

**Conceptual Site Model Report** 

Axil Belko Kingsville, MD

MDE Case Number: 1991-0916-BA4

January 21, 2014

Prepared For:

The Axil Corporation 375 Metuchen Road P.O. Box 98 South Plainfield, NJ 07080

Prepared By: Brownfield Science & Technology, Inc. 3157 Limestone Road Cochranville, PA 19330

Willfam "Tripp" Fischer, P.G. Principal Hydrogeologist

Mid Atlantic Region & Headquarters 3157 Limestone Road • Cochranville, PA 19330 (610) 593-5500 Northeast Region P.O. Box 600 • Belmar, NJ 07719 (732) 280-1420

www.bstiweb.com

# **TABLE OF CONTENTS**

1.0	INTRODUCTION	.1
1.1	Methodology	. 1
2.0	SITE DESCRIPTION	.2
2.1	SITE DESCRIPTION	. 2
2.2	Environmental History	3
3.0	FOURTH QUARTER 2013 ACTIVITES	.8
3.1	SITE INSPECTION	. 8
3.2	MONITORING WELL INSTALLATION	. 8
3.3	MONITORING WELL SAMPLING	9
4.0	SUBSURFACE CONDITIONS	0
4.1	SUBSURFACE STRATIGRAPHY	10
4.2	SUBSURFACE HYDROGEOLOGY	12
4.3	SUMMARY OF REMEDIAL ACTIVITIES	14
4.4	SOIL ANALYTICAL RESULTS	15
4.5	GROUND AND SURFACE WATER ANALYTICAL RESULTS	16
5.0	SEVEN RISK FACTORS	8
5.1	LIGHT NON-AQUEOUS PHASE LIQUIDS (LNAPL)	18
	1.1 LNAPL Type and Source	
5.2	<b>.1.2 LNAPL Distribution</b>	-
	2.2.1 Potable Well Sampling	
5.	2.2.2 Use of Groundwater Concern	20
5.3	MIGRATION OF CONTAMINATION	20
	3.1 Dissolved Contaminants	
5.4	<b>.3.2 Migration of Contamination Concern</b>	
5.	.4.1 Inhalation Exposure	22
5.	.4.2 Dermal Contact	22
5.5	<b>.4.3 Ingestion</b>	
2.0	BROWNE	

SCIENCE & TECHNOLOGY

.D

 IMPACT TO UTILITIES AND OTHER BURIED SERVICE	5.6
 OTHER SENSITIVE RECEPTORS	5.7
 CONCLUSIONS/RECOMMENDATIONS	6.0



# TABLES

- Table 1Area of Concern Stratigraphy
- Table 2Groundwater Elevation Data
- Table 3Remediation Summary
- Table 4Soil Analytical Data
- Table 5Phase II Groundwater Analytical Data
- Table 6Monitoring Well Groundwater Analytical Data
- Table 7Outfall and Seep Analytical Data
- Table 8Potable Well Analytical Data

# FIGURES

- Figure 1 Site Location Map
- Figure 2 Area Map
- Figure 3 Site Base Map
- Figure 4 Cross Section Location Map
- Figure 5 Cross Section A
- Figure 6 Cross Section B
- Figure 7 Cross Section C
- Figure 8 Cross Section D
- Figure 9 Cross Section E
- Figure 10 Cross Section F
- Figure 11 Cross Section G
- Figure 12 Cross Section H
- Figure 13 Area C NAPL/Heavy Staining Map
- Figure 14 Groundwater Contour (December 2013)
- Figure 15 Hydrograph
- Figure 16 TPH-DRO Soil Analytical Map
- Figure 17 TPH-DRO Groundwater Analytical Contour (December 2013)
- Figure 18 TPH-DRO Groundwater Analytical Time Series
- Figure 19 TPH-DRO Outfall and Seep Analytical Time Series

# APPENDICES

- Appendix I Field Notes
- Appendix II Soil Boring Logs
- Appendix III Monitoring Well Sampling Sheets
- Appendix IV Analytical Data



# **1.0 INTRODUCTION**

On behalf of the Axil Corporation (Axil), Brownfield Science & Technology, Inc. (BSTI) is pleased to submit this updated Conceptual Site Model Report (CSM or Report) for the Former Axil-Belko Facility (**Figure 1**) in Kingsville, MD (1991-0916-BA4). A corrective action work plan (CAW) was submitted for the Site in December 2010. Corrective action, as described in the CAW and subsequent addendums, is now complete. An update to the original CSM dated April 14, 2010 was requested by MDE in correspondence dated October 8, 2013. This CSM Report updates the 2010 CSM and includes all previous assessments performed site wide and information gathered during assessments and corrective actions from 2010 to present. Specifically, this CSM Report includes the following:

- Description of installation and sampling of replacement monitoring wells;
- Graphical presentation of subsurface conditions both horizontally and vertically;
- A summary of data from assessments to date including:
  - o Tabular and graphic presentation of soil analytical data
  - Tabular and graphic presentation of groundwater analytical data;
- An evaluation of the seven risk factors as per the MDE MEAT document;
- Evaluation of contaminant fate and transport and any data gaps; and
- Proposed steps to address data gaps and prepare for Site closure

# 1.1 Methodology

To construct this CSM Report, all monitoring wells, building corners, outfalls and sampling points were mapped in Maryland State Plane coordinates (North American Datum 1983). Data was then analyzed using various mapping software packages (ArcGIS<sup>TM</sup>, Rockworks<sup>TM</sup>) to generate three-dimensional models which were used to conceptualize subsurface water flow, contaminant migration, stratigraphy, and location of fill material. The analyses were then used to evaluate the seven risk factors as described in the MDE MEAT Guidance (February 2003).



# 2.0 SITE DESCRIPTION

# 2.1 Site Description

The facility functioned as a cotton mill in the late 1800's and later became a rubber products manufacturing plant owned and operated by the Belko Corporation. The Site consists of three contiguous parcels (11-10-03900, 11-10-039001 and 11-10039002) and is approximately three acres in size and irregular shaped. The Site is located along the Little Gunpowder Falls (LGF) River in Kingsville, MD. Residential properties border the Site to the west and south and state owned land to the north and east (Gunpowder Falls State Park) (**Figure 2**).

The property is located in the Piedmont physiographic province. Due to the uneven natural terrain of the metamorphic and igneous Precambrian aged bedrock in this area, the facility was extensively filled in order to accommodate industrial use (parking, construction and storage). As a result, the terrain surrounding the buildings slopes gently to the northeast with little to no rock outcropping. Where the fill terminates, the terrain drops sharply to the rocky stream bank of the LGF River. Precipitation infiltrates gently graded areas to recharge groundwater perched above bedrock. The perched groundwater discharges at the river bank through seeps and underground conduits (Outfalls 1 and 2); the course of which are approximately known. Increased flow is observed from outfalls during rain events, and large variations in water levels are also observed in some onsite monitoring wells.

A base map of the Site as it existed during operation is presented in **Figure 3**. This map illustrates potential areas of concern (Areas A through J) identified in the 2002 Phase II Environmental Site Assessment. Also illustrated are areas of concern identified during remediation (crawl space, Accumulator and fuel oil UST). As of early 2013 all above ground structures at the Site were demolished. The facility still contains paved areas, building foundations, a security fence, various storm water drains, outlets and conduits, a subsurface vault which served as a spring house and an intake pipe for stream water. Drains and pipes discharge to the southern banks of the Little Gunpowder Falls (LGF) stream. When in operation, the facility's potable water was supplied by a groundwater well located in the western portion of the property (POT-1). Another potable well was located on the eastern side of the office building



(POT-2), but was not being used for potable water when the facility closed due to bacteria concerns.

# 2.2 Environmental History

Environmental history of the Site was reviewed in detail in the original CSM and CAW from 2010. The contents of significant documents describing the environmental history of the Site are summarized below. In addition to the documents reviewed below, quarterly updates describing routine monitoring have been submitted to MDE by BSTI from the fourth quarter of 2008 through the present.

#### MDE Environmental Assessment Summary 7/27/2007

Project chronology begins with observation of a Light Non-Aqueous Phase Liquid (LNAPL) seep into the LGF River on November 30, 1986 shortly after the apparent loss of 200 gallons of#4 oil. Between May 1991 and June 1992 remedial activities including monitoring well installation, bailing of LNAPL, vacuum extraction, and aquifer testing were reported. As much as ten inches of LNAPL was reported in MW-2. LNAPL thickness between one and two inches was observed in MW-1 and MW-2 in August 1991. Approximately 1,400 gallons of product, primarily from MW-2 was reported recovered by January 1992. Subsequent to this, periodic bailing and use of sorbent socks reportedly continued for an unknown length of time.

*Phase I and Phase II Environmental Site Assessment (August 2001 and February 2002)* Environmental assessments resumed with Phase I and Phase II ESAs performed by TriState Environmental. Potential areas of concern (AOCs A through J) were identified in the Phase I ESA and evaluated in the Phase II ESA. A total of 46 boreholes were advanced during the Phase II ESA and 31 soil samples were analyzed. Four existing monitoring wells in Area C and temporary monitoring wells in Areas A, C, D and H were also used to evaluate groundwater quality.

Soil samples analyzed for diesel range organics (DRO) exceeded the MDE non-residential standard at Areas A, C, D and I. Soil staining was also observed in Area B. Soil samples



collected in Area B contained concentrations of DRO below regulatory standards. Based on laboratory analysis, concentrations of DRO above the groundwater standard were only observed in Areas A and C, adjacent to the location of the 1986 seep into the LGF River. Areas A and C were identified as likely to require remediation.

#### Focused Site Investigation, Interim Measures and Monitoring Activities 11/12/2004

In February of 2004, an oil seep was observed at the LGF River at the same location as previous seepage, labeled as "Seep" in **Figure 3**. Langan Environmental was retained by the property owner to perform additional assessment work. Evidence of petroleum was observed in several test pits and fingerprint analysis indicated that subsurface contamination consisted mainly of hydraulic oil which was used on Site prior to the 1980s.

#### Drinking Water Supply Well Sampling 12/16/2006

Langan reported the results of sampling two supply wells on Site referred to as PTO-1 and PTO-2 with depths of 200 and 106 ft respectively. Both wells were non-detect for petroleum constituents.

#### Supplemental Site Characterization Report 12/6/2009

Beginning in October 2008, BSTI (then Brownfield Associates) performed work on the Site including monthly monitoring and maintenance of sorbent material at the seep location, a geophysical survey, installation of five additional monitoring wells and three test pits, surface water and outfall water sampling, and sediment sampling all in the vicinity of Area C. Results indicated that soil collected from monitoring well borings exceeded standards for Total Petroleum Hydrocarbon – DRO (TPH-DRO). One of three sediment samples also slightly exceeded standards for DRO. All groundwater samples and two out of three outfall water samples also exceeded standards for DRO. It was observed that current hydrologic conditions in Area C consist of a perched water table driven by recharge of standing water within the building foundation.



# Conceptual Site Model Report 4/14/2010

A Site conceptual model report was submitted to MDE by BSTI on April 16, 2010. This report compiled data from past and recent site assessments in Area C to provide a graphic representation of subsurface conditions and evaluated Seven Risk Factors as per the MDE's Maryland Environmental Assessment Technology (MEAT) for Leaking Underground Storage Tanks document. LNAPL discharge to the LGF River was identified as a concern due to three potential risk factors (LNAPL distribution, Migration of Contamination, and Ecological Exposure). A remedial strategy was outlined consisting of source area removal through excavation under and in the immediate vicinity of the hydraulic system and boiler rooms of the building along with additional sampling to further characterize DRO mass flux and potential toxic effects to the LGF River.

### Corrective Action Work plan 12/22/2010

The CAW further developed the remediation strategy with a plan for targeted remedial excavation. Environmental decommissioning of the contents of remaining buildings, and additional assessment were also recommended.

#### 1st Q 2011Remedial Action Progress Report 5/15/2011

Initial remedial excavations were carried out to remove soils impacted by petroleum hydrocarbons. Excavations were performed in Area A on the east side of the former building, Area D the location of a former drum storage area and Area I, the location of a pit for hydraulic equipment. Localized VOC impacts, primarily acetone, were discovered in Area D and fully excavated. Approximately 6,754 lb of petroleum hydrocarbons were disposed of offsite.

# MW-3 Pump Test Report 6/22/2011

A pump test was conducted to evaluate the dewatering requirements for Area C excavation. Hydraulic conductivity of 0.071 ft/day was calculated.



# Remedial Action Progress Report Demolition Activities 2/28/2012

This report detailed the demolition of a portion of the building (Building 8) to provide access for remediation.

### Sub slab Soil Assessment 5/9/2012

A direct push assessment was carried out to refine the area proposed for excavation in Area C and the accumulator (Area F). A total of 48 borings were advanced and this data was combined with data from prior excavations to produce an updated 3D model of Area C. Concentrated zones of petroleum impacted soil were targeted for excavation.

# 2nd Q 2012 Remedial Action Progress Report 5/1/2012

Initial excavations were carried out in Area C focused on the vicinity of a former AST containment, reportedly collocated with a former unlined sump used for the collection of hydraulic oil. Approximately 6,239 lb of petroleum hydrocarbons were disposed of offsite.

# Remedial Action Progress Report July 2012 Excavation 8/31/2012

Excavation in Area C was expanded to the south east. Approximately 4,081 lb of petroleum hydrocarbons were disposed of offsite.

# Remedial Action Progress Report October 2012 Excavation 12/4/2012

Excavation in Area C was expanded to the north east. Stockpiled soil from prior excavations containing TPH-DRO in the 1000 mg/kg range was disposed offsite. Approximately 4,693 lb of petroleum hydrocarbons total were disposed of offsite.

# Remedial Action Progress Report April 2013 UST Removal 5/21/2013

Three tanks were removed consisting of a gasoline UST and a fuel oil UST reportedly abandoned in the 1960s and 1970s and used oil AST closed in place in 1985 and subsequently partially buried. Approximately 1,311 lb of petroleum hydrocarbons total were disposed of offsite. Remediation was not completed for the fuel oil and used oil tanks.



# Remedial Action Progress Report April 2013 Excavation 5/23/2013

Excavation in Area C expanded to the east to encompass MW-7 and to the north to include MP-13 and MP-14. Approximately 3,190 lb of petroleum hydrocarbons total were disposed of offsite.

# Remedial Action Progress Report July 2013 Excavation 9/16/2013

Remedial excavation conducted of fuel UST and used oil tank, accumulator, and crawl space formerly used for hydraulic equipment. Approximately 11,748 lb of petroleum hydrocarbons total were disposed of offsite. Remedial excavation in Area C completed.



# 3.0 FOURTH QUARTER 2013 ACTIVITES

# 3.1 Site Inspection

Site inspections were performed at least weekly during each month of the reporting period. BSTI personnel inspected the banks of the LGF River to identify potential petroleum seeps from the Site (along the bank) and into the River. Isolated drops of petroleum and or sheen were observed at the seep in October and November. Field notes recording the observations made during Site inspections are attached in **Appendix I**. BSTI continues to maintain and/or replace petroleum sorbent pads and booms in the area of the "seep" near MW-1 and Outfall 2.

# 3.2 Monitoring Well Installation

On November 22, 2013, replacement monitoring wells were installed as requested by MDE in an October 8, 2013 *Approval of Monitoring Well Replacement and Request for Updated Conceptual Model*. This letter specified the replacement of four monitoring wells (MW-2, MW-3, MW-7 and MW-8) removed during excavation, and requested an additional two wells within the footprint of the excavation encompassing the former used oil AST and brick raceway structure.

Monitoring wells were successfully installed in the former locations of MW-3, MW-7, and MW-8. Replacement wells were designated by the suffix "A" (e.g. MW-3A). A new well, designated MW-10, was installed at the northern edge of the raceway excavation, located between former MW-8 and MW-2. During field activities, it was observed that conditions did not allow for typical construction of a monitoring well at the location of former MW-2 or directly down gradient. For this reason, no well was installed in the location of MW-2, nor was a second well installed within the raceway footprint. A proposed plan for the completion of monitoring well installation was submitted on November 25, 2013 to MDE by BSTI. Completed monitoring wells were surveyed to determine casing elevation. Locations for all existing wells at the Site are illustrated in **Figure 3**. Boring logs describing well construction and subsurface conditions are provided in **Appendix II**.



# 3.3 Monitoring Well Sampling

On December 17 and 18, 2013, groundwater samples were collected from the existing monitoring wells. Water levels were recorded using an interface probe; no sheen was observed. For comparison purposes, monitoring wells MW-8 and MW-5 were first sampled using low flow techniques for TPH-DRO and PAHs. All wells including MW-8 and MW-5 were then purged of three casing volumes of water using a submersible pump and sampled. All monitoring wells were sampled using dedicated disposable bailers and in accordance with BSTI's Quality Assurance and Quality Control program. The field reports for groundwater sampling, including purge volumes and low flow sampling sheets are included in **Appendix III**. Samples were also collected from both Outfalls and the Seep. As each of these locations is free flowing, samples were collected directly from the water dripping from each source. Results of sampling are described below.



# 4.0 SUBSURFACE CONDITIONS

The subsurface conditions at the facility have been assessed through several environmental assessments and monitoring activities. These activities include; monitoring well installation, test pit excavations, direct push soil borings, surface water sampling, sediment sampling, outfall sampling, groundwater gauging and sampling. The following describes the stratigraphy and hydrogeology of the Site including contaminant transport based on prior assessments.

# 4.1 Subsurface Stratigraphy

Observations from the following reports have been combined to update the conceptual site model originally presented in the 2010 CSM:

- TriState Environmental Phase II Environmental Site Assessment (February 2002);
- Brownfield Associates Supplemental Site Characterization Report (November 5, 2009);
- BSTI Sub-slab Soil Assessment (May 2012);
- and from reports regarding remedial excavations (April 2011 to September 2013)

# Area C

Field observations from soil borings within Area C are presented as a series of cross sections. A plan view of Area C showing the location of cross sections is illustrated in **Figure 4**. Cross Sections are provided in **Figure 5** through **Figure 12** including excavated areas and subsurface structures observed during excavation. Note that subsurface structures have been projected into the plane of the nearest cross section. Additionally, figures represent a straight line interpolation of the observations from each boring; hence depictions between borings may not fully reflect reality.

Within Area C, petroleum impacts were widespread. Soil staining was primarily limited to soils at or below the perched water levels with heavy staining and or soil with residual LNAPL observed directly above bedrock. Notable exceptions were observed in the vicinity of monitoring point MP-12 and soil boring SB-21. In these areas, heavily stained soils were observed throughout the soil column. This suggests sources of petroleum impacts are near these locations.



This is consistent with the description of former Site operations contained in the Langan *Focused Site Investigation, Interim Measures and Monitoring Activities* (November 12, 2004). In this document, the flow of oil is described through open channels, ultimately entering the hydraulic room through an opening adjacent to SB-21. Although not observed during the demolition of Building 8, the hydraulic room is described as having sumps in its floor for the recovery of this oil. In addition, a "pit" is described which received overflow of oil from pumps and vessels within the hydraulic room. This pit was approximately of the same size and location as the 10,000 gallon AST containment area which was directly adjacent to MP-12. As illustrated in the cross sections the majority of heavily petroleum impacted soils were removed during remedial excavation.

Soils with no observed petroleum impacts were present at the northern most extent of Area C (SB-34) in the direction of MW-9 and along the bank of the LGF (CHP-1, CGW-1, CHP-7, CHP-8, CHP-10, SB-27). It should be noted, however, that some of these borings may have not reached sufficient depth to encounter the water table prior to refusal. Significant petroleum impacts were also not observed in the vicinity of SB-37 or SB-38 on the south east edge of Area C. However, observations made during excavation of the adjacent used oil tank indicate that a large mass of petroleum impacted material was present in this area below the elevation of surrounding bedrock within a brick structure believed to be associated with the original mill race. MW-2 was installed into the southern end of this structure and the reported 1,400 gallons of product recovered from this well presumably was recovered from the void space within the structure.

The thickness of heavily stained soil and LNAPL bearing layers presented in cross sections is summarized in **Figure 13** along with the outline of excavated areas. This figure presents the straight line interpolation of heavily stained layers equal to or greater than two (2) feet in thickness and of LNAPL bearing layers equal to or greater than one half (0.5) foot in thickness. As also illustrated in cross sections the majority of heavily stained soils were removed from the Site during remedial excavation.



#### **Other Areas**

Subsurface stratigraphy in other areas of the Site is similar to than observed in Area C generally consisting of one to eight feet of fill of varying age and composition overlying native soils or weathered gneiss. Refusal for direct push sampling varied from eight to twenty ft. Based on these observations, use of fill was most extensive in Area C, the lowest lying portion of the Site. Petroleum impacts were also less extensive with isolated areas of staining observed with no LNAPL apparent.

Stratigraphy of the various Areas of concern, as evidenced by Phase II soil borings and subsequent excavation, is summarized in **Table 1**. No petroleum impacted soil was observed in Areas B, E, F, G, H or J. Within Area A petroleum staining and odor was observed in some borings between 2 and 8 ft bgs. In Area D petroleum odor and moderately elevated PID readings were observed from 1 to 4 ft bgs. Subsequent excavation indicated petroleum and VOC impacts extending to approximately 7 ft bgs. Petroleum odor was observed at some locations between 2 and 8 ft bgs within Area I.

Additional direct push borings were conducted by BSTI around the accumulator (SB-39 to SB-42) and machinery pads located within the northwest corner of the building (SB-43 to SB-47). Near the accumulator, silt and sand fill with brick was observed to a maximum of 9 ft bgs above weathered gneiss with refusal at 14 to 19 ft. An isolated layer of staining was observed in only one boring. Near machinery pads up to 1 ft of fill was observed above silt and sand or weathered gneiss with refusal at 3.5 to 11 ft. A slight petroleum odor was observed in some borings. Analytical results from these borings indicated minimal petroleum impacts as described below.

# 4.2 Subsurface Hydrogeology

There are currently twelve monitoring wells on Site which are gauged monthly for liquid levels and presence of LNAPL. Monitoring wells are all installed to refusal with total depths ranging from 22 to 5 feet below grade.

Groundwater is observed between 0.5 and 10 feet below ground surface. As precipitation infiltrates the ground surface, the water migrates down to the irregular bedrock layer where it



moves laterally towards the LGF River. Depth to water measurements and calculated groundwater elevations for the monitoring wells are summarized in the attached Table 2. The apparent groundwater flow direction is toward the east with an average groundwater hydraulic gradient of 0.138 ft/ft. Groundwater elevation contours as observed during the most recent sampling event (December 2013) are shown in Figure 14. Note that to elevation control points have been surveyed near Outfall 1 and the Seep and that river levels at these locations are also depicted. These observations illustrate the steep drop in groundwater elevation which occurs in the embankment area. Hydraulic gradient across Area C was determined to be approximately 0.2 ft/ft. Flow direction observed in Area C has been consistent throughout monitoring starting in 2008, although substantial changes in water level of have been observed in Area C as a result of excavation activities. Hydrographs for Site monitoring wells are provided in Figure 15. Water levels decreased by a foot or more over much of Area C (wells MW-4, MW-5, and MW-6) as a result of excavation in 2012. Water levels in replacement well MW-3A are over two feel lower than observed prior to excavation, presumably due to removal of overburden and the placement of permeable gravel backfill in this up gradient location. Water levels in replacement wells MW-7A and MW-8A on the down gradient end of the excavation are higher than observed prior to excavation. This is believed to result from pooling of groundwater within the gravel filled excavation. In 2013 the abandonment of Outfall 2 resulted in sharp increases of up to two feet in water levels at MW-4, MW-5, MW-6 and MW-9resulting from the infiltration of water which previously discharged directly to the LGF.

Area C aquifer properties are known through slug testing performed in 2010 on MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8 and MW-9 and a pump test conducted at MW-3 in 2011. Slug test hydraulic conductivity values ranged from 0.22 to 0.006 ft/day with a mean of 0.013 ft/day. For the pump test, analysis of distance verses drawdown data from MW-3, MP-10, MP-11 and MP-12 resulted in an estimated hydraulic conductivity of 0.071 ft/day. Results are consistent with the likely range of hydraulic conductivity for a silty aquifer (0.001 to 0.1 ft/day). A groundwater velocity was calculated using 0.071 ft/day conductivity, 0.2 ft/ft gradient and 0.3 porosity for a value of 0.047 ft/day. While these calculations can be used to estimate the rate at which water flows through each well, they may not be useful in describing Area C overall given the extreme heterogeneity of the subsurface.



Flow of water from Outfalls 1 and 2 are believed to represent a combination of infiltrating groundwater and storm water. Greater flow is observed from outfalls and the Seep subsequent to rainfall events. Flow in Outfall 2 subsequent to its abandonment in April 2013 has ranged from 1 to 4 gpm. Flow from both outfalls has averaged 1.6 gpm since April 2013. Flow from the Seep is estimated to average less than 1 gpm.

Excavation of the used oil tank within Area C has provided additional insight into the hydrogeology of the Seep on the banks of the LGF. Heavy flow of water was observed in the Seep during and immediately after backfill of this excavation but not prior to backfill on the same day. During backfill, water levels within the excavation were elevated several feet above static levels and discharge from the seep was observed several feet higher on the bank than normal. This indicates that a direct hydraulic connection exists between the former mill race and the Seep, located approximately 50 ft to the east. This supports the supposition, previously made based on the large volume of product historically recovered from the mill race, that this area was the primary source of LNAPL discharging to the LGF.

# 4.3 Summary of Remedial Activities

The December 2010 CAW proposed remedial excavation, environmental decommissioning of the contents of remaining buildings, and additional investigation. Target excavation areas were identified in a Sub slab Soil Assessment report submitted to MDE in May 2012. For safety reasons in response to fire damage, all above ground structures at the Site were demolished by early 2013. Absence of Site structures greatly facilitated remedial activities. Remedial excavation activities are summarized in **Table 3**. Excavated areas are illustrated in **Figure 16**. During seven remedial excavation events a total of 4,422 tons of soil were disposed of offsite. This corresponds to the removal of approximately 36,900 pounds or 5,042 gallons of hydrocarbons. Approximately 60 gallons of LNAPL and 18 lb of dissolved phase hydrocarbons were recovered during treatment and discharge or offsite disposal of 119,594 gallons of groundwater. In addition, 50 to 100 gallons of fuel/hydraulic oils, petroleum sludge, and containerized petroleum products were recovered from Site structures during environmental



decommissioning. MDE correspondence dated October 8, 2013 acknowledged that remedial activities as described in the CAW were complete.

### 4.4 Soil Analytical Results

A large quantity of analytical data has been collected from locations across the Site. Analytical data from all prior Site assessments is summarized in the **Table 4.** Note that locations subsequently excavated and disposed of offsite are stippled to indicate that they are no longer present. Results are presented for a total of 154 soil and sediment samples analyzed for TPH-DRO, 49 analyzed for TPH-GRO, 33 for VOCs, 16 for SVOCs, and 14 for PAHs. No VOCs, SVOCs, PAH or TPH-GRO were detected above MDE residential or non residential cleanup standards in these samples (0% above standards). In contrast TPH-DRO was detected above the MDE non residential cleanup standard in 88 or 57% of these soil samples. Only 15 samples exceed the MDE non residential criteria for TPH-DRO by more than an order of magnitude, the majority of these locations were subsequently excavated. A small number of samples for VOCs (in Areas C, D and E) and SVOCs (in Area C) slightly exceeded MDE protection of groundwater and the majority of these sample locations were excavated and disposed of offsite during remediation of TPH-DRO.

These observations reinforce the assertion made in the December 22, 2011 *Corrective Action Work Plan* that TPH-DRO is the only contaminant of concern at this Site and is the only appropriate target for remedial action. Soil analytical data for TPH-DRO is presented in **Figure 16** for the entire Site. Also illustrated are remedial excavation boundaries. Note that only data corresponding to soil remaining on Site is displayed. The majority of soils with elevated TPH-DRO have been disposed of offsite. Some soil with TPH-DRO above MDE standards remain in Areas A, C, D and I. Soils which exceed MDE non residential criteria for TPH-DRO by greater than an order of magnitude remain in place in only two locations within Area C SB-15 (3-4') and NSW with concentrations of 12,200 and 6,390 mg/kg respectively. In summary, remedial assessments throughout the Site indicate that remaining petroleum impacts are limited in extent.



#### 4.5 Ground and Surface Water Analytical Results

During the Phase II assessment in 2001 groundwater samples were collected via temporary well points in Areas A, C, D and H. Samples were also collected from existing monitoring wells in Area C (MW-1, MW-3, MW-4). Results for this analysis are presented in **Table 5.** TPH-DRO exceeded MDE standards in Areas A and C and bis (2-ethylhexy) phthalate was detected above MDE standards in MW-1.

Groundwater quality analytical results within Area C from October 2008 through December 2013 are provided in Table 6. TPH-DRO exceeds the 47 ug/l standard for Type I and II aquifers in all Area C wells. However, the perched groundwater at this facility is not suitable for potable use. TPH-DRO ranged from 1,490 ug/l to 26,800 ug/l in Site monitoring wells in December 2013. Analytical results for MP-15 indicated no detectable PAHs, TPH-DRO concentration was 6,130 ug/l. Note that the majority of TPH-DRO is above the theoretical solubility of diesel range hydrocarbons. Solubility under 6,000 ug/l would be expected for fuel oil and for the mineral oil based hydraulic oil present at the Site solubility under 1,000 ug/l is probable. Hence, analytical measurements greater than solubility indicate the presence of a hydrocarbon sheen or colloidal suspension or polar non hydrocarbon compounds resulting from petroleum degradation. To evaluate the possibility that sampling methods mobilize separate phase petroleum, two wells (MW-5 and MW-10) were sampled using low flow purging techniques then sampled using standard three purge methods. Analytical results for both sampling methods were very similar indicating that sampling methods have not affected analytical results. Further comparison of TPH-DRO analytical results with and without a silica gel cleanup step may be warranted to evaluate the degree to which polar non hydrocarbon compounds are present.

Concentrations are observed to fluctuate widely over time in many wells. TPH-DRO concentration of MW-9 increased sharply subsequent to the abandonment of Outfall 2 during the remedial event which occurred in April of 2013. Rising groundwater elevations in the vicinity of MW-5 may have resulted in flow towards MW-9 carrying residual hydrocarbons to this location. Concentrations are expected to decrease as the system reaches equilibrium.



Concentrations of various PAHs above MDE drinking water standards have been sporadically observed in monitoring wells, most notably in MW-2 and MW-7. No PAHs were detected in replacement well MW-7A in December 2013. PAHs slightly above MDE drinking water standards have also recently been observed in MW-6 (benzo(a)pyrene) and MW-9 (naphthalene) in the last two quarters of 2013. In addition, bis (2-Ethylhexyl) phthalate was observed at low concentrations with some regularity in MW-7, on one occasion with a concentration above MDE standards.

DRO concentrations and contours for December 2013 are illustrated in **Figure 17**. TPH-DRO concentrations over time in monitoring wells are illustrated in **Figure 18**. No statistically significant trends have been observed in TPH-DRO concentrations over the monitoring period. TPH-DRO was also detected at levels which exceed the MDE standard at the Seep and outfalls as summarized in **Table 7**. TPH-DRO in outfalls and the seep over time are illustrated in **Figure 19**. No clear trends exist in TPH-DRO concentrations at these locations over time.

Three surface water samples were collected from the LGF river in 2009 and analyzed for VOCs, SVOCs, TPH-DRO and TPH-GRO. No analyses were detected other than bis(2-Ethylhexyl)phthalate which was detected in all samples, but also present in laboratory blanks.

Analytical results for potable wells are summarized in **Table 8**. No petroleum derived VOCs were observed in either well. A low level detection of chloroform, below MDE standards, has been consistently observed in POT-2. Full analytical results for all recent water samples are provided in **Appendix IV**.

In summary TPH-DRO is the only constituent of concern currently present in Site groundwater. It is expected that TPH-DRO concentrations in groundwater will decrease gradually over time in response to the remedial excavation.



# 5.0 SEVEN RISK FACTORS

In order to assess the Site based on risk and make corrective action decisions, the Site was evaluated using the "Seven Risk Factors" as described in the MDE's MEAT Guidance Document. Each of the "Seven Risk Factors" is discussed below including recommendations for further evaluation or remediation.

# 5.1 Light Non-Aqueous Phase Liquids (LNAPL)

The first documented observation of LNAPL on Site was during December 1986 when NAPL was observed entering the LGF. Initially, up to ten (10) inches of free-phase LNAPL was measured in MW-2. Over time, LNAPL thicknesses decreased to between 1 and 2 inches in both MW-1 and MW-2. An estimated 1,350 gallons of free-phase LNAPL were removed via bailing and vacuum truck extraction from June 1991 through January 1992. Measurable product (0.01') was last observed in Site monitoring wells in August 2009.

# 5.1.1 LNAPL Type and Source

No singular source for the LNAPL has been identified. In 2004, Langan performed fingerprint analyses on LNAPL samples collected from the fuel oil AST, the hydraulic oil tank in the pipe room, test pit # 5, and the LGF seep. The fingerprint analyses concluded that the LNAPL which was found in the subsurface and groundwater seeps did *not* match the fuel oil in the ASTs or the water soluble hydraulic oil used after the mid-1980's. Hydraulic oil used prior to the 1980s is presumed to be the main source of LNAPL. This is consistent with the concentration of staining and LNAPL around the former hydraulic room, outdoor sump/fuel oil AST containment and used oil AST.

#### 5.1.2 LNAPL Distribution

LNAPL has historically been observed in Area C in subsurface soils, as observed thickness' in monitoring wells, and as a discharge to the LGF at the Seep and Outfall 2. Locations with substantial thickness of LNAPL in soils have been excavated and disposed of offsite. Lesser



residual quantities are still present outside the boundaries of the excavation, as observed in borings SB-32, and SB-1 and illustrated in **Figures 5 and 8**. Residual and/or free phase LNAPL was observed in these areas just above bedrock at 8 and 13 feet below ground surface.

No LNAPL greater than sheen has been observed in Site wells since August, 2009. Moderate quantities of LNAPL were observed collecting on the water surface during excavation and recovered. The quantity of LNAPL observed decreased as excavations extended further from the former hydraulic room and AST enclosure. The largest quantity of LNAPL was observed and recovered during the excavation of the used oil AST pit near MW-2. This excavation remained open for a period of approximately one week subsequent to excavation. During this period only a small quantity of LNAPL, one to two feet square in area, was observed and recovered.

LNAPL was historically observed in two separate seeps, the riverbank east of MW-1 (Seep) and on the slope adjacent to the former used oil AST. Discharges of very small quantities of LNAPL totaling much less than a milliliter at any one time, have been observed periodically at the Seep through the present. Discharge is sometimes, but not always associated with elevated groundwater flow to the Seep. As noted above a preferential flow path has been observed between the Seep and the former used oil AST pit. LNAPL was observed more frequently and in slightly larger quantity at the Seep in the days subsequent to excavation of the AST pit but LNAPL has not been observed in unusual quantities since that time.

Available evidence indicates LNAPL has been remediated to the maximum extent possible. Any LNAPL still potentially present at the Site should be largely immobile and that the source of LNAPL discharge to the LGF has been remediated. However, as LNAPL discharge has historically been intermittent, LNAPL remains a potential concern. Hence, continued monitoring and maintenance of sorbent materials in the area of the Seep is warranted. It is expected that if no LNAPL is observed during the course of a year of monitoring this risk factor will be fully addressed.



# 5.2 Current and Future Use of Impacted Groundwater

The groundwater at the Site is perched water located above bedrock. The facility and surrounding communities are served by non-public supply wells; however, the wells are typically 150-300 feet deep and installed into bedrock. Perched groundwater is not used for direct consumption and would not yield enough water to be used for industrial purposes.

#### 5.2.1 Potable Well Sampling

The facility's potable water was supplied primarily by a groundwater well located in the western portion of the property (POT-1). Details of the construction of the well are not available; however, it has been measured to be 200 feet deep. Another potable well (POT-2) is located on the eastern side of the office building but had not been used for potable water due to bacteria concerns. POT-2 is at a total depth of 106 feet below ground surface (bgs). Sampling of potable wells from 2006 through 2013 has detected no VOCs excepting low levels of chloroform. POT-1 was also tested for and did not contain any detectable TPH-DRO.

# 5.2.2 Use of Groundwater Concern

Multiple sampling events performed on both potable wells, suggest that the bedrock aquifer is free of petroleum contamination. The shallow, perched, aquifer beneath the Site is not adequate for human consumption, agricultural use or industrial use. Groundwater beneath the Site is not, and shall never be, used for these purposes. Use of this perched groundwater is thus not a concern.

# 5.3 Migration of Contamination

Groundwater flow is generally toward the east in the direction of the LGF. In addition, an apparent preferential flow path exists between the former location of the used oil AST and the Seep. Perched groundwater discharges at multiple seep and outfall locations along the river bank.



#### 5.3.1 Dissolved Contaminants

The primary dissolved phase contaminant of concern is TPH-DRO. Although individual petroleum compounds have not consistently exceeded their respective MDE-Generic Numeric Cleanup Standards (MDE-GNCS) for groundwater, the TPH-DRO MDE-GNCS (47ug/L) has been exceeded in all nine monitoring wells. This agrees with the fingerprint analysis performed by Torkelson Geochemistry (Langan November 2004 report) where the weathered hydraulic oil samples consisted mainly of unidentified peaks in the C13-C35 range.

TPH-DRO concentrations in monitoring wells from the December 2013 monitoring event ranged from 1,490 to 26,800 ug/L with an arithmetic mean of 5,730 ug/l. **Figure 17** depicts the most recent concentrations of TPH-DRO.

# 5.3.2 Migration of Contamination Concern

The TPH-DRO detected in the dissolved phase is primarily comprised of unidentifiable peaks in the DRO carbon range and is therefore difficult to assess from a risk perspective. The MDE-GNCS for TPH-DRO in Type I and II aquifers is 47ug/L. This standard is based on the human health risk assumed to be present from an ingestion pathway in the case where all TPH-DRO is in the form of aromatic hydrocarbons, which are more toxic than aliphatic hydrocarbons. Based on the type of source material (hydraulic oil) and chemical analysis performed to date, the bulk of the TPH at this Site consists of aliphatic hydrocarbons. As such, the 47ug/L standard is highly conservative when applied to this Site for the purposes of protecting human health. In addition, the perched water bearing unit does not meet the criteria of a Type I or II aquifers and could not be used for potable water. Therefore, the groundwater cleanup standards for Type I and II aquifers are not applicable.

Rather, given that a pathway for migration of TPH-DRO to the LGF exists, this pathway should be evaluated as an exposure point to humans (dermal contact through wading) and wildlife (Section 5.4 and 5.5).



# 5.4 Human Exposure

The pathways for human exposure are inhalation, ingestion and dermal contact. Inhalation pertains to the vapor phase of the petroleum contamination while ingestion and dermal contact relate to the dissolved and adsorbed phases (soil and groundwater). Each pathway and potential exposure scenario is discussed below.

#### 5.4.1 Inhalation Exposure

Due to the lack of VOCs at the Site and the nature of the petroleum product (hydraulic oil), vapor phase contamination is not expected to be a significant concern. No structures are currently present at the Site. During the installation of monitoring wells MW-5, 6, 7 and 8, PID detections were all below instrument detection limits for the first 6-10 feet of soil column during split spoon sampling. The highest PID reading for the four borings was 5 parts per million. Similarly low PID readings have been observed during excavation of source areas. As vapor phase contamination is minimal and no pathway to potential receptors exists, inhalation exposure is not a concern.

#### 5.4.2 Dermal Contact

Soil analytical data for TPH-DRO as presented in **Table 3** and **Figure 16** indicate that TPH-DRO is present in some Site soils above the MDE TPH-DRO non-residential clean-up standard of 620 mg/kg. This standard is based on an ingestion pathway and the assumption that all TPH-DRO is in the form of the more toxic aromatic hydrocarbons. For these reasons this standard is not diagnostic of dermal contact risk. Based on less toxic nature of the petroleum product present at the Site, risk associated with dermal exposure is expected to be minimal. In addition no receptors currently exist at the Site and a complete pathway could only exist if soils at the Site were disturbed.

Another potential dermal exposure pathway is through recreational contact during wading activities in the LGF River. Although TPH-DRO is observed above MDE standards in water from outfall locations and in one outfall sediment sample, surface water samples were void of all petroleum contaminants of concern. Therefore, dermal contact through wad



### 5.4.3 Ingestion

The only substance of concern at the Site is TPH-DRO. TPH-DRO standards are 230 mg/kg for residential soils, 620 mg/kg for non-residential soils and 47 ug/l for groundwater. These MDE standards are based on toxicological data compiled by the State of Massachusetts (Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of MADEP VPH/EPH Approach, October 31, 2002, Policy # WSC-02-0411). The MDE standards assume 100% of hydrocarbons in the TPH-DRO range are aromatic. Given the nature of the product present on Site this is a conservative assumption considering that the MADEP guidance suggests less than 20% of hydraulic oil TPH is aromatic in nature. As such MDE state wide standards are expected to be extremely conservative relative to human health risks actually present at this Site.

The Groundwater Cleanup Standard of 47 ug/L is generally applicable to groundwater from Type I and II aquifers. As observed above groundwater observed in Area C has no potential for residential or industrial use and groundwater cleanup standards for Type I and II aquifers are not appropriate. When in use, the facility was supplied by an on-site supply well installed 200 feet into bedrock. The well has been void of all petroleum compounds. Hence, human ingestion of the petroleum impacted groundwater is not possible due to an incomplete pathway to receptors.

The applicable non-residential standard for TPH-DRO in soils is 620 mg/kg. As observed above, this standard is extremely conservative considering the product type present at the Site. Subsequent to remediation, soils which exceed the MDE standard by greater than an order of magnitude remain only in an isolated area in the subsurface within Area C. While some human health risk could be associated with potential ingestion of these soils it is expected to be minimal given their limited extent, and the lesser toxicity of the compounds involved. Disturbance in the form of excavation would be required to create a pathway for ingestion of these soils. As the Site is currently not occupied no complete pathway is present for ingestion of soils.

#### 5.5 Environmental Ecological Exposure

Individual chemicals of concern were not detected in outfall samples, surface water samples, or monitoring wells above the MDE numerical criteria for toxic substances in surface waters



(COMAR 26.08.02.03-2). This agrees with the results of the fingerprint analysis (Langan 2004) performed on the weathered LNAPL which stated that individual toxic chemicals of concern were not present. Dissolved TPH-DRO is present in monitoring wells and Outfalls and the Seep. However, surface water samples downstream of discharge points have contained no detectable levels of TPH-DRO. This is presumed to result from the small quantity of petroleum impacted ground water discharged to the LGF (averaging less than 3 gpm) compared to the mean flow of approximately 21,000 gpm reported for the LGF at the USGS gauging station at Laurel Brook. Given that TPH-DRO has not been detected in surface water, it is expected that the toxicological effect on ecological receptors in the LGF river is negligible. However, as the discharge of groundwater containing TPH-DRO may continue for an intermediate length of time additional evaluation of the potential ecological impacts of this discharge may be warranted and is addressed in the recommendations section of this Report.

Of more immediate concern, with respect to the degradation of a natural resource, is the intermittent presence of LNAPL sheen discharging through Seep to the LGF River. LNAPL sheen can impact flora and fauna via direct contact and can also inhibit natural processes. This concern is discussed above in the section regarding LNAPL and will be addressed in the Recommendations section of this document.

# 5.6 Impact to Utilities and Other Buried Services

There are no longer active utilities at the Site. The only remaining subsurface structures within the petroleum impacted area are storm water pipes which discharge to the banks of the LGF River. A spring house and intake for stream water are located outside of the areas of concern. It has previously been observed that outfalls could potentially serve as a transport mechanism for contaminated water to the LGF River. In response Outfall 2, which has frequently contained dissolved phase TPH-DRO and was once observed to contain sheen was abandoned in April 2013. Although flow of infiltrating groundwater continues in Outfall 2 it is believed that this step should eliminate the potential for any substantial discharge of petroleum at this location. Little or



no petroleum impacts are associated with Outfall 1 and this risk factor no longer is relevant to the Site.

# 5.7 Other Sensitive Receptors

There are no other sensitive receptors to be addressed for this project. The surface water body, Little Gunpowder Falls River, is adequately addressed in the sections above.



# 6.0 CONCLUSIONS/RECOMMENDATIONS

Of primary concern for corrective action at this facility is the discharge of LNAPL sheen to the surface water. Fingerprinting analyses revealed that the LNAPL at this facility is from historic (prior to mid 1980's) hydraulic fluid releases through supply lines and equipment leaks. Remedial actions completed under the CAW have removed the majority of LNAPL source material contributing to the Seep and elucidated the historic sources and transport mechanisms for LNAPL which discharged to the LGF River. Based on field observations, mobile LNAPL has been fully addressed. Continued maintenance and monitoring will be required to confirm that LNAPL discharges have ceased. The on-site potable well has not been impacted by these releases. Furthermore, volatile organic compounds are not present in significant quantities at this Site. Petroleum impacts at the Site consist of TPH-DRO in soil and groundwater.

Risks posed by environmental conditions at the Site were evaluated using MDEs "Seven Risk Factors" contained in the MEAT guidance. Evaluation indicates that the Site presents no current or reasonably anticipated future threat to human health. Potential concerns were identified with regard to LNAPL, contaminant migration, and ecological exposure. Additional steps required to address these concerns are described below.

Based on the above, BSTI makes the following recommendations:

- Monitoring of Outfalls and the Seep will continue for one additional year (January 2014-January2015). During this period BSTI will reduce the existing monitoring frequency to bi-monthly. Maintenance and replacement of sorbent pads and boom will continue as necessary. At the completion of one year of monitoring, observations will be evaluated in concert with groundwater data. A proposal will be made at that time regarding any further inspections, if warranted.
- 2. Groundwater monitoring will continue quarterly for a period of one year (January 2014 to January 2015). Monitoring will be performed only for TPH-DRO and PAHs. Annual sampling for VOCs will be discontinued. On completion of one year of sampling a proposal will be made regarding any further sampling at the Site, if warranted.



- Sampling of potable wells for VOCs will be discontinued. POT-2, which was previously determined not fit for potable use due to bacterial contamination will be abandoned. POT-1 will be left in place until such time as future use of the Site is determined.
- 4. Potential for ecological impacts due to the continued discharge of TPH-DRO from the seep will be evaluated though the use of in-vivo ecological toxicity testing. 48-hr acute LC50 testing will be performed with Cerodaphnia dubia. Two tests will be carried out three months apart. This testing protocol is similar to the toxicity testing required for the General Permit for the Discharge of Treated Ground Water from Oil Contaminated Ground Water Sources to Surface or Ground Water of the State for discharges with average flows over 40 gpm. Hence, this testing will provide for a very conservative evaluation of the potential ecological impacts of the much smaller discharge associated with natural flow of groundwater to the LGF River. Testing will be performed using pooled water collected from directly under the Seep. Results of this testing will be evaluated in concert with groundwater data to determine if additional monitoring or evaluation is required.



# TABLES



#### Table 1 Area of Concern Stratigraphy Axil-Belko Kingsville MD

Area	Area A	Area B	Area D	Area E	Area F	Area G	Area H (in road)	Area I	Area J
First Unit	Silt and Sand with Rubber	Asphalt and Gravel	Asphalt and Gravel or Concrete	Concrete and Gravel	Silt and Sand with buried Asphalt layers	Silt and Sand with Brick and Concrete	Asphalt and Gravel	Concrete and Gravel	Asphalt and Gravel
Bottom of Layer (ft bgs)	1-2	0.5	0.75-1.25	0.5	2-5.25		0.5-1	0.5	0.5
Second Unit	Silt	Silt and Sand	Silt and Sand w/wo Rubber and Brick	Silt and Sand with Brick	Weathered Gneiss		Silt and Sand w/wo Rubber	Silt and Sand with Brick	Fill with wood and Brick
Bottom of Layer (ft bgs)	1-3	1.5	3-12	6-7.5			6-9	4-5	1
Third Unit	Weathered Gneiss	Weathered Gneiss	Weathered Gneiss	Weathered Gneiss			Weathered Gneiss	Weathered Gneiss	Silt
Bottom of Borings (ft bgs)	2-8.5	8	12	11	8	4	20	8	4

#### Table 2 Well Gauging Data Axil Belko Kingsville, MD

Well Designation :		MV	W-1			MW-2		MW-3/MW-3A					MW-4		MW-5		
Casing Elevation :	ion : 94.41				98.44			99.37					97.28			99.19	
DATE	DTP	DTW	PT	*ELEV	DTP	DTW	ELEV.	DTP	DTW	PT	*ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.
08/07/08		12.87		81.54		13.88	84.56	NM	NM				7.42	89.86	NA	NA	
10/03/08 10/22/08		12.62 13.12		81.79 81.29		13.87 13.83	84.57 84.61	NM NM	NM NM				7.38	89.9 89.76	NA NA	NA NA	
11/11/08		12.59		81.82		13.85	84.62	NM	NM				7.32	89.91	NA	NA	
12/04/08		12.82		81.59		13.6	84.84	NM	NM				7.39	89.89	NA	NA	
01/12/09		12.3		82.11		13.8	84.64	NM	NM				7.41	89.87	NA	NA	
02/05/09		12.74		81.67		13.99	84.45	NM	NM				7.48	89.8	NA	NA	
03/13/09		12.94		81.47		13.62	84.82	4.19	4.23	0.04	95.14		7.53	89.75	NA	NA	
04/10/09 05/21/09		12.18		82.23 82.91		13.98 13.63	84.46 84.81	3.52	3.53 3.19	0.01	95.84 96.18		7.39	89.89 89.94	NA NA	NA NA	
06/09/09		11.5		82.91		13.05	85.15	5.17	2.91	0.02	96.18		7.23	89.94 90.05	NA	NA	
07/27/09		12.21		82.2		13.34	85.1		3.2	0	96.17		7.34	89.94	NA	NA	
08/18/09	13.71	13.73	0.02	80.68		13.7	84.74	3.25	3.26	0.01	96.11		7.35	89.93	NA	NA	
09/04/09	sheen	12.12	0	82.29	1	13.42	85.02	sheen	3.39	0	95.98	-	7.29	89.99	NA	NA	
10/19/09	sheen	10.77	0	83.64		13.29	85.15	3.64	3.69	0.01	95.68		7.35	89.93		4.82	94.37
11/13/09 12/14/09	sheen	10.86 9.85	0	83.55 84.56		13.23 13.3	85.21 85.14	sheen	2.86 2.92	0	96.51 96.45		7.32	89.96 90.03		4.85 4.91	94.34 94.28
01/18/10	sheen	9.85	0	84.56 84.18		13.31	85.14 85.13	sheen	2.92	0	96.45		7.25	90.03		4.91	94.28 94.26
02/24/10		9.85	0	84.56		13.51	85.44	sheen	2.81	0	96.56		7.25	90.03		4.75	94.44
04/01/10		10.19	0	84.22		13.09	85.35		2.77	0	96.60		7.21	90.07		4.5	94.69
05/27/10		11.17	0	83.24		13.13	85.31	sheen	3.03	0	96.34		7.47	89.81		5.07	94.12
06/15/10		12.34	0	82.07		13.27	85.17	sheen	3.22	0	96.15		7.53	89.75		5.19	94
08/09/10		13.09	0	81.32		13.41	85.03	sheen	3.51	0	95.86		7.52	89.76		5.37	93.82
09/22/10 12/21/10	sheen	13.36 12.63	0	81.05 81.78	sheen	13.81 13.57	84.63 84.87	sheen	3.78 3.07	0	95.59 96.30		7.58 7.38	89.7 89.9		5.55 5.23	93.64 93.96
02/18/11		12.03	0	82.33		13.57	84.89		2.13	0	97.24		7.3	89.98		5.18	93.90
03/22/11		11.27	0	83.14		13.38	85.06		3.06	0	96.31		7.23	90.05		4.71	94.48
04/26/11		11.35	0	83.06		13.31	85.13	sheen	2.83	0	96.54		7.19	90.09		4.22	94.97
05/11/11		11.83	0	82.58		13.4	85.04		2.96	0	96.41		7.3	89.98		4.41	94.78
05/26/11		11.89	0	82.52		13.52	84.92	sheen	3.19	0	96.18		7.27	90.01	sheen	4.44	94.75
06/15/11	sheen	12.18	0	82.23		13.71	84.73	sheen	3.24	0	96.13		7.31	89.97	sheen	4.63	94.56
07/06/11			0			13.61	84.83	sheen	3.54	0	95.83		7.36	89.92		4.91	94.28
07/20/11 08/02/11		12.94 12.98	0	81.47 81.43		13.65 13.94	84.79 84.5	sheen	3.58	0	95.79 95.67		7.32	89.96 89.93		4.89 5.01	94.3 94.18
08/30/11	sheen	11.1	0	83.31		13.4	85.04		3.19	0	96.18		7	90.28		4.16	95.03
09/15/11		11.14	0	83.27		13.43	85.01		3.25	0	96.12		6.93	90.35		4.02	95.17
10/31/2011		10.94	0	83.47	-	13.33	85.11		2.67	0	96.70	-	6.92	90.36		4.21	94.98
11/21/2011		12	0	82.41		13.42	85.02		2.91	0	96.46		7.07	90.21		4.45	94.74
12/8/2011 1/25/2012		9.78 11	0	84.63 83.41		13.05 13.58	85.39 84.86		2.72 NM	0	96.65		7.02	90.26 90.17		4.17 4.79	95.02 94.4
2/7/2012		11.82	0	82.59		13.35	85.09		3.34	0	96.03		7.19	90.09		4.93	94.4
3/8/2012		11.65	0	82.76		13.4	85.04		3.55	0	95.82		7.22	90.06		4.93	94.26
4/6/2012		12.33	0	82.08		13.28	85.16		3.29	0	96.08		7.27	90.01		5.01	94.18
4/23/2012		10.71	0	83.70	-	13.01	85.43		NM			-	7.13	90.15		4.74	94.45
5/3/2012		11.18	0	83.23		12.14	86.3		NM				7.24	90.04		5.17	94.02
6/7/2012 6/15/2012		12.18 11.65	0	82.23 82.76		13.15 13.12	85.29 85.32		NM NM				7.25	90.03 89.8		4.98 6.1	94.21 93.09
6/21/2012		11.05	0	82.66		13.06	85.38		NM				7.48	90.01		5.88	93.09
7/6/2012		11.74	0	82.67		13.06	85.38		NM				7.15	90.13		5.82	93.37
8/20/2012		10.27	0	84.14		12.98	85.46		NM				7.89	89.39		6.02	93.17
9/19/2012		10.32	0	84.09		13.01	85.43	-	NM				7.92	89.36		6.03	93.16
10/18/2012 11/21/2012		12.14 10.48	0	82.27		13.15	85.29 85.35		NM				7.95	89.33		6 6.34	93.19
11/21/2012		10.48	0	83.93 84.07		13.09 12.98	85.35 85.46		NM NM				8.18 8.2	89.1 89.08	trace	6.34	92.85 92.93
1/9/2013		10.34	0	84.07		12.98	85.39		NM				8.24	89.08		6.43	92.93
2/11/2013		9.82	0	84.59		12.94	85.5		NM				8.25	89.03		6.32	92.87
3/21/2013		9.85	0	84.56		13.93	84.51		NM				8.31	88.97		6.31	92.88
4/15/2013		9.85	0	84.56		NM			NM				8.44	88.84		6.4	92.79
5/7/2013		10.89	0	83.52		NM			NM				7.31	89.97		6.33	92.86
6/4/2013 6/21/2013		9.41 9.49	0	85.00 84.92		NM NM			NM NM				6.73 6.74	90.55 90.54		5.36 5.24	93.83 93.95
6/21/2013 7/15/2013		9.49	0	84.92 84.77		NM			NM NM				6.74	90.54 90.52		5.24	93.95
8/15/2013		10.13	0	84.28		NM			NM				6.74	90.52		5.12	94.07
9/24/2013		10.78	0	83.63		NM			NM				6.96	90.32		5.45	93.74
10/21/2013		10.39	0	84.02		NM			NM				7.04	90.24		5.35	93.84
11/11/2013		11.26	0	83.15		NM			NM				7.1	90.18		5.41	93.78
12/17/2013		9.41	0	85.00		NM			6.48		93.13		6.81	90.47		5.02	94.17

Note: MW-3A, MW-7A, MW-8A and MW-10 Installed November 2013 DTW: Depth to water DTP: Depth to product PT: Product thickness ELEV: Water table elevation (\* corrected for product thickness) MM: Not measured NA: Not Applicable

> BROWNFIELD SCIENCE & TECHNOLOGY

#### Table 2 Well Gauging Data Axil Belko Kingsville, MD

Well Designation : MW-6				MV	MW-7/MW-7A MW-8/MW-8A					MW-9 MW-10				V-10		MP-15		MP-16		
Casing Elevation :		96.33			95.84			98.71			97.85			.02		102.04			101.04	
DATE	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.
08/07/08	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
10/03/08	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
10/22/08	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
11/11/08	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
12/04/08 01/12/09	NA NA	NA NA		NA NA	NA NA		NA NA	NA NA		NA NA	NA NA		NA NA		NA NA	NA NA		NA NA	NA NA	
02/05/09	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
03/13/09	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
04/10/09	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
05/21/09	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
06/09/09	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
07/27/09	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
08/18/09 09/04/09	NA	NA		NA	NA		NA	NA		NA	NA		NA		NA	NA		NA	NA	
10/19/09	NA	NA 7.27	89.06	NA	NA 9.5	86.34	NA 	NA 7.5	91.21	NA 	NA 6.94	90.91	NA NA		NA NA	NA NA		NA NA	NA NA	
11/13/09		7.19	89.00		9.69	86.15		7.51	91.21		6.81	90.91	NA		NA	NA		NA	NA	
12/14/09		7	89.33		9.6	86.24		7.35	91.36		6.8	91.05	NA		NA	NA		NA	NA	
01/18/10		7.18	89.15		9.7	86.14		7.55	91.16		6.83	91.02	NA		NA	NA		NA	NA	
02/24/10		7.13	89.2		9.65	86.19		7.75	90.96		6.81	91.04	NA		NA	NA		NA	NA	
04/01/10		7.14	89.19		9.48	86.36	-	7.42	91.29		6.82	91.03	NA		NA	NA		NA	NA	
05/27/10		7.54	88.79		10.28	85.56		7.77	90.94		6.77	91.08	NA		NA	NA		NA	NA	
06/15/10		7.61	88.72		10.37	85.47		7.9	90.81		6.76	91.09	NA		NA	NA		NA	NA	
08/09/10		7.63	88.7		10.82	85.02		8.23	90.48		6.67	91.18	NA		NA	NA		NA	NA	
09/22/10		7.65	88.68		11.04	84.8	sheen	8.45	90.26		6.6	91.25	NA		NA	NA		NA	NA	
12/21/10 02/18/11		7.45	88.88 88.94		10.59	85.25 85.49	sheen	8.13 8.23	90.58 90.48		6.48 6.59	91.37 91.26	NA NA		NA NA	NA NA		NA NA	NA NA	
03/22/11		7.29	89.04		9.5	86.34		8.05	90.66		6.55	91.3	NA			2.8	99.24		5.56	95.48
04/26/11		7.17	89.16	sheen	9.81	86.03		7.84	90.87		6.49	91.36	NA			2.58	99.46		4.97	96.07
05/11/11		7.31	89.02		9.92	85.92		7.95	90.76		6.4	91.45	NA			2.38	99.34		5.11	95.93
05/26/11		7.29	89.02		9.92	85.92		8.01	90.70		6.38	91.43	NA			2.67	99.34 99.37		5.12	95.93
06/15/11		7.36	88.97		10.01	85.83		8.17	90.54		6.36	91.49	NA			2.87	99.17		5.4	95.64
07/06/11		7.38	88.95		10.37	85.47	sheen	8.34	90.37	sheen	6.33	91.52	NA			3.39	98.65		5.71	95.33
07/20/11		7.33	89		10.25	85.59		8.3	90.41		6.31	91.54	NA			3.48	98.56		5.68	95.36
08/02/11		7.35	88.98		10.56	85.28		8.36	90.35		6.3	91.55	NA			3.79	98.25		5.8	95.24
08/30/11		7.08	89.25		9.44	86.4		7.95	90.76	sheen	6.25	91.6	NA			2.31	99.73		4.85	96.19
09/15/11		7.05	89.28		9.5	86.34		7.83	90.88		6.16	91.69	NA			2.2	99.84		4.77	96.27
10/31/2011	sheen	7.02	89.31		9.54	86.3		7.78	90.93		6.11	91.74	NA			2.43	99.61		4.94	96.1
11/21/2011 12/8/2011		7.02	89.31 89.3		10.05 9.51	85.79 86.33		8.1	90.61		6.11 6.31	91.74 91.54	NA NA		sheen	2.67	99.37 99.88		5.19 5.01	95.85 96.03
1/25/2012		7.05 NM			9.49	86.35		NM NM			6.26	91.59	NA			2.10	99.88		5.47	95.57
2/7/2012		7.32	89.01		9.93	85.91		8.29	90.42		6.29	91.56	NA			3.23	98.81		5.69	95.35
3/8/2012		7.31	89.02		10	85.84		8.35	90.36		6.14	91.71	NA			3.31	98.73		5.74	95.3
4/6/2012		7.42	88.91		10.23	85.61		8.45	90.26		6.18	91.67	NA			3.32	98.72		5.81	95.23
4/23/2012		7.35	88.98		9.75	86.09		8.41	90.3		6.09	91.76	NA			2.65	99.39		5.51	95.53
5/3/2012		7.35	88.98		10.02	85.82		NM			6.15	91.7	NA			3.77	98.27		6.04	95
6/7/2012		7.43	88.9		10.38	85.46		NM			6.04	91.81	NA			3.71	98.33		5.87	95.17
6/15/2012		7.44	88.89		NM			NM			6.43	91.42	NA			7.75	94.29		7.42	93.62
6/21/2012 7/6/2012		7.27 7.16	89.06 89.17		NM NM			NM NM			6.36 6.26	91.49 91.59	NA NA			7.06	94.98 94.83		7.08	93.96 94.02
8/20/2012		7.82	89.17		NM			NM			6.18	91.59	NA			7.55	94.83		7.02	94.02
9/19/2012		7.85	88.48		NM			NM			6.23	91.62	NA			7.55	94.49		NM	93.94
10/18/2012		7.89	88.44		NM			NM			6.43	91.42	NA			7.58	94.46		7.22	93.82
11/21/2012		7.91	88.42		NM			NM			6.41	91.44	NA			7.67	94.37		9.28	91.76
12/11/2012		7.83	88.5		NM			NM			6.29	91.56	NA			7.65	94.39		9.19	91.85
1/9/2013		7.91	88.42		NM			NM			6.51	91.34	NA			7.69	94.35		9.29	91.75
2/11/2013		7.91	88.42		NM			NM			6.48	91.37	NA			7.61	94.43		9.2	91.84
3/21/2013		7.92	88.41		NM			NM			6.41	91.44	NA			7.6	94.44		9.21	91.83
4/15/2013 5/7/2013		7.96 7.82	88.37 88.51		NM			NM			6.47 5.89	91.38	NA NA			7.62 7.62	94.42		9.29 9.28	91.75
6/4/2013		7.82	88.94		NM			NM NM			4.32	91.96 93.53	NA			7.62	94.42 94.61		9.28	91.76 92.52
6/21/2013		7.39	88.89		NM NM			NM			4.52	93.33	NA			7.45	94.61 94.48		7.12	92.52
7/15/2013		7.44	88.88		NM			NM			3.9	93.95	NA			7.53	94.48		7.63	93.92
8/15/2013		7.48	88.85		NM			NM			3.86	93.99	NA			7.58	94.46		NM	
		6.2	90.13		NM			NM			3.9	93.95	NA			7.65	94.39		8.45	92.59
9/24/2013									1											
9/24/2013 10/21/2013	-	7.68	88.65		NM			NM			3.85	94	NA		-	7.64	94.4		8.25	92.79
			88.65 88.54		NM NM			NM NM	  91.48		3.85 3.9 3.54	94 93.95	NA NA			7.64 8.2	94.4 93.84		8.25 7.79	92.79 93.25

Note: MW-3A, MW-7A, DTW: Depth to water DTP: Depth to product PT: Product thickness ELEV: Water table eleval NM: Not measured NA: Not Applicable



#### Table 3 Remedial Activity Summary Axil-Belko Kingsville MD

Remedial Target	Date	Soil TPH-DRO (mg/kg)	Soil Quantity (tons)	TPH-DRO Mass Removed (lb)	TPH-DRO Volume Removed (gal)	LNAPL Recovered (gal)	Water Recoverd (gal)	Water TPH- DRO (mg/l)	Aqueous Mass Removed (lb)
Area C	July-13	5,000	1182	11748	1605	20	13000	20	2.1
AST Pit Water Treatment	April-13 to May-13	-	-	-	-	15	59000	12	5.8
Area C	April-13	5,000	321	3190	436	1	-	-	-
UST/AST Locations	April-15	2,000	482	1311	179	20	19773	20	3.2
Area C	October-12	9,920	364	2966	405	-	-	-	-
Area C Stockpile	October-12	2,556	277	612	84	-	-	-	-
Area C	July-13	2,705	757	4081	558	2	10390	20	1.7
Area C	June-12	5,182	604	6239	853	2	9431	44.9	3.5
Area A		9,070	150	2101	287	-	8000	20	1.3
Area D	April-11	2,272	225	869	119	-	-	-	-
Area I		35,335	60	3784	517	-	-	-	-
Total		-	4,422	36,900	5,042	60	119,594	-	18

# Table 4A Soil Analytical TPH-DRO (mg/kg) Axil-Belko Kingsville MD

Sample Area:						ARE	EA A					ARE	AB
Sample ID:	Non- Residential	APH-1 2.0-3.0	APH-3 3.0- 4.0	APH-4 3.0-4.0	APH-4 7.0-8.0	AREA A	AREA A	AREA A NE	AREA A NW	AREA A SE	AREA A SW	BPH-3 0.5- 1.5	BPH-4 0.5-1.5
	Standard					STOCKPILE 1	STOCKPILE 2	SIDEWALL	SIDEWALL	SIDEWALL	SIDEWALL		
Date Sampled:		9/27/2001	9/27/2001	11/26/2001	11/26/2001	4/1/2011	4/1/2011	4/4/2011	4/4/2011	4/4/2011	4/4/2011	9/26/2001	9/26/2001
TPH-DRO (C10-C28)	620	2,200	6,400	5,900	12,000	4,640	13,500	53	958	6,180	530	ND	ND
0													
Sample Area:	Non-			1	CPH-2 6.5-	CPH-4	ARE CPH-5 6.0-	CPH-6	CPH-7 9.0	CPH-9 2.0-	CPH-10		
Sample ID:	Residential Standard	BS-1	BS-2	BS-3	7.5	2.0-3.0	7.0 6.0-7.0	4.5-5.5	10.0 9.0-10.0	3.0	10.0-11.0 10.0-11.0	DISPOSAL	ESW-2
Date Sampled:	otandara	6/13/2012	6/13/2012	6/13/2012	9/28/2001	9/28/2001	9/28/2001	9/28/2001	9/28/2001	11/26/2001	11/26/2001	10/24/2012	10/24/2012
TPH-DRO (C10-C28)	620	551	8,620	606	ND	4,900	140	180	2,600	670	10	9,920	2,990
Sample Area:							ARE	AC					
Sample ID:	Non- Residential Standard	ESW-3	HYDRAULIC ROOM	HYDRAULIC ROOM 2	MW-5	MW-6	MW-8	MW-7	NSW	NSW-2	S SIDEWALL-1	S SIDEWALL-2	SIDEWALL-E1
Date Sampled:		4/19/2013	7/23/2012	7/25/2012	9/30/2009	9/30/2009	9/30/2009	10/1/2009	10/24/2012	4/19/2013	7/25/2012	7/25/2012	7/26/2012
TPH-DRO (C10-C28)	620	ND 4.2	2,710	2,700	7,360	1,800	2,350	2,710	6,390	79	829	ND 0.35	1,570
Sample Area:	Non-						ARE	SB-34 11'-					
Sample ID:	Residential Standard	SB-1 3'-4'	SB-5 3'-4'	SB-7 5'-6'	SB-15 3-4'	SB-15 6'	SB-26 3'-4'	12'	SP-1	SP-1	SP-10	SP-11	SP-11
Date Sampled:		3/14/2012	3/14/2012	3/14/2012	3/14/2012	3/14/2012	3/15/2012	3/15/2012	4/18/2013	4/18/2013	4/18/2013	4/18/2013	4/18/2013
TPH-DRO (C10-C28)	620	ND 0.37	ND 0.34	ND 0.36	12,200	5,280	5,590	ND 0.41	1,780	1,530	858	3,490	3,170
Sample Area:	Non-	SP-2	SP-2	SP-3	SP-4	SP-5	ARE SP-6	SP-7	SP-8	SP-9	SP-N1	SP-N2	SP-S1
Sample ID:	Residential	5P-2	5P-2	5P-3	5P-4	5P-5	5P-0	5P-7	5P-0	5P-9	SP-N1	5P-N2	58-51
Date Sampled:	Standard	4/18/2013	4/18/2013	4/18/2013	4/18/2013	4/18/2013	4/18/2013	4/18/2013	4/18/2013	4/18/2013	6/12/2012	6/12/2012	6/12/2012
TPH-DRO (C10-C28)	620	940	1,360	917	795	1,150	1,410	1,980	1,170	1,080	1,820	2,000	1,220
0													
Sample Area:	Non-	SP-S2	SP-S3	SP-S4	SP-S5	SP-S6	ARE SP-W1	A C SP-W2	SS-1	SS-2	SW-1	CW/ 0	SW-3
Sample ID:	Residential	5P-52	5P-53	58-24	58-55	52-56	5P-W1	5P-W2	55-1	55-2	SVV-1	SW-2	500-3
Date Sampled:	Standard	6/12/2012	6/12/2012	7/23/2012	7/25/2012	7/26/2012	6/14/2012	6/14/2012	6/15/2012	6/15/2012	4/17/2013	4/17/2013	4/17/2013
TPH-DRO (C10-C28)		1,560	4,460	816	43	131	1,260	759	4,590	22,600	106	103	1,540
	620	1,500											
. , , .	620	1,500								1			
Sample Area:			1			A C							
Sample Area:	Non- Residential	SW-4	PIT BOTTOM-	PIT BOTTOM- 2	PIT	TAIL RACE	TAIL RACE	WOSW-1	WOSW-2				
Sample Area:	Non-		PIT BOTTOM-	PIT BOTTOM-			TAIL RACE SIDEWALL-2 8/5/2013	WOSW-1 8/5/2013	WOSW-2 8/5/2013				

### Table 4A Soil Analytical TPH-DRO (mg/kg) Axil-Belko Kingsville MD

Sample Area:							ARE	A D					
	Non-	AREA D											
Sample ID:	Residential	BOTTOM 1	BOTTOM 2	BOTTOM 3	BOTTOM 4	BOTTOM 5	BOTTOM 6	BOTTOM 7	SIDEWALL	SIDEWALL	SIDEWALL	SIDEWALL	SIDEWALL
	Standard								1	2	3	NE	NW
Date Sampled:		4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011	4/1/2011
TPH-DRO (C10-C28)	620	38	114	5,750	59	22	ND 6.8	ND 5.7	485	1,170	ND 6	1,400	122

						AREA D				
Sample ID: Re	Non- tesidential	AREA D SIDEWALL	AREA D	AREA D	AREA D SW	DPH-3 3.0- 4.0	DPH-5 2.0- 3.0	DPH-3 9.0- 10.0	DPH-6 3.0- 4.0	DPH-6 6.5- 7.5
	Standard	SE	STOCKPILE A- 1	STOCKPILE B- 1	SIDEWALL					
Date Sampled:		4/1/2011	4/1/2011	4/1/2011	4/4/2011	9/25/2001	9/25/2001	9/26/2001	11/26/2001	11/26/2001
TPH-DRO (C10-C28)	620	61	3,940	604	340	2,200	213	130	2,000	40

Sample Area:					AREA E						AREA F		
Sample ID:	Non- Residential Standard	EPH-3 8.0-9.0	EPH-4 8.0- 9.0	T2 E SIDEWALL	T2 N SIDEWALL	T2 S SIDEWALL	T2 W SIDEWALL	TANK 2 PIPEING	FPH-1 0.5- 1.5	FPH-3 0.5- 1.5	ACCUMULAT E	SB-39 16'- 17'	SB-39 4'-5'
Date Sampled:		9/25/2001	9/25/2001	4/3/2013	4/3/2013	4/3/2013	4/3/2013	4/3/2013	9/26/2001	9/26/2001	8/4/2011	3/16/2012	3/16/2012
TPH-DRO (C10-C28)	620	ND	ND	43	32	ND 4.4	27	ND 4.4	ND	ND	2,710	ND 0.41	ND 0.35

Sample Area:							ARE	EA F					
	Non-	SB-40 4'-5'	SB-41 11'-12'	SW-1	SW-2	SW-3	CRAWL	CRAWL	CRAWL	CRAWL	CRAWL	CRAWL	CRAWL
Sample ID:	Residential	38-40 4 -5	30-4111-12	344-1	344-2	344-3	SPACE	SPACE	SPACE	SPACE	SPACE	SPACE SW-	SPACE SW-
	Standard						FLOOR-1	FLOOR-2	FLOOR-3	SIDEWALL 4	SIDEWALL 5	6	7
Date Sampled:		3/16/2012	3/16/2012	7/24/2013	7/24/2013	7/24/2013	7/29/2013	7/29/2013	7/29/2013	7/26/2013	7/29/2013	7/29/2013	7/29/2013
TPH-DRO (C10-C28)	620	25	ND 0.36	ND 0.39	642	20	1,430	1,240	1,100	387	80	1,100	5,200

Sample Area:		AREA G		AREA H					ARI	EAI			
Sample ID:	Residential	GPH-3 0.5- 1.5	HPH-2 0.5- 1.5	HPH-5 0.5- 1.5	HPH-7 0.5- 1.5	AREA I BOTTOM	AREA I SIDEWALL	AREA I	AREA II	IPH-1 7.0- 8.0	IPH-2 7.0- 8.0	IPH-3 3.0- 4.0	IPH-3 6.0- 7.0
Date Sampled:	Standard	9/26/2001	9/27/2001	9/27/2001	9/27/2001	3/31/2011	3/31/2011	STOCKPILE 2 4/1/2011	STOCKPILE 4/1/2011	11/28/2001	11/28/2001	11/28/2001	11/28/2001
TPH-DRO (C10-C28)	620	170	ND	ND	ND	1,620	26	60,700	9,970	5,600	ND	51,000	9,400

Sample Area:		AREA J			A Fr	ame				Fuel O	il UST	
Sample ID:	Non- Residential Standard	JPH-1 0.5- 1.5	SB-43 8'-9'	SB-44 10-11	SB-45 1-2	SB-46 2-3	SB-47 2.5- 3.5	SB-48 2-3	TANK3- SIDEWALL- N1	TANK3- SIDEWALL- N2	UST N SIDEWALL	UST N SIDEWALL
Date Sampled:		9/26/2001	3/16/2012	3/16/2012	3/16/2012	3/16/2012	3/16/2012	3/16/2012	4/5/2013	4/5/2013	7/26/2013	7/26/2013
TPH-DRO (C10-C28)	620	ND	ND 0.34	1,170	ND 0.35	ND 0.34	ND 0.34	1,140	1,370	10,200	1,570	3,290

Sample Area:	Non-			SEDI	MENT		
Sample ID:	Residential Standard	SED-2	SED-3	SED-1	SED-2	SED-3	SED-4
Date Sampled:	Stanuaru	9/30/2009	9/30/2009	6/16/2011	6/16/2011	6/16/2011	6/16/2011
TPH-DRO (C10-C28)	620	11	692	ND 0.39	ND 0.39	ND 0.4	ND 0.42

Legend:

All values in mg/kg Detected Exceed Standard

Exceed Standard > 10x

Excavated

### Table 4B Soil Analytical PAHs (ug/kg) Axil-Belko Kingsville MD

Sample Area:		Non-	Protection	AR	EA A				ARE	AC				AREA D		SEDIMENT	
Sample ID:	Residential Standard	Residential Standard	of Ground Water	APH-1 2.0-3.0	APH-3 3.0-4.0	CPH-2 6.5-7.5	CPH-4 2.0-3.0	CPH-5 6.0-7.0	CPH-6 4.5-5.5	CPH-7 9.0-10.0	MW-5	MW-6	MW-8	DPH-5 2.0-3.0	SED-1	SED-2	SED-3
Date Sampled:		Standard	Standard	9/27/2001	9/27/2001	9/28/2001	9/28/2001	9/28/2001	9/28/2001	9/28/2001	9/30/2009	9/30/2009	9/30/2009	9/25/2001	9/30/2009	9/30/2009	9/30/2009
Acenaphthene	470000	6100000	100000	ND	ND	ND	ND	ND	ND	ND	ND (0.75)	ND (0.75)	ND (0.70)	213	ND (1.2)	ND (0.73)	ND (0.92)
Acenaphthylene	470000	6100000	100000	ND	ND	ND	ND	ND	ND	ND	ND (0.71)	ND (0.71)	ND (0.66)	-	ND (1.1)	ND (0.69)	ND (0.87)
Anthracene	2300000	31000000	470000	ND	ND	ND	ND	ND	ND	ND	88	31.4	42.4	-	ND (0.61)	7.26	9.35
Benzo(a)anthracene	220	3900	480	ND	ND	ND	ND	ND	ND	ND	ND (0.45)	ND (0.44)	ND (0.41)	-	13.1	20.3	ND (0.54)
Benzo(a)pyrene	22	390	120	ND	ND	ND	ND	ND	ND	ND	ND (0.34)	ND (0.33)	ND (0.31)	-	ND (0.54)	16.6	ND (0.41)
Benzo(b)fluoranthene	220	3900	1500	ND	ND	ND	ND	ND	ND	ND	ND (0.28)	ND (0.27)	ND (0.26)	-	ND (0.44)	17	38.7
Benzo(g,h,i)perylene	230000	3100000	680000	ND	ND	ND	ND	ND	ND	ND	ND (0.34)	ND (0.34)	ND (0.32)	-	ND (0.54)	ND (0.33)	ND (0.41)
Benzo(k)fluoranthene	2200	39000	15000	ND	ND	ND	ND	ND	ND	ND	ND (0.22)	ND (0.22)	ND (0.21)	-	9.43	10.7	ND (0.27)
Bis(2-ethylhexyl) phthalate	2200	39000	15000	ND	ND	ND	ND	560	ND	ND	-	-	-	-	-	-	-
Chrysene	22000	390000	48000	ND	ND	ND	ND	ND	ND	ND	ND (0.43)	ND (0.42)	ND (0.40)	-	ND (0.68)	16.4	ND (0.52)
Dibenzo(a,h)anthracene	22	390	460	ND	ND	ND	ND	ND	ND	ND	ND (0.24)	ND (0.24)	ND (0.23)	-	ND (0.39)	ND (0.24)	ND (0.30)
Fluoranthene	310000	4100000	6300000	ND	ND	ND	ND	ND	ND	ND	ND (0.35)	ND (0.35)	ND (0.32)	-	ND (0.56)	56.8	ND (0.42)
Fluorene	310000	4100000	140000	ND	ND	ND	ND	ND	ND	ND	77.8	32.2	47.1	-	ND (1.1)	ND (0.67)	8.79
Indeno(1,2,3-cd)pyrene	220	3900	4200	ND	ND	ND	ND	ND	ND	ND	ND (0.45)	ND (0.45)	ND (0.42)	-	12	14.7	ND (0.55)
Naphthalene	160000	2000000	150	ND	ND	ND	ND	ND	ND	ND	ND (0.71)	ND (0.71)	ND (0.66)	-	ND (1.1)	ND (0.69)	ND (0.87)
1-Methylnaphthalene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND (0.66)	ND (0.66)	ND (0.62)	-	ND (1.1)	ND (0.65)	ND (0.81)
2-Methylnaphthalene	31000	410000	4400	ND	ND	ND	ND	ND	ND	ND	ND (1.6)	ND (1.6)	ND (1.5)	-	ND (2.6)	ND (1.6)	ND (2.0)
Phenanthrene	2300000	31000000	470000	ND	ND	ND	ND	ND	ND	ND	ND (0.39)	79.4	53.1	-	ND (0.62)	31.6	22.1
Pyrene	230000	3100000	680000	ND	ND	ND	ND	ND	ND	ND	250	101	123	-	13.6	37.2	31.4
Legend.			•				• • • • • • • • • • • • • • • • • • • •										

Legend:

All values in ug/kg Detected

Exceed Standard

Excavated

#### Table 4C Soil Analytical SVOCs (ug/kg) Axil-Belko Kingsville MD

Image         Partial         Partial <th< th=""><th>Sample Area:</th><th></th><th></th><th>Protection</th><th></th><th></th><th>AR</th><th>EA C</th><th></th><th></th><th></th><th>AREA D</th><th></th><th>AREA F</th><th>AREA G</th><th>ARE</th><th>ΔН</th><th></th><th>SEDIMENT</th><th></th></th<>	Sample Area:			Protection			AR	EA C				AREA D		AREA F	AREA G	ARE	ΔН		SEDIMENT	
Bar b			-	of Ground	MW-5	MW-6			WOSW-1	WOSW-2		DPH-5 2.0-		FPH-1 0.5-		HPH-2 0.5-	HPH-5 0.5-	SED-1		SED-3
Conversion         Display         No.70         No.70        No.70         No.70	Date Sampled:	Standard	Standard		9/30/2009	9/30/2009	9/30/2009	10/1/2009	8/5/2013	8/5/2013					9/26/2001			9/30/2009	9/30/2009	9/30/2009
Choosener         Dial		39000	510000								5/20/2001	-	-	-	-	-	-			ND (45)
Changelinguar         None         None         No. 100         No. 100 <t< td=""><td>4-Chloro-3-methyl phenol</td><td>-</td><td>-</td><td>-</td><td>ND (37)</td><td>ND (37)</td><td>ND (35)</td><td>ND (34)</td><td>ND (36)</td><td>ND (34)</td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td>ND (36)</td><td>ND (45)</td></t<>	4-Chloro-3-methyl phenol	-	-	-	ND (37)	ND (37)	ND (35)	ND (34)	ND (36)	ND (34)		-	-	-	-	-	-		ND (36)	ND (45)
125 September         100         2000         0         0         1												-	-	-	-	-	-			ND (72)
Control         C.         C.        C.        C.        C				6700	= (0)						-	-	-	-	-	-	-			ND (75)
jachygenge         BOX         Fox         No RA         No RA <t< td=""><td></td><td>16000</td><td>200000</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td></td><td>ND (55)</td></t<>		16000	200000									-	-	-	-	-	-			ND (55)
Bit Machingang         C         C         C         C         C         Machingang         C        C         C         C		-	-	-					( )	( /	-	-	-	-	-	-	-			ND (55)
Sinterior         Interior		390000	5100000								•	-	-	-	-	-	-			ND (51)
Allengene         Image		-	-	-								-	-	-	-	-	-			ND (57) ND (48)
Spectromode			-	-								-	-	-	-	-	-			ND (48)
Spect         Spect <th< td=""><td></td><td>5300</td><td>24000</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td></td><td>ND (77)</td></th<>		5300	24000									-	-	-	-	-	-			ND (77)
21.5.16.00009800       7       NO (25)       NO (26)       NO (26) <td>Phenol</td> <td></td> <td></td> <td>67000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td> <td>ND (47)</td>	Phenol			67000								-	-	-	-	-	-			ND (47)
5.4.5.6.6.6.6.2         5.4.5.6.6.2         400.00         500.00        500.00         500.00	2,3,4,6-Tetrachlorophenol																			
Accompany         Priority         No.101         No.101         No.101         No.101         No.101         No.101         No.101           Accompany         Priority         No.101         No							= (		= (.=)			-	-	-	-	-	-			ND (52)
Accession/sec         Ability         Molity         Molity <th< td=""><td></td><td>00000</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td></td><td>ND (42)</td></th<>		00000									-	-	-	-	-	-	-			ND (42)
Accessment         Particle											-	-	-	-	-	-	-			ND (13) ND (14)
prime         prim<         prim<         prim         prim<         prim<		470000	6100000	100000	ND (12)	ND (12)	ND (11)	ND (11)	= (.:=)			-	-	-	-	-	-	ND (19)	ND (12)	ND (14)
Algore         Image: Construction of the construction		2300000	31000000	470000	ND (13)	ND (13)	ND (12)	ND (12)	76			-	-	-	-	-	-	ND (21)	ND (13)	ND (16)
Discolgramme         20         300         400         NO (12)         NO (11)         NO (11)         NO (10)         NO (10		2000000	01000000	110000	110 (10)		110 (12)	(12)	ND (7.1)			-	-	-	-	-	-	100 (21)	140 (10)	100 (10)
Based Microsonne 220         Stron         No. 162         No. 162         No. 162         No. 162         No. 163		220	3900	480	ND (12)	ND (12)	ND (11)	ND (11)	321		-	-	-	-	-	-	-	ND (19)	ND (12)	ND (15)
Biologic Marcel Parket         Status         No (14)         Mo (14)         Mo (14)         Mo (14)         Mo (15)         Mo (15)         C         L        L        L         L		22	390	120	ND (11)	ND (11)			283	ND (10)		-	-	-	-	-	-	ND (18)	ND (11)	ND (14)
Brance Mountaining         2200         3000         1000         100									110			-	-	-	-	-	-			ND (15)
Dia         Description         4000         2000         NO											-	-	-	-	-	-	-			ND (17)
4.6000.00001/gbms/gbms/gbms/gbms/gbms/gbms/gbms/gbms												-	-	-	-	-	-	ND (22)		ND (17)
Bay Length Philade         I         I         I         IND (2)         ND (2) <td></td> <td>46000</td> <td>200000</td> <td>2900000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1300</td> <td>213</td> <td>ND</td> <td>1100</td> <td>1500</td> <td>220J</td> <td>ND</td> <td>311 ND (22)</td> <td></td> <td>ND (40) ND (16)</td>		46000	200000	2900000							1300	213	ND	1100	1500	220J	ND	311 ND (22)		ND (40) ND (16)
11. Graphing     r.     r.<		-	-	-								-	-	-	-	-	-			ND (16) ND (26)
Bionzaleshighe         C.         No. 101         NO.173         NO		-	-	-	ND (21)	ND (21)	ND (20)	ND (20)				-	-	-	-	-	-	ND (34)	ND (21)	ND (20)
Concomprise         65000         80000         80011         N0111		-	-	-																
Carbascie         3200         Hoto         470         ND (17)         ND (17		630000	8200000	32000	ND (11)	ND (11)	ND (11)	ND (11)			-	-	-	-	-	-	-	ND (18)	ND (11)	ND (14)
Capacitalm         P<         P<         P<         P<         P<         P<         P<         P<         P	4-Chloroaniline	31000	410000	970	ND (12)	ND (12)	ND (11)	ND (11)	ND (12)	ND (11)		-	-	-	-	-	-	ND (19)	ND (12)	ND (14)
Chrysner         2000         38000         48000         NO (12)         NO (13)         NO (14)         NO (14)         NO (15)         -         -         -         -         -         NO (13)         NO (16)         NO (16) </td <td>Carbazole</td> <td>32000</td> <td>140000</td> <td>470</td> <td>ND (17)</td> <td>ND (17)</td> <td>ND (16)</td> <td>ND (16)</td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>ND (27)</td> <td>ND (17)</td> <td>ND (21)</td>	Carbazole	32000	140000	470	ND (17)	ND (17)	ND (16)	ND (16)				-	-	-	-	-	-	ND (27)	ND (17)	ND (21)
Dat2         Data         ND (15)         ND (15)         ND (14)         ND (15)         ND (16)         ND (																				
big2         Disp         Disp<         D		22000	390000									-	-	-	-	-	-			ND (15) ND (18)
Digl2 Characterization         9100         41000         17.1         ND (11)		-	-								-	-	-	-	-	-	-			ND (18) ND (14)
4-Chieopheny Jenny etem         ·         ·         NO (11)         ND (11)         ND (10)         ND (11)         ND (10)         ND (10)         ·         ·         ·         ·         ·         ND (10)         ND (10)           1.3-Dichtodburgenzene         23000         310000         420         ND (28)         ND (28) <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td>-</td><td>-</td><td></td><td></td><td></td><td>ND (14)</td></t<>												-			-	-				ND (14)
12-DetAnotomezene       70000       920000       4.80       ND (11)       ND (19)       ND (19)       ND (19)       ND (19)       ND (19)       ND (10)         1.3-DetAnotomezene       27000       12000       4.2       ND (18)       ND (19)       ND (11)       ND (12)       ND (12) <td></td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td> <td>ND (14)</td>		-	-	-								-	-	-	-	-	-			ND (14)
13-Delindopenzene       23000       12000       2000       2400       ND (63)       ND (63)       ND (63)       ND (63)       ND (63)       ND (64)       ND (65)		700000	9200000	4600	ND (11)				-	-	-	-	-	-	-	-	-	ND (17)	ND (10)	ND (13)
24-Diminstrabilizer         1500         2000         257         ND (19)         ND (15)         ND (16)         ND (15)         ND (16)         ND (15)         ND (16)         ND (16)          25-Diminstration         7400         16000         250         ND (14)         ND (13)         ND (13)         ND (12)          25-Diminstration         7400         16000         25         ND (12)         ND (13)         ND (12)         State         ND (12)         ND (13)         ND (14)         ND (15)         ND (13)         ND (12)         ND (13)         ND (12)         ND (13)         ND (	1,3-Dichlorobenzene			290	ND (9.8)	ND (9.9)	ND (9.3)	ND (9.1)	-	-	-	-	-	-	-	-	-	ND (16)	ND (9.6)	ND (12)
24-Dintroluceme       7800       100000       250       ND (4)       ND (4)       ND (3)       ND (4)       ND (4)       ND (3)       ND (4)       ND (3)       ND (4)       ND (3)       ND (4)       ND (3)       ND (4)       ND (4) <td>1,4-Dichlorobenzene</td> <td>27000</td> <td>120000</td> <td>4.2</td> <td>ND (8.2)</td> <td>ND (8.2)</td> <td>ND (7.7)</td> <td>14.9 J</td> <td>-</td> <td>-</td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>ND (13)</td> <td>ND (8.0)</td> <td>ND (10)</td>	1,4-Dichlorobenzene	27000	120000	4.2	ND (8.2)	ND (8.2)	ND (7.7)	14.9 J	-	-		-	-	-	-	-	-	ND (13)	ND (8.0)	ND (10)
24-Dintroluceme       7800       100000       250       ND (4)       ND (4)       ND (3)       ND (4)       ND (4)       ND (3)       ND (4)       ND (3)       ND (4)       ND (3)       ND (4)       ND (3)       ND (4)       ND (4) <td>2 4-Dinitrotoluene</td> <td>16000</td> <td>200000</td> <td>570</td> <td>ND (16)</td> <td>ND (16)</td> <td>ND (15)</td> <td>ND (15)</td> <td>ND (16)</td> <td>ND (15)</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>ND (26)</td> <td>ND (16)</td> <td>ND (20)</td>	2 4-Dinitrotoluene	16000	200000	570	ND (16)	ND (16)	ND (15)	ND (15)	ND (16)	ND (15)	-	-	-	-	-	-	-	ND (26)	ND (16)	ND (20)
Dispersoluta         22         390         460         ND (12)         ND (11)         ND (12)         ND (12)         ND (12)         ND (11)         ND (11)         ND (12)         ND (12)         ND (12)         ND (13)         ND (12)         ND (13)         ND (13)         ND (13)         ND (13)         ND (13)         ND (13)         ND (12)         ND (13)         ND (12)         ND (13)         ND (12)         ND (13)         ND (12)         ND (12)         ND (13)         ND (12)         ND (12)         ND (13)         ND (12)         ND (12)         ND (12)         ND (13)         ND (12)         ND (12)         ND (12)         ND (13)         ND (13)         ND (13)         ND (13)         ND (13											-	-	-	-	-	-	-			ND (17)
Debrachy Prima         7800         100000         -         ND (11)         ND (10)         ND (11)         ND (10)         -         -         -         -         -         ND (16)         ND (17)         ND (17)         ND (16)         ND (17)         ND (17)         ND (17)         ND (16)         ND (12)         ND (13)         ND (13)         ND (12)         ND (13)         ND (13)         ND (12)         ND (13)         ND (12)         ND (13)         ND (13)         ND (12)         ND (13)         ND (12)         ND (13)         ND (12)         ND (16)         ND (16)         ND (16)         ND (16)         ND (16)         ND (17)         ND (13)         ND (12)         ND (13)         ND (12)         ND (13)         ND (12)         ND (16)         ND (16	3,3'-Dichlorobenzidine	1400	6400	4.9	ND (9.3)	ND (9.4)	ND (8.8)	ND (8.6)	ND (9.2)	ND (8.7)		-	-	-	-	-	-	ND (15)	ND (9.1)	ND (11)
Din-butyl phthalate         780000         1000000         500000         ND (8.1)         ND (7.7)				460					58.7			-	-	-	-	-	-			ND (15)
Display         -         -         ND (18)         ND (17)         ND (18)         ND (17)         .         .         .         .         ND (29)         ND (18)           Diethyl phhalate         6300000         4500000         ND (12)         ND (13)         ND (12)         ND (11)         ND (12)         ND (12												-	-	-	-	-	-			ND (13)
Diethyl phrhalate         6300000         4500000         4500000         101(2)         ND (12)         ND (11)		780000	10000000	5000000								-	-	-	-	-	-			ND (10) ND (22)
Dimetry phthalate         -         -         ND (13)         ND (12)         ND (13)         ND (12)         .         -         -         -         -         ND (21)         ND (13)         ND (16)         ND (16)         ND (16)         ND (16)         ND (16)         ND (15)         T27         ND (15)         .         -         -         -         -         ND (12)         ND (13)         ND (12)         ND (15)         ND (15)         ND (15)         ND (15)         ND (15)         ND (12)         ND (11)         S2.5         ND (11)         ND (12)         ND (12)         ND (12)         ND (12)         ND (12)         ND (12)         ND (13)		-	-	-			()					-	-	-	-	-	-			ND (22) ND (15)
Flucrammene         310000         4100000         63000000         ND (16)         ND (15)         727         ND (15)         . <th< td=""><td></td><td>-</td><td>-</td><td>+50000</td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td>-</td><td>-</td><td></td><td></td><td>-</td><td></td><td></td><td>ND (15) ND (16)</td></th<>		-	-	+50000							-		-	-			-			ND (15) ND (16)
Fluorene         31000         410000         140000         77.8         ND (12)         ND (11)         52.5         ND (12)         ND (11)               ND (12)         ND (12)         ND (12)         ND (11)         ND (12)         ND (12)         ND (13)         ND (14)         ND (15)         ND (10)         ND (13)         ND (14)         ND (14		310000	4100000	6300000					727		-	-	-	-	-	-	-			ND (20)
Hexachirobatenee         400         1800         52         ND (12)         ND (11)         ND (12)         ND (12)         ND (13)         ND (13)         ND (13)         ND (35)         N									ND (12)			-	-	-	-	-	-			ND (15)
Hexachloroputadiene         4200         37000         1800         ND (10)         ND (9.6)         ND (9.6)         ND (9.6)         ND (9.6)         .         -         -         -         -         -         ND (16)         ND (16)         ND (10)         ND (10)         ND (10)         ND (10)         ND (37)         ND (33)         ND (33)         ND (35)         ND (37)         ND (36)         ND (37)         ND (35)         ND (36)         ND (37)         ND (37)         ND (36)         ND (37)         ND (37)         ND (36)         ND (37)         N		400	1800	52	ND (12)	ND (12)		ND (11)		ND (11)		-	-	-	-	-	-		ND (12)	ND (15)
Hexachirorefrane         46000         200000         360         ND (10)         ND (10)         ND (9.6)         ND (12)         -         -         -         -         ND (16)         ND (16)         ND (10)         ND (9.7)           Linden(1,2,3-cd)pyrene         220         3900         410         ND (9.8)         ND (9.3)         ND (9.1)         ND (9.7)         -         -         -         -         ND (16)         ND (9.7)           2-Mitryinaphthalene         31000         41000         A400         ND (19)         ND (19)         ND (10)         ND (10) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ND (9.4)</td> <td></td> <td></td> <td>÷</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td>ND (10)</td> <td>ND (12)</td>								ND (9.4)			÷	-	-	-	-	-	-		ND (10)	ND (12)
Indencit2.3-odjpyrene         220         3900         4200         ND (13)         ND (12)         21a         ND (12)         -         -         -         -         -         ND (21)         ND (21)         ND (12)         ND (12)         ND (12)         .         -         -         -         -         -         ND (21)         ND (21)         ND (12)											Ŧ	-	-	-	-	-	-			ND (46)
Isophorone         670000         3000000         410         ND (9.9)         ND (9.3)         ND (9.1)         ND (9.7)         ND (9.2)         -         -         -         -         ND (6)         ND (9.7)           2-Methylnaphthalene         31000         41000         4400         ND (20)         ND (19)         ND (20)         ND (19)         -         -         -         -         ND (6)         ND (7)           2-Methylnaphthalene         31000         41000         4400         ND (20)         ND (19)         ND (10)         ND (14)         ND (16)         <											-	-	-	-	-	-	-			ND (12)
2.4/etryhapithalene         31000         44000         ND (20)         ND (19)         ND (20)         ND (19)         ND (20)         ND (20)         ND (20)         ND (21)         ND (21)         ND (19)         ND (20)         ND (21)         ND (21)         ND (19)         ND (20)         ND (21)												-	-	-	-	-	-			ND (16)
2xNitroaniline         -         -         ND (16)         ND (15)         ND (16)         ND (15)         ND (16)         ND (15)         -         -         -         -         ND (26)         ND (14)           3-Nitroaniline         -         -         ND (15)         ND (14)									= (\$)		-	-	-	-	-	-	-			ND (12) ND (25)
3-Nitroanline          ND (15)         ND (14)         <		31000	410000	4400								-	-	-	-	-	-			ND (25) ND (20)
4-Nitroanline         -         -         ND (14)         ND (13)         ND (14)         ND (13)         -         -         -         -         -         -         ND (23)         ND (14)           Mutophinaline         16000         2000000         150         ND (10)         ND (13)         ND (13)         ND (13)         -         -         -         -         -         ND (23)         ND (16)           Nitrosoft-repropularine         390         51000         23         ND (11)         ND (10)         ND (98)         ND (98)         -         -         -         -         ND (17)         ND (17)         ND (10)           N-Nitrosoft-repropularine         91         410         0.047         ND (8.0)         ND (24)         ND (28)         ND (8.3)         -         -         -         -         ND (17)         ND (10)           N-Nitrosoft-repropularine         91         410         0.047         ND (20)         ND (20)         ND (20)         ND (20)         ND (8.3)         -         -         -         -         ND (14)         ND (16)           N-Nitrosoft-repropularine         91         410         0.047         ND (20)         ND (21)         ND (22)         ND (21)			-	-								-	-	-	-	-	-			ND (20) ND (18)
Naphthalene         16000         200000         150         ND (10)         ND (9.4)         ND (9.3)         ND (9.3)         -         -         -         -         -         -         ND (10)         ND (6)         ND (9.0)           Nitrobenzene         3900         51000         23         ND (11)         ND (10)         ND (9.8)         ND (10)         ND (9.9)         -         -         -         -         ND (17)         ND (10)           Nutrosocin-propylamine         91         410         0.047         ND (8.9)         ND (8.4)         ND (8.3)         ND (8.3)         ND (8.3)         -         -         -         -         ND (14)         ND (14)           N-Nitrosoch-propylamine         130000         580000         760         ND (22)         ND (21)         ND (22)         ND (23)         -         -         -         -         ND (14)         ND (16)           Phenanthrene         230000         31000000         470000         ND (17)         39.3         ND (15)         385         ND (16)         -         -         -         -         ND (23)         ND (14)           Pyrene         2300000         31000000         680000         101         34.6.4         ND		-	-	-							-	-	-	-	-	-	-			ND (18)
Nitroscience         3900         51000         23         ND (1)         ND (10)         ND (8)         ND (10)         ND (9)         -         -         -         -         -         -         ND (17)         ND (17)         ND (17)         ND (18)           N-Nitroscien-proplamine         91         410         0.047         ND (8)         ND (4)         ND (8)         ND (10)         ND (1		160000	2000000	150							-	-	-	-	-	-	-			ND (12)
N-Nitroso-din-propylamine         91         410         0.047         ND (8.9)         ND (9.0)         ND (8.4)         ND (8.3)         ND (8.3)             ND (14)         ND (8.6)           N-Nitrosodiphenylamine         13000         580000         760         ND (22)         ND (21)         ND (22)         ND (22)         ND (23)             ND (14)         ND (8.8)           Phenanthrene         230000         3100000         470000         ND (17)         39.3         ND (16)         ND (15)         385         ND (16)             ND (27)         ND (16)           Pyrene         230000         3100000         68000         101         34.6         ND (13)         55.6         485         39.7             ND (23)         ND (14)	Nitrobenzene	3900	51000								-	-	-	-	-	-	-			ND (13)
Phenanthrene         230000         3100000         470000         ND(17)         39.3         ND(16)         385         ND(16)         -         -         -         -         -         ND(27)         ND(16)           Pyrene         230000         3100000         680000         101         34.6 J         ND(13)         55.6         485         39.7         -         -         -         -         ND(27)         ND(14)								ND (8.3)			-	-	-	-	-	-	-			ND (11)
Pyrene 230000 310000 680000 101 34.6 J ND (13) 55.6 485 39.7									ND (22)		Ŧ	-	-	-	-	-	-			ND (27)
							= (		385		-	-	-	-	-	-	-			ND (20)
								00.0			-	-	-	-	-	-	-			ND (17)
1.2.4-110101000e122110 70000 2400 ND (9.7) ND (9.0) ND (9.2) ND (9.2) ND (9.0) ND (11) ND (10) ND (16) ND (9.0)		78000	1000000	2400	ND (9.7)	ND (9.8)	ND (9.2)	ND (9.0)	ND (11)	ND (10)		-	-	-	-	-	-	ND (16)	ND (9.6)	ND (12)

Legend: All values in ug/kg

Detected Exceed Standard

Exceed Standard Excavated

# Table 4D Soil Analytical TPH-GRO (ug/kg) Axil-Belko Kingsville MD

Sample Area:		Non-	Protection of		AR	EA A		AR	EA B	1								
Sample ID:	Residential Standard	Residential	Ground Water	APH-1 2.0-3.0	APH-3 3.0-4.0	APH-4 3.0-4.0	APH-4 7.0-8.0	BPH-3 0.5-1.5	BPH-4 0.5-1.5									
Date Sampled:		Standard	Standard	9/27/2001	9/27/2001	11/26/2001	11/26/2001	9/26/2001	9/26/2001									
TPH-GRO (C6-C10)	230000	620000		ND	1700	ND	ND	ND	ND									
Sample Area:										AREA C							1	
Sample ID:	Residential Standard	Non- Residential	Protection of Ground Water	CPH-2 6.5-7.5	CPH-4 2.0-3.0	CPH-5 6.0-7.0	CPH-6 4.5-5.5	CPH-7 9.0-10.0	CPH-9 2.0-3.0	CPH-10 10.0-11.0	MW-5	MW-6	MW-8	MW-7	WOSW-1	WOSW-2		
Date Sampled:		Standard	Standard	9/28/2001	9/28/2001	9/28/2001	9/28/2001	9/28/2001	11/26/2001	11/26/2001	9/30/2009	9/30/2009	9/30/2009	10/1/2009	8/5/2013	8/5/2013		
TPH-GRO (C6-C10)	230000	620000		ND	600	3100	560	ND	1900	140	ND (1500)	ND (1500)	ND (1400)	17100	ND (3000)	ND (2900)		
Sample Area:						AREA D			1			AREA E				ARI	EA F	AREA G
Sample ID:	Residential Standard	Non- Residential Standard	Protection of Ground Water Standard	DPH-3 3.0 4.0	DPH-5 2.0-3.0	DPH-3 9.0-10.0	DPH-6 3.0-4.0	DPH-6 6.5-7.5	EPH-3 8.0-9.0	EPH-4 8.0-9.0	T2 E SIDEWALL	T2 N	T2 S SIDEWALL	T2 W SIDEWALL	TANK 2 PIPEING	FPH-1 0.5-1.5	FPH-3 0.5-1.5	GPH-3 0.5-1.5
Date Sampled:				9/25/2001	9/25/2001	9/26/2001	11/26/2001	11/26/2001	9/25/2001	9/25/2001	4/3/2013	4/3/2013	4/3/2013	4/3/2013	4/3/2013	9/26/2001	9/26/2001	9/26/2001
TPH-GRO (C6-C10)	230000	620000		14000	23000	ND	110	ND	ND	ND	ND (1300)	ND (1300)	ND (1200)	ND (1200)	ND (1300)	ND	ND	ND
Occurred to Amore															OFRIMENT			

Sample Area:					AREA H			AR	EAI		AREA J	Fuel C	Dil UST		SEDIMENT		ARE	AW
Sample ID:	Residential Standard	Non- Residential Standard	Protection of Ground Water Standard	HPH-2 0.5- 1.5	HPH-5 0.5-1.5	HPH-7 0.5-1.5	IPH-1 7.0 8.0	IPH-2 7.0 8.0	IPH-3 3.0 4.0	IPH-3 6.0-7.0	JPH-1 0.5-1.5	TANK3- SIDEWALL- N1	TANK3- SIDEWALL- N2	SED-1	SED-2	SED-3	WOSW-1	WOSW-2
Date Sampled:				9/27/2001	9/27/2001	9/27/2001	11/28/2001	11/28/2001	11/28/2001	11/28/2001	9/26/2001	4/5/2013	4/5/2013	9/30/2009	9/30/2009	9/30/2009	8/5/2013	8/5/2013
TPH-GRO (C6-C10)	230000	620000		ND	ND	ND	ND	ND	ND	ND	ND	ND (1200)	ND (1300)	ND (3000)	ND (1400)	ND (2000)	ND (3000)	ND (2900)
l egend:																		

Legend: All values in ug/kg Detected

Exceed Standard

Excavated

### Table 4E Soil Analytical VOCs (ug/kg) Axil-Belko Kingsville MD

															I-Beiko King															
Sample Area:	Booidontia	Non-	Protection				ARE			-				AREA D						AREA	1				AREA G	AREA H	Fuel Oil UST		SEDIMENT	
Sample ID:	Residentia Standard	Residential	of Ground Water	CPH-2 6.5-7.5	CPH-5 6.0- 7 0	MW-5	MW-6	MW-8 MW-7	WOSW-1	WOSW-2	AREA D	AREA D	AREA D	AREA D AREA D	AREA D	DPH-3 3.0 DPH- 4.0 2.0-3.0			EPH-4 8 0-9 0	T2 E T2 I	T2 S	T2 W	TANK 2	FPH-1 0 5-1 5	GPH-3 0.5- 1.5	HPH-2 0.5 HPH-5 0.5-	TANK3- TANK3- N1 N2	SED-1	SED-2	SED-3
Date Sampled:	otanidara	Standard	Standard		9/28/2001	9/30/2009	9/30/2009	9/30/2009 10/1/200	9 8/5/2013	8/5/2013	4/1/2011	4/1/2011	4/1/2011	4/1/2011 4/1/2011	U U				0.0 0.0	4/3/2013 4/3/20	13 4/3/2013	4/3/2013	4/3/2013	010 110		9/27/2001 9/27/2001	11 112	9/30/2009	9/30/2009	9/30/2009
Acetone	7000000	92000000	22000	110	89	77.7	62.5	10.4 J 24.9	ND (2.0)	ND (1.9)	ND (2.9)	25	23.6	47.2 19.9	23.9	73 47	100	0 ND	200	ND (1.7) 10.4			ND (1.9)	-	-		ND (1.9) 32.8		ND (2.5)	ND (3.2)
Benzene	12000	52000	1.9	ND	ND	ND (0.38)	ND (0.39)	2.2 3.1	ND (0.14)	ND (0.13)	ND (0.44)	ND (0.38)	ND (0.36)	0.50 J ND (0.44)	ND (0.34)	4J ND	ND	) -	-	ND (0.12) 0.82	J ND (0.12	) ND (0.13)	ND (0.13)	-	-		ND (0.14) ND (0.15)	ND (0.98)	ND (0.38)	ND (0.50)
Bromobenzene	-	-	-	-	-	-	-	-	-	-	ND (0.47)	ND (0.41)	ND (0.38)	ND (0.49) ND (0.47)	ND (0.36)		-	-	-	ND (0.15) ND (0.		, <u>, ,</u> ,	ND (0.17)	-	-			-	-	-
Bromochloromethane	-	-	-	-	-	-	-	-	ND (0.31)		ND (0.28)	ND (0.25)	ND (0.23)	ND (0.30) ND (0.28)	ND (0.22)		-	-		ND (0.27) ND (0.		, <u>, ,</u> ,	. /	-	-			-	-	-
Bromodichloromethane	10000	46000	1.1	-		ND (0.29)	ND (0.30)		B) ND (0.12)				ND (0.27)	ND (0.34) ND (0.33)			-	-		ND (0.11) ND (0.	/	/ (* /	(. )	-	-				ND (0.29)	ND (0.37)
Bromoform Bromomethane	81000 11000	360000 140000	67 41	-		ND (0.17) ND (0.45)	( )	ND (0.17) ND (0.1 ND (0.44) ND (0.4	()	ND (0.17) ND (0.31)	ND (0.20) ND (0.52)		ND (0.16) ND (0.42)	ND (0.20) ND (0.19) ND (0.54) ND (0.52)	ND (0.15) ND (0.40)	-	-	-		ND (0.15) ND (0. ND (0.28) ND (0.	.,	//	(· /	-	-		ND (0.17) ND (0.19) ND (0.31) ND (0.35)	(· /	ND (0.17) ND (0.45)	ND (0.22) ND (0.59)
2-Butanone (MEK)	4700000	61000000	29000	15		ND (0.43)	ND (0.40)	ND (0.44) ND (0.4			ND (0.52)		ND (0.42)	ND (0.54) ND (0.52) ND (2.6) ND (2.5)	ND (0.40)	ND 12	18	- ND	44	ND (0.28) ND (0. ND (2.4) ND (2		1 (1.1.1)			-		ND (0.31) ND (0.33)		ND (0.45)	ND (0.59)
n-Butylbenzene	-	-	-	-	-	-	-		-	-	ND (0.49)	· /	ND (0.40)	ND (0.51) ND (0.49)	ND (0.38)		-	-	-	ND (0.11) 0.30			ND (0.13)	-	-			-	-	-
sec-Butylbenzene	-	-	-	-	-	-	-	-	-	-	ND (0.63)	ND (0.55)	ND (0.51)	ND (0.66) ND (0.62)	ND (0.49)	-	-	-	-	ND (0.12) ND (0.	11) ND (0.11	) ND (0.13)	ND (0.13)	-	-			-	-	-
tert-Butylbenzene	-	-	-	-	-	-	-		-	-	ND (0.62)	ND (0.54)	ND (0.50)	ND (0.64) ND (0.61)	ND (0.47)		-	-	-	ND (0.30) ND (0.	30) ND (0.30	) ND (0.33)	ND (0.33)	-	-			-	-	-
Carbon disulfide	780000	10000000	19000	-		ND (0.34)		ND (0.34) ND (0.3			-	-	-		-		-	-	-		-	-		-	-			1	ND (0.34)	ND (0.44)
Carbon tetrachloride	4900	22000	2.1	-		ND (0.62)		ND (0.61) ND (0.5	( · · · )		<u>(</u> ; )	( /	ND (0.58)	ND (0.75) ND (0.71)	( /	-	-	-	-	ND (0.13) ND (0.		/ /	V: /	-	-		ND (0.15) ND (0.17)	( · · /	ND (0.62)	ND (0.81)
Chlorobenzene	160000	2000000	680	-	-	ND (0.38)	ND (0.39) ND (1.3)	0.97 J 6.2 ND (1.3) ND (1.2	ND (0.12)		ND (0.44) ND (1.3)	ND (0.38) ND (1.1)	ND (0.36) ND (1.0)	ND (0.46) ND (0.43) ND (1.3) ND (1.3)	ND (0.34) ND (1.0)	ND 61	ND	)		ND (0.11) ND (0.		, <u>, ,</u> ,		-	-		ND (0.12) ND (0.14)		ND (0.38)	ND (0.49) ND (1.7)
Chloroethane Chloroform	220000 78000	990000 1000000	19 0.91	-	-	ND (1.3) ND (0.35)	= (		) ND (0.26) ND (0.095				ND (0.33)	ND (1.3) ND (1.3) ND (0.43) ND (0.41)	( )	-	-	-	-	ND (0.23) ND (0. ND (0.084) ND (0.0	<ol> <li>ND (0.23</li> <li>ND (0.083</li> </ol>	, <u>, ,</u> ,	. /	-	-		ND (0.26) ND (0.29) ND (0.095) ND (0.11)	ND (3.3) ND (0.92)	ND (1.3) ND (0.36)	ND (1.7) ND (0.46)
Chloromethane			930			ND (0.18)	( )	ND (0.18) ND (0.1		/	ND (0.21)	V	ND (0.17)	ND (0.22) ND (0.21)	ND (0.16)				-	ND (0.19) ND (0.			ND (0.21)		-		ND (0.21) ND (0.24)	()	ND (0.19)	ND (0.24)
Cyclohexane	-	-	-	-	-	-	-		ND (0.14)													, (0.21)								
o-Chlorotoluene	-	-	-	<u> </u>	-	-	-			-	ND (0.37)	ND (0.32)	ND (0.30)	ND (0.38) ND (0.37)	ND (0.29)	- 1	-	-		ND (0.13) ND (0.	13) ND (0.13	) ND (0.14)	ND (0.14)	-	-			-	-	
p-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	ND (0.32)	ND (0.28)	ND (0.26)	ND (0.33) ND (0.31)	ND (0.24)	-	-	-	-		14) ND (0.14	, <u>, ,</u> ,	= ()	-	-			-	-	-
Di-Isopropyl ether						ND (0.24)	ND (0.24)	ND (0.23) ND (0.2			-	<b>↓</b> - ↓	-			-	-			ND (0.18) ND (0.	.,	/ /	V	-			<u> </u>	ND (0.61)	ND (0.24)	ND (0.31)
1,2-Dibromo-3-chloropropane	200	3600	0.0037	-	-	-	-	-	ND (1.0)		ND (0.70)		ND (0.57)	ND (0.73) ND (0.69)		-	-	-	-	ND (0.90) ND (0.		1 (2.2.2)		-	-	-   -		-	-	-
Dibromochloromethane	7600	34000	0.83	-	-	ND (0.12)	ND (0.13)	ND (0.12) ND (0.1	,	ND (0.18)	ND (0.14)	ND (0.12)	ND (0.12)	ND (0.15) ND (0.14)	ND (0.11)	<u> </u>	-		-	ND (0.17) ND (0.	/	, <u>, ,</u> ,	V: /	-	-		ND (0.19) ND (0.21)	ND (0.32)	ND (0.12)	ND (0.16)
1,2-Dibromoethane 1,2-Dichlorobenzene	320 700000	1400 9200000	0.06 4600	-	-	-	-		ND (0.15) ND (0.22)	ND (0.14) ND (0.21)	ND (0.18)	ND (0.15) ND (0.30)	ND (0.14) ND (0.28)	ND (0.18) ND (0.18) ND (0.36) ND (0.35)	ND (0.14) ND (0.27)					ND (0.13) ND (0. ND (0.19) ND (0.	<ol> <li>ND (0.13</li> <li>ND (0.19</li> </ol>	, <u>, ,</u> ,	. /	-	-			-	-	
1,3-Dichlorobenzene	23000	310000	290	-	-	-	-		ND (0.22)	ND (0.21) ND (0.21)	ND (0.35)		ND (0.28)	ND (0.37) ND (0.35)	ND (0.27)	-	-			ND (0.19) ND (0.		, <u>, ,</u> ,	. /	-	-			-	-	
1,4-Dichlorobenzene	27000	120000	4.2	-	-	-	-		ND (0.20)	ND (0.20)			ND (0.35)	()	ND (0.34)	-	-	-		ND (0.18) ND (0.	.,	//	(· /	-	-				-	
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	ND (0.26)	ND (0.26)	ND (1.2)	ND (1.1)	ND (0.99)	ND (1.3) ND (1.2)	ND (0.94)	-	-	-	-	ND (0.23) ND (0.	23) ND (0.23	) ND (0.25)	ND (0.25)	-	-			-	-	-
1,1-Dichloroethane	1600000	20000000	5100	-		ND (0.15)	ND (0.16)	ND (0.15) ND (0.1	5) ND (0.16)	ND (0.15)	ND (0.18)		ND (0.14)	ND (0.19) ND (0.18)	ND (0.14)	-	-	-	-	ND (0.14) ND (0.		, <u>, ,</u> ,	ND (0.15)	-	-				ND (0.16)	ND (0.20)
1,2-Dichloroethane	7000	31000	1	-		ND (0.38)	ND (0.40)		ND (0.16)	( /		( /	ND (0.36)		ND (0.34)		-	-		(; ) (;	14) ND (0.14	, (* .)	( /	-	-				ND (0.39)	ND (0.50)
1,1-Dichloroethene	390000	5100000	2900	-		ND (0.74)	( )	ND (0.73) ND (0.7	(	( · · · /	ND (0.86)	1 1	ND (0.69)	ND (0.89) ND (0.85)	ND (0.66)	-	-	-	-	ND (0.26) ND (0.		, , ,		-	-		ND (0.29) ND (0.33)	1.1	ND (0.74)	ND (0.96)
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	78000 160000	2000000	720	-		ND (0.27) ND (0.50)	ND (0.27)	ND (0.26) ND (0.20 ND (0.49) ND (0.41	,		ND (0.31) ND (0.58)	ND (0.27) ND (0.51)	ND (0.25) ND (0.47)	ND (0.32) ND (0.31) ND (0.60) ND (0.57)	110 (0.2.1)	-	-	-	-	ND (0.19) ND (0. ND (0.24) ND (0.		1	ND (0.20) ND (0.26)	-	-		ND (0.21) ND (0.23) ND (0.27) ND (0.31)	1	ND (0.27) ND (0.50)	ND (0.35) ND (0.65)
1,2-Dichloroethene (total)	70000	920000	370			ND (0.27)	( )	ND (0.26) ND (0.2		ND (0.27)	-	-	-	ND (0.00) ND (0.07)	-			-	-	ND (0.24) ND (0.	-	) ND (0.20)	ND (0.20)		-			1.1	ND (0.27)	ND (0.35)
1,2-Dichloropropane	9400	42000	3.4	-		ND (0.14)			<ul> <li>ND (0.18)</li> </ul>	ND (0.17)	ND (0.17)	ND (0.15)	ND (0.14)	ND (0.17) ND (0.17)	ND (0.13)	-	-	-	-	ND (0.16) ND (0.	16) ND (0.16	) ND (0.17)	ND (0.17)	-	-		ND (0.18) ND (0.20)		ND (0.15)	ND (0.19)
1,3-Dichloropropane	-	-	-	-	-	-	-	-	-	-	ND (0.14)	ND (0.12)	ND (0.11)	ND (0.14) ND (0.14)	ND (0.11)	-	-	-	-	ND (0.15) ND (0.	15) ND (0.15	) ND (0.17)	ND (0.17)	-	-			-	-	-
2,2-Dichloropropane	-	-	-	-	-	-	-		-	-	ND (0.74)	ND (0.64)	ND (0.60)	ND (0.77) ND (0.73)	ND (0.57)	-	-	-	-	ND (0.20) ND (0.			ND (0.22)	-	-			-	-	-
1,1-Dichloropropene	-	-	-	-	-	-	-	-	-	-	ND (0.18)	ND (0.16)	ND (0.15)	ND (0.19) ND (0.18)	ND (0.14)		-	-	-	ND (0.21) ND (0.		, <u>, ,</u> ,	ND (0.23)	-	-			-	-	-
cis-1,3-Dichloropropene	6400 6400	29000 29000	3.1 3.1	-		ND (0.15) ND (0.11)	( /		<ul> <li>ND (0.16)</li> <li>ND (0.18)</li> </ul>				ND (0.14) ND (0.10)	ND (0.18) ND (0.17) ND (0.13) ND (0.12)	ND (0.13) ND (0.096)	-	-	-	-	ND (0.14) ND (0. ND (0.16) ND (0.		, <u>, ,</u> ,		-	-		ND (0.16) ND (0.18) ND (0.18) ND (0.20)		ND (0.15) ND (0.11)	ND (0.19) ND (0.14)
trans-1,3-Dichloropropene 1.4-Dioxane	0400	29000	3.1	-	-	ND (0.11)	ND (0.11)	ND (0.11) ND (0.1	ND (0.18)	ND (0.17) ND (67)	ND (0.12)	ND (0.11)	ND (0.10)	ND (0.13) ND (0.12)	ND (0.090)	-	-	-	-	ND (0.10) ND (0.	10) ND (0.10	) ND (0.17)	ND (0.17)	-	-		ND (0.18) ND (0.20)	ND (0.20)	ND (0.11)	ND (0.14)
Ethylbenzene	780000	10000000	15000	ND	ND	ND (0.41)	ND (0.43)	1.5 ND (0.4	()	(- )	ND (0.48)	ND (0.42)	ND (0.39)	ND (0.50) ND (0.47)	ND (0.37)	6900 61	ND	)		ND (0.27) 1.2	ND (0.27	) 0.35 J	ND (0.29)	-	-		ND (0.30) ND (0.34)	ND (1.1)	ND (0.42)	ND (0.54)
Freon 113									ND (0.50)	ND (0.48)																				
Hexachlorobutadiene	8200	37000	1800	-	-	-	-		-	-	ND (0.55)	ND (0.48)	ND (0.44)	ND (0.57) ND (0.54)	ND (0.42)	-	-	-	-	ND (0.20) ND (0.	20) ND (0.20	) ND (0.22)	ND (0.22)	-	-			-	-	-
2-Hexanone	-	-	-	-	-	ND (1.1)	ND (1.1)	ND (1.1) ND (1.0	) ND (0.72)		-	-	-		-		-	-	-		-	-	-	-	-		ND (0.71) ND (0.80)	ND (2.8)	ND (1.1)	ND (1.4)
Isopropylbenzene	780000	1000000	64000	-		-	-	-		) ND (0.083)	ND (0.67)	ND (0.58)	ND (0.54)	ND (0.70) ND (0.66)	ND (0.52)	-	-	-	-	ND (0.075) 0.24	J ND (0.075	5) ND (0.083)	) ND (0.082)	-	-			-	-	-
Methyl Acetate Methylcyclohexane									ND (3.0) ND (0.20)	ND (2.9) ND (0.19)													+ +							
p-Isopropyltoluene	-	-	-	-	-	-	-	-	ND (0.20)	-	ND (0.56)	ND (0.48)	ND (0.45)	ND (0.58) ND (0.55)	ND (0.43)	-	-	-	-	ND (0.11) 0.28	J ND (0.10	) ND (0.12)	ND (0.12)	-	-			-	-	-
Methyl Tert Butyl Ether	160000	720000	12	-	-	ND (0.31)	ND (0.32)	ND (0.31) ND (0.3	) ND (0.27)	ND (0.26)			( )	ND (0.38) ND (0.36)		-	-	-			24) ND (0.24	, <u>, ,</u> ,	. /	-	-			ND (0.81)	ND (0.32)	ND (0.41)
4-Methyl-2-pentanone(MIBK)			59000	-	-	ND (0.90)	ND (0.93)	ND (0.89) ND (0.8	) ND (0.87)	ND (0.84)	ND (1.1)	ND (0.91)	ND (0.85)	ND (1.1) ND (1.0)	ND (0.81)	-	-	-	-	ND (0.76) ND (0.	76) ND (0.76	) ND (0.84)	ND (0.83)	-	-		ND (0.86) ND (0.96)	ND (2.3)	ND (0.91)	ND (1.2)
Methylene bromide						-	L - 1	-	-		ND (0.23)		ND (0.18)	ND (0.24) ND (0.23)	ND (0.18)	-	-		L - ]		14) ND (0.14			-	-	<u> </u>		-	- 1	
Methylene chloride	85000	380000	19	4J	4J	ND (0.25)	ND (0.26)	ND (0.25) ND (0.24	4.2 J	3.4 J	ND (0.29)	1 1	ND (0.23)	ND (0.30) ND (0.29)		8 2J	ND	D 4 J	4 J	7 17.9		26.5	21		3 J	2 J ND	3.5 J 2.8 J	ND (0.64)	ND (0.25)	ND (0.32)
Naphthalene n-Propylbenzene	160000	2000000	150		-	-					ND (0.95) ND (0.33)		ND (0.77) ND (0.27)	ND (0.99) ND (0.94) ND (0.34) ND (0.33)	ND (0.74) ND (0.25)	<u>                                     </u>	-	-	<u>⊢ -</u>	ND (0.12) 2.2 ND (0.12) 0.77		/	ND (0.14) ND (0.13)	-	-		ND (0.14) 1.7 J	-	-	
n-Propylbenzene Stvrene	1600000	20000000	57000	1 -	-	- ND (0.12)	ND (0.12)	ND (0.12) ND (0.1	ND (0.11)	ND (0.10)	(1.1.1)	( · · · /	ND (0.27) ND (0.11)		ND (0.25)		-			(; / ;	92) ND (0.12	/	= ()	-	-		ND (0.11) ND (0.12)	ND (0.31)	- ND (0.12)	ND (0.16)
Tert Butyl Alcohol	-	-	-	-	-	ND (16)	ND (17)	ND (16) ND (15		-	-	-	-		-		-	-	-	ND (4.4) ND (4	. /	/ /	V	-	-			ND (41)	ND (16)	ND (21)
tert-Amyl Methyl Ether	-	-	-	-			ND (0.50)	ND (0.47) ND (0.4	3) -	-	-	-	-		-	-	-	-	-	ND (0.59) ND (0.	59) ND (0.59	) ND (0.65)	ND (0.65)	-	-			ND (1.2)		
tert-Butyl Ethyl Ether	-	-	-	-	-	ND (0.79)	ND (0.81)	ND (0.77) ND (0.7		-	-	L - 1	-		-	<u> </u>	-	-		ND (0.083) ND (0.0				-	-			ND (2.0)	ND (0.79)	ND (1.0)
1,1,1,2-Tetrachloroethane	-	-	-		-	-	-	-	-	-				ND (0.14) ND (0.14)						(, )	14) ND (0.14	/ ( /	( /	-	-	-   -		-	-	-
1,1,2,2-Tetrachloroethane	3200	14000	0.68			ND (0.33) ND (0.16)	· · /						( )	ND (0.39) ND (0.38)			-		-	( ,	13) ND (0.13	, (* .)	ND (0.15) 1.3 J	-	-	 42 ND	ND (0.15) ND (0.17)	ND (0.84) ND (0.42)	(1.1.1)	(1.1.7)
Tetrachloroethene Toluene	1200 630000	5300 8200000	4.7	- ND		ND (0.16) ND (0.33)	ND (0.17) ND (0.34)							ND (0.19) ND (0.19) ND (0.39) ND (0.37)	ND (0.14) ND (0.29)	73 17	- 4,1	- J ND	11	2.3 J 5.8 ND (0.11) 2.4			1.3 J 0.27 J	9	- 4 J	42 ND 6 ND		ND (0.42) ND (0.84)		ND (0.21) ND (0.43)
1,2,3-Trichlorobenzene	-	-	-	-		-	-							ND (0.79) ND (0.76)		-	-+J	-	-	ND (0.17) 2.4 ND (0.17) ND (0.			ND (0.18)	-				-	-	
1,2,4-Trichlorobenzene	78000	1000000	2400	-	-	-	-	-						ND (0.46) ND (0.44)		-	-	-			14) ND (0.14			-	-			-	-	
1,1,1-Trichloroethane	16000000	20000000	32000	-		ND (0.14)			ND (0.12)	ND (0.12)	ND (0.17)	ND (0.14)	ND (0.13)	ND (0.17) ND (0.16)	ND (0.13)	-	-	-			11) ND (0.11		ND (0.12)	-	-		ND (0.12) ND (0.14)			
1,1,2-Trichloroethane	11000	50000	0.78			ND (0.21)								ND (0.25) ND (0.24)			-		L - 1	1	18) ND (0.18	1	1 /	-	-	<u> </u>		ND (0.53)		C /
Trichloroethene	1600	7200	0.26	-	-	ND (0.59)	ND (0.61)	ND (0.58) ND (0.5				( /	( /	ND (0.71) ND (0.67)	( /	-	-	-	-		18) ND (0.18			-	-		ND (0.20) ND (0.22)	ND (1.5)	ND (0.59)	ND (0.77)
Trichlorofluoromethane 1,2,3-Trichloropropane	-		-		-	-	-	- E	ND (0.34)	ND (0.33)				ND (0.31) ND (0.29) ND (0.43) ND (0.41)	ND (0.23)	-	-			ND (0.30) ND (0. ND (0.41) ND (0.	30) ND (0.30 41) ND (0.41		0.89 J ND (0.45)	-	-			-	-	-
1,2,3-Tricnioropropane	-	-	<u> </u>	-	<u> </u>	-	-							ND (0.43) ND (0.41) ND (0.58) ND (0.55)			-			ND (0.41) ND (0. ND (0.21) 3.3	/	/ ( /	( /	-	-			-	-	<u> </u>
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	_	-	-				ND (0.48) ND (0.46)			-			ND (0.16) 2.0			ND (0.23)	-	-			-	-	
Vinyl chloride	90	4000	0.12	-	-	ND (0.20)	ND (0.20)	ND (0.20) ND (0.1	) ND (0.17)	ND (0.16)				ND (0.24) ND (0.23)			-	-	-	1	15) ND (0.15		ND (0.16)	-	-		ND (0.17) ND (0.18)	ND (0.51)	ND (0.20)	ND (0.26)
m,p-Xylene	1600000	20000000	3000	-	-	-	-		ND (0.20)	ND (0.20)	ND (0.61)	ND (0.53)	ND (0.49)	ND (0.63) ND (0.60)	ND (0.47)	-	-	-		ND (0.18) 3.3	ND (0.18	) 1.9	0.34 J	-	-			-	-	-
o-Xylene	1600000	20000000	3000	-		-	-	-	( /	()	(1.1.7)	( /	1	ND (0.63) ND (0.60)	(. /		-			ND (0.14) 3	ND (0.14		ND (0.15)	-	-			-	-	-
Xylene (total)	1600000	2000000	3000	ND	3J	ND (0.52)	ND (0.54)	2.2 ND (0.5	) ND (0.16)	ND (0.16)	ND (0.61)	ND (0.53)	ND (0.49)	ND (0.63) ND (0.60)	ND (0.47)	47034 213	8	ND	6 J	ND (0.14) 6.3	ND (0.14	) 3.1	0.34 J	19	3 J	6 J ND	ND (0.16) 0.33 J	ND (1.4)	ND (0.53)	ND (0.68)
Legend:																														

Legend: All values in ug/kg Detected Exceed Standard Excavated

### Table 5 Phase II Groundwater Analytical Axil-Belko Kingsville MD

			W-1	W-3	W-4
Constituent	MDE Standard	Units	11/27/01	11/27/01	11/27/01
VOCs	NA	NA	-	-	-
Acetone	61	ug/L	3 J	9 J	ND
SVOCs	NA		-	-	-
bis (2-ethylhexyl) phthalate	6	ug/L	47	ND	ND
TPH-GRO	47	ug/L	ND	ND	ND
TPH-DRO	47	ug/L	16,000	11,000	5,300

			AGW-1	CGW-1	DGW-1	HGW-1
Constituent	MDE Standard	Units	11/27/01	11/27/01	11/27/01	11/27/01
VOCs	NA	NA	-	-	-	-
Acetone	61	ug/L	6 J	18	5 J	5 J
2-Butanone	700	ug/L	ND	3 J	ND	ND
PAHs	NA	ug/L	ND	-	-	-
SVOCs	NA	ug/L	-	ND	ND	-
TPH-GRO	47	ug/L	ND	ND	ND	-
TPH-DRO	47	ug/L	6,900	7,600	ND	ND

Table 6 Groundwater Analytical Data Axil Belko Kingsville, MD

																				King	svine, wid																								
Well #: W-1		10	22/2008	1	/12/09	4/21	1/2009 2		8/18/09	2	10/19/09 <sup>2</sup>	12/1	4/09 <sup>2</sup>	4/1	1/10 <sup>2</sup>	6/15	/10 2	9/22/1	0 2	12/21/2	010 <sup>2</sup>	3/22/201	1 2	6/15/20	11 <sup>2</sup>	9/15/2	011 <sup>3</sup>	12/8/2	2011 <sup>3</sup>	3/8/2	012 <sup>3</sup>	6/7/2	2012 3	9/19/	2012 <sup>3</sup>	12/11/2	2012 3	3/21/20	013 <sup>3</sup>	6/04/2	013 <sup>3</sup>	9/24/2	2013 <sup>3</sup>	12/17/	7/2013 3
Constituent	MDE Standard Unit	ts Resu	lts RDL	Resu	lts RD	L Resul	lts RI	DL Re	sults 1	RDL R	esults RDL	Result	s RDI	Resul	ts RDL	Results	RDL	Results	RDL	Results	RDL F	esults 1	RDL I	esults	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) <sup>1</sup>	NA μg/Ι	L NI	) -	NE	) -	ND	) .	NS (	Sheen)	- NS	(Sheen) -	ND	-	ND	-	ND	-	NS (Sheen)	-	-	-	ND	- NS	(Sheen	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS	-	NS	-
2-Butanone (MEK)	700 μg/I	L NI	0 1.6	NE	) 1.6	ND	) 1.	.6 NS (	Sheen)	1.6 NS	(Sheen) 0.1	179	1.6	ND	1.6	ND	1.6	NS (Sheen)	-	ND	1.6	ND	1.6 NS	(Sheen	-	ND	1.6	ND	1.6	ND	1.6	NS	-	NS	-	NS	-	ND	2.4	NS	-	NS	-	NS	-
PAHs	NA -	-	-	-	-	-			-	-		-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	180 µg/I	0.02	3 J 0.019	NE	0.01	9 ND	0.	.1 NS (	Sheen)	0.1 NS	(Sheen) 0.1	ND	0.1	ND	0.1	ND	0.1	NS (Sheen)	-	ND	0.1	ND	0.1 NS	(Sheen	-	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.29	ND	0.29	ND	0.29
Benzo (b) fouranthene	0.2 µg/I	0.009	0 J 0.008	0.008	0 J 0.00	8 ND	0.	1 NS (	Sheen)	0.1 NS	(Sheen) 0.1	ND	0.1	ND	0.1	ND	0.1	NS (Sheen)	-	ND	0.1	ND	0.1 NS	(Sheen	-	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.46	ND	0.46	ND	0.46
Benzo (k) flouranthene	0.3 μg/I	0.008	0 J 0.008	NE	0.00	8 ND	0.	.1 NS (	Sheen)	0.1 NS	(Sheen) 0.1	ND	0.1	ND	0.1	ND	0.1	NS (Sheen)	-	ND	0.1	ND	0.1 NS	(Sheen	-	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.1	ND	0.51	ND	0.51	ND	0.51
TPH-GRO	47 μg/Ι	L NI	20	NE	20	ND	20	00 NS (	Sheen)	200 NS	(Sheen) 200	ND	200	ND	200	ND	200	NS (Sheen)	-	ND	200	ND	200 NS	(Sheen	-	ND	200	ND	200	ND	200	ND	200	ND	200	NS	-	ND	40	NS	-	NS	-	NS	-
TPH-DRO	47 μg/Ι	8,00	0 320	5,50	0 150	4,840	0 10	00 NS (	Sheen)	100 NS	(Sheen) 100	1,340	100	3,410	100	1,820	100	NS (Sheen)	-	3,150	100	2,780	100 NS	(Sheen	-	4.240	100	1.320	100	5,980	100	3,590	100	4,500	100	2.030	100	5.000	100	13,300	200	4,550	200	4,920	200

Well #: W-2			10/22/20	008	1/12	/09	4/21/2	2009 <sup>2</sup>	8/18	/09 <sup>2</sup>	10/19	/09 <sup>2</sup>	12/14/	09 <sup>2</sup>	4/1/1	.0 2	6/15/	10 <sup>2</sup>	9/22	/10 <sup>2</sup>	12/21/2	010 <sup>2</sup>	3/22/2	2011 <sup>2</sup>	6/15	5/2011 <sup>2</sup>	9/15	/2011 3	12/8	2011 <sup>3</sup>	3/8/2	2012 <sup>3</sup>	6/7/20	12 <sup>3</sup>	9/19/2012	3 1	2/11/2012	3	3/21/2013	3	6/04/201	)13 <sup>3</sup>	9/24/2	2013 <sup>3</sup>	12/17/2	2013 <sup>3</sup>
Constituent	MDE Standard	Units	Results	RDL	Results	RDL	Results	s RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	s RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results R	RDL Res	sults R	DL R	esults R	RDL I	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) <sup>1</sup>	NA	µg/L	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	NS (Shee	en) -	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	NS	- !	NS	-	ND	-	AB		AB	_ 1	AB	-
Acetone	550	µg/L	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	NS (Shee	en) -	3.3 J	10	ND	10	ND	10	ND	10	ND	10	ND	10	NS	-	NS	- !	NS	-	ND 3	3.3	AB		AB	- 1	AB	-
Carbon Disulfide	100	µg/L	ND	2	ND	2	ND	2	ND	2	ND	2	ND	2	ND	2	ND	2	NS (Shee		0.85 J	2.0	ND	2.0	0.74 J	2.0	ND	2.0	ND	2.0	ND	2.0	NS	-	NS	- !	NS	-	ND 0	).19	AB	.	AB	- 1	AB	-
PAHs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	AB		AB	-	AB	-
Flourene	24	µg/L	0.11 J	0.094	0.59	0.095	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0 ?	ND 1	1.0 1	ND	1.0	AB		AB	- 1	AB	-
Phenanthrene	180	µg/L	2.6	0.038	14	0.038	0.344	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.9	1.0	2.3	1.0	4.3	1.0	1.7	1.0 N	ND 1	1.0	2.6	1.0	AB		AB	- 1	AB	-
Anthracene	180	µg/L	0.45	0.019	1.8	0.019	0.257	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.45 J	1.0	0.51	1.0	1	1.0	0.41 J	1.0 ?	ND 1	1.0 0.	).54 J	1.0	AB		AB	-	AB	-
Flouranthene	150	µg/L	3.5	0.019	15	0.19	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.8	1.0	2.2	1.0	6.8	1.0	2.9	1.0 ?	ND 1	1.0	4.9	1.0	AB		AB	- 1	AB	-
Pyrene	18	µg/L	3.3	0.094	13	0.095	1.62	0.1	ND		ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.3	1.0	1.6	1.0	6.1	1.0	2.5	1.0 ?	ND 1	.0	3.6	1.0	AB		AB	_	AB	-
Benzo (a) anthracene	0.2	µg/L	1.4	0.009	5	0.095	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.70 J	1.0	0.83	1.0	3.10	1.0	1.90	1.0 ?	ND 1	1.0 1	1.90	1.0	AB		AB	-	AB	-
Benzo (b) flouranthene	0.2	µg/L	1.3	0.008	4	0.076	0.971	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND		NS (Shee		ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.57 J	1.0	0.73	1.0	2.90	1.0	1.90	1.0 ?	ND 1	1.0 2	2.30	1.0	AB		AB	_	AB	-
Benzo (a) pyrene	0.2	µg/L	1.3	0.009	4	0.095	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.42 J	1.0	0.49	1.0	2.10	1.0	1.30	1.0 1	ND 1	1.0 1	1.80	1.0	AB		AB	_ 1	AB	-
Dibenzo (a,h) anthracene	0.2	µg/L	0.11	0.019	0.32	0.019	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.49 J	1.0	ND	1.0 )	ND 1	1.0 0.	).58 J	1.0	AB		AB		AB	-
Indeno (1,2,3-cd) pyrene	0.2	µg/L	1.3	0.038	4.2	0.038	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.10	1.0	0.87 J	1.0 N	ND 1	1.0 1	1.10	1.0	AB		AB	_	AB	-
Benzo (g,h,i) perylene	18	µg/L	2.2	0.057	6.5	0.057	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1	1.0	0.89 J	1.0 )	ND 1	.0	1.3	1.0	AB		AB	_ 1	AB	-
Chrysene	3	µg/L	2	0.038	5.1	0.038	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.66 J	1.0	0.69	1.0	2.7	1.0	1.9	1.0 1	ND 1	.0	2.3	1.0	AB		AB		AB	-
Benzo (k) flouranthene	0.3	µg/L	0.71	0.008	2.3	0.008	1.01	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS (Shee	en) -	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.30	1.0	1.20	1.0 N	ND 1	1.0 1	1.20	1.0	AB		AB		AB	-
SVOCs (Full Suite)	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	- 1	NS	-	NS	-	AB		AB		AB	-
bis (2-Ethylhexyl) phthalate	6	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	2.0	1.2 J	2.0	ND	2.0	NS (Shee	en) -	2.7	2.0	2.7	2.0	NS	-	NS	-	NS	-	NS	-	NS	-	NS	- 1	NS		NS	-	AB		AB	_ 1	AB	-
TPH-GRO	47	µg/L	ND	20	ND	20	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	NS (Shee	en) -	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	NS	- 1	NS	-	ND ·	40	AB		AB	_	AB	-
TPH-DRO	47	μg/L	6,400	330	9,300	300	144,000	1,000	5,310	1,000	1,730	100	2,740	100	1,420	100	2,080	100	NS (Shee	en) -	2,740	100	5,410	100	42,600	100	10,500	100	3,530	100	14,200	100	43,300	100	11,800	100 21,	,100 1	.00 2	2,760 1	100	AB		AB	_ 1	AB	-

Well #: W-3	3		10/22/2008	1	12/09		4/21/2009 2		8/18/09 <sup>2</sup>	1	0/19/09 <sup>2</sup>	12/1	4/09 <sup>2</sup>	4	4/1/10 <sup>2</sup>	6/15/	10 <sup>2</sup>	9/22/10 <sup>2</sup>		12/21/2010	0 <sup>2</sup>	3/22/2011 2		5/15/2011	2	9/15/2011	3	12/9/20	)11 <sup>3</sup>	3/8/2	)12 <sup>3</sup>	6/7/2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	12/	11/2012 <sup>3</sup>	3/2	21/2013 3	6/04	4/2013 <sup>3</sup>	9/24/2	2013 <sup>3</sup>	12/17/2	2013 <sup>3</sup>
Constituent	MDE Standard	Units I	esults RD	L Resu	lts R	DL	Results RI	DL Re	sults RD	DL Res	ults RD	L Result	s RD	L Resu	alts RDI	Results	RDL	Results F	RDL I	Results I	RDL Re	sults RD	Res	ults R	DL I	Results R	DL R	Results	RDL	Results	RDL	Results RDL	L Results RD	L Resu	lts RD	L Resu	lts RDL	Result	s RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) <sup>1</sup>	NA	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen) -	N	D -	ND	-	NI	D -	NS (Sheer	i) - N	NS (Sheen)	-	-	-				-	-	-	-	-	-	-	NS -	AB -	AF	3 -	AB	- 1	AB	-	AB	- 1	NS	-
Acetone	550	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen) -	N	D 10	ND	10	5.8	J 10	NS (Sheer	1) - N	NS (Sheen)	-	ND	10 6	.5 J 10	N	D 1	0	ND	10	ND	10	ND	10	NS -	AB -	AF	3 -	AB		AB	-	AB	- 1	NS	-
1,1 Dichloroethene	7	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen) -	N	D 1	ND	1	NI	D 1	NS (Sheer	1) - N	NS (Sheen)	-	0.64	1 1	ND 1	N	D	1	ND	1	ND	1	ND	1	NS -	AB -	AF	3 -	AB	, –	AB	-	AB	- 1	NS	-
Carbon disulfide	100	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen) -	N	D 2	ND	2	NI	D 2	NS (Sheer	1) - N	NS (Sheen)	-	ND	2 1	ND 2	N	D	2	ND	2 (	0.42 J	2	ND	2	NS -	AB -	AE	3 -	AB	- 1	AB	-	AB	-	NS	-
PAHs	NA	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen) -	Ν	- D	ND	-	NI	D -	NS (Sheer	i) - N	NS (Sheen)	-	ND	- 1	ND -	Ν	D	-	ND	-	ND	-	ND	-	NS -	AB -	AF	3 -	AB		AB	-	AB	-	ND	-
Benzo(a)anthracene	0.2	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen)	N	D 1	ND	1	NI	D 1	NS (Sheer	i) - N	NS (Sheen)		ND	1 1	ND 1	N	D	1	ND	1	1.1	1	ND	1	NS -	AB -	AE	3 -	AB		AB	-	AB	- I	ND	-
Chrysene	3	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen)	Ν	D 1	ND	1	NI	D 1	NS (Sheer	i) - N	NS (Sheen)		ND	1	ND 1	Ν	D	1	ND	1	2.2	1	ND	1	NS -	AB -	AE	3 -	AB		AB	-	AB	-	ND	-
Pyrene	18	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen)	Ν	D 1	ND	1	NI	D 1	NS (Sheer	i) - N	NS (Sheen)		ND	1	ND 1	Ν	D	1	ND	1	1.7	1	ND	1	NS -	AB -	AF	3 -	AB		AB	-	AB	-	ND	-
SVOCs (Full Suite)	NA	-	NS -	NS		-	NS -	1	- IS	N	D -	-	-	-	-	-	-	-	-	-	-		N	s	-	NS	-	NS	-	NS	-	NS -	AB -	AE	3 -	AB		AB	-	AB	- I	NS	-
bis (2-Ethylhexyl) phthalate	6	µg/L	NS -	NS		-	NS -	1	is -	N	D -	ND	2.0	1.2	J 2.0	NS (Sheer	1) - N	NS (Sheen)	-	1.4 J	2 1	ND 2	N	S	-	NS	-	NS	-	NS	-	NS -	AB -	AF	3 -	AB		AB	-	AB	- 1	NS	-
TPH-GRO	47	µg/L N	(CNL) -	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen) -	Ν	D -	ND	-	NI	D -	NS (Sheer	i) - N	NS (Sheen)	-	ND	200 1	ND 200	N	D 2	00	ND 2	00	ND	200	ND	200	NS -	AB -	AF	3 -	AB	, -	AB	-	AB	-	NS	-
TPH-DRO	47	µg/L N	(CNL)	NS (C	NL)	- N	S (Sheen) -	NS (	Sheen) -	1,3	350 100	1,030	100	4,95	50 100	NS (Sheer	i) - N	NS (Sheen)	-	1,320	100 8	388 100	2,6	10 1	00	1,930 1	00 4	44,900	100	14,500	100	NS -	AB -	AF	- 3	AB	-	AB	-	AB		26,800	100



Table 6 Groundwater Analytical Data Axil Belko Kingsville, MD

XX7_1) #- XX7_4			0/22/2000	11	12/00	4/21/2009	0 <sup>2</sup>	8/18/09 <sup>2</sup>	10	/19/09 <sup>2</sup>	2/14/09 <sup>2</sup>	4/1/10 <sup>2</sup>	6/15/1	) <sup>2</sup> 9/22/10	2	Kingsville, 12/21/2010 <sup>2</sup>		2011 <sup>2</sup>	6/15/2	2011 2	9/15/2011 <sup>3</sup>	12/8/2	0011 3	3/8/201	12 3	6/7/2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	12/11/2012 <sup>3</sup>	3/21/2013 <sup>3</sup>	6/04/2013	9/24/20	12 3	12/17/2013 <sup>3</sup>
Well #: W-4	MDE		0/22/2008	1/.	/12/09	4/21/200	19	8/18/09	10	/19/09	2/14/09	4/1/10	0/15/1	9/22/10		12/21/2010	312212	2011	0/15/2	2011	9/15/2011	12/8/2	2011	3/8/201	12	6/7/2012	9/19/2012	12/11/2012	3/21/2013	6/04/2013	9/24/20	13	12/17/2015
Constituent	Standard U	nits Re	sults RDI	L Resul	lts RDL	Results	RDL Re	esults RI	DL Resu	ilts RDL Re	ults RD	L Results RD	Results	RDL Results	RDL R	esults RDI	L Results	RDL	Results	RDL	Results RDL	Results	RDL	Results	RDL R	Results RDL	Results RDL	Results RDL	Results RD	Results R	DL Results	RDL R	Results RDL
VOCs (PPL + Xylene) <sup>1</sup>	NA µ	g/L	NS -	ND	- (	ND	- 1	ND -	- NE	- 1	D -	ND -	ND	- ND	-	ND -	ND	-	ND	-	ND -	ND	-	ND	-	NS -	NS -	NS -	ND -	NS	- NS	-	NS -
PAHs	NA	-		-	-	-	-			-			-		-		-	-	-	-		-	-	-	-	ND -	ND -	ND -	ND -	NS	- NS	-	ND -
Phenanthrene		0	0.039 0.039					ND 0.			D 1.0		ND			ND 1.0		1.0	ND	1.0	ND 1.0	ND	1.0	ND		ND 1.0	ND 1.0	ND 1.0	ND 1.0		.3 ND		ND 0.3
Anthracene	180 µ	0	044 J 0.019					ND 0.			D 1.0	1.0	ND	1.0 ND		ND 1.0		1.0	ND	1.0	ND 1.0	ND	1.0	ND		ND 1.0	ND 1.0	ND 1.0			.3 ND		ND 0.3
Flouranthene		0	023 J 0.019					ND 0.			D 1.0	ND 1.0	ND	1.0 ND	1.0	ND 1.0	) ND	1.0	ND	1.0	ND 1.0	ND	1.0	ND		ND 1.0	ND 1.0	ND 1.0	ND 1.0		.3 ND		ND 0.3
SVOCs (Full Suite)	NA		NS -	NS		NS		NS -	- NE				-	• -	-		-	-	NS	-	NS -	NS	-	NS		NS -	NS -	NS -	NS -	NS	- NS		NS -
bis (2-Ethylhexyl) phthalate		~	NS - NS -	NS NS		NS NS		NS - NS -	- NE - NE		D 2.0	1.0 J 2.0 ND -	ND 0.87 J	2.0 ND 5.0 ND		1.1 J 2.0 ND 5.0		2.0 5.0	NS NS	-	NS - NS -	NS NS	-	NS NS		NS -	NS - NS -	NS - NS -	NS -	NS NS	- NS - NS		NS -
N-Nitrosodiphenylamine TPH-GRO		-	ND 20					ND 20			D 200					ND 200	, 112	200	ND	200	ND 200	ND	200	ND		ND 200	ND 200	NS -	ND -	NS	- NS		NS -
TPH-DRO			500 32	460					00 353		87 100		_			485 100		100	441	100	440 100	157	100	334		431 100	1.520 100	821 100	1.500 100		00 865		2,390 200
Well #: W-5	MDE	1	0/22/2008	1/	/12/09	4/21/2009	19 <sup>2</sup>	8/18/09 <sup>2</sup>	10	/19/09 <sup>2</sup>	2/14/09 <sup>2</sup>	4/1/10 <sup>2</sup>	6/15/1	9/22/10	2	12/21/2010 <sup>2</sup>	3/22/2	2011 2	6/15/2	2011 <sup>2</sup>	9/15/2011 <sup>3</sup>	12/8/2	2011 3	3/8/201	12 <sup>3</sup>	6/7/2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	12/11/2012 <sup>3</sup>	3/21/2013 3	6/04/2013	9/24/20	13 <sup>3</sup>	12/17/2013 <sup>3</sup>
Constituent	Standard U	nits Re	sults RDI	L Resul	lts RDL	Results	RDL Re	esults RI	DL Resu	ilts RDL Re	ults RD	L Results RD	Results	RDL Results	RDL R	lesults RDI	L Results	RDL	Results	RDL	Results RDL	Results	RDL	Results	RDL R	Results RDL	Results RDL	Results RDL	Results RDI	Results R	DL Results	RDL R	Results RDL
VOCs (PPL + Xylene) <sup>1</sup>	NA µ	g/L	NS -	NS	-	NS	- 1	NS -	- NE	- I	D -	ND -	ND	- ND	-	ND -	ND	-	NS	-	ND -	ND	-	ND	-	NS -	NS -	NS -	ND -	ND	- ND	-	NS -
PAHs			NS -	NS		NS		NS -	- NE		D -	ND -	ND	- ND		ND -	ND	-	NS	-	ND -	ND	-	ND		ND -	ND -	ND -	ND -				ND -
TPH-GRO TPH-DRO	47 μ 47 μ		NS - NS -	NS NS		NS NS		NS - NS -	- NE - 4,69		D 200 200 100					ND 200 933 100		200	NS NS	-	ND 200 653 100	ND 278	200 100	ND 539		ND 200 529 100	ND 200 760 100	NS - 1,020 100	ND - 1,780 100	NS 1,490 2	- NS 00 889		NS - 2,600 200
		-																															
Well #: W-6	MDF	]	0/22/2008	1/	/12/09	4/21/2009	19 <sup>-2</sup>	8/18/09 <sup>2</sup>	10	/19/09 <sup>2</sup>	2/14/09 <sup>2</sup>	4/1/10 <sup>2</sup>	6/15/1	9/22/10	4	12/21/2010 <sup>2</sup>	3/22/2	2011 <sup>2</sup>	6/15/2	2011 2	9/15/2011 <sup>3</sup>	12/8/2	2011 3	3/8/201	12 3	6/7/2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	12/11/2012 <sup>3</sup>	3/21/2013 <sup>3</sup>	6/04/2013	9/24/20	13 '	12/17/2013 <sup>3</sup>
Constituent	MDE Standard U	nits Re	sults RDI	L Resul	lts RDL	Results	RDL Re	esults RI	DL Resu	ilts RDL Re	ults RD	L Results RD	Results	RDL Results	RDL R	esults RDI	L Results	RDL	Results	RDL	Results RDL	Results	RDL	Results	RDL R	Results RDL	Results RDL	Results RDL	Results RD	Results R	DL Results	RDL R	Results RDL
VOCs (PPL + Xylene) <sup>1</sup>		g/L		-	-	-	-			-			-		-		-	-	-	-		-	-	-	-	NS -	NS -	NS -		-		-	
Acetone	550 µ		NS -	NS		NS		NS -	- NE		D 10		ND 0.44 J	10 ND		ND 10		10	ND 0.20 J	10	ND 10	ND 0.26 J	10	ND 0.22		NS -	NS -	NS -	ND 10		- NS		NS -
Benzene Chlorobenzene		0	NS - NS -	NS NS		NS NS		NS - NS -	- 0.47 - 1.6		4 J 1.0 .5 1.0		0.44 J 1.6	1.0 0.575	1.0 0	0.41 J 1.0 1.7 1.0		1.0	0.29 J 1.7	1.0	0.24 J 1.0 1.5 1.0	0.26 J 1.6	1.0	0.22		NS - NS -	NS - NS -	NS - NS -	ND 10 1.8 1.0	NS NS	- NS - NS		NS - NS -
1,2-Dichlorobenzene	600		NS	NS		NS	]	NS	NE	D 1.0 1	D 1.0	ND 1.0	ND	1.0 ND		ND 1.0	) ND	1.0	ND	1.0	ND 1.0	ND	1.0	ND	1.0	NS -	NS -	NS -	0.34 J 1.0	NS	- NS	-	NS -
1,4-Dichlorobenzene cis-1,2-Dichloroethene	75 600 u		NS -	NS NS		NS NS		NS -	- 0.31		D 1.0 2 J 1.0		ND ND			ND 1.0 ND 1.0		1.0	ND ND	1.0	ND 1.0 ND 1.0	ND 0.30 J	1.0	ND 0.22		NS - NS -	NS - NS -	NS - NS -	2.2 1.0 ND 1.0		- NS - NS		NS - NS -
1,2-Dichloroethene (total)		0	NS -	NS		NS		NS -	- 0.31		22J 1.0		ND			ND 1.0		1.0	ND	1.0	ND 1.0	0.30 J	1.0	0.22		NS -	NS -	NS -	ND 1.0		- NS		NS -
PAHs	101		NS -	NS		NS		NS -	- NE		D -	ND -	ND	- ND		ND -	ND	-	ND	-	ND -	ND	-	ND		ND -	ND -	ND -	ND -	-			ND -
Benzo (a) anthracene Benzo (a) pyrene	0.2 μ 0.2 μ	-	NS - NS -	NS NS		NS NS		NS - NS -	- NE - NE		D 1.0		ND ND	1.0 ND 1.0 ND		ND 1.0 ND 1.0		1.0	ND ND	1.0	ND 1.0 ND 1.0	ND ND	1.0	ND ND		ND 1.0 ND 1.0	ND 1.0 ND 1.0	ND 1.0 ND 1.0	ND 1.0 ND 1.0		.0 0.46J .0 0.49J		ND - 0.46J -
Benzo (g,h,i) perylene	18 µ	g/L	NS -	NS	-	NS	- 1	NS -	- NE	D 1.0 1	D 1.0	ND 1.0	ND	1.0 ND	1.0	ND 1.0	) ND	1.0	ND	1.0	ND 1.0	ND	1.0	ND	1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1	.0 0.56J	-	ND -
Chrysene Flourene		0	NS - NS -	NS NS		NS NS		NS - NS -	- NE - NE		D 1.0 D 1.0		ND ND			ND 1.0 ND 1.0		1.0	ND ND	1.0	ND 1.0 ND 1.0	ND ND	1.0	ND ND		ND 1.0 ND 1.0	ND 1.0 ND 1.0		ND 1.0 ND 1.0		.0 0.70J .0 0.77J		0.45J - ND -
Flouranthene		0	NS -	NS		NS		NS -	- NE		D 1.0		ND	1.0 ND	1.0	ND 1.0		1.0	ND	1.0	ND 1.0	ND	1.0	ND		ND 1.0	ND 1.0	ND 1.0	ND 1.0		.0 0.47J		ND -
Pyrene	18 µ	g/L	NS -	NS		NS		NS -	- NE		D 1.0	ND 1.0	ND	1.0 ND	1.0	ND 1.0	) ND	1.0	ND	1.0	ND 1.0		1.0	ND		ND 1.0	ND 1.0		ND 1.0		.0 0.91J		ND -
SVOCs (Full Suite) 1,4 - Dichlorobenzene	NA 75 u		NS - NS -	NS NS		NS NS		NS - NS -	- NE - NE			ND 2.0	- 1.2	 2.0 ND	- 2.0	1.1 1.1	- 1.2	- 1.0	NS NS	-	NS - NS -	NS NS	-	NS NS		NS - NS -	NS - NS -	NS - NS -	NS - NS -	NS NS	- NS - NS		NS - NS -
Fluorene	24 µ		NS -	NS		NS		NS -	- NE		6 J 1.0					).45 J 1.1		1.0	ND	1.0	ND 1.0		1.0	ND		ND 1.0				ND	- 0.77J		NS -
N-Nitrosodiphenylamine TPH-GRO	14 μ 47 μ		NS -	NS NS		NS NS		NS - NS -	- NE		8 J 5.0 D 200					4.0 J 5.6 ND 200		5.0 200	NS ND	- 200	NS - ND 200	NS ND	- 200	NS ND		NS - ND 200	NS - NS -	NS - NS -	NS - ND 40	115	- NS - NS		NS - NS -
TPH-GRO TPH-DRO		0	NS -	NS		NS		NS -	- NL		<b>340</b> 100					2,780 100			6,750		3,720 100			9,420		2,620 100	5,060 100		5,560 100		00 7,670		2,890 200
						4/21/2000	an 2	0/10/00 2	10	10/00 2	2/1 4/00 2	4/1/10 2	(1) = 11		2	12/21/20102	2/22/	2011 2	(1) = 10	2011 2	0/15/2011 3	10/0/2	0113	310/201	10.3	(17/2012 3	0/10/2012 3	10/11/2010 3	2/21/2012 3	(0.4/2012)	0/24/20	12.3	10/15/0010 3
Well #: W-7	MDE	]	0/22/2008	1/	/12/09	4/21/2009	19 -	8/18/09 <sup>-2</sup>	10,	/19/09 2	2/14/09 <sup>-2</sup>	4/1/10 2	6/15/1	9/22/10	-	12/21/2010 <sup>2</sup>	3/22/2	2011 -	6/15/2	2011 -	9/15/2011 3	12/8/2	2011 5	3/8/201	12.5	6/7/2012 <sup>3</sup>	9/19/2012 3	12/11/2012 3	3/21/2013 3	6/04/2013	9/24/20	13 5	12/17/2013 3
Constituent	Standard U	nits Re	sults RDI	L Resul	lts RDL	Results	RDL Re	esults RI	DL Resu	ilts RDL Re	ults RD	L Results RD	Results	RDL Results	RDL R	tesults RDI	L Results	RDL	Results	RDL	Results RDL	Results	RDL	Results	RDL R	Results RDL	Results RDL	Results RDL	Results RD	E Results R	DL Results	RDL R	Results RDL
VOCs (PPL + Xylene) <sup>1</sup>			NS -	NS		NS		NS -	- NE		D -	ND -	ND	- ND	-		-	-	-	-		-	-	-		NS -	AB -	AB -	AB -		- AB		NS -
Acetone Chlorobenzene	550 μ 11 μ		NS - NS -	NS NS		NS NS		NS - NS -	- NE - NE		D 10.0 51 1.0		0.58 0.40 J			ND 10.0		10.0	ND 0.69 J	10.0	ND 10.0 0.66 J 1.0	ND ND	10.0	ND .42 J		NS - NS -	AB - AB -	AB - AB -	AB - AB -		- AB - AB	-	NS - NS -
1,2 Dichloroethene (total)	600 µ	g/L	NS -	NS	-	NS	- ]	NS -	- NE	D 1.0 1	D 1.0	ND 1.0	ND	1.0 0.28 J	1.0	ND 1.0	) ND	1.0	0.26 J	1.0	ND 1.0	ND	1.0	ND	1.0	NS -	AB -	AB -	AB -	AB	- AB	-	NS -
Toluene PAHs	1,000 µ NA		NS - NS -	NS NS		NS NS		NS - NS -	- NE - NE		D 1.0	ND 1.0 ND -	ND ND	1.0 17.7 - ND		ND 1.0 ND -	) ND ND	1.0	ND ND	1.0	0.49 J 1.0 ND -	ND ND	1.0	ND ND		NS - ND 1.0	AB - AB -	AB - AB -	AB - AB -	AB AB	- AB - AB		NS - ND -
Acenaphthene	37		NS -	NS		NS	- ]	NS -	- NE		D 1.0		ND	1.0 ND		ND 1.0		1.0	ND	1.0	ND 1.0	ND	1.0	ND		3.2 1.0	AB -	AB -	AB -	AB	- AB		ND -
Anthracene	180		NS -	NS		NS		- 14	- NE		D 1.0					ND 1.0		1.0	ND	1.0	ND 1.0		1.0	ND	1.0	12.2 1.0	AB -	AB -	AB -		- AB		ND -
Benzo(a)anthracene Benzo(a)pyrene	0.2		NS - NS -			NS NS		NS - NS -	- NE - NE		D 1.0 D 1.0					ND 1.0 ND 1.0		1.0	ND ND	1.0	ND 1.0 ND 1.0		1.0	ND ND		23 1.0 17 1.0	AB - AB -	AB - AB -	AB - AB -	AB AB	- AB - AB		ND - ND -
Benzo(b)fluoranthene	0.2		NS -	NS	-	NS	- ]	NS -	- NE	D 1.0 1	D 1.0	ND 1.0	ND	1.0 ND	1.0	ND 1.0	) ND	1.0	ND	1.0	ND 1.0	ND	1.0	ND	1.0	13 1.0	AB -	AB -	AB -		- AB	-	ND -
Benzo(g,h,i)perylene	18 0.3		NS -			NS		NS -	- NE		D 1.0					ND 1.0 ND 1.0		1.0	ND		ND 1.0		1.0	ND		10.3 1.0		AB -	AB -		- AB		ND - ND -
Benzo(k)fluoranthene Chrysene	0.3		NS - NS -	NS NS		NS NS		NS - NS -	- NE - NE		D 1.0 D 1.0		ND ND			ND 1.0 ND 1.0		1.0 1.0	ND ND		ND 1.0 ND 1.0		1.0	ND ND		17 1.0 24 1.0	AB - AB -	AB - AB -	AB - AB -		- AB - AB		ND - ND -
Dibenzo(a,h)anthracene	0.2		NS -	NS	-	NS	- 1	NS -	- NE	D 1.0 1	D 1.0	ND 1.0	ND	1.0 ND	1.0	ND 1.0	) ND	1.0	ND	1.0	ND 1.0	ND	1.0	ND	1.0	4 1.0	AB -	AB -	AB -	AB	- AB	-	ND -
Fluoranthene	150		NS -	NS		NS		NS -	- NE		D 1.0					ND 1.0		1.0	ND		ND 1.0		1.0	ND		73.1 1.0	AB -	AB -	AB -	AB	- AB		ND -
Fluorene Indeno(1,2,3-cd)pyrene	24 0.2		NS - NS -			NS NS		NS - NS -	- NE		D 1.0					ND 1.0 ND 1.0		1.0	ND ND		ND 1.0 ND 1.0		1.0	ND ND		4 1.0 10 1.0	AB - AB -	AB - AB -	AB - AB -		- AB - AB		ND - ND -
Phenanthrene	180		NS -	NS	-	NS	- ]	NS -	- NE	D 1.0 1	D 1.0	ND 1.0	ND	1.0 ND	1.0	ND 1.0	) ND	1.0	ND	1.0	ND 1.0	ND	1.0	ND	1.0	41.2 1.0	AB -	AB -	AB -	AB	- AB	-	ND -
Pyrene SVOCa (Evil Suita)	18 NA		NS -			NS			- NE		D 1.0		ND	1.0 ND	1.0	ND 1.0			ND	1	ND 1.0		1.0	ND		54 1.0		AB -	AB -		- AB		ND -
SVOCs (Full Suite) 3&4-Methylphenol	NA NA		NS - NS -			NS NS		NS - NS -	NE		 D -		- 9.6	 2.0 ND	2.0		- ND	2.0	NS NS	-	NS - NS -	NS NS	-	NS NS		NS - NS -	AB - AB -	AB - AB -	AB - AB -	AB AB	- AB - AB		NS - NS -
Phenol	11,00 µ	g/L	NS -	NS	-	NS	- ]	NS -	- NE	· · C	D -	ND -	0.89	2.0 ND	2.0	ND 2.1	ND	2.0	NS	-	NS -	NS	-	NS	-	NS -	AB -	AB -	AB -	AB	- AB	-	NS -
bis (2-Ethylhexyl) phthalate 1,4 - Dichlorobenzene		0	NS -	NS NS		NS NS		NS - NS -	- NE		0 J 2.0 0 J 2.0		1.8 J 1.1			2 2.1 ND 1.0		2.0	NS NS		NS - NS -	NS NS	-	NS NS		NS - NS -	AB - AB -	AB - AB -	AB - AB -		- AB - AB		NS - NS -
N-Nitrosodiphenylamine	14 µ	g/L	NS -			NS			- NL - NE		6 J 2.0 68 J 5.0					ND 1.0 ND 5.2		5.2	NS	-	NS -	NS	-	NS		NS - NS -	AB -	AB -	AB -		- AB - AB		NS -
TPH-GRO	47 μ	g/L	NS -	NS	-	NS	-	NS -	- NE	200 1	D 200	ND 200	ND	200 ND	200	ND 200	) ND	200	ND	200	ND 200	ND	200	ND	200	ND 200	AB -	AB -	AB -	AB	- AB	-	NS -
TPH-DRO	47 μ	g/L	- SV	NS	-	NS	- 1	NS -	- 12,90	00 100 2,	800 100	3,820 100	6,660	100 5,520	100 9	9,160 100	5,750	100	12,200	100	4,850 100	2,380	100	12,000	100	7,660 100	AB -	AB -	AB -	AB	<ul> <li>AB</li> </ul>	- 8	8,490 100



# Table 6 Groundwater Analytical Data Axil Belko Kingsville, MD

Well #: W-8	10/22/200	08 1/12/0	)9 4	4/21/2009 <sup>2</sup>	8/18/09 <sup>2</sup>	10/19/09 <sup>2</sup>	12/14/09 <sup>2</sup>	4/1/10 <sup>2</sup>	6/15/1	0 <sup>2</sup> 9/22/10 <sup>2</sup>	12/21/2010 <sup>2</sup>	3/22/2011 2	6/15/201	1 2	9/15/2011 <sup>3</sup>	12/8/2011 <sup>3</sup>	3/8/2012 3	6/7/	2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	12/11/2012	<sup>3</sup> 3/21/2013 <sup>3</sup>	6/04/2013	<sup>3</sup> 9/24/2013 <sup>3</sup>	12/17/2013
Constituent	MDE Standard Units Results 1	RDL Results	RDL Re	esults RDL	L Results RDI	L Results RD	DL Results RDL	Results RDL	Results	RDL Results RDI	. Results RD	DL Results RDL	Results	RDL 1	Results RDL	Results RDI	L Results R	DL Results	RDL I	esults RDL	Results RI	DL Results RD	DL Results F	RDL Results RI	DL Results R
$OCs (PPL + Xylene)^1$	NA µg/L NS	- NS		NS -	NS -	ND -	ND -	ND -	ND	- NS (Sheen) -			-	-			-		-						-
Acetone	550 µg/L NS	- NS		NS -	NS -	ND 10	.0 ND 10.0	15 10.0	) ND	10.0 NS (Sheen) 10.0	ND 10	.0 4.1 J 10.0	ND	10.0	ND 10.0	NS -	ND 1	0.0 NS	-	AB -	AB	- AB -	• AB	- AB -	NS
Benzene	5 µg/L NS	- NS	- ?	NS -	NS -	ND 1.	0 ND 1.0	ND 1.0	0.26	1.0 NS (Sheen) 1.0	0.26 J 1.	0 ND 1.0	0.23 J	1.0	ND 1.0	NS -	ND 1	.0 NS	-	AB -	AB	- AB -	• AB	- AB ·	NS
cis-1,2-Dichloroethene	600 µg/L NS	- NS	- ?	NS -	NS -	ND 1.	0 ND 1.0	ND 1.0	ND	1.0 NS (Sheen) 1.0	ND 1.	0 0.23 J 1.0	0.27 J	1.0	0.43 J 1.0	NS -	.62 J 1	.0 NS	-	AB -	AB	- AB -	• AB	- AB ·	NS
1,2-Dichloroethene (total)	600 µg/L NS	- NS	- ?	NS -	NS -	ND 1.	0 ND 1.0	ND 1.0	ND	1.0 NS (Sheen) 1.0			0.27 J	1.0	0.43 J 1.0	NS -	.62 J 1	.0 NS	-	AB -	AB	- AB -	• AB	- AB ·	NS
Chlorobenzene	11 μg/L NS	- NS	- ?	NS -	NS -	1.4 1.	0 1.4 1.0	1 1.0	0.58 J	1.0 NS (Sheen) 1.0	0.64 J 1.	0 0.68 J 1.0	0.51 J	1.0	0.87 J 1.0	NS -	1 1	.0 NS	-	AB -	AB	- AB -	• AB	- AB -	NS
Toluene	1,000 µg/L NS	- NS		NS -	NS -	ND -	ND -	ND -	нь	<ul> <li>NS (Sheen) -</li> </ul>	0.34 J 1.			1.0	ND 1.0	NS -		.0 NS	-	AB -	AB	- AB -	• AB	- AB ·	145
AHs	NA - NS	- NS		NS -	NS -	ND -	ND -	ND -	ND	<ul> <li>NS (Sheen)</li> </ul>	ND -	ND -	ND	-	ND -	NS -		<ul> <li>NS</li> </ul>	-	AB -	AB	- AB -	- AB	- AB ·	
Anthracene		1.0 NS		NS	NS	ND 1.				1.0 NS (Sheen) -	ND 1.			1.0	ND 1.0	NS -		.0 NS	-	AB -	AB	- AB -	AB	- AB -	ND
Benzo(a)anthracene	10	1.0 NS		NS	NS		0 ND 1.0			1.0 NS (Sheen) -	ND 1.			1.0	ND 1.0	NS -		.0 NS	-	AB -	AB	- AB -	• AB	- AB ·	
Chrysene	18	1.0 NS		NS	NS	ND 1.		1.2		1.0 NS (Sheen) -	ND 1.			1.0	ND 1.0	NS -		.0 NS	-	AB -	AB	- AB -	AB	- AB -	нD
Fluoranthene	10	1.0 NS		NS	NS	ND 1.				1.0 NS (Sheen) -	ND 1.			1.0	ND 1.0	NS -		.0 NS	-	AB -	AB	- AB -	· AB	- AB -	ND
Phenanthrene	10	1.0 NS		NS	NS	ND 1.				1.0 NS (Sheen) -	ND 1.			1.0	ND 1.0	NS -		.0 NS	-	AB -	AB	- AB -	- AB	- AB -	ND
Pyrene	10	1.0 NS		NS	NS		0 ND 1.0			1.0 NS (Sheen) -	ND 1.			1.0	ND 1.0	NS -		.0 NS	-	AB -	AB	- AB -	· AB	- AB -	
Fluorene VOCs (Full Suite)	24 μg/L NS NA - NS	1.0 NS - NS		NS - NS -	NS - NS -	ND 1. ND -	0 0.59 J 1.0	ND 1.0	ND	1.0 NS (Sheen) -	ND 1.	0 ND 1.0	ND NS	1.0	ND 1.0 NS -	NS - NS -		.0 NS - NS	-	AB - AB -	AB	- AB - - AB -	• AB • AB	- AB - AB -	ND NS
1,4 - Dichlorobenzene	75 ug/L NS	- NS		NS -	NS -		0.61 J 2.0	ND 2.0	0.84 J	2.0 NS (Sheen) 2.0	ND 2.	0 ND 2.0		-	NS -	NS -		- NS	-	AB -	AB	AB -	· AB	- AB -	
bis (2-Ethylhexyl) phthalate	- μg/L NS	- NS		NS -	NS -	ND -	ND -	ND 2.0		2.0 NS (Sheen) 2.0		0 2.4 2.0		-	NS -	NS -		- NS		AB -	AB	AB AB	AB	- AB -	NS
PH-GRO	47 μg/L NS	- NS		NS -	NS -	ND 20				200 NS (Sheen) 200				200	ND 200	NS -		- NS		AB -	AB	AB -	AB	- AB -	
PH-DRO	47 µg/L NS	- NS		NS -	NS -		0 15.900 100			100 NS (Sheen) 100					7,930 100	NS -		- NS		AB -	AB	AB -	AB	- AB -	1.490
	17 µg/2 110	110		10	110	0,000 10	10,000 100	5,170 100	2,000	100 110 (bliceli) 100	7,270 10	0,000 100	10,100	100	1,000	110	19,500	115	1 1			112			1,170
Well #: W-9	10/22/200	08 1/12/0	)9 4	4/21/2009 <sup>2</sup>	8/18/09 <sup>2</sup>	10/19/09 <sup>2</sup>	12/14/09 <sup>2</sup>	4/1/10 <sup>2</sup>	6/15/1	0 <sup>2</sup> 9/22/10 <sup>2</sup>	12/21/2010 <sup>2</sup>	3/22/2011 <sup>2</sup>	6/15/201	1 <sup>2</sup>	9/15/2011 <sup>3</sup>	12/8/2011 <sup>3</sup>	3/8/2012 3	6/7/	2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	12/11/2012	<sup>3</sup> 3/21/2013 <sup>3</sup>	6/04/2013	<sup>3</sup> 9/24/2013 <sup>3</sup>	12/17/2013
onstituent	MDE Standard Units Results 1	RDL Results	RDL Re	esults RDL	L Results RD	L Results RD	DL Results RDL	Results RDL	Results	RDL Results RDI	Results RD	DL Results RDL	Results	RDL 1	Results RDL	Results RDI	L Results R	DL Results	RDL I	esults RDL	Results RI	DL Results RD	DL Results F	RDL Results RI	DL Results R
$DCs (PPL + Xylene)^{1}$	NA ug/L NS	- NS		NS -	NS -	ND -	ND -	ND -	ND	- ND -	ND -	ND -	ND		ND -	ND -	ND ND	- NS		ND -	ND 1	ND -	· ND	- ND -	ND
Isopropylbenzene	66 ug/L NS	- NS		NS -	NS -	ND -	ND -	ND -	ND	- ND -	ND -	ND -	ND	-	ND -	ND -	ND	- NS	-	ND -	ND	0.87 J 1	ND NS	- NS	ND
Mis	NA - NS	- NS		NS -	NS -	ND -	ND -	ND -	ND	- ND -	ND -	ND -	ND	-	ND -	ND -		- ND		ND -	ND	• ND -			
Napthalene	0.65 - NS	- NS		NS -	NS -	ND -	ND -	ND -	ND	- ND -	ND -	ND -		-	ND -	ND -		- ND	-	ND -	ND	ND -		- 1 -	
PH-GRO	47 μg/L NS	- NS		NS -	NS -	ND 20	0 ND 200	ND 200	ND	200 ND 200		00 ND 200		200	ND 200	ND 200		00 ND	200	ND 200	NS	ND -	- NS	- NS -	ND
PH-DRO	47 ug/L NS														236 100			10 412						200 7.760 20	0 8.980 2
	4/ µg/L INS	- NS	- 1	NS -	NS -	840 10	0 627 100	207 100	ND	100 187 100	326 10	00 180 100	295	100	250 100	ND 110	320 1	412	110	402 110	ND 1	0 749 11	10 20,500		
		1																						3	
Well #: W 10A	10/22/200	1		NS - 4/21/2009 <sup>2</sup>	NS - 8/18/09 <sup>2</sup>	840 10 10/19/09 <sup>2</sup>	0 627 100 12/14/09 <sup>2</sup>	207 100 4/1/10 <sup>2</sup>	ND 6/15/10		326 10 12/21/2010 <sup>2</sup>		295 6/15/201		9/15/2011 <sup>3</sup>	ND 110	) <u>320</u> 1 <u>3/8/2012</u> <sup>3</sup>		110 2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	ND 11			<sup>3</sup> 9/24/2013 <sup>3</sup>	12/17/2013
		08 1/12/0	09 4		8/18/09 <sup>2</sup>	10/19/09 <sup>2</sup>	12/14/09 <sup>2</sup>	4/1/10 <sup>2</sup>			12/21/2010 <sup>2</sup>	3/22/2011 2	6/15/201	1 2			3/8/2012 3		2012 3		12/11/2012	<sup>3</sup> 3/21/2013 <sup>3</sup>	6/04/2013	<sup>3</sup> 9/24/2013 <sup>3</sup> RDL Results RI	12/17/2013
onstituent	10/22/200 MDE	08 1/12/0	09 4 RDL Re	4/21/2009 <sup>2</sup>	8/18/09 <sup>2</sup>	10/19/09 <sup>2</sup> L         Results         RE	12/14/09 <sup>2</sup>	4/1/10 <sup>2</sup>	6/15/10	0 <sup>2</sup> 9/22/10 <sup>2</sup>	12/21/2010 <sup>2</sup>	3/22/2011 2	6/15/201 . Results	1 <sup>2</sup>	9/15/2011 <sup>3</sup>	12/8/2011 3	3/8/2012 <sup>3</sup> L Results R	6/7/	2012 <sup>3</sup>	9/19/2012 <sup>3</sup>	12/11/2012	<sup>3</sup> 3/21/2013 <sup>3</sup>	6/04/2013 DL Results F		12/17/2013 DL Results R
onstituent AHs	MDE Standard Units Results	08 1/12/0 RDL Results	09 4 RDL Re	4/21/2009 <sup>2</sup> esults RDL	8/18/09 <sup>2</sup> L Results RDI	10/19/09 <sup>2</sup> L         Results         RE	12/14/09 <sup>2</sup> DL         Results         RDL	4/1/10 <sup>2</sup> Results RDL	6/15/10 Results	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL Results RDI	12/21/2010 <sup>2</sup>	3/22/2011 <sup>2</sup> DL Results RDL	6/15/201 . Results	11 <sup>2</sup> RDL	9/15/2011 <sup>3</sup> Results RDL	12/8/2011 <sup>3</sup> Results RDI	3/8/2012 <sup>3</sup> L Results R NS	6/7/. DL Results	2012 <sup>3</sup> RDL I	9/19/2012 <sup>3</sup> esults RDL	12/11/2012 Results RI	<sup>3</sup> 3/21/2013 <sup>3</sup> DL Results RD	6/04/2013 DL Results F	RDL Results RI	12/17/2013 DL Results R
nstituent Hs Napthalene	MDE         10/22/200           Standard         Units         Results         1           NA         -         NS	08 1/12/0 RDL Results - NS	09 4 RDL Re - 1 - 1	4/21/2009 <sup>2</sup> esults RDL NS -	8/18/09 <sup>2</sup> L         Results         RDI           NS         -	10/19/09 <sup>2</sup> L         Results         RE           NS         -	12/14/09 <sup>2</sup> DL         Results         RDL           NS         -	4/1/10 <sup>2</sup> Results         RDL           NS         -	6/15/10 <b>Results</b> NS	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL         Results         RDI           -         NS         -	12/21/2010 <sup>2</sup> Results         RE           NS         -	3/22/2011 <sup>2</sup> DL         Results         RDI           NS         -	6/15/201 . Results NS	11 <sup>2</sup> RDL	9/15/2011 <sup>3</sup> Results RDL NS -	12/8/2011 <sup>3</sup> Results         RDI           NS         -	3/8/2012         3           L         Results         R           NS         NS         NS	6/7/. DL Results - NS	2012 <sup>3</sup> RDL I	9/19/2012 <sup>3</sup> esults RDL NS -	12/11/2012           Results         RI           NS	<sup>3</sup> 3/21/2013 <sup>3</sup> DL Results RD NS -	6/04/2013           DL         Results         H           NS	RDL Results RI	12/17/2013           DL         Results         R           ND         ND         ND
nstituent Hs Napthalene H-DRO	MDE         10/22/200           Standard         Units         Results         1           NA         -         NS         0.65         -         NS           47         µg/L         NS         -         -         -	1/12/0           RDL         Results           -         NS           -         NS           -         NS	09 4 RDL Re - 1 - 1 - 1 - 1	4/21/2009 <sup>2</sup> esults RDL NS - NS - NS -	8/18/09     2       L     Results     RDI       NS     -       NS     -       NS     -	10/19/09         2           L         Results         RE           NS         -           NS         -           NS         -           NS         -	I2/14/09         2           DL         Results         RDL           NS         -           NS         -           NS         -           NS         -	4/1/10         2           Results         RDL           NS         -           NS         -           NS         -	6/15/10 Results NS NS NS NS	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL Results RDI - NS NS NS -	12/21/2010 <sup>2</sup> Results         RE           NS         -           NS         -           NS         -	3/22/2011         2           DL         Results         RDI           NS         -         NS         -           NS         -         NS         -           NS         -         NS         -	6/15/201 Kesults NS NS NS NS NS	RDL 1	9/15/2011         3           Results         RDL           NS         -           NS         -           NS         -	12/8/2011         3           Results         RDI           NS         -           NS         -           NS         -	3/8/2012 <sup>3</sup> L Results R NS NS NS	6/7/. DL Results - NS - NS - NS	2012 <sup>3</sup> RDL I - -	9/19/2012 3           esults         RDL           NS         -           NS         -           NS         -	12/11/2012       Results     RI       NS     NS       NS     NS	<sup>3</sup> 3/21/2013 <sup>3</sup> DL Results RD NS - NS - NS - NS -	bl Results F NS NS NS NS NS	RDL Results RI - NS - - NS - - NS -	12/17/2013           DL         Results         R           ND         ND         0.00000000000000000000000000000000000
<mark>istituent</mark> Hs Napthalene	MDE         10/22/200           Standard         Units         Results         1           NA         NS         0.65         -         NS	1/12/0           RDL         Results           -         NS           -         NS           -         NS	09 4 RDL Re - 1 - 1 - 1 - 1	4/21/2009 <sup>2</sup> esults RDL NS - NS -	8/18/09 <sup>2</sup> L         Results         RDI           NS         -           NS         -	10/19/09         2           L         Results         RE           NS         -           NS         -	12/14/09         2           DL         Results         RDL           NS         -           NS         -	4/1/10 <sup>2</sup> Results         RDL           NS         -           NS         -	6/15/10 Results NS NS	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL Results RDI - NS NS NS -	12/21/2010 <sup>2</sup> Results         RE           NS         -	3/22/2011         2           DL         Results         RDI           NS         -           NS         -	6/15/201       Results       NS       NS	RDL 1	9/15/2011         3           Results         RDL           NS         -           NS         -	12/8/2011 <sup>3</sup> Results         RDI           NS         -           NS         -	3/8/2012 <sup>3</sup> L Results R NS NS	6/7/. DL Results - NS - NS - NS	2012 <sup>3</sup> RDL I	9/19/2012 <sup>3</sup> esults RDL NS - NS -	12/11/2012       Results     RI       NS     NS	<sup>3</sup> 3/21/2013 <sup>3</sup> DL Results RD NS - NS - NS - NS -	6/04/2013           DL         Results         H           NS         NS	RDL     Results     RI       -     NS     -       -     NS     -       -     NS     -	12/17/2013           DL         Results         H           ND         ND           ND         6,140
onstituent MIs Napthalene PH-DRO Well #: MP 15	MDE         10/22/200           Standard         Units         Results         1           NA         -         NS         0.65         -         NS           47         μg/L         NS         10/22/200         10/22/200           MDE         10/22/200         10/22/200         10/22/200	1/12/0           RDL         Results           -         NS           -         NS           -         NS	09 4 RDL Re - n - n - n 09 4	4/21/2009 <sup>2</sup> esults RDL NS - NS - NS -	8/18/09         2           L         Results         RDI           NS         -         -           NS         -         -           NS         -         -           8/18/09         2         -	10/19/09         2           L         Results         RD           NS         -           NS         -           NS         -           NS         -           10/19/09         2	12/14/09         2           DL         Results         RDL           NS         -         NS         -           NS         -         12/14/09         2	4/1/10         2           Results         RDL           NS         -           NS         -           NS         -	6/15/10 Results NS NS NS NS	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL Results RDI - NS NS NS -	12/21/2010 <sup>2</sup> Results         RE           NS         -           NS         -           NS         -           12/21/2010 <sup>2</sup> -	3/22/2011         2           NS         -           NS         -           NS         -           3/22/2011         2	6/15/201	I1 <sup>2</sup> RDL           -           -           -           I1 <sup>2</sup>	9/15/2011         3           Results         RDL           NS         -           NS         -           NS         -	12/8/2011         3           Results         RDI           NS         -           NS         -           NS         -	3/8/2012 <sup>3</sup> L Results R NS NS NS 3/8/2012 <sup>3</sup>	6/7/. DL Results - NS - NS - NS	2012 <sup>3</sup> RDL I - - 2012 <sup>3</sup>	9/19/2012 3           esults         RDL           NS         -           NS         -           NS         -	12/11/2012           Results         RI           NS         -           NS         -           12/11/2012         -	<sup>3</sup> 3/21/2013 <sup>3</sup> DL Results RD NS - NS - NS - <sup>3</sup> 3/21/2013 <sup>3</sup>	6/04/2013 DL Results F NS NS NS 6/04/2013	RDL     Results     RI       -     NS     -       -     NS     -       -     NS     -	12/17/2013           DL         Results         R           ND         ND         ND           All         6,140         2           12/17/2013         12/17/2013         12/17/2013
nstituent Hs Napthalene H-DRO Well #: MP 15 nstituent	MDE         10/22/200           Standard         Units         Results         1           NA         -         NS         0.65         -         NS           47         μg/L         NS         10/22/200         10/22/200           MDE         10/22/200         10/22/200         10/22/200	08         1/12/0           RDL         Results           -         NS           -         NS           -         NS           -         NS           -         NS           -         NS	09 4 RDL Re - P - P - P 09 4 RDL Re	4/21/2009 <sup>2</sup> esults RDL NS - NS - NS - 4/21/2009 <sup>2</sup>	8/18/09         2           L         Results         RDI           NS         -         -           NS         -         -           NS         -         -           8/18/09         2         -	10/19/09         2           L         Results         RD           NS         -           NS         -           NS         -           NS         -           10/19/09         2	12/14/09         2           DL         Results         RDI.           NS         -            NS         -            NS         -            12/14/09         2	4/1/10         2           Results         RDL           NS         -           NS         -           NS         -           4/1/10         2	6/15/1/ Results NS NS NS NS 6/15/1/	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL Results RDI - NS - - NS - 0 <sup>2</sup> 9/22/10 <sup>2</sup>	12/21/2010 <sup>2</sup> Results         RE           NS         -           NS         -           12/21/2010 <sup>2</sup> -	3/22/2011         2           NS         -           NS         -           NS         -           3/22/2011         2	6/15/201 Results NS NS NS 6/15/201 Results	I1 <sup>2</sup> RDL           -           -           -           I1 <sup>2</sup>	9/15/2011         3           Results         RDL           NS         -           NS         -           9/15/2011         3	12/8/2011         3           Results         RDI           NS         -           NS         -           NS         -           12/8/2011         3	3/8/2012 <sup>3</sup> L Results R NS NS NS 3/8/2012 <sup>3</sup> L Results R	6/7/ DL Results - NS - NS - NS - NS	2012 <sup>3</sup> RDL I - 2012 <sup>3</sup> RDL I	9/19/2012         3           esuits         RDL           NS         -           NS         -           9/19/2012         3	12/11/2012           Results         RI           NS         -           NS         -           12/11/2012         -	<sup>3</sup> 3/21/2013 <sup>3</sup> DL Results RD NS - NS - NS - <sup>3</sup> 3/21/2013 <sup>3</sup>	6/04/2013 DL Results F NS NS NS 6/04/2013	Results         RI           -         NS         -	12/17/2013           DL         Results         R           ND         ND         ND           All         6,140         2           12/17/2013         12/17/2013         12/17/2013
onstituent Hs Napthalene PH-DRO Well #: MP 15 onstituent PH-DRO	MDE         10/22/200           Standard         Units         Results         1           NA         -         NS         0.65         -         NS           0.65         -         NS         47         µg/L         NS         10/22/200           MDE	1/12/0           RDL         Results           -         NS	09 4 RDL Re - P - P - P - P - P - P - P - P	4/21/2009         2           esuits         RDL           NS         -           NS         -           4/21/2009         2           esuits         RDL           NS         -	8/18/09         2           Results         RDI           NS         -           NS         -           8/18/09         2           L         Results           RDI         NS           NS         -	10/19/09         2           L         Results         RE           NS         -         -           NS         -         -           10/19/09         2         -           10/19/09         2         -           NS         -         -           NS         -         -           NS         -         -           NS         -         -	12/14/09         2           NS         -           NS         -           12/14/09         2           12/14/09         2           12/14/09         2           12/14/09         2           12/14/09         2           NS         -	4/1/10         2           Results         RDL           NS         -           NS         -           NS         -           4/1/10         2           Results         RDL           NS         -	6/15/14 Results NS NS NS 6/15/14 C Results NS	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL         Results         RDI           -         NS         -           -         NS         -           0 <sup>2</sup> 9/22/10 <sup>2</sup> -           RDL         Results         RDI           RDL         Results         RDI           -         NS         -	12/21/2010 <sup>2</sup> Results         RE           NS         -           NS         -           12/21/2010 <sup>2</sup> -           Results         RE           NS         -	3/22/2011         2           NS         -           NS         -           NS         -           3/22/2011         2           3/22/2011         2           3/22/2011         2           NS         -           NS         -           NS         -           X         NS           NS         -	6/15/201	11 <sup>2</sup> RDL       -	9/15/2011         3           Results         RDL           NS         -           9/15/2011         3           9/15/2011         3           Results         RDL           NS         -	12/8/2011 3           Results         RDI           NS         -           NS         -           12/8/2011 3         -           12/8/2011 3         -           NS         -           NS         -           NS         -           NS         -           NS         -	3/8/2012         3           L         Results         R           NS         NS           3/8/2012         3           J/8/2012         3           L         Results         R           NS         NS	6/7/ DL Results - NS - NS - NS - OT/ DL Results - NS	2012 <sup>3</sup> RDL I - - 2012 <sup>3</sup> RDL I RDL I - - - - - - - - -	9/19/2012 3           esults         RDL           NS         -           NS         -           9/19/2012 3         -           esults         RDL           2,390         -	12/11/2012           Results         RI           NS         NS           NS         12/11/2012           Results         RI           1,200         12/11/2012	3         3/21/2013           JL         Results         RD           NS         -           NS         -           NS         -           3         3/21/2013           JL         Results         RD           2,200         -	6/04/2013           DL         Results         F           NS         NS         NS           NS         6/04/2013         NS           Comparison         6/04/2013         NS           Comparison         6/04/2013         NS           Comparison         6/04/2013         NS           Comparison         6/04/2013         NS	RDL         Results         RI           -         NS         -           -         NS         -           3         9/24/2013         3           RDL         Results         RI           1,100         -         -	12/17/2013           NL         Results         R           ND         .         .           AND         .         .         .           AND         .         .         .         .           AND         .         .         .         .         .           AND         . </td
onstituent Ms Napthalene PH-DRO Well #: MP 15 onstituent	MDE         10/22/200           MDE         Standard         Units         Results         1           NA         -         NS         0.65         -         NS           47         μg/L         NS         10/22/200           MDE         Standard         Units         Results         1           47         μg/L         NS         10/22/200           MDE         Standard         Units         Results         1           47         μg/L         NS         1           47         μg/L         NS         1	1/12/0           RDL         Results           -         NS	09 4 RDL Re - P - P - P - P - P - P - P - P	4/21/2009         2           esults         RDL           NS         -           NS         -           4/21/2009         2           esults         RDL           4/21/2009         2           esults         RDL	8/18/09         2           L         Results         RDI           NS         -         NS           NS         -         8/18/09           L         Results         RDI           L         Results         RDI	10/19/09         2           L         Results         RE           NS         -           NS         -           10/19/09         2           L         Results         RE	12/14/09         2           DL         Results         RDL           NS         -         -           NS         -         -           12/14/09         2         -           JL         Results         RDL           Results         RDL         -	4/1/10         2           Results         RDL           NS         -           NS         -           4/1/10         2           2         Results           RDL         RDL	6/15/10 Results NS NS NS 6/15/10 Results	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL         Results         RDI           -         NS         -           -         NS         -           0 <sup>2</sup> 9/22/10 <sup>2</sup> -           RDL         Results         RDI           RDL         Results         RDI           -         NS         -	12/21/2010 <sup>2</sup> Results         RE           NS         -           NS         -           12/21/2010 <sup>2</sup> -           Results         RE	3/22/2011         2           NL         Results         RDI           NS         -         -           NS         -         -           NS         -         -           3/22/2011         2         -           JL         Results         RDI	6/15/201 Results NS NS NS 6/15/201 Results	11 <sup>2</sup> RDL       -	9/15/2011         3           Results         RDL           NS         -           NS         -           9/15/2011         3           Results         RDL           Results         RDL	12/8/2011         3           Results         RDI           NS         -           NS         -           12/8/2011         3           Results         RDI	3/8/2012         3           L         Results         R           NS         NS         NS           NS         3/8/2012         3           L         Results         R	6/7/ DL Results - NS - NS - NS - OT/ DL Results - NS	2012 <sup>3</sup> RDL I - 2012 <sup>3</sup> RDL I	9/19/2012 3           esults         RDL           NS         -           NS         -           9/19/2012 3         -           9/19/2012 3         RDL	12/11/2012           Results         RI           NS         -           NS         -           12/11/2012         -           Results         RI	3         3/21/2013           JL         Results         RD           NS         -           NS         -           NS         -           3         3/21/2013           DL         Results           RD         2,200	6/04/2013           DL         Results         F           NS         NS         NS           NS         6/04/2013         NS           Comparison         6/04/2013         NS           Comparison         6/04/2013         NS           Comparison         6/04/2013         NS           Comparison         6/04/2013         NS	RDL         Results         RI           -         NS         -           -	12/17/2013           DL         Results         R           ND         ND         ND           6,140         2         12/17/2013           DL         Results         R
onstituent Ms Napthalene PH-DRO Well #: MP 15 onstituent PH-DRO Trip Blank	MDE         10/22/200           Standard         Units         Results         1           NA         -         NS         0.05         -         NS           47         µg/L         NS         10/22/200         10/22/200           MDE         5         10/22/200         10/22/200           MDE         10/22/200         10/22/200         10/22/200	1/12/0           RDL         Results           -         NS           -         NS	09         4           RDL         Re           -         1           -         1           -         1           09         4           RDL         Re           -         1           09         4           09         4	4/21/2009         2           esults         RDL           NS         -           NS         -           4/21/2009         2           esults         RDL           NS         -           4/21/2009         2           esults         RDL           NS         -           4/21/2009         2	8/18/09         2           L         Results         RDI           NS         -         NS           NS         -         -           8/18/09         2         -           L         Results         RDI           NS         -         -           8/18/09         2         -           8/18/09         2         -	10/19/09         2           L         Results         RE           NS         -           NS         -           10/19/09         2           L         Results         RE           NS         -           10/19/09         2           L         Results         RI           NS         -           10/19/09         2	12/14/09         2           DL         Results         RDL           NS         -         NS           NS         -         12/14/09           DL         Results         RDL           NS         -         12/14/09           DL         Results         RDL           NS         -         -	4/1/10         2           4/1/10         2           NS         -           NS         -           4/1/10         2           Results         RDL           NS         -           4/1/10         2           4/1/10         2           4/1/10         2           4/1/10         2	6/15/10 Results NS NS 6/15/10 Results NS 6/15/10	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDI         Results         RDI           ·         NS         ·           0 <sup>2</sup> 9/22/10 <sup>2</sup>	12/21/2010 <sup>2</sup> Results         RE           NS         -           NS         -           12/21/2010 <sup>2</sup> -           Results         RE           NS         -           12/21/2010 <sup>2</sup> -           12/21/2010 <sup>2</sup> -	3/22/2011         2           NL         Results         RDI           NS         -         NS           NS         -         3/22/2011           JL         Results         RDI           NS         -         -           JL         Results         RDI           NS         -         -           JL         Results         RDI           NS         -         -	6/15/201 Results NS NS 6/15/201 Results NS 6/15/201 6/15/201	11 <sup>2</sup> RDL       - <td>9/15/2011         3           Results         RDL           NS         -           NS         -           9/15/2011         3           Results         RDL           NS         -           9/15/2011         3           9/15/2011         3</td> <td>12/8/2011         3           Results         RDI           NS         -           NS         -           12/8/2011         3           Results         RDI           NS         -           12/8/2011         3           12/8/2011         3</td> <td>3/8/2012         3           L         Results         R           NS         NS           3/8/2012         3           L         Results         R           NS         3/8/2012         3           J/8/2012         3/8/2012         3</td> <td>6/7/ DL Results - NS - NS - NS - 6/7/ DL Results - NS - 6/7/</td> <td>2012 <sup>3</sup> RDL 1 - - 2012 <sup>3</sup> RDL 1 - 2012 <sup>3</sup> 2012 <sup>3</sup></td> <td>9/19/2012 <sup>3</sup> esuits RDL NS - NS - 9/19/2012 <sup>3</sup> esuits RDL 2,390 9/19/2012 <sup>3</sup></td> <td>12/11/2012           Results           NS           NS           12/11/2012           Results           Results           12/11/2012           Results           1,200</td> <td>3         3/21/2013           &gt;IL         Results         RD           NS         -           NS         -           NS         -           3         3/21/2013           &gt;IL         Results           RD         2,200           3         3/21/2013</td> <td>6/04/2013           End         6/04/2013           DL         Results         F           NS         NS         NS           NS         S         S           Contract         S         S           DL         Results         F           1,430         G/04/2013         S</td> <td>RDL         Results         RI           -         NS         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -<!--</td--><td>12/17/2013           DL         Results         R           ND         ND         6,140         2           12/17/2013         12/17/2013         12/17/2013           DL         Results         R         6,130           12/17/2013         12/17/2013         12/17/2013</td></td>	9/15/2011         3           Results         RDL           NS         -           NS         -           9/15/2011         3           Results         RDL           NS         -           9/15/2011         3           9/15/2011         3	12/8/2011         3           Results         RDI           NS         -           NS         -           12/8/2011         3           Results         RDI           NS         -           12/8/2011         3           12/8/2011         3	3/8/2012         3           L         Results         R           NS         NS           3/8/2012         3           L         Results         R           NS         3/8/2012         3           J/8/2012         3/8/2012         3	6/7/ DL Results - NS - NS - NS - 6/7/ DL Results - NS - 6/7/	2012 <sup>3</sup> RDL 1 - - 2012 <sup>3</sup> RDL 1 - 2012 <sup>3</sup> 2012 <sup>3</sup>	9/19/2012 <sup>3</sup> esuits RDL NS - NS - 9/19/2012 <sup>3</sup> esuits RDL 2,390 9/19/2012 <sup>3</sup>	12/11/2012           Results           NS           NS           12/11/2012           Results           Results           12/11/2012           Results           1,200	3         3/21/2013           >IL         Results         RD           NS         -           NS         -           NS         -           3         3/21/2013           >IL         Results           RD         2,200           3         3/21/2013	6/04/2013           End         6/04/2013           DL         Results         F           NS         NS         NS           NS         S         S           Contract         S         S           DL         Results         F           1,430         G/04/2013         S	RDL         Results         RI           -         NS         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         - </td <td>12/17/2013           DL         Results         R           ND         ND         6,140         2           12/17/2013         12/17/2013         12/17/2013           DL         Results         R         6,130           12/17/2013         12/17/2013         12/17/2013</td>	12/17/2013           DL         Results         R           ND         ND         6,140         2           12/17/2013         12/17/2013         12/17/2013           DL         Results         R         6,130           12/17/2013         12/17/2013         12/17/2013
onstituent AHs Napthalene PH-DRO Well #: MP 15 Jonstituent PH-DRO	MDE         10/22/200           Standard         Units         Results         1           NA         -         NS         0.05         -         NS           47         µg/L         NS         10/22/200         10/22/200           MDE         Standard         Units         Results         1           47         µg/L         NS         10/22/200           MDE         10/22/200         10/22/200           MDE         10/22/200         10/22/200	1/12/0           RDL         Results           -         NS           -         NS	09         4           RDL         Re           -         1           -         1           -         1           09         4           RDL         Re           -         1           09         4           RDL         Re           -         1           09         4           RDL         Re           RDL         Re	4/21/2009         2           esuits         RDL           NS         -           NS         -           4/21/2009         2           esuits         RDL           NS         -	8/18/09         2           L         Results         RDI           NS         -         -           NS         -         -           8/18/09         2         2           L         Results         RDI           NS         -         -           8/18/09         2         -           8/18/09         2         -	10/19/09         2           L         Results         RE           NS         -           NS         -           10/19/09         2           L         Results         RE           NS         -           10/19/09         2           L         Results         RI           NS         -           10/19/09         2	12/14/09         2           NS         -           NS         -           NS         -           12/14/09         2           DL         Results         RDL           NS         -           12/14/09         2           DL         Results         RDL           NS         -           12/14/09         2	4/1/10         2           4/1/10         2           NS         -           NS         -           4/1/10         2           Results         RDL           NS         -           4/1/10         2           4/1/10         2           4/1/10         2           4/1/10         2	6/15/14 Results NS NS NS 6/15/14 C Results NS	0 <sup>2</sup> 9/22/10 <sup>2</sup> RDL         Results         RDI           -         NS         -           -         NS         -           0 <sup>2</sup> 9/22/10 <sup>2</sup> -           RDL         Results         RDI           RDL         Results         RDI           -         NS         -	12/21/2010 <sup>2</sup> Results         RE           NS         -           NS         -           12/21/2010 <sup>2</sup> -           Results         RE           NS         -           12/21/2010 <sup>2</sup> -           12/21/2010 <sup>2</sup> -	3/22/2011         2           NS         -           NS         -           NS         -           3/22/2011         2           DL         Results           ROULD         ROULD           NS         -           3/22/2011         2           DL         Results           RDI         NS           3/22/2011         2	6/15/201 Results NS NS 6/15/201 Results NS 6/15/201 6/15/201	11 <sup>2</sup> RDL       - <td>9/15/2011         3           Results         RDL           NS         -           9/15/2011         3           9/15/2011         3           Results         RDL           NS         -</td> <td>12/8/2011         3           Results         RDI           NS         -           NS         -           12/8/2011         3           Results         RDI           NS         -</td> <td>3/8/2012         3           L         Results         R           NS         NS           3/8/2012         3           L         Results         R           NS         3/8/2012         3           J/8/2012         3/8/2012         3</td> <td>6/7/ DL Results - NS - NS - NS - OT/ DL Results - NS</td> <td>2012 <sup>3</sup> RDL 1 - - 2012 <sup>3</sup> RDL 1 - 2012 <sup>3</sup> 2012 <sup>3</sup></td> <td>9/19/2012 3           esults         RDL           NS         -           NS         -           9/19/2012 3         -           esults         RDL           2,390         -</td> <td>12/11/2012           Results         RI           NS         NS           12/11/2012         Results           Results         RI           1,200         12/11/2012</td> <td>3         3/21/2013           NS         -           NS         -           NS         -           3         3/21/2013           DL         Results           RD         2,200           3         3/21/2013</td> <td>6/04/2013           End         6/04/2013           DL         Results         F           NS         NS         NS           NS         S         S           Contract         S         S           DL         Results         F           1,430         G/04/2013         S</td> <td>RDL         Results         RI           -         NS         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -<!--</td--><td>12/17/2013           DL         Results         R           ND         ND         6,140         2           12/17/2013         12/17/2013         12/17/2013           DL         Results         R         6,130           12/17/2013         12/17/2013         12/17/2013</td></td>	9/15/2011         3           Results         RDL           NS         -           9/15/2011         3           9/15/2011         3           Results         RDL           NS         -	12/8/2011         3           Results         RDI           NS         -           NS         -           12/8/2011         3           Results         RDI           NS         -	3/8/2012         3           L         Results         R           NS         NS           3/8/2012         3           L         Results         R           NS         3/8/2012         3           J/8/2012         3/8/2012         3	6/7/ DL Results - NS - NS - NS - OT/ DL Results - NS	2012 <sup>3</sup> RDL 1 - - 2012 <sup>3</sup> RDL 1 - 2012 <sup>3</sup> 2012 <sup>3</sup>	9/19/2012 3           esults         RDL           NS         -           NS         -           9/19/2012 3         -           esults         RDL           2,390         -	12/11/2012           Results         RI           NS         NS           12/11/2012         Results           Results         RI           1,200         12/11/2012	3         3/21/2013           NS         -           NS         -           NS         -           3         3/21/2013           DL         Results           RD         2,200           3         3/21/2013	6/04/2013           End         6/04/2013           DL         Results         F           NS         NS         NS           NS         S         S           Contract         S         S           DL         Results         F           1,430         G/04/2013         S	RDL         Results         RI           -         NS         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         - </td <td>12/17/2013           DL         Results         R           ND         ND         6,140         2           12/17/2013         12/17/2013         12/17/2013           DL         Results         R         6,130           12/17/2013         12/17/2013         12/17/2013</td>	12/17/2013           DL         Results         R           ND         ND         6,140         2           12/17/2013         12/17/2013         12/17/2013           DL         Results         R         6,130           12/17/2013         12/17/2013         12/17/2013

Notes: - Shaded results indicates values above MDE standards for groundwater. - J = Indicates estimated value - AB = Well abandoned - ND = Non-detectable - NS= Not Sampled - RDL - Reportable detection limit



## Table 7 Analytical Results Outfalls and Seep Axil Belko Kingsville, MD

Outfall 1	9/30	)/09	12/2	1/10	3/22	2/11	6/15	/11	9/1	5/11	12/	9/11	3/8	3/12	6/7	/12	9/1	9/12	12/1	1/12	3/21	/13	6/4	/13	9/24	4/13	12/1	18/13
Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) <sup>1</sup>	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS	-	NS	-
PAHs					NS	-	ND		ND		ND	-	ND	-	ND		ND	-	ND		ND		ND		ND		ND	-
SVOCs (Full Suite)	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	1.4 B	2	NS	-	NS	-	ND	2	ND	2	ND	2	ND	2	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	ND	200	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200	ND	200	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
TPH-DRO	ND	100	142	100	ND	100	ND	100	ND	100	ND	100	ND	100	ND	100	238	100	ND	100	279	100	146	100	ND	100	172	100
									•				•															<u></u>
Outfall 2	9/30	)/09	12/2	1/10	3/22	2/11	6/15	/11	9/1	5/11	12/	9/11	3/8	3/12	6/7	/12	9/1	9/12	12/1	1/12	3/21	/13	6/4	/13	9/24	4/13	12/1	18/13
Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xvlene) <sup>1</sup>	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS	-	NS	-
Toluene	ND	1	NS	-	NS	-	ND	1	ND	1	0.62 J	1	ND	1	NS	-	NS	-	NS	-	ND	1	NS	-	NS	-	NS	-
Ethylbenzene	ND	1	NS	-	NS	-	ND	1	ND	1	0.44 J	1	ND	1	NS	-	NS	-	NS	-	ND	1	NS	-	NS	-	NS	-
Xylene (total)	ND	1	NS	-	NS	-	ND	1	ND	1	3.3	1	ND	1	NS	-	NS	-	NS	-	ND	1	NS	-	NS	-	NS	-
Tetrachloroethene	ND	1	NS	-	NS	-	ND	1	ND	1	1	1	ND	1	NS	-	NS	-	NS	-	ND	1	NS	-	NS	-	NS	-
PAHs	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Phenanthrene	ND	1	NS	-	NS	-	ND	1	ND	1	0.48 J	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.29	ND	0.29	ND	0.29
Naphthalene	ND	1	NS		NS	-	ND	1	ND	1	1.7	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.26	ND	0.26	ND	0.26
SVOCs (Full Suite)	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS		NS	-
bis (2-Ethylhexyl) phthalate	8.7 B	2	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS		NS	-
TPH-GRO	ND	200	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200	ND	200	NS	-	NS	-	ND		NS	-	NS		NS	-
TPH-DRO	154	100	290	110	197	110	560	110	288	110	784	110	743	110	298	110	ND	110	ND	110	840	110	1,930	110	530	110	829	110
Seep	9/30	)/09	12/2	1/10	3/22	2/11	6/15	/11	9/1	5/11	12/	9/11	3/8	3/12	6/7	/12	9/1	9/12	12/1	1/12	3/21	/13	6/4	/13	9/24	4/13	12/1	18/13
Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) <sup>1</sup>	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS	-	NS	-
PAHs	ND	-	NS	-	NS	-	ND	-	ND	•	ND	-	ND	-	ND	-	ND	-	ND	-	ND	•	ND	-	ND		ND	-
SVOCs	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	3.9 B	2.2	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS	-	NS	-
TPH-GRO	ND	200	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	-	NS	-	NS	-	NS	-
TPH-DRO	710	100	2,630	110	1,130	110	4,480	110	275	110	1,020	110	363	110	7,420	110	7,560	110	1,860	110	6,740	110	14,000	110	9,520	110	4.120	110

Notes:

All VOCs and SVOCs analyzed are non-detect unless listed.

All concentrations presented in µg/L
 J = Indicates estimated value

- B = Analyte found in associated method blank - ND = Non-detectable

- NS= Not Sampled

- RDL - Reportable detection limit



### Table 8 Potable Well Analytical Data Axil-Belko Kingsville, MD

Well #: POT-1	10/23	/2008	4/24	/09 <sup>2</sup>	6/15	/11 2	12/7	/11 2	6/8/	11 <sup>2</sup>	6/4/	13 <sup>2</sup>	12/18	8/13 <sup>2</sup>
Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
<b>VOCs</b> (EPA Method 524.2) <sup>1</sup>	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Acetone	-	-	3.4 J	5.0	ND	5.0	ND	5.0	ND	5.0	ND	3.3	NS	3.3
PAHs	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	ND	20	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-DRO	ND	31	NS	-	NS	-	NS	-	NS	-	ND	-	NS	-
Well #: POT-2	10/23	/2008	4/24	$/09^{2}$	6/15	/11 <sup>2</sup>	12/8/	/11 <sup>2</sup>	6/8/	11 <sup>2</sup>	6/4/	13 <sup>2</sup>	12/18	3/13 <sup>2</sup>
Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
<b>VOCs</b> (EPA Method 524.2) <sup>1</sup>	NS (CNL)	-	NS (CNL)	-	ND	-	ND	-	ND	-	ND	-	ND	-
Chloroform	NS (CNL)	0.5	NS (CNL)	0.5	0.39 J	0.5	0.36 J	0.5	0.18 J	0.5	0.7J	0.5	ND	0.5

Notes:

1. All VOCs analyzed are non-detect unless listed.

2. Samples analyzed by new lab (Accutest)

- All concentrations presented in  $\mu g/L$ 

- J = Indicates estimated value

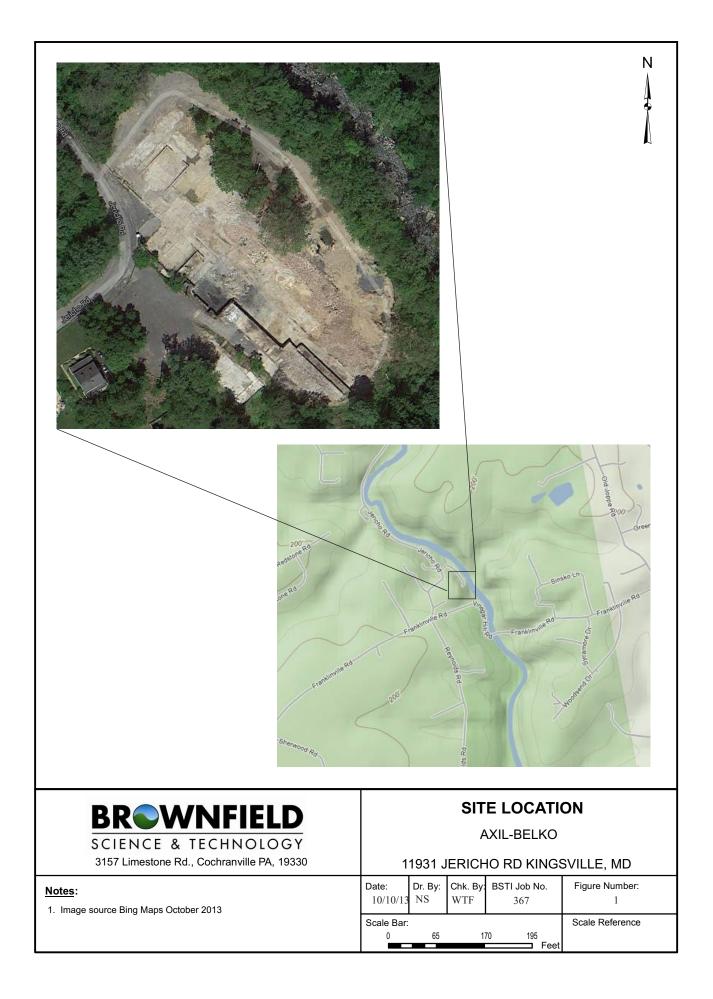
- ND = Non-detectable

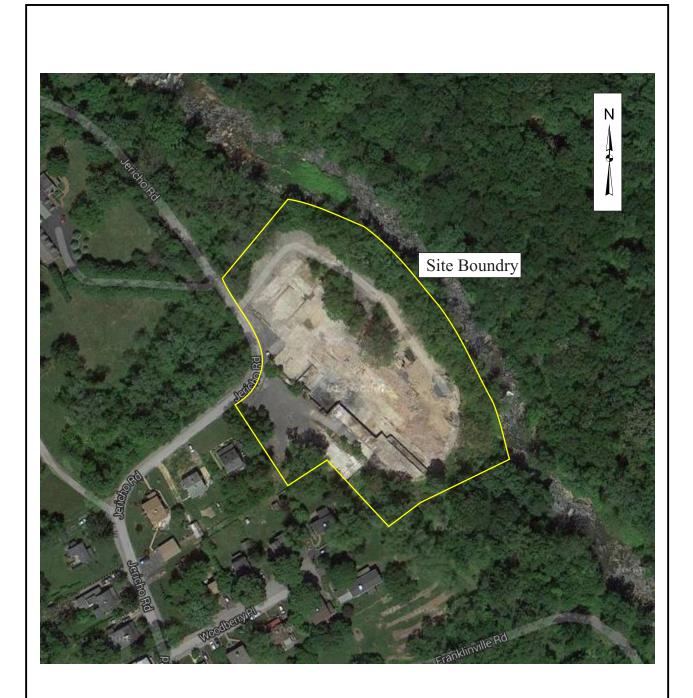
- NS= Not Sampled

- RDL - Reportable detection limit

## FIGURES









3157 Limestone Rd., Cochranville PA, 19330

## AREA MAP

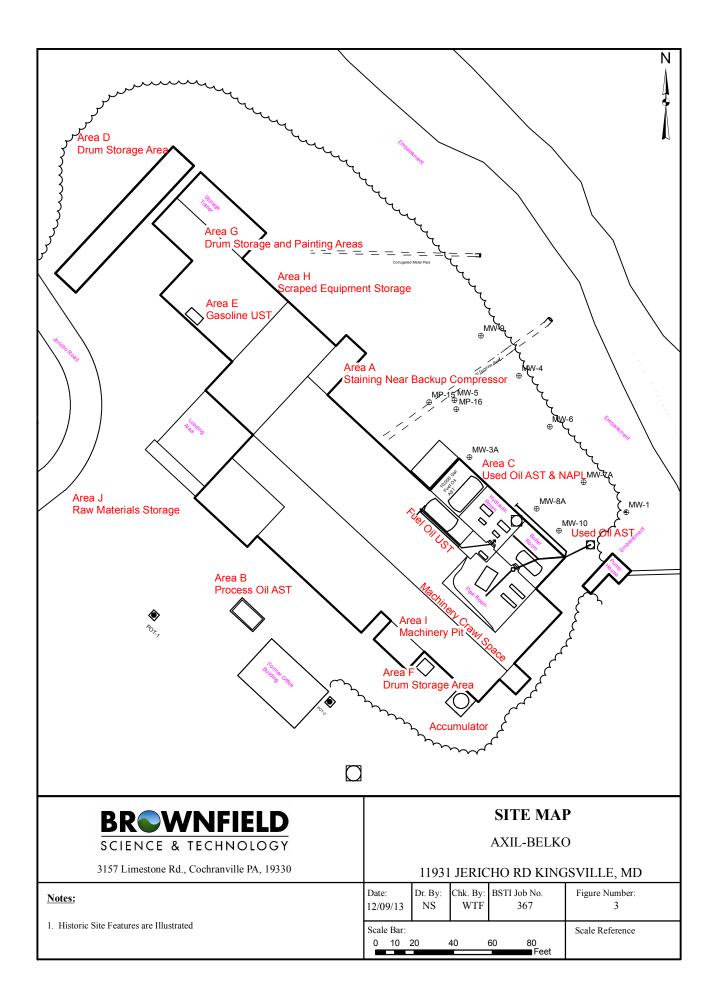
AXIL-BELKO

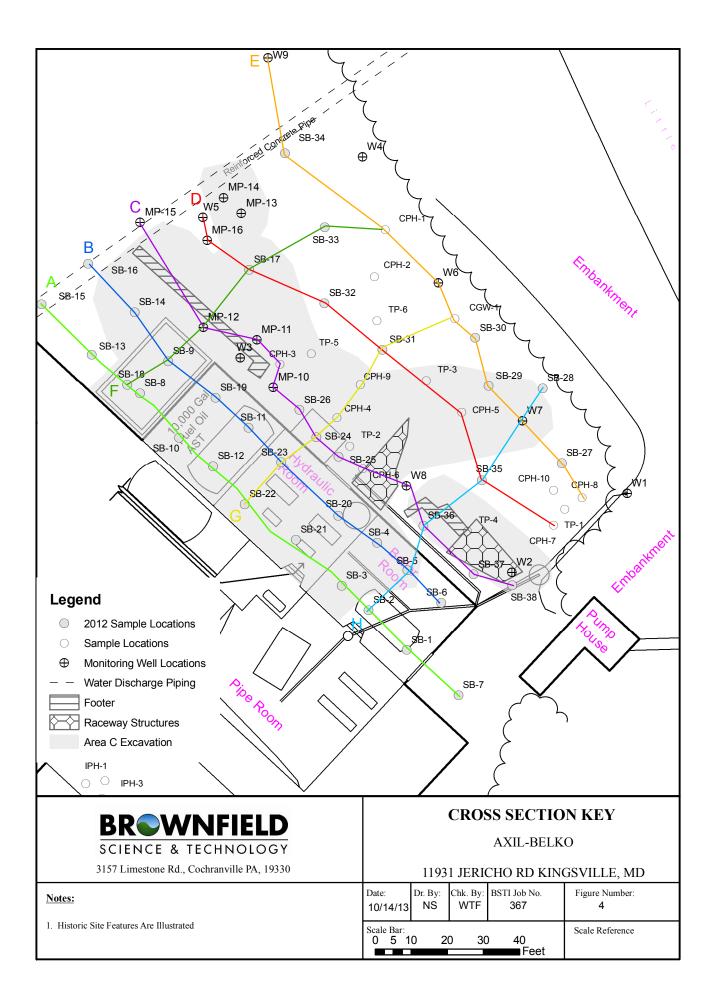
### 11931 JERICHO RD KINGSVILLE, MD

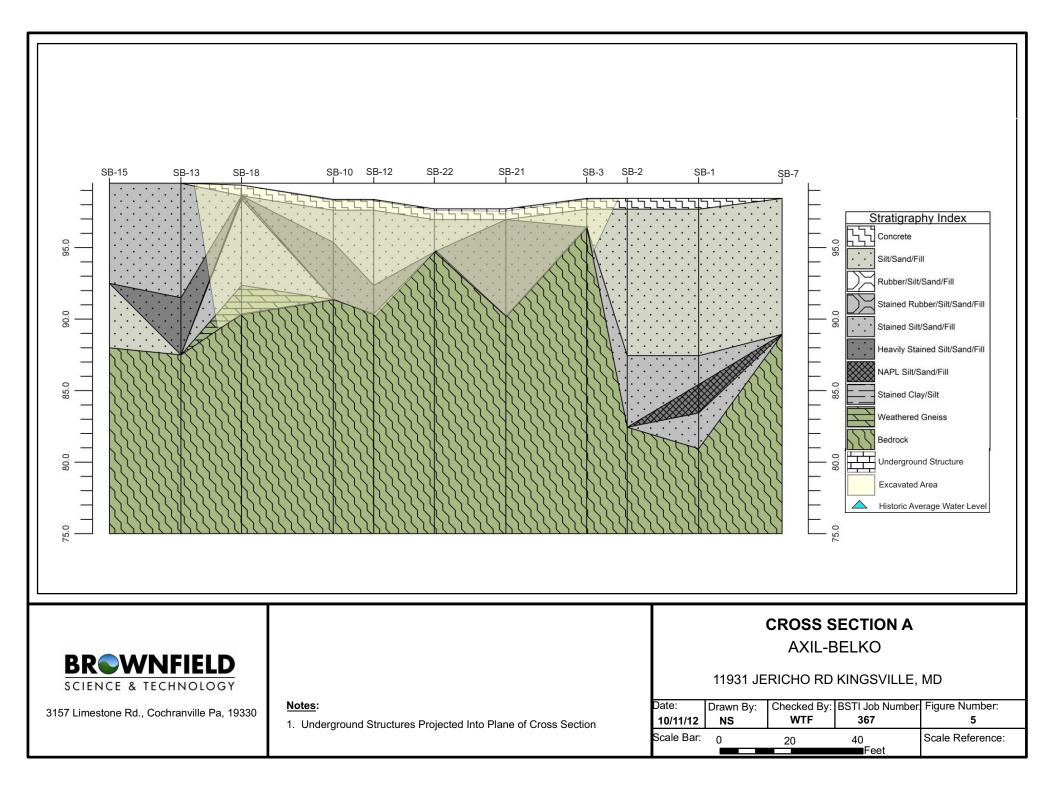
Date: 10/10/13		Chk. By: WTF	BS1	ГI Job No. 367	Figure Number: 2
Scale Bar: 0	100		200	Feet	Scale Reference

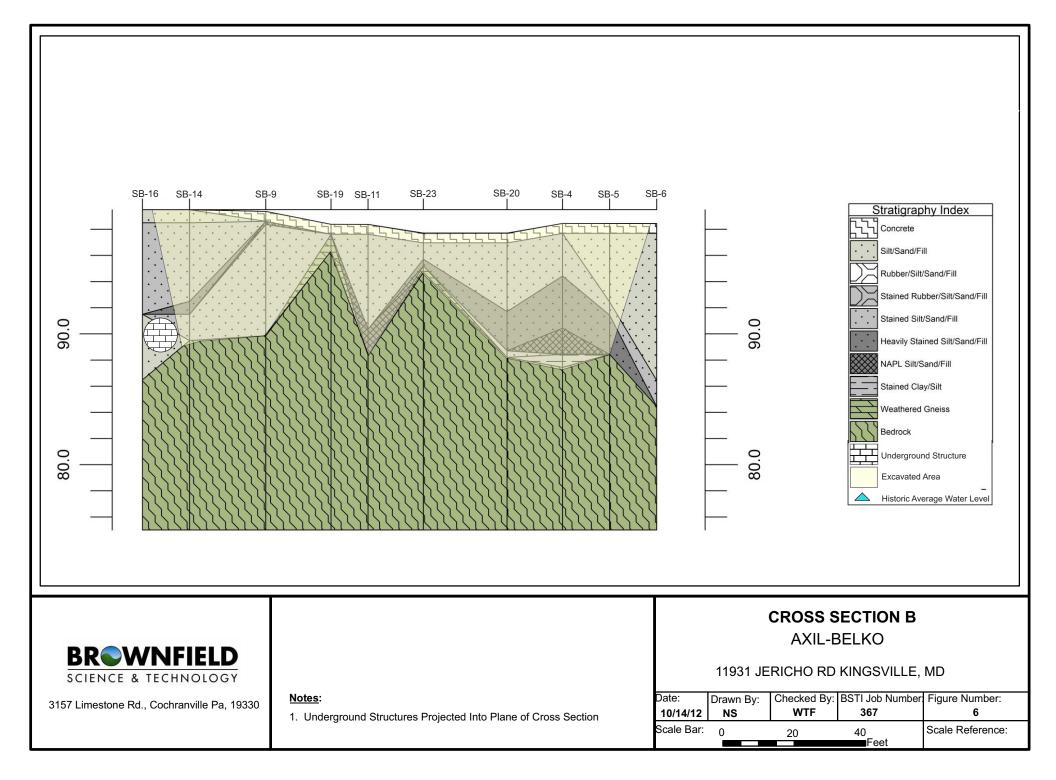
Notes:

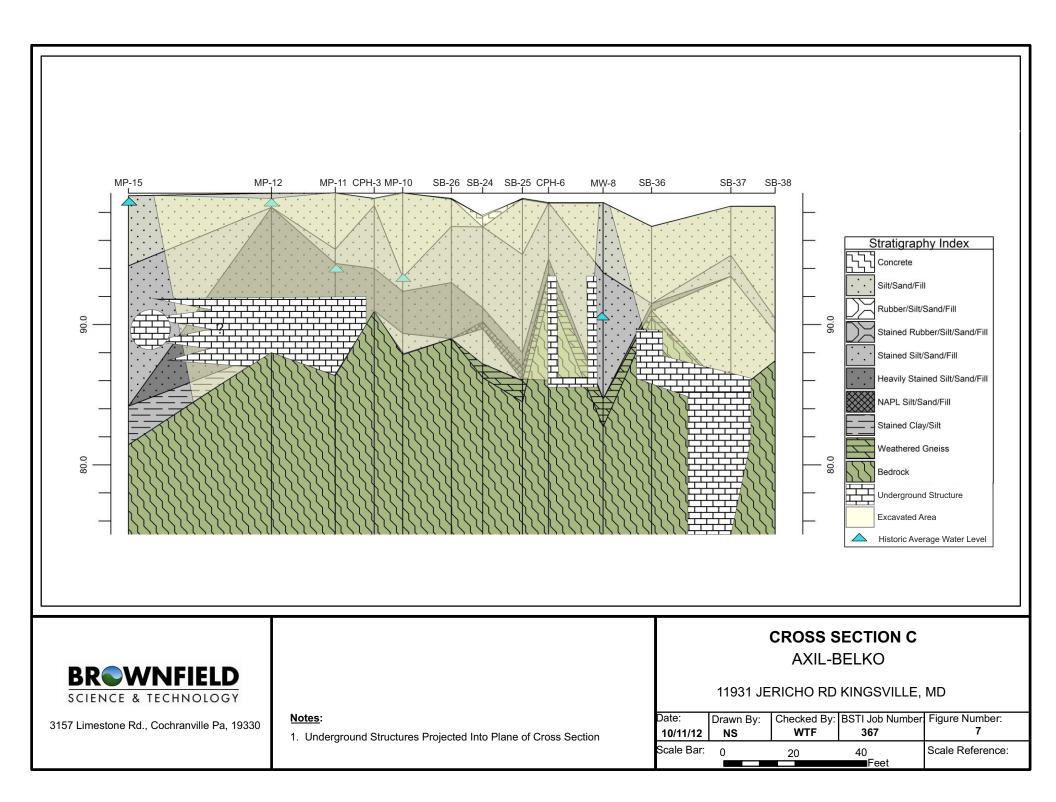
1. Image source Google Maps October 2013

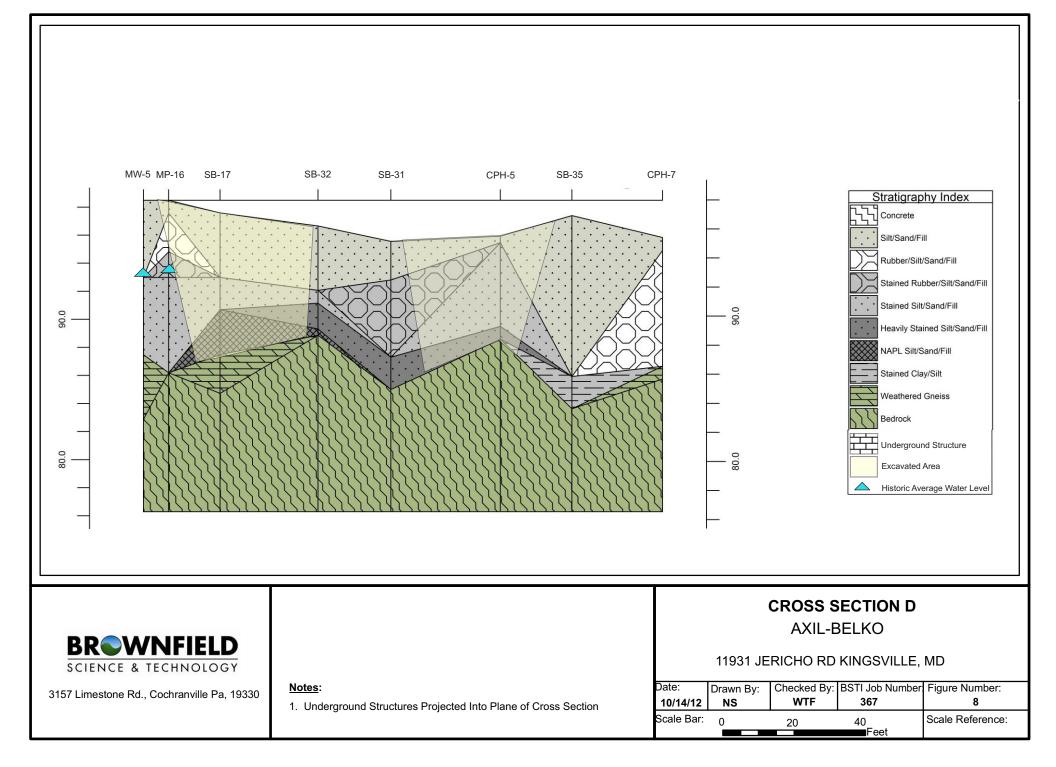


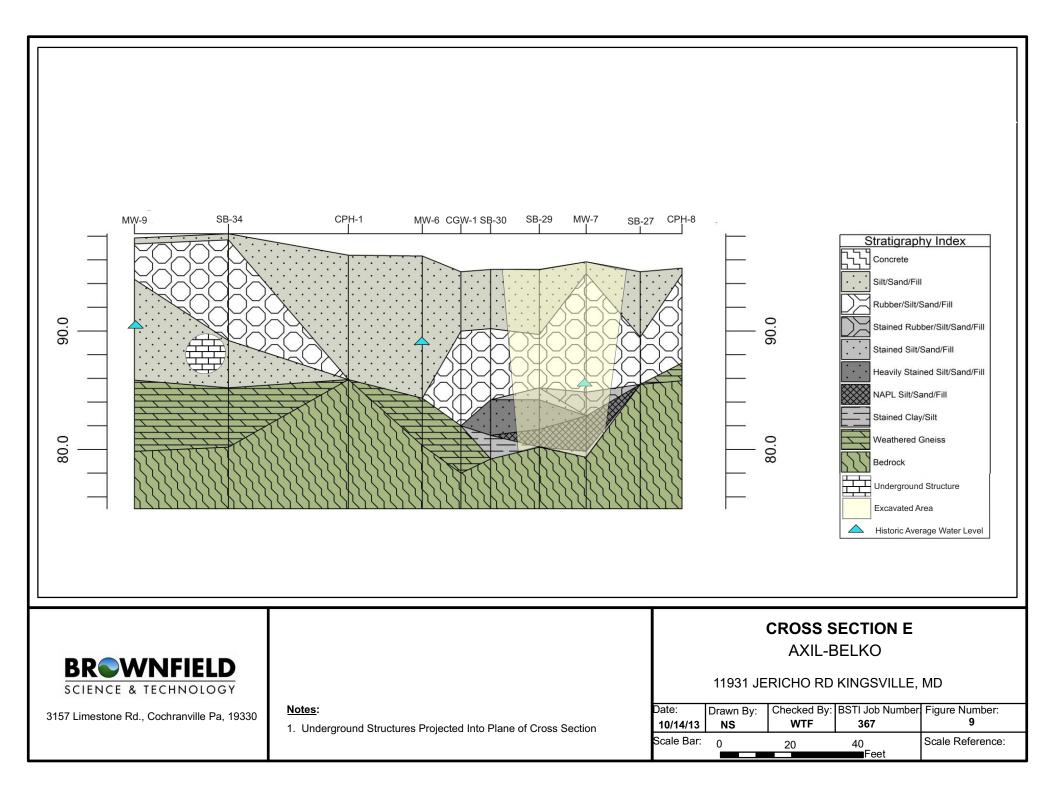


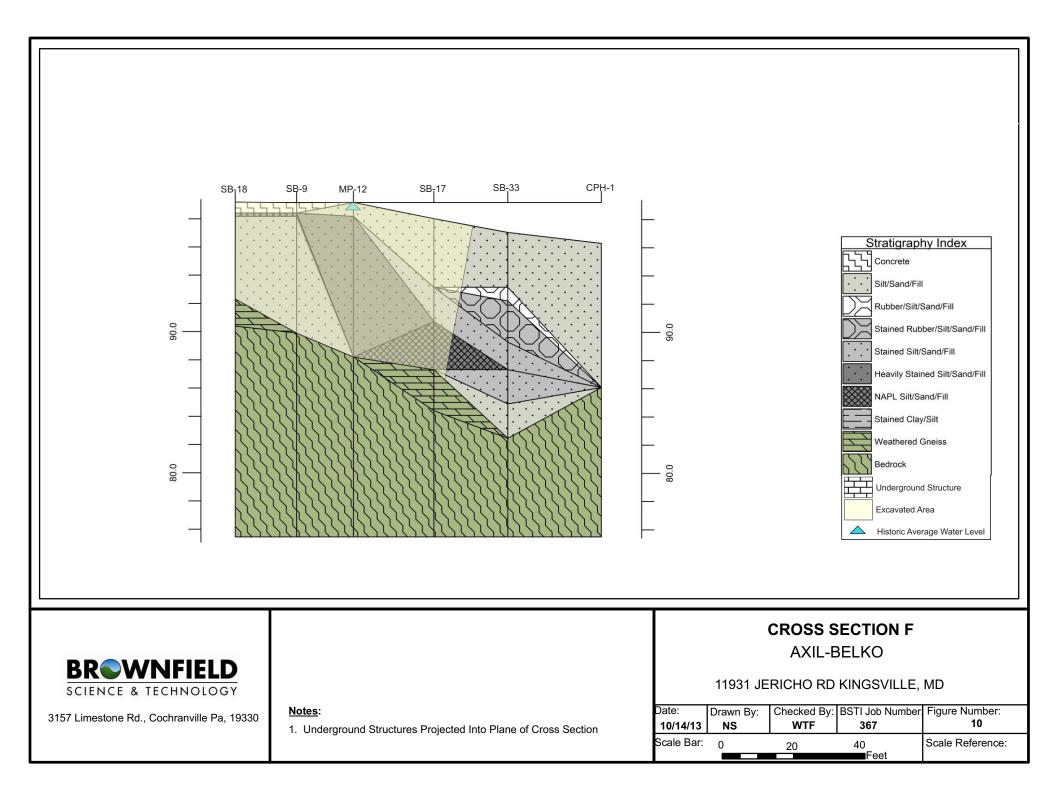


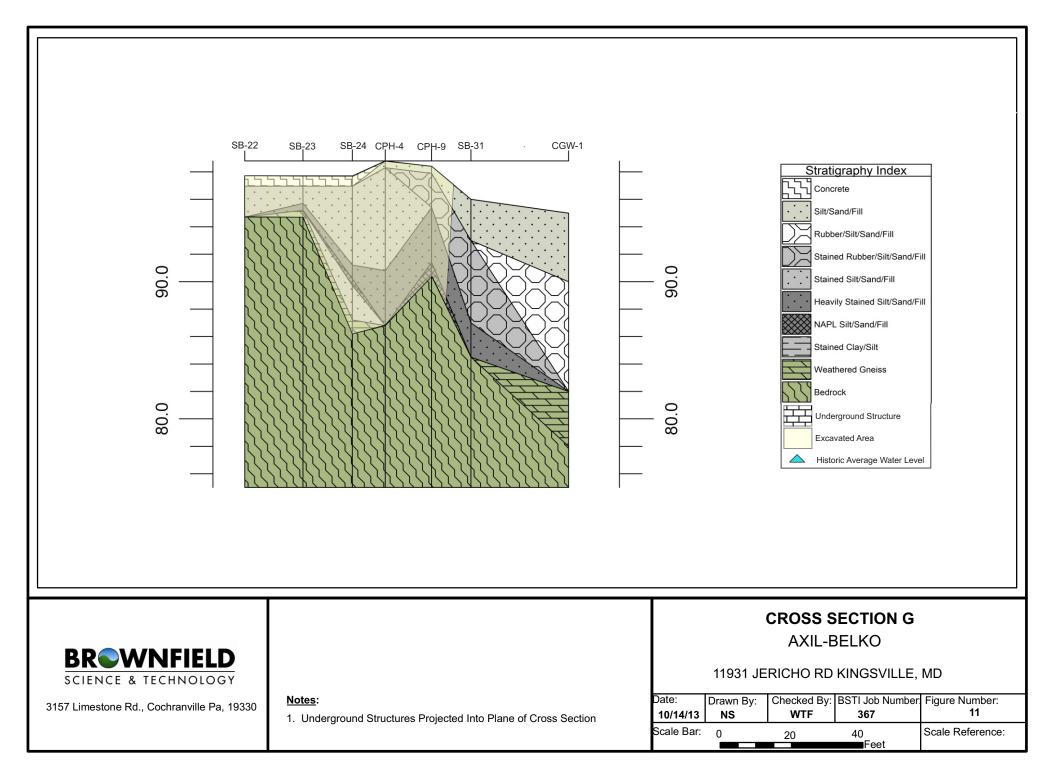


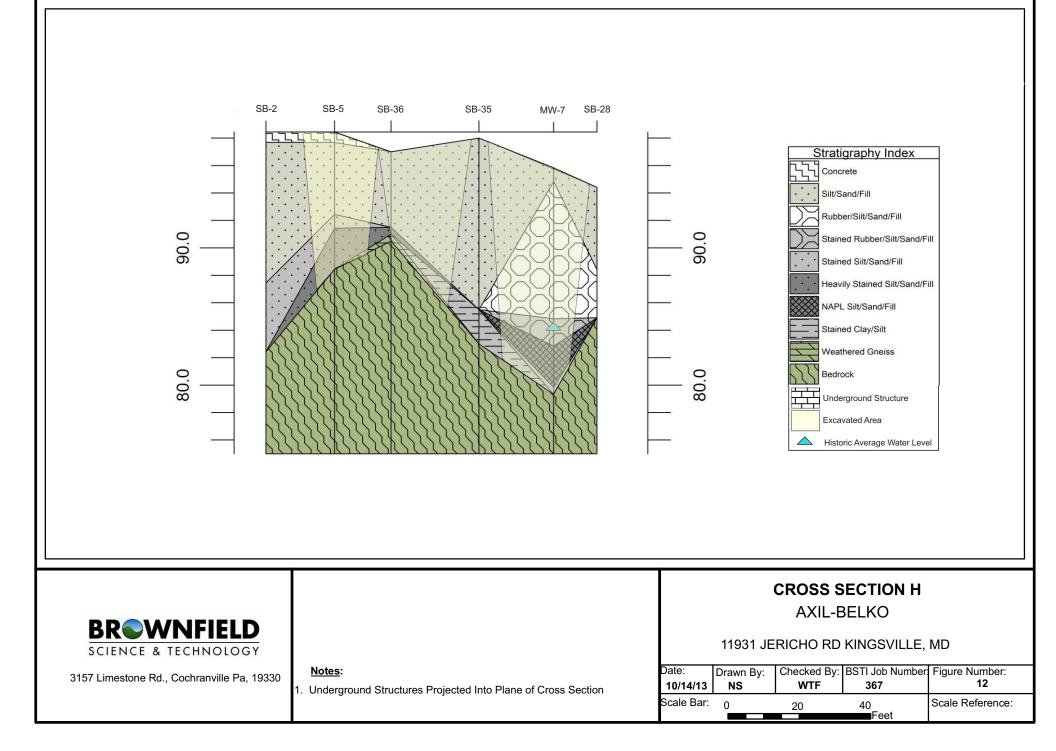


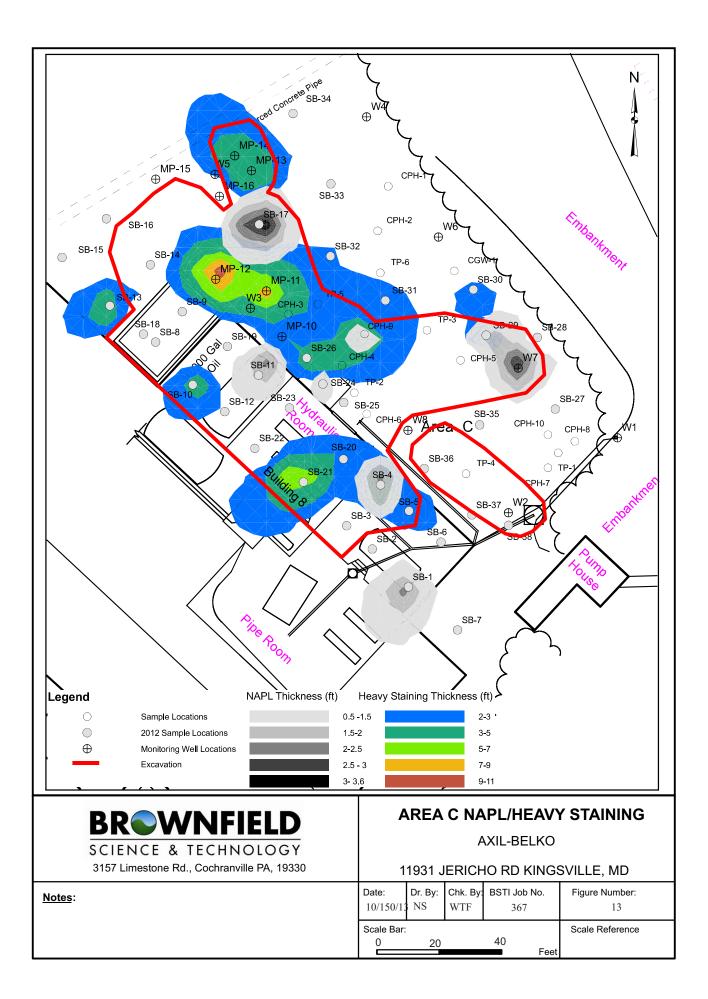


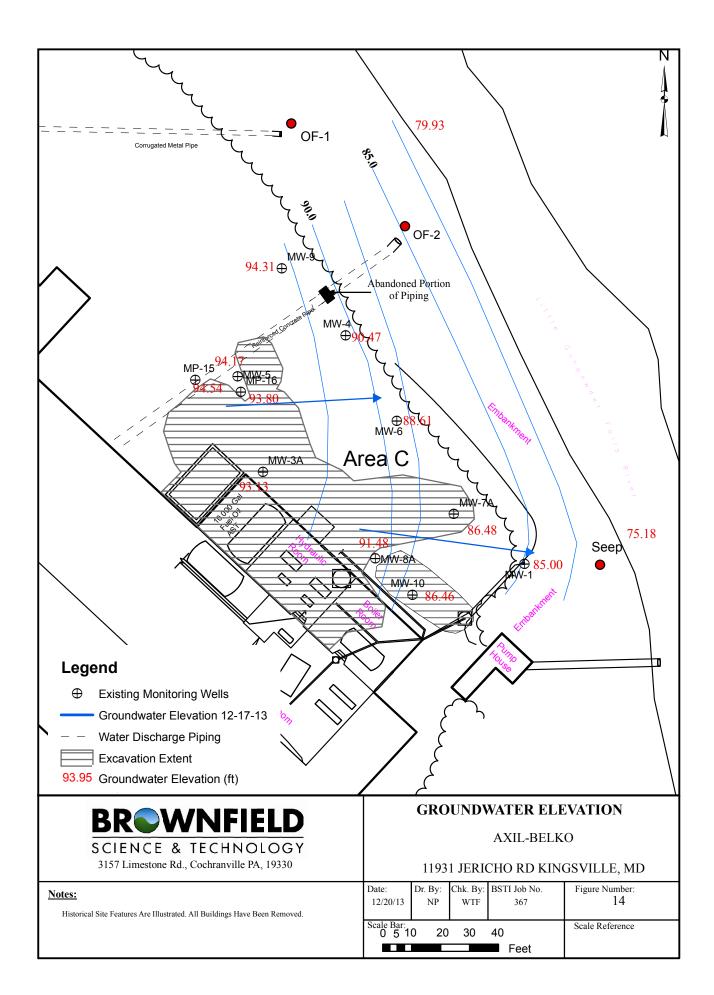


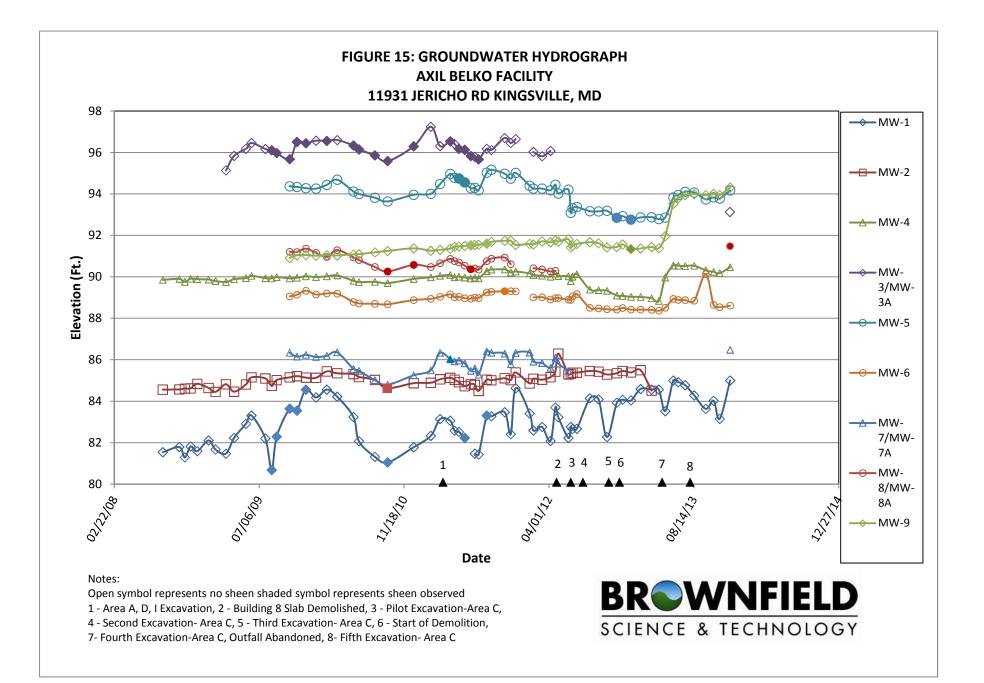


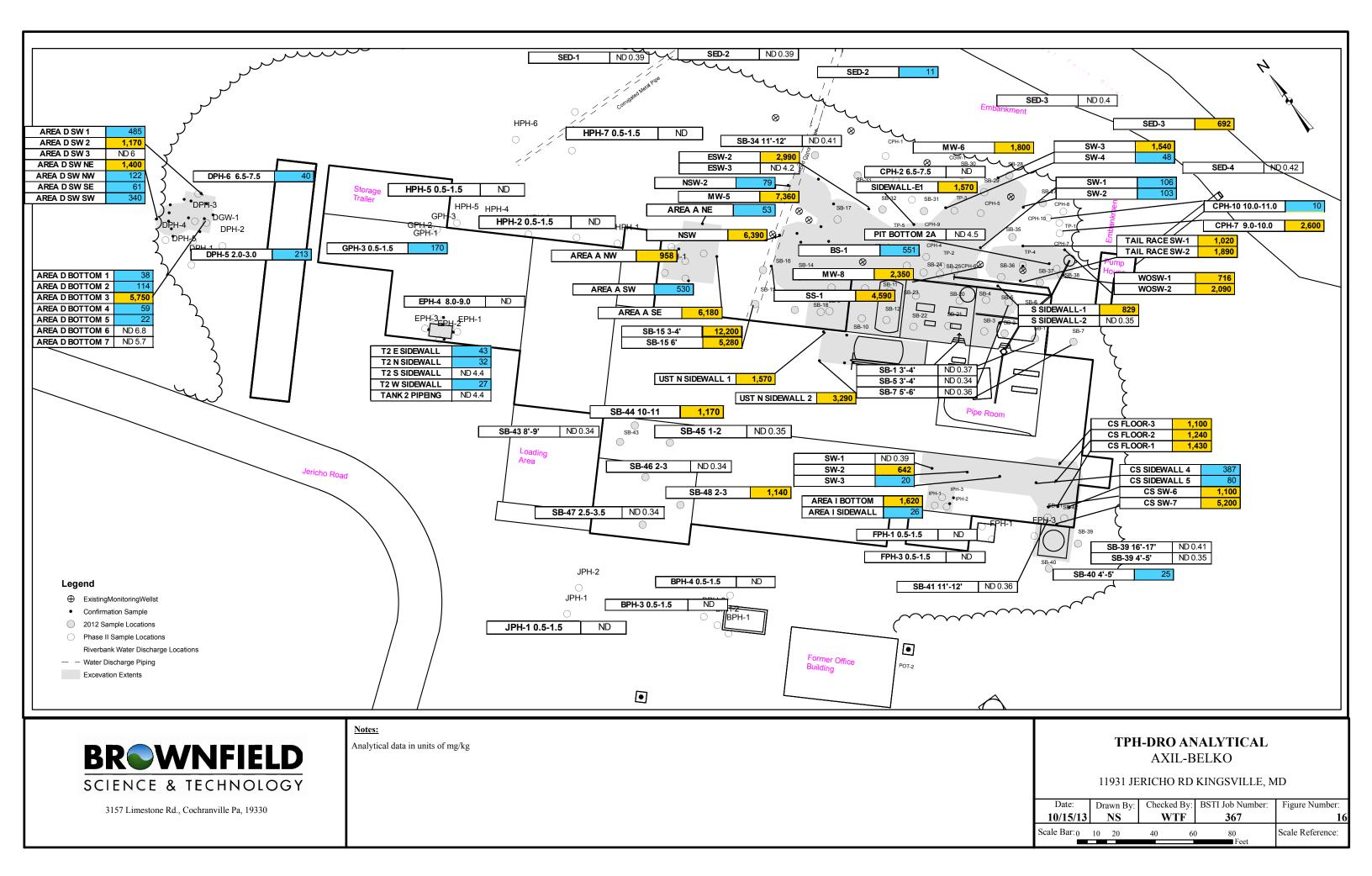


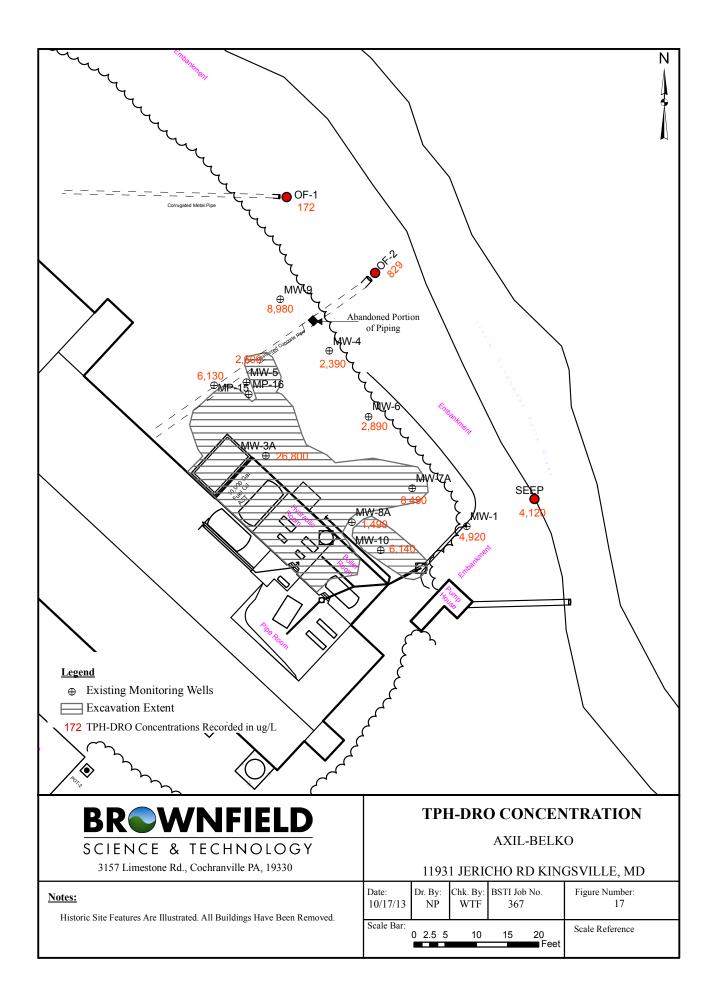


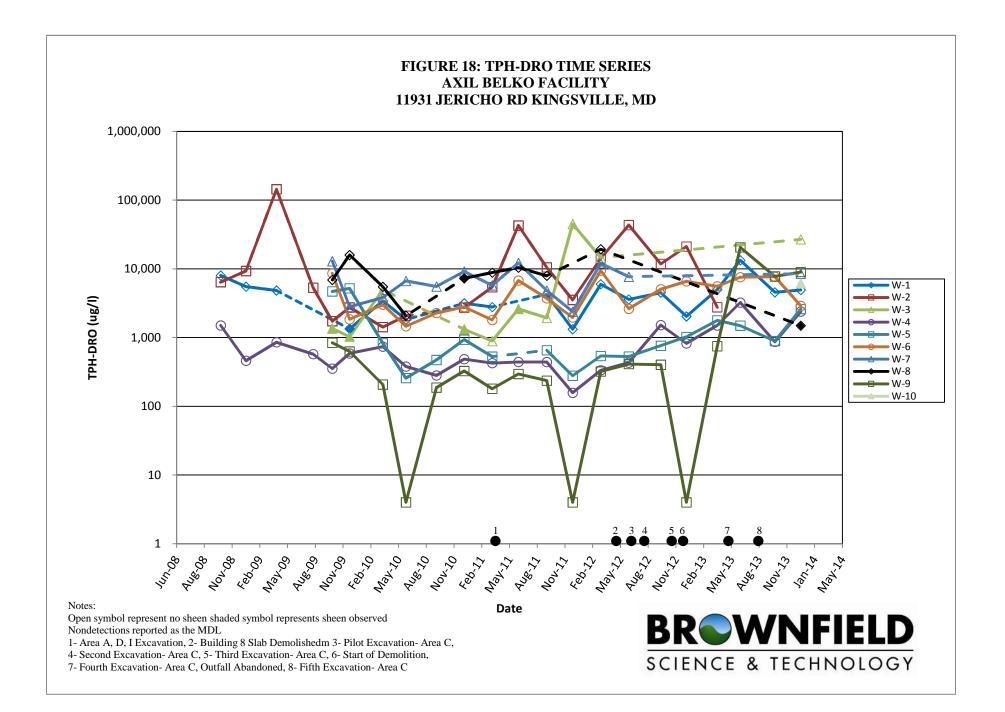


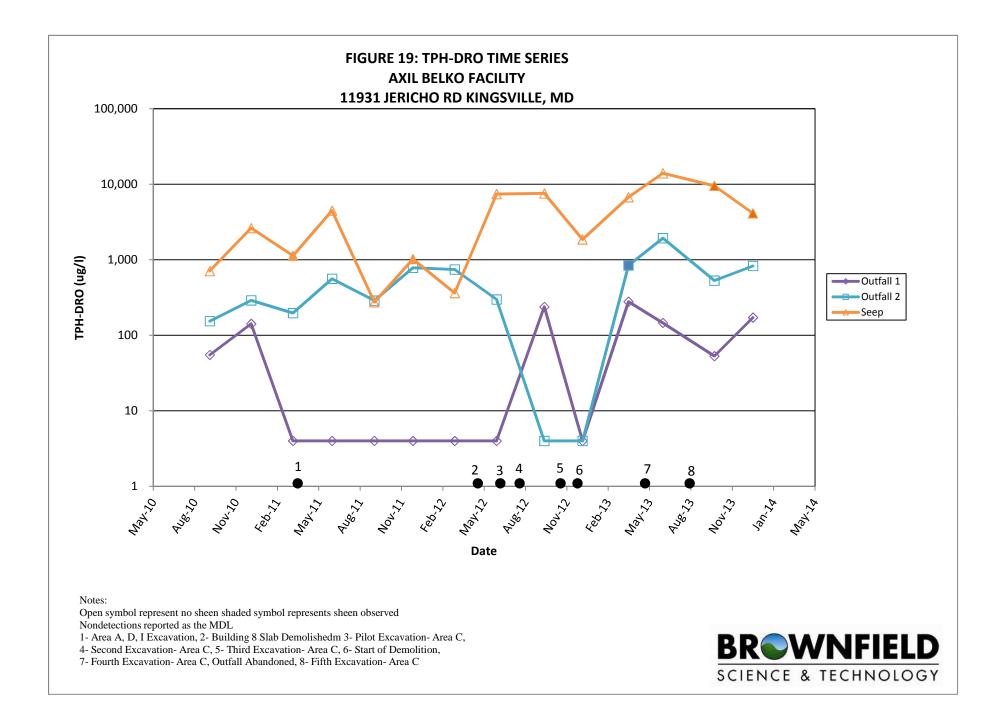










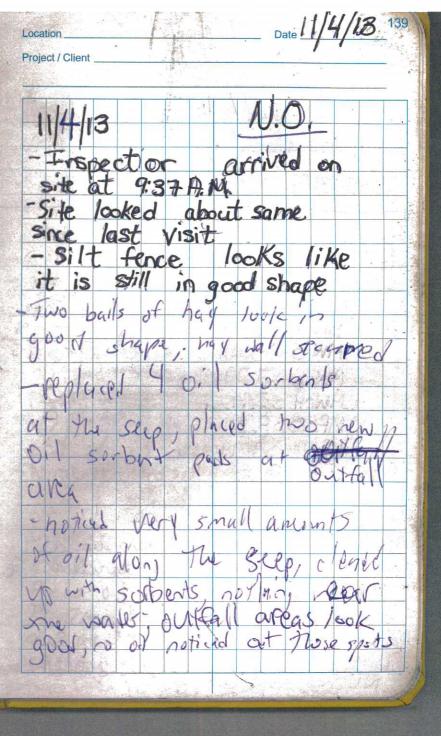


## **APPENDIX I – FIELD NOTES**



Project	/ Client				949 1949-21 194	
		(		me Pa		4 <u>31</u>
10-2	1-13	-		MA PARA	17	A. C.
				·	1	And State
NP	on sit	eat 11	00		3.4	
Liquic	Lenvels					
	WellID		DTW			- 34
-	MW-1		10,39	-		Rote
	MW-4	4	7.04	OF-	١	0.25
·	MW-5		5.35	OF-	2	0.25
	MW-6		7.68			
	MW-9		3.85			
	MP-15		7.64			
	MP-16		8.25			
- Small	drops	stoil		0100		1
NP of	f site	at 12	15.			ic.) As
	-	1-				
10-28-	13					
SQ	on sit	e 103	ò,			
	22.			pads in	+	he Seep.
- Place	1 2.1	sed of	Sorbent	f pads in	h 5	teel drum.
- Small	amoust	of oil	observe	ed in th	p	seep along
	ver bank.					

THE PARTY OF

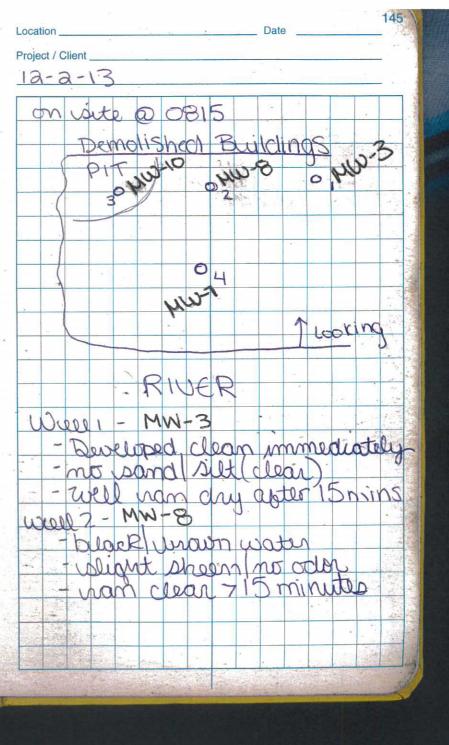


11/4/10 continued All new seeps discovered, down Stream looks in 50.d shape November 11th 2013 NP ONSITE @ 10:00 Liquid terrels MW-1 11.26 MW-1 11.26 MW-4 7.10 OF-1 0.25 MW-5 5.41 OF-2 K0.25 MW-9 3.90 MP-15 8-20 MP-16 7.79 - Cumpounder Parker & Rec on with to Check in @ 1045 - Suith frence in gott shape - River is up higher than usual - Seep area has some errodence of ord - Organic sheen noticed in Seep - Phalling (orange) present in Seep - Phalling (orange) present in Seep	111.11	6 1	1.			
Stream looks in gord shape November 11th 2013 NP ONSITE @ 10:00 Liquid Levels MW-1 11.26 MW-4 7.10 OF-1 0.25 MW-4 7.10 OF-2 0.25 MW-5 5.41 OF-2 0.25 MW-6 7.79 MW-9 3.90 MP-15 8-20 MP-15 8-20 MP-16 7.79 - Europounder Parker & Rec on with to Check in @ 1045 - Silt frence in gord shape - River is up higher than usual - Seep area has some evidence of oil	11411	o cont	ned			
November 11th 2013 NP onsite @ 10:00 Liquid levels MW-1 11.26 MW-4 7.10 OF-1 0.25 MW-5 5.41 OF-2 K0.25 MW-6 7.79 MW-9 3.90 MP-15 8.20 MP-16 7.79 - Eumpourder Parker & Rec on with Its Check in @ 1045 - Silt frence in gott shape - Riven is up higher than usual - Seep area has some evidence of oil	-no	new se	tps 1	discov	eved,	down
NP on site @ 10:00 Liquid Levels MW-1 11.26 MW-4 7.10 OF-1 0.25 MW-5 5.41 OF-2 KO.25 MW-6 7.79 MW-9 3.90 MP-15 8.20 MP-15 8.20 MP-16 7.79 - Europounder Parker & Rec on wite to Check in @ 1045 - Silt frence in gott shape - River is up higher than usual - Seep area has some evidence of orl	Stream	looks	in goin	d. Shaep	re	
Liquid Levels MW-1 11.26 MW-4 7.10 OF-1 0.25 MW-5 5.41 OF-2 0.25 MW-6 7.79 MW-9 3.90 MP-15 8.20 MP-15 8.20 MP-16 7.79 - Cumpounder Parks & Rec on with to Check in @ 1045 - Silt frence in gold shapp - River is up higher than usual - Seep area has some evidence of oil	Noven	nber 11	th 201	3		
MW-1 11.26 MW-4 7.10 OF-1 0.25 MW-5 5.41 OF-2 0.25 MW-6 7.79 MW-9 3.90 MP-15 8-20 MP-16 7.79 Cumpounder Parks & Rec on with to Check in @ 1045 - Silt frence in good shape - River is up higher than usual - Seep area has some evidence of oil	NP	onsite	@ 10:0	00		* 2
MW-1 11.26 MW-4 7.10 OF-1 0.25 MW-5 5.41 OF-2 0.25 MW-6 7.79 MW-9 3.90 MP-15 8-20 MP-16 7.79 Cumpounder Parks & Rec on with to Check in @ 1045 - Silt frence in good shape - River is up higher than usual - Seep area has some evidence of oil						
MW-4 7.10 MW-5 5.41 OF-2 10.25 MW-6 7.79 MW-9 3.90 MP-15 8.20 MP-16 7.79 Chumpourder Parks & Rec on site Io Check in @ 1045 - Sill fience in gold shape - River is up higher than usual - Seep area has some evidence of oil	0	MW-1	11.26			Rate
MW-5 5.41 OF-2 0.25 MW-6 7.79 MW-9 3.90 MP-15 8-20 MP-16 7.79 Chumpourder Parks & Rec on site to Check in @ 1045 - Silt fience in gold shape - River is up higher than usual - Seep area has some evidence of oil		MW-4	7.10		OF-1	
MW-6 7.79 MW-9 3.90 MP-15 8.20 MP-16 7.79 Cumpounder Parks & Rec on with to Check in @ 1045 - Silt frence in good shape - River is up higher than usual - Seep area has some evidence of oil		MW-5	5.41			10.25
MW-9 3.90 MP-15 8-20 MP-16 7.79 Cumpourder Parks & Reconsite to Check in @ 1045 - Silt fience in gold shape - River is up higher than usual - Seep area has some evidence of oil		MW-10	7.79			*
MP-15 8.20 MP-16 7.79 Chumpourder Parks & Rec on site to Check in @ 1045 - Silt frence in gold shape - River is up higher than usual - Seep area has some evidence of oil				S	-	н. 
MP-16 7.79 Europourder Parks & Rec on site to Check in @ 1045 - Silt frence in good shape - River is up higher than usual - Seep area has some evidence of oil						ad <sup>ite</sup> =
Cumpounder Parke & Rec on site to Check in @ 1045 - Silt fience in good shape - River is up higher than usual - Seep area has some evidence of oil	-	-				·
Check in @ 1045 - Suilt fience in good shape - River is up higher than usual - Seep area has some evidence of oil				Rec m	n voite	to .
- Suilt frence in gold shape - River is up higher than usual - Seep area has some evidence of vil						
- River is up higher than usual - Seep area has some evidence of vil				od shar	e	
- Seep area thas some evidence of						ual
oil						
- organic sheen noticed in Seep	oil					
a start start	- 01.00	nic	sheen	notic	ed in	SeeD
- Phalling (orange) present in Seep - Both 20 OF-16 OF-2 little water - NP 066-5ke @ 11:45	- Phal	ling [	oname	Deres	ent is	n Seep

Location\_ 141 Date Project / Client November 79 15 10:05 Onsite 2 big tonker Site 00/45 norma DAVEK Truc 1d O when Site arn Stordy 120/05 the 9000 Lew hai bails 15 MISSI n en bails 44 ÷J. m12510 ne nas hug DI Alvenity water has no veni da seeps down st No new rear WIN TILL mounts nothin Organic cam np Sheen Str 15 minimal in good sta Ords Look oil pads ord eplaced new ones when I removed. noncedsmall amongs of sil r O. 0 this was at the seep area

143 142 Location Date 1//2.2/13 Date Project / Client \_ Project / Client NS orsile 830 Joneet AEC New MW heter Un-8. bron silf ind on store dalles held up n buil ourdat at 25 red relisieted Sim dechadull and seeps bothat rosteen 10:00 AEC arrives and stati to set op in by lever of nour york will set 4' some 5'Cosn 0-3' Sitt Sol at debres Fill ppp MW-3A 3 Bags of Sond 140, bar on L Bron noist no dodo 3-6 Stey angh good mean my Close Mu-8 low Relling self in wist snequetor is 0-3 A 911+ Oppon sly 4+ pethods Tetra at 6' williet com 4' soren assilinging (# = boctil) 3-941 grey silts and vot sme pe try me - 2 to each refer at 2,5° may 28 OPD 5'Sven 5' Rish Charles drum ippete cetter 9.24 and soil appus dorh ster with some odor Bolyton Sil Sont w Riches Mu-7 BA 10-0470 9.24 2.6010 Mu-7A 34 10-0471 Slight odos PiD=0 mist some smel 5.33 8.89 MU-10 340 0472 BAO 0460 MU-8A 4.79 10.05 distal distly the to 1W-3A 8.36 Swill cubbles retrail at belon ~ Grs 9,08 hore n/ noe ulsible n horehle Set (1.5' Scen S' Rizer 340 AEC leaves site 400 pochpul leveste plug & Roch n allen to retine in Firs? Wan wen ? 4 fly vest 3 Bogs 300 to boll 3' at oug net chanter -

Project/Client No 11/25/25 athored at 9:08 a.M. conditions cold biok morning with some over cast/creek hibri war kent Some over cast/creek hibri war kent Sold can be her yop if the hilletso Twite force on yop if the hilletso Twite force on yop if the hilletso Twite and the some of a bid the area has a lot of leaves Subsome the same organic sheep. The area has a lot of leaves The area has a lot of leaves The area has a lot of leaves The area has a lot of leaves	Location			_ Date	
Astronomical of 9:08 ame Conditions cold brok morning with Some over cast/creek higher work level Sil can was moved -silt fince along the walter side looks In great shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso -silt fence one top if the hillalso -silt fence one top if the hillalso -site formatics at seep area, but -so charge, very liftle water flow - outflow not flow what scorewer -seep area has a lot of leaves -seep area has a lot of leaves	Project / Client		<b>N</b>		
Astronomical of 9:08 ame Conditions cold brok morning with Some over cast/creek higher work level Sil can was moved -silt fince along the walter side looks In great shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso Twoks like is in good shape -silt fence one top if the hillalso -silt fence one top if the hillalso -silt fence one top if the hillalso -site formatics at seep area, but -so charge, very liftle water flow - outflow not flow what scorewer -seep area has a lot of leaves -seep area has a lot of leaves	NO 1/25/15				<u> </u>
Conditions cold brok morning with Some overrast/creek hicks work level Sil can was moved -silt fince along the walter side looks In great shape -silt fence one top if the hillalso Twists like is in postshipe -ice tomatic at peop area, but oil prodo look the in great shape -o change, very little water flow - down stream nothing unissiant - outflow no. flow what screwer also ice sturting the form a tond the great - seep area has a lot of leaves - surround area & are romentiat Cloggin - up stream the same orgonic sheep.	13130				
Some over cast/creek higher work fewl Some over cast/creek higher work fewl Sit can was moved - sitt fince along the walter side looks In great shape - sitt fence one top of the hillalso Twoks like its in good shape - sitt fence one top of the hillalso Twoks like its in good shape - sitt fence one top area, but out productor at seep area, but out productor at seep area, but - down stream nother unitsual - outflow not flow what sorewer also ice studing the form a bud the area - seep area has a lot of leaves - surround area & are romenhat along - up stream the same organic sheep.		9:08 a	M	~	
Silt fonce along the walter side looks in great shape -silt fonce along the walter side looks I was like its in good shape -silt fonce on top of the hillalso Twoks like its in good shape -ice to matic at seep area, but oil pid look the min great shape -down stream nother unitsuch - down stream nother unitsuch - outflow no flow what scorewer also ice sturting the form a bind the area - seep area has a lot of leaves - seep area has a lot of leaves				orning	with
Silt fonce along the walter side looks in great shape -silt fonce along the walter side looks I was like its in good shape -silt fonce on top of the hillalso Twoks like its in good shape -ice to matic at seep area, but oil pid look the min great shape -down stream nother unitsuch - down stream nother unitsuch - outflow no flow what scorewer also ice sturting the form a bind the area - seep area has a lot of leaves - seep area has a lot of leaves	SAMO CONF	action	sent la	her was	r lewl
- Silt fince along the walter side looks In great shape - Silt fence one top of the hillalso Twoks like its in good shape - ice to matic at seep area, but out production at seep area, but - out production at some of the pro- - down stream nothing unicided - outflow not flow what sorewer - also ice sturting the form a bind - Me area - seep area has a lot of leaves - seep area has a lot of leaves	ail a wal	us p.M.d	The Mi	Deal 1	v / 0-0 (
In great shape -Silt fence one top of the hillalso Twoks like its in good shape ice to matrix at beep area, but oil prode look the min great shape no change, very little water flow -down stream nothing unitsuch - outflow not flow what scorencer also ice starting the form a bind the area - seep area has a lot of leaves - seep area has a lot of leaves	Sil can was	V~OVKO	20 1.50	HAUSI	10 Jan/1
-Silt fence on top if The hillalso Twike its in good shape -ice to matic at seep area, but out provide to the man great shape no change, very little wate thou -down stream nothing unitsuch -outflow no. flow what screwer also ice studing the form a tond the area - seep area has a lot of leaves - seep area has a lot of leaves	-SIT three 9	iong /	ne wi	THE DI	wi-cos
160KS like its in good shake -ice tomatic at seep area, but or provide took the pringread shake no change, very little wate down -down stream not have unicsual -outflow no flow what screwer also ice studing the form a tond the area - seep area has a lot of leaves - seep area has a lot of leaves	In great s	nape	r	the h	116 4.
- ice tomatic at seep area, but or provide took the ingreat shape no change, very little water flow - down striegen nothing unicided - outflow not flow what screwer also ice starting the form a Und the area - seep area has a lot of leaves - seep area has a lot of leaves					1, 4100
- seep area has a lot of leaves Surrand area & are romenhat aloggin - up stream the same organic sheep.	Tusks like i	s in	good Shap	NC Contraction	
- seep area has a lot of leaves Surrand area & are romenhat aloggin - up stream the same organic sheep.	- ice tomatica	at,	Setip a	rea, b	nt
- no change, very little water flow - downstream notation unissignal - outflow no flow whatsorever also ice sturting the form a tond the given - seep area has a lot of leaves - seep area has a lot of leaves	OUL PAR 100	K tit	eniv	great	Shape
- down stream notifier unitistical - outflow no. flow whatscrewer algo ice sturting the form a ond the area - seep area has a lot of leaves - up stream the same organic sheep.	no charle.	ver 1	Ma NI	Do A	out .
Also ice sturting the form a lond the given - seep grea has a lot of leaves - seriend great are romenihat aloggi 17 - up stream the same organic sheep.	- down stream	NATH	LA IA	usual	
Also ice sturting the form a lond the given - seep grea has a lot of leaves - seep grea has a lot of leaves - seriend great are romenthat aloggi 17 - up stream the same organic sheep.	- outfload al	· flo.	2 IN	hat stare	1000
- Seep area has a lot of leaves Surrand area & are romenhat aloggi 17 - up stream the same organic sheep.		ctus tin		Corn a	Mar I
- seep area has a lot at leaves - surround area & are romenhat aloggi 17 - up stream the same organic sheep.	A BUILDING STORE	DIM 1.1	1 ms-	nine a	und
- up stream the same organic sheer.	the given			F	
- up stream the same organic sheer.	- seep area	has	a lot	51	eaves
- up stream the same organic sheer.	surround or	en &	are son	nerthat	Cluggiv
	17 - Marine	Rep. A	Sent North		
	- Up stream.	the si	me or	smit -	They.
- Outflow 2 vor small warter tow,	and the second se	A LUNCE AND TOP TO GOLD	Station Little Little		
- Outflow 7 way small war flow,	à l'Ani		A.		9.
and the property pray in wards in the	- 1. 1. 4	1 mil	E. 11	L'écolor	PINN.
	all proved	t red	PMG VI	way	(000)
	and the second s			historia and	General and the



14F Date Location Project / Client MW-10 arell 3-- Black Inown water - no when or odor clear 715 mins well MW 4 BOSECTION unen, hailin URT Seer oromu X000-Still tomti

The manufacturers of "Rite in the Rain" all-weather writing products are grateful to the numerous environmental experts who have contributed to the development of this book. Should you have any additions, improvements or corrections for future publications of this field book or have suggestions for other environmental field book formats, we welcome your input.

Although much effort has been taken to ensure the accuracy of the following reference pages, the J. L. Darling Corp. cannot guarantee the accuracy of the data.

To provide input or solicit pricing on these or custom printed field books, contact your "Rite in the Rain" dealer or J. L. Darling Corp., 253-922-5000 or fax 253-922-5300.

www.RiteintheRain.com / sales@riteintherain.com

## **Common Field Data Error Codes**

Error codes are used to explain common mistakes and are written above or close to the mistake. Commonly used error codes include:

- RE Recording Error
- CE Calculation Error
- TE Transcription Error

- SE Spelling Error
- CL Changed for Clarity
- OC Original Sample Description Changed After Further Evaluation
- WO Write Over
- NI Not Initialed and Dated at Time of Entry OB Not Recorded at the Time of Initial Observation

Note: Error code should be circled, dated, and initialed when recorded.

## **Hazard Classifications**

Class 1 Explosives

Class 2 Gas

Class 3 Flammable Liquid

Class 4 Flammable Solids (Potential spontaneous combustion, or emission of flammable gases when in contact with water)

- Class 5 Oxidizing Substances and Organic Peroxides
- Class 6 Toxic (poisonous) and infectious substances
- Class 7 Radioactive material

Class 8 Corrosives

Class 9 Miscellaneous dangerous goods

Container type abbreviations (for sampling guidelines)

BR - Boston Round • ABR - Amber Boston Round • AJ - Amber Jug • AWM - Amber Wide Mouth • Poly - Polyethylene Bottles • BOD - Bottle • CWM - Clear Wide Mouth

			1
PAGE	REFERENCE	DATE	
			100
			-
	9		
	1		
			1.49
			a final
			A
			165

3 ocation Date Project / Client ruiny SNOW 30 A.M. arriva One sil port the of inder looks That other than 5100 good shape ike 1 +5 top ferce On the hill joks OF good piare Sha hails 5 Good leve safer the creek 00 Than higher norma no signs of water Alow 600 u SUMErene. pere 5 is under contro ño sf oil, signs SF USGNIC Igns sheen still here 10 Sighs chun shrean Chy SDEPS OF no smell of rank re flow, organi very The TIONS No sheh Still pegesent no signs of serps up stren shill preshas reanic sheets

Location AXII-BUKO Date 12-16-13 Location Axil- Bello Date 12-17-13 5 Project / Client Project / Client Note & vora on site @ 0915 Nate è Vora on site @ 0915 MW-9, MW-4, MW-10, MWET, Sampling OF-1, OF-2 and Breep MW-IOA, MW-7A, MW-8A, Law Pilow sampling MW-3A, MP-15 and MW-5 POT-1 and POT-2. Low Flow sampled MW-5 POT-1: should re-do and mu-10A. rotted and should be Wells MW-TA and MW-3A 1 take a while to sample due to slow recharge. replaced. . 3.4 Pot-2: needs a cap and a filling box ilocating. Note è Nora con site araind 3:30. Dora E Nate Oblo around 2:00 site

6 Location Axil-Belko Date 12/23/43 Location Kingsville, MD Date 12-30-13 7 Project / Client AXI - Bello # 367-03 Project / Client NPon site @ 10:00 haint Priver very high due to a - Dutflow 2 stendy flow most likely from all the rath past week. -MW-1 9.55, depth to bottom 21.65 12 mins - Seep loobs normal no poticeto No Pit area filled w water -NO Sheen or odler - close to overflowing - Hay bern lacks good oil sheen in any avea's - Silt ferre still looks & feels in gent No great shape solvell standing Suc parece: aganic no-- to visible sheen of fil - a lest of pranches leaves - Outflow 1 looks of little mane of a hanny than ourmal and deenis - need to change out boom but mostly by their organic ~ upstream account for two organic iron thelling looks life it may on next visit - River VER: high > covering parts of the River Bank have grown - downstream seems to be normal water teve - Greek 15. Ligh from OF-2: Steady flow coming out; orcanic sheen; lests OF-1 Stready First NO visible Gin Sheen; For phalling an eulo get que lice jo naisans

8 Date 12/30/13 (CONT'CI) Location . Project / Client Rain - arniel repress Rain Jock Denall site looks good No environmental concerns lack cut che we seen. to entre NP objective @ 11:00 HEE & entry Give Pit high 12 SIR t Nee 40 - dav

# **APPENDIX II – BORING LOGS**



l									Job Mr	Client				Leastic -	
10	-	-		-	-	-	-		Job. No.	Client				Location	
11	BR		Ŵ	N	FI	EL	D		367					Axil Belko	
									Drilling Method:					Boring No.	MW-8A
-	SCIE					DLO	GY	8	Geoprobe Auge	r					
		LOG	OF SOI	L BORI	NG				Sampling Metho	od:					
Coordinates	(East):													Sheet 1 of	
Coordinates	(North):		_												Drilling
Surface Elev	vation:								Water Level					Start	Finish
Top of PVC									Time	1			1	1:30	2:30
Permit #:	U		BA10-047	'2					Date					11/22/2013	11/22/2013
									Reference					1	
Sample	Inches	Dpth.	Samp. #	PID	Blows	Depth	l	JSCS		ons:	Soil			<b>I</b>	
Туре	Drvn/In.	Csg.	/samp.	(ppm)	per	in	`	Log	Currace Corrain		001				
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Recvrd	3	depth	(FF)	6 in.	Feet		9							
				0		0			Red brown Silty	sand some or	avel moist no	odor (fill)			
				0		0			Red blown Silly	sanu some gi	avei, moisi, no				
	+				1										
					I										
<u> </u>					I										
					I	2									
	+				I				. ·						
				0	I	3			Grey angular gr	avel\					
ļ		I		L											
						4									
									I						
					<u> </u>	5									
						6									
				0		7			Grey silty Sand,	wet, some pe	troleum odor				
						8			Refusal at 8'						
						9									
					1	10									
						11									
						12									
						13									
						14									
									-						
h	1	1			1	15									
						10									
	1			L		16									
						10									
	+				1	17									
						/									
	+					40									
						18									
<u> </u>					I										
	1					19									
					I										
					I	20									
					I										
Logged by:		N San	tella						_	Date:	11/22/2013			_	
Drilling Cont	ractor:	AEC							_	Driller:	Greg			_	
WELL SPEC	IFICATION	IS:													
Diam. of cas	ing:	4"		Screen	Interval:		8-3			Sandpack:	8-2		Grout:		
BOH:		8		Riser In	nterval:		3-0			Bentonite:	2-0		Cover:		

								Job. No.	Client				Location	
3.51		0						367	Cilent					
80	ык	-	vv	N		ELI							Axil Belko	
	CIE	NIC		TEC		DLOG	V	Drilling Method:	_				Boring No.	MW-10
3	CIEI					100	1 1	Geoprobe Auge						
0	( <b>F</b> )	LOG	OF SOI	L BORI	NG			Sampling Metho	od:				0	
Coordinates							_	L					Sheet 1 of	
Coordinates								L	1	1			ļ,	Drilling
Surface Elev								Water Level					Start	Finish
Top of PVC	Casing:							Time					12:30	1:30
Permit #:			BA10-047	'1				Date	ļ				11/22/2013	11/22/2013
		r			-			Reference						
Sample	Inches		Samp. #	PID	Blows		USCS	Surface Conditi	ons:	Soil				
Туре	Drvn/In.	Csg.	/samp.	(ppm)	per	in	Log							
	Recvrd		depth		6 in.	Feet								
				0		0		Red brown Silty	sand and grav	vel, moist, no c	odor (fill)			
		ļ				IL								
						1								
						IL								
						2								
						IL								
				0		3								
						4								
						5		Refusal at 5'						
						6								
						1								
						7								
						1		l l						
						8								
						1								
						9								
						1								
						10								
						11								
						1								
						12								
						1								
						13								
						1								
		I			Ī	14		l l						
						1								
	1	I				15		1						
						] [								
		1				16								
						] [								
						17								
						] [								
					L	18								
						] [								
						19								
	L													
		1				20								
	1					1	7							
							-							
Logged by:		N Sant	tella						Date:	11/22/2013	3			
								_					-	
Drilling Contr	ractor:	AEC							Driller:	Greg				
-								_					-	
WELL SPEC	FICATION	IS:												
Diam. of casi		4"		Screen	Interval:	5-1			Sandpack:	6-1		Grout:		
BOH:		5		Riser Ir		1-0			Bentonite:	Jan-00	)	Cover:		
		-							-					

1								Job. No.	Client				Location	
171		0			-				Client				Location	
	BR		<b>W</b>	N	FI	EL	D	367					Axil Belko	
								Drilling Method					Boring No.	MW-7A
5	SCIE					510	GY	Geoprobe Aug						
		LOG	OF SOI	L BORI	NG			Sampling Meth	od:				]	
Coordinates													Sheet 1 of	
Coordinates	(North):													Drilling
Surface Elev	vation:							Water Level					Start	Finish
Top of PVC	Casing:							Time					11:30	0:30
Permit #:			BA10-047	70				Date					11/22/2013	11/22/2013
								Reference						
Sample	Inches	Dpth.	Samp. #	PID	Blows	Depth	USC	S Surface Condit	ions:	Soil				
Туре	Drvn/In.	Csg.	/samp.	(ppm)	per	in	Log							
	Recvrd	-	depth		6 in.	Feet								
				0		0	1	Grey brown Sil	ty sand and rut	ober, moist, slic	ht petroleum od	lor		
	1			Ĩ		1 1		,						
	1	1			1	1								
						ſ ┣								
	1	1			1	2								
						1 1								
	1			0	l I	3								
						1 1		<b> </b>						
	1					4								
						1 ]								
	1					5								
				0		╡╵┝	_	Grev brown Sil	ty sand some a	obbles wat al	ght petroleum o	dor		
	+			0	1	6		Grey DIOWIT SI	iy sanu some d	JUDDIES, WEL, SI	Sur her olenin o	1001		
						°-								
	1					┨ ┠		Refusal at 7'						
						╡╵┝		itterusar at /						
	+					8		<b> </b>						
					I	Ö		<b> </b>						
						╡╷┝		<b> </b>						
					I	9	_							
					I		_							
						10								
					I	┨╷╷┣								
						11								
	1					╡╷┠								
					I	12								
	+					╡╷┠								
	1					13								
	+		┠───┤			┨╷┠								
						14								
	+				I	┨╷┠								
						15								
						┨╷┠								
					I	16								
						┨┊┠								
						17								
					Į	╡┝								
						18								
					Į	╡┝								
					<u> </u>	19								
L	1					1								
					<u> </u>	20								
Logged by:		N Sant	tella						Date:	11/22/2013			_	
Drilling Contr	ractor:	AEC							Driller:	Greg			_	
WELL SPEC	FICATION	IS:												
Diam. of cas	ing:	4"		Screen	Interval:	7	'-3.5		Sandpack:	7-3		Grout:		
BOH:		7		Riser In	nterval:	3	8.5-0		Bentonite:	3-0		Cover:		

								Job. No.		Client				Location	
19	BR	-	NA/		EI.	EI		367						Axil Belko	
10	DR							Drilling Me	ethod:	1				Boring No.	
5	SCIE	NC	E & .	TEC	HNO	DLO	GY	Geoprobe		r					MW-3A
109			OF SOI			019712509		Sampling	-						
Coordinates	(East):		2. 001					2		-				Sheet 1 of	1
Coordinates															Drilling
Surface Elev								Water Lev	/el					Start	Finish
Top of PVC								Time						10:30	11:30
Permit #:	ousing.		BA10-046	39				Date						11/22/2013	11/22/2013
								Reference	9	-	1	1	1		
Sample	Inches	Dpth	Samp. #	PID	Blows	Depth	US			ons:	Soil		1		
Туре	Drvn/In.	Csg.	/samp.	(ppm)	per	in	Lo		ornanne		001				
21 -	Recvrd	5	depth	<b>NI</b> /	6 in.	Feet		5							
				0		0		Brown Silt	tv sand	d. some brick f	fragments, moi	st (fill)			
				-		1			.,	-,					
						1									
						1 F									
	Ī				1	2									
						1 F									
	1	Ī		0		3		Grey angu	ular gra	avel mixed wit	h grey stilty cla	y, most to we	t, slight peti	oleum odor	
						] [			÷						
						4									
						] [									
						5									
				0											
						6		Refusal at	t 6'						
						7									
						8									
						9									
						10									
						11									
						12									
						4									
						13									
	-					4 .									
						14									
						<u>ار ا</u>									
						15									
					<u> </u>	16									
						47									
					<u> </u>	17									
	+				<u> </u>	1.									
					<u> </u>	18									
						19									
					<u> </u>	19									
	1					20									
					<u> </u>	20									
Logged by: Drilling Conte	ractor:	N San AEC	tella		•	• • • •				Date: Driller:	11/22/2013 Greg	3		-	
WELL SPEC		IS.													
Diam. of cas		4"		Scroon	Interval:		8-2			Sandpack:	6-3.5		Grout:		
BOH:	nıy.	4. 6		-	nterval:	-	6-2 2-0			Bentonite:	6-3.5 3.5-0		Grout: Cover:		
BOH.		0		1/1261 11	nerval.		£-U			Demonite.	0.0-0		_ Cover:		

## **Groundwater Sampling Data**

Project Name:	Axil Belko

Project Location: Kingsville, MD

Date: 12-17-13 and 12-18-13

Samplers: NO and NP

Location	Depth to Water (Ft)	Depth to Bottom (Ft)	Well Diameter (in)	Water Column (Ft)	Volume to Purge (Gal)	Volume Purged (Gal)	Purge Method	Sample Time	Sample Method
W-1	9.41	21.65	4	12.24	23.98	24	W	13:00	Bailer
W-2	-	27	8	-	-	-	W	-	Bailer
W-3A	6.48	9.08	4	2.6	5.09	5	W		Bailer
W-4	6.81	14.06	4	7.25	14.20	14	W	10:40	Bailer
W-5	5.02	17.8	4	12.78	25.04	25	W	11:00	Bailer
W-6	7.72	10.5	4	2.78	5.45	5.5	W	11:15	Bailer
W-7A	7.69	9.6	4	1.91	3.74	4	W	13:25	Bailer
W-8A	4.43	10.05	4	5.62	11.01	11	W	13:35	Bailer
W-9	3.54	12.4	4	8.86	17.36	17	W	10:00	Bailer
W-10A	4.56	8.89	4	4.33	8.48	8.5	w	12:05	Bailer
POT-1	19.44	200	6	-	-	-	Low Flow	11:40	Grab
POT-2	23.73	106	6	-	-	-	Low Flow	13:10	Grab
W-11									
W-12									
W-13									
W-14							_		
W-15	7.5	18	4	10.5	20	20	W		Bailer
W-16	7.2								

Location	Flow Rate	Sample Time	DTW
Outfall 1	1/4 gpm	9:30	0.7
Outfall 2	1/4 gpm	9:35	-
Seep	-	9:55	4.64

 Purge Coefficients

 2"
 0.163

 4"
 0.653

 6"
 1.469

 8"
 2.611

W: Whale pump

G: Grundfos pump

Comments:

Low Flow Sampled

Low Flow Sampled and Sampled by Purging Three Well Volumes



									ATA SHE	- 1			SHEET:	1	OF:	1
ROJECT	NA	ME:		Axil-Belko		PROJECT	NUMBER:	367	DATE:	12/17/2013	WEATHER		over	rcast		
TECHNIC	IAN	:		NP												
MONITO	RIN	G W	/ELL NO.:	MW-5	WELL DEPT	17.8	ft below TO	WELL	DIAMETER:	4"	SCREE	N LENGTH:		ft below TO	с	
PUMP IN					ft below TO					TALLATION:	17.8 BING TYPE:					
ANALYTI	ICAL	LAE	BORATORY		ACCUTEST									F BOTTLES:		<u>.</u>
	PURGING	APLING	р (рН (	H units)	SPE CONDU (mS)	CTIVITY	-	RP iv)	DISS OX (m		TEMPE	RATURE C)	-	SIDITY TU)	PUMPING RATE	DEPTH TO WATER
TIME	PUI	SAI	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		CHANGE*		CHANGE*		CHANGE*	(ml/min)	(ft below TOC
1010	х		6.52	<u>+</u> 0.1	0.025	<u>+</u> 3%	189.4	<u>+</u> 10	4.75	<u>+</u> 10%	11.1	<u>+</u> 3%	-	<u>+</u> 10%	300	17.76
1015	х		6.02		0.025		206.7		2.91		11.44		-		300	17.75
1020	х		5.88		0.025		193.3		2.88		11.94		-		290	17.76
1025	х		5.84		0.025		188.6		2.78		11.95		-		290	17.76
1030	х	х	5.82		0.025		188.6		2.79		11.98		-		290	17.75
			npled at 10							H; <u>+</u> 3% for Con						

 $\pm$  10 mv for ORP; and  $\pm$  10% for Dissolved Oxygen and Turbidity.



ECHNIC										12/17/2013			010.	ouor		
NONITC	RIN	G W	/ELL NO.:	MW-10A	WELL DEPT	8.89	ft below TO	WELL I	DIAMETER:	4"	SCREE	N LENGTH:		ft below TO	с	
PUMP IN PURGIN					ft below TO					TALLATION: TU	4.43 BING TYPE:					
NALYT	ICAL	LAE	BORATORY:		ACCUTEST		SAMPLE	ANALYSIS:					UMBER O	F BOTTLES:		
	PURGING	SAMPLING	р (рН (	H units)	SPEC CONDU (mS/	CTIVITY /cm)	•	ıv)	OX (m		TEMPEI (°	C)	•	ru)	PUMPING RATE	WATER
TIME		S/		CHANGE*		CHANGE* + 3%		CHANGE* <u>+</u> 10	READING	CHANGE* <u>+</u> 10%		CHANGE* <u>+</u> 3%	READING	CHANGE*		(ft below TOC
1125 1130	x x		1.78 6.22	<u></u>	0.025	<u>.</u> 370	417.9 463	<u>.</u> 10	9.9 2.35	<u>.</u> 10/0	7.82 8.11	<u>.</u> 370	-	<u>.</u> 10/0	240 220	4.42 4.33
1130	×		6.8		0.025		300		2.35		8.43		-		220	4.33
1140	x		6.83		0.025		250.7		1.75		8.45		-		240	4.46
1145	x		6.79		0.025		259		1.5		8.45		-		240	4.47
1150	х		2		0.025		399		1.27		8.88		-		220	4.46
1155	х		1.64		0.025		397.3		1.21		8.63		-		240	4.51
1200	х		2.18		0.025		362.4		1.15		8.6		-		240	4.51
1205	х	х														
					nction. YSI c											

ECUTIVE READINGS ARE WITHIN: <u>+</u>0.1 for pH; <u>+</u>3% for Conductivity and Temperature; \* INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CON  $\pm$  10 mv for ORP; and  $\pm$  10% for Dissolved Oxygen and Turbidity.



								0.	ATA SHEE				SHEET:	1	OF:	1
						PROJECT	NUMBER:	367	DATE:	12/18/2013	WEATHER:		Sunn	y/Cold		
TECHNIC	IAN	:		NP												
ΜΟΝΙΤΟ	RIN	G W	/ELL NO.:	POT-1	WELL DEPT	200	ft below TO	WELL	DIAMETER:	6"	SCREE	N LENGTH:		ft below TO	с	
	ITAK	(E D	EPTH:		ft below TO	DEP	TH TO WAT	ER BEFORE	PUMP INS	TALLATION:	19.44	ft below TO	с			
PURGIN	g de	VIC				SAMPLING	METHOD:	LF	PS	TU	BING TYPE:	PC	DLY			
ANALYT	ICAL	LAE	BORATORY		ACCUTEST	Γ	SAMPLE	ANALYSIS:		VO	C's		UMBER O	F BOTTLES:	3	
	PURGING	APLING	р (рН (	H units)	SPEC CONDU (mS		-	RP IV)	OX	OLVED (GEN 1g/L)	TEMPEI (°		TURB (N	SIDITY TU)	PUMPING RATE	DEPTH TO WATER
TIME	PUF	SAN	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	(ml/min)	(ft below TOO
1110	х		-3	<u>+</u> 0.1	0.025	<u>+</u> 3%	778	<u>+</u> 10	6.21	<u>+</u> 10%	10.65	<u>+</u> 3%	-	<u>+</u> 10%	240	19.52
1115	х		6.93		0.025		188.8		5.4		10.52		-		220	19.5
1120	х		6.29		0.025		199.7		5.11		8.59		-		240	19.51
1125	х		5.92		0.025		210.4		5		8.6		-		240	19.51
1130	х		5.91		0.025		206.9		4.58		8.67		-		220	19.52
1135	х		5.9		0.025		220		4.6		8.65		-		220	19.5
1140	х	х														
					1											

 $\pm$  10 mv for ORP; and  $\pm$  10% for Dissolved Oxygen and Turbidity.



									ATA SHE	- 1			SHEET:	1	OF:	1
PROJECT	T NA	ME		Axil-Belko		PROJECT	NUMBER:	367	DATE:	12/18/2013	WEATHER		Sunny	//Chilly		
TECHNIC	CIAN	:		NP												
ΜΟΝΙΤΟ	ORIN	G W	/ELL NO.:	POT-2	WELL DEP	106	ft below TO	WELL	DIAMETER:	6"	SCREE	N LENGTH:		ft below TO	С	
					ft below TO					TALLATION: TU		-				
			BORATORY		ACCUTES						C's		UMBER O	F BOTTLES:	3	
				IVITY ORP			ISSOLVED			TURBIDITY (NTU)		PUMPING RATE	DEPTH TO WATER			
TIME	PU	SAI		CHANGE*		CHANGE*		CHANGE*		CHANGE*		CHANGE*		CHANGE*	(ml/min)	(ft below TOC
1245	х		5.85	<u>+</u> 0.1	0.025	<u>+</u> 3%	250	<u>+</u> 10	10.38	<u>+</u> 10%	11.16	<u>+</u> 3%	-	<u>+</u> 10%	240	23.81
1250	х		6.2		0.025		200.7		7.93		11.79		-		240	23.79
1255	х		6.2		0.025		187.2		7.46		12		-		260	23.8
1300	х		6.19		0.025		185		7.45		11.4		-		260	23.8
1305	х		6.17		0.025		181.7		7.59		11.43		-		240	23.79
1310	х	х	6.16		0.025		185		7.58		11.43		-		240	23.79
			mpled at 13		ZED WHEN 3	CONSECUTIV	VE READING	S ARE WITHI	N: +0.1 for n	H: + 3% for Cor	ductivity and i					

 $\pm$  10 mv for ORP; and  $\pm$  10% for Dissolved Oxygen and Turbidity.



# **APPENDIX IV – ANALYTICAL DATA**





01/09/14

# **Technical Report for**

# **Brownfield Science & Technology**

Axil Belko, Kingsville, MD

367

Accutest Job Number: JB55980



Sampling Date: 12/17/13

**Report to:** 

Brownfield Associates, Inc.

npearse@bstiweb.com

**ATTN: Nora Pearse** 

# Total number of pages in report: 34



Mancy F. Cole

Nancy Cole Laboratory Director

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

# Client Service contact: Kevin Dovedytis 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

New Jersey • 2235 Route 130 • Dayton, NJ 08810 • tel: 732-329-0200 • fax: 732-329-3499 • http://www.accutest.com



# **Table of Contents**

# 1 2 3 4 5

# -1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Summary of Hits	5
Section 4: Sample Results	7
<b>4.1:</b> JB55980-1: MW-9	8
<b>4.2:</b> JB55980-2: MW-5 LOW	10
<b>4.3:</b> JB55980-3: MW-5	12
<b>4.4:</b> JB55980-4: MW-4	14
<b>4.5:</b> JB55980-5: MW-6	16
<b>4.6:</b> JB55980-6: MW-10A LOW	18
<b>4.7:</b> JB55980-7: MW-1	20
<b>4.8:</b> JB55980-8: MW-10A	22
<b>4.9:</b> JB55980-9: MW-7A	24
<b>4.10:</b> JB55980-10: MW-8A	26
<b>4.11:</b> JB55980-11: MP-15	28
<b>4.12:</b> JB55980-12: MW-3A	30
Section 5: Misc. Forms	32
5.1: Chain of Custody	33



# Sample Summary

# **Brownfield Science & Technology**

Axil Belko, Kingsville, MD Project No: 367

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
JB55980-1	12/17/13	10:05 NO	12/18/13	AQ	Ground Water	MW-9
JB55980-2	12/17/13	10:32 NO	12/18/13	AQ	Ground Water	MW-5 LOW
JB55980-3	12/17/13	11:00 NO	12/18/13	AQ	Ground Water	MW-5
JB55980-4	12/17/13	10:40 NO	12/18/13	AQ	Ground Water	MW-4
JB55980-5	12/17/13	11:15 NO	12/18/13	AQ	Ground Water	MW-6
JB55980-6	12/17/13	12:05 NO	12/18/13	AQ	Ground Water	MW-10A LOW
JB55980-7	12/17/13	13:00 NO	12/18/13	AQ	Ground Water	MW-1
JB55980-8	12/17/13	13:00 NO	12/18/13	AQ	Ground Water	MW-10A
JB55980-9	12/17/13	13:25 NO	12/18/13	AQ	Ground Water	MW-7A
JB55980-10	12/17/13	13:35 NO	12/18/13	AQ	Ground Water	MW-8A
JB55980-11	12/17/13	14:10 NO	12/18/13	AQ	Ground Water	MP-15
JB55980-12	12/17/13	14:15 NO	12/18/13	AQ	Ground Water	MW-3A



Job No: JB55980



# CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Brownfield Science & Technology	Job No	JB55980
Site:	Axil Belko, Kingsville, MD	Report Date	1/7/2014 9:02:02 AM

On 12/18/2013, 12 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 1 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB55980 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Extractables by GCMS By Method SW846 8270D

		Matrix: AQ	Batch ID:	OP71576
--	--	------------	-----------	---------

All samples were extracted within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

## Extractables by GC By Method SW846 8015C

		Matrix: AQ	Batch ID:	OP71572
--	--	------------	-----------	---------

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB55980-9 have surrogates outside control limits. Probable cause due to matrix interference.
- JB55980-9: Confirmation run.
- JB55980-9 for Tetracosane-d50: Outside of in house control limits, refer to re-extract.
- JB55980-9 for 5a-Androstane: Outside of in house control limits, refer to re-extract.

	Batch ID:	Matrix: AQ
--	-----------	------------

- All method blanks for this batch meet method specific criteria.
- The following samples were extracted outside of holding time for method SW846 8015C: JB55980-9 Sample extracted outside the holding time.
- Sample(s) JB55980-9 have surrogates outside control limits. Probable cause due to matrix interference.
- JB55980-9: Sample extracted outside the holding time.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover



# Summary of Hits

Job Number:	JB55980
Account:	Brownfield Science & Technology
Project:	Axil Belko, Kingsville, MD
Collected:	12/17/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB55980-1	MW-9					
Naphthalene TPH-DRO (C10	-C28)	1.4 8.98	1.0 0.10	0.26 0.053	ug/l mg/l	SW846 8270D SW846 8015C
JB55980-2	MW-5 LOW					
TPH-DRO (C10	-C28)	2.25	0.10	0.053	mg/l	SW846 8015C
JB55980-3	MW-5					
TPH-DRO (C10	-C28)	2.60	0.10	0.053	mg/l	SW846 8015C
JB55980-4	MW-4					
TPH-DRO (C10	-C28)	2.39	0.10	0.053	mg/l	SW846 8015C
JB55980-5	MW-6					
Benzo(a)pyrene Chrysene TPH-DRO (C10	-C28)	0.46 J 0.45 J 2.89	1.0 1.0 0.10	0.23 0.29 0.053	ug/l ug/l mg/l	SW846 8270D SW846 8270D SW846 8015C
JB55980-6	MW-10A LOW					
TPH-DRO (C10	-C28)	6.61	0.10	0.053	mg/l	SW846 8015C
JB55980-7	MW-1					
TPH-DRO (C10	-C28)	4.92	0.10	0.053	mg/l	SW846 8015C
JB55980-8	MW-10A					
TPH-DRO (C10	-C28)	6.14	0.10	0.053	mg/l	SW846 8015C
JB55980-9	MW-7A					
TPH-DRO (C10	-C28) <sup>a</sup>	8.49	0.10	0.053	mg/l	SW846 8015C
JB55980-10	MW-8A					
TPH-DRO (C10	-C28)	1.49	0.10	0.053	mg/l	SW846 8015C



ယ



# **Summary of Hits**

Г

Job Number:	JB55980
Account:	Brownfield Science & Technology
Project:	Axil Belko, Kingsville, MD
Collected:	12/17/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB55980-11	MP-15					
TPH-DRO (C10-	C28)	6.13	0.10	0.053	mg/l	SW846 8015C
JB55980-12	MW-3A					
TPH-DRO (C10-	C28)	26.8	0.11	0.061	mg/l	SW846 8015C

(a) Sample extracted outside the holding time.



ω



**Section 4** 

4



Sample Results

**Report of Analysis** 



			Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Samp Matrix: Method: Project:	AQ - G SW846	er W846 3510C ville, MD			Date	<b>I</b>	2/17/13 2/18/13 a	
Run #1 Run #2	File ID 6P3033.D	DF 1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	olume					
BN PAH L	list							
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9 208-96-8	Acenaphthene Acenaphthylen	e	ND ND	1.0 1.0	0.26 0.23	ug/l ug/l		
120-12-7	Anthracene		ND	1.0	0.29	ug/l		
56-55-3 50-32-8	Benzo(a)anthra Benzo(a)pyreno		ND ND	1.0 1.0	0.23 0.23	ug/l ug/l		
205-99-2	Benzo(b)fluora	nthene	ND	1.0	0.46	ug/l		
191-24-2	Benzo(g,h,i)pe		ND	1.0	0.32	ug/l		
207-08-9 218-01-9	Benzo(k)fluora Chrysene	ntnene	ND ND	1.0 1.0	0.51 0.29	ug/l ug/l		
53-70-3	Dibenzo(a,h)ar	nthracene	ND	1.0	0.29	ug/l		
206-44-0	Fluoranthene	lunucene	ND	1.0	0.32	ug/l		
86-73-7	Fluorene		ND	1.0	0.28	ug/l		
193-39-5	Indeno(1,2,3-c	d)pyrene	ND	1.0	0.37	ug/l		
91-20-3	Naphthalene	15	1.4	1.0	0.26	ug/l		
85-01-8	Phenanthrene		ND	1.0	0.29	ug/l		
129-00-0	Pyrene		ND	1.0	0.27	ug/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Lim	its		
4165-60-0	Nitrobenzene-d	15	<b>50</b> %		28-1	31%		
321-60-8	2-Fluorobipher	ıyl	60%		30-1	21%		
1718-51-0	Terphenyl-d14		<b>18</b> %		16-1	47%		

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

J = Indicates an estimated value

**B** = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





4



			Repo	alysis			Page 1 of 1	
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB559 AQ - ( SW84	80-1 Ground Wate	V846 3510C			I I	12/18/13	
Run #1 Run #2	File ID 2Y58476.D	DF 1	Analyzed 12/30/13	By JM	Prep D 12/20/1		Prep Batch OP71572	Analytical Batch G2Y2281
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	lume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
	TPH-DRO (C	10-C28)	8.98	0.10	0.053	mg/l		
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its		
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d 5a-Androstan		69% 102% 93%		32-1	44% 38% 36%		

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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





			Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:	AQ - G SW846	0-2 round Wate	V846 3510C			Date	1	2/17/13 2/18/13 a
Run #1 Run #2	File ID 6P3034.D	DF 1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	ume					
BN PAH L	ist							
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l		
208-96-8	Acenaphthylen	e	ND	1.0	0.23	ug/l		
120-12-7	Anthracene		ND	1.0	0.29	ug/l		
56-55-3	Benzo(a)anthra		ND	1.0	0.23	ug/l		
50-32-8	Benzo(a)pyrene		ND	1.0	0.23	ug/l		
205-99-2	Benzo(b)fluora		ND	1.0	0.46	ug/l		
191-24-2	Benzo(g,h,i)pe		ND	1.0	0.32	ug/l		
207-08-9	Benzo(k)fluora	nthene	ND	1.0	0.51	ug/l		
218-01-9	Chrysene		ND	1.0	0.29	ug/l		
53-70-3	Dibenzo(a,h)an	thracene	ND	1.0	0.38	ug/l		
206-44-0	Fluoranthene		ND	1.0	0.32	ug/l		
86-73-7	Fluorene		ND	1.0	0.28	ug/l		
193-39-5	Indeno(1,2,3-co	d)pyrene	ND	1.0	0.37	ug/l		
91-20-3	Naphthalene		ND	1.0	0.26	ug/l		
85-01-8	Phenanthrene		ND	1.0	0.29	ug/l		
129-00-0	Pyrene		ND	1.0	0.27	ug/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Lim	iits		
4165-60-0	Nitrobenzene-d	Nitrobenzene-d5 56%			28-1	<b>31</b> %		
321-60-8	2-Fluorobiphen	2-Fluorobiphenyl			30-1	21%		
1718-51-0	Terphenyl-d14	-	<b>29</b> %		16-1	47%		

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



JB55980

			Page 1 of 1					
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB5598 AQ - C SW846	30-2 Ground Wate	V846 3510C			I I	12/17/13 12/18/13 n/a	
Run #1 Run #2	File ID 2Y58477.D	DF 1	Analyzed 12/30/13	By JM	Prep D 12/20/1		Prep Batch OP71572	Analytical Batch G2Y2281
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	lume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
	TPH-DRO (C	10-C28)	2.25	0.10	0.053	mg/l		
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its		
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d 5a-Androstane		85% 53% 49%		32-1	44% 38% 36%		

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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





			Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Samp Matrix: Method: Project:	AQ - G SW846	round Wate	V846 3510C			Date	Received: 1	2/17/13 2/18/13 1/a
Run #1 Run #2	File ID 6P3035.D	DF 1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	ume					
BN PAH L	ist							
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthra Benzo(a)pyrene Benzo(b)fluora Benzo(g,h,i)pe Benzo(k)fluora Chrysene Dibenzo(a,h)an Fluoranthene Fluorene	cene e nthene rylene nthene	ND ND ND ND ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	0.26 0.23 0.29 0.23 0.23 0.46 0.32 0.51 0.29 0.38 0.32 0.28	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
193-39-5 91-20-3 85-01-8 129-00-0	Indeno(1,2,3-c) Naphthalene Phenanthrene Pyrene	d)pyrene	ND ND ND ND	1.0 1.0 1.0 1.0	0.37 0.26 0.29 0.27	ug/l ug/l ug/l ug/l		
CAS No. 4165-60-0 321-60-8 1718-51-0	Surrogate Rec Nitrobenzene-d 2-Fluorobiphen Terphenyl-d14	15	Run# 1 40% 37% 22%	Run# 2	30-1	iits 31% 21% 47%		

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



4.3

			Repo	rt of An	alysis			Page 1 of 1	
Client Sam Lab Sample Matrix: Method: Project:	e ID: JB559 AQ - SW84	-	W846 3510C			Date	Received: 12	12, 10, 10	
Run #1 Run #2	File ID 2Y58478.D	DF 1	Analyzed 12/31/13	By JM	Prep D 12/20/1		Prep Batch OP71572	Analytical Batch G2Y2281	
Run #1 Run #2	Initial Volum 1000 ml	e Final Vo 1.0 ml	lume						
CAS No.	Compound		Result	RL	MDL	Units	Q		
	TPH-DRO (	C10-C28)	2.60	0.10	0.053	mg/l			
CAS No.	Surrogate R	ecoveries	Run# 1	Run# 2	Lim	its			
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane- 5a-Androstan		83% 52% 51%		32-1	44% 38% 36%			

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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

4.3 4



	<b>Report of Analysis</b>										
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB55980-4 AQ - Ground V	SW846 3510C	V846 3510C			1	2/17/13 2/18/13 a				
Run #1 Run #2	File ID         DF           6P3036.D         1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123				
Run #1 Run #2	Initial Volume Fina 1000 ml 1.0 m	l Volume nl									
BN PAH L	ist										
CAS No.	Compound	Result	RL	MDL	Units	Q					
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracen Fluorene Indeno(1,2,3-cd)pyren Naphthalene Phenanthrene Pyrene	ND ND	$ \begin{array}{c} 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\$	0.26 0.23 0.29 0.23 0.23 0.46 0.32 0.51 0.29 0.38 0.32 0.28 0.37 0.26 0.29 0.27	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l						
CAS No.	Surrogate Recoveries	s Run# 1	Run# 2	Lim	its						
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	57% 54% 29%		30-1	31% 21% 47%						

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



			Repo	alysis	Page 1 of 1					
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB55 AQ - SW8	4 980-4 Ground Wate 46 8015C SV Belko, Kingsv	V846 3510C		Date Sampled: 12/17/13 Date Received: 12/18/13 Percent Solids: n/a					
Run #1 Run #2	File ID 2Y58479.D	DF 1	Analyzed 12/31/13	By JM	Prep Date 12/20/13	Prep Batch OP71572	Analytical Batch G2Y2281			
Run #1 Run #2	Initial Volum 1000 ml	e Final Vo 1.0 ml	lume							
CAS No.	Compound		Result	RL	MDL Uni	ts Q				
	TPH-DRO (	C10-C28)	2.39	0.10	0.053 mg/	1				
CAS No.	Surrogate R	ecoveries	Run# 1	Run# 2	Limits					
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane- 5a-Androsta		74% 55% 57%		36-144% 32-138% 31-136%					

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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





			Repo	rt of An	alysis			Page 1 of 1
Client San Lab Samp Matrix: Method: Project:	AQ - G SW846	round Wate	W846 3510C			Date	1	2/17/13 2/18/13 a
Run #1 Run #2	File ID 6P3037.D	DF 1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	lume					
BN PAH L	List							
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7	Acenaphthene Acenaphthylen Anthracene		ND ND ND ND	1.0 1.0 1.0	0.26 0.23 0.29 0.23	ug/l ug/l ug/l		
56-55-3 50-32-8 205-99-2 191-24-2	Benzo(a)anthra Benzo(a)pyrene Benzo(b)fluora Benzo(g,h,i)per	e nthene rylene	0.46 ND ND	1.0 1.0 1.0 1.0	0.23 0.46 0.32	ug/l ug/l ug/l ug/l	J	
207-08-9 218-01-9 53-70-3 206-44-0	Benzo(k)fluora Chrysene Dibenzo(a,h)an Fluoranthene		ND 0.45 ND ND ND	1.0 1.0 1.0 1.0	0.51 0.29 0.38 0.32	ug/l ug/l ug/l ug/l	J	
86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	Fluorene Indeno(1,2,3-c Naphthalene Phenanthrene Pyrene	d)pyrene	ND ND ND ND	1.0 1.0 1.0 1.0 1.0	0.28 0.37 0.26 0.29 0.27	ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Lim	U		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d 2-Fluorobiphen Terphenyl-d14		36% 33% 22%		30-1	31% 21% 47%		

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



4.5

			Page 1 of 1					
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB559 AQ - ( SW84		V846 3510C		Da	L .	12/17/13 12/18/13 n/a	
Run #1 Run #2	File ID 2Z36456.D	DF 1	Analyzed 12/30/13	By JM	Prep Date 12/20/13	Prep Batch OP71572	Analytical Batch G2Z1394	
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	ume					
CAS No.	Compound		Result	RL	MDL Unit	s Q		
	TPH-DRO (C	10-C28)	2.89	0.10	0.053 mg/			
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Limits			
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d 5a-Androstane		78% 51% 42%		36-144% 32-138% 31-136%			

4.5 **4** 

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



J = Indicates an estimated value

			Repo	rt of An		Page 1 of 1		
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB5598 AQ - G SW846	round Wate	N846 3510C			Date	-	2/17/13 2/18/13 a
Run #1	File ID 6P3038.D	DF 1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123
Run #2								
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	lume					
BN PAH L	ist							
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l		
208-96-8	Acenaphthylen	e	ND	1.0	0.23	ug/l		
120-12-7	Anthracene		ND	1.0	0.29	ug/l		
56-55-3	Benzo(a)anthra		ND	1.0	0.23	ug/l		
50-32-8	Benzo(a)pyren		ND	1.0	0.23	ug/l		
205-99-2	Benzo(b)fluora		ND	1.0	0.46	ug/l		
191-24-2	Benzo(g,h,i)pe		ND	1.0	0.32	ug/l		
207-08-9	Benzo(k)fluora	inthene	ND	1.0	0.51	ug/l		
218-01-9	Chrysene	_	ND	1.0	0.29	ug/l		
53-70-3	Dibenzo(a,h)ai	nthracene	ND	1.0	0.38	ug/l		
206-44-0	Fluoranthene		ND	1.0	0.32	ug/l		
86-73-7	Fluorene	_	ND	1.0	0.28	ug/l		
193-39-5	Indeno(1,2,3-c	cd)pyrene	ND	1.0	0.37	ug/l		
91-20-3	Naphthalene		ND	1.0	0.26	ug/l		
85-01-8	Phenanthrene		ND	1.0	0.29	ug/l		
129-00-0	Pyrene		ND	1.0	0.27	ug/l		
CAS No.	Surrogate Rec	coveries	Run# 1	Run# 2	Lim	iits		
4165-60-0	Nitrobenzene-d5		<b>49</b> %		28-1	31%		
321-60-8	2-Fluorobipher	nyl	42%		30-1	21%		
1718-51-0	Terphenyl-d14	:	45%		16-1	47%		

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



			Repo	rt of An	alysis	Page 1 of 1			
Client Sam Lab Sample Matrix: Method: Project:	e ID: JB55 AQ - SW8	10A LOW 980-6 Ground Wate 46 8015C SV Belko, Kingsv	V846 3510C		Date Sampled: 12/17/13 Date Received: 12/18/13 Percent Solids: n/a				
Run #1 Run #2	File ID 2Z36457.D	DF 1	Analyzed 12/30/13	By JM	Prep Date 12/20/13	Prep Batch OP71572	Analytical Batch G2Z1394		
Run #1 Run #2	Initial Volum 1000 ml	e Final Vo 1.0 ml	lume						
CAS No.	Compound		Result	RL	MDL Uni	ts Q			
	TPH-DRO (	C10-C28)	6.61	0.10	0.053 mg/	l			
CAS No.	Surrogate R	ecoveries	Run# 1	Run# 2	Limits				
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane- 5a-Androsta		84% 61% 54%		36-144% 32-138% 31-136%				

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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



Report of Analysis Page 1											
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB5598 AQ - G SW846	round Wate	V846 3510C			Date	1	2/17/13 2/18/13 /a			
Run #1 Run #2	File IDDF6P3039.D1		Analyzed 12/21/13	By ALS	Prep Date 12/20/13		Prep Batch OP71576	Analytical Batch E6P123			
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	ume								
BN PAH L	ist										
CAS No.	Compound		Result	RL	MDL	Units	Q				
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l					
208-96-8	Acenaphthylen	e	ND	1.0	0.23	ug/l					
120-12-7	Anthracene		ND	1.0	0.29	ug/l					
56-55-3	Benzo(a)anthra		ND	1.0	0.23	ug/l					
50-32-8	Benzo(a)pyren		ND	1.0	0.23	ug/l					
205-99-2	Benzo(b)fluora		ND	1.0	0.46	ug/l					
191-24-2	Benzo(g,h,i)pe		ND	1.0	0.32	ug/l					
207-08-9	Benzo(k)fluora	nthene	ND	1.0	0.51	ug/l					
218-01-9	Chrysene		ND	1.0	0.29	ug/l					
53-70-3	Dibenzo(a,h)ar	nthracene	ND	1.0	0.38	ug/l					
206-44-0	Fluoranthene		ND	1.0	0.32	ug/l					
86-73-7	Fluorene	I)	ND	1.0	0.28	ug/l					
193-39-5	Indeno(1,2,3-c	d)pyrene	ND	1.0	0.37	ug/l					
91-20-3	Naphthalene		ND	1.0	0.26	ug/l					
85-01-8 129-00-0	Phenanthrene Pyrene		ND ND	1.0 1.0	0.29 0.27	ug/l ug/l					
CAS No.	5		Run# 1	Run# 2	Lim	-					
4165-60-0	Nitrobenzene-d5 50%			28-1	31%						
321-60-8	2-Fluorobipher	nyl	47%		30-1	21%					
1718-51-0	Terphenyl-d14 42%					47%					

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



20 of 34

ACCUTEST



			Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB559 AQ - ( SW84	80-7 Ground Wate	W846 3510C Percent Solids:					12/17/13 12/18/13 n/a	
Run #1 Run #2	File ID 2Z36458.D	DF 1	Analyzed 12/30/13	By JM	Prep Da 12/20/13		Prep Batch OP71572	Analytical Batch G2Z1394	
Run #1 Run #2	Initial Volume 1000 ml	e Final Vo 1.0 ml	lume						
CAS No.	Compound		Result	RL	MDL	Units	Q		
	TPH-DRO (C	10-C28)	4.92	0.10	0.053	mg/l			
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Limi	ts			
84-15-1 16416-32-3 438-22-2	o-Terphenyl 85% Tetracosane-d50 58% 5a-Androstane 51%				36-14 32-13 31-13	38%			

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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



4.7 4



Report of Analysis Pag										
Client Sam Lab Sampl Matrix: Method: Project:	AQ - G SW846	0-8 round Wate	W846 3510C			Date	<b>I</b>	/17/13 /18/13 a		
Run #1 Run #2	File ID DF 6P3040.D 1		Analyzed 12/21/13	By ALS	Prep Date 12/20/13		Prep Batch OP71576	Analytical Batch E6P123		
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	lume							
BN PAH L	ist									
CAS No.	Compound		Result	RL	MDL	Units	Q			
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l				
208-96-8	Acenaphthylen	e	ND	1.0	0.23	ug/l				
120-12-7	Anthracene		ND	1.0	0.29	ug/l				
56-55-3	Benzo(a)anthra		ND	1.0	0.23	ug/l				
50-32-8	Benzo(a)pyren		ND	1.0	0.23	ug/l				
205-99-2	Benzo(b)fluora		ND	1.0	0.46	ug/l				
191-24-2	Benzo(g,h,i)pe		ND	1.0	0.32	ug/l				
207-08-9	Benzo(k)fluora	nthene	ND	1.0	0.51	ug/l				
218-01-9	Chrysene	a	ND	1.0	0.29	ug/l				
53-70-3	Dibenzo(a,h)ar	ithracene	ND	1.0	0.38	ug/l				
206-44-0	Fluoranthene		ND	1.0	0.32	ug/l				
86-73-7	Fluorene	J)	ND	1.0	0.28	ug/l				
193-39-5	Indeno(1,2,3-c	a)pyrene	ND	1.0	0.37	ug/l				
91-20-3 95 01 9	Naphthalene Phenanthrene		ND ND	1.0	0.26	ug/l				
85-01-8 129-00-0	Phenanthrene Pyrene		ND ND	1.0 1.0	0.29 0.27	ug/l ug/l				
CAS No.	Surrogate Rec	Surrogate Recoveries		Run# 2	Lim	its				
4165-60-0		Nitrobenzene-d5 5				31%				
321-60-8	2-Fluorobipher	ıyl	<b>49%</b>		30-1	21%				
1718-51-0	Terphenyl-d14		<b>50%</b>		16-1	47%				

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



4.8

			Page 1 of 1					
Client Samj Lab Sample Matrix: Method: Project:	e ID: JB559 AQ - ( SW84			Date Sampled: 12/17/13 Date Received: 12/18/13 Percent Solids: n/a				
Run #1 Run #2	File ID 2Z36461.D	DF 1	Analyzed 12/30/13	By JM	Prep Dat 12/20/13	e	Prep Batch OP71572	Analytical Batch G2Z1394
Run #1 Run #2	Initial Volume 1000 ml	e Final Vo 1.0 ml	lume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
	TPH-DRO (C	(10-C28)	6.14	0.10	0.053	mg/l		
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Limits	6		
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d50 5a-Androstane		73% 52% 46%		36-144 32-138 31-136	8%		

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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



Report of Analysis Page											
Client Sam Lab Sampl Matrix: Method: Project:	AQ - G SW846						Date Sampled:12/17/13Date Received:12/18/13Percent Solids:n/a				
Run #1 Run #2	File ID DF 6P3041.D 1		Analyzed 12/21/13	By ALS	Prep Date 12/20/13		Prep Batch OP71576	Analytical Batch E6P123			
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	ume								
BN PAH L	ist										
CAS No.	Compound		Result	RL	MDL	Units	Q				
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l					
208-96-8	Acenaphthylen	e	ND	1.0	0.23	ug/l					
120-12-7	Anthracene		ND	1.0	0.29	ug/l					
56-55-3	Benzo(a)anthra		ND	1.0	0.23	ug/l					
50-32-8	Benzo(a)pyrene		ND	1.0	0.23	ug/l					
205-99-2	Benzo(b)fluora		ND	1.0	0.46	ug/l					
191-24-2	Benzo(g,h,i)pe		ND	1.0	0.32	ug/l					
207-08-9	Benzo(k)fluora	nthene	ND	1.0	0.51	ug/l					
218-01-9	Chrysene		ND	1.0	0.29	ug/l					
53-70-3	Dibenzo(a,h)an	thracene	ND	1.0	0.38	ug/l					
206-44-0	Fluoranthene		ND	1.0	0.32	ug/l					
86-73-7	Fluorene	-	ND	1.0	0.28	ug/l					
193-39-5	Indeno(1,2,3-c	d)pyrene	ND	1.0	0.37	ug/l					
91-20-3	Naphthalene		ND	1.0	0.26	ug/l					
85-01-8	Phenanthrene		ND	1.0	0.29	ug/l					
129-00-0	Pyrene		ND	1.0	0.27	ug/l					
CAS No.	Surrogate Recoveries Run# 1		Run# 1	Run# 2	Lim	iits					
4165-60-0	Nitrobenzene-d5 48%		<b>48</b> %		28-1	<b>31</b> %					
321-60-8	2-Fluorobiphen	2-Fluorobiphenyl 44			30-1	21%					
1718-51-0	Terphenyl-d14	31%		16-1	47%						

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



ACCUTEST

JB55980

4.9

			Ксро		a1 y 515		rage 1 01 1	
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB5598 AQ - G SW846	0-9 round Wate	V846 3510C	Date Sampled: Date Received: Percent Solids:				/17/13 /18/13 a
	File ID	DF	Analyzed	By	Prep Da	ate	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	2Z36572.D	1	01/06/14	JM	01/02/14	4	OP71822	G2Z1397
Run #2 <sup>b</sup>	2Z36462.D	1	12/30/13	JM	12/20/13	3	OP71572	G2Z1394
Run #1 Run #2	Initial Volume 1000 ml 1000 ml	Final Vol 1.0 ml 1.0 ml	lume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
	TPH-DRO (C1	0-C28)	8.49	0.10	0.053	mg/l		
CAS No.	Surrogate Recoveries		Run# 1	Run# 2	Limi	ts		
84-15-1 16416-32-3 438-22-2	o-Terphenyl 3 Tetracosane-d50 5a-Androstane		72% 41% 37%	54% 31% <sup>c</sup> 28% <sup>c</sup>	36-14 32-13 31-13	38%		

**Report of Analysis** 

(a) Sample extracted outside the holding time.

(b) Confirmation run.

(c) Outside of in house control limits, refer to re-extract.

ND = Not detected MDL - Method Detection Limit

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range



J = Indicates an estimated value

**B** = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis Page 1 of 2										
Client Sam Lab Sample Matrix: Method: Project:	AQ - 0 SW846		846 3510C			Date	1	2/17/13 2/18/13 a		
Run #1 Run #2	File ID 6P3042.D	DF 1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123		
Run #1 Run #2	Initial Volume 1000 ml	Final Volu 1.0 ml	ume							
BN PAH Li	ist									
CAS No.	Compound		Result	RL	MDL	Units	Q			
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l				
208-96-8	Acenaphthyle	ne	ND	1.0	0.23	ug/l				
120-12-7 56-55-3	Anthracene Benzo(a)anthr		ND ND	1.0 1.0	0.29 0.23	ug/l				
50-55-5 50-32-8	Benzo(a)anun Benzo(a)pyren		ND	1.0	0.23	ug/l ug/l				
205-99-2	Benzo(b)fluora		ND	1.0	0.23	ug/l				
203-39-2 191-24-2	Benzo(g,h,i)p		ND	1.0	0.40	ug/l				
207-08-9	Benzo(k)fluora		ND	1.0	0.52	ug/l				
218-01-9	Chrysene	anunene	ND	1.0	0.31	ug/l				
53-70-3	Dibenzo(a,h)a	nthracene	ND	1.0	0.25	ug/l				
206-44-0	Fluoranthene	nunacene	ND	1.0	0.32	ug/l				
86-73-7	Fluorene		ND	1.0	0.28	ug/l				
193-39-5	Indeno(1,2,3-	cd)pyrene	ND	1.0	0.20	ug/l				
91-20-3	Naphthalene	, FJ - one	ND	1.0	0.26	ug/l				
85-01-8	Phenanthrene		ND	1.0	0.29	ug/l				
129-00-0	Pyrene		ND	1.0	0.27	ug/l				
CAS No.	Surrogate Recoveries Run# 1 Ru				Lim	its				
4165-60-0	Nitrobenzene-d5 61%					31%				
321-60-8	2-Fluorobiphenyl 56%					21%				
1718-51-0	Terphenyl-d14	1	46%		16-1	47%				

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



			Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB559 AQ - ( SW84	80-10 Ground Wate	V846 3510C		Date Sampled: 12/17/13 Date Received: 12/18/13 Percent Solids: n/a				
Run #1 Run #2	File ID 2Z36463.D	DF 1	Analyzed 12/31/13	By JM	Prep Date 12/20/13		Prep Batch OP71572	Analytical Batch G2Z1394	
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	lume						
CAS No.	Compound		Result	RL	MDL	Units	Q		
	TPH-DRO (C	10-C28)	1.49	0.10	0.053	mg/l			
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its			
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d50 5a-Androstane		85% 34% 31%		32-1	44% 38% 36%			

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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

4.10



Report of Analysis Page 1 of											
Client Sam Lab Sample Matrix: Method: Project:	AQ - G SW846	r V846 3510C ille, MD		Date Sampled: Date Received: Percent Solids:		Received: 12	12/17/13 12/18/13 n/a				
Run #1 Run #2	File ID 6P3043.D	DF 1	Analyzed 12/21/13	By ALS	Prep D 12/20/1		Prep Batch OP71576	Analytical Batch E6P123			
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	ume								
BN PAH L	ist										
CAS No.	Compound		Result	RL	MDL	Units	Q				
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l					
208-96-8	Acenaphthylen	e	ND	1.0	0.23	ug/l					
120-12-7	Anthracene		ND	1.0	0.29	ug/l					
56-55-3	Benzo(a)anthra		ND	1.0	0.23	ug/l					
50-32-8	Benzo(a)pyren		ND	1.0	0.23	ug/l					
205-99-2	Benzo(b)fluora		ND	1.0	0.46	ug/l					
191-24-2	Benzo(g,h,i)pe		ND	1.0	0.32	ug/l					
207-08-9	Benzo(k)fluora	mmene	ND ND	1.0	0.51	ug/l					
218-01-9 53-70-3	Chrysene Dibenzo(a,h)aı	athracana	ND ND	1.0 1.0	0.29	ug/l					
53-70-3 206-44-0	Fluoranthene	iunacene	ND	1.0	0.38 0.32	ug/l					
200-44-0 86-73-7	Fluorene		ND	1.0	0.32	ug/l ug/l					
80-73-7 193-39-5	Indeno(1,2,3-c	d)nvrono	ND	1.0	0.28	ug/1 ug/l					
193-39-3 91-20-3	Naphthalene	upprene	ND	1.0	0.37	ug/l					
85-01-8	Phenanthrene		ND	1.0	0.20	ug/l					
129-00-0	Pyrene		ND	1.0	0.23	ug/l					
CAS No.	Surrogate Rec	coveries	Run# 1	Run# 2	Limits						
4165-60-0	Nitrobenzene-d	15	60%			31%					
321-60-8	2-Fluorobipher	nyl	<b>59%</b>		30-1	21%					
1718-51-0						47%					

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

**E** = Indicates value exceeds calibration range

			Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB559 AQ - ( SW84	80-11 Ground Wate	V846 3510C		Date Sampled: 12/17/13 Date Received: 12/18/13 Percent Solids: n/a				
Run #1 Run #2	File ID 2Z36464.D	DF 1	Analyzed 12/31/13	By JM	Prep Date 12/20/13		Prep Batch OP71572	Analytical Batch G2Z1394	
Run #1 Run #2	Initial Volume 1000 ml	e Final Vo 1.0 ml	lume						
CAS No.	Compound		Result	RL	MDL	Units	Q		
	TPH-DRO (C	10-C28)	6.13	0.10	0.053	mg/l			
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its			
84-15-1 16416-32-3 438-22-2	Tetracosane-d50		87% 57% 50%		32-1	44% 38% 36%			

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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

4.11

4



Report of Analysis Page											
Client Sam Lab Sampl Matrix: Method: Project:	AQ - G SW846	0-12 round Wate	V846 3510C			Date	Received: 1	.2/17/13 2/18/13 1/a			
Run #1 Run #2	File ID DF 6P3044.D 1		Analyzed 12/21/13	By ALS	-		Prep Batch OP71576	Analytical Batch E6P123			
Run #1 Run #2	Initial Volume 1000 ml	Final Vol 1.0 ml	ume								
BN PAH L	ist										
CAS No.	Compound		Result	RL	MDL	Units	Q				
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthra Benzo(a)pyrene Benzo(b)fluora Benzo(g,h,i)per Benzo(k)fluora Chrysene Dibenzo(a,h)an Fluoranthene Fluorene Indeno(1,2,3-co Naphthalene Phenanthrene Pyrene	cene e nthene rylene nthene nthracene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	$ \begin{array}{c} 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\$	0.26 0.23 0.29 0.23 0.23 0.46 0.32 0.51 0.29 0.38 0.32 0.28 0.37 0.26 0.29 0.27	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l					
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Lim	U					
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14		52% 51% 49%		30-1	31% 21% 47%					

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





30 of 34

ACCUTEST

			Repo	rt of An	alysis		Page 1 of 1		
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB559 AQ - ( SW84		V846 3510C		Date Sampled: 12/17/13 Date Received: 12/18/13 Percent Solids: n/a				
Run #1 Run #2	File ID 2Z36465.D	DF 1	Analyzed 12/31/13	By JM	Prep Date 12/20/13	Prep Batch OP71572	Analytical Batch G2Z1394		
Run #1 Run #2	Initial Volumo 870 ml	e Final Vol 1.0 ml	ume						
CAS No.	Compound		Result	RL	MDL Units	Q			
	TPH-DRO (C	C10-C28)	26.8	0.11	0.061 mg/l				
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Limits				
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d50 5a-Androstane		88% 57% 55%		36-144% 32-138% 31-136%				

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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





**Section 5** 

G



Misc. Forms	
Custody Documents and Other	Forms
Includes the following where applica	ıble:
Chain of Custody	

32 of 34 ACCUTEST.

	cω	(	CHAIN		F CI	UST	OD	Y								1	PAG	E	_ OF	
ACCUTEST	C.w	· ·								1	FED-EX 1	Fracking #				Bottle Ord	er Control #			
LABORATORIES			2235 Ro TEL. 732-329	oute 130,	Dayton, 1	J 08810	3480				Accutest	Quote #				Accutest J	ob#	T	RSS	5980
			TEL. 752-529	www.ac	cutest.con	1					Restances					L CO	DE chor	*		Matrix Codes
Client / Reporting Information			Project In	format	ion							Reque	sted A	naiysis	(see i		DE shee	50	and a state of the	
ompany Name BROWNFIEld Science		i n	11/-																	DW - Drinking Water GW - Ground Water
ALL BENED & Technolog	GN H Istreet	IXIL BC	110								8									WW - Water SW - Surface Water
RET Address	Street					( if differe	nt fron	n Report	to)											SO - Soil SL- Sludge
State Zip	City	ille h	State 0	Company	Name															SED-Sediment OI - Oil
Concanville, PA 1933	Project #	alle r		Street Add	dress							I								LIQ - Other Liquid AIR - Air
TIDD FISCHER	30			City			Sta	ite	Zip		- X	Hd								SOL - Other Solid WP - Wipe
Those # Fax #	Client Purchase	Order #		City							DRO	1 1								FB-Field Blank EB-Equipment Blank
Sampler(s) Name(s) Phone #	Project Manager	Col. IC	·	Attention:							25	2								RB- Rinse Blank TB-Trip Blank
Note O. E Nora P.	ILIDE	Fischer	Collection	1			N	lumber of p	reserved Bol	tles	10	5								
				Sampled			E	204	NONE DI Water MEOH	ENCORE	86	BQ								LAB USE ONLY
Accutest Sample # Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	by	Matrix	# of bottles	HCI NaOF	HNG H2S		ä	_									
MW-9		12-17-13	1005	NO	GW	4	2		2	_	2	2								BIJ
7 MINI-5LOW		12-17-13	1032		GW	4	2	$\downarrow \downarrow$	2		2	2								<b></b>
2 MW-5		12-17-13	1100	NP	GW	Ц	2		2	+	2	2								<b>{</b>
4 MW-4		12-17-13	1040		GW	4	2		2	┿╋	2	2								+
5 MW-10		12-17-13	1115	NO	GW	4	2		2		2	2								+
6 MW-IOALOW		12-17-13	1205	NP	GW	4	2		2	+-+-	2	2								+
7 MW-1		12-17-13	1300	NO	Gw	4	2		2	+-+-	2	2								
8 MW-10A		12-17-13	1300	NP	GW	4	2		2		2	2								+
9 MW-TA		12-17-13	1325	NP	GW	4	2		2	++		2					$\vdash$			
10 MW-8A		12-17-13	1335	NO	GW	4	2			++	2	2								
1 MP-15		12-17-13		1.4.		4	2	++-	2		2	2								+
12 MW-3A		12-17-13	1415	NO	6~	Data	2 Delive	arable Inf	2 ormation		12				Co	mments	Special I	nstruction	าร	1
Turnaround Time ( Business days)	Approved By (Ac	cutest PM): / Date:				ial "A" (L	evel 1)		NYA	SP Cate										
Std. 10 Business Days	6					ial "B" ( L Level 3+4				SP Cate e Forms		ł								
5 Day RUSH 3 Day EMERGENCY					NJ Reduc		· /		EDD	Forma				Rec'a	t at E	<del>xton S</del>	Service	- Gent	er	
2 Day EMERGENCY	-dedite-				Commerc	commerc	int "A" -	- Dacuite	Only Oth	er										
						Commerc	ial "B" :	= Results	+ QC Sumr	nary										
Emergency & Rush T/A data available VIA Lablink		Sample Custody m	ust be docun	nented t	elow ea	NJ Redui	ample	esuits + s/chang	C Summar	ion, inc	al Raw di cluding	ata   courier (	lelivery	•						
Relinquished by Sampler	·	Received By:	. 11	1	1		Relind	uished By	n /1	1	//	1		ate Time: 2/18/1	3 163	2	ed By:	-	~	×
11 lorac rearse 11-1		1110	04-	V	(		Refloc	uished By	: 00	b	20			ate Time:	101	Receiv	ed By:			5.6
Relinquished by Sampler: Date Tim			X		$\rightarrow$	•				- r	Intact		Preserver	d where ar	plicable	4		On lợc	Çog	ler Temp/
Relinquished by: Date Tim 5		Received By: 5	e		c		Custo	dy Seal # VOM	/₽		Not int			0				БŹ		5 (~) G
																			11	1 6-16
3B JUS																			1.	5644

# JB55980: Chain of Custody Page 1 of 2



5.<u>1</u>

G



### Accutest Laboratories Sample Receipt Summary

Accutest Job Number:	JB55980	Client:		Project:			
Date / Time Received:	12/18/2013		Delivery Method:	Airbill #'s:			
Cooler Temps (Initial/Adjusted): #1: (1/1); #2: (1.5/1.5); #3: (1.1/1.1); #4: (1.3/1.3); 0							

Cooler Security Y	or N			Y	or N	Sample Integrity - Documentation	<u>Y</u>	or	N	
1. Custody Seals Present:			C Present:	$\checkmark$		1. Sample labels present on bottles:	$\checkmark$			
2. Custody Seals Intact:		4. Smpl	Dates/Time OK	✓		2. Container labeling complete:	$\checkmark$			
Cooler Temperature	Y or	N				3. Sample container label / COC agree:				
1. Temp criteria achieved:	$\checkmark$					Sample Integrity - Condition	<u>Y</u>	or	N	
2. Cooler temp verification:	IR G	Gun				1. Sample recvd within HT:	$\checkmark$			
3. Cooler media:	Ice (I	Bag)				2. All containers accounted for:				
4. No. Coolers:	4					3. Condition of sample:		Intac	t	
Quality Control Preservatio	<u>Y or</u>	N	N/A			Sample Integrity - Instructions	Y	or	N	N/A
1. Trip Blank present / cooler:		✓				1. Analysis requested is clear:				
2. Trip Blank listed on COC:						2. Bottles received for unspecified tests			$\checkmark$	
3. Samples preserved properly:	$\checkmark$					3. Sufficient volume recvd for analysis:				
4. VOCs headspace free:	$\checkmark$					4. Compositing instructions clear:				$\checkmark$
						5. Filtering instructions clear:				$\checkmark$

Comments

Accutest Laboratories V:732.329.0200 2235 US Highway 130 F: 732.329.3499 Dayton, New Jersey www/accutest.com 5.<u>1</u>

G

## JB55980: Chain of Custody Page 2 of 2





01/09/14

# **Technical Report for**

## **Brownfield Science & Technology**

Axil Belko, Kingsville, MD

367

Accutest Job Number: JB56072



Sampling Date: 12/18/13

**Report to:** 

Brownfield Associates, Inc.

npearse@bstiweb.com

**ATTN: Nora Pearse** 

## Total number of pages in report: 20



Mancy F. Cole

Nancy Cole Laboratory Director

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

Client Service contact: Kevin Dovedytis 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

New Jersey • 2235 Route 130 • Dayton, NJ 08810 • tel: 732-329-0200 • fax: 732-329-3499 • http://www.accutest.com



# **Table of Contents**

N

ω

4

G

### -1-

Section 1: Sample Summary Section 2: Case Narrative/Conformance Summary	
Section 3: Summary of Hits	
Section 4: Sample Results	7
<b>4.1:</b> JB56072-1: OF-1	8
<b>4.2:</b> JB56072-2: OF-2	10
<b>4.3:</b> JB56072-3: SEEP	12
<b>4.4:</b> JB56072-4: POT 1	14
<b>4.5:</b> JB56072-5: POT 2	16
Section 5: Misc. Forms	18
5.1: Chain of Custody	19



# Sample Summary

### **Brownfield Science & Technology**

Axil Belko, Kingsville, MD Project No: 367

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
JB56072-1	12/18/13	09:30 NO	12/19/13	AQ	Ground Water	OF-1
JB56072-2	12/18/13	09:35 NO	12/19/13	AQ	Ground Water	OF-2
JB56072-3	12/18/13	09:55 NO	12/19/13	AQ	Ground Water	SEEP
JB56072-4	12/18/13	11:40 NO	12/19/13	AQ	Ground Water	POT 1
JB56072-5	12/18/13	13:10 NO	12/19/13	AQ	Ground Water	POT 2



Job No: JB56072



## CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Brownfield Science & Technology	Job No	JB56072
Site:	Axil Belko, Kingsville, MD	Report Date	1/6/2014 11:48:30 AM

On 12/19/2013, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.4 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB56072 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

Matrix: AQ	Batch ID: V4V168	

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB56158-5MS, JB56158-5MSD were used as the QC samples indicated.

### Extractables by GCMS By Method SW846 8270D

	Matrix: AQ	Batch ID:	OP71600			
-	All samples were extracted within the recommended method holding time.					

All method blanks for this batch meet method specific criteria.

• OP71600-BS1 for Benzo(a)anthracene: Outside of in house control limits.

OP71600-BS1 for Benzo(a)pyrene: Outside of in house control limits.

# Matrix: AQ Batch ID: OP71819

- The data for SW846 8270D meets quality control requirements.
- The following samples were extracted outside of holding time for method SW846 8270D: JB56072-1, JB56072-2, JB56072-3
- JB56072-3: Confirmation run.
- JB56072-2: Confirmation run.
- JB56072-1: Confirmation run.

#### Extractables by GC By Method SW846 8015C

	Matrix: AQ	Batch ID:	OP71605				
	All samples were extracted within the recommended method holding time.						
-	Sample(s) JB56133-5MS, JB56133-5MSD were used as the QC samples indicated.						

- All method blanks for this batch meet method specific criteria.
- JB56072-3 for 5a-Androstane: Outside of in house control limits.

Matrix: AQ	Batch ID: OP71719	
The data for SW846 8015C mee	ts quality control requirements.	

The following samples were extracted outside of holding time for method SW846 8015C: JB56072-3

JB56072-3: Confirmation run.



Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Page 2 of 2



# Summary of Hits

Job Number:	JB56072
Account:	Brownfield Science & Technology
Project:	Axil Belko, Kingsville, MD
Collected:	12/18/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB56072-1	OF-1					
TPH-DRO (C10-	-C28)	0.172	0.10	0.053	mg/l	SW846 8015C
JB56072-2	OF-2					
TPH-DRO (C10-	-C28)	0.829	0.10	0.053	mg/l	SW846 8015C
JB56072-3	SEEP					
TPH-DRO (C10-	-C28)	4.12	0.10	0.053	mg/l	SW846 8015C
JB56072-4	POT 1					
No hits reported	in this sample.					
JB56072-5	POT 2					
No hits reported	in this sample.					



ω



**Section 4** 

4



Sample Results

**Report of Analysis** 



			Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Samp Matrix: Method: Project:	le ID: JB56077 AQ - G SW846	round Wate	V846 3510C			Date	Received: 1	2/18/13 2/19/13 /a
Run #1 Run #2 <sup>a</sup>	File ID Z87408.D 6P3386.D	DF 1 1	Analyzed 12/23/13 01/03/14	By EP EP	Prep D 12/21/1 01/02/1	3	Prep Batch OP71600 OP71819	Analytical Batch EZ4372 E6P134
Run #1 Run #2 BN PAH I	Initial Volume 1000 ml 960 ml .ist	Final Vol 1.0 ml 1.0 ml	lume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthra Benzo(a)pyrene Benzo(b)fluora Benzo(g,h,i)per Benzo(g,h)an Fluoranthene Fluorene Indeno(1,2,3-cc Naphthalene Pyrene	cene e nthene rylene nthene nthracene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	$ \begin{array}{c} 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\$	0.26 0.23 0.29 0.23 0.23 0.23 0.23 0.23 0.23 0.23 0.32 0.51 0.29 0.38 0.32 0.28 0.37 0.26 0.29 0.27	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	x	
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Lim	its		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d 2-Fluorobiphen Terphenyl-d14		71% 64% 47%	83% 74% 57%	30-1	31% 21% 47%		

(a) Confirmation run.

**J** = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound





			Repo	rt of An	alysis			Page 1 of 1	
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB560 AQ - ( SW840	Ground Wate	V846 3510C			Date	I I	2/18/13 2/19/13 a	
Run #1 Run #2	File ID 2Z36324.D	DF 1	Analyzed 12/26/13	By JM	Prep D 12/23/1		Prep Batch OP71605	Analytical Batch G2Z1391	
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	lume						
CAS No.	Compound		Result	RL	MDL	Units	Q		
	TPH-DRO (C	10-C28)	0.172	0.10	0.053	mg/l			
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its			
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d 5a-Androstane		83% 72% 62%		32-1	44% 38% 36%			

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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



4.1 4



			Repor	rt of An	alysis			Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB56072 AQ - Gi SW846	round Wate	V846 3510C			Date	I I	2/18/13 2/19/13 a
	File ID	DF	Analyzed	By	Prep D		Prep Batch	Analytical Batch
Run #1 Run #2 <sup>a</sup>	Z87409.D 6P3387.D	1 1	12/23/13 01/03/14	EP EP	12/21/1 01/02/1		OP71600 OP71819	EZ4372 E6P134
Run #1 Run #2 BN PAH L	Initial Volume 1000 ml 1000 ml ist	Final Vol 1.0 ml 1.0 ml	ume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthrae Benzo(a)pyrene Benzo(b)fluorae Benzo(g,h,i)per Benzo(g,h,i)per Benzo(k)fluorae Chrysene Dibenzo(a,h)an Fluoranthene Fluorene	cene nthene rylene nthene thracene	ND ND ND ND ND ND ND ND ND ND	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	0.26 0.23 0.29 0.23 0.23 0.46 0.32 0.51 0.29 0.38 0.32 0.32 0.28	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
193-39-5 91-20-3 85-01-8 129-00-0	Indeno(1,2,3-co Naphthalene Phenanthrene Pyrene	l)pyrene	ND ND ND ND	1.0 1.0 1.0 1.0	0.37 0.26 0.29 0.27	ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Lim	U		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d 2-Fluorobiphen Terphenyl-d14		67% 65% 39%	77% 67% 32%	30-1	31% 21% 47%		

(a) Confirmation run.

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



			Repo	rt of An	alysis			Page 1 of 1	
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB560 AQ - ( SW840	Ground Wate	V846 3510C			Date	I I	2/18/13 2/19/13 a	
Run #1 Run #2	File ID 2Y58550.D	DF 1	Analyzed 01/02/14	By JM	Prep D 12/23/1		Prep Batch OP71605	Analytical Batch G2Y2283	
Run #1 Run #2	Initial Volume 1000 ml	Final Vo 1.0 ml	lume						
CAS No.	Compound		Result	RL	MDL	Units	Q		
	TPH-DRO (C	10-C28)	0.829	0.10	0.053	mg/l			
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its			
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-d 5a-Androstane		68% 47% 41%		32-1	44% 38% 36%			

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



J = Indicates an estimated value

B = Indicates analyte found in associated method blank

			Repor	rt of An	alysis			Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB56077 AQ - G SW846	round Wate	V846 3510C			Date	I I	2/18/13 2/19/13 a
D #4	File ID	DF	Analyzed	By	Prep D		Prep Batch	Analytical Batch
Run #1 Run #2 <sup>a</sup>	Z87410.D 6P3388.D	1 1	12/23/13 01/03/14	EP EP	12/21/1 01/02/1		OP71600 OP71819	EZ4372 E6P134
Run #1 Run #2 BN PAH L	Initial Volume 1000 ml 950 ml ist	Final Vol 1.0 ml 1.0 ml	lume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
83-32-9	Acenaphthene		ND	1.0	0.26	ug/l		
208-96-8	Acenaphthylen	e	ND	1.0	0.23	ug/l		
120-12-7	Anthracene		ND	1.0	0.29	ug/l		
56-55-3	Benzo(a)anthra		ND	1.0	0.23	ug/l		
50-32-8	Benzo(a)pyrene		ND	1.0	0.23	ug/l		
205-99-2	Benzo(b)fluora		ND	1.0	0.46	ug/l		
191-24-2	Benzo(g,h,i)per		ND ND	1.0	0.32	ug/l		
207-08-9 218-01-9	Benzo(k)fluora	ntnene	ND ND	1.0 1.0	0.51 0.29	ug/l		
53-70-3	Chrysene Dibenzo(a,h)an	thracana	ND	1.0	0.29	ug/l		
55-70-5 206-44-0	Fluoranthene	unracene	ND	1.0	0.38	ug/l		
200-44-0 86-73-7	Fluorene		ND	1.0	0.32	ug/l		
80-73-7 193-39-5	Indeno(1,2,3-co	d)nyrono	ND	1.0	0.28	ug/l ug/l		
91-20-3	Naphthalene	u)pyrene	ND	1.0	0.37	ug/l		
85-01-8	Phenanthrene		ND	1.0	0.20	ug/l		
129-00-0	Pyrene		ND	1.0	0.23	ug/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Lim	uits		
4165-60-0	Nitrobenzene-d	5	<b>67</b> %	<b>78</b> %	28-1	<b>31</b> %		
321-60-8	2-Fluorobiphen	yl	64%	61%	30-1	<b>21%</b>		
1718-51-0	Terphenyl-d14		<b>62</b> %	45%	16-1	47%		

(a) Confirmation run.

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



			Kepu		al y 515	rage 1 01 1	
Client Sam Lab Sampl Matrix: Method: Project:	le ID: JB5607 AQ - C SW846	Fround Wate	W846 3510C		Da	L I	2/18/13 2/19/13 a
	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Y58266.D	1	12/24/13	JM	12/23/13	OP71605	G2Y2277
Run #2 <sup>a</sup>	2Z36450.D	1	12/30/13	JM	12/27/13	OP71719	G2Z1394
Run #1 Run #2	Initial Volume 1000 ml 1000 ml	Final Vo 1.0 ml 1.0 ml	lume				
CAS No.	Compound		Result	RL	MDL Unit	s Q	
	TPH-DRO (C	10-C28)	4.12	0.10	0.053 mg/l		
CAS No.							
	Surrogate Re	coveries	Run# 1	Run# 2	Limits		
84-15-1	Surrogate Ree o-Terphenyl	coveries	Run# 1 51%	Run# 2	Limits 36-144%		
84-15-1 16416-32-3	o-Terphenyl						

**Report of Analysis** 

(a) Confirmation run.

(b) Outside of in house control limits.

ND = Not detected MDL - Method Detection Limit

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Page 1 of 1

4.3 4



J = Indicates an estimated value

**B** = Indicates analyte found in associated method blank

	<b>Report of Analysis</b>						
Client Samj Lab Sample Matrix: Method: Project:	ple ID: POT 1 e ID: JB56072-4 AQ - Ground Water SW846 8260B Axil Belko, Kingsville	, MD			Date	-	2/18/13 2/19/13 'a
Run #1 Run #2		nalyzed 2/30/13	By LD	Prep Da n/a	ate	Prep Batch n/a	Analytical Batch V4V168
Run #1 Run #2	Purge Volume 5.0 ml						
VOA TCL	List (SOM0 1.1)						
CAS No.	Compound	Result	RL	MDL	Units	Q	
67-64-1 71-43-2 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 110-82-7 96-12-8 124-48-1 106-93-4	Acetone Benzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone (MEK) Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorobenzene Chloroethane Chloroform Chloromethane Cyclohexane 1,2-Dibromo-3-chloropropane Dibromochloromethane 1,2-Dibromoethane	ND ND	$ \begin{array}{c} 10\\ 1.0\\ 5.0\\ 1.0\\ 2.0\\ 10\\ 2.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 2.0\\ \end{array} $	3.3 0.28 0.42 0.21 0.30 0.56 3.2 0.18 0.23 0.35 0.39 0.25 0.36 0.18 1.3 0.19 0.16	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6	1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene	ND ND ND ND ND ND ND ND ND ND	1.0 1.0 5.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	0.20 0.31 0.30 0.63 0.26 0.22 0.34 0.24 0.38 0.28 0.15 0.21	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
123-91-1 100-41-4 76-13-1	1,4-Dioxane Ethylbenzene Freon 113	ND ND ND	130 1.0 5.0	73 0.21 0.77	ug/l ug/l ug/l		

ND = Not detected **MDL** - Method Detection Limit

**RL** = **Reporting Limit** 

**B** = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



**E** = Indicates value exceeds calibration range

J = Indicates an estimated value

# **Report of Analysis**

Client Sample ID:	POT 1		
Lab Sample ID:	JB56072-4	Date Sampled:	12/18/13
Matrix:	AQ - Ground Water	Date Received:	12/19/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Axil Belko, Kingsville, MD		

#### VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	101%		79-1	17%	
17060-07-0	1,2-Dichloroethane-D4	<b>91</b> %		72-1	23%	
2037-26-5	Toluene-D8	<b>99</b> %		82-1	<b>18</b> %	
460-00-4	4-Bromofluorobenzene	90%		75-1	18%	

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





		Repo	ort of A	nalysis			Page 1 of
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: POT 2 le ID: JB56072-5 AQ - Ground Water SW846 8260B Axil Belko, Kingsvill	e, MD			Date	1	2/18/13 2/19/13 a
Run #1 Run #2		Analyzed 12/30/13	By LD	Prep D n/a	ate	Prep Batch n/a	Analytical Batch V4V168
Run #1 Run #2	Purge Volume 5.0 ml						
VOA TCL	List (SOM0 1.1)						
CAS No.	Compound	Result	RL	MDL	Units	Q	
67-64-1 71-43-2	Acetone Benzene	ND ND	10 1.0	3.3 0.28	ug/l ug/l		
74-97-5 75-27-4	Bromochloromethane Bromodichloromethane	ND ND	5.0 1.0	0.42 0.21	ug/l ug/l		
75-25-2 74-83-9	Bromoform Bromomethane	ND ND	4.0 2.0	0.30 0.56	ug/l ug/l		
78-93-3 75-15-0	2-Butanone (MEK) Carbon disulfide	ND ND	10 2.0	3.2 0.18	ug/l ug/l		
56-23-5 108-90-7	Carbon tetrachloride Chlorobenzene	ND ND	1.0 1.0	0.23 0.35	ug/l ug/l		
75-00-3 67-66-3	Chloroethane Chloroform	ND ND	1.0 1.0	0.39 0.25	ug/l ug/l		
74-87-3 110-82-7	Chloromethane Cyclohexane	ND ND	1.0 5.0	0.36 0.18	ug/l ug/l		
96-12-8 124-48-1	1,2-Dibromo-3-chloropropan Dibromochloromethane	ND	10 1.0	1.3 0.19	ug/l ug/l		
106-93-4 95-50-1	1,2-Dibromoethane 1,2-Dichlorobenzene	ND ND	2.0 1.0	0.16 0.20	ug/l ug/l		
541-73-1 106-46-7	1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND	1.0 1.0	0.31 0.30	ug/l ug/l		
75-71-8 75-34-3	Dichlorodifluoromethane 1,1-Dichloroethane	ND ND	5.0 1.0	0.63 0.26	ug/l ug/l		
107-06-2 75-35-4	1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene	ND ND	1.0 1.0	0.22 0.34	ug/l ug/l		
156-59-2 156-60-5 78-87-5	trans-1,2-Dichloroethene 1,2-Dichloropropane	ND ND ND	1.0 1.0 1.0	0.24 0.38 0.28	ug/l ug/l ug/l		
78-87-5 10061-01-5 10061-02-6	cis-1,3-Dichloropropene	ND ND ND	1.0 1.0 1.0	0.28 0.15 0.21	ug/l ug/l ug/l		
123-91-1 100-41-4	1,4-Dioxane Ethylbenzene	ND ND ND	130 1.0	73 0.21	ug/l ug/l		
76-13-1	Freon 113	ND	5.0	0.21	ug/l		

ND = Not detected **MDL** - Method Detection Limit

**RL** = **Reporting Limit** 

**B** = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



**E** = Indicates value exceeds calibration range

J = Indicates an estimated value

# **Report of Analysis**

Client Sample ID:	POT 2		
Lab Sample ID:	JB56072-5	Date Sampled:	12/18/13
Matrix:	AQ - Ground Water	Date Received:	12/19/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Axil Belko, Kingsville, MD		

#### VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	101%		79-1	17%	
17060-07-0	1,2-Dichloroethane-D4	<b>92</b> %		72-1	23%	
2037-26-5	Toluene-D8	100%		82-1	<b>18</b> %	
460-00-4	4-Bromofluorobenzene	91%		75-1	18%	

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





**Section 5** 





			CHAI	N Ö	FC	UST	OD	Y										PAGE		OF	<u> </u>
ACCUTEST											FE	D-EX Tra	acking A				Bottle Ord	der Control #			
LABORATORIES	Gw		2235 F TEL: 732-32	9-0200	FAX: 73		) 9/3480				Acc	utest Qu	uote #				Accutest	Job # 5/	3560	72	
Client / Reporting Information	<u></u>		Project I		coutest.co	m							Reau	ested /	Analysi	s ( see T	EST CO	DDE sheet)	1.500	Ť	Matrix Codes
Company Name Brownfield	Project Name:																				DW - Drinking Water
company Name Brownfield Science & Technology	Axil	- Bel	КО																		GW - Ground Water WW - Water
3157 Limestone Road	Street			Dilling is		n ( if differ	ant from		1.10)	的财政		0[-	I								SW - Surface Water SO - Soil
Marbranyille, PA 19330	City		State	Company	Name	n ( n unior	ent non	r repor	(10)			$\mathcal{Y}$	I								SL- Sludge SED-Sediment
Project Contact	City KINGSVII	lle, I	MD	Street Ad	dress						H۶	X k	2								OI - Oil LIQ - Other Liquid
Tripo Fischer	30			<b>A1</b> .			Stat			Žip	<i>f</i>	-	0								AIR - Air SOL - Other Solid
Phone # - 593-5500 Fax#	Client Purchase Orde	ier #		City			Stat	e		zip	l	$\Omega$	21								WP - Wipe FB-Field Blank EB-Equipment Blank
Sampler(s) Name(s) Phone #	Project Manager	ische	r	Attention							Ī	0	5	$\mathbf{O}$							RB- Rinse Blank TB-Trip Blank
I VAR U.	HI PP	· JUIL	Collection				N	umber of	preserved	Bottles	ΞÌ	Ŭ	00	Š						ŀ	
Accutest Semple # Field ID / Point of Collection	MEOH/DI Vial #	Dale	Time	Sampled by	Matrix	# of bottles	HCI NaOH	HN03 H2SO4	NONE Di Wate	MEOH			687	2							LAB USE ONLY
		12/18/12	020	NO	Gint	ч	2		2			2 -	2							_	
2 DF-2	1	211813	0935	NO	GW	4	Z		2				2								
3 SeeD	1	2118/13	0955	NO	GW	4	2		2		1	2	2								E15
4 POT I	1.	21813	1140	NO	GW	З	3							3							2111
5 POT 2	ľ	2/18/13	1310	NO	GW	З	3							3							
																	+				
									┼-┼		++								+	$\rightarrow$	
	+									┼╌┼╌	┼┼╴									+	
								$\square$			++	+				_					
	+																				
																0		Consideration of the second			
Turnaround Time ( Business days)	Approved By (Accutee	et PM): / Date:			Commerc	Data Ial "A" (Le		able In	ormatio	n YASP C	ategory	A				Cor	riments /	Special Inst	uctions ]		
Std. 10 Business Days						ial "B" ( Le Level 3+4				YASP C		в				Rec	dat	Exton Se	nvice	Cont	or
5 Day RUSH 3 Day EMERGENCY					NJ Reduc	ed	.,			DD For											
2 Day EMERGENCY     1 Day EMERGENCY					Commerc	Commerci	ial "A" =	Results		ther							.//9	`	(())		
ther			Λ μ			Commerci NJ Reduc	ial "B" = I red = Res	Results	+ QC Suma	mmary	art <b>ili</b> Ra	w data					1.1		•		
Emergency & Rush T/A data available VIA Lablink		ple <b>Ges</b> tody m	ust be docum	ented b	elow eac								urier	lelivery	late There		Receive	d Bur	/		
1 Mona E Pearse 12-18	13@1530	Minl	LAN	12/1	9/13	400	2	1Ľ	ML	1	47	11		111	19/15	1450	2 7	K			
Relinquished by Sampler: Date Time:	13 1810 3	scoived By	1 K	1			Relinqui 4	chille,		• •	4- 1	$\mathbb{V}$	/	ſ	atterime:		Receive 4	d By:	1		
Relinquished by: Date Time:	Re 5	eceived By:					Custody	Seal #	Ē			act ↓ otin tact		Preserved	where an	pilCable		Pu l	•/	Gooler	°ma Cl
																		/	1		R
XB JJ285																		·	J		0/

JB56072: Chain of Custody Page 1 of 2



5.<u>1</u>

(J)



1. Temp criteria achieved:

2. Cooler temp verification:

3. Cooler media:

4. No. Coolers:

### Accutest Laboratories Sample Receipt Summary

Sample Integrity - Condition

1. Sample recvd within HT:

3. Condition of sample:

2. All containers accounted for:

1. Analysis requested is clear:

Sample Integrity - Instructions

2. Bottles received for unspecified tests

3. Sufficient volume recvd for analysis:

4. Compositing instructions clear:

5. Filtering instructions clear:

LABOR	ATORIES				
Accutest Job Number:	JB56072	Client:		Project:	
Date / Time Received:	12/19/2013	Delivery N	lethod:	Airbill #'s:	
Cooler Temps (Initial/Ad	djusted): <u>#1: (1.4</u> /	(1.4); 0			
Cooler Security	Y or N		Y or N	Sample Integrity - Documentation	Y or N
1. Custody Seals Present:		3. COC Present:		1. Sample labels present on bottles:	
2. Custody Seals Intact:	✓ 4.	Smpl Dates/Time OK		2. Container labeling complete:	
Cooler Temperature	Y or N	_		3. Sample container label / COC agree:	

5.1 5

Quality Control _Preservatio	Y	or N	N/A
1. Trip Blank present / cooler:		$\checkmark$	
2. Trip Blank listed on COC:		$\checkmark$	
3. Samples preserved properly:	$\checkmark$		
4. VOCs headspace free:	$\checkmark$		

✓

Ice (Bag)

1

Comments

Accutest Laboratories V:732.329.0200 2235 US Highway 130 F: 732.329.3499 Dayton, New Jersey www/accutest.com

JB56072: Chain of Custody Page 2 of 2

<u>Y</u>

✓

✓

✓

✓

<u>or N</u>

Intact

Y or N

✓

N/A

✓

✓





01/09/14

# **Technical Report for**

## **Brownfield Science & Technology**

Axil Belko, Kingsville, MD

367

Accutest Job Number: JB56462



Sampling Date: 12/23/13

**Report to:** 

Brownfield Associates, Inc.

npearse@bstiweb.com

**ATTN: Nora Pearse** 

### Total number of pages in report: 12



Mancy F. Cole

Nancy Cole Laboratory Director

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

Client Service contact: Kevin Dovedytis 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

New Jersey • 2235 Route 130 • Dayton, NJ 08810 • tel: 732-329-0200 • fax: 732-329-3499 • http://www.accutest.com



# **Table of Contents**

Sections:

N

ω

4

G

### -1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Summary of Hits	5
Section 4: Sample Results	6
<b>4.1:</b> JB56462-1: C-EFFLUENT	7
Section 5: Misc. Forms	10
5.1: Chain of Custody	11



# Sample Summary

Job No:

JB56462

### **Brownfield Science & Technology**

Axil Belko, Kingsville, MD Project No: 367

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
JB56462-1	12/23/13	11:00 NP	12/24/13	AQ	Effluent	C-EFFLUENT





## CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Brownfield Science & Technology	Job No	JB56462
Site:	Axil Belko, Kingsville, MD	Report Date	1/6/2014 4:22:04 PM

On 12/24/2013, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.6 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB56462 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

		Matrix: AQ	Batch ID:	V2B5238
--	--	------------	-----------	---------

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JB56453-6MS, JB56453-6MSD were used as the QC samples indicated.

### Volatiles by GC By Method SW846 8015C

Γ	Matrix:	AQ		Ba	atch I	D:	: GUV4442

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JB56432-1MS, JB56432-1MSD were used as the QC samples indicated.

### Extractables by GC By Method SW846 8015C

	Matrix: AQ	Batch ID:	OP71700
--	------------	-----------	---------

All samples were extracted within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

N



# Summary of Hits

Job Number:	JB56462
Account:	Brownfield Science & Technology
Project:	Axil Belko, Kingsville, MD
Collected:	12/23/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB56462-1	<b>C-EFFLUENT</b>					
TPH-DRO (C10-	·C28)	1.55	0.10	0.055	mg/l	SW846 8015C

ω

**Section 4** 

4



Sample Results

**Report of Analysis** 



Methyl Tert Butyl Ether

**Surrogate Recoveries** 

Dibromofluoromethane

1,2-Dichloroethane-D4

**4-Bromofluorobenzene** 

**Toluene-D8** 

1634-04-4

CAS No.

1868-53-7

17060-07-0

2037-26-5

460-00-4

<b>Report of Analysis</b>							Page 1 of 1			
Client Sam Lab Sampl Matrix: Method: Project:	le ID: JB564 AQ - 1 SW84	FLUENT 62-1 Effluent 6 8260B Selko, Kings	ville, MD			Date	1	/23/13 /24/13 a		
Run #1 Run #2	File ID 2B115129.D	DF 1	Analyzed 12/27/13	By KC	Prep D n/a	ate	Prep Batch n/a	Analytical Batch V2B5238		
Run #1 Run #2	Purge Volume 5.0 ml	;								
Purgeable	Aromatics, MT	BE								
CAS No.	Compound		Result	RL	MDL	Units	Q			
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		ND ND ND ND	1.0 1.0 1.0 1.0	0.28 0.44 0.21 0.19	ug/l ug/l ug/l ug/l				

1.0

**Run# 2** 

ND

Run#1

103%

**102%** 

97%

96%

0.29

Limits

79-117%

72-123%

82-118%

75-118%

ug/l

### Donort of Analysis

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



		Repo	ort of An	alysis		Page 1 of 1
Client San Lab Samp Matrix: Method: Project:	le ID: JB56462-1 AQ - Effluent SW846 80150			Da	I I I I I I I I I I I I I I I I I I I	2/23/13 2/24/13 /a
Run #1 Run #2	File ID DF UV12371.D 1	Analyzed 12/27/13	By XPL	Prep Date n/a	Prep Batch n/a	Analytical Batch GUV4442
Run #1 Run #2	Purge Volume 5.0 ml					
CAS No.	Compound	Result	RL	MDL Units	5 Q	
	TPH-GRO (C6-C10)	ND	0.20	0.038 mg/l		
CAS No.	Surrogate Recoverie	s Run#1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	88%		<b>68-114</b> %		

**MDL** - Method Detection Limit ND = Not detected

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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



41



<b>Report of Analysis</b>								Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:	e ID: JB564 AQ - 1 SW84	Effluent	W846 3510C ville, MD			Date	L	2/23/13 2/24/13 a
Run #1 Run #2	File ID 2Y58510.D	DF 1	Analyzed 12/31/13	By JM	Prep D 12/26/1		Prep Batch OP71700	Analytical Batch G2Y2282
Run #1 Run #2	Initial Volumo 960 ml	e Final Vo 1.0 ml	lume					
CAS No.	Compound		Result	RL	MDL	Units	Q	
	TPH-DRO (C	C10-C28)	1.55	0.10	0.055	mg/l		
CAS No.	Surrogate Re	ecoveries	Run# 1	Run# 2	Lim	its		
84-15-1 16416-32-3 438-22-2	o-Terphenyl Tetracosane-c 5a-Androstan		66% 42% 37%		32-1	44% 38% 36%		

ND = Not detected **MDL** - Method Detection Limit

**RL** = **Reporting Limit** 

**E** = Indicates value exceeds calibration range

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





**Section 5** 



Misc. Forms
Custody Documents and Other Forms
Includes the following where applicable: <ul> <li>Chain of Custody</li> </ul>

	CHAI	N OF C	UST	OD	Y								F	PAGE		OF
	2235	Route 130, Dayton	NI 08810					FED-EX	Tracking	ŧ			Bottle Order			
	TEL, 732-3	29-0200 FAX: 73 www.accutest.co	2-329-3499	/3480				Acculest	Quote #				Accutest Jo	"SB	5646	2
Client / Reporting Information		Information							Requ	lested A	alysis (	see TE	ST COL	)E sheet)	T	Matrix Codes
Company Name Brownfield Project Name:	- Belko															DW - Drinking Water GW - Ground Water
Street Address		en de la militar	. et : 2.07	1999 - C			1. No. (1)	602		1.)						WW - Water SW - Surface Water SO - Soil
3157 Limestone Road	State	Billing Informatic Company Name	n (if differe	ant from	Report t	0)		-		B						SL- Sludge SED-Sediment
Cochranville, PA 19330 King	wille, MD	Street Address						-  Q	$\mathcal{A}$	E						OI - Oil LIQ - Other Liquid
Higher @ bstiweb.com 30	7	City		State			Zip	- NA	GR	2						AIR - Air SOL - Other Solid WP - Wipe
Phone # Chent Purchase Chent Purchase	Order #	City		State				P		+						FB-Field Blank EB-Equipment Blank
Sampler(s) Name(s) NUTO PROYSE NOTE O TOUT	Fischer	Attention:							+	X						RB- Rinse Blank TB-Trip Blank
Maria real schades. Inthe	Collection			Nur	nber of pr	1		H.	Hd	Ш						
Acculent Sample # Field ID / Point of Collection MEOH/DI Val #	Date Time	Sampled by Matrix	# of bottles	NaOH	HN03 H2SO4	DI Wate	MEOH	F	Ĥ	Þ						LAB USE ONLY
1 C-Effluent	12/23/13 1100	NPGW	7	٦				×	×	X						
	, ,											ļ				R12
						_	++									812
				-++	+								+		+	
					-+-+	++	++	1								
													_			
								_								
															+-+	
											_		+			
Turnaround Time ( Business days)			Data cial "A" (Le	Delivera	ble Info		ASP Cate					Сол	nments / S	Special Inst	ructions	
Approved By (Acc	itest PM); / Date:	Commer	cial "B" ( Le	evel 2)	[	N	ASP Cate	gory B								
5 Day RUSH 3 Day EMERGENCY		FULLT1	( Level 3+4 ced	)	Ĺ	_	ate Forme D Forme					Roch	1		5 1 J - 5	
2 Day EMERGENCY		Commer	cial "C" Commerci	al "A" = F	] Iesults O		her					12	24	ton Se	ervice (	
1 Day EMERGENCY     other			Commerci	ial "B" = F ed = Resi	tesults +	QC Sur	arv + Parti	ial Raw da	ta				' 'P	2012	to days	
	ample Custody must be docu	mented below ea	ch time sa	mpies c	hange	posses	sipn, in	cluding	courier		e Time:		Received	By:	-	4.1
Mora E Regnoe 12/11/13	Received By:	/		2		Ì	1	_		) <u>r</u>	12413	1415	2 Received	21		
Belle Time Date Time 13/3 1800	Received By:	·		Relinquia 4		_		] Intact			e Time:	able	4	Dn	~	Cooler Temp
Refinquished by: 5	Received By: 5			Custody	2481 #			J Intact Not inta	ict					5	۲	Cooler Temp. 6-C-IC
3A TAS											mB					1

JB56462: Chain of Custody Page 1 of 2



5.<u>1</u>

G



### Accutest Laboratories Sample Receipt Summary

LABOR	ATORIES					
Accutest Job Number:	JB56462	Client:		Project:		_
Date / Time Received:	12/24/2013		Delivery Method:	Airbill #'s:		
Cooler Temps (Initial/A	djusted): <u>#1: (1.6/</u>	<u>1.6); 0</u>				
Cooler Security	Y or N		Y or N	Sample Integrity - Documentation	Y or N	

1. Custody Seals Present:     Image: Custody Seals Intact:       2. Custody Seals Intact:     Image: Custody Seals Intact:	3. COC Present:     4. Smpl Dates/Time OK     Y or N	<ol> <li>Sample labels present on bottles:</li> <li>Container labeling complete:</li> <li>Sample container label / COC agree:</li> </ol>	V V		
1. Temp criteria achieved:         2. Cooler temp verification:         3. Cooler media:         4. No. Coolers:	IR Gun Ice (Bag) 1	Sample Integrity - Condition 1. Sample recvd within HT: 2. All containers accounted for: 3. Condition of sample:	Y or ✓ ✓ Intac	<u>N</u>	
Quality Control _Preservatio         1. Trip Blank present / cooler:         2. Trip Blank listed on COC:         3. Samples preserved properly:         4. VOCs headspace free:	Y         or         N         N/A            Ø             Ø            Ø         Ø            Ø             Ø	Sample Integrity - Instructions 1. Analysis requested is clear: 2. Bottles received for unspecified tests 3. Sufficient volume recvd for analysis: 4. Compositing instructions clear: 5. Filtering instructions clear:	<u>Y</u> or ✓ ✓ ✓ ✓		<u>N/A</u>

Comments

Accutest Laboratories V:732.329.0200 2235 US Highway 130 F: 732.329.3499 Dayton, New Jersey www/accutest.com

## JB56462: Chain of Custody Page 2 of 2



5.<u>1</u>

