last year? Yes ☐ No ☒
If yes, when and where?______________________________

25. Do you regularly use or work in a dry cleaning service (check only one box)?
Yes, use dry-cleaning regularly (at least weekly) ☐
Yes, use dry-cleaning infrequently (monthly or less) ☐
Yes, work at a dry cleaning service ☐
No ☒

26. Does anyone in your home use solvents at work?
Yes ☐ If yes, how many persons__________
No ☒ If no, go to question 28

27. If yes for question 26 above, are the work clothes washed at home? Yes ☐ No ☐

28. Where is the washer/dryer located?
Basement ☒
Upstairs utility room ☐
Kitchen ☐
Garage ☐
Use a Laundromat ☐
Other, please specify ☐ ____________________________

29. If you have a dryer, is it vented to the outdoors? Yes ☒ No ☐

30. What type(s) of home heating do you have (check all that apply)
Fuel type: Gas ☒, Oil ☐, Electric ☐, Wood ☐, Coal ☐, Other__________________
Heat conveyance system:
Forced hot air ☐
Forced hot water ☐
Steam ☐
Radiant floor heat ☐
Wood stove ☐
Coal furnace ☐
Fireplace ☐
Other____________________

31. Do you have air conditioning? Yes ❑ No ☒ If yes, please check the appropriate type(s)
Central air conditioning ❑
Window air conditioning unit(s) ☒ 1 Back room / rarely used.
Other ❑, please specify ______

32. Do you use any of the following? Room fans ❑, Ceiling fans ❑, Attic fan ❑
Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes ❑ No ❑

33. Has your home had ~~termite or~~ other pesticide treatment: Yes ❑ No ❑ Unknown ❑
If yes, please specify type of pest controlled, May 2008
and approximate date of service inspected yearly 9-24-09

34. Water Heater Type: Gas ☒, Electric ❑, By furnace ❑, Other ❑ ______
Water heater location: Basement ☒, Upstairs utility room ❑, Garage ❑, Other ❑ (please describe) ______

35. What type of cooking appliance do you have? Electric ❑, Gas ❑, Other ❑ ______

36. Is there a stove exhaust hood present? Yes ☒ No ❑
Does it vent to the outdoors? Yes ❑ No ❑

37. Smoking in Home:
None ☒, Rare (only guests) ❑, Moderate (residents light smokers) ❑,
Heavy (at least one heavy smoker in household) ❑

38. If yes to above, what do they smoke?
Cigarettes ❑ Cigars ❑
Pipe ❑ Other ❑

39. Do you regularly use air fresheners? Yes ❑ No ☒

40. Does anyone in the home have indoor home hobbies of crafts involving: None ☒,
Heating ❑, soldering ❑, welding ❑, model glues ❑, paint ❑, spray paint,
wood finishing ❑, Other ❑ Please specify what type of hobby: ______

41. General family/home use of consumer products (please circle appropriate): Assume that **Never** = never used, **Hardly ever** = less than once/month, **Occasionally** = about once/month, **Regularly** = about once/week, and **Often** = more than once/week.

Product	Frequency of Use				
Spray-on deodorant	Never	Hardly ever	Occasionally	Regularly	Often

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often

(Question 41, continued)

Product	Frequency of Use				
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often

42. Please check weekly household cleaning practices:
    - Dusting ☑
    - Dry sweeping ☐
    - Vacuuming ☑
    - Polishing (furniture, etc) ☐
    - Washing/waxing floors ☐
    - Other ☐ ____________________

43. Other comments: ____________________

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 8/19/10

1. Name: ROBERT HARMIC

   Address: 1207 CHESACO AVE 2nd FLOOR

   BALTIMORE COUNTY MD 21237

   Home Phone: 410 918 9815 Work Phone: N/A

2. What is the best time to call to speak with you?________ At: Work ❑ or Home ☒?

3. Are you the Owner ❑, Renter ☒, Other ❑ (please specify)____________________ of this Home/Structure?

4. Total number of occupants/persons at this location? 2
   Number of children? N/A Ages? N/A

5. How long have you lived at this location? 13 YRS

General Home Description

6. Type of Home/Structure (check only one): Single Family Home ❑, Duplex ❑, Condominium❑, Townhouse ❑, Other ☒ ~~2 FLOOR~~ SINGLE HOME APT

7. Home/Structure Description: number of floors 2
   Basement? Yes ☒ No ❑
   Crawl Space? Yes ❑ No ☒
   If Yes, under how much of the house's area? ____%

8. Age of Home/Structure: 1951 ________ years, Not sure/Unknown ☒

9. General Above-Ground Home/Structure construction (check all that apply):
   Wood ❑, Brick ☒, Concrete ❑, Cement block ❑, Other ❑____________

10. Foundation Construction (check all that apply):
    Concrete slab ☒ ?
    Fieldstone ❑
    Concrete block ☒

Below grade Basement

Elevated above ground/grade ❑

Other DON'T KNOW

11. What is the source of your drinking water (check all that apply)?
    Public water supply ☒
    Private well ❑
    Bottled water ❑
    Other, please specify ______________

12. Do you have a private well for purposes other than drinking?
    Yes ❑ No ☒
    If yes, please describe what you use the well for: ______________

13. Do you have a septic system? Yes ❑ No ☒ Not used ❑ Unknown ❑

14. Do you have standing water outside your home (pond, ditch, swale)? Yes ❑ No ☒

Basement Description, please check appropriate boxes.
<u>If you do not have a basement</u> go to question 23.

15. Is the basement finished ❑ or unfinished ☒?
16. If finished, how many rooms are in the basement? N/A
    How many are used for more than 2 hours/day? ______
17. Is the basement floor (check all that apply) concrete ☒, tile ❑, carpeted ❑, dirt ❑, other ❑ (describe) DON'T KNOW?
18. Are the basement walls poured concrete ❑, cement block ❑, stone ❑, wood ❑, brick ❑, other ❑ DON'T KNOW ?
19. Does the basement have a moisture problem (check one only)?
    Yes, frequently (3 or more times/yr) ❑
    Yes, occasionally (1-2 times/yr) ❑
    Yes, rarely (less than 1 time/yr) ❑
    No ☒

20. Does the basement ever flood (check one only)?
    Yes, frequently (3 or more times/yr) ❑
    Yes, occasionally (1-2 times/yr) ❑
    Yes, rarely (less than 1 time/yr) ❑
    No ☒

21. Does the basement have any of the following? (check all that apply) Floor cracks ❑, Wall cracks ❑, Sump ☒, Floor drain ❑, Other hole/opening in floor ❑ (describe) ______

22. Are any of the following used or stored in the basement (check all that apply)
Paint ☐ Paint stripper/remover ☐ Paint thinner ☐
Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐
Laundry spot removers ☒ Drain cleaners ☐ Pesticides ☐

23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes ☐ No ☒
If yes, please specify what was done, where in the home, and what month:
____
____

24. Have you installed new carpeting in your home within the last year? Yes ☐ No ☒
If yes, when and where?______________________________

25. Do you regularly use or work in a dry cleaning service (check only one box)?
Yes, use dry-cleaning regularly (at least weekly) ☐
Yes, use dry-cleaning infrequently (monthly or less) ☐
Yes, work at a dry cleaning service ☐
No ☒

26. Does anyone in your home use solvents at work?
Yes ☐ If yes, how many persons_________
No ☒ If no, go to question 28

27. If yes for question 26 above, are the work clothes washed at home? Yes ☐ No ☐

28. Where is the washer/dryer located?
Basement ☒
Upstairs utility room ☐
Kitchen ☒
Garage ☐
Use a Laundromat ☐
Other, please specify ☐______________________________

29. If you have a dryer, is it vented to the outdoors? Yes ☒ No ☐

30. What type(s) of home heating do you have (check all that apply)
Fuel type: Gas ☒, Oil ☐, Electric ☐, Wood ☐, Coal ☐, Other____________________
Heat conveyance system:
Forced hot air ☐
Forced hot water ☐
Steam ☐
Radiant floor heat ☐
Wood stove ☐
Coal furnace ☐
Fireplace ☐
Other________________________

31. Do you have air conditioning? Yes ☒ No ❑. If yes, please check the appropriate type(s)
Central air conditioning ❑
Window air conditioning unit(s) ☒
Other ❑, please specify ______

32. Do you use any of the following? Room fans ☒, Ceiling fans ☒, Attic fan ☒
Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes ☒ No ❑

33. Has your home had termite or other pesticide treatment: Yes ☒ No ☒ Unknown ❑
If yes, please specify type of pest controlled, May 2008
and approximate date of service Inspected yearly 9-24-09

34. Water Heater Type: Gas ☒, Electric ❑, By furnace ❑, Other ❑ ______
Water heater location: Basement ☒, Upstairs utility room ❑, Garage ❑, Other ❑ (please describe) ______

35. What type of cooking appliance do you have? Electric ❑, Gas ☒, Other ❑ ______

36. Is there a stove exhaust hood present? Yes ☒ No ❑
Does it vent to the outdoors? Yes ☒ No ❑

37. Smoking in Home:
None ❑, Rare (only guests) ❑, Moderate (residents light smokers) ☒,
Heavy (at least one heavy smoker in household) ❑

38. If yes to above, what do they smoke?
Cigarettes ☒ Cigars ❑
Pipe ❑ Other ❑

39. Do you regularly use air fresheners? Yes ❑ No ☒

40. Does anyone in the home have indoor home hobbies of crafts involving: None ☒
Heating ❑, soldering ❑, welding ❑, model glues ❑, paint ❑, spray paint,
wood finishing ❑, Other ❑ Please specify what type of hobby: ______

41. General family/home use of consumer products (please circle appropriate): Assume that **Never** = never used, **Hardly ever** = less than once/month, **Occasionally** = about once/month, **Regularly** = about once/week, and **Often** = more than once/week.

Product	Frequency of Use				
Spray-on deodorant	Never	Hardly ever	Occasionally	Regularly	Often

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often

(Question 41, continued)

Product	Frequency of Use				
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often

42. Please check weekly household cleaning practices:
    - Dusting ☒
    - Dry sweeping ☐
    - Vacuuming ☒
    - Polishing (furniture, etc) ☐
    - Washing/waxing floors ☐
    - Other ☐ ____________________

43. Other comments: ____

APPENDIX F

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**1205 Sump**	Date Sampled:	06/30/10
Site:	**RF-64**	Date Received:	07/01/10
Job No:	05-056	Date Analyzed:	07/05/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound	Concentration Detected	CAS Number	Compound	Concentration Detected
75-71-8	Dichlorodifluoromethane	< 5.0	108-88-3	**Toluene**	95
74-87-3	Chloromethane	< 5.0	10061-02-(	Trans-1,3-dichloropropene	< 5.0
75-01-4	Vinyl chloride	< 5.0	79-00-5	1,1,2-Trichloroethane	< 5.0
74-83-9	Bromomethane	< 5.0	108-10-1	4-Methyl-2-pentanone	< 5.0
75-00-3	Chloroethane	< 5.0	591-78-6	2-Hexanone	< 5.0
75-69-4	Trichlorofluoromethane	< 5.0	127-18-4	Tetrachloroethene	< 5.0
75-35-4	1,1-Dichloroethene	< 5.0	142-28-9	1,3-Dichloropropane	< 5.0
75-65-0	**Tert-butanol; TBA**	< 50	124-48-1	Dibromochloromethane	< 5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	< 5.0	106-93-4	1,2-Dibromoethane	< 5.0
75-09-2	Methylene chloride	< 5.0	108-90-7	Chlorobenzene	< 5.0
156-60-5	Trans-1,2-dichloroethene	< 5.0	630-20-6	1,1,1,2-Tetrachloroethane	< 5.0
108-20-3	**Isopropyl ether DIPE**	< 20	100-41-4	**Ethylbenzene**	57
637-92-3	**Ethyl-tert-butyl ether ETBE**	< 20	108-38-3	**m,p-xylene**	570
994-05-8	**Tert-amyl metyl ether TAME**	< 5.0	95-47-6	**o-xylene**	390
75-85-4	**Tert-amyl alcohol TAA**	< 200	100-42-5	Styrene	< 5.0
75-34-3	1,1-Dichloroethane	< 5.0	75-25-2	Bromoform	< 5.0
67-64-1	Acetone	< 5.0	98-82-8	Isopropylbenzene	11
75-15-0	Carbon disulfide	< 5.0	108-86-1	Bromobenzene	< 5.0
594-20-7	2,2-Dichloropropane	< 5.0	79-34-5	1,1,2,2-Tetrachloroethane	< 5.0
156-59-2	Cis-1,2-dichloroethene	< 5.0	96-18-4	1,2,3-Trichloropropane	< 5.0
75-27-4	Bromochloromethane	< 5.0	103-65-1	N-propylbenzene	< 5.0
67-66-3	Chloroform	< 5.0	95-49-8	2-Chlorotoluene	< 5.0
71-55-6	1,1,1-Trichloroethane	< 5.0	106-43-4	4-Chlorotoluene	< 5.0
56-23-5	Carbon tetrachloride	< 5.0	108-67-8	1,3,5-Trimethylbenzene	180
78-3-93	2-Butanone	< 5.0	98-06-6	Tert-butylbenzene	< 5.0
563-58-6	1,1-Dichloropropene	< 5.0	120-82-1	1,2,4-Trimethylbenzene	340
108-05-4	Vinyl Acetate	< 5.0	135-98-8	Sec-butylbenzene	< 5.0
110-75-8	2-Chloroethylvinyl ether	< 5.0	541-73-1	1,3-Dichlorobenzene	< 5.0
71-43-2	**Benzene**	34	99-87-6	4-Isopropyltoluene	20
107-06-2	1,2-Dichloroethane	< 5.0	106-46-7	1,4-Dichlorobenzene	< 5.0
79-01-6	Trichloroethene	< 5.0	95-50-1	1,2-Dichlorobenzene	< 5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	< 20	104-51-8	n-Butylbenzene	< 5.0
78-87-5	1,2-Dichloropropane	< 5.0	96-12-8	1,2-Dibromo-3-chloropropan	< 5.0
74-95-3	Dibromomethane	< 5.0	120-82-1	1,2,4-Trichlorobenzene	< 5.0
75-27-4	Bromodichloromethane	< 5.0	87-68-3	Hexachlorobutadiene	< 5.0
10061-01-5	Cis-1,3-dichloropropene	< 5.0	91-20-3	Naphthalene	270
			87-61-6	1,2,3-Trichlorobenzene	< 5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	1.1	mg/L	EPA 8015M	0.5	07/05/10
TPH - DRO	< 0.5	mg/L	EPA 8015M	0.5	07/07/10

*** **Oxygenates & BTEX in bold**

7/7/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**1207 Sump**	Date Sampled:	06/30/10
Site:	**RF-64**	Date Received:	07/01/10
Job No:	05-056	Date Analyzed:	07/05/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane		6.4	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone		100	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform		1400	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		5.2
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		13
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/05/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/07/10

*** **Oxygenates & BTEX in bold**

7/7/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**1207 Sump 1/2**	Date Sampled:	06/30/10
Site:	**RF-64**	Date Received:	07/01/10
Job No:	05-056	Date Analyzed:	07/05/10
EPA Method 8260		Units:	ug/L (ppb)

CAS Number	Compound	Concentration Detected		CAS Number	Compound	Concentration Detected	
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform		18	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected		Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/05/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/07/10

*** **Oxygenates & BTEX in bold**

7/7/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Baltimore-Washington Blvd., Suite 217 Jessup, Maryland 20794 Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

Page 1 of 1

CLIENT: SMS / Royal Farms
TURN-AROUND TIME: Standard
Job Number: 05-056-64
Site: RF-64
Sampler (s): Tom Ruzich

Analyses Requested: DRO/GRO 8015; Volatiles 8260

Section to be completed by Laboratory:
Initials:
Temp:
Custody seal Y N
Sample Storage:

Sample ID	Date	Time	Comp	Grab	Matrix	Preserv. pH	# Bottles	DRO/GRO 8015	Volatiles 8260					Comments	VOA ONLY Air Bubbles (Y or N)	pH	TPH Chlorine Check Na2S2O3
1207 Sump	6/30/10	1100		X	H2O		3	X	X								
1207 1/2 Sump	↓	1120		↓	↓		↓	↓	↓								
1205 Sump	↓	1145		↓	↓		↓	↓	↓								

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6/30/10 17:00		
Relinquished By:	Date/Time	Received By Laboratory: [signature]	Date/Time 07/01/10

Report Results To: truzich@aec-env.com
jstein@aec-env.com

Fax:

Anabell
Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**1209 Sump**	Date Sampled:	07/15/10
Site:	**RF-64**	Date Received:	07/20/10
Job No:	05-056	Date Analyzed:	07/21/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		32	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform		6.4	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/21/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/22/10

*** **Oxygenates & BTEX in bold**

7/23/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Washington Blvd., Suite 217 Jessup, Maryland 20794 Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

CLIENT: Lowell Kemp/ Fureey
TURN-AROUND TIME: Standard
Job Number: 05-056
Site: RE-64
Sampler (s): Tim Rubins

Analyses Requested: DRO/GRO via 8015B; VOCs + OXY via 8260

Sample ID	Date	Time	Comp	Grab	Matrix	Preserv. pH	# Bottles	DRO/GRO via 8015B	VOCs + OXY via 8260					Comments	VOA ONLY Air Bubbles (Y or N)	pH	TPH Chlorine Check Na2S2O3
P09 Sump	7/15/10	12		X	H2O	*	3	X	X								

Section to be completed by Laboratory
Initials:
Temp:
Custody seal: Y N
Sample Storage:

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/15/10		
Relinquished By:	**Date/Time**	**Received By Laboratory:** [signature]	**Date/Time** 07/20/10

Report Results To: jslan@aec-env.com
trosein@aec-env.com
Fax:

* 2 liters preserved w/ HCl + 1 Amber Liter unpreserved

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Soil
Client ID:	**B-25-8'**	Date Sampled:	07/02/10
Site:	**RF-64**	Date Received:	07/13/10
Job No:	05-056	Date Analyzed:	07/14/10

EPA Method 8260 Units: ug/Kg (ppb)

CAS Number	Compound	Concentration Detected		CAS Number	Compound	Concentration Detected	
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected		Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/Kg	EPA 8015M	0.5	07/14/10
TPH - DRO	<	10	mg/Kg	EPA 8015M	10	07/15/10

*** **Oxygenates & BTEX in bold**

7/15/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Soil
Client ID:	**B-26-8'**	Date Sampled:	07/02/10
Site:	**RF-64**	Date Received:	07/13/10
Job No:	05-056	Date Analyzed:	07/14/10

EPA Method 8260 Units: ug/Kg (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/Kg	EPA 8015M	0.5	07/14/10
TPH - DRO	<	10	mg/Kg	EPA 8015M	10	07/15/10

*** **Oxygenates & BTEX in bold**

7/15/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Soil
Client ID:	**B-27-7'**	Date Sampled:	07/02/10
Site:	**RF-64**	Date Received:	07/13/10
Job No:	05-056	Date Analyzed:	07/14/10

EPA Method 8260 Units: ug/Kg (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/Kg	EPA 8015M	0.5	07/14/10
TPH - DRO	<	10	mg/Kg	EPA 8015M	10	07/15/10

*** **Oxygenates & BTEX in bold**

7/15/2010

Approved Date

Anabell Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Soil
Client ID:	**B-28-5'**	Date Sampled:	07/02/10
Site:	**RF-64**	Date Received:	07/13/10
Job No:	05-056	Date Analyzed:	07/14/10

EPA Method 8260 Units: ug/Kg (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/Kg	EPA 8015M	0.5	07/14/10
TPH - DRO	<	10	mg/Kg	EPA 8015M	10	07/15/10

*** **Oxygenates & BTEX in bold**

7/15/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Soil
Client ID:	B-29-5'	Date Sampled:	07/02/10
Site:	**RF-64**	Date Received:	07/13/10
Job No:	05-056	Date Analyzed:	07/14/10

EPA Method 8260 Units: ug/Kg (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/Kg	EPA 8015M	0.5	07/14/10
TPH - DRO	<	10	mg/Kg	EPA 8015M	10	07/15/10

*** **Oxygenates & BTEX in bold**

7/15/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Baltimore-Washington Blvd., Suite 217   Jessup, Maryland 20794   Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

CLIENT: SMS
TURN-AROUND TIME: Standard
Job Number: CT-056
Site: KF-64
Sampler (s): AER
Report to: J Stein @ AEC-Env.com

Analyses Requested: VOCs + Oxygenates via 8260 | TPH DRO via 8015 | TPH GRO via 8015

Sample ID	Date	Time	Comp	Grab	Matrix	Preserv. pH	# Bottles	VOCs + Oxygenates via 8260	TPH DRO via 8015	TPH GRO via 8015					Comments	VOA ONLY Air Bubbles (Y or N)	pH	TPH Chlorine Check Na2S2O3
B-25-8'	7/2/10	0855		X	Soil	—	1	X	X	X								
B-26-8'	↓	1015		↓	↓	↓	↓	↓	↓	↓								
B-27-7'	↓	1225		↓	↓	↓	↓	↓	↓	↓								
B-28-5'	↓	1330		↓	↓	↓	↓	↓	↓	↓								
B-29-5'	↓	1500		↓	↓	↓	↓	↓	↓	↓								

Section to be completed by Laboratory:
Initials:
Temp:
Custody seal: Y N
Sample Storage:

Relinquished By: [signature]	Date/Time 7/2/10 1700	Received By:	Date/Time
Relinquished By:	Date/Time	Received By: [signature]	Date/Time 0 7/13/10

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Soil
Client ID:	**B-30-15'**	Date Sampled:	07/12/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056-064	Date Analyzed:	07/19/10
EPA Method 8260		Units:	ug/Kg (ppb)

CAS Number	Compound	Concentration Detected		CAS Number	Compound	Concentration Detected	
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected		Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/Kg	EPA 8015M	0.5	07/19/10
TPH - DRO	<	10	mg/Kg	EPA 8015M	10	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Soil
Client ID:	**B-31-5'**	Date Sampled:	07/12/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056-064	Date Analyzed:	07/19/10

EPA Method 8260 Units: ug/Kg (ppb)

CAS Number	Compound	Concentration Detected	CAS Number	Compound	Concentration Detected
75-71-8	Dichlorodifluoromethane	< 5.0	108-88-3	**Toluene**	< 5.0
74-87-3	Chloromethane	< 5.0	10061-02-(	Trans-1,3-dichloropropene	< 5.0
75-01-4	Vinyl chloride	< 5.0	79-00-5	1,1,2-Trichloroethane	< 5.0
74-83-9	Bromomethane	< 5.0	108-10-1	4-Methyl-2-pentanone	< 5.0
75-00-3	Chloroethane	< 5.0	591-78-6	2-Hexanone	< 5.0
75-69-4	Trichlorofluoromethane	< 5.0	127-18-4	Tetrachloroethene	< 5.0
75-35-4	1,1-Dichloroethene	< 5.0	142-28-9	1,3-Dichloropropane	< 5.0
75-65-0	**Tert-butanol; TBA**	< 50	124-48-1	Dibromochloromethane	< 5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	< 5.0	106-93-4	1,2-Dibromoethane	< 5.0
75-09-2	Methylene chloride	< 5.0	108-90-7	Chlorobenzene	< 5.0
156-60-5	Trans-1,2-dichloroethene	< 5.0	630-20-6	1,1,1,2-Tetrachloroethane	< 5.0
108-20-3	**Isopropyl ether DIPE**	< 20	100-41-4	**Ethylbenzene**	< 5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	< 20	108-38-3	**m,p-xylene**	< 5.0
994-05-8	**Tert-amyl metyl ether TAME**	< 5.0	95-47-6	**o-xylene**	< 5.0
75-85-4	**Tert-amyl alcohol TAA**	< 200	100-42-5	Styrene	< 5.0
75-34-3	1,1-Dichloroethane	< 5.0	75-25-2	Bromoform	< 5.0
67-64-1	Acetone	< 5.0	98-82-8	Isopropylbenzene	< 5.0
75-15-0	Carbon disulfide	< 5.0	108-86-1	Bromobenzene	< 5.0
594-20-7	2,2-Dichloropropane	< 5.0	79-34-5	1,1,2,2-Tetrachloroethane	< 5.0
156-59-2	Cis-1,2-dichloroethene	< 5.0	96-18-4	1,2,3-Trichloropropane	< 5.0
75-27-4	Bromochloromethane	< 5.0	103-65-1	N-propylbenzene	< 5.0
67-66-3	Chloroform	< 5.0	95-49-8	2-Chlorotoluene	< 5.0
71-55-6	1,1,1-Trichloroethane	< 5.0	106-43-4	4-Chlorotoluene	< 5.0
56-23-5	Carbon tetrachloride	< 5.0	108-67-8	1,3,5-Trimethylbenzene	< 5.0
78-3-93	2-Butanone	< 5.0	98-06-6	Tert-butylbenzene	< 5.0
563-58-6	1,1-Dichloropropene	< 5.0	120-82-1	1,2,4-Trimethylbenzene	< 5.0
108-05-4	Vinyl Acetate	< 5.0	135-98-8	Sec-butylbenzene	< 5.0
110-75-8	2-Chloroethylvinyl ether	< 5.0	541-73-1	1,3-Dichlorobenzene	< 5.0
71-43-2	**Benzene**	< 5.0	99-87-6	4-Isopropyltoluene	< 5.0
107-06-2	1,2-Dichloroethane	< 5.0	106-46-7	1,4-Dichlorobenzene	< 5.0
79-01-6	Trichloroethene	< 5.0	95-50-1	1,2-Dichlorobenzene	< 5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	< 20	104-51-8	n-Butylbenzene	< 5.0
78-87-5	1,2-Dichloropropane	< 5.0	96-12-8	1,2-Dibromo-3-chloropropan	< 5.0
74-95-3	Dibromomethane	< 5.0	120-82-1	1,2,4-Trichlorobenzene	< 5.0
75-27-4	Bromodichloromethane	< 5.0	87-68-3	Hexachlorobutadiene	< 5.0
10061-01-5	Cis-1,3-dichloropropene	< 5.0	91-20-3	Naphthalene	< 5.0
			87-61-6	1,2,3-Trichlorobenzene	< 5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	< 0.5	mg/Kg	EPA 8015M	0.5	07/19/10
TPH - DRO	< 10	mg/Kg	EPA 8015M	10	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Baltimore-Washington Blvd., Suite 217 Jessup, Maryland 20794 Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

Page of

CLIENT: AIS / Royal Farms
TURN-AROUND TIME: Standard
Job Number: 05-056-064
Site: RF-64
Sampler (s): Tom Ruzich

Analyses Requested: TPH GRO/DRO 8015B; VOCs + Oxy 8260

Sample ID	Date	Time	Comp	Grab	Matrix	Preserv. pH	# Bottles	TPH GRO/DRO 8015B	VOCs + Oxy 8260						Comments	VOA ONLY Air Bubbles (Y or N)	pH	TPH Chlorine Check Na2S2O3
B-30 15'	7/12/10	0945		X	Soil	None	1	X	X									
B-31 5'	↓	1130		↓	↓	↓	↓	↓	↓									

Section to be completed by Laboratory:
Initials:
Temp:
Custody seal: Y N
Sample Storage:

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/12/10 1600		
Relinquished By:	Date/Time	Received By Laboratory:	Date/Time
		[signature]	07/15/10

Report Results To: truzich@aec-env.com
jstein@aec-env.com

Fax:

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-25 GW**	Date Sampled:	07/09/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056	Date Analyzed:	07/19/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO		1.1	mg/L	EPA 8015M	0.5	07/19/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-26 GW**	Date Sampled:	07/09/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056	Date Analyzed:	07/19/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		62
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**		93
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		43
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**		21
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		7.2
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		17
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		24
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		130	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		17
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO		1.1	mg/L	EPA 8015M	0.5	07/19/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Anabell Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-27 GW**	Date Sampled:	07/09/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056	Date Analyzed:	07/19/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		6.7
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**		190
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		27
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		94
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		5.7
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		29	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		44
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	1.6	mg/L	EPA 8015M	0.5	07/19/10
TPH - DRO	0.9	mg/L	EPA 8015M	0.5	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-28 GW**	Date Sampled:	07/09/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056	Date Analyzed:	07/19/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**		190
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		120
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		30
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene		6.8
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		93
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		400
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		70	99-87-6	4-Isopropyltoluene		8.1
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		140
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	1.8	mg/L	EPA 8015M	0.5	07/19/10
TPH - DRO	0.7	mg/L	EPA 8015M	0.5	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Anabell

Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-29 GW**	Date Sampled:	07/09/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056	Date Analyzed:	07/19/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		9.4	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO		1.1	mg/L	EPA 8015M	0.5	07/19/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Washington Blvd., Suite 217 Jessup, Maryland 20794 Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

CLIENT: SMS / Royal Farms
TURN-AROUND TIME: Standard
Job Number: 05-056-064
Site: RF-64
Sampler (s): Tim Ruzin

Section to be completed by Laboratory: Initials / Temp / Custody sea Y N / Sample Storage

Sample ID	Date	Time	Comp.	Grab	Matrix	Preserv. pH	# Bottles	TPH DRO/GRO 8015B	VOCs+oxy 8260						Comments	VOA ONLY Air Bubbles (Y or N)	TPH Chlorine Check Na2S2O3
B-25 GW	7/9/10	1125		X	H_2O	Ice/HCl	4	X	X								
B-26 GW	↓	1135		↓	↓	↓	↓	↓	↓								
B-27 GW	↓	1140		↓	↓	↓	↓	↓	↓								
B-28 GW	↓	1152		↓	↓	↓	↓	↓	↓								
B-29 GW	↓	1220		↓	↓	↓	↓	↓	↓								

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7-9-10 / 1240		
Relinquished By:	Date/Time	Received By Laboratory:	Date/Time
		[signature]	07/15/10

Report Results To: truzin@aec-env.com, jstein@aec-env.com
Fax:

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-30 GW**	Date Sampled:	07/14/10
Site:	**RF-64**	Date Received:	07/20/10
Job No:	05-056	Date Analyzed:	07/21/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/21/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/22/10

*** **Oxygenates & BTEX in bold**

7/23/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-31 GW**	Date Sampled:	07/14/10
Site:	**RF-64**	Date Received:	07/20/10
Job No:	05-056	Date Analyzed:	07/21/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		48	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/21/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/22/10

*** **Oxygenates & BTEX in bold**

7/23/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Washington Blvd., Suite 217   Jessup, Maryland 20794   Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

Page 1 of 1

CLIENT: SMS / Rocky Farms   TURN-AROUND TIME: Standard
Job Number: 05-056   Site: RF-64
Sampler (s): Tom Ruszin

Sample ID	Date	Time	Comp	Grab	Matrix	Preserv. pH	# Bottles	VOCs 8260 via [illegible]	TPH C6-C44 via 8015C						Comments	VOA ONLY Air Bubbles (Y or N)	pH	TPH Chlorine Check Na2S2O3
R-20 GW	7/14/10	1310		X	GW	*	4	X	X									
B-51 GW	7/14/10	1325		X	GW	*	4	X	X									

Analyses Requested

Section to be completed by Laboratory
Initials:
Temp.
Custody seal: Y N
Sample Storage:

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/15/10		
Relinquished By:	Date/Time	Received By Laboratory: [signature]	Date/Time 07/15/10

Report Results To: jstein@aec-env.com + truszin@aec-env.com
Fax:

* 3 VOAs preserved w/ HCl and 1 unpreserved Amber Liter per sample

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8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**B-29 GW**	Date Sampled:	07/09/10
Site:	**RF-64**	Date Received:	07/15/10
Job No:	05-056	Date Analyzed:	07/19/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		9.4	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO		1.1	mg/L	EPA 8015M	0.5	07/19/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/20/10

*** **Oxygenates & BTEX in bold**

7/21/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Washington Blvd., Suite 217 Jessup, Maryland 20794 Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

CLIENT: SMS / Royal Farms
TURN-AROUND TIME: Standard
Job Number: 05-056-064
Site: RF-64
Sampler (s): Tim Ruzin

Analyses Requested: TPH DRO/GRO 8015B; VOCs + oxy 8260B

Sample ID	Date	Time	Comp.	Grab	Matrix	Preserv. pH	# Bottles	TPH DRO/GRO 8015B	VOCs + oxy 8260B					Comments
B-25 GW	7/9/10	1105		X	H_2O	Ice/HCl	4	X	X					
B-26 GW	↓	1115		↓	↓	↓	↓	↓	↓					
B-27 GW	↓	1140		↓	↓	↓	↓	↓	↓					
B-28 GW	↓	1152		↓	↓	↓	↓	↓	↓					
B-29 GW	↓	1220		↓	↓	↓	↓	↓	↓					

Section to be completed by Laboratory
Initials
Temp
Custody seal Y N
Sample Storage

VOA ONLY: Air Bubbles (Y or N) pH
TPH: Chlorine Check Na2S2O3

Relinquished By: [signature] Date/Time: 7-9-10 / 1240 Received By: Date/Time:
Relinquished By: [signature] Date/Time: Received By Laboratory: [signature] Date/Time: 07/15/10
Report Results To: truzin@aec-env.com, jstein@aec-env.com Fax:

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-1**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound	Concentration Detected	CAS Number	Compound	Concentration Detected
75-71-8	Dichlorodifluoromethane	< 5.0	108-88-3	**Toluene**	23000
74-87-3	Chloromethane	< 5.0	10061-02-(	Trans-1,3-dichloropropene	< 5.0
75-01-4	Vinyl chloride	< 5.0	79-00-5	1,1,2-Trichloroethane	< 5.0
74-83-9	Bromomethane	< 5.0	108-10-1	4-Methyl-2-pentanone	< 5.0
75-00-3	Chloroethane	< 5.0	591-78-6	2-Hexanone	< 5.0
75-69-4	Trichlorofluoromethane	< 5.0	127-18-4	Tetrachloroethene	< 5.0
75-35-4	1,1-Dichloroethene	< 5.0	142-28-9	1,3-Dichloropropane	< 5.0
75-65-0	**Tert-butanol; TBA**	< 50	124-48-1	Dibromochloromethane	< 5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	< 5.0	106-93-4	1,2-Dibromoethane	< 5.0
75-09-2	Methylene chloride	< 5.0	108-90-7	Chlorobenzene	< 5.0
156-60-5	Trans-1,2-dichloroethene	< 5.0	630-20-6	1,1,1,2-Tetrachloroethane	< 5.0
108-20-3	**Isopropyl ether DIPE**	580	100-41-4	**Ethylbenzene**	2800
637-92-3	**Ethyl-tert-butyl ether ETBE**	< 20	108-38-3	**m,p-xylene**	10000
994-05-8	**Tert-amyl metyl ether TAME**	< 5.0	95-47-6	**o-xylene**	5600
75-85-4	**Tert-amyl alcohol TAA**	< 200	100-42-5	Styrene	< 5.0
75-34-3	1,1-Dichloroethane	< 5.0	75-25-2	Bromoform	< 5.0
67-64-1	Acetone	< 5.0	98-82-8	Isopropylbenzene	160
75-15-0	Carbon disulfide	< 5.0	108-86-1	Bromobenzene	< 5.0
594-20-7	2,2-Dichloropropane	< 5.0	79-34-5	1,1,2,2-Tetrachloroethane	< 5.0
156-59-2	Cis-1,2-dichloroethene	< 5.0	96-18-4	1,2,3-Trichloropropane	< 5.0
75-27-4	Bromochloromethane	< 5.0	103-65-1	N-propylbenzene	56
67-66-3	Chloroform	< 5.0	95-49-8	2-Chlorotoluene	< 5.0
71-55-6	1,1,1-Trichloroethane	< 5.0	106-43-4	4-Chlorotoluene	< 5.0
56-23-5	Carbon tetrachloride	< 5.0	108-67-8	1,3,5-Trimethylbenzene	860
78-3-93	2-Butanone	< 5.0	98-06-6	Tert-butylbenzene	< 5.0
563-58-6	1,1-Dichloropropene	< 5.0	120-82-1	1,2,4-Trimethylbenzene	3100
108-05-4	Vinyl Acetate	< 5.0	135-98-8	Sec-butylbenzene	< 5.0
110-75-8	2-Chloroethylvinyl ether	< 5.0	541-73-1	1,3-Dichlorobenzene	< 5.0
71-43-2	**Benzene**	7600	99-87-6	4-Isopropyltoluene	57
107-06-2	1,2-Dichloroethane	< 5.0	106-46-7	1,4-Dichlorobenzene	< 5.0
79-01-6	Trichloroethene	< 5.0	95-50-1	1,2-Dichlorobenzene	< 5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	< 20	104-51-8	n-Butylbenzene	< 5.0
78-87-5	1,2-Dichloropropane	< 5.0	96-12-8	1,2-Dibromo-3-chloropropan	< 5.0
74-95-3	Dibromomethane	< 5.0	120-82-1	1,2,4-Trichlorobenzene	< 5.0
75-27-4	Bromodichloromethane	< 5.0	87-68-3	Hexachlorobutadiene	< 5.0
10061-01-5	Cis-1,3-dichloropropene	< 5.0	91-20-3	Naphthalene	3900
			87-61-6	1,2,3-Trichlorobenzene	< 5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	86	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	9.2	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-3**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		1700
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		310	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**		330
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		1100
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**		670
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		45
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene		22
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		250
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		1400
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		200	99-87-6	4-Isopropyltoluene		23
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		1800
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	7.0	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	1.6	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-4**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		22000
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**		470	100-41-4	**Ethylbenzene**		2900
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		11000
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**		6000
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		150
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		1100
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		4300
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		5200	99-87-6	4-Isopropyltoluene		54
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		8600
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	30	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	8.0	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-6**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		9200
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**		290	100-41-4	**Ethylbenzene**		1500
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		5200
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**		2900
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		71
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene		19
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		250
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		1700
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		3300	99-87-6	4-Isopropyltoluene		20
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		2900
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	18	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	9.5	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-7**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound	Concentration Detected	CAS Number	Compound	Concentration Detected
75-71-8	Dichlorodifluoromethane	< 5.0	108-88-3	**Toluene**	19300
74-87-3	Chloromethane	< 5.0	10061-02-(	Trans-1,3-dichloropropene	< 5.0
75-01-4	Vinyl chloride	< 5.0	79-00-5	1,1,2-Trichloroethane	< 5.0
74-83-9	Bromomethane	< 5.0	108-10-1	4-Methyl-2-pentanone	< 5.0
75-00-3	Chloroethane	< 5.0	591-78-6	2-Hexanone	< 5.0
75-69-4	Trichlorofluoromethane	< 5.0	127-18-4	Tetrachloroethene	< 5.0
75-35-4	1,1-Dichloroethene	< 5.0	142-28-9	1,3-Dichloropropane	< 5.0
75-65-0	**Tert-butanol; TBA**	< 50	124-48-1	Dibromochloromethane	< 5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	< 5.0	106-93-4	1,2-Dibromoethane	< 5.0
75-09-2	Methylene chloride	< 5.0	108-90-7	Chlorobenzene	< 5.0
156-60-5	Trans-1,2-dichloroethene	< 5.0	630-20-6	1,1,1,2-Tetrachloroethane	< 5.0
108-20-3	**Isopropyl ether DIPE**	1400	100-41-4	**Ethylbenzene**	2200
637-92-3	**Ethyl-tert-butyl ether ETBE**	< 20	108-38-3	**m,p-xylene**	9400
994-05-8	**Tert-amyl metyl ether TAME**	< 5.0	95-47-6	**o-xylene**	4700
75-85-4	**Tert-amyl alcohol TAA**	< 200	100-42-5	Styrene	< 5.0
75-34-3	1,1-Dichloroethane	< 5.0	75-25-2	Bromoform	< 5.0
67-64-1	Acetone	< 5.0	98-82-8	Isopropylbenzene	130
75-15-0	Carbon disulfide	< 5.0	108-86-1	Bromobenzene	< 5.0
594-20-7	2,2-Dichloropropane	< 5.0	79-34-5	1,1,2,2-Tetrachloroethane	< 5.0
156-59-2	Cis-1,2-dichloroethene	< 5.0	96-18-4	1,2,3-Trichloropropane	< 5.0
75-27-4	Bromochloromethane	< 5.0	103-65-1	N-propylbenzene	46
67-66-3	Chloroform	< 5.0	95-49-8	2-Chlorotoluene	< 5.0
71-55-6	1,1,1-Trichloroethane	< 5.0	106-43-4	4-Chlorotoluene	< 5.0
56-23-5	Carbon tetrachloride	< 5.0	108-67-8	1,3,5-Trimethylbenzene	770
78-3-93	2-Butanone	< 5.0	98-06-6	Tert-butylbenzene	< 5.0
563-58-6	1,1-Dichloropropene	< 5.0	120-82-1	1,2,4-Trimethylbenzene	3000
108-05-4	Vinyl Acetate	< 5.0	135-98-8	Sec-butylbenzene	< 5.0
110-75-8	2-Chloroethylvinyl ether	< 5.0	541-73-1	1,3-Dichlorobenzene	< 5.0
71-43-2	**Benzene**	7100	99-87-6	4-Isopropyltoluene	50
107-06-2	1,2-Dichloroethane	< 5.0	106-46-7	1,4-Dichlorobenzene	< 5.0
79-01-6	Trichloroethene	< 5.0	95-50-1	1,2-Dichlorobenzene	< 5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	< 20	104-51-8	n-Butylbenzene	< 5.0
78-87-5	1,2-Dichloropropane	< 5.0	96-12-8	1,2-Dibromo-3-chloropropan	< 5.0
74-95-3	Dibromomethane	< 5.0	120-82-1	1,2,4-Trichlorobenzene	< 5.0
75-27-4	Bromodichloromethane	< 5.0	87-68-3	Hexachlorobutadiene	< 5.0
10061-01-5	Cis-1,3-dichloropropene	< 5.0	91-20-3	Naphthalene	3700
			87-61-6	1,2,3-Trichlorobenzene	< 5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	16	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	12	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-8**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		1400
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**		1600	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		240	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**		340	100-41-4	**Ethylbenzene**		200
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		470
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**		270
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		14
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		39
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		180
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		870	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		100
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	3.0	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	2.0	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

Approved

Date 7/28/2010

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-9**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		150
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		110	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**		35
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		280
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**		190
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene		5.5
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		39
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		100
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		200	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		50
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-10**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		5.6
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		120	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.
8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-11**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		280
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**		310	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**		31
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**		130
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**		76
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene		8.6
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene		30
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**		140	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		12
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell

Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-12**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound	Concentration Detected		CAS Number	Compound	Concentration Detected	
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**	<	5.0
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	<	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene	<	5.0
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

	Concentration Detected		Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Anabell
Environmental, Inc.

8648 Dakota Drive, Gaithersburg, MD 20877 Tel/Fax: (301) 548-9425

Laboratory Analysis Results

Client:	Advantage Environmental	Matrix:	Water
Client ID:	**MW-13**	Date Sampled:	07/22/10
Site:	**RF-64**	Date Received:	07/23/10
Job No:	05-056	Date Analyzed:	07/27/10

EPA Method 8260 Units: ug/L (ppb)

CAS Number	Compound		Concentration Detected	CAS Number	Compound		Concentration Detected
75-71-8	Dichlorodifluoromethane	<	5.0	108-88-3	**Toluene**		15
74-87-3	Chloromethane	<	5.0	10061-02-(	Trans-1,3-dichloropropene	<	5.0
75-01-4	Vinyl chloride	<	5.0	79-00-5	1,1,2-Trichloroethane	<	5.0
74-83-9	Bromomethane	<	5.0	108-10-1	4-Methyl-2-pentanone	<	5.0
75-00-3	Chloroethane	<	5.0	591-78-6	2-Hexanone	<	5.0
75-69-4	Trichlorofluoromethane	<	5.0	127-18-4	Tetrachloroethene	<	5.0
75-35-4	1,1-Dichloroethene	<	5.0	142-28-9	1,3-Dichloropropane	<	5.0
75-65-0	**Tert-butanol; TBA**	<	50	124-48-1	Dibromochloromethane	<	5.0
1634-04-4	**Methyl-Tert-butyl ether MTBE**	<	5.0	106-93-4	1,2-Dibromoethane	<	5.0
75-09-2	Methylene chloride	<	5.0	108-90-7	Chlorobenzene	<	5.0
156-60-5	Trans-1,2-dichloroethene	<	5.0	630-20-6	1,1,1,2-Tetrachloroethane	<	5.0
108-20-3	**Isopropyl ether DIPE**	<	20	100-41-4	**Ethylbenzene**	<	5.0
637-92-3	**Ethyl-tert-butyl ether ETBE**	<	20	108-38-3	**m,p-xylene**	7	5.0
994-05-8	**Tert-amyl metyl ether TAME**	<	5.0	95-47-6	**o-xylene**	<	5.0
75-85-4	**Tert-amyl alcohol TAA**	<	200	100-42-5	Styrene	<	5.0
75-34-3	1,1-Dichloroethane	<	5.0	75-25-2	Bromoform	<	5.0
67-64-1	Acetone	<	5.0	98-82-8	Isopropylbenzene	<	5.0
75-15-0	Carbon disulfide	<	5.0	108-86-1	Bromobenzene	<	5.0
594-20-7	2,2-Dichloropropane	<	5.0	79-34-5	1,1,2,2-Tetrachloroethane	<	5.0
156-59-2	Cis-1,2-dichloroethene	<	5.0	96-18-4	1,2,3-Trichloropropane	<	5.0
75-27-4	Bromochloromethane	<	5.0	103-65-1	N-propylbenzene	<	5.0
67-66-3	Chloroform	<	5.0	95-49-8	2-Chlorotoluene	<	5.0
71-55-6	1,1,1-Trichloroethane	<	5.0	106-43-4	4-Chlorotoluene	<	5.0
56-23-5	Carbon tetrachloride	<	5.0	108-67-8	1,3,5-Trimethylbenzene	<	5.0
78-3-93	2-Butanone	<	5.0	98-06-6	Tert-butylbenzene	<	5.0
563-58-6	1,1-Dichloropropene	<	5.0	120-82-1	1,2,4-Trimethylbenzene	<	5.0
108-05-4	Vinyl Acetate	<	5.0	135-98-8	Sec-butylbenzene	<	5.0
110-75-8	2-Chloroethylvinyl ether	<	5.0	541-73-1	1,3-Dichlorobenzene	<	5.0
71-43-2	**Benzene**	<	5.0	99-87-6	4-Isopropyltoluene	<	5.0
107-06-2	1,2-Dichloroethane	<	5.0	106-46-7	1,4-Dichlorobenzene	<	5.0
79-01-6	Trichloroethene	<	5.0	95-50-1	1,2-Dichlorobenzene	<	5.0
75-65-0	**Tert-amyl ethyl ether TAEE**	<	20	104-51-8	n-Butylbenzene	<	5.0
78-87-5	1,2-Dichloropropane	<	5.0	96-12-8	1,2-Dibromo-3-chloropropan	<	5.0
74-95-3	Dibromomethane	<	5.0	120-82-1	1,2,4-Trichlorobenzene	<	5.0
75-27-4	Bromodichloromethane	<	5.0	87-68-3	Hexachlorobutadiene	<	5.0
10061-01-5	Cis-1,3-dichloropropene	<	5.0	91-20-3	Naphthalene		23
				87-61-6	1,2,3-Trichlorobenzene	<	5.0

		Concentration Detected	Units	Method	PQL	Date Analyzed
TPH - GRO	<	0.5	mg/L	EPA 8015M	0.5	07/27/10
TPH - DRO	<	0.5	mg/L	EPA 8015M	0.5	07/28/10

*** **Oxygenates & BTEX in bold**

7/28/2010

Approved Date

Advantage Environmental Consultants, LLC
8610 Baltimore-Washington Blvd., Suite 217 Jessup, Maryland 20794 Phone/Fax: (301) 776-0500/(301) 776-1123

Environmental Sample Chain-of-Custody Record

CLIENT: AEC
TURN-AROUND TIME: Standard
Job Number: 05-056
Site: RF-64
Sampler(s): Tom Luszin
Report to: Jklein@aec-env.com tluszin@aec-env.com

Analyses Requested

Sample ID	Date	Time	Comp	Grab	Matrix	Preserv. pH	# Bottles	VOCs - oxygenates via method 8260	TPH DRO via method 8015	TPH GRO via method 8015				Comments
MW-1	7/22/10	1135		X	H_2O	*	4	X	X	X				
MW-3		1015												
MW-4		1025												
MW-6		1040												
MW-7		1055												
MW-8		1115												
MW-9		1105												
MW-10		1005												
MW-11		955												
MW-12		945												
MW-13		1125												

Section to be completed by Laboratory:
AEC#:
Temp:
Custody seal: Y N
Sample Storage:
VOA ONLY Air Bubbles (Y or N) pH
TPH Chlorine Check Na2S2O3

Relinquished By: [signature] Date/Time: 7/26/10 0800 Received By: Date/Time:
Relinquished By: Date/Time: Received By: [signature] Date/Time: 07/23/10

* 3-40ml VOAs preserved with HCl. 1 unpreserved amber liter.

MARYLAND SPECTRAL SERVICES, INC.

1500 Caton Center Drive, Baltimore MD 21227

VOLATILE ORGANICS BY EPA GC/MS METHOD TO-15

CLIENT SAMPLE ID:	IAQ-01 RF-64	IAQ-02 RF-64	IAQ-03 RF-64	AA-01 RF-64	AA-02 RF-64	METHOD BLANK
LAB SAMPLE ID:	10082327	10082328	10082329	10082330	10082331	100824TBLKG1
SAMPLE DATE:	08/20/10	08/20/10	08/20/10	08/20/10	08/20/10	
RECEIVED DATE:	08/23/10	08/23/10	08/23/10	08/23/10	08/23/10	
ANALYSIS DATE:	08/24/10	08/24/10	08/24/10	08/24/10	08/24/10	08/24/10
CANISTER ID:	016	048	018	017	046	001
REGULATOR ID:	O	J	A	S	R	NONE
FILE NAME:	10082327	10082328	10082329	10082330	10082331	100824TBLKG1
INSTRUMENT ID:	MS-G	MS-G	MS-G	MS-G	MS-G	MS-G
MATRIX:	VAPOR	VAPOR	VAPOR	VAPOR	VAPOR	VAPOR
UNITS:	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0	1.0
ANALYTE						
Acetone	16.7 L	14.6 L	15.0 L	6.7 L	6.5 L	1.2 U
Benzene	2.71	2.00	2.72	1.16	1.21	0.64 U
Benzyl Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Bromoform	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Bromomethane	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
1,3-Butadiene	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Carbon Disulfide	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Carbon Tetrachloride	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Chlorobenzene	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Chloroethane	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
Chloroform	1.23	0.97 U	1.47	0.97 U	0.97 U	0.97 U
Chloromethane	1.09	1.17	2.31	1.10	1.06	0.41 U
3-Chloropropene	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Cyclohexane	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Dibromochloromethane	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
1,2-Dibromoethane	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
m-Dichlorobenzene	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
o-Dichlorobenzene	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
p-Dichlorobenzene	16.6	1.2 U	2.1	1.2 U	1.2 U	1.2 U
Dichlorodifluoromethane	2.62	2.68	2.38	2.43	2.44	0.99 U
1,1-Dichloroethane	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
1,2-Dichloroethane	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
1,1-Dichloroethene	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
cis-1,2-Dichloroethene	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
trans-1,2-Dichloroethene	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
1,2-Dichloropropane	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
cis-1,3-Dichloropropene	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
trans-1,3-Dichloropropene	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
1,4-Dioxane	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Ethyl Acetate	4.77	10.1	4.82	3.50	3.02	0.72 U
Ethylbenzene	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
4-Ethyltoluene	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
Freon 113	1.5 U	3.4	1.7	1.5	1.5 U	1.5 U
Freon 114	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Heptane	1.09	1.05	0.98	0.82 U	0.82 U	0.82 U

ug/m^3 - micrograms per cubic meter U - Less than reported quantitation limit L - Suspect artifact
B - Detected in lab blank E - Exceeded calibration range

MARYLAND SPECTRAL SERVICES, INC.

1500 Caton Center Drive, Baltimore MD 21227

VOLATILE ORGANICS BY EPA GC/MS METHOD TO-15

CLIENT SAMPLE ID:	IAQ-01 RF-64	IAQ-02 RF-64	IAQ-03 RF-64	AA-01 RF-64	AA-02 RF-64	METHOD BLANK
LAB SAMPLE ID:	10082327	10082328	10082329	10082330	10082331	100824TBLKG1
SAMPLE DATE:	08/20/10	08/20/10	08/20/10	08/20/10	08/20/10	
RECEIVED DATE:	08/23/10	08/23/10	08/23/10	08/23/10	08/23/10	
ANALYSIS DATE:	08/24/10	08/24/10	08/24/10	08/24/10	08/24/10	08/24/10
CANISTER ID:	016	048	018	017	046	001
REGULATOR ID:	O	J	A	S	R	NONE
FILE NAME:	10082327	10082328	10082329	10082330	10082331	100824TBLKG1
INSTRUMENT ID:	MS-G	MS-G	MS-G	MS-G	MS-G	MS-G
MATRIX:	VAPOR	VAPOR	VAPOR	VAPOR	VAPOR	VAPOR
UNITS:	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0	1.0
ANALYTE						
Hexachlorobutadiene	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Hexane	**3.6**	**6.2**	**3.7**	**3.1**	**2.90**	1.8 U
2-Hexanone	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
Methyl tert-Butyl Ether	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Methylene Chloride	**14.4** BL	**11.1** BL	**7.8** BL	5.2 U	5.2 U	**9.9** B
Methyl Ethyl Ketone	**3.04**	**4.79**	**3.30**	**1.83**	**2.17**	0.59 U
Methyl Isobutyl Ketone	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
Naphthalene	**1.4**	**1.2**	1.1 U	1.1 U	1.1 U	1.1 U
Propylene	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Styrene	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
1,1,2,2-Tetrachloroethane	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Tetrachloroethene	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Tetrahydrofuran	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
Toluene	**4.56**	**4.88**	**9.96**	**3.32**	**3.11**	0.75 U
1,2,4-Trichlorobenzene	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
1,1,1-Trichloroethane	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2-Trichloroethane	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Trichloroethene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Trichlorofluoromethane	**2.3**	**4.60**	**1.7**	**1.5**	**1.5**	1.1 U
1,2,4-Trimethylbenzene	0.98 U	0.98 U	**2.53**	0.98 U	0.98 U	0.98 U
1,3,5-Trimethylbenzene	0.98 U	0.98 U	**1.26**	0.98 U	0.98 U	0.98 U
2,2,4-Trimethylpentane	**1.74**	**2.59**	**2.16**	**1.95**	**1.99**	0.93 U
Vinyl Acetate	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Vinyl Bromide	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
Vinyl Chloride	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
o-Xylene	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
m-&p-Xylenes	1.7 U	1.7 U	**2.6**	1.7 U	1.7 U	1.7 U

ug/m^3 - micrograms per cubic meter U - Less than reported quantitation limit L - Suspect artifact
B - Detected in lab blank E - Exceeded calibration range

Maryland Spectral Services
1500 Caton Ctr Dr Suite G
Baltimore MD 21227
410-247-7600

Air Analysis by TO-15

Chain of Custody

Client Contact Information	
Company:	Advantage Env.
Address:	8610 Washington Blvd, Ste 2??
City/State/Zip	Jessup, MD 20794
Phone:	301-776-0500
FAX:	
Project Name:	RF-64
Site:	1207 Chicago Ave
PO #	05-056-RF064

Project Manager: Jeff Stein
Phone:
Site Contact: Tom Ruszin

Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

Carrier: Tom Ruszin
Samplers Name(s) Tom Ruszin

1 of 1 COCs

Client Sample ID	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Incoming Canister Pressure ("Hg) (Lab)	Sample Regulator ID	Can ID	Can Size (L)		TO-15 FULL LIST	TO-15 ABREVIATED LIST	Indoor / Ambient Air	Soil Gas / Subslab	Comments
1207IAQ-01	8/20/10	1607	1450	>30"	7"		S-O	MSS016	6L		X		X		100823-27
1207IAQ-02	↓	1610	1452	>30"	8"		S-S	MSS048	6L		↓		↓		100823-28
1207IAQ-03	↓	1612	1454	30"	7"		S-A	MSS018	6L		↓		↓		100823-29
1207AA-01	↓	1620	1507	>30"	7"		S-S	MSS017	6L		↓		↓		100823-30
1207AA-02	↓	1624	1509	>30"	7"		S-R	MSS046	6L		↓		↓		100823-31

Special Instructions/QC Requirements & Comments:
Canisters provided: [MSS-046, 016, 018, 017, 048] (all pressures checked on [08-19-10] to be >30" vac.)
Samplers provided: [S-O, S-R, S-J, S-A, S-S] 24hr Comp in 6.0L can

* Sample start date = 8/20/10
Samples collected on 8/21/10

Canisters Shipped by:	Date/Time: 8-23-10 / 1600	~~Canisters Received by:~~	Date/Time: 8/23/10 1600
Samples Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

APPENDIX G

EFR PILOT STUDY DATA

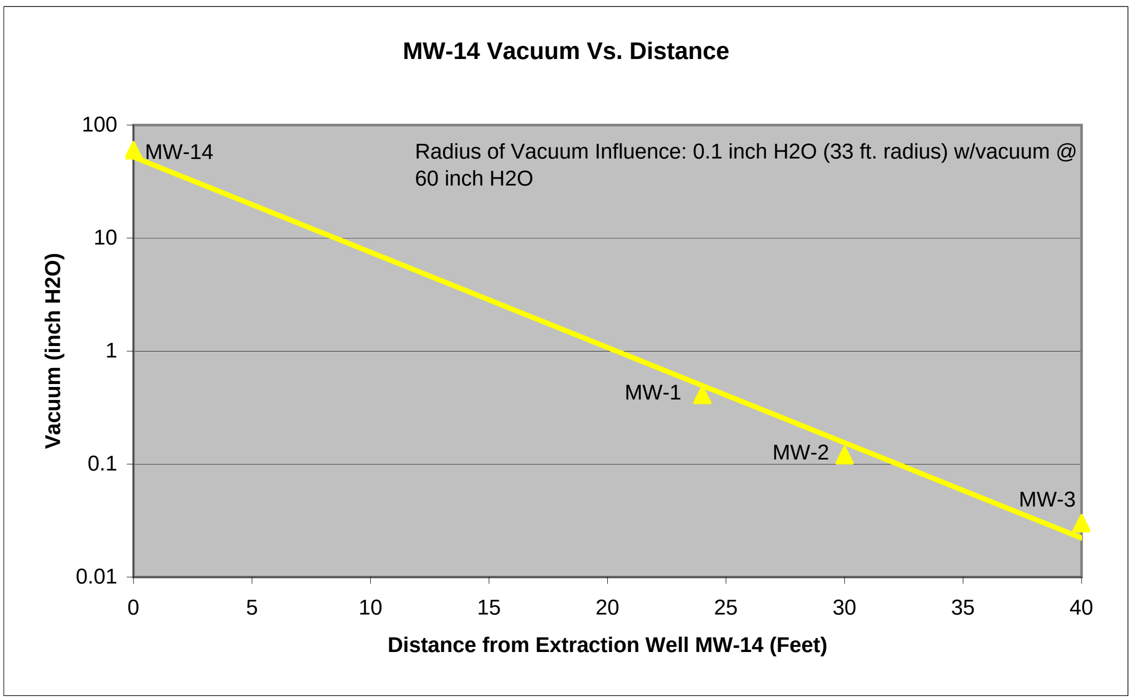
Royal Farms Store No. 64

MW-14 Step Test - Vacuum Readings (Inch H2O)

Valve	Time (min)	MW-14	MW-1	MW-2	MW-3
1/3	0	36	0.05	0.04	0.02
	10	50	0.07	0.04	0.01
	20	50	0.07	0.03	0.03
	30	50	0.06	0.04	0.02
	40	50	0.07	0.04	0.02
2/3	50	54	0.10	0.08	0.05
	60	58	0.10	0.08	0.03
	70	58	0.12	0.06	0.03
	80	58	0.13	0.07	0.02
Open	90	60	0.31	0.10	0.03
	100	60	0.33	0.11	0.03
	110	60	0.42	0.13	0.02
	120	60	0.41	0.13	0.03
	130	60	0.41	0.12	0.03
	Distance	0	24.00	30.00	40.00

MW-14 Step Test - Air Flow

Valve	Time	Air Flow
1/3	15	31
1/3	45	29
2/3	75	38
Full	105	58
Full	135	33



MW-14 Step Test - Liquid Levels

Valve	Time	MW-2		MW-1		MW-3		MW-5		MW-10	
		DTW	DTP	DTW	DTP	DTW	DTP	DTW	DTP	DTW	DTP
Static	0	12.92	Sheen	12.71	12.71	6.42	6.42	5.81	5.80	3.30	3.30
1/3	30	13.57	13.52	13.37	13.37	7.05	7.05	6.61	6.60	NG	NG
2/3	60	13.79	13.74	13.64	13.64	7.30	7.30	6.83	6.82	NG	NG
2/3	90	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
Full	120	14.04	13.99	13.86	13.86	7.57	7.57	7.10	7.09	4.35	4.35

Test Conducted September 3, 2010
Liquid levels measured in feet from top of casing
DTW - Depth to water   DTP - Depth to product
Time in minutes
Air-flow in cubic feet per minute (cfm)

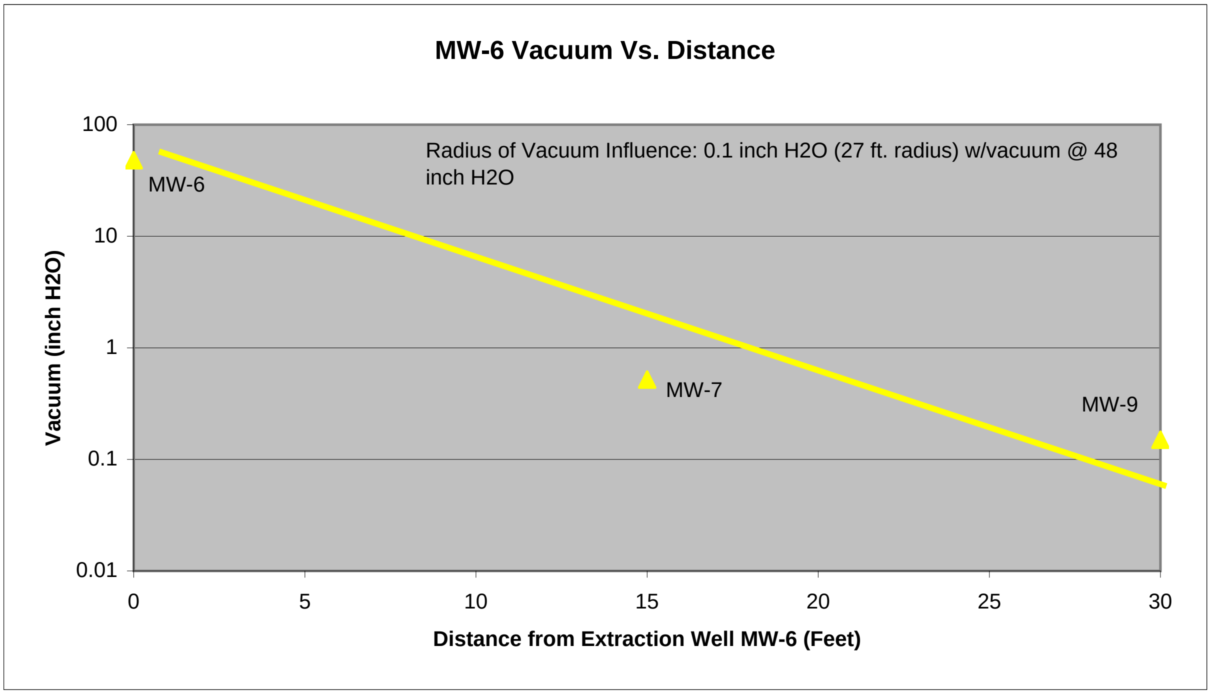
Royal Farms Store No. 64

MW-6 Pilot Study - Vacuum Readings (inch H2O)

Time (min)	MW-6	MW-7	MW-9	MW-4	MW-8
0	46	0.57	0.10	0.00	0.01
10	46	0.51	0.13	0.00	0.01
20	48	0.52	0.12	0.00	0.00
30	48	0.52	0.15	0.00	0.00
40	49	0.55	0.17	0.00	0.00
50	48	0.55	0.18	0.00	0.00
60	51	0.57	0.19	0.00	0.00
Distance	0	15.00	30.00	35.00	40.00

MW-6 - Air Flow

Time	Air Flow
0	30
10	NM
20	34
30	NM
40	NM
50	NM
60	NM



Test Conducted September 13, 2010
Time in minutes
Air-flow in cubic feet per minute (cfm)
NM - Not Measured

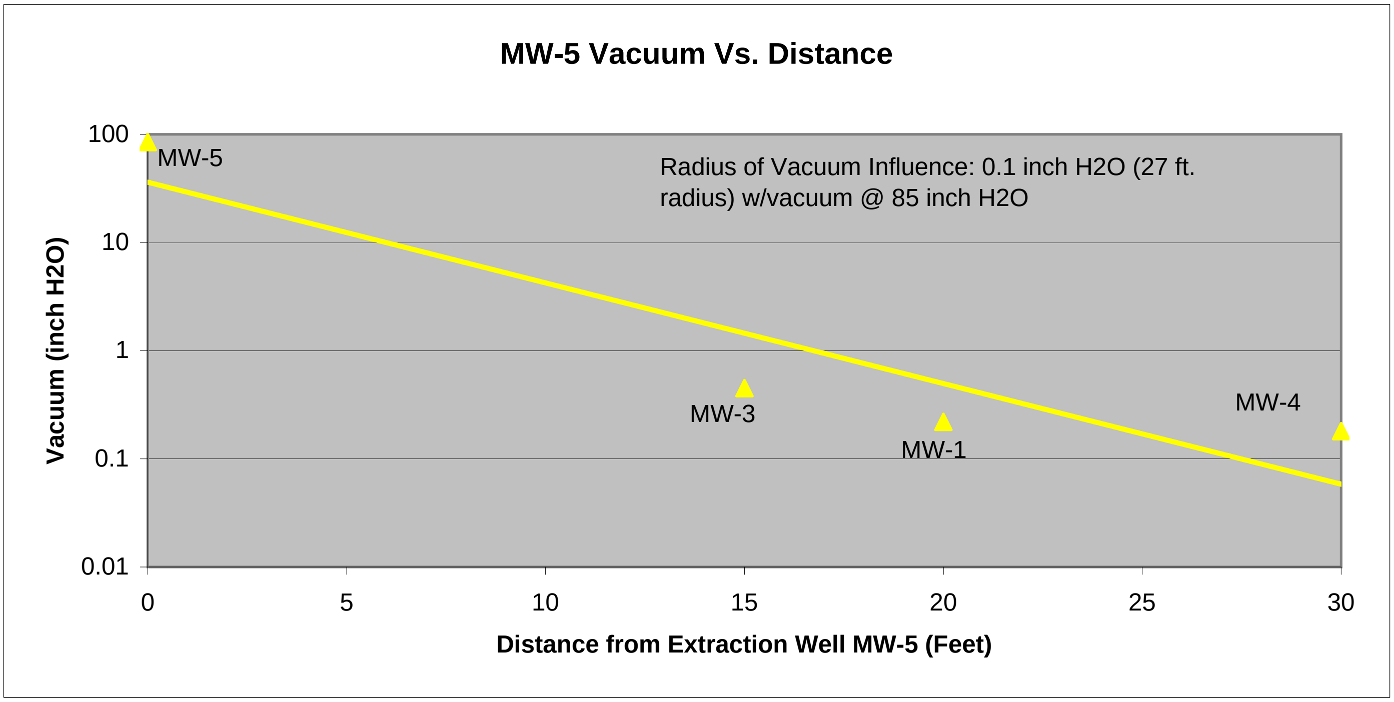
Royal Farms Store No. 64

MW-5 Pilot Study - Vacuum Readings (Inch H2O)

Time (min)	MW-5	MW-3	MW-1	MW-4	MW-11
0	86	0.39	0.21	0.14	0.01
10	86	0.40	0.23	0.13	0.01
20	86	0.42	0.32	0.13	0.00
30	84	0.38	0.22	0.14	0.00
40	82	0.39	0.22	0.16	0.00
50	83	0.42	0.23	0.16	0.00
60	85	0.45	0.22	0.18	0.00
Distance	0	15.00	20.00	30.00	50.00

MW-5 - Air Flow

Time	Air Flow
0	47
10	NM
20	50
30	45
40	NM
50	NM
60	NM



Test Conducted September 13, 2010
Time in minutes
Air-flow in cubic feet per minute (cfm)
NM - Not Measured