



**3rd Quarter 2015
Update Report
Axil Belko – 1991-0916-BA4**

September 2015

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1.0 INTRODUCTION

This Quarterly Report (Report), prepared by **Brownfield Science & Technology, Inc.** (BSTI) describes the third quarter (July – September) 2015 activities for the Axil Belko project in Kingsville, MD (**Figure 1**). The routine activities described in this Report include biweekly inspections of seeps and outfalls along the Little Gunpowder Falls River (LGF) (River), quarterly gauging and sampling of monitoring wells and quarterly sampling of outfalls and the natural seep. Additionally, in accord with the July 2014 *Soil Sampling and Ecological Risk Assessment Work Plan* approved by MDE in December 2014, and subsequent communications, BSTI has carried out the second round of surface water sampling and ecological toxicity testing.

2.0 MONTHLY SITE INSPECTIONS AND WELL GAUGING

2.1 Monthly Site Inspections

Site inspections were performed biweekly 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 droplets of petroleum and or sheen were observed at the seep in August when the oil sorbent pads were removed from the rock crevasse adjacent to the Seep. A summary of observations made during Site inspections are attached in **Table 1**. Observations of sheen and small quantities of product continue to decrease in frequency as did observations made in 2011 and 2012, prior to the remedial excavation in Area C. Maximum quantities of free product have consisted of isolated drops in the Seep area observed during only one site inspection (August 27, 2015) over the past four months. Observations of product are expected to continue to decrease in frequency as the groundwater system equilibrates. BSTI continues to maintain and/or replace petroleum sorbent pads and booms in the area of the Seep near MW-1 and Outfall 2.

2.2 Monitoring Well Gauging

No sheen or measurable product was observed in the initial gauging of monitoring wells during the second quarter. However, after purging MW-3A, a small quantity of product was observed on the pump. After purging, the well was gauged again and no measurable product was observed. Refer to **Table 2** for the well gauging data for the period from July to September, 2015. A hydrograph depicting liquid levels is presented in **Figure 2**. Water levels in the LGF River were measured in September and were 79.49 feet and 74.87 feet above mean sea level adjacent to Outfall 1 and the Seep respectively.

Groundwater elevations were calculated to determine general perched groundwater flow direction in Area C. **Figure 3** shows perched groundwater contours observed September 8, 2015 and estimated direction of groundwater flow. The presence of the excavation, backfilled with high permeability gravel and the partial abandonment of Outfall 2 have modified water le

Area C and altered the shape of groundwater contours. Despite this, direction of groundwater flow remains similar to that observed prior to remedial activities. In the southern part of the area, groundwater flow direction is primarily toward the location of the Seep; along the bank of the LGF River. In the vicinity of Outfall 2 (OF-2) groundwater flow is directly east towards the bank of the River. Hydraulic gradient was determined to be approximately 0.2 ft/ft.

Despite partially abandoning OF-2, approximately 20 feet of concrete pipe remains intact. This portion of pipe was unreachable with heavy equipment. As a result, base ground water flow continues to enter the OF-2 piping and discharges along the riverbank at a reduced rate compared prior to abandonment. Flow rates of both outfalls during this quarter varied at OF-1 from 0.1 to 0.5 gallons per minute (gpm) and from OF-2 from 0.15 to 0.25 gpm.

3.0 GROUNDWATER SAMPLING

3.1 Sampling Procedures

Groundwater samples were collected from the on-site monitoring wells on September 8, 2015. The field report for groundwater sampling, including purge volumes, is included in **Table 3**. All monitoring wells were sampled using dedicated disposable bailers and in accordance with BSTI's quality assurance and quality control program. 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. Samples from monitoring wells and samples from OF-1, OF-2 and the Seep were collected and analyzed for the following:

- PAHs via method 8270
- TPH Diesel Range Organics (DRO) via method 8015

3.2 Results

The analytical results for monitoring wells during this sampling event may be found in **Table 4**, attached. TPH-DRO continues to exceed the 47 $\mu\text{g/l}$ standard for Type I and II aquifers; however, the perched groundwater at this facility is not suitable for potable use. TPH-DRO ranged from 506 $\mu\text{g/l}$ to 16,600 $\mu\text{g/l}$ in Site monitoring wells. Analytical results for MW-9 show concentrations of naphthalene to be 1.7 $\mu\text{g/l}$, which exceeds the 0.65 $\mu\text{g/l}$ standard for Type I and II aquifers. DRO concentrations for respective monitoring wells are presented in **Figure 4**. TPH-DRO concentrations over time in monitoring wells are illustrated in **Figure 5**. Concentrations are generally similar to those observed in the last quarter of 2015. TPH-DRO concentrations remain higher than observed prior to the start of remedial excavations in some wells (MW-3, MW-4 and MW-9). Concentrations have fallen to levels below those observed prior to remediation in wells MW-1, MW-7 and MW-8 with no clear pattern visible for the remainder of the wells. TPH-DRO levels in well MW-10, installed subsequent to remediation, have a consistent decreasing trend.

TPH-DRO was detected at levels which exceed the MDE standard at the Seep, Outfall 1 and Outfall-2 as summarized in **Table 5**. No individual compounds were detected above MDE standards. TPH-DRO in Outfalls and the Seep over time are illustrated in **Figure 6**.

Concentrations have exhibited an overall downward trend since the completion of remediation and are currently in a similar range to those observed prior to remediation.

Concentrations of TPH-DRO, close to or above solubility limits, are still observed in down gradient wells MW-1, MW-4, MW-6, MW-7A, MW-9, Outfall #1, Outfall #2 and the Seep. TPH-DRO and PAH detections presumably reflect the mobilization of NAPL containing material during the remedial excavation. It is expected that TPH-DRO concentrations in groundwater will continue to decrease gradually over time in response to the remedial excavation.

Full analytical results for all water samples are provided in **Appendix I**.

4.0 ECOLOGICAL TOXICITY ASSESEMENT

4.1 Surface Water Sampling

On September 8, 2015 the second of two surface water sampling events was conducted. Three samples were collected from the LGF River approximately 25, 20 and 10 feet down gradient from Outfall1, Outfall 2 and the Seep. Samples were analyzed for TPH-DRO and PAHs and none were detected above method detection limits. Analytical results are provided in **Appendix I**.

4.2 Toxicity Testing

On September 8, 2015 water samples were collected from Outfall 2 and the Seep for ecological toxicity testing. Due to problems with one of the tests, additional sample volume from the Seep was collected on September 21. The test organisms, *Ceriodaphnia dubia* (water flea) and *Hyalella Azteca* (amphipod) were exposed to 100, 10, 4, 1 and 0.5 percent dilutions of each sample by EA Engineering, Science, and Technology, Inc (Hunt Valley, MD). In the Outfall 2 undiluted sample *C. dubia* had 75% survival and *H. azteca* had 62% survival. The survival of *C. dubia* is a significant increase from that observed in the previous test were 0% survived while *H. Azteca* results were similar. All dilutions had survival rates of at least 90 % for both organisms. In the undiluted Seep sample *C. dubia* had 90% survival and *H. azteca* had 80% survival. Both survival rates are an increase from those observed in the initial testing where *C. dubia* had 50% survival and *H. azteca* had 5% survival. All dilutions of the Seep had 100% survival. The full report on toxicity testing is included in **Appendix II**.

Overall results indicate that undiluted groundwater discharging from the Site has some toxicity. However, toxicity is significantly less than indicated by the initial testing despite similar or increased concentrations of TPH-DRO during the second testing event. As noted in reporting on the prior toxicity testing, absence of correlation of mortality with TPH-DRO concentrations and differing results for the two organisms suggest that some factor other than TPH-DRO is responsible for the toxicity observed in prior testing.

Concentrations of TPH-DRO in Outfall 2 and the Seep were 346 and 2,890 ug/l at the time of sampling while the LGF River contained less than 64 ug/l TPH-DRO. This indicates that groundwater is diluted in the LGF River down gradient of the Seep by a factor of at least 24:1. Based on the relative flow rates of the LGF River and Seep, a dilution of approximately 20,000:1 is expected when fully mixed. Toxicity testing indicates that as little as a 1 in 10 dilution of both the Seep and Outfall 2 waters results in no readily apparent toxicity to test organisms. Consequently the discharge of these waters should have minimal to no impact on the ecology of the Little Gunpower Falls River after minimal mixing. No further evaluation of ecological toxicity is proposed.

5.0 FUTURE ACTIVITIES

5.1 Routine Sampling and Monitoring

Quarterly and biannual sampling activities, biweekly inspections (until approval of monthly inspections) and quarterly water level gauging will continue with fourth quarter monitoring well sampling for PAHs and TPH-DRO scheduled for December 2015. Sample of the onsite potable well will also be conducted in December 2015. In addition, all oil absorbent pads and booms will be maintained throughout the duration of the remedial actions.

TABLES

**TABLE 1 - SITE INSPECTION SUMMARY
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Date	Seep	Outfall 1	Outfall 2	MW-2 Excavation	Notes
3/22/11	sheen	no sheen	no sheen	NA	NA
4/1/11	no sheen	no sheen	no sheen	NA	Excavation Areas A, D, I
4/27/11	no sheen	no sheen	no sheen	NA	Building 8 Slab Demolished
5/2/11	no sheen	no sheen	no sheen	NA	NA
5/11/11	no sheen	no sheen	no sheen	NA	NA
5/24/11	no sheen	no sheen	no sheen	NA	NA
6/2/11	no sheen	no sheen	no sheen	NA	NA
7/6/11	no sheen	no sheen	no sheen	NA	NA
7/20/11	no sheen	no sheen	no sheen	NA	NA
10/14/11	sheen	no sheen	no sheen	NA	NA
10/31/11	no sheen	no sheen	no sheen	NA	NA
11/29/11	sheen & tiny amount of oil	no sheen	sheen	NA	NA
12/8/11	no sheen	no sheen	no sheen	NA	NA
1/13/12	no sheen	no sheen	no sheen	NA	NA
1/19/12	sheen	no sheen	no sheen	NA	NA
1/25/12	no sheen	no sheen	no sheen	NA	NA
2/6/12	no sheen	no sheen	no sheen	NA	NA
3/29/12	no sheen	no sheen	no sheen	NA	NA
6/11/12	no sheen	no sheen	no sheen	NA	Pilot Excavation
7/12/12	no sheen	no sheen	no sheen	NA	NA
7/27/12	no sheen	no sheen	sheen	NA	2nd excavation completed
9/12/12	no sheen	no sheen	no sheen	NA	water above seep
10/31/12	sheen	no sheen	no sheen	NA	3rd excavation completed
11/8/12	small amount of product	no sheen	sheen	NA	NA
11/21/12	small amount of product	no sheen	no sheen	NA	Start of Demolition
1/9/13	no sheen	no sheen	no sheen	NA	NA
1/24/13	no sheen	NA	NA	NA	NA
2/11/13	no sheen	no sheen	no sheen	NA	NA
4/12/13	sheen	no sheen	no sheen	NA	NA
4/30/13	no sheen	no sheen	no sheen	NA	4th excavation completed
5/7/13	no sheen	no sheen	no sheen	NA	NA
6/21/13	sheen	no sheen	no sheen	NA	NA
7/9/13	drops of oil	no sheen	no sheen	NA	NA
7/26/13	drops of oil	no sheen	no sheen	NA	NA
7/30/13	drops of oil	no sheen	no sheen	NA	NA
8/19/13	drops of oil	no sheen	no sheen	NA	5th excavation completed
8/20/13	drops of oil	no sheen	no sheen	residual oil	NA



**TABLE 1 - SITE INSPECTION SUMMARY
 AXIL BELKO FACILITY
 11931 JERICHO RD KINGSVILLE, MD**

Date	Seep	Outfall 1	Outfall 2	MW-2 Excavation	Notes
8/22/13	drops of oil	no sheen	no sheen	residual oil	MW-2 excavation backfilled
9/12/13	drops of oil	no sheen	no sheen	no product	NA
10/3/13	little oil	no sheen	no sheen	no product	NA
10/7/13	little oil	no sheen	no sheen	no product	NA
10/21/13	drops of oil	no sheen	no sheen	no product	NA
10/28/13	small amount of oil	no sheen	no sheen	no product	NA
11/4/13	small amount of oil	no sheen	no sheen	no product	NA
11/11/13	drops of oil	no sheen	no sheen	no product	NA
11/18/13	no product	no sheen	no sheen	no product	NA
11/22/13	no sheen	no sheen	no sheen	no product	NA
11/25/13	no sheen	no sheen	no sheen	no product	NA
12/2/13	little oil	no sheen	no sheen	no product	NA
12/9/13	no sheen	no sheen	no sheen	no product	NA
12/16/13	sheen	no sheen	no sheen	no product	NA
12/23/13	no sheen	no sheen	no sheen	no product	NA
12/30/13	sheen	no sheen	no sheen	no sheen	NA
1/6/14	no sheen	no sheen	no sheen	no sheen	NA
1/13/14	no sheen	no sheen	no sheen	no sheen	NA
1/20/14	product size of dime	no sheen	no sheen	no sheen	NA
1/29/14	no sheen	no sheen	no sheen	no sheen	NA
2/5/14	no sheen	no sheen	no sheen	no sheen	NA
2/10/14	product size of dime	no sheen	no sheen	no sheen	NA
2/17/14	sheen	no sheen	no sheen	no sheen	NA
2/24/14	no sheen	no sheen	no sheen	no sheen	NA
3/4/14	sheen	no sheen	no sheen	no sheen	NA
3/18/14	no sheen	no sheen	no sheen	no sheen, algae growth	NA
3/24/14	no sheen	no sheen	no sheen	no sheen, algae growth	NA
4/2/14	sheen	no sheen	no sheen	minimal sheen	NA
4/9/14	no sheen	no sheen	no sheen	no sheen	NA
4/14/14	sheen	no sheen	no sheen	no sheen	NA
4/22/14	sheen	no sheen	no sheen	no sheen	NA
5/19/14	sheen	no sheen	no sheen	no sheen	NA
6/2/14	small droplets of product	no sheen	no sheen	no sheen	NA
6/9/14	small droplets of product	no sheen	no sheen	no sheen	NA
6/16/14	no sheen	no sheen	no sheen	no sheen	NA
6/23/14	1" circle of product	no sheen	no sheen	no sheen	NA
6/30/14	no sheen	no sheen	no sheen	no sheen	NA
7/7/14	no sheen	no sheen	no sheen	minimal sheen	NA
7/14/14	no sheen	no sheen	no sheen	no sheen	NA
7/22/14	no sheen	no sheen	no sheen	organic sheen	NA
8/4/14	no sheen	no sheen	no sheen	no sheen	NA
8/15/14	no sheen	no sheen	no sheen	no sheen	NA



**TABLE 1 - SITE INSPECTION SUMMARY
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Date	Seep	Outfall 1	Outfall 2	MW-2 Excavation	Notes
8/8/14	2.5" circle product	no sheen	no sheen	no sheen	NA
8/25/14	2 quarter size drops of product	no sheen	no sheen	no sheen	NA
9/2/14	no sheen	no sheen	no sheen	no sheen	NA
9/12/14	no sheen	no sheen	no sheen	no sheen	NA
9/17/14	no sheen	no sheen	no sheen	no sheen	NA
9/22/14	no sheen	no sheen	no sheen	no sheen	NA
9/30/14	sheen	no sheen	no sheen	no sheen	NA
10/6/14	no sheen	no sheen	no sheen	no sheen	NA
10/16/14	several quarter size drops of product	no sheen	no sheen	no sheen	NA
10/20/14	no sheen	no sheen	no sheen	sheen	NA
10/27/14	small quantity product	no sheen	no sheen	no sheen	NA
11/3/14	no sheen	no sheen	no sheen	no sheen	NA
11/17/14	no sheen	no sheen	no sheen	no sheen	NA
12/4/14	no sheen	no sheen	no sheen	no sheen	NA
12/8/14	sheen	no sheen	no sheen	no sheen	NA
12/15/14	no sheen	no sheen	no sheen	no sheen	NA
12/22/14	sheen	no sheen	no sheen	no sheen	NA
12/30/14	product size of dime	no sheen	no sheen	no sheen	NA
1/13/15	no sheen	no sheen	no sheen	no sheen	NA
1/20/15	2 sheens (3"by 4")	no sheen	no sheen	no sheen	NA
1/26/15	1 sheen (4" by 3 1/2")	no sheen	no sheen	no sheen	NA
2/4/15	3 separate sheens (4" by 3 1/2")	no sheen	no sheen	no sheen	NA
2/9/15	sheen (15" by 3 1/2")	no sheen	no sheen	no sheen	NA
2/16/15	sheen (3"& 1/2")	no sheen	no sheen	no sheen	NA
2/25/15	no sheen	no sheen	no sheen	no sheen	NA
3/2/15	no sheen	no sheen	no sheen	no sheen	NA
3/11/15	sheen (8" by 7")	no sheen	no sheen	no sheen	NA
3/16/15	sheen 1/2 the size of seep area	no sheen	no sheen	no sheen	NA
3/23/15	sheen 1/4 the size of seep area	no sheen	no sheen	no sheen	NA
3/31/15	sheen (8" by 7")	no sheen	no sheen	no sheen	NA
4/6/15	sheen (4" by 3 1/2")	no sheen	no sheen	no sheen	NA
4/14/15	Sheen (15" by 7")	no sheen	no sheen	no sheen	NA
4/20/15	NA	no sheen	no sheen	no sheen	Sheen under water
4/27/15	sheen (26" by 4 1/2")	no sheen	no sheen	no sheen	NA
5/4/15	no sheen	no sheen	no sheen	no sheen	NA
5/14/15	no sheen	no sheen	no sheen	no sheen	NA
5/18/15	sheen (2" by 1 3/4")	no sheen	no sheen	no sheen	NA
5/26/15	3 sheens (4" by 3")	no sheen	no sheen	no sheen	NA
6/2/15	no sheen/ river over flooded	no sheen	no sheen	no sheen	NA
6/18/15	No sheen/raining	no sheen	no sheen	no sheen	NA
7/11/15	No sheen	no sheen	no sheen	no sheen	replaced oil boom/boom was displaced
8/14/15	No Sheen	no sheen	no sheen	no sheen	sorbents replaced
8/27/15	nickle sized droplets of product	no sheen	no sheen	no sheen	sorbents replaced
9/8/15	No sheen	no sheen	no sheen	no sheen	boom was displaced/sorbents replaced
9/21/15	No sheen	no sheen	no sheen	no sheen	sorbents replaced



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

Well Designation :	MW-1				MW-2			MW-3/MW-3A			
Casing Elevation :	94.41				98.44			99.37			
Screened Interval :	TD 21.65'				TD 27'			TD 20.6'/6-2'			
DATE	DTP	DTW	PT	*ELEV.	DTP	DTW	ELEV.	DTP	DTW	PT	*ELEV.
08/07/08	--	12.87	--	81.54	--	13.88	84.56	NM	NM	--	--
10/03/08	--	12.62	--	81.79	--	13.87	84.57	NM	NM	--	--
10/22/08	--	13.12	--	81.29	--	13.83	84.61	NM	NM	--	--
11/11/08	--	12.59	--	81.82	--	13.82	84.62	NM	NM	--	--
12/04/08	--	12.82	--	81.59	--	13.6	84.84	NM	NM	--	--
01/12/09	--	12.3	--	82.11	--	13.8	84.64	NM	NM	--	--
02/05/09	--	12.74	--	81.67	--	13.99	84.45	NM	NM	--	--
03/13/09	--	12.94	--	81.47	--	13.62	84.82	4.19	4.23	0.04	95.14
04/10/09	--	12.18	--	82.23	--	13.98	84.46	3.52	3.53	0.01	95.84
05/21/09	--	11.5	--	82.91	--	13.63	84.81	3.17	3.19	0.02	96.18
06/09/09	--	11.1	--	83.31	--	13.29	85.15	--	2.91	0	96.46
07/27/09	--	12.21	--	82.2	--	13.34	85.1	--	3.2	0	96.17
08/18/09	13.71	13.73	0.02	80.68	--	13.7	84.74	3.25	3.26	0.01	96.11
09/04/09	sheen	12.12	0	82.29	--	13.42	85.02	sheen	3.39	0	95.98
10/19/09	sheen	10.77	0	83.64	--	13.29	85.15	3.64	3.69	0.01	95.68
11/13/09	sheen	10.86	0	83.55	--	13.23	85.21	sheen	2.86	0	96.51
12/14/09	sheen	9.85	0	84.56	--	13.3	85.14	sheen	2.92	0	96.45
01/18/10	--	10.23	0	84.18	--	13.31	85.13	--	2.8	0	96.57
02/24/10	--	9.85	0	84.56	--	13	85.44	sheen	2.81	0	96.56
04/01/10	--	10.19	0	84.22	--	13.09	85.35	--	2.77	0	96.60
05/27/10	--	11.17	0	83.24	--	13.13	85.31	sheen	3.03	0	96.34
06/15/10	--	12.34	0	82.07	--	13.27	85.17	sheen	3.22	0	96.15
08/09/10	--	13.09	0	81.32	--	13.41	85.03	sheen	3.51	0	95.86
09/22/10	sheen	13.36	0	81.05	sheen	13.81	84.63	sheen	3.78	0	95.59
12/21/10	--	12.63	0	81.78	--	13.57	84.87	sheen	3.07	0	96.30
02/18/11	--	12.08	0	82.33	--	13.55	84.89	--	2.13	0	97.24
03/22/11	--	11.27	0	83.14	--	13.38	85.06	--	3.06	0	96.31
04/26/11	--	11.35	0	83.06	--	13.31	85.13	sheen	2.83	0	96.54
05/11/11	--	11.83	0	82.58	--	13.4	85.04	--	2.96	0	96.41
05/26/11	--	11.89	0	82.52	--	13.52	84.92	sheen	3.19	0	96.18
06/15/11	sheen	12.18	0	82.23	--	13.71	84.73	sheen	3.24	0	96.13
07/06/11	--	--	0	--	--	13.61	84.83	sheen	3.54	0	95.83
07/20/11	--	12.94	0	81.47	--	13.65	84.79	--	3.58	0	95.79
08/02/11	--	12.98	0	81.43	--	13.94	84.5	sheen	3.7	0	95.67
08/30/11	sheen	11.1	0	83.31	--	13.4	85.04	--	3.19	0	96.18
09/15/11	--	11.14	0	83.27	--	13.43	85.01	--	3.25	0	96.12
10/31/2011	--	10.94	0	83.47	--	13.33	85.11	--	2.67	0	96.70
11/21/2011	--	12	0	82.41	--	13.42	85.02	--	2.91	0	96.46
12/8/2011	--	9.78	0	84.63	--	13.05	85.39	--	2.72	0	96.65
1/25/2012	--	11	0	83.41	--	13.58	84.86	--	NM	--	--
2/7/2012	--	11.82	0	82.59	--	13.35	85.09	--	3.34	0	96.03
3/8/2012	--	11.65	0	82.76	--	13.4	85.04	--	3.55	0	95.82
4/6/2012	--	12.33	0	82.08	--	13.28	85.16	--	3.29	0	96.08
4/23/2012	--	10.71	0	83.70	--	13.01	85.43	--	NM	--	--
5/3/2012	--	11.18	0	83.23	--	12.14	86.3	--	NM	--	--
6/7/2012	--	12.18	0	82.23	--	13.15	85.29	--	NM	--	--
6/15/2012	--	11.65	0	82.76	--	13.12	85.32	--	NM	--	--
6/21/2012	--	11.75	0	82.66	--	13.06	85.38	--	NM	--	--
7/6/2012	--	11.74	0	82.67	--	13.06	85.38	--	NM	--	--

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

Well Designation :	MW-1				MW-2			MW-3/MW-3A			
Casing Elevation :	94.41				98.44			99.37			
Screened Interval :	TD 21.65'				TD 27'			TD 20.6'/6-2'			
DATE	DTP	DTW	PT	*ELEV.	DTP	DTW	ELEV.	DTP	DTW	PT	*ELEV.
8/20/2012	--	10.27	0	84.14	--	12.98	85.46	--	NM	--	--
9/19/2012	--	10.32	0	84.09	--	13.01	85.43	--	NM	--	--
10/18/2012	--	12.14	0	82.27	--	13.15	85.29	--	NM	--	--
11/21/2012	--	10.48	0	83.93	--	13.09	85.35	--	NM	--	--
12/11/2012	--	10.34	0	84.07	--	12.98	85.46	--	NM	--	--
1/9/2013	--	10.37	0	84.04	--	13.05	85.39	--	NM	--	--
2/11/2013	--	9.82	0	84.59	--	12.94	85.5	--	NM	--	--
3/21/2013	--	9.85	0	84.56	--	13.93	84.51	--	NM	--	--
4/15/2013	--	9.85	0	84.56	--	NM	--	--	NM	--	--
5/7/2013	--	10.89	0	83.52	--	NM	--	--	NM	--	--
6/4/2013	--	9.41	0	85.00	--	NM	--	--	NM	--	--
6/21/2013	--	9.49	0	84.92	--	NM	--	--	NM	--	--
7/15/2013	--	9.64	0	84.77	--	NM	--	--	NM	--	--
8/15/2013	--	10.13	0	84.28	--	NM	--	--	NM	--	--
9/24/2013	--	10.78	0	83.63	--	NM	--	--	NM	--	--
10/21/2013	--	10.39	0	84.02	--	NM	--	--	NM	--	--
11/11/2013	--	11.26	0	83.15	--	NM	--	--	NM	--	--
12/17/2013	--	9.41	0	85.00	--	NM	--	--	6.48	--	93.13
1/20/2014	--	9.5	0	84.91	--	NM	--	--	6.51	--	93.10
2/24/2014	--	9.37	0	85.04	--	NM	--	--	6.34	--	93.27
3/18/2014	--	9.55	0	84.86	--	NM	--	--	6.48	--	93.13
3/26/2014	--	9.55	0	84.86	--	NM	--	--	7.4	--	92.21
4/22/2014	--	9.6	0	84.81	--	NM	--	--	4.39	--	95.22
5/19/2014	--	9.47	0	84.94	--	NM	--	--	6.34	--	93.27
6/9/2014	--	9.71	0	84.70	--	NM	--	--	6.41	--	93.20
7/14/2014	--	9.88	0	84.53	--	NM	--	--	6.73	--	92.88
8/18/2014	--	10.05	0	84.36	--	NM	--	--	6.4	--	93.21
9/12/2014	--	11.46	0	82.95	--	NM	--	--	6.5	--	93.11
9/17/2014	--	11.56	0	82.85	--	NM	--	--	6.5	--	93.11
10/20/2014	--	9.83	0	84.58	--	NM	--	--	6.45	--	93.16
12/8/2014	--	9.51	0	84.90	--	NM	--	--	6.44	--	93.17
1/13/2015	--	9.53	0	84.88	--	NM	--	--	6.31	--	93.30
2/9/2015	--	9.64	0	84.77	--	NM	--	--	6.51	--	93.1
3/11/2015	--	9.53	0	84.88	--	NM	--	--	6.23	--	93.38
4/6/2015	--	9.73	0	84.68	--	NM	--	--	6.63	--	92.98
5/4/2015	--	9.73	0	84.68	--	NM	--	--	6.71	--	92.9
6/18/2015	--	9.83	0	84.58	--	NM	--	sheen	6.74	--	92.87
7/11/2015	--	10.06	0	84.35	--	NM	--	--	6.67	--	92.94
8/14/2015	--	10.85	0	83.56	--	NM	--	--	7.1	--	92.51
9/8/2015	--	10.17	0	84.24	--	NM	--	sheen	6.71	--	92.9

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)
 NM: Not measured
 NA: Not Applicable



**Table 2
Well Guaging Data
Axil Belko
Kingsville, MD**

Well Designation :	MW-4			MW-5			MW-6			MW-7/MW-7A		
Casing Elevation :	97.28			99.19			96.33			95.84		
Screened Interval :	TD 14.06'			3-18'			3-11'			3-13'/7-3.5'		
DATE	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.
08/07/08	--	7.42	89.86	NA	NA	--	NA	NA	--	NA	NA	--
10/03/08	--	7.38	89.9	NA	NA	--	NA	NA	--	NA	NA	--
10/22/08	--	7.52	89.76	NA	NA	--	NA	NA	--	NA	NA	--
11/11/08	--	7.37	89.91	NA	NA	--	NA	NA	--	NA	NA	--
12/04/08	--	7.39	89.89	NA	NA	--	NA	NA	--	NA	NA	--
01/12/09	--	7.41	89.87	NA	NA	--	NA	NA	--	NA	NA	--
02/05/09	--	7.48	89.8	NA	NA	--	NA	NA	--	NA	NA	--
03/13/09	--	7.53	89.75	NA	NA	--	NA	NA	--	NA	NA	--
04/10/09	--	7.39	89.89	NA	NA	--	NA	NA	--	NA	NA	--
05/21/09	--	7.34	89.94	NA	NA	--	NA	NA	--	NA	NA	--
06/09/09	--	7.23	90.05	NA	NA	--	NA	NA	--	NA	NA	--
07/27/09	--	7.34	89.94	NA	NA	--	NA	NA	--	NA	NA	--
08/18/09	--	7.35	89.93	NA	NA	--	NA	NA	--	NA	NA	--
09/04/09	--	7.29	89.99	NA	NA	--	NA	NA	--	NA	NA	--
10/19/09	--	7.35	89.93	--	4.82	94.37	--	7.27	89.06	--	9.5	86.34
11/13/09	--	7.32	89.96	--	4.85	94.34	--	7.19	89.14	--	9.69	86.15
12/14/09	--	7.25	90.03	--	4.91	94.28	--	7	89.33	--	9.6	86.24
01/18/10	--	7.29	89.99	--	4.93	94.26	--	7.18	89.15	--	9.7	86.14
02/24/10	--	7.25	90.03	--	4.75	94.44	--	7.13	89.2	--	9.65	86.19
04/01/10	--	7.21	90.07	--	4.5	94.69	--	7.14	89.19	--	9.48	86.36
05/27/10	--	7.47	89.81	--	5.07	94.12	--	7.54	88.79	--	10.28	85.56
06/15/10	--	7.53	89.75	--	5.19	94	--	7.61	88.72	--	10.37	85.47
08/09/10	--	7.52	89.76	--	5.37	93.82	--	7.63	88.7	--	10.82	85.02
09/22/10	--	7.58	89.7	--	5.55	93.64	--	7.65	88.68	--	11.04	84.8
12/21/10	--	7.38	89.9	--	5.23	93.96	--	7.45	88.88	--	10.59	85.25
02/18/11	--	7.3	89.98	--	5.18	94.01	--	7.39	88.94	--	10.35	85.49
03/22/11	--	7.23	90.05	--	4.71	94.48	--	7.29	89.04	--	9.5	86.34
04/26/11	--	7.19	90.09	--	4.22	94.97	--	7.17	89.16	sheen	9.81	86.03
05/11/11	--	7.3	89.98	--	4.41	94.78	--	7.31	89.02	--	9.92	85.92
05/26/11	--	7.27	90.01	sheen	4.44	94.75	--	7.29	89.04	--	9.87	85.97
06/15/11	--	7.31	89.97	sheen	4.63	94.56	--	7.36	88.97	--	10.01	85.83
07/06/11	--	7.36	89.92	--	4.91	94.28	--	7.38	88.95	--	10.37	85.47
07/20/11	--	7.32	89.96	--	4.89	94.3	--	7.33	89	--	10.25	85.59
08/02/11	--	7.35	89.93	--	5.01	94.18	--	7.35	88.98	--	10.56	85.28
08/30/11	--	7	90.28	--	4.16	95.03	--	7.08	89.25	--	9.44	86.4
09/15/11	--	6.93	90.35	--	4.02	95.17	--	7.05	89.28	--	9.5	86.34
10/31/2011	--	6.92	90.36	--	4.21	94.98	sheen	7.02	89.31	--	9.54	86.3
11/21/2011	--	7.07	90.21	--	4.45	94.74	--	7.02	89.31	--	10.05	85.79
12/8/2011	--	7.02	90.26	--	4.17	95.02	--	7.03	89.3	--	9.51	86.33
1/25/2012	--	7.11	90.17	--	4.79	94.4	--	NM	--	--	9.49	86.35
2/7/2012	--	7.19	90.09	--	4.93	94.26	--	7.32	89.01	--	9.93	85.91
3/8/2012	--	7.22	90.06	--	4.93	94.26	--	7.31	89.02	--	10	85.84
4/6/2012	--	7.27	90.01	--	5.01	94.18	--	7.42	88.91	--	10.23	85.61
4/23/2012	--	7.13	90.15	--	4.74	94.45	--	7.35	88.98	--	9.75	86.09
5/3/2012	--	7.24	90.04	--	5.17	94.02	--	7.35	88.98	--	10.02	85.82
6/7/2012	--	7.25	90.03	--	4.98	94.21	--	7.43	88.9	--	10.38	85.46
6/15/2012	--	7.48	89.8	--	6.1	93.09	--	7.44	88.89	--	NM	--
6/21/2012	--	7.27	90.01	--	5.88	93.31	--	7.27	89.06	--	NM	--
7/6/2012	--	7.15	90.13	--	5.82	93.37	--	7.16	89.17	--	NM	--

**Table 2
Well Guaging Data
Axil Belko
Kingsville, MD**

Well Designation :	MW-4			MW-5			MW-6			MW-7/MW-7A		
Casing Elevation :	97.28			99.19			96.33			95.84		
Screened Interval :	TD 14.06'			3-18'			3-11'			3-13'/7-3.5'		
DATE	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.
8/20/2012	--	7.89	89.39	--	6.02	93.17	--	7.82	88.51	--	NM	--
9/19/2012	--	7.92	89.36	--	6.03	93.16	--	7.85	88.48	--	NM	--
10/18/2012	--	7.95	89.33	--	6	93.19	--	7.89	88.44	--	NM	--
11/21/2012	--	8.18	89.1	trace	6.34	92.85	--	7.91	88.42	--	NM	--
12/11/2012	--	8.2	89.08	--	6.26	92.93	--	7.83	88.5	--	NM	--
1/9/2013	--	8.24	89.04	--	6.43	92.76	--	7.91	88.42	--	NM	--
2/11/2013	--	8.25	89.03	--	6.32	92.87	--	7.91	88.42	--	NM	--
3/21/2013	--	8.31	88.97	--	6.31	92.88	--	7.92	88.41	--	NM	--
4/15/2013	--	8.44	88.84	--	6.4	92.79	--	7.96	88.37	--	NM	--
5/7/2013	--	7.31	89.97	--	6.33	92.86	--	7.82	88.51	--	NM	--
6/4/2013	--	6.73	90.55	--	5.36	93.83	--	7.39	88.94	--	NM	--
6/21/2013	--	6.74	90.54	--	5.24	93.95	--	7.44	88.89	--	NM	--
7/15/2013	--	6.76	90.52	--	5.08	94.11	--	7.45	88.88	--	NM	--
8/15/2013	--	6.74	90.54	--	5.12	94.07	--	7.48	88.85	--	NM	--
9/24/2013	--	6.96	90.32	--	5.45	93.74	--	6.2	90.13	--	NM	--
10/21/2013	--	7.04	90.24	--	5.35	93.84	--	7.68	88.65	--	NM	--
11/11/2013	--	7.1	90.18	--	5.41	93.78	--	7.79	88.54	--	NM	--
12/17/2013	--	6.81	90.47	--	5.02	94.17	--	7.72	88.61	--	7.69	86.48
1/20/2014	--	6.9	90.38	--	5.05	94.14	--	7.72	88.61	--	7.83	86.34
2/24/2014	--	6.91	90.37	--	4.88	94.31	--	4.23	92.1	--	8.71	85.46
3/18/2014	--	6.93	90.35	--	5.02	94.17	--	7.74	88.59	--	8.08	86.09
3/26/2014	--	6.85	90.43	--	4.96	94.23	--	7.65	88.68	--	8.07	86.1
4/22/2014	--	6.66	90.62	--	4.91	94.28	--	7.54	88.79	--	7.78	86.39
5/19/2014	--	6.78	90.5	--	4.92	94.27	--	7.51	88.82	--	7.78	86.39
6/9/2014	--	6.73	90.55	--	4.93	94.26	--	7.53	88.8	--	8.02	86.15
7/14/2014	--	7.73	89.55	--	4.87	94.32	--	7.46	88.87	--	8.92	85.25
8/18/2014	--	6.82	90.46	--	4.93	94.26	--	7.48	88.85	--	7.89	86.28
9/12/2014	--	7.03	90.25	--	5.04	94.15	--	7.6	88.73	--	8.49	85.68
9/17/2014	--	6.98	90.3	--	5.02	94.17	--	7.58	88.75	--	8.53	85.64
10/20/2014	--	6.9	90.38	--	4.93	94.26	--	7.52	88.81	--	7.93	86.24
12/8/2014	--	6.96	90.32	--	4.82	94.37	--	7.62	88.71	--	7.89	86.28
1/13/2015	--	6.84	90.44	--	4.79	94.4	--	7.57	88.76	--	7.85	86.32
2/9/2015	--	6.78	90.5	--	4.82	94.37	--	7.68	88.65	--	7.92	86.25
3/11/2015	--	6.66	90.62	--	4.45	94.74	--	7.47	88.86	--	7.73	86.44
4/6/2015	--	6.97	90.31	--	4.83	94.36	--	7.63	88.7	--	8.14	86.03
5/4/2015	--	7.07	90.21	--	4.85	94.34	--	7.63	88.7	--	8.33	85.84
6/18/2015	--	6.98	90.3	--	4.81	94.38	--	7.43	88.9	--	7.97	86.2
7/11/2015	--	7.11	90.17	--	7.83	91.36	--	7.38	88.95	--	7.92	86.25
8/14/2015	--	7.28	90	--	4.9	94.29	--	7.43	88.9	--	8.41	85.76
9/8/2015	--	7.13	90.15	--	5	94.19	--	7.48	88.85	--	8.79	85.38

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

Well Designation :	MW-8/MW-8A			MW-9			MW-10		MP-15			MP-16		
Casing Elevation :	98.71			97.85			91.02		102.04			101.04		
Screened Interval :	5-15'/8-3'			TD 12.4'			5-1'		17.75-2.75'			13.4-3.4'		
DATE	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	--
10/03/08	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
10/22/08	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
11/11/08	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
12/04/08	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
01/12/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
02/05/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
03/13/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
04/10/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
05/21/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
06/09/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
07/27/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
08/18/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
09/04/09	NA	NA	--	NA	NA	--	NA	--	NA	NA	--	NA	NA	--
10/19/09	--	7.5	91.21	--	6.94	90.91	NA	--	NA	NA	--	NA	NA	--
11/13/09	--	7.51	91.2	--	6.81	91.04	NA	--	NA	NA	--	NA	NA	--
12/14/09	--	7.35	91.36	--	6.8	91.05	NA	--	NA	NA	--	NA	NA	--
01/18/10	--	7.55	91.16	--	6.83	91.02	NA	--	NA	NA	--	NA	NA	--
02/24/10	--	7.75	90.96	--	6.81	91.04	NA	--	NA	NA	--	NA	NA	--
04/01/10	--	7.42	91.29	--	6.82	91.03	NA	--	NA	NA	--	NA	NA	--
05/27/10	--	7.77	90.94	--	6.77	91.08	NA	--	NA	NA	--	NA	NA	--
06/15/10	--	7.9	90.81	--	6.76	91.09	NA	--	NA	NA	--	NA	NA	--
08/09/10	--	8.23	90.48	--	6.67	91.18	NA	--	NA	NA	--	NA	NA	--
09/22/10	sheen	8.45	90.26	--	6.6	91.25	NA	--	NA	NA	--	NA	NA	--
12/21/10	sheen	8.13	90.58	--	6.48	91.37	NA	--	NA	NA	--	NA	NA	--
02/18/11	--	8.23	90.48	--	6.59	91.26	NA	--	NA	NA	--	NA	NA	--
03/22/11	--	8.05	90.66	--	6.55	91.3	NA	--	--	2.8	99.24	--	5.56	95.48
04/26/11	--	7.84	90.87	--	6.49	91.36	NA	--	--	2.58	99.46	--	4.97	96.07
05/11/11	--	7.95	90.76	--	6.4	91.45	NA	--	--	2.7	99.34	--	5.11	95.93
05/26/11	--	8.01	90.7	--	6.38	91.47	NA	--	--	2.67	99.37	--	5.12	95.92
06/15/11	--	8.17	90.54	--	6.36	91.49	NA	--	--	2.87	99.17	--	5.4	95.64
07/06/11	sheen	8.34	90.37	sheen	6.33	91.52	NA	--	--	3.39	98.65	--	5.71	95.33
07/20/11	--	8.3	90.41	--	6.31	91.54	NA	--	--	3.48	98.56	--	5.68	95.36
08/02/11	--	8.36	90.35	--	6.3	91.55	NA	--	--	3.79	98.25	--	5.8	95.24
08/30/11	--	7.95	90.76	sheen	6.25	91.6	NA	--	--	2.31	99.73	--	4.85	96.19
09/15/11	--	7.83	90.88	--	6.16	91.69	NA	--	--	2.2	99.84	--	4.77	96.27
10/31/2011	--	7.78	90.93	--	6.11	91.74	NA	--	--	2.43	99.61	--	4.94	96.1
11/21/2011	--	8.1	90.61	--	6.11	91.74	NA	--	sheen	2.67	99.37	--	5.19	95.85
12/8/2011	--	NM	--	--	6.31	91.54	NA	--	--	2.16	99.88	--	5.01	96.03
1/25/2012	--	NM	--	--	6.26	91.59	NA	--	--	2.84	99.2	--	5.47	95.57
2/7/2012	--	8.29	90.42	--	6.29	91.56	NA	--	--	3.23	98.81	--	5.69	95.35
3/8/2012	--	8.35	90.36	--	6.14	91.71	NA	--	--	3.31	98.73	--	5.74	95.3
4/6/2012	--	8.45	90.26	--	6.18	91.67	NA	--	--	3.32	98.72	--	5.81	95.23
4/23/2012	--	8.41	90.3	--	6.09	91.76	NA	--	--	2.65	99.39	--	5.51	95.53
5/3/2012	--	NM	--	--	6.15	91.7	NA	--	--	3.77	98.27	--	6.04	95
6/7/2012	--	NM	--	--	6.04	91.81	NA	--	--	3.71	98.33	--	5.87	95.17
6/15/2012	--	NM	--	--	6.43	91.42	NA	--	--	7.75	94.29	--	7.42	93.62
6/21/2012	--	NM	--	--	6.36	91.49	NA	--	--	7.06	94.98	--	7.08	93.96
7/6/2012	--	NM	--	--	6.26	91.59	NA	--	--	7.21	94.83	--	7.02	94.02

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

Well Designation :	MW-8/MW-8A			MW-9			MW-10		MP-15			MP-16		
Casing Elevation :	98.71			97.85			91.02		102.04			101.04		
Screened Interval :	5-15'/8-3'			TD 12.4'			5-1'		17.75-2.75'			13.4-3.4'		
DATE	DTP	DTW	ELEV.	DTP	DTW	ELEV.	DTW	ELEV.	DTP	DTW	ELEV.	DTP	DTW	ELEV.
8/20/2012	--	NM	--	--	6.18	91.67	NA	--	--	7.55	94.49	--	7.1	93.94
9/19/2012	--	NM	--	--	6.23	91.62	NA	--	--	7.55	94.49	--	NM	--
10/18/2012	--	NM	--	--	6.43	91.42	NA	--	--	7.58	94.46	--	7.22	93.82
11/21/2012	--	NM	--	--	6.41	91.44	NA	--	--	7.67	94.37	--	9.28	91.76
12/11/2012	--	NM	--	--	6.29	91.56	NA	--	--	7.65	94.39	--	9.19	91.85
1/9/2013	--	NM	--	--	6.51	91.34	NA	--	--	7.69	94.35	--	9.29	91.75
2/11/2013	--	NM	--	--	6.48	91.37	NA	--	--	7.61	94.43	--	9.2	91.84
3/21/2013	--	NM	--	--	6.41	91.44	NA	--	--	7.6	94.44	--	9.21	91.83
4/15/2013	--	NM	--	--	6.47	91.38	NA	--	--	7.62	94.42	--	9.29	91.75
5/7/2013	--	NM	--	--	5.89	91.96	NA	--	--	7.62	94.42	--	9.28	91.76
6/4/2013	--	NM	--	--	4.32	93.53	NA	--	--	7.43	94.61	--	8.52	92.52
6/21/2013	--	NM	--	--	4.04	93.81	NA	--	--	7.56	94.48	--	7.12	93.92
7/15/2013	--	NM	--	--	3.9	93.95	NA	--	--	7.53	94.51	--	7.63	93.41
8/15/2013	--	NM	--	--	3.86	93.99	NA	--	--	7.58	94.46	--	NM	--
9/24/2013	--	NM	--	--	3.9	93.95	NA	--	--	7.65	94.39	--	8.45	92.59
10/21/2013	--	NM	--	--	3.85	94	NA	--	--	7.64	94.4	--	8.25	92.79
11/11/2013	--	NM	--	--	3.9	93.95	NA	--	--	8.2	93.84	--	7.79	93.25
12/17/2013	--	4.43	91.48	--	3.54	94.31	4.56	86.46	--	7.5	94.54	--	7.2	93.84
1/20/2014	--	4.55	91.36	sheen	3.48	94.37	3.97	87.05	--	7.55	94.49	--	7.39	93.65
2/24/2014	--	4.41	91.5	--	3.39	94.46	NM	--	--	7.32	94.72	--	7.06	93.98
3/18/2014	--	4.51	91.4	--	3.48	94.37	NM	--	--	7.5	94.54	--	7.37	93.67
3/26/2014	--	4.45	91.46	--	3.48	94.37	3.56	87.46	--	7.44	94.6	--	NM	--
4/22/2014	--	4.47	91.44	--	3.1	94.75	NM	--	--	7.35	94.69	--	7.28	93.76
5/19/2014	--	4.44	91.47	--	3.23	94.62	NM	--	--	7.34	94.7	--	7.33	93.71
6/9/2014	--	4.5	91.41	--	3.38	94.47	3.83	87.19	--	7.46	94.58	--	NM	--
7/14/2014	--	4.4	91.51	--	3.09	94.76	NM	--	--	9.98	92.06	--	7.55	93.49
8/18/2014	--	4.49	91.42	--	3.23	94.62	NM	--	--	7.45	94.59	--	6.82	94.22
9/12/2014	--	4.53	91.38	--	3.42	94.43	3.87	87.15	--	7.57	94.47	--	7.89	93.15
9/17/2014	--	4.5	91.41	--	3.42	94.43	4.22	86.8	--	7.66	94.38	--	NM	--
10/20/2014	--	4.5	91.41	--	3.18	94.67	NA	--	--	7.6	94.44	--	7.52	93.52
12/8/2014	--	4.57	91.34	--	3.21	94.64	3.21	87.81	--	7.52	94.52	--	--	NM
1/13/2015	--	4.54	91.37	--	3.06	94.79	NM	--	--	7.47	94.57	--	7.11	93.93
2/9/2015	--	4.6	91.31	--	3.14	94.71	NM	--	--	7.5	94.54	--	7.26	93.78
3/11/2015	--	4.45	91.46	--	2.83	95.02	3.96	87.06	--	7.34	94.7	--	NM	NM
4/6/2015	--	4.62	91.29	--	3.13	94.72	NM	--	--	7.41	94.63	--	7.48	93.56
5/4/2015	--	4.66	91.25	--	3.23	94.62	NM	--	--	7.47	94.57	--	7.48	93.56
6/18/2015	--	4.68	91.23	--	3.03	94.82	3.77	87.25	--	7.42	94.62	--	7.8	93.24
7/11/2015	--	4.72	91.19	--	2.96	94.89	NM	NM	--	7.37	94.67	--	4.84	96.2
8/14/2015	--	4.74	91.17	--	3.13	94.72	NM	NM	--	7.59	94.45	--	4.95	96.09
9/8/2015	--	4.84	91.07	--	3.36	94.49	3.28	87.74	--	7.53	94.51	--	8.11	92.93

Table 3 - Groundwater Sampling Data

**Axil Belko
Kingsville, MD**

Project Name: Axil Belko

Date: 9/8/2015

Project Location: Kingsville, MD

Sampler: SQ/NO

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
MW-1	11.48	21.65	4	10.17	19.92	20	W	10:30	Bailer
MW-3A	6.71	9.08	4	2.37	4.64	5	W	11:30	Bailer
MW-4	7.13	14.06	4	6.93	13.58	14	W	12:10	Bailer
MW-5	5	17.8	4	12.8	25.08	25	W	12:35	Bailer
MW-6	7.48	10.5	4	3.02	5.92	6	W	12:15	Bailer
MW-7A	8.79	9.6	4	0.81	1.59	2.5	W	11:10	Bailer
MW-8A	4.84	10.05	4	5.21	10.21	10	W	11:00	Bailer
MW-9	3.36	12.4	4	9.04	17.71	18	W	10:45	Bailer
MW-10	3.28	8.89	4	5.61	10.99	11	W	11:45	Bailer
MP-15	7.53	18	2	10.47	5.12	21	W	12:30	Bailer
POT-1	--	200	--	--	--	--	W	--	--

Location	Flow Rate	Sample Time
Outfall 1	480	1315
Outfall 2	600	1325
Seep	--	1315

Purge Coefficients	
2"	0.163
4"	0.653
6"	1.469
8"	2.611

W: Whale pump
G: Grundfos pump

Comments: MW-3A after we pulled whale pump; product was observed on pump



TABLE 4 - ANALYTICAL RESULTS - MONITORING WELLS
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD

Well #: W-1			10/22/2008		1/12/09		4/21/2009 ²		8/18/09 ²		10/19/09 ²		12/14/09 ²		4/1/10 ²		6/15/10 ²	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	µg/L	ND	-	ND	-	ND	-	NS Sheen	-	NS Sheen	-	ND	-	ND	-	ND	-
2-Butanone (MEK)	700	µg/L	ND	1.6	ND	1.6	ND	1.6	NS Sheen	1.6	NS Sheen	0.1	179	1.6	ND	1.6	ND	1.6
PAHs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	180	µg/L	0.023 J	0.02	ND	0.02	ND	0.1	NS Sheen	-	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1
Benzo (b) flouranthene	0.2	µg/L	0.0090 J	0.01	0.0080 J	0.01	ND	0.1	NS Sheen	-	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1
Benzo (k) flouranthene	0.3	µg/L	0.0080 J	0.01	ND	0.01	ND	0.1	NS Sheen	-	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1
Napthalene	0.65	µg/l	ND	0.1	ND	0.1	ND	0.1	NS Sheen	-	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1
TPH-GRO	47	µg/L	ND	20	ND	20	ND	200	NS Sheen	-	NS Sheen	-	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	8.000	320	5.500	150	4.840	100	NS Sheen	-	NS Sheen	-	1.340	100	3.410	100	1.820	100

Well #: W-2			10/22/2008		1/12/09		4/21/2009 ²		8/18/09 ²		10/19/09 ²		12/14/09 ²		4/1/10 ²		6/15/10 ²	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	µg/L	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Acetone	550	µg/L	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10
Carbon Disulfide	100	µg/L	ND	2	ND	2	ND	2	ND	2	ND	2	ND	2	ND	2	ND	2
PAHs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flourene	24	µg/L	0.11 J	0.09	0.59	0.1	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Phenanthrene	180	µg/L	2.6	0.04	14	0.04	0.344	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Anthracene	180	µg/L	0.45	0.02	1.8	0.02	0.257	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Flouranthene	150	µg/L	3.5	0.02	15	0.19	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Pyrene	18	µg/L	3.3	0.09	13	0.1	1.62	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (a) anthracene	0.2	µg/L	1.4	0.01	5	0.1	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (b) flouranthene	0.2	µg/L	1.3	0.01	4	0.08	0.971	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (a) pyrene	0.2	µg/L	1.3	0.01	4	0.1	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Dibenzo (a,h) anthracene	0.2	µg/L	0.11	0.02	0.32	0.02	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Indeno (1,2,3-cd) pyrene	0.2	µg/L	1.3	0.04	4.2	0.04	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (g,h,i) perylene	18	µg/L	2.2	0.06	6.5	0.06	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chrysene	3	µg/L	2	0.04	5.1	0.04	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (k) flouranthene	0.3	µg/L	0.71	0.01	2.3	0.01	1.01	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
SVOCs (Full Suite)	NA	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	-	-	-	-	-
bis (2-Ethylhexyl) phthalate	6	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	ND	2.0	1.2 J	2.0	ND	2.0
TPH-GRO	47	µg/L	ND	20	ND	20	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	6.400	330	9.300	300	144.000	####	5.310	####	1.730	100	2.740	100	1.420	100	2.080	100

Well #: W-3A			10/22/2008		1/12/09		4/21/2009 ²		8/18/09 ²		10/19/09 ²		12/14/09 ²		4/1/10 ²		6/15/10 ²	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	-	ND	-	ND	-	NS Sheen	-
Acetone	550	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	10	ND	10	5.8 J	10	NS Sheen	-
1,1 Dichloroethene	7	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	1	ND	1	ND	1	NS Sheen	-
Carbon disulfide	100	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	2	ND	2	ND	2	NS Sheen	-
PAHs	NA	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	-	ND	-	ND	-	NS Sheen	-
Benzo(a)anthracene	0.2	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	1	ND	1	ND	1	NS Sheen	-
Chrysene	3	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	1	ND	1	ND	1	NS Sheen	-
Pyrene	18	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	ND	1	ND	1	ND	1	NS Sheen	-
SVOCs (Full Suite)	NA	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	-	-	-	-	-
bis (2-Ethylhexyl) phthalate	6	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	ND	2.0	1.2 J	2.0	NS Sheen	-
TPH-GRO	47	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	NS	-	ND	-	ND	-	NS Sheen	-
TPH-DRO	47	µg/L	NS (CNL)	-	NS (CNL)	-	NS Sheen	-	NS Sheen	-	1.350	100	1.030	100	4.950	100	NS Sheen	-

Well #: W-4			10/22/2008		1/12/09		4/21/2009 ²		8/18/09 ²		10/19/09 ²		12/14/09 ²		4/1/10 ²		6/15/10 ²	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	µg/L	NS	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
PAHs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	180	µg/L	0.087 J	0.04	ND	0.07	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Anthracene	180	µg/L	0.044 J	0.02	ND	0.07	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluoranthene	150	µg/L	0.023 J	0.02	0.020 J	0.02	ND	0.1	ND	0.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0
SVOCs (Full Suite)	NA	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	-	-	-	-	-
bis (2-Ethylhexyl) phthalate	6	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	ND	2.0	1.0 J	2.0	ND	2.0
N-Nitrosodiphenylamine	14	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	0.87 J	5.0
TPH-GRO	47	µg/L	ND	20	ND	20	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	1.500	32	460	31	854	100	574	100	353	100	587	100	738	100	379	100



TABLE 4 - ANALYTICAL RESULTS - MONITORING WELLS
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD

Well #: W-1			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	ug/L	NS Sheen	-	-	-	-	-	NS Sheen	-	ND	-	ND	-	ND	-	NS	-
2-Butanone (MEK)	700	ug/L	NS Sheen	-	ND	1.6	ND	1.6	NS Sheen	-	ND	1.6	ND	1.6	ND	1.6	NS	-
PAHs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	180	ug/L	NS Sheen	-	ND	0.1	ND	0.1	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1	ND	0.1
Benzo (b) flouranthene	0.2	ug/L	NS Sheen	-	ND	0.1	ND	0.1	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1	ND	0.1
Benzo (k) flouranthene	0.3	ug/L	NS Sheen	-	ND	0.1	ND	0.1	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1	ND	0.1
Napthalene	0.65	ug/l	NS Sheen	-	ND	0.1	ND	0.1	NS Sheen	-	ND	0.1	ND	0.1	ND	0.1	ND	0.1
TPH-GRO	47	ug/L	NS Sheen	-	ND	200	ND	200	NS Sheen	-	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	ug/L	NS Sheen	-	3.150	100	2.780	100	NS Sheen	-	4.240	100	1.320	100	5.980	100	3.590	100

Well #: W-2			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	ug/L	NS Sheen	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-
Acetone	550	ug/L	NS Sheen	-	3.3 J	10	ND	10	ND	10	ND	10	ND	10	ND	10	NS	-
Carbon Disulfide	100	ug/L	NS Sheen	-	0.85 J	2.0	ND	2.0	0.74 J	2.0	ND	2.0	ND	2.0	ND	2.0	NS	-
PAHs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flourene	24	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Phenanthrene	180	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.9	1.0	2.3	1.0	4.3	1.0
Anthracene	180	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.45 J	1.0	0.51	1.0	1	1.0
Flouranthene	150	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.8	1.0	2.2	1.0	6.8	1.0
Pyrene	18	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.3	1.0	1.6	1.0	6.1	1.0
Benzo (a) anthracene	0.2	ug/L	NS Sheen	-	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
Benzo (b) flouranthene	0.2	ug/L	NS Sheen	-	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
Benzo (a) pyrene	0.2	ug/L	NS Sheen	-	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
Dibenzo (a,h) anthracene	0.2	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.49 J	1.0
Indeno (1,2,3-cd) pyrene	0.2	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.10	1.0
Benzo (g,h,i) perylene	18	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1	1.0
Chrysene	3	ug/L	NS Sheen	-	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
Benzo (k) flouranthene	0.3	ug/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	1.30	1.0
SVOCs (Full Suite)	NA	-	-	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	6	ug/L	NS Sheen	-	2.7	2.0	2.7	2.0	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	ug/L	NS Sheen	-	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	ug/L	NS Sheen	-	2.740	100	5.410	100	42.600	100	10.500	100	3.530	100	14.200	100	43.300	100

Well #: W-3A			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/9/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	ug/L	NS Sheen	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-
Acetone	550	ug/L	NS Sheen	-	ND	10	6.5 J	10	ND	10	ND	10	ND	10	ND	10	NS	-
1,1 Dichloroethene	7	ug/L	NS Sheen	-	0.64	1	ND	1	ND	1	ND	1	ND	1	ND	1	NS	-
Carbon disulfide	100	ug/L	NS Sheen	-	ND	2	ND	2	ND	2	ND	2	0.42 J	2	ND	2	NS	-
PAHs	NA	ug/L	NS Sheen	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	NS	-
Benzo(a)anthracene	0.2	ug/L	NS Sheen	-	ND	1	ND	1	ND	1	ND	1	1.1	1	ND	1	NS	-
Chrysene	3	ug/L	NS Sheen	-	ND	1	ND	1	ND	1	ND	1	2.2	1	ND	1	NS	-
Pyrene	18	ug/L	NS Sheen	-	ND	1	ND	1	ND	1	ND	1	1.7	1	ND	1	NS	-
SVOCs (Full Suite)	NA	-	-	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	6	ug/L	NS Sheen	-	1.4 J	2	ND	2	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	ug/L	NS Sheen	-	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	NS	-
TPH-DRO	47	ug/L	NS Sheen	-	1.320	100	888	100	2.610	100	1.930	100	44.900	100	14.500	100	NS	-

Well #: W-4			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	ug/L	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	NS	-
PAHs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-
Phenanthrene	180	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Anthracene	180	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluoranthene	150	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
SVOCs (Full Suite)	NA	-	-	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	6	ug/L	ND	2.0	1.1 J	2.0	ND	2.0	NS	-	NS	-	NS	-	NS	-	NS	-
N-Nitrosodiphenylamine	14	ug/L	ND	5.0	ND	5.0	ND	5.0	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	ug/L	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	ug/L	281	100	485	100	425	100	441	100	440	100	157	100	334	100	431	100



**TABLE 4 - ANALYTICAL RESULTS - MONITORING WELLS
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Well #: W-5			10/22/2008		1/12/09		4/21/2009 ²		8/18/09 ²		10/19/09 ²		12/14/09 ²		4/1/10 ²		6/15/10 ²	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Naphthalene	0.65	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1	ND	1	ND	1	ND	1
TPH-GRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	4.690	100	5.200	100	826	100	257	100

Well #: W-6			10/22/2008		1/12/09		4/21/2009 ²		8/18/09 ²		10/19/09 ²		12/14/09 ²		4/1/10 ²		6/15/10 ²	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	550	µg/L	NS	-	NS	-	NS	-	NS	-	ND	10	ND	10	6.9 J	10	ND	10
Benzene	5	µg/L	NS	-	NS	-	NS	-	NS	-	0.47 J	1.0	0.34 J	1.0	0.44 J	1.0	0.44 J	1.0
Chlorobenzene	100	µg/L	NS	-	NS	-	NS	-	NS	-	1.6	1.0	1.5	1.0	ND	1.0	1.6	1.0
1,2-Dichlorobenzene	600		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,4-Dichlorobenzene	75		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
cis-1,2-Dichloroethene	600	µg/L	NS	-	NS	-	NS	-	NS	-	0.31 J	1.0	0.22 J	1.0	ND	1.0	ND	1.0
1,2-Dichloroethene (total)	600	µg/L	NS	-	NS	-	NS	-	NS	-	0.31 J	1.0	0.22 J	1.0	ND	1.0	ND	1.0
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Benzo (a) anthracene	0.2	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (a) pyrene	0.2	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (g,h,i) perylene	18	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chrysene	3	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluorene	24	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluoranthene	150	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Pvrene	18	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
SVOCs (Full Suite)	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	-	-	-	-	-	-
1,4 - Dichlorobenzene	75	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	1.7 J	2.0	ND	2.0	1.2	2.0
Fluorene	24	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	0.46 J	1.0	ND	1.0	0.46 J	1.0
N-Nitrosodiphenylamine	14	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	3.8 J	5.0	ND	5.0	4.4 J	5.0
TPH-GRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	8.590	100	1.840	100	3.010	100	1.460	100

Well #: W-7A			10/22/2008		1/12/09		4/21/2009 ²		8/18/09 ²		10/19/09 ²		12/14/09 ²		4/1/10 ²		6/15/10 ²	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Acetone	550	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	10.0	18.3	10.0	0.58	10.0
Chlorobenzene	11	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	0.51	1.0	0.40 J	1.0	0.40 J	1.0
1,2 Dichloroethene (total)	600	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Toluene	1,000	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Acenaphthene	37		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Anthracene	180		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo(a)anthracene	0.2		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo(a)pyrene	0.2		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo(b)fluoranthene	0.2		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo(g,h,i)perylene	18		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo(k)fluoranthene	0.3		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chrysene	3		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Dibenzo(a,h)anthracene	0.2		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluoranthene	150		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluorene	24		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Indeno(1,2,3-cd)pyrene	0.2		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Phenanthrene	180		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Pvrene	18		NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
SVOCs (Full Suite)	NA	-	NS	-	NS	-	NS	-	NS	-	-	-	-	-	-	-	-	-
3&4-Methylphenol	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	9.6	2.0
Phenol	11.00	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	0.89	2.0
bis (2-Ethylhexyl) phthalate	6	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	1.0 J	2.0	6.4	2.0	1.8 J	2.0
1,4 - Dichlorobenzene	75	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	1.0 J	2.0	ND	2.0	1.1	2.0
N-Nitrosodiphenylamine	14	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	0.58 J	5.0	ND	5.0	0.58 J	5.0
TPH-GRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	12.900	100	2.800	100	3.820	100	6.660	100



**TABLE 4 - ANALYTICAL RESULTS - MONITORING WELLS
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Well #: W-5			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	ug/L	ND	-	ND	-	ND	-	NS	-	ND	-	ND	-	ND	-	NS	-
PAHs	NA	-	ND	-	ND	-	ND	-	NS	-	ND	-	ND	-	ND	-	ND	-
Naphthalene	0.65	ug/L	ND	1	ND	1	ND	1	NS	-	ND	1	ND	1	ND	1	ND	1
TPH-GRO	47	ug/L	ND	200	ND	200	ND	200	NS	-	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	ug/L	472	100	933	100	528	100	NS	-	653	100	278	100	539	100	529	100

Well #: W-6			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-
Acetone	550	ug/L	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	ND	10	NS	-
Benzene	5	ug/L	0.39 J	1.0	0.41 J	1.0	0.28 J	1.0	0.29 J	1.0	0.24 J	1.0	0.26 J	1.0	0.22	1.0	NS	-
Chlorobenzene	100	ug/L	1.5	1.0	1.7	1.0	1.6	1.0	1.7	1.0	1.5	1.0	1.6	1.0	2	1.0	NS	-
1,2-Dichlorobenzene	600		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-
1,4-Dichlorobenzene	75		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-
cis-1,2-Dichloroethene	600	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.30 J	1.0	0.22	1.0	NS	-
1,2-Dichloroethene (total)	600	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	0.30 J	1.0	0.22	1.0	NS	-
PAHs	NA	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Benzo (a) anthracene	0.2	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (a) pyrene	0.2	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo (g,h,i) perylene	18	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chrysene	3	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluorene	24	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluoranthene	150	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Pvrene	18	ug/L	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
SVOCs (Full Suite)	NA	-	-	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-
1,4 - Dichlorobenzene	75	ug/L	ND	2.0	1.1	1.1	1.2	1.0	NS	-	NS	-	NS	-	NS	-	NS	-
Fluorene	24	ug/L	ND	1.0	0.45 J	1.1	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0
N-Nitrosodiphenylamine	14	ug/L	ND	5.0	4.0 J	5.6	ND	5.0	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	ug/L	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	ug/L	2,270	100	2,780	100	1,800	100	6,750	100	3,720	100	1,960	100	9,420	100	2,620	100

Well #: W-7A			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene) ¹	NA	ug/L	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-
Acetone	550	ug/L	ND	10.0	ND	10.0	5.7 J	10.0	ND	10.0	ND	10.0	ND	10.0	ND	10.0	NS	-
Chlorobenzene	11	ug/L	0.97 J	1.0	0.41 J	1.0	0.42 J	1.0	0.69 J	1.0	0.66 J	1.0	ND	1.0	42 J	1.0	NS	-
1,2 Dichloroethene (total)	600	ug/L	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	-
Toluene	1,000	ug/L	17.7	1.0	ND	1.0	ND	1.0	ND	1.0	0.49 J	1.0	ND	1.0	ND	1.0	NS	-
PAHs	NA	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	1.0
Acenaphthene	37		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	3.2	1.0
Anthracene	180		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	12.2	1.0
Benzo(a)anthracene	0.2		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	23	1.0
Benzo(a)pyrene	0.2		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	17	1.0
Benzo(b)fluoranthene	0.2		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	13	1.0
Benzo(g,h,i)perylene	18		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	10.3	1.0
Benzo(k)fluoranthene	0.3		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	17	1.0
Chrysene	3		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	24	1.0
Dibenzo(a,h)anthracene	0.2		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	4	1.0
Fluoranthene	150		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	73.1	1.0
Fluorene	24		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	4	1.0
Indeno(1,2,3-cd)pyrene	0.2		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	10	1.0
Phenanthrene	180		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
Pvrene	18		ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	54	1.0
SVOCs (Full Suite)	NA	-	-	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-
3&4-Methylphenol	NA	-	ND	2.0	ND	2.1	ND	2.0	NS	-	NS	-	NS	-	NS	-	NS	-
Phenol	11.00	ug/L	ND	2.0	ND	2.1	ND	2.0	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	6	ug/L	2.7	2.0	2	2.1	1.2	2.0	NS	-	NS	-	NS	-	NS	-	NS	-
1,4 - Dichlorobenzene	75	ug/L	1.9	2.0	ND	1.0	0.63 J	1.0	NS	-	NS	-	NS	-	NS	-	NS	-
N-Nitrosodiphenylamine	14	ug/L	ND	5.0	ND	5.2	ND	5.2	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	ug/L	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	ug/L	5,520	100	9,160	100	5,750	100	12,200	100	4,850	100	2,380	100	12,000	100	7,660	100



**TABLE 4 - ANALYTICAL RESULTS - MONITORING WELLS
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Well #: W-8A			10/22/2008		1/12/09		4/21/2009 ^z		8/18/09 ^z		10/19/09 ^z		12/14/09 ^z		4/1/10 ^z		6/15/10 ^z	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Acetone	550	µg/L	NS	-	NS	-	NS	-	NS	-	ND	10.0	ND	10.0	15	10.0	ND	10.0
Benzene	5	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	0.26	1.0
cis-1,2-Dichloroethene	600	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
1,2-Dichloroethene (total)	600	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chlorobenzene	11	µg/L	NS	-	NS	-	NS	-	NS	-	1.4	1.0	1.4	1.0	1	1.0	0.58 J	1.0
Toluene	1,000	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Anthracene	180	µg/L	NS	1.0	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Benzo(a)anthracene	0.2	µg/L	NS	1.0	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Chrysene	3	µg/L	NS	1.0	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Fluoranthene	150	µg/L	NS	1.0	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Phenanthrene	180	µg/L	NS	1.0	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0
Pyrene	18	µg/L	NS	1.0	NS	-	NS	-	NS	-	ND	1.0	ND	1.0	ND	1.0	NS	1.0
Fluorene	24	µg/L	NS	1.0	NS	-	NS	-	NS	-	ND	1.0	0.59 J	1.0	ND	1.0	ND	1.0
SVOCs (Full Suite)	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	-	-	-	-	-	-
1,4 - Dichlorobenzene	75	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	0.61 J	2.0	ND	2.0	0.84 J	2.0
bis (2-Ethylhexyl) phthalate	-	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	1.3 J	2.0
TPH-GRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	6.900	100	15.900	100	5.470	100	2.080	100

Well #: W-9			10/22/2008		1/12/09		4/21/2009 ^z		8/18/09 ^z		10/19/09 ^z		12/14/09 ^z		4/1/10 ^z		6/15/10 ^z	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Isopropylbenzene	66	µg/L	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-
Napthalene	0.65	µg/L	NS	-	NS	-	NS	-	NS	-	ND	1	ND	1	ND	1	ND	1
TPH-GRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	840	100	627	100	207	100	ND	100

Well #: W 10A			10/22/2008		1/12/09		4/21/2009 ^z		8/18/09 ^z		10/19/09 ^z		12/14/09 ^z		4/1/10 ^z		6/15/10 ^z	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

Well #: MP 15			10/22/2008		1/12/09		4/21/2009 ^z		8/18/09 ^z		10/19/09 ^z		12/14/09 ^z		4/1/10 ^z		6/15/10 ^z	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

Trip Blank			10/22/2008		1/12/09		4/21/2009 ^z		8/18/09 ^z		10/19/09 ^z		12/14/09 ^z		4/1/10 ^z		6/15/10 ^z	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	µg/L	ND	-	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-



**TABLE 4 - ANALYTICAL RESULTS - MONITORING WELLS
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Well #: W-8A			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	µg/L	NS Sheen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	550	µg/L	NS Sheen	10.0	ND	10.0	4.1 J	10.0	ND	10.0	ND	10.0	NS	-	ND	10.0	NS	-
Benzene	5	µg/L	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	-
cis-1,2-Dichloroethene	600	µg/L	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	-
1,2-Dichloroethene (total)	600	µg/L	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	-
Chlorobenzene	11	µg/L	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	-
Toluene	1,000	µg/L	NS Sheen	-	0.34 J	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	ND	1.0	NS	-
PAHs	NA	-	NS Sheen	-	ND	-	ND	-	ND	-	ND	-	NS	-	ND	-	NS	-
Anthracene	180	µg/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	0.51 J	1.0	NS	-
Benzo(a)anthracene	0.2	µg/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	80 J	1.0	NS	-
Chrysene	3	µg/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	.64 J	1.0	NS	-
Fluoranthene	150	µg/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	1.8	1.0	NS	-
Phenanthrene	180	µg/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	1.5	1.0	NS	-
Pyrene	18	µg/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	1.5	1.0	NS	-
Fluorene	24	µg/L	NS Sheen	-	ND	1.0	ND	1.0	ND	1.0	ND	1.0	NS	-	0.47	1.0	NS	-
SVOCs (Full Suite)	NA	-	-	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-
1,4 - Dichlorobenzene	75	µg/L	NS Sheen	2.0	ND	2.0	ND	2.0	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	-	µg/L	NS Sheen	2.0	ND	2.0	2.4	2.0	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	µg/L	NS Sheen	200	ND	200	ND	200	ND	200	ND	200	NS	-	NS	-	NS	-
TPH-DRO	47	µg/L	NS Sheen	100	7,270	100	8,800	100	10,400	100	7,930	100	NS	-	19,300	-	NS	-

Well #: W-9			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	µg/L	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	NS	-
Isopropylbenzene	66	µg/L	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	NS	-
PAHs	NA	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Napthalene	0.65	µg/L	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
TPH-GRO	47	µg/L	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
TPH-DRO	47	µg/L	187	100	326	100	180	100	295	100	236	100	ND	110	320	110	412	110

Well #: W 10A			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

Well #: MP 15			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

Trip Blank			9/22/10 ²		12/21/2010 ²		3/22/2011 ²		6/15/2011 ²		9/15/2011 ³		12/8/2011 ³		3/8/2012 ³		6/7/2012 ³	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPI + Xylene)¹	NA	µg/L	NS	-	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-



TABLE 4 - ANALYTICAL RESULTS - MONITORING WELLS
 AXIL BELKO FACILITY
 11931 JERICHO RD KINGSVILLE, MD

Well #: W-8A			9/19/2012 ^s		12/11/2012 ^s		3/21/2013 ^s		6/04/2013 ^s		9/24/2013 ^s		12/17/2013 ^s		3/26/2014 ^s		6/09/2014 ^s		9/17/14		12/8/14		3/11/15		6/18/15		9/8/15		
Constituent	MDE	Units	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) ¹	NA	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acetone	550	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
Benzene	5	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
cis-1,2-Dichloroethene	600	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
1,2-Dichloroethene (total)	600	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
Chlorobenzene	11	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
Toluene	1,000	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
PAHs	NA	-	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1.00	ND	1.00	ND	1.00	ND
Anthracene	180	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.19	ND	0.19	ND	0.19	ND
Benzo(a)anthracene	0.2	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.22	ND	0.22	ND	0.22	ND
Chrysene	3	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.16	ND	0.16	ND	0.16	ND
Fluoranthene	150	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.16	ND	0.16	ND	0.16	ND
Phenanthrene	180	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.19	ND	0.19	ND	0.19	ND
Pyrene	18	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.19	ND	0.19	ND	0.19	ND
Fluorene	24	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	ND	1	ND	1	ND	1	ND	1	ND	1	ND	0.27	ND	0.27	ND	0.27	ND
SVOCs (Full Suite)	NA	-	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
1,4 - Dichlorobenzene	75	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
bis (2-Ethylhexyl) phthalate	-	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
TPH-GRO	47	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	
TPH-DRO	47	ug/L	AB	-	AB	-	AB	-	AB	-	AB	-	1,490	100	1,300	100	1,190	100	633	100	484	80	735	83	643	83	506	83	

Well #: W-9			9/19/2012 ^s		12/11/2012 ^s		3/21/2013 ^s		6/04/2013 ^s		9/24/2013 ^s		12/17/2013 ^s		3/26/2014 ^s		6/09/2014 ^s		9/17/14		12/8/14		3/11/15		6/18/15		9/8/15	
Constituent	MDE	Units	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) ¹	NA	ug/L	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
Isopropylbenzene	66	ug/L	ND	-	ND	-	0.87 J	1	NS	-	NS	-	ND	-	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
PAHs	NA	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Napthalene	0.65	ug/L	ND	1	ND	1	ND	1	0.8 J	1	1.1	1	1.4	1	1.4	1	2.1	1	1.5	1	1.7	1	0.99 J	1	1.4	1	1.7	1
TPH-GRO	47	ug/L	ND	200	NS	-	ND	-	NS	-	NS	-	ND	-	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-DRO	47	ug/L	402	110	ND	110	749	110	20,500	200	7,760	200	8,980	200	5,410	200	3,260	200	2,860	200	4,600	80	4,490	83	2,820	83	3,510	

Well #: W 10A			9/19/2012 ^s		12/11/2012 ^s		3/21/2013 ^s		6/04/2013 ^s		9/24/2013 ^s		12/17/2013 ^s		3/26/2014 ^s		6/09/2014 ^s		9/17/14		12/8/14		3/11/15		6/19/15		9/8/15	
Constituent	MDE	Units	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
PAHs	NA	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
TPH-DRO	47	ug/L	NS	-	NS	-	NS	-	NS	-	NS	-	6,140	200	4,840	200	2,330	200	NS	200	3,070	80	2,300	83	3,860	83	1,820	83

Well #: MP 15			9/19/2012 ^s		12/11/2012 ^s		3/21/2013 ^s		6/04/2013 ^s		9/24/2013 ^s		12/17/2013 ^s		3/26/2014 ^s		6/09/2014 ^s		9/17/14		12/8/14		3/11/15		6/19/15		9/8/15	
Constituent	MDE	Units	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
TPH-DRO	47	ug/L	2,390	100	1,200	100	2,200	100	1,430	100	1,100	100	6,130	100	1,130	100	1,020	100	1,180	100	806	80	1,160	83	762	83	612	

Trip Blank			9/19/2012 ^s		12/11/2012 ^s		3/21/2013 ^s		6/04/2013 ^s		9/24/2013 ^s		12/17/2013 ^s		3/26/2014 ^s		6/09/2014 ^s		9/14/14		12/8/14		3/11/15		6/18/15		9/8/15	
Constituent	MDE	Units	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) ¹	NA	ug/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

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



**TABLE 5 - ANALYTICAL RESULTS - OUTFALLS AND SEEP
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Outfall 1			9/30/09		12/21/10		3/22/11		6/15/11		9/15/11		12/9/11		3/8/12		6/7/12		9/19/12		12/11/12	
Constituent	MDE Stand	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) ¹	NA	ug/l	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-
PAHs	NA	ug/l					NS	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
SVOCs (Full Suite)	NA	ug/l	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	6	μg/L	1.4 B	2	NS	-	NS	-	ND	2	ND	2	ND	2	ND	2	NS	-	NS	-	NS	-
TPH-GRO	47	μg/L	ND	200	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200	ND	200	ND	-	ND	-
TPH-DRO	47	μg/L	ND	100	142	100	ND	100	ND	100	ND	100	ND	100	ND	100	ND	100	238	100	ND	100

S.W. OF. #1			9/30/09		12/21/10		3/22/11		6/15/11		9/15/11		12/9/11		3/8/12		6/7/12		9/19/12		12/11/12	
Constituent	MDE Stand	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	47	μg/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

Outfall 2			9/30/09		12/21/10		3/22/11		6/15/11		9/15/11		12/9/11		3/8/12		6/7/12		9/19/12		12/11/12	
Constituent	MDE Stand	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) ¹	NA	ug/l	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-
Toluene	1,000	μg/L	ND	1	NS	-	NS	-	ND	1	ND	1	0.62 J	1	ND	1	NS	-	NS	-	NS	-
Ethylbenzene	700	μg/L	ND	1	NS	-	NS	-	ND	1	ND	1	0.44 J	1	ND	1	NS	-	NS	-	NS	-
Xylene (total)	10000	μg/L	ND	1	NS	-	NS	-	ND	1	ND	1	3.3	1	ND	1	NS	-	NS	-	NS	-
Tetrachloroethene	5	μg/L	ND	1	NS	-	NS	-	ND	1	ND	1	1	1	ND	1	NS	-	NS	-	NS	-
PAHs	NA	μg/L	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Phenanthrene	180	μg/L	ND	1	NS	-	NS	-	ND	1	ND	1	0.48 J	1	ND	1	ND	1	ND	1	ND	1
Naphthalene	0.65	μg/L	ND	1	NS	-	NS	-	ND	1	ND	1	1.7	1	ND	1	ND	1	ND	1	ND	1
SVOCs (Full Suite)	NA	ug/l	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	6	μg/L	8.7 B	2	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	μg/L	ND	200	NS	-	NS	-	ND	200	ND	200	ND	200	ND	200	ND	200	NS	-	NS	-
TPH-DRO	47	μg/L	154	100	290	110	197	110	560	110	288	110	784	110	743	110	298	110	ND	110	ND	110



**TABLE 5 - ANALYTICAL RESULTS - OUTFALLS AND SEEP
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

S.W. OF. #2			9/30/09		12/21/10		3/22/11		6/15/11		9/15/11		12/9/11		3/8/12		6/7/12		9/19/12		12/11/12	
Constituent	MDE	Stand Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

Seep			9/30/09		12/21/10		3/22/11		6/15/11		9/15/11		12/9/11		3/8/12		6/7/12		9/19/12		12/11/12	
Constituent	MDE	Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
VOCs (PPL + Xylene) ¹	NA	ug/l	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-	NS	-
PAHs	NA	ug/l	ND	-	NS	-	NS	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
SVOCs	NA	ug/l	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	6	µg/L	3.9 B	2.2	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	47	µg/L	ND	200	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-DRO	47	µg/L	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

S.W. SEEP			9/30/09		12/21/10		3/22/11		6/15/11		9/15/11		12/9/11		3/8/12		6/7/12		9/19/12		12/11/12	
Constituent	MDE	Stand Units	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	47	µg/L	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-

Notes:

- 1. 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 5 - ANALYTICAL RESULTS - OUTFALLS AND SEEP
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

Outfall 1	3/21/13		6/4/13		9/24/13		12/18/13		3/26/14		6/9/14		9/17/14		12/8/14		3/11/15		6/18/15		9/8/15	
Constituent	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) ¹	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
PAHs	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
SVOCs (Full Suite)	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	NS	-	NS	-
TPH-DRO	279	100	146	100	ND	100	172	100	ND	100	ND	100	650	100	ND	80	ND	83	121	83	111	83

S.W. OF. #1	3/21/13		6/4/13		9/24/13		12/18/13		3/26/14		6/9/14		9/17/14		12/8/14		3/11/15		6/18/15		9/8/15	
Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	64	ND	64

Outfall 2	3/21/13		6/4/13		9/24/13		12/18/13		3/26/14		6/9/14		9/17/14		12/8/14		3/11/15		6/18/15		9/8/15	
Constituent	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) ¹	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
Toluene	ND	1	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
Ethylbenzene	ND	1	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
Xylene (total)	ND	1	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
Tetrachloroethene	ND	1	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
PAHs	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
Phenanthrene	ND	1	ND	0.29	ND	0.29	ND	0.29	ND	0.29	ND	0.29	ND	0.29	ND	0.19	ND	0.19	ND	0.19	ND	0.19
Naphthalene	ND	1	ND	0.26	ND	0.26	ND	0.26	ND	0.26	ND	0.26	ND	0.26	ND	0.27	ND	0.27	ND	0.28	ND	0.27
SVOCs (Full Suite)	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-DRO	840	110	1,930	110	530	110	829	110	410	110	395	110	516	110	798	80	578	83	362	83	346	83



**TABLE 5 - ANALYTICAL RESULTS - OUTFALLS AND SEEP
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**

S.W. OF. #2	3/21/13		6/4/13		9/24/13		12/18/13		3/26/14		6/9/14		9/17/14		12/8/14		3/11/15		6/18/15		9/8/15	
Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	64	ND	64

Seep	3/21/13		6/4/13		9/24/13		12/18/13		3/26/14		6/9/14		9/17/14		12/8/14		3/11/15		6/18/15		9/8/15	
Constituent	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) ¹	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
PAHs	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
SVOCs	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
bis (2-Ethylhexyl) phthalate	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-GRO	ND	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-
TPH-DRO	6,740	110	14,000	110	9,520	110	4,120	110	4,060	110	2,210	110	2,170	110	2,950	80	795	83	1,550	83	2,890	83

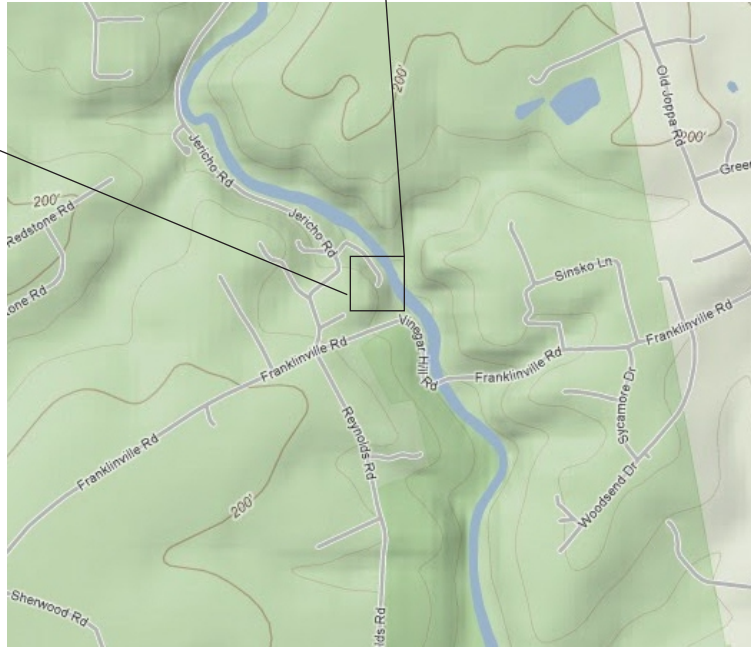
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Constituent	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL	Results	RDL
TPH-DRO	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	NS	-	ND	64	ND	64

Notes:

- 1. All VOCs and SVOCs ana
- All concentrations presented
- J = Indicates estimated value
- B = Analyte found in associ
- ND = Non-detectable
- NS= Not Sampled
- RDL - Reportable detection



FIGURES



3157 Limestone Rd., Cochranville PA, 19330

SITE LOCATION

AXIL-BELKO

11931 JERICHO RD KINGSVILLE, MD

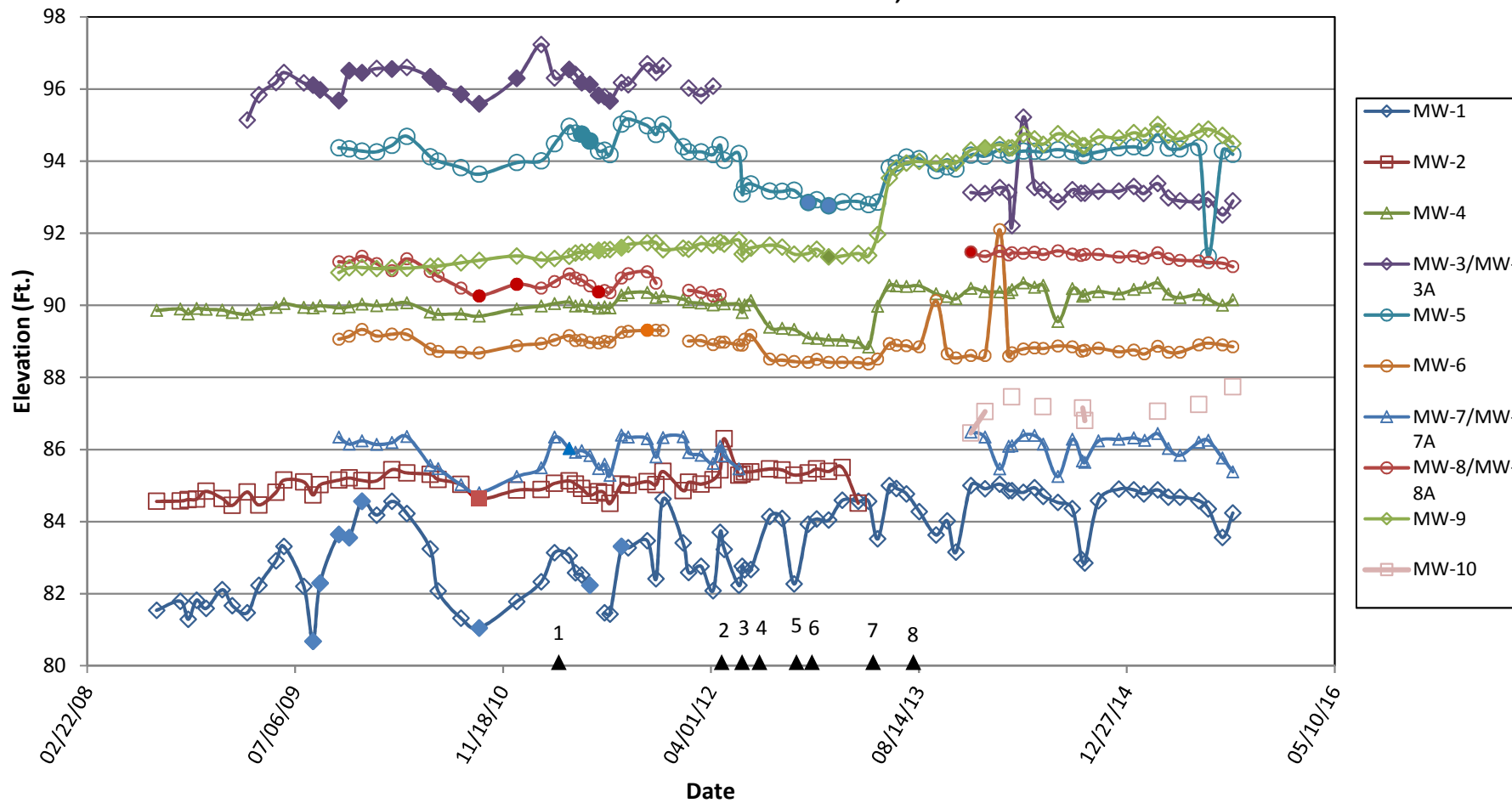
Notes:

- 1. Image source Bing Maps October 2013

Date: 9/21/15	Dr. By: NS	Chk. By: WTF	BSTI Job No. 367	Figure Number: 1
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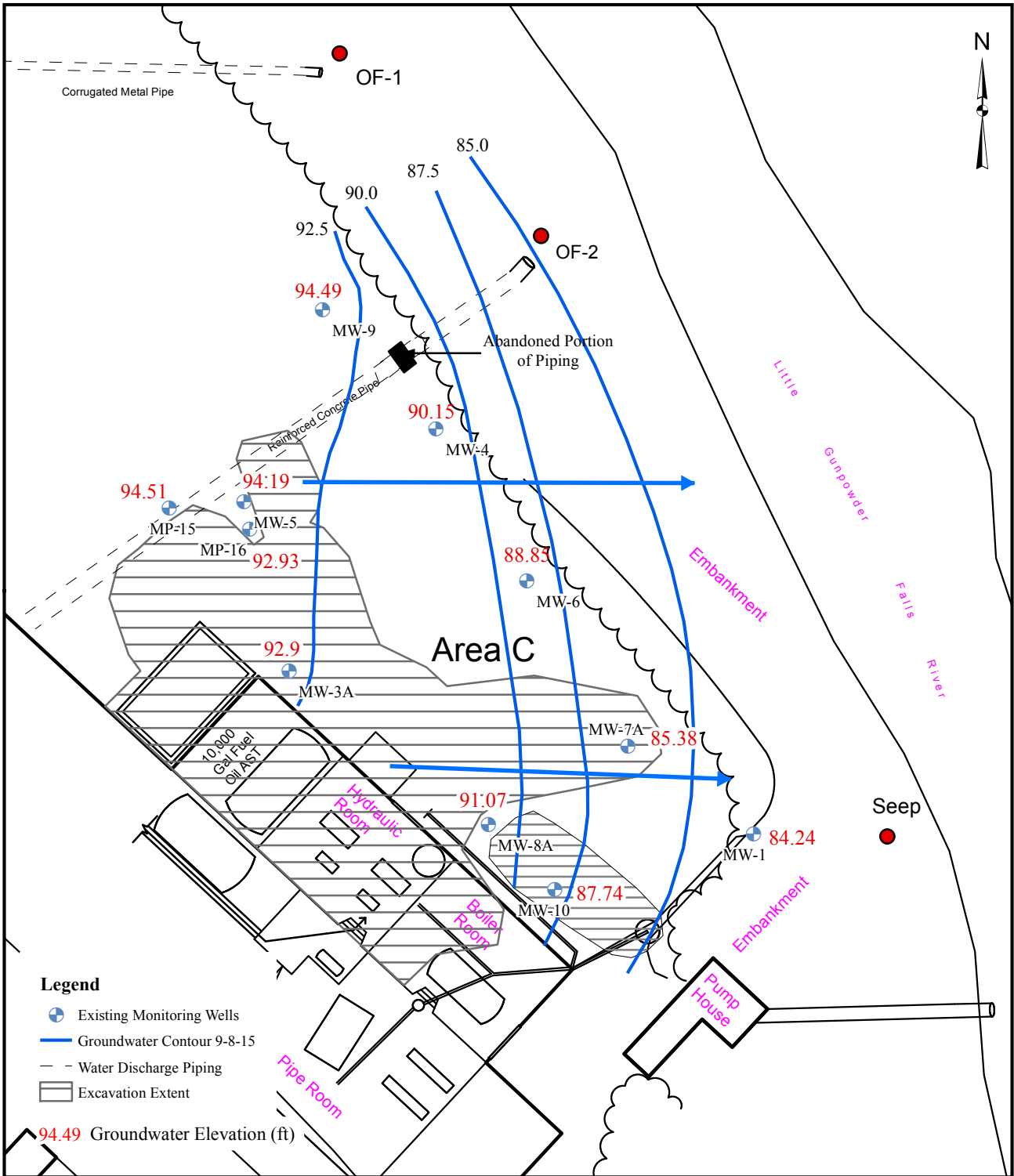
Scale Bar: 0 65 170 195 Feet	Scale Reference
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**FIGURE 2: GROUNDWATER HYDROGRAPH
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**



Notes:
 Open symbol represents no sheen shaded symbol represents sheen observed
 1 - Area A, D, I Excavation, 2 - Building 8 Slab Demolished, 3 - Pilot Excavation-Area C,
 4 - Second Excavation- Area C, 5 - Third Excavation- Area C, 6 - Start of Demolition,
 7- Fourth Excavation-Area C, Outfall Abandoned, 8- Fifth Excavation- Area C





3157 Limestone Rd., Cochranville PA, 19330

GROUNDWATER ELEVATION

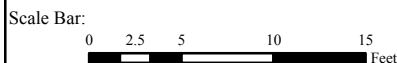
AXIL-BELKO

11931 JERICHO RD KINGSVILLE, MD

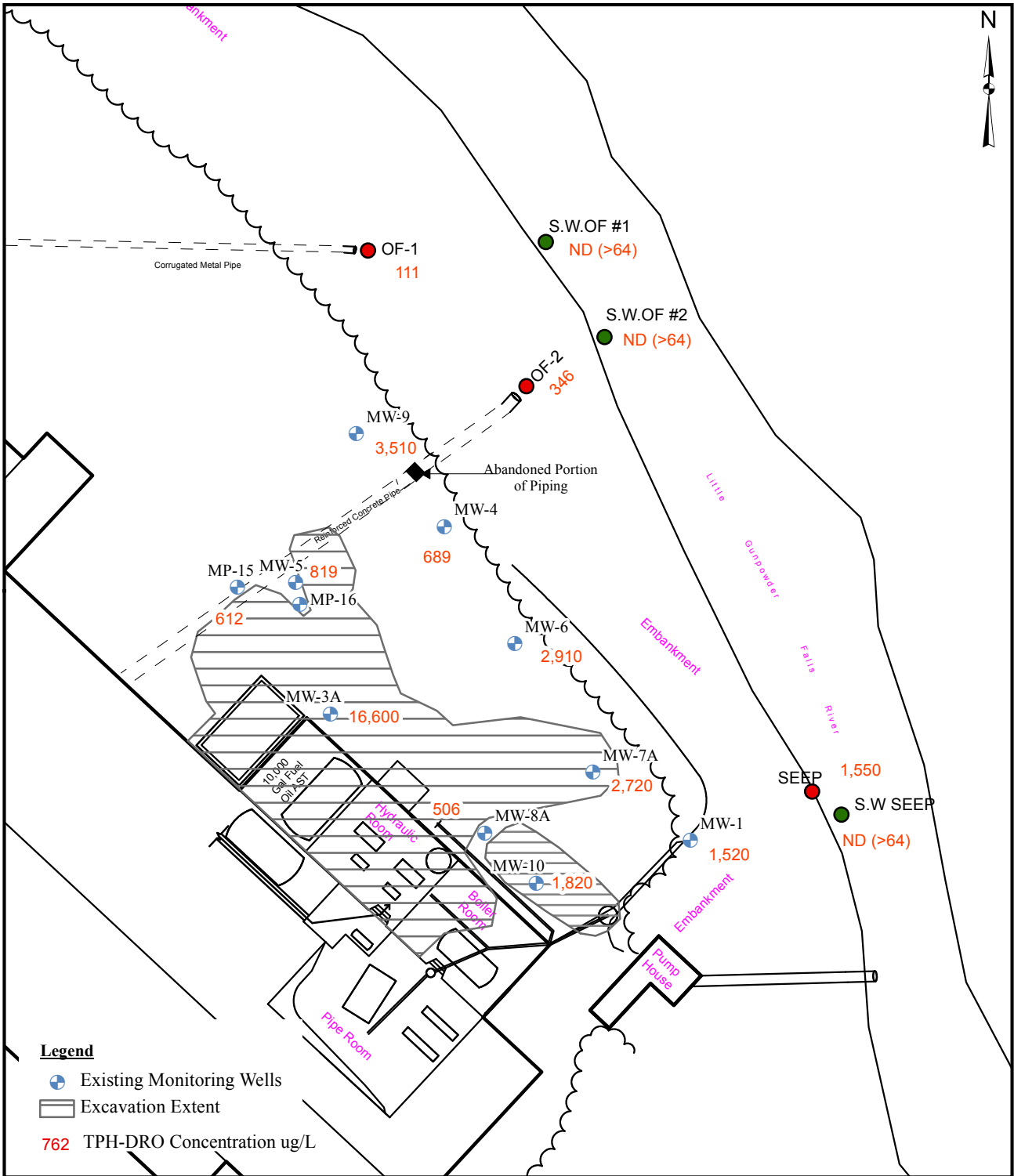
Notes:

Historical Site Features Are Illustrated. All Buildings Have Been Removed.

Date: 9/21/15	Dr. By: NP	Chk. By: WTF	BSTI Job No. 367	Figure Number: 3
------------------	---------------	-----------------	---------------------	---------------------



Scale Reference



BSTI
science that works for you

3157 Limestone Rd., Cochranville PA, 19330

TPH-DRO CONCENTRATION

AXIL-BELKO

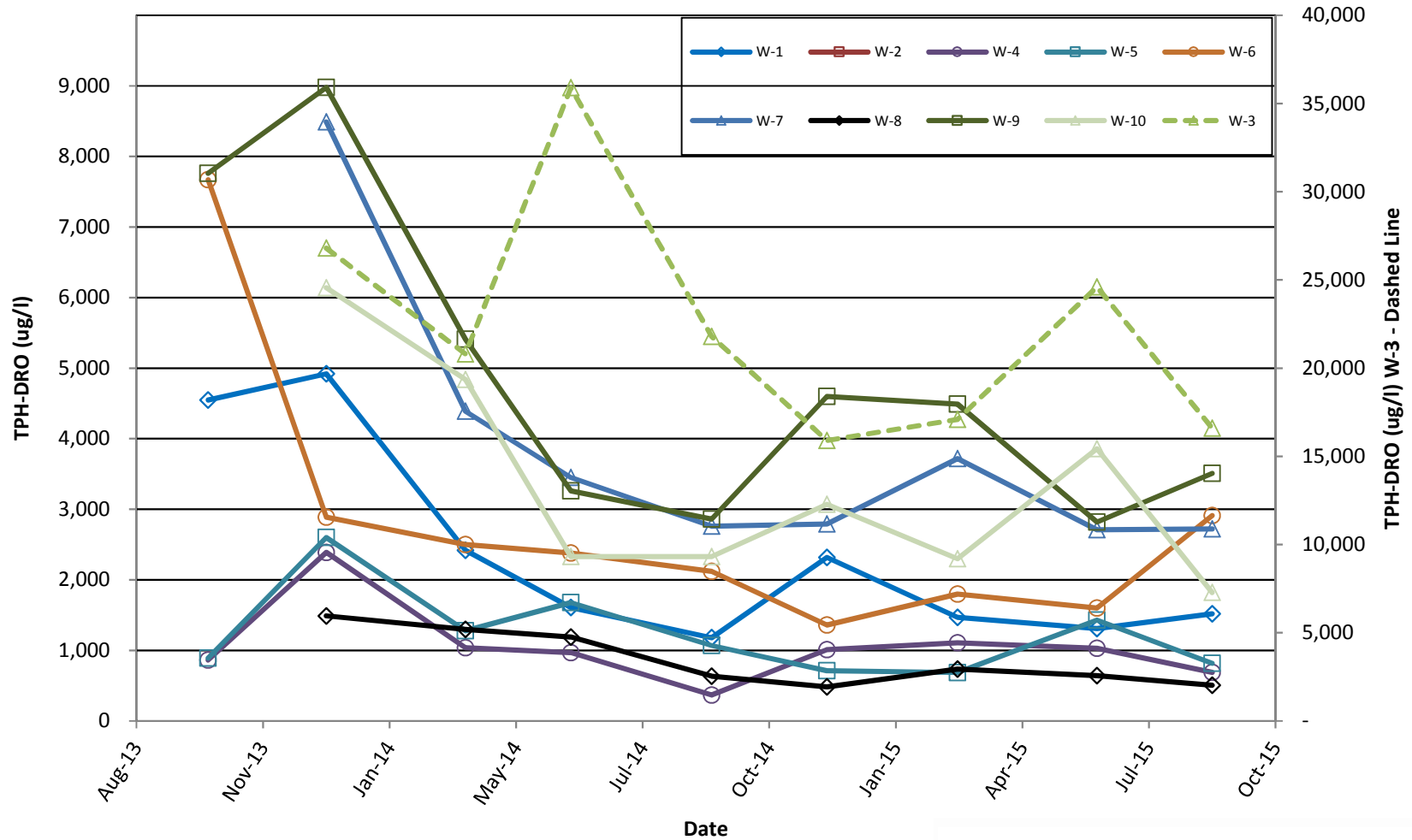
11931 JERICHO RD KINGSVILLE, MD

Notes:

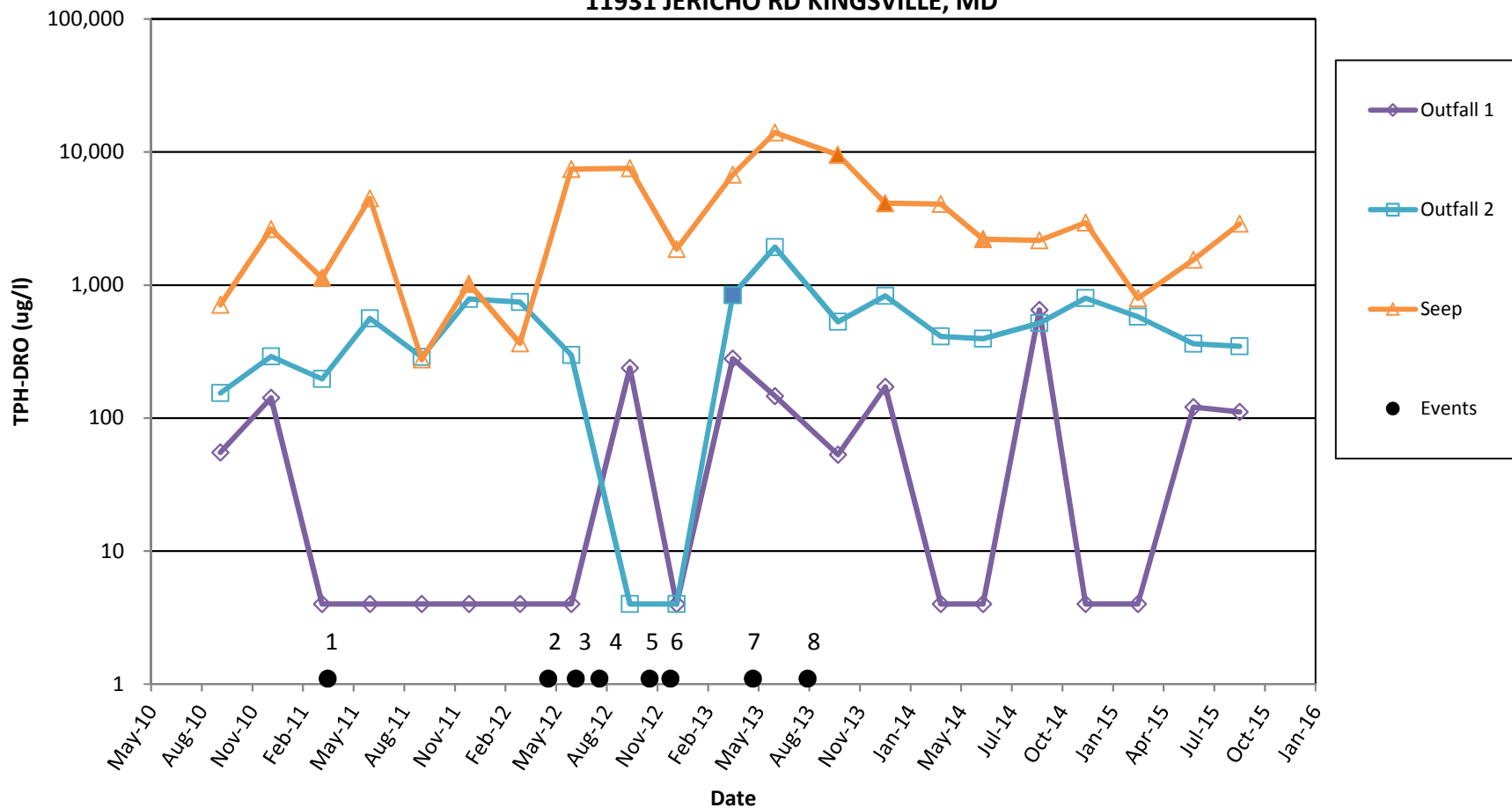
Historic Site Features Are Illustrated. All Buildings Have Been Removed.

Date: 9/23/15	Dr. By: NP	Chk. By: WTF	BSTI Job No. 367	Figure Number: 4
Scale Bar: 0 4 8 16 24 Feet				Scale Reference

**FIGURE 5: MONITORING WELL TPH-DRO TIME SERIES
AXIL BELKO FACILITY
11931 JERICHO RD KINGSVILLE, MD**



**FIGURE 6: OUTFALLS AND SEEP TPH-DRO TIME SERIES
AXIL BELKO FACILITY
11931 JERICO RD KINGSVILLE, MD**



Notes:
 Open symbol represent no sheen shaded symbol represents sheen observed
 Nondetections reported as the MDL
 1- Area A, D, 1 Excavation, 2- Building 8 Slab Demolishedm 3- Pilot Excavation- Area C,
 4- Second Excavation- Area C, 5- Third Excavation- Area C, 6- Start of Demolition,
 7- Fourth Excavation- Area C, Outfall Abandoned, 8- Fifth Excavation- Area C



APPENDICES

(CD Version only)



APPENDIX I
ANALYTICAL RESULTS
(CD Version Only)

Technical Report for

Brownfield Science & Technology

Axil Belko, Kingsville, MD

367

Accutest Job Number: JC3433

Sampling Date: 09/08/15

Report to:

Brownfield Associates, Inc.

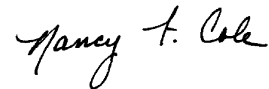
npearse@bstiweb.com

ATTN: Nora Pearse

Total number of pages in report: 49



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



Nancy Cole
Laboratory Director

Client Service contact: Kelly Patterson 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), AK (UST-103), AZ (AZ0786), PA, RI, SC, TN, TX, VA, WV, DoD ELAP (L-A-B L2248)

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Test results relate only to samples analyzed.

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Sample Summary

Brownfield Science & Technology

Job No: JC3433

Axil Belko, Kingsville, MD

Project No: 367

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC3433-1	09/08/15	10:30 NO	09/09/15	AQ	Ground Water	MW-1
JC3433-2	09/08/15	11:30 NO	09/09/15	AQ	Ground Water	MW-3A
JC3433-3	09/08/15	12:10 NO	09/09/15	AQ	Ground Water	MW-4
JC3433-4	09/08/15	12:35 NO	09/09/15	AQ	Ground Water	MW-5
JC3433-5	09/08/15	12:15 NO	09/09/15	AQ	Ground Water	MW-6
JC3433-6	09/08/15	11:10 NO	09/09/15	AQ	Ground Water	MW-7A
JC3433-7	09/08/15	11:00 NO	09/09/15	AQ	Ground Water	MW-8A
JC3433-8	09/08/15	10:45 NO	09/09/15	AQ	Ground Water	MW-9
JC3433-9	09/08/15	11:45 NO	09/09/15	AQ	Ground Water	MW-10
JC3433-10	09/08/15	12:30 NO	09/09/15	AQ	Ground Water	MP-15
JC3433-11	09/08/15	13:15 NO	09/09/15	AQ	Ground Water	O.F.#1
JC3433-12	09/08/15	13:25 NO	09/09/15	AQ	Ground Water	O.F.#2
JC3433-13	09/08/15	13:20 NO	09/09/15	AQ	Ground Water	SEEP



Sample Summary (continued)

Brownfield Science & Technology

Job No: JC3433

**Axil Belko, Kingsville, MD
Project No: 367**

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC3433-14	09/08/15	08:25 NO	09/09/15	AQ	Surface Water	S.W. O.F.#1
JC3433-15	09/08/15	08:40 NO	09/09/15	AQ	Surface Water	S.W. O.F.#2
JC3433-16	09/08/15	09:00 NO	09/09/15	AQ	Surface Water	S.W. SEEP
JC3433-17	09/08/15	10:15 NO	09/09/15	AQ	Effluent	CARBON EFFLUENT

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Brownfield Science & Technology

Job No JC3433

Site: Axil Belko, Kingsville, MD

Report Date 9/23/2015 1:04:33 PM

On 09/09/2015, 17 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 2.4 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JC3433 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 8260C

Matrix: AQ

Batch ID: VO7023

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D75098-1MS, D75098-2DUP were used as the QC samples indicated.
- RPD(s) for Duplicate for Xylene (total) are outside control limits for sample D75098-2DUP. High RPD due to possible sample analyzed from different vials.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ

Batch ID: OP87156

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC3433-1MS, JC3433-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015C

Matrix: AQ

Batch ID: GUV5018

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC3351-1MS, JC3351-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8015C

Matrix: AQ

Batch ID: OP87126

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC3433-1MS, JC3433-1MSD were used as the QC samples indicated.
- JC3433-14 for o-Terphenyl: High percent recoveries and no positive found in the sample.

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: JC3433
Account: Brownfield Science & Technology
Project: Axil Belko, Kingsville, MD
Collected: 09/08/15



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC3433-1	MW-1					
TPH-DRO (C10-C28)		1.52	0.083	0.064	mg/l	SW846 8015C
JC3433-2	MW-3A					
TPH-DRO (C10-C28)		16.6	0.083	0.064	mg/l	SW846 8015C
JC3433-3	MW-4					
TPH-DRO (C10-C28)		0.689	0.083	0.064	mg/l	SW846 8015C
JC3433-4	MW-5					
TPH-DRO (C10-C28)		0.819	0.083	0.064	mg/l	SW846 8015C
JC3433-5	MW-6					
TPH-DRO (C10-C28)		2.91	0.083	0.064	mg/l	SW846 8015C
JC3433-6	MW-7A					
TPH-DRO (C10-C28)		2.72	0.083	0.064	mg/l	SW846 8015C
JC3433-7	MW-8A					
TPH-DRO (C10-C28)		0.506	0.083	0.064	mg/l	SW846 8015C
JC3433-8	MW-9					
Naphthalene		1.7	1.0	0.27	ug/l	SW846 8270D
TPH-DRO (C10-C28)		3.51	0.083	0.064	mg/l	SW846 8015C
JC3433-9	MW-10					
TPH-DRO (C10-C28)		1.82	0.083	0.064	mg/l	SW846 8015C
JC3433-10	MP-15					
TPH-DRO (C10-C28)		0.612	0.083	0.064	mg/l	SW846 8015C
JC3433-11	O.F.#1					
TPH-DRO (C10-C28)		0.111	0.083	0.064	mg/l	SW846 8015C

Summary of Hits

Job Number: JC3433
Account: Brownfield Science & Technology
Project: Axil Belko, Kingsville, MD
Collected: 09/08/15



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC3433-12	O.F.#2					
TPH-DRO (C10-C28)		0.346	0.083	0.064	mg/l	SW846 8015C
JC3433-13	SEEP					
TPH-DRO (C10-C28)		2.89	0.083	0.064	mg/l	SW846 8015C
JC3433-14	S.W. O.F.#1					
No hits reported in this sample.						
JC3433-15	S.W. O.F.#2					
No hits reported in this sample.						
JC3433-16	S.W. SEEP					
No hits reported in this sample.						
JC3433-17	CARBON EFFLUENT					
TPH-DRO (C10-C28)		0.141	0.083	0.064	mg/l	SW846 8015C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-1 Lab Sample ID: JC3433-1 Matrix: AQ - Ground Water Method: SW846 8270D SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98764.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		32-128%
321-60-8	2-Fluorobiphenyl	67%		35-119%
1718-51-0	Terphenyl-d14	50%		10-126%

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

Report of Analysis

Client Sample ID: MW-1 Lab Sample ID: JC3433-1 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y12994.D	1	09/11/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.52	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	86%		36-144%		
16416-32-3	Tetracosane-d50	82%		32-138%		
438-22-2	5a-Androstane	83%		31-136%		

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

4.1
4

Report of Analysis

Client Sample ID: MW-3A	Date Sampled: 09/08/15
Lab Sample ID: JC3433-2	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98765.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		32-128%
321-60-8	2-Fluorobiphenyl	73%		35-119%
1718-51-0	Terphenyl-d14	54%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3A Lab Sample ID: JC3433-2 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y12995.D	1	09/11/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	16.6	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	99%		36-144%		
16416-32-3	Tetracosane-d50	93%		32-138%		
438-22-2	5a-Androstane	93%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.2
4

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 09/08/15
Lab Sample ID: JC3433-3	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98766.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		32-128%
321-60-8	2-Fluorobiphenyl	68%		35-119%
1718-51-0	Terphenyl-d14	61%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-4 Lab Sample ID: JC3433-3 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y12998.D	1	09/11/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.689	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	98%		36-144%		
16416-32-3	Tetracosane-d50	99%		32-138%		
438-22-2	5a-Androstane	97%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.3
4

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 09/08/15
Lab Sample ID: JC3433-4	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98767.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		32-128%
321-60-8	2-Fluorobiphenyl	77%		35-119%
1718-51-0	Terphenyl-d14	71%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5 Lab Sample ID: JC3433-4 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y12999.D	1	09/11/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.819	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	87%		36-144%		
16416-32-3	Tetracosane-d50	71%		32-138%		
438-22-2	5a-Androstane	70%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.4
4

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 09/08/15
Lab Sample ID: JC3433-5	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98768.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		32-128%
321-60-8	2-Fluorobiphenyl	79%		35-119%
1718-51-0	Terphenyl-d14	70%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-6 Lab Sample ID: JC3433-5 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y13000.D	1	09/12/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.91	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	101%		36-144%		
16416-32-3	Tetracosane-d50	105%		32-138%		
438-22-2	5a-Androstane	100%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.5
4

Report of Analysis

Client Sample ID: MW-7A Lab Sample ID: JC3433-6 Matrix: AQ - Ground Water Method: SW846 8270D SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98769.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		32-128%
321-60-8	2-Fluorobiphenyl	77%		35-119%
1718-51-0	Terphenyl-d14	66%		10-126%

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

4.6
4

Report of Analysis

Client Sample ID: MW-7A Lab Sample ID: JC3433-6 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y13001.D	1	09/12/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.72	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	99%		36-144%		
16416-32-3	Tetracosane-d50	91%		32-138%		
438-22-2	5a-Androstane	89%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.6
4

Report of Analysis

Client Sample ID: MW-8A	Date Sampled: 09/08/15
Lab Sample ID: JC3433-7	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98770.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		32-128%
321-60-8	2-Fluorobiphenyl	64%		35-119%
1718-51-0	Terphenyl-d14	60%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-8A Lab Sample ID: JC3433-7 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y13002.D	1	09/12/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.506	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	86%		36-144%		
16416-32-3	Tetracosane-d50	75%		32-138%		
438-22-2	5a-Androstane	73%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.7
4

Report of Analysis

Client Sample ID: MW-9	Date Sampled: 09/08/15
Lab Sample ID: JC3433-8	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98771.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	1.7	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		32-128%
321-60-8	2-Fluorobiphenyl	78%		35-119%
1718-51-0	Terphenyl-d14	57%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-9 Lab Sample ID: JC3433-8 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y13003.D	1	09/12/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3.51	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	92%		36-144%		
16416-32-3	Tetracosane-d50	80%		32-138%		
438-22-2	5a-Androstane	74%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.8
4

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 09/08/15
Lab Sample ID: JC3433-9	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98772.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		32-128%
321-60-8	2-Fluorobiphenyl	41%		35-119%
1718-51-0	Terphenyl-d14	33%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10 Lab Sample ID: JC3433-9 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y13004.D	1	09/12/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.82	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	80%		36-144%		
16416-32-3	Tetracosane-d50	68%		32-138%		
438-22-2	5a-Androstane	67%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.9
4

Report of Analysis

Client Sample ID: MP-15	Date Sampled: 09/08/15
Lab Sample ID: JC3433-10	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98773.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		32-128%
321-60-8	2-Fluorobiphenyl	66%		35-119%
1718-51-0	Terphenyl-d14	57%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MP-15 Lab Sample ID: JC3433-10 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Y13005.D	1	09/12/15	PK	09/11/15	OP87126	G7Y519
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.612	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	84%		36-144%		
16416-32-3	Tetracosane-d50	52%		32-138%		
438-22-2	5a-Androstane	50%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.10
4

Report of Analysis

Client Sample ID: O.F.#1	Date Sampled: 09/08/15
Lab Sample ID: JC3433-11	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98774.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		32-128%
321-60-8	2-Fluorobiphenyl	74%		35-119%
1718-51-0	Terphenyl-d14	76%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: O.F.#1 Lab Sample ID: JC3433-11 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Z12994.D	1	09/11/15	PK	09/11/15	OP87126	G7Z529
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.111	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	85%		36-144%		
16416-32-3	Tetracosane-d50	69%		32-138%		
438-22-2	5a-Androstane	63%		31-136%		

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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4.11
4

Report of Analysis

Client Sample ID: O.F.#2	Date Sampled: 09/08/15
Lab Sample ID: JC3433-12	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98775.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	72%		35-119%
1718-51-0	Terphenyl-d14	65%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: O.F.#2 Lab Sample ID: JC3433-12 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
--	---

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Z12995.D	1	09/12/15	PK	09/11/15	OP87126	G7Z529
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.346	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	110%		36-144%		
16416-32-3	Tetracosane-d50	91%		32-138%		
438-22-2	5a-Androstane	80%		31-136%		

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

4.12
4

Report of Analysis

Client Sample ID: SEEP	Date Sampled: 09/08/15
Lab Sample ID: JC3433-13	Date Received: 09/09/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98776.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		32-128%
321-60-8	2-Fluorobiphenyl	59%		35-119%
1718-51-0	Terphenyl-d14	47%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SEEP Lab Sample ID: JC3433-13 Matrix: AQ - Ground Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
--	---

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Z12996.D	1	09/12/15	PK	09/11/15	OP87126	G7Z529
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.89	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	87%		36-144%		
16416-32-3	Tetracosane-d50	75%		32-138%		
438-22-2	5a-Androstane	67%		31-136%		

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

4.13
4

Report of Analysis

Client Sample ID: S.W. O.F.#1	Date Sampled: 09/08/15
Lab Sample ID: JC3433-14	Date Received: 09/09/15
Matrix: AQ - Surface Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P98777.D	1	09/14/15	LK	09/12/15	OP87156	EP4296
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		32-128%
321-60-8	2-Fluorobiphenyl	74%		35-119%
1718-51-0	Terphenyl-d14	69%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S.W. O.F.#1 Lab Sample ID: JC3433-14 Matrix: AQ - Surface Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
--	---

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Z12997.D	1	09/12/15	PK	09/11/15	OP87126	G7Z529
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	147% ^a		36-144%		
16416-32-3	Tetracosane-d50	134%		32-138%		
438-22-2	5a-Androstane	122%		31-136%		

(a) High percent recoveries and no positive found in the sample.

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

4.14
4

Report of Analysis

Client Sample ID: S.W. O.F.#2	Date Sampled: 09/08/15
Lab Sample ID: JC3433-15	Date Received: 09/09/15
Matrix: AQ - Surface Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98778.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		32-128%
321-60-8	2-Fluorobiphenyl	67%		35-119%
1718-51-0	Terphenyl-d14	59%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S.W. O.F.#2 Lab Sample ID: JC3433-15 Matrix: AQ - Surface Water Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Z12998.D	1	09/12/15	PK	09/11/15	OP87126	G7Z529
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	87%		36-144%		
16416-32-3	Tetracosane-d50	85%		32-138%		
438-22-2	5a-Androstane	80%		31-136%		

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

4.15
4

Report of Analysis

Client Sample ID: S.W. SEEP	Date Sampled: 09/08/15
Lab Sample ID: JC3433-16	Date Received: 09/09/15
Matrix: AQ - Surface Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	P98779.D	1	09/14/15	LK	09/12/15	OP87156	EP4296

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		32-128%
321-60-8	2-Fluorobiphenyl	74%		35-119%
1718-51-0	Terphenyl-d14	59%		10-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S.W. SEEP	Date Sampled: 09/08/15
Lab Sample ID: JC3433-16	Date Received: 09/09/15
Matrix: AQ - Surface Water	Percent Solids: n/a
Method: SW846 8015C SW846 3510C	
Project: Axil Belko, Kingsville, MD	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Z12999.D	1	09/12/15	PK	09/11/15	OP87126	G7Z529
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	109%		36-144%		
16416-32-3	Tetracosane-d50	102%		32-138%		
438-22-2	5a-Androstane	94%		31-136%		

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

4.16
4

Report of Analysis

Client Sample ID: CARBON EFFLUENT	
Lab Sample ID: JC3433-17	Date Sampled: 09/08/15
Matrix: AQ - Effluent	Date Received: 09/09/15
Method: SW846 8260C	Percent Solids: n/a
Project: Axil Belko, Kingsville, MD	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	O160505.D	1	09/17/15	DC	n/a	n/a	VO7023
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.24	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
91-20-3	Naphthalene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: CARBON EFFLUENT Lab Sample ID: JC3433-17 Matrix: AQ - Effluent Method: SW846 8015C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV125928.D	1	09/11/15	JC	n/a	n/a	GUV5018
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.038	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
98-08-8	aaa-Trifluorotoluene	67%		62-120%		

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

4.17
4

Report of Analysis

Client Sample ID: CARBON EFFLUENT Lab Sample ID: JC3433-17 Matrix: AQ - Effluent Method: SW846 8015C SW846 3510C Project: Axil Belko, Kingsville, MD	Date Sampled: 09/08/15 Date Received: 09/09/15 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7Z13000.D	1	09/12/15	PK	09/11/15	OP87126	G7Z529
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.141	0.083	0.064	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	94%		36-144%		
16416-32-3	Tetracosane-d50	89%		32-138%		
438-22-2	5a-Androstane	82%		31-136%		

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

4.17
4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JC3433 **Client:** _____ **Project:** _____
Date / Time Received: 9/9/2015 6:30:00 PM **Delivery Method:** _____ **Airbill #s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (1.4); Cooler 2: (1.0); Cooler 3: (1.0); Cooler 4: (1.3); Cooler 5: (2.2);
 Cooler Temps (Corrected) °C: Cooler 1: (1.6); Cooler 2: (1.2); Cooler 3: (1.2); Cooler 4: (1.5); Cooler 5: (2.4);

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

Cooler Temperature Y or N
 1. Temp criteria achieved:
 2. Cooler temp verification: _____ IR Gun
 3. Cooler media: _____ Ice (Bag)
 4. No. Coolers: _____ 5

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

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

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

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

Comments

5.1
5

APPENDIX II
ECOLOGICAL TOXICITY TESTING LAB REPORT
(CD Version Only)





RESULTS OF ACUTE TOXICITY TESTING
WITH *Ceriodaphnia dubia* AND *Hyalella azteca*
ON SAMPLES PROVIDED BY
BROWNFIELD SCIENCE AND TECHNOLOGY

Prepared for:

Brownfield Science and Technology
3157 Limestone Road
Cochranville, Pennsylvania 19330

Prepared by:

EA Engineering, Science, and Technology, Inc., PBC
231 Schilling Circle
Hunt Valley, Maryland 21031
For questions regarding this report contact Wayne McCulloch
ph: 410-584-7000

Results relate only to the items tested or to the samples as received by the laboratory.

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EA Engineering, Science, and Technology, Inc., PBC*

This report contains 9 pages plus 3 attachments.

A handwritten signature in black ink, reading 'Wayne L. McCulloch', is written over a horizontal line.

Wayne L. McCulloch
Laboratory Director

5 October 2015

Date

EA Project Number 70005.15



EA Report Number 7179

INTRODUCTION

At the request of Brownfield Science and Technology, EA Engineering, Science, and Technology performed acute toxicity tests on grab samples provided by Brownfield Science and Technology. The samples were collected on 8 September 2015 and were designated as Outfall #2 and Seep Area. The test organisms, *Ceriodaphnia dubia* (water flea) and *Hyalella azteca* (amphipod) were exposed to 100, 10, 4, 1 and 0.5 percent of each sample and a laboratory dilution water control. Unfortunately, the *H. azteca* toxicity test with the Seep Area was invalid due to unacceptable control mortality. This test was rerun with a sample collected on 21 September 2015. The objective of this study was to assess the acute lethality of the samples to the test species, expressed as 48-hour (*C. dubia*) and 96-hour (*H. azteca*) median lethal concentrations (LC50s).

This toxicity testing was conducted following EA's standard operating procedures (EA 2013) which are in accordance with US EPA guidance (US EPA 2002). The results of the acute toxicity tests were analyzed using the ToxCalc statistical software package (Version 5.0, Tidepool Scientific Software) and followed US EPA guidance (US EPA 2002). A summary of sample information, test conditions, and reference toxicant data is presented on page 5 for *C. dubia* and on page 6 for *H. azteca*. The results of the acute toxicity tests conducted on the Outfall #2 and Seep Area samples are summarized on pages 7 and 8, respectively. Table 1 (page 9) summarizes the collection and receipt information for the samples. Copies of raw data sheets and statistical analyses are included in Attachment I, and cumulative reference toxicant test data are included in Attachment II. The Report Quality Assurance Record is included as Attachment III.

SUMMARY OF RESULTS

The results of the acute toxicity testing on the September 2015 Outfall #2 and Seep Area samples comply with current NELAC standards.

The Outfall #2 acute toxicity test results are presented on page 7. In the *C. dubia* test, there was 75 percent survival in the 100 percent concentration after 48 hours. There was a minimum of 95 percent survival in the remaining percent sample concentrations and 100 percent survival in the control. The 48-hour LC50 for *C. dubia* was >100 percent sample. The *H. azteca* test had 62 percent survival in the 100 percent concentration, and a minimum of 90 percent survival in the remaining percent sample concentrations after 96 hours. The dilution water control had 95 percent survival. The 96-hour LC50 for *H. azteca* was >100 percent sample.

The Seep Area acute toxicity test results are presented on page 8. In the *C. dubia* test, there was a minimum of 90 percent survival in the percent sample concentrations after 48 hours. There was 95 percent survival in the dilution water control. The 48-hour LC50 for *C. dubia* was >100 percent sample. The *H. azteca* test had 80 percent survival in the 100 percent concentration, and 100 percent survival in the remaining percent sample concentrations after 96 hours. The dilution water control had 95 percent survival. The 96-hour LC50 for *H. azteca* was >100 percent sample.

In conformance with EA's quality assurance/quality control program, monthly reference toxicant tests were performed on the in-house cultured test species. The 48-hour LC50 for the September *C. dubia* reference toxicant test was 1,909 mg/L NaCl which fell within EA's acceptable control chart limits of 1,540-2,085 mg/L NaCl (page 5). The results of the *H. azteca* reference toxicant test were also acceptable with a 96-hour LC50 of 164 mg/L Cu and acceptable control chart limits of 0-341 mg/L Cu (page 6). Cumulative reference toxicant data for these EA-cultured test species are presented in Attachment II.

REFERENCES

- EA. 2013. EA Ecotoxicology Laboratory Quality Assurance and Standard Operating Procedures Manual. EA Manual ATS-102. Internal document prepared by EA's Ecotoxicology Laboratory, EA Engineering, Science, and Technology, Inc., Hunt Valley, Maryland.
- US EPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. EPA-821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C.

SUMMARY OF SAMPLE/TEST INFORMATION

Test: *Ceriodaphnia dubia* 48-hour acute toxicity test

Test Procedure: **EA Protocol CD-AC-03**

Acute assay with *Ceriodaphnia dubia*

Client Name: **Brownfield Science and Technology**

Sample Description: **Outfall #2 and Seep Area samples**

Sample Date: **8 September 2015**

Dilution Water Description: **Moderately hard synthetic freshwater**

Concentration Series: **100, 10, 4, 1, 0.5% sample and control**

Test Chamber: **30-ml cup**

Volume per Test Chamber: **15 ml**

Number of Replicates: **4**

Number of Organisms Per Replicate: **5**

Organism Lot Information

Lot Number: Not Applicable

Source: EA's Culture Facility (Hunt Valley, Maryland)

Age: <24 hours old

Reference Toxicant Test Information^(b)

Reference Toxicant: Sodium chloride (NaCl)

EA Test Number: RT-15-121 (initiated 2 September 2015)

Dilution Water: Moderately hard synthetic freshwater

48-hour LC50: 1,909 mg/L NaCl

Laboratory control chart acceptability range for 48-hour LC50: 1,541-2,085 mg/L NaCl

(b) Cumulative reference toxicant test data for EA-cultured *C. dubia* are included in Attachment II.

SUMMARY OF SAMPLE/TEST INFORMATION

Test: *Hyalella azteca* 96-hour acute toxicity test

Test Procedure: **EA Protocol INVERT-AC-03**
Acute assay with Invertebrates

Client Name: **Brownfield Science and Technology**

Sample Description: **Outfall #2 and Seep Area samples**

Sample Date: **8 September 2015 and 21 September 2015, respectively**

Dilution Water Description: **Moderately hard synthetic freshwater**

Concentration Series: **100, 10, 4, 1, 0.5% sample and control**

Test Chamber: **1-L beaker**

Volume per Test Chamber: **250 ml**

Number of Replicates: **4**

Number of Organisms Per Replicate: **5**

Organism Lot Information

Lot Number: N/A

Source: EA's Culture Facility (Hunt Valley, Maryland)

Age: 7-8 days old

Reference Toxicant Test Information^(a)

Reference Toxicant: Copper sulfate (CuSO₄)

EA Test Number: RT-15-134 (initiated 30 September 2015)

Dilution Water: Dechlorinated Tap Water

96-hour LC50: 164 mg/L Cu

Laboratory control chart acceptability range for 48-hour LC50: 0-341 mg/L Cu

(a) Cumulative reference toxicant test data for EA-cultured *H. azteca* are included in Attachment II.

ACUTE TOXICITY TEST RESULTS ON AN OUTFALL #2 SAMPLE PROVIDED BY
BROWNFIELD SCIENCE AND TECHNOLOGY

Test Species:	<i>Ceriodaphnia dubia</i> (water flea)	<i>Hyalella azteca</i> (amphipod)
Sample Identification:	Outfall #2	Outfall #2
Sample Type:	Grab	Grab
Sample Date:	8 September	8 September 2015
EA Accession Number:	AT5-365	AT5-365
EA Test Number:	TN-15-363	TN-15-365
Test Initiation:	1447, 8 September 2015	1525, 8 September 2015
Test Completion:	1410, 10 September 2015	1440, 12 September 2015

<u>Test Concentration</u> (percent sample)	<u>48-Hour</u> <u>Percent Survival</u>	<u>96-Hour</u> <u>Percent Survival</u>
Control	100	95
0.5	100	100
1	100	90
4	100	100
10	95	95
100	75	62

LC50 as percent sample: (95 percent confidence limits)	>100 (not applicable)	>100 (not applicable)
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Acute Toxic Units (TU _a):	<1.0	<1.0
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<u>Water Quality Parameters</u> <u>on Test Solutions</u>	<u>(<i>C. dubia</i>)</u>	<u>(<i>H. azteca</i>)</u>
	<u>Range</u>	<u>Range</u>
Temperature (°C):	24.9 – 25.4	24.3 – 25.2
pH:	7.5 – 8.5	7.6 – 8.5
Dissolved Oxygen (mg/L):	7.3 – 8.3	7.2 – 8.7
Conductivity (µS/cm):	315 – 681	313 – 702

<u>Additional Water Quality Parameters</u>	<u>AT5-365</u>
Alkalinity (mg/L CaCO ₃):	144
Hardness (mg/L CaCO ₃):	188
Conductivity (µS/cm):	681
Temperature (°C):	10.2 ^(a)
pH:	7.4
Total Residual Chlorine (mg/L):	<0.01

(a) Sample temperature upon receipt was greater than 6.0 °C. Sample received on wet ice less than 8 hours post collection.

ACUTE TOXICITY TEST RESULTS ON A SEEP AREA SAMPLE PROVIDED BY BROWNFIELD SCIENCE AND TECHNOLOGY

Test Species:	<i>Ceriodaphnia dubia</i> (water flea)	<i>Hyaella azteca</i> (amphipod)
Sample Identification:	Seep Area	Seep Area
Sample Type:	Grab	Grab
Sample Date:	8 September 2015	21 September 2015
EA Accession Number:	AT5-364	AT5-387
EA Test Number:	TN-15-364	TN-15-389
Test Initiation:	1450, 8 September 2015	1248, 22 September 2015
Test Completion:	1425, 10 September 2015	1220, 26 September 2015
Test Concentration (percent sample)	48-Hour Percent Survival	96-Hour Percent Survival
Control	95	95
0.5	100	100
1	100	100
4	100	100
10	100	100
100	90	80
LC50 as percent sample: (95 percent confidence limits)	>100 (not applicable)	>100 (not applicable)
Acute Toxic Units (TU _a):	<1.0	<1.0
Water Quality Parameters on Test Solutions	<i>(C. dubia)</i>	<i>(H. azteca)</i>
	Range	Range
Temperature (°C):	24.3 – 25.3	24.0 – 25.9
pH:	7.9 – 8.4	7.6 – 8.5
Dissolved Oxygen (mg/L):	7.1 – 8.4	8.1 – 8.6
Conductivity (µS/cm):	316 – 906	318 – 936
Additional Water Quality Parameters	AT5-364	AT5-387
Alkalinity (mg/L CaCO ₃):	318	XXX
Hardness (mg/L CaCO ₃):	320	XXX
Conductivity (µS/cm):	933	XXX
Temperature (°C):	10.6 ^(a)	14.8 ^(a)
pH:	7.2	7.0
Total Residual Chlorine (mg/L):	<0.01	<0.01

(a) Sample temperature upon receipt was greater than 6.0 °C. Sample received on wet ice less than 8 hours post collection.

TABLE 1 SUMMARY OF COLLECTION/RECEIPT INFORMATION FOR SEPTMEBER 2015 SAMPLES PROVIDED BY BROWNFIELD SCIENCE AND TECHNOLOGY

Sample Description	EA Accession Number	Collection Time and Date	Receipt Time and Date
Outfall #2	AT5-365	0855, 8 September 2015	1315, 8 September 2015
Seep Area	AT5-364	0835, 8 September 2015	1315, 8 September 2015
Seep Area	AT5-387	0820, 21 September 2015	0855, 21 September 2015

ATTACHMENT I

Data Sheets and Statistical Analyses
(25 pages)



EA Ecotoxicology Laboratory
 231 Schilling Circle
 Hunt Valley, Maryland 21031
 Telephone: 410-584-7000
 Fax: 410-584-1057



Sample Shipped By: (circle) Hand
 Fed. Ex. UPS Other: Delivered
 Tracking #: _____

Client: BSTI Project No.: 307
 NPDES Number: _____ Client Purchase Order Number: _____
 City/State Collected: Kingsville, Md

PLEASE READ SAMPLING INSTRUCTIONS ON BACK OF FORM

Accession Number (office use only)	Grab	Composite	Collection		Sample Description (including Site, Station Number, and Outfall Number)	Number/Volume of Container
			Start Date/Time	End Date/Time		
AT5-364	✓		9/8/15/835	9/8/15/835	seed	1 gallon & 1/2
AT5-365	✓		9/8/15/835	9/8/15/835	O.F. # 2	1 gallon & 1/2 gal

Sampled By: <u>Nate Orzoffo</u>	Date/Time: <u>9/8/15/1130</u>	Received By: <u>[Signature]</u>	Date/Time: <u>9/8/15 1130</u>
Sampler's Printed Name: <u>Nate Orzoffo</u>	Title: 	Relinquished By: <u>[Signature]</u>	Date/Time: <u>9/8/15 1:15</u>
Relinquished By: 	Date/Time: 	Received By Laboratory: <u>[Signature]</u>	Date/Time: <u>9/8/15 1315</u>

Was Sample Chilled During Collection? Yes / No

Comments:

Sample Collection Parameters

Visual Description:

Temperature (°C):

pH:

TRC (mg/L):

Other:



SAMPLE CHECK-IN FOR TESTING

Client: BSTI

EA Accession Number: ATS 364 (seep)

Parameter	Acceptable Range	Measurement*	Date	Time	Initials
Temperature (°C)	≤4	10.6	9/8/15	1324	vy
Is ice present?	--	Melted	↓	↓	↓
pH	6.0-9.0	7.2	↓	↓	↓
TRC (mg/L)	<0.01	LO.01	↓	↓	↓
Visual Description	--	Brown	↓	↓	↓

*If outside acceptable range, contact project manager.

OTHER PARAMETERS IF REQUIRED (SEE STUDY PLAN):

Parameter	Acceptable Range	(✓)	Date	Time	Initials
Ammonia (preserve aliquot)	--				
Parameter	Acceptable Range	Measurement*	Date	Time	Initials
Salinity (ppt)	--				



**SAMPLE CHECK-IN
FOR TESTING**

Client: BST I

EA Accession Number: AT5 - 365 (O.F. #2)

Parameter	Acceptable Range	Measurement*	Date	Time	Initials
Temperature (°C)	≤4	^{v. air} 7.4 10.2	9/8/15	1324	wy
Is ice present?	---	melted	↓	↓	↓
pH	6.0-9.0	7.4			
TRC (mg/L)	<0.01	<0.01			
Visual Description	--	BROWN			

*If outside acceptable range, contact project manager.

OTHER PARAMETERS IF REQUIRED (SEE STUDY PLAN):

Parameter	Acceptable Range	(✓)	Date	Time	Initials
Ammonia (preserve aliquot)	--				
Parameter	Acceptable Range	Measurement*	Date	Time	Initials
Salinity (ppt)	--				



EA Ecotoxicology Laboratory
 231 Schilling Circle
 Hunt Valley, Maryland 21031
 Telephone: 410-584-7000
 Fax: 410-584-1057



Sample Shipped By: (circle) Hand
 Fed. Ex. UPS Other: Carried
 Tracking #: _____

Client: BSTI Project No.: 367

NPDES Number: _____ Client Purchase Order Number: _____

City/State Collected: Kingsville, Md.

PLEASE READ SAMPLING INSTRUCTIONS ON BACK OF FORM

Accession Number (office use only)	Grab	Composite	Collection		Sample Description (including Site, Station Number, and Outfall Number)	Number/Volume of Container
			Start Date/Time	End Date/Time		
AT5-387	<input checked="" type="checkbox"/>		9/21/15 1720	9/21/15 1920	seep	1 gallon

Sampled By: <u>Nathaniel Duggan</u>	Date/Time <u>9/21/15 / 0855</u>	Received By:	Date/Time
Sampler's Printed Name: <u>Nathaniel Duggan</u>	Title:	Relinquished By:	Date/Time
Relinquished By:	Date/Time	Received By Laboratory: <u>M-L</u>	Date/Time <u>9/21/15 0855</u>

Was Sample Chilled During Collection? Yes / No Comments:

Sample Collection Parameters

Visual Description:
 Temperature (°C):
 pH:
 TRC (mg/L):
 Other:



**SAMPLE CHECK-IN
FOR TESTING**

Client: BSTI

EA Accession Number: ATS-387 (seep)

Parameter	Acceptable Range	Measurement*	Date	Time	Initials
Temperature (°C)	≤4	14.8°C ^(a)	9/21/15	1008	WM
Is ice present?	--	YES	9/21/15	1008	WM
pH	6.0-9.0	7.0	9/21/15	1008	WM
TRC (mg/L)	<0.01	<0.01	9/22/15	1105	MJ
Visual Description	--	TAN	9/21/15	1008	WM

*If outside acceptable range, contact project manager.

OTHER PARAMETERS IF REQUIRED (SEE STUDY PLAN):

Parameter	Acceptable Range	(✓)	Date	Time	Initials
Ammonia (preserve aliquot)	--				
Parameter	Acceptable Range	Measurement*	Date	Time	Initials
Salinity (ppt)	--				

(a) Fresh sample < 3 hours old delivered on ice.

WM



TOXICITY TEST SET-UP BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-363

TEST ORGANISM INFORMATION

Common Name: <u>Water flea</u>	Adults Isolated (Time, Date): <u>9/8/15 0855</u>
Scientific Name: <u>C. dubia</u>	Neonates Pulled & Fed (Time, Date): <u>9/8/15 1315</u>
Lot Number: <u>N/A</u>	Acclimation: <u><24hrs</u> Age: <u><24 hrs</u>
Source: <u>EA</u>	Culture Water (T/S): <u>25.0</u> °C <u>0</u> ppt

TEST INITIATION

<u>Date</u>	<u>Time</u>	<u>Initials</u>	<u>Activity</u>
<u>9/8/15</u>	<u>1440</u>	<u>IM</u>	<u>Dilutions Made</u>
<u>↓</u>	<u>1440</u>	<u>↓</u>	<u>Test Vessels Filled</u>
<u>↓</u>	<u>1447</u>	<u>X</u>	<u>Organisms Transferred</u>
<u>↓</u>	<u>1535</u>	<u>vy</u>	<u>Head Counts</u>

TEST SET-UP

Sample Number: ATS-365

Dilution Number: LD5-416

<u>Test Concentration</u>	<u>Volume Test Material</u>	<u>Final Volume</u>
Control	0 ml	200 ml
0.5%	1 ml	<u>↓</u>
1%	2 ml	
4%	8 ml	
10%	20 ml	
100%	200 ml	



ACUTE TOXICITY TEST DATA SHEET

Project Number: 70005.15 Beginning Date: 9/8/15 Time: 1447
 Client: BSTI Ending Date: 9/10/15 Time: 1410
 QC Test Number: TN-15-303 TEST TYPE: Static / Flowthrough
 Test Material: _____ Renewal / Non-renewal
 Accession Number: A15-365 mg/L Test Container: 30 ml cup
 Dilution Water: Mod Hard pH: 6.0 - 9.0 Salinity: 0 Test Volume: 15 ml
 Accession Number: L05-416 Photoperiod: 16L 8d Light Intensity: 50 - 100 fc Test Duration: 48 hrs

TARGET VALUES

Concentration	Rep	Number of Live Organisms				Temperature (°C)				pH				Dissolved Oxygen (mg/L)				Conductivity (µS/cm) Salinity (ppt)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	
Control	A	5	5	5	5	5	25.0	25.0	25.0	25.0	8.3	8.5	7.9	8.3	8.0	7.3	315	320	336			
	B	5	5	5	5	5																
	C	5	5	5	5	5																
	D	5	5	5	5	5																
0.5	A	5	5	5	5	5	25.0	25.1	25.2		8.3	8.5	7.9	8.3	8.1	7.5	316	321	325			
	B	5	5	5	5	5																
	C	5	5	5	5	5																
	D	5	5	5	5	5																
1.0	A	5	5	5	5	5	25.0	25.2	25.3		8.3	8.4	7.9	8.3	8.1	7.9	317	322	325			
	B	5	5	5	5	5																
	C	5	5	5	5	5																
	D	5	5	5	5	5																
Meter Number																						
Time																						
Initials																						

JH
9/10



ACUTE TOXICITY TEST DATA SHEET

Project Number: 70005.15 Beginning Date: 9/8/15 Time: 1447
 Client: BSTI Ending Date: 9/10/15 Time: 1410
 QC Test Number: IN-15-363 TEST TYPE: Static / Flowthrough
 Test Material: _____ Renewal / Non-renewal
 Accession Number: AT5-365 Test Container: 30 ml cup
 Dilution Water: Mod Hard Test Volume: 15 ml
 Accession Number: UD5-416 Test Duration: 48 hrs

TARGET VALUES

Temp: 25±1 °C DO: >4.0 mg/L
 pH: 6.0 - 9.0 Salinity: 0 ppt
 Photoperiod: 16L 8d Light Intensity: 50 - 100 fc

Concentration	Rep	Number of Live Organisms				Temperature (°C)				pH				Dissolved Oxygen (mg/L)				Conductivity (µS/cm) Salinity (ppt)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	
4	A	5	5	5	5	24.9	25.4	25.3	8.3	8.4	8.0	8.3	8.1	7.4	328	332	336					
	B	5	5	5	5																	
	C	5	5	5	5																	
	D	5	5	5	5																	
10	A	5	5	5	5	24.9	25.1	25.3	8.2	8.4	8.0	8.3	8.1	8.3	348	353	355					
	B	5	5	5	4																	
	C	5	5	5	5																	
	D	5	5	5	5																	
100	A	5	5	5	3	24.9	25.4	25.3	7.5	8.3	7.9	8.0	8.0	7.9	681	674	679					
	B	5	5	5	4																	
	C	5	5	5	3																	
	D	5	5	5	5																	
Meter Number																						
Time	1355	1425	1410		677	677	678	677	677	678	677	677	678	677	677	678	677	677	678	677	678	
Initials	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	



TOXICOLOGY LABORATORY BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-363

Date/Time/Initials

Comments/Activity



TOXICITY TEST SET-UP BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-365

TEST ORGANISM INFORMATION

Common Name: <u>Amphipod</u>	Adults Isolated (Time, Date): _____
Scientific Name: <u>H. azteca</u>	Neonates Pulled & Fed (Time, Date): _____
Lot Number: <u>N/A</u>	Acclimation: <u><24hrs</u> Age: <u><24 hrs 3 days</u>
Source: <u>EA</u>	Culture Water (T/S): <u>26.0</u> °C <u>0</u> ppt

TEST INITIATION

<u>Date</u>	<u>Time</u>	<u>Initials</u>	<u>Activity</u>
9/2/15	1424	IM	Dilutions Made
↓	1424	↓	Test Vessels Filled
	1525		Organisms Transferred
	1545		Head Counts
		UY	

TEST SET-UP

Sample Number: AT5-365

Dilution Number: LD5-416

<u>Test Concentration</u>	<u>Volume Test Material</u>	<u>Final Volume</u>
Control	0 ml	1000 ml ↓
0.5%	5 ml	
1%	10 ml	
4%	40 ml	
10%	100 ml	
100%	1000 ml	



ACUTE TOXICITY TEST DATA SHEET

Project Number: 70005.15 Beginning Date: 9/8/15 Time: 1525
 Client: BSTI Ending Date: 9/2/15 Time: 1440
 QC Test Number: IN-15-365 TEST TYPE: Static / Flowthrough
 Test Material: _____ Renewal / Non-renewal
 Accession Number: ATS-365 mg/L Test Container: 100 ml cup
 Dilution Water: Mod Hard pH: 6.0 - 9.0 Salinity: 0 Test Volume: 250 ml
 Accession Number: LD5-416 Photoperiod: 16L, 8d Light Intensity: 50 - 100 fc Test Duration: 96 hrs

TARGET VALUES

Concentration	Rep	Number of Live Organisms					Temperature (°C)					pH					Dissolved Oxygen (mg/L)					Conductivity (µS/cm) Salinity (ppt)						
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96		
Control	A	5	5	5	5	5	24.3	25.1	24.9	24.4	24.5	8.2	8.5	8.2	8.6	7.9	8.4	8.2	7.7	8.7	8.4	313	315	319	332	334		
	B	5	5	5	5	5																						
	C	5	5	5	4	4																						
	D	5	5	5	5	5																						
0.5	A	5	5	5	5	5	24.4	25.2	25.1	24.5	24.6	8.2	8.5	8.2	8.6	7.9	8.4	8.1	7.7	8.6	8.4	316	318	323	336	337		
	B	5	5	5	5	5																						
	C	5	5	5	5	5																						
	D	5	5	5	5	5																						
1	A	5	5	5	4	4	24.4	25.2	25.1	24.6	24.7	8.2	8.5	8.2	8.6	8.0	8.4	8.1	7.4	8.6	8.4	317	319	323	336	337		
	B	5	5	5	5	5																						
	C	5	5	5	4	4																						
	D	5	5	5	5	5																						
Meter Number	9111 MJ																											
Time	1545	1540	1500	1455	1440	1510	0855	0817	0812	0842	1510	0855	0914	1012	0842	1510	0855	0914	1012	0842	1510	0855	0917	1012	0842			
Initials	VY	VY	VY	VY	IM	IM	IM	VY	IM	IM	IM	VY	IM	IM	IM	IM	IM	VY	IM	IM	IM	IM	IM	IM	IM	IM		



ACUTE TOXICITY TEST DATA SHEET

Project Number: 70005.15 Beginning Date: 9/8/15 Time: 1525
 Client: BSTI Ending Date: 9/12/15 Time: 1440
 QC Test Number: IN-15-365 TEST TYPE: Static / Flowthrough
 Test Material: _____ Renewal / Non-renewal
 Accession Number: A15-365 Temp: 25±1 °C DO: >4.0 mg/L Test Container: 100 ml cup
 Dilution Water: Mod Hard pH: 6.0 - 9.0 Salinity: 0 ppt Test Volume: 250 ml
 Accession Number: U05-416 Photoperiod: 16L 8d Light Intensity: 50 - 100 fc Test Duration: 96 hrs

TARGET VALUES

Concentration	Rep	Number of Live Organisms				Temperature (°C)				pH				Dissolved Oxygen (mg/L)				Conductivity (µS/cm) Salinity (ppt)								
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96					
4	A	5	5	5	5	5	24.4	25.2	25.1	24.8	24.8	8.2	8.4	8.2	8.5	8.0	8.4	8.2	7.9	8.6	8.3	327	331	333	345	343
	B	5	5	5	5	5																				
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
10	A	5	5	5	5	5	24.4	25.2	25.1	24.7	24.9	8.1	8.4	8.2	8.5	8.0	8.3	8.1	7.5	8.5	8.2	347	349	353	366	365
	B	5	5	5	5	5																				
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
100	A	5	5	5	5	5	24.4	25.2	25.1	24.7	24.9	7.6	8.1	8.1	8.3	7.9	7.9	8.1	7.2	8.5	8.2	684	679	684	701	702
	B	5	5	5	5	5																				
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
Meter Number						677	677	678	677	677	677	677	677	678	677	677	677	677	678	677	677	677	677	678	677	677
Time						1510	0855	0917	1012	0842	1510	0855	0917	1012	0842	1510	0855	0917	1012	0842	1510	0855	0917	1012	0842	
Initials						JM	VX	JM	JM	JM	JM	VX	JM	JM	JM	JM	JM	VX	JM	JM	JM	VX	JM	JM	JM	

JM 9/10



TOXICOLOGY LABORATORY BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-365

Date/Time/Initials

Comments/Activity



TOXICITY TEST SET-UP BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-364

TEST ORGANISM INFORMATION

Common Name: <u>Water flea</u>	Adults Isolated (Time, Date): <u>0855 9/8/15</u>
Scientific Name: <u>C. dubia</u>	Neonates Pulled & Fed (Time, Date): <u>1315 9/8/15</u>
Lot Number: <u>N/A</u>	Acclimation: <u><24hrs</u> Age: <u><24 hrs</u>
Source: <u>EA</u>	Culture Water (T/S): <u>25.0</u> °C <u>0</u> ppt

TEST INITIATION

<u>Date</u>	<u>Time</u>	<u>Initials</u>	<u>Activity</u>
9/8/15	1434	UY	Dilutions Made
↓	1434	UY	Test Vessels Filled
	1450	UY	Organisms Transferred
	1540	IM	Head Counts

TEST SET-UP

Sample Number: ATS-364

Dilution Number: LDS-416

<u>Test Concentration</u>	<u>Volume Test Material</u>	<u>Final Volume</u>
Control	0 ml	200 ml
0.5%	1 ml	↓
1%	2 ml	
4%	8 ml	
10%	20 ml	
100%	200 ml	



ACUTE TOXICITY TEST DATA SHEET

Project Number: 70005.15 Beginning Date: 9/8/15 Time: 1450
 Client: BSI Ending Date: 9/10/15 Time: 1425
 QC Test Number: TN-15-364 TEST TYPE: Static / Flowthrough
 Test Material: _____ Renewal / Non-renewal
 Accession Number: ATS-364 Temp: 25±1 °C DO: >4.0 mg/L Test Container: 30 ml cup
 Dilution Water: Mod Hard pH: 6.0 - 9.0 Salinity: 0 ppt Test Volume: 15 ml
 Accession Number: UD5-416 Photoperiod: 16L, 8d Light Intensity: 50 - 100 fc Test Duration: 48 hrs

TARGET VALUES

Concentration	Rep	Number of Live Organisms				Temperature (°C)	pH				Dissolved Oxygen (mg/L)				Conductivity (µS/cm) Salinity (ppt)			
		0	24	48	72		96	0	24	48	72	96	0	24	48	72	96	
Control	A	5	5	5	5	21.3	25.1	24.8	8.3	8.4	8.1	8.1	8.0	7.7	316	325	337	
	B	5	5	5	5													
	C	5	5	5	4													
	D	5	5	5	5													
0.5	A	5	5	5	5	24.4	25.3	24.9	8.3	8.4	8.1	8.3	8.0	7.9	317	321	325	
	B	5	5	5	5													
	C	5	5	5	5													
1.0	A	5	5	5	5	24.4	25.3	25.2	8.3	8.4	8.1	8.3	8.0	7.7	320	330	328	
	B	5	5	5	5													
	C	5	5	5	5													
D	D	5	5	5	5													
	Meter Number																	
	Time	1540	1430	1425			677	677	678	677	677	678	677	677	678	677	677	678
Initials	IM	IM	IM	IM	IM	V8	V7	IM	V8	V7	IM	V8	V7	IM	V8	V7	IM	



ACUTE TOXICITY TEST DATA SHEET

Project Number: 70005.15 Beginning Date: 9/8/15 Time: 1450
 Client: BSTI Ending Date: 9/10/15 Time: 1425
 QC Test Number: TN-15-364
 Test Material: _____
 Accession Number: AT5-364
 Dilution Water: Mod Hard mg/L Test Container: 30 ml cup
 Accession Number: LD5-364 410 ppt Test Volume: 15 ml
 Photo period: 16 L 8 D Light Intensity: 50 - 100 fc Test Duration: 48 hrs

TEST TYPE: Static / Flowthrough
 Renewal / Non-renewal

TARGET VALUES

Temp: 25±1 °C DO: >4.0 mg/L
 pH: 6.0 - 9.0 Salinity: 0 ppt

Concentration	Rep	Number of Live Organisms				Temperature (°C)	pH				Dissolved Oxygen (mg/L)				Conductivity (µS/cm) Salinity (ppt)			
		0	24	48	72		96	0	24	48	72	96	0	24	48	72	96	
4	A	5	5	5	5	24.5	8.3	8.4	8.1	8.4	8.0	7.4	338	343	346			
	B	5	5	5	5													
	C	5	5	5	5													
	D	5	5	5	5													
10	A	5	5	5	5	24.5	8.3	8.4	8.1	8.3	8.0	7.1	372	374	383			
	B	5	5	5	5													
	C	5	5	5	5													
	D	5	5	5	5													
100	A	5	5	5	5	24.5	7.9	8.4	8.1	8.3	7.9	7.5	906	862	807			
	B	5	5	3	5													
	C	5	5	5	5													
	D	5	5	5	5													
Meter Number																		
Time		1940	1425			677	677	678	677	677	678	677	677	677	678			
Initials		JM	JM	JM		VY	VY	JM	VY	VY	JM	VY	VY	JM	VY	VY	JM	



TOXICOLOGY LABORATORY BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-364

Date/Time/Initials

Comments/Activity



TOXICITY TEST SET-UP BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-389

TEST ORGANISM INFORMATION			
Common Name: <u>Amphipod</u>	Adults Isolated (Time, Date): _____		
Scientific Name: <u>H. azteca</u>	Neonates Pulled & Fed (Time, Date): _____		
Lot Number: <u>N/A</u>	Acclimation: <u><24hrs</u>	Age: <u>7-8 days</u>	24 hrs
Source: <u>EA</u>	Culture Water (T/S): <u>24.9</u> °C <u>0</u> ppt		

9/22/15

TEST INITIATION			
<u>Date</u>	<u>Time</u>	<u>Initials</u>	<u>Activity</u>
9/22/15	1010	MJ	Dilutions Made
↓	↓	↓	Test Vessels Filled
	1248	MJ	Organisms Transferred
	↓		Head Counts
	1338	IM	

TEST SET-UP		
Sample Number: <u>AT5-387</u>		
Dilution Number: <u>LD5-437</u>		
<u>Test Concentration</u>	<u>Volume Test Material</u>	<u>Final Volume</u>
Control	0 ml	1000 ml ↓
0.5%	5 ml	
1%	10 ml	
4%	40 ml	
10%	100 ml	
100%	1000 ml	



ACUTE TOXICITY TEST DATA SHEET

Project Number: Z0005.15
 Client: BSTI
 QC Test Number: IN-15-389
 Test Material: Effluent
 Accession Number: ATS-387
 Dilution Water: Mod Hard
 Accession Number: LD5-437

TEST ORGANISM
 Common Name: Amphipod
 Scientific Name: H. azteca
 TARGET VALUES
 Temp: 25±1 °C DO: >4.0 mg/L
 pH: 6.0-9.0 Salinity: 0 ppt
 Photoperiod: 16L 8d Light Intensity: 50 - 100 fc

Beginning Date: 9/22/15 Time: 1248
 Ending Date: 9/26/15 Time: 1220
 TEST TYPE: Static / Flowthrough
 Renewal / Non-renewal
 Test Container: 100 ml cup
 Test Volume: 250 ml
 Test Duration: 96 hrs

Concentration	Rep	Number of Live Organisms				Temperature (°C)				pH				Dissolved Oxygen (mg/L)				Conductivity (µS/cm) Salinity (ppt)								
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96					
Control	A	5	5	5	5	5	24.0	24.0	24.4	24.6	24.9	8.1	8.5	7.7	7.7	8.3	8.4	8.6	8.4	8.2	8.5	320	318	328	347	
	B	5	5	5	5	5																				
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
0.5	A	5	5	5	5	5	24.0	24.3	24.3	25.3	25.5	8.1	8.5	7.6	7.6	8.3	8.5	8.6	8.4	8.1	8.6	322	318	329	335	
	B	5	5	5	5	5																				
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
1	A	5	5	5	5	5	24.0	24.5	24.4	25.5	25.1	8.1	8.5	7.6	7.6	8.3	8.5	8.6	8.4	8.1	8.3	325	321	332	338	
	B	5	5	5	5	5																				
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
Meter Number						677	678	678	678	678	677	678	678	678	678	678	677	678	678	678	678	677	678	678	678	
Time		338	1301	1303	1357	1220	1014	0949	0837	0856	1100	1014	0949	0832	0858	1106	1014	0949	0832	0858	1106	1014	0949	0832	0858	
Initials		JM	MS	MS	JM	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	



ACUTE TOXICITY TEST DATA SHEET

Project Number: 70005.15
 Client: BSTI
 QC Test Number: IN-15389
 Test Material: Effluent
 Accession Number: ATS-387
 Dilution Water: Mod Hard
 Accession Number: LD5-437

TEST ORGANISM: Amphipod
 Common Name: Amphipod
 Scientific Name: H. azteca
 TARGET VALUES: Static / Flowthrough
 Renewal / Non-renewal
 Temp: 25±1 °C DO: >4.0 mg/L Test Container: 100 ml cup
 pH: 6.0-9.0 Salinity: 0 ppt Test Volume: 250 ml
 Photoperiod: 16L, 8d Light Intensity: 50 - 100 fc Test Duration: 96 hrs

Beginning Date: 9/22/15 Time: 1248
 Ending Date: 9/26/15 Time: 720

Concentration	Rep	Number of Live Organisms					Temperature (°C)					pH					Dissolved Oxygen (mg/L)					Conductivity (µS/cm) Salinity (ppt)						
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96		
4	A	5	5	5	5	5	24.0	24.8	24.5	25.6	25.6	8.1	8.3	7.7	7.6	8.3	8.5	8.5	8.5	8.2	8.5	8.5	8.5	343	338	349	353	357
	B	5	5	5	5	5																						
	C	5	5	5	5	5																						
	D	5	5	5	5	5																						
10	A	5	5	5	5	5	24.0	24.8	25.0	25.6	25.7	8.0	8.3	7.8	7.6	8.2	8.5	8.4	8.4	8.2	8.6	8.1	8.73	382	387	388		
	B	5	5	5	5	5																						
	C	5	5	5	5	5																						
	D	5	5	5	5	5																						
100	A	5	5	5	5	3	24.2	24.6	24.8	25.9	25.9	7.7	8.1	7.8	7.7	8.2	8.3	8.3	8.4	8.1	8.5	8.5	885	895	890	881		
	B	5	5	5	5	5																						
	C	5	5	5	5	3																						
	D	5	5	5	5	5																						
Meter Number						677	677	678	678	678	677	677	678	678	678	677	677	677	678	678	678	677	677	677	678	678	678	
Time		1338	1301	1303	1357	1220	1014	0949	0832	0858	1106	1014	0949	0832	0858	1106	1014	0949	0832	0858	1106	1014	0949	0832	0858	1106		
Initials		JH	MS	MS	JM	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	



TOXICOLOGY LABORATORY BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-389

Date/Time/Initials

Comments/Activity



TOXICOLOGY LABORATORY BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-389

Aliquot of sample warmed to test temperature, then aerated if supersaturated:

Date	Sample #	ON AIR			OFF AIR		
		Initial DO (mg/L)	Time	Initials	Final DO (mg/L)	Time	Initials
9/22/15	ATS-387	3.0	0905	MJ	7.8	0915	MJ



TOXICOLOGY LABORATORY BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-363/365

Aliquot of sample warmed to test temperature, then aerated if supersaturated:

Date	Sample #	ON AIR			OFF AIR		
		Initial DO (mg/L)	Time	Initials	Final DO (mg/L)	Time	Initials
9/8/15	AT5-365	7.8	1359 1359	IM	—	—	—



TOXICOLOGY LABORATORY BENCH SHEET

Project Number: 70005.15

Client: BSTI

QC Test Number: TN-15-364/366

Aliquot of sample warmed to test temperature, then aerated if supersaturated:

Date	Sample #	ON AIR			OFF AIR		
		Initial DO (mg/L)	Time	Initials	Final DO (mg/L)	Time	Initials
9/8/15	AT5-364 ^②	2.4	1359	IM	8.2	1409	IM

ATTACHMENT II

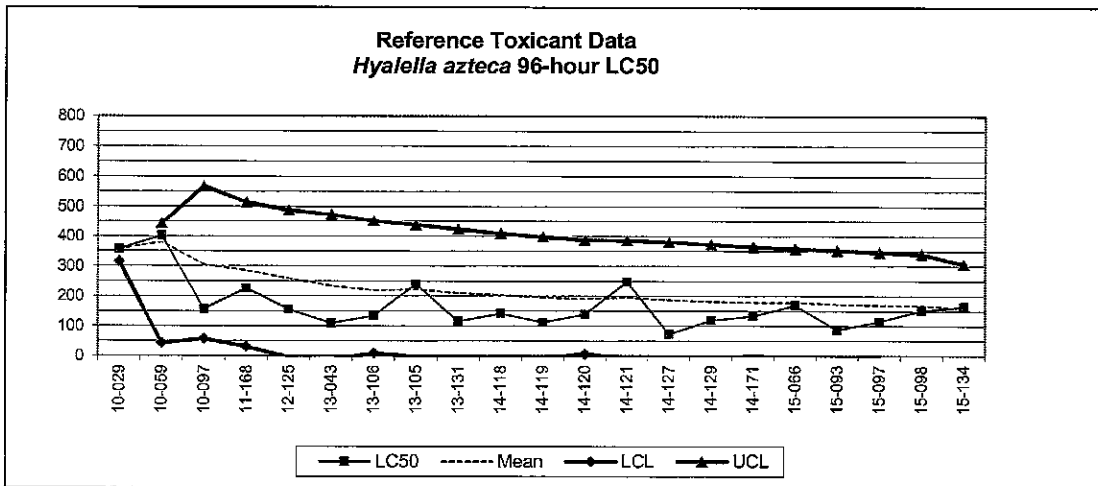
Cumulative Reference Toxicant Data
(3 pages)

EA Engineering, Science, and Technology, Inc.
 Reference Toxicant Data - Copper sulfate (CuSO₄)

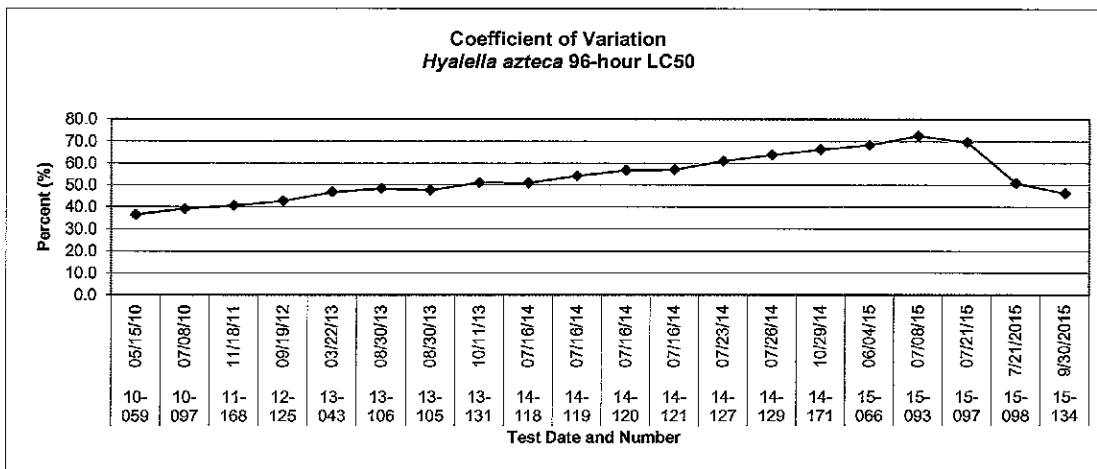
Hyalella azteca (amphipod)

96-hour LC50 (ug/L Cu)

Test #	Test Date	Lot #	Vendor	LC50	Mean	Std. Dev.	LCL	UCL	CV
10-029	03/25/10	N/A	EA	357	357.00				37.3
10-059	05/15/10	N/A	EA	402	379.50	31.82	315.86	443.14	36.5
10-097	07/08/10	N/A	EA	156	305.00	130.98	43.03	566.97	39.2
11-168	11/18/11	N/A	EA	226	285.25	114.01	57.23	513.27	40.6
12-125	09/19/12	N/A	EA	155	259.20	114.64	29.93	488.47	42.7
13-043	03/22/13	N/A	EA	108	234.00	119.68	-5.36	473.36	46.8
13-106	08/30/13	N/A	EA	134	219.71	115.61	-11.50	450.93	48.4
13-105	08/30/13	N/A	EA	240	222.25	107.27	7.71	436.79	47.7
13-131	10/11/13	N/A	EA	114	210.22	106.63	-3.04	423.49	51.1
14-118	07/16/14	N/A	EA	142	203.40	102.82	-2.25	409.05	51.0
14-119	07/16/14	N/A	EA	112	195.09	101.37	-7.64	397.82	54.2
14-120	07/16/14	N/A	EA	139	190.42	97.99	-5.57	386.41	56.8
14-121	07/16/14	N/A	EA	248	194.85	95.17	4.50	385.19	57.2
14-127	07/23/14	N/A	EA	73	186.14	97.06	-7.99	380.27	61.0
14-129	07/26/14	N/A	EA	118	181.60	95.17	-8.75	371.95	63.8
14-171	10/29/14	N/A	EA	133	178.56	92.75	-6.93	364.05	66.3
15-066	06/04/15	N/A	EA	169	178.00	89.83	-1.66	357.66	68.2
15-093	07/08/15	N/A	EA	87	172.93	89.77	-6.61	352.46	72.5
15-097	07/21/15	N/A	EA	115	169.88	88.24	-6.61	346.37	69.6
15-098	7/21/2015	N/A	EA	152	168.99	85.98	-2.98	340.95	50.9
15-134	9/30/2015	N/A	EA	164	159.34	73.73	11.88	306.79	46.3



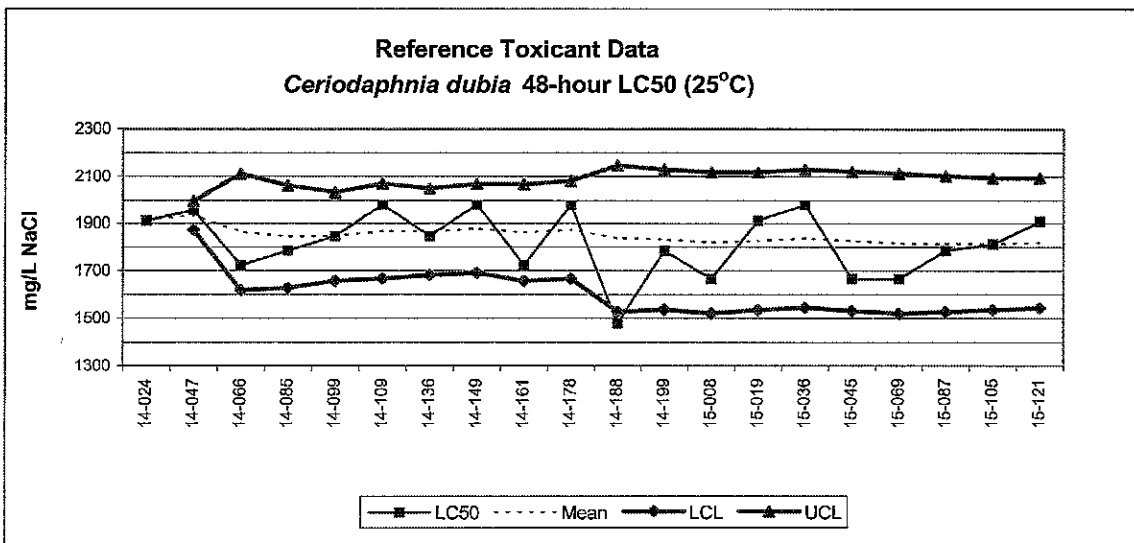
Coefficient of variation 46.3 %



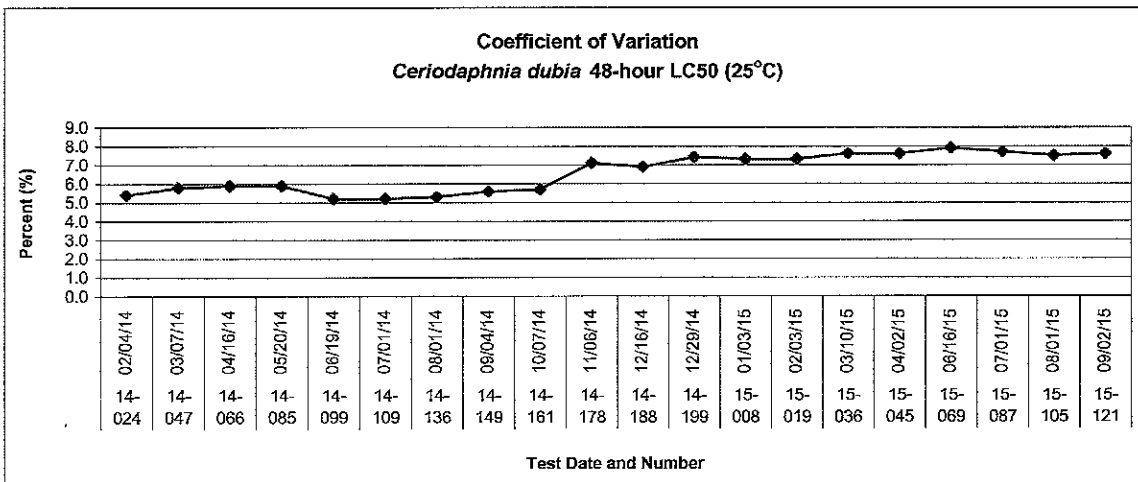
Ceriodaphnia dubia (water flea)

48-hour LC50 (mg/L NaCl) - 25°C

Test #	Test Date	Lot #	Vendor	LC50	Mean	Std. Dev.	LCL	UCL	CV
14-024	02/04/14	N/A	EA	1912	1912.00				5.4
14-047	03/07/14	N/A	EA	1956	1934.00	31.11	1871.77	1996.23	5.8
14-066	04/16/14	N/A	EA	1724	1864.00	123.22	1617.55	2110.45	5.9
14-085	05/20/14	N/A	EA	1784	1844.00	108.27	1627.46	2060.54	5.9
14-099	06/19/14	N/A	EA	1847	1844.60	93.78	1657.05	2032.15	5.2
14-109	07/01/14	N/A	EA	1980	1867.17	100.45	1666.26	2068.07	5.2
14-136	08/01/14	N/A	EA	1847	1864.29	92.02	1680.25	2048.32	5.3
14-149	09/04/14	N/A	EA	1980	1878.75	94.50	1689.74	2067.76	5.6
14-161	10/07/14	N/A	EA	1724	1861.56	102.35	1656.86	2066.26	5.7
14-178	11/06/14	N/A	EA	1980	1873.40	103.51	1666.38	2080.42	7.1
14-188	12/16/14	N/A	EA	1477	1837.36	154.69	1527.99	2146.74	6.9
14-199	12/29/14	N/A	EA	1784	1832.92	148.29	1536.34	2129.50	7.4
15-008	01/03/15	N/A	EA	1665	1820.00	149.42	1521.16	2118.84	7.3
15-019	02/03/15	N/A	EA	1912	1826.57	145.65	1535.27	2117.87	7.3
15-036	03/10/15	N/A	EA	1980	1836.80	145.83	1545.13	2128.47	7.6
15-045	04/02/15	N/A	EA	1665	1826.06	147.29	1531.48	2120.64	7.6
15-069	06/16/15	N/A	EA	1665	1816.59	147.87	1520.86	2112.32	7.9
15-087	07/01/15	N/A	EA	1784	1814.78	143.66	1527.46	2102.09	7.7
15-105	08/01/15	N/A	EA	1811	1814.58	139.61	1535.35	2093.80	7.5
15-121	09/02/15	N/A	EA	1909	1819.30	137.52	1544.26	2094.34	7.6



Coefficient of variation 7.6 %



ATTACHMENT III

Report Quality Assurance Record
(2 pages)



REPORT QUALITY ASSURANCE RECORD

Client: BSTI

Project Number: 70005-15

Author: Michael Chavez

EA Report Number: 7179

REPORT CHECKLIST

QA/QC ITEM	REVIEWER	DATE
1. Samples collected, transported, and received according to study plan requirements.	<u>[Signature]</u>	<u>9/28/15</u>
2. Samples prepared and processed according to study plan requirements.	<u>[Signature]</u>	<u>9/28/15</u>
3. Data collected using calibrated instruments and equipment.	<u>[Signature]</u>	<u>9/28/15</u>
4. Calculations checked:		
- Hand calculations checked	<u>[Signature]</u>	<u>9/28/15</u>
- Documented and verified statistical procedure used.	<u>[Signature]</u>	<u>9/28/15</u>
5. Data input/statistical analyses complete and correct.	<u>[Signature]</u>	<u>9/29/15</u>
6. Reported results and facts checked against original sources.	<u>[Signature]</u>	<u>9/29/15</u>
7. Data presented in figures and tables correct and in agreement with text.	<u>[Signature]</u>	<u>9/29/15</u>
8. Results reviewed for compliance with study plan requirements.	<u>[Signature]</u>	<u>9/28/15</u>

	AUTHOR	DATE
9. Commentary reviewed and resolved.	<u>[Signature]</u>	<u>10/2/15</u>
10. All study plan and quality assurance/control requirements have been met and the report is approved:		
	<u>[Signature]</u>	<u>10/2/15</u>
	PROJECT MANAGER	DATE
	<u>[Signature]</u>	<u>9/29/15</u>
	QUALITY CONTROL OFFICER	DATE
	<u>[Signature]</u>	<u>9/30/15</u>
	SENIOR TECHNICAL REVIEWER	DATE