2014 ANNUAL SOIL MONITORING REPORT

OPEN BURNING GROUND

RADFORD FACILITY ARMY AMMUNITION PLANT
RADFORD, VIRGINIA

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EXECUTIVE SUMMARY

The Radford Facility Army Ammunition Plant (RFAAP) in Radford, Virginia is required under their *Final Permit for the Treatment of Hazardous Waste by Open Burning* (Final Permit; effective date October 28, 2005; modified September 27, 2011; and June 12, 2014) to perform annual soil monitoring in accordance with Permit Attachment II.C – *Soil Monitoring Program for the Open Burning Ground*. The June 12, 2014 Permit Modification updated the facility's Action Levels (ALs). This Annual Soil Monitoring Report summarizes activities conducted during calendar year 2014 at the Open Burning Ground (OBG).

The annual soil monitoring event was performed on July 31, 2014 and a verification event to confirm or refute initial detections in soil above the permit Action Level (AL) was conducted on September 18, 2014. Results of the 2014 annual monitoring event indicated the nitroglycerin concentration from PAD-3 exceeded the permit Action Level (AL).

Additional soil sampling activities were conducted on October 22 and December 8, 2014 to assess the horizontal and vertical extent of nitroglycerin in soil in the vicinity of PAD-3, in accordance with the permit. RFAAP conducted soil sampling activities on December 8, 2014 in support of the hot-spot evaluation for nitroglycerin in soil as specified in the Interim Measures Corrective Action Plan submitted to the Virginia Department of Environmental Quality (VDEQ) on November 24, 2014. Analytical results from the additional soil sampling activities suggest that nitroglycerin concentrations above the AL are localized to the surficial soil (0-6 inches depth) at the original PAD-3 sample location. In accordance with permit, RFAAP is currently developing a soil removal work plan to be submitted for review and approval by VDEQ. Details of the all activities conducted subsequent to the July 31 and September 18, 2014 verification events will be submitted to VDEQ under separate cover within 30 days of completion of soil removal activities.

1.0 INTRODUCTION

This document presents the 2014 Annual Soil Monitoring Report for the Open Burning Ground (OBG) located at the Radford Army Ammunition Plant (RFAAP) in Radford, Virginia. This Annual Soil Monitoring Report summarizes activities conducted at the OBG during calendar year 2014. The Annual Soil Monitoring Report was compiled in accordance with the requirements specified in Permit Attachment II.C – *Soil Monitoring Program for the Open Burning Ground,* which is included in the *Final Permit for the Treatment of Hazardous Waste by Open Burning* (Final Permit; effective date October 28, 2005; modified in VDEQ-approved Class 3 Permit Modification dated September 27, 2011 and Class 1 Permit Modification dated June 12, 2014).

This report presents background information for the OBG, a description of the permit requirements for soil sampling and reporting, sample collection and analytical methods, data validation results, and analytical results.

2.0 SITE BACKGROUND

RFAAP is located in the Valley and Ridge Physiographic Province in southwestern Virginia along the New River in Pulaski and Montgomery counties and is divided into two sections by the river. The southern section, which comprises two-thirds of the facility, is known as the Main Plant Area. The northern one-third of the property, which includes the OBG, is known as the Horseshoe Area.

The OBG serves as the waste propellant burning ground for the RFAAP facility. Material that cannot be burned in the Explosive Waste Incinerators is burned at the OBG. The OBG is located within the 100-year floodplain of the New River at the southeastern end of the Horseshoe Area. The OBG is relatively flat and is located at an approximate elevation of 1,695 feet above Mean Sea Level (MSL). The site slopes steeply upward 75 to 100 feet north of the unit.

The geology at RFAAP consists of the Cambrian-aged Elbrook Formation comprising limestone and dolomite with some shale and siltstone, covered by weathered residual deposits and/or alluvial deposits. The alluvial deposits have an average thickness of approximately 13 to 20 feet and consist of typical fluvial deposits of interbedded clay, silt, and sand/gravel deposits with lenses of cobbles. In portions of the site, the alluvial deposits and bedrock are separated by residual deposits, which consist of clay, silt, and clasts resulting from weathering of the parent bedrock. The residuum thickness on the site ranges from a few feet to up to 40 feet depending on the location.

The OBG is underlain by the Wheeling Silty Loam, which is characterized by low slopes. The unit includes a surface layer of approximately 10 inches of dark brown sandy loam underlain by 50 inches of dark brown gravelly sandy loam subsoil. At depths greater than 60 inches, the soil is predominantly a mixture of silt and sand with minor amounts of clay.

The general hydrogeologic setting for RFAAP is characterized by alluvial sediments overlying weathered and unweathered dolomite and limestone bedrock. In areas where alluvial sediments form the uppermost water-bearing zone, groundwater flow is generally from topographically high areas to topographically low areas. In some areas of the facility, the uppermost water-bearing zone is located within bedrock. Karst features within the bedrock aquifer can provide conduits for transport of groundwater to the New River, which is the discharge area for regional groundwater flow.

3.0 SOIL MONITORING PROGRAM REQUIREMENTS

The *Soil Monitoring Program for the Open Burning Ground* (SMP) was developed to monitor the OBG for potential effects to surface soils resulting from the facility operations. Implementation of the SMP will continue throughout the lifetime of the Resource Conservation & Recovery Act (RCRA) Operating Permit for the OBG facility. The SMP requires soil sampling at prescribed locations as shown on **Figure 1** in **Appendix A**. Initially, the SMP required semiannual soil sampling; however, the sampling frequency was reduced from semiannual to annual monitoring as part of the Class 3 Permit Modification approved by the VDEQ in correspondence dated September 27, 2011. The soil monitoring event for 2014 was conducted on July 31, 2014 and September 18, 2014 in accordance with the Class 1 Permit Modification dated June 12, 2014. Additional sampling events to characterize the extent of nitroglycerin were conducted on October 22, 2014 and December 8, 2014.

As the SMP is designed to evaluate potential effects to the site by airborne deposition, soil sample collection targets the uppermost soil horizon. Sample locations were selected to represent the areas of greatest potential to be affected and are located between the burn pans of each burn pad. Each pad is defined as the area of raised topography that contains two individual burn pans. Burn pans are the ceramic or clay-lined vessels that hold waste propellant before and during the open burning process. The sample locations represent areas that are subject to overlapping zones of ejecta from each pan. The ejecta zone is conservatively defined as 20 feet in all directions based on previous studies. The actual sample locations correspond to areas of low topography between each pan that function as the runoff conduit for the pad. These areas are erosion channels that flow toward the river-side berm and to the pond that precedes Outfall 017. The channels are not vegetated.

In addition to the eight samples collected adjacent to the burn pans (PAD 1-8), two discreet grab samples (SB-1 and SB-2) were collected along the southern boundary of the OBG along the New River. Two samples (NB-1 and NB-2) were also collected in the grassed median north of the burn pads. In addition, one grab sample (BERM-1) was collected at the southeast corner of the OBG inside the berm, and one sample (POND-1) was collected at the bottom of the sediment basin. According to the facility permit, if no constituents are detected at the additional monitoring locations (SB-1, SB-2, NB-1, NB-2, BERM-1, and POND-1) above their respective Action Limits (ALs), RFAAP may petition VDEQ to cease sampling at these additional locations. To date, no constituents have been detected at these additional monitoring locations at concentrations above their respective ALs.

In accordance with the SMP, the analytical results for the July, September, October, and December 2014 annual soil monitoring event were compiled, evaluated, and interpreted upon receipt from the laboratory to determine whether concentrations of COPCs in soil are greater than the designated ALs. Analytical results from the July, September, October, and December 2014 soil monitoring event were compared to the ALs updated in 2014 as approved by VDEQ in the Class 1 Permit Modification dated June 12, 2014. The results of the data evaluation from the July, September, October, and December 2014 soil monitoring event are summarized in this Annual Soil Monitoring Report.

4.0 SAMPLE COLLECTION

The annual soil monitoring event for calendar year 2014 was performed on July 31, 2014, September 18, 2014, October 22, 2014, and December 8, 2014, in accordance with the requirements of the OBG SMP. Approximate sample locations are shown on **Figure 1** in **Appendix A**. Soil samples collected during the annual monitoring event were analyzed for the COPCs as listed in the SMP and as shown on **Tables 1**, **2A**, **2B,** and **3** in **Appendix B**. A copy of the COPC list from the SMP (as updated by the VDEQ in the Class 1 Permit Modification dated June 12, 2014) is included in **Appendix C**.

Initial laboratory results indicated 2,4-dinitrotoluene (PAD-1, PAD-4, and PAD-5) and nitroglycerin (PAD-3 and PAD-4) exceeded permit specified Action Levels (ALs). Therefore, an additional sampling event was performed on September 18, 2014 to confirm or refute the initial results for these target analytes only as listed above. The samples collected on October 22, 2014 and December 8, 2014 were only analyzed for nitroglycerin.

Soil samples were collected from the uppermost six inches of soil using dedicated stainless steel tulip bulb samplers as described in the ASTM International (ASTM) *Standard Guide for Soil Sampling in the Vadose Zone, Designation D 4700-91* (reapproved 1998). Each dedicated sampler is labeled with the corresponding sample location. Sample aliquots for hexavalent chromium were collected using a dedicated plastic composite trowel.

Samples were collected from the lowest point in the swale between the pans at each burn pad. In order to determine the appropriate sample location, the center of each pan was located using a measuring tape. The lowest point in the swale was marked along a line connecting the centers of the burn pans. Samples PAD-1 through PAD-8 were collected from the designated low point in accordance with the sample collection procedure outlined in the SMP. Also, two discreet grab samples (SB-1 and SB-2) were collected along the southern boundary of the OBG along the New River, in the grassed median north of the burn pads (NB-1 and NB-2), at the southeast corner of the OBG inside the berm (BERM-1), and at the bottom of the sediment basin (POND-1). For analytical quality assurance/quality control (QA/QC) purposes, a blind field duplicate sample (PAD-X), trip and equipment blanks were submitted. Copies of chains-of-custody (COCs) and field notes are included in **Appendix D**.

The dedicated samplers were cleaned prior to and following sample collection in accordance with equipment decontamination procedures outlined in the SMP. Equipment rinsate water generated during the sampling events was containerized and taken to the RFAAP Biological Wastewater Treatment Plant for disposal.

Samples were shipped in coolers under appropriate chain-of-custody. Sample coolers were shipped via overnight courier service to the analytical laboratory.

5.0 SOIL ANALYTICAL DATA EVALUATION

Soil samples collected during the July and September 2014 annual monitoring events were analyzed for the COPCs listed in the SMP (as updated by the VDEQ in September 2011 and June 12, 2014; **Appendix C**). Samples were analyzed using analytical methods set forth in U.S. Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846). Analyses were performed by Eurofins-Lancaster Laboratories Environmental, Inc. (ELLE) of Lancaster, Pennsylvania; TestAmerica North Canton of North Canton, Ohio; TestAmerica Knoxville of Knoxville, Tennessee; and Microbac Laboratories, Ohio Valley Division (Microbac) of Marietta, Ohio. Laboratory analytical data were validated in accordance with the SMP.

The COPCs detected at concentrations greater than their respective method detection limits (MDLs) during the July and September 2014 annual soil monitoring events are summarized in **Tables 2A** and **2B** in **Appendix B**. Dioxin/furan results for the July 2014 event are summarized in **Table 3** in **Appendix B**. Comparisons of detected constituent concentrations with their respective ALs (as updated in June 2014) are also included in **Tables 2A, 2B,** and **3**.

As summarized in **Tables 2A, 2B,** and **3**, a total of 24 COPCs were detected at concentrations equal to or greater than their respective MDLs in the soil samples collected during the July 2014 event. Of the 24 COPCs detected, 12 were classified as carcinogens, 12 were classified as non-carcinogens. The determination of whether a specific COPC is a carcinogen or a non-carcinogen is dependent upon that constituent's classification in the January 2015 USEPA Region III Regional Screening Level (RSL) Summary Table and/or its classification in the USEPA Integrated Risk Information System (IRIS; website www.epa.gov/IRIS/; accessed on January 20, 2015). For the purposes of this evaluation, the constituent total petroleum hydrocarbons-diesel range organics (TPH-DRO) is classified as a carcinogen due to the fact that several of the component constituents of TPH-DRO are classified as carcinogens. The 12 carcinogenic COPCs detected during the July and September 2014 events included the following: 2,4-dinitrotoluene, 2,4,6-trinitrotoluene, arsenic, 2,6-dinitrotoluene, benzo(a)anthracene, bis(2-ethylhexyl) phthalate, hexavalent chromium, lead, naphthalene, RDX, TPH-DRO, and dioxins/furans.

The 12 non-carcinogenic COPCs detected during the July 2014 event included the following: barium, cadmium, mercury, selenium, silver, perchlorate, nitroglycerin, HMX, diethyl phthalate, di-n-butyl phthalate, diphenylamine, and fluoranthene. As specified in the Permit, if ten or more non-carcinogenic COPCs are detected during a single sampling event, the concentrations are compared to 1/10 the RSL of those constituents. This comparison is a qualitative evaluation that has no bearing on the risk evaluation of the site, and does not trigger corrective actions or interim measures at the site. A summary of the 12 non-carcinogenic COPCs detected during the July and September 2014 events with comparisons to 1/10 the RSLs is included in **Table 4** (**Appendix B**).

Initial laboratory results indicated 2,4-dinitrotoluene (PAD-1, PAD-4, and PAD-5) and nitroglycerin (PAD-3 and PAD-4) exceeded permit specified Action Levels (ALs). A verification event to confirm or refute the initial result was conducted on September 18, 2014. All 2,4-dinitrotoluene results from the September 18, 2014 verification event were below the permit ALs. The concentration of nitroglycerin in PAD-3 again exceeded the permit AL, but the

nitroglycerin result from PAD-4 was below the AL. In accordance with the permit, an additional sampling was conducted on October 22, 2014. The additional verification soil sampling was required to assess the horizontal extent of impact for nitroglycerin previously detected above the Action Level (AL) at PAD-3. Samples were collected from the PAD-3 location as well as locations north, south, east, and west of the PAD-3 sample location. The results of the October 22, 2014 verification event again confirmed the presence of nitroglycerin at the PAD-3 sample location above the applicable AL. However, the four locations north, south, east, and west resulted in concentrations below the AL for nitroglycerin. In accordance with Sections 7.0 and 8.0 of Permit Attachment II.C, RFAAP submitted an interim measures corrective action work plan. In accordance with the submitted interim measure corrective action plan, additional "hot spot" samples were collected on December 8, 2014 from a sampling grid in a five-feet radius of the sample collection point (PAD-3). Four randomly selected sample points were selected within the diameter of the grid. Each sample point was sampled to a terminal depth of 24-inches below ground surface. Samples were collected every six-inches to the terminal depth. The aliquots from each six-inch interval were composited with the same corresponding interval from each of the four borings. The aliquots were homogenized in a pre-cleaned stainless steel bowl using a pre-cleaned stainless steel spoon. The analyses from each six-inch interval were evaluated by comparing the results to the Action Level for nitroglycerin. All samples collected on December 8, 2014 resulted in concentrations below the AL for nitroglycerin. In accordance with Permit Attachment II.C, RFAAP is currently developing a soil removal work plan to be submitted for review and approval by VDEQ.

Historical soil results are included in **Appendix E**. The complete laboratory certificates of analysis and data validation reports for the July and September 2014 soil monitoring events are included in **Appendix F**. The laboratory certificates of analysis and data validation reports for the October and December 2014 verification events will be submitted under separate cover. Copies of correspondence notifying VDEQ of the results of soil sampling conducted at the OBG during the timeframe for this report are included as **Appendix G**.

6.0 CONCLUSIONS

Based on an evaluation of the soil analytical data for the OBG, nitroglycerin was verified at a concentration greater than the permit-specified AL (updated and approved on September 27, 2011 and June 12, 2014) at PAD-3 during the annual soil monitoring event performed during calendar year 2014. In accordance with Permit Attachment II.C, RFAAP is currently developing a soil removal work plan to address the nitroglycerin exceedances within PAD-3. The soil removal work plan will be submitted to VDEQ for review and approval prior to completion of the removal action.

7.0 SIGNATURE/CERTIFICATION

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Reviewed by:

I certify that I have supervised preparation of the attached report, that it has been prepared in accordance with industry standards and practices, and that the information contained herein is truthful and accurate to the best of my knowledge.

Name: Michael D. Lawless, Environmental Division Manager

Signature:

Virginia Professional Certification Type and Number: PG 832

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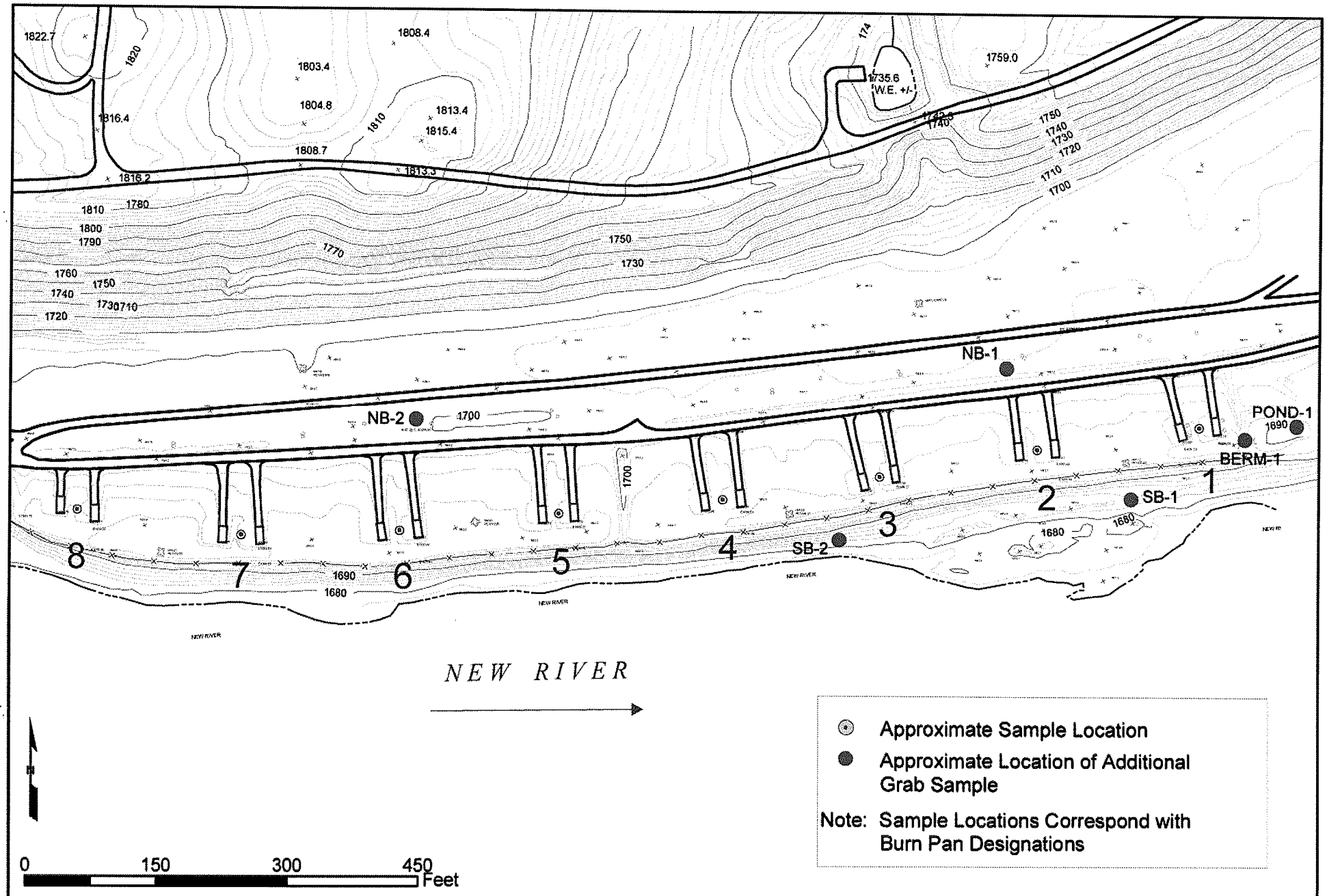
APPENDIX A

FIGURES



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Date: August 28, 2006

FIGURE 1
Sample Location Map
Open Burning Ground; Radford Army Ammunition Plant; Radford, Virginia

APPENDIX B

TABLES

Table 1 - Sample Analytical Requirements
Open Burning Ground - Soil Monitoring Program

Sample Location ID	Sample Analytical Method								
	VOCs (8260)	SVOCs (8270)	RCRA Metals (6010/6020/7471)	Chromium, hexavalent (7196)	Perchlorate (6850)	Dioxins/Furans (8290)	Explosives (8330)	Nitroglycerine (8332)	TPH-DRO (8015)
PAD-1	X	X	X	X	X	X	X	X	X
PAD-2	X	X	X	X	X	X	X	X	
PAD-3	X	X	X	X	X	X	X	X	
PAD-4	X	X	X	X	X	X	X	X	X
PAD-5	X	X	X	X	X	X	X	X	
PAD-6	X	X	X	X	X	X	X	X	
PAD-7	X	X	X	X	X	X	X	X	X
PAD-8	X	X	X	X	X	X	X	X	
NB-1	X	X	X			X	X	X	
NB-2	X	X	X			X	X	X	
SB-1	X	X	X			X	X	X	
SB-2	X	X	X			X	X	X	
BERM-1	X	X	X			X	X	X	
POND-1	X	X	X			X	X	X	

Notes:
X indicates sample was analyzed for corresponding analytical method.
Each method was performed for certain Constituents of Potential Concern (COPCs), which are listed on the COPC list included in Appendix C of this Annual Soil Monitoring Report.

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	1100	8260C	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	2.2	8260C	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.25	27000	8330B	mg/kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.25	62	8330B	mg/kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
7/31/2014	U		U		U		U		U		U		U		U		0.327	J	U		0.527	J	0.25	79	8330B	mg/kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.33	1800	8270D	mg/kg
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
7/31/2014	U		U		U		3.18		0.433		U		U		U		2.28		U		U		0.25	5.5	8330B	mg/kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
7/31/2014	0.418	J	U		U		U		U		U		U		U		-		-		-		0.25	1.2	8330B	mg/kg
2-Amino-4,6-Dinitrotoluene					*CAS #: 35572-78-2*																					
7/31/2014	U		U		U		U		U		U		U		U		U		U		U		0.25	2000	8330B	mg/kg
2-Chlorophenol					*CAS #: 95-57-8*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.33	5100	8270D	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.25	13	8330B	mg/kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
7/31/2014	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	-		-		-		1.6	0.16	8270D	mg/kg
3-Methylphenol					*CAS #: 108-39-4*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.33	31000	8270D	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.25	62	8330B	mg/kg
4-Amino-2,6-Dinitrotoluene					*CAS #: 19406-51-0*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.25	1900	8330B	mg/kg
4-Methylphenol					*CAS #: 106-44-5*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.33	62000	8270D	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		1.6	7	8270D	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.25	110	8330B	mg/kg

See last page of this report for definitions.

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Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.33	100000	8270D	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
7/31/2014	1.4	J	2.2	J	1.2	J	2	J	1.6	J	0.88	J	1.9	J	1.4	J	1.7	J	2.1	J	2.2	J	1	15.8	6010C	mg/kg
Barium					*CAS #: 7440-39-3*																					
7/31/2014	89	J	120	J	92	J	140	J	140	J	92	J	100	J	80	J	92	J	100	J	120	J	20	190000	6010C	mg/kg
Benzene					*CAS #: 71-43-2*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	5.4	8260C	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
7/31/2014	U		0.005	J	U		0.027	J	U		U		U		U		-		-		-		0.33	2.1	8270D	mg/kg
Benzo(a)pyrene					*CAS #: 50-32-8*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	-		-		-		0.02	0.21	8270D	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	-		-		-		0.33	2.1	8270D	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	-		-		-		0.33	2.1	8270D	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
7/31/2014	U		U		U		U	J	U		U		U		U		-		-		-		0.005	4.9	8260C	mg/kg
Bromomethane					*CAS #: 74-83-9*																					
7/31/2014	U		U		U		U		U		U		U		U		U		U		U		0.005	32	8260C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
7/31/2014	0.12	J	0.23	J	0.1	J	0.27	J	0.11	J	0.16	J	0.11	J	0.059	J	0.14	J	0.23	J	0.39	J	0.5	800	6010C	mg/kg
Carbon Tetrachloride					*CAS #: 56-23-5*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	-		-		-		0.005	3	8260C	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	1400	8260C	mg/kg
Chloroform					*CAS #: 67-66-3*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	1.5	8260C	mg/kg
Chloromethane					*CAS #: 74-87-3*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	500	8260C	mg/kg
Chromium, hexavalent					*CAS #: 18540-29-9*																					
7/31/2014	U		0.74	J	2.4		U		U		1.6		U		U		-		-		-		1	5.6	7196A	mg/kg
Chromium					*CAS #: 7440-47-3*																					
7/31/2014	13	J	35	J	17	J	16	J	13	J	30	J	13	J	13	J	13	J	19	J	21	J	1		6010C	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	-		-		-		0.02	0.21	8270D	mg/kg

See last page of this report for definitions.

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Fluoranthene					*CAS #: 206-44-0*																					
7/31/2014	U		0.005	J	U		0.029	J	0.006	J	0.076	J	0.005	J	0.004	J	-		-		-		0.33	22000	8270D	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.33	43	8270D	mg/kg
HMX					*CAS #: 2691-41-0*																					
7/31/2014	U	J	U	J	U	J	0.836	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	2.2	49000	8330B	mg/kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	-		-		-		0.33	2.1	8270D	mg/kg
Lead					*CAS #: 7439-92-1*																					
7/31/2014	38	J	160	J	280	J	270	J	150	J	610	J	81	J	110	J	86	J	54	J	120	J	0.3	800	6010C	mg/kg
Mercury					*CAS #: 7439-97-6*																					
7/31/2014	U		U		U		U		0.027	J	0.019	J	U		U		-		-		-		0.1	43	7471A	mg/kg
Methylene Chloride					*CAS #: 75-09-2*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	960	8260C	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
7/31/2014	U		U		U		0.034	J	0.005	J	U		0.007	J	U		-		-		-		0.33	18	8270D	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.25	24	8330B	mg/kg
Nitroglycerin					*CAS #: 55-63-0*																					
7/31/2014	23.1		9.17		174		17.5		11.1		53.1		20.2	J	13.2		8.66		U		U		2.5	62	8330B	mg/kg
Diphenylamine					*CAS #: 122-39-4*																					
7/31/2014	0.073	J	U	J	3.3	J	0.56	J	0.038	J	1.7	J	0.17	J	0.074	J	0.098	J	U	J	0.079	J	1.6	15000	8270D	mg/kg
Perchlorate					*CAS #: 14797-73-0*																					
7/31/2014	U	J	U	J	U	J	0.00491	J	0.00756	J	0.00621	J	0.00181	J	U	J	-		-		-		0.002	720	6850	mg/kg
Phenol					*CAS #: 108-95-2*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.33	180000	8270D	mg/kg
RDX					*CAS #: 121-82-4*																					
7/31/2014	U		U		U		5.28		U		U		U		U		-		-		-		1	24	8330B	mg/kg
Selenium					*CAS #: 7782-49-2*																					
7/31/2014	U		U		U		U		0.41	J	U		U		U		U		U		U		1	5100	6010C	mg/kg
Silver					*CAS #: 7440-22-4*																					
7/31/2014	0.11	J	0.29	J	0.14	J	0.15	J	0.11	J	U		U		0.11	J	-		-		-		1	5100	6010C	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	110	8260C	mg/kg
Tetryl					*CAS #: 479-45-8*																					
7/31/2014	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	-		-		-		0.65	1200	8330B	mg/kg

See last page of this report for definitions.

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*PAD-1*	*Q*	*PAD-2*	*Q*	*PAD-3*	*Q*	*PAD-4*	*Q*	*PAD-5*	*Q*	*PAD-6*	*Q*	*PAD-7*	*Q*	*PAD-8*	*Q*	*POND-1*	*Q*	*SB-1*	*Q*	*SB-2*	*Q*	*RL*	*Action Limit*	*Method*	*Unit*
Toluene					*CAS #: 108-88-3*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	45000	8260C	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
7/31/2014	U	J	-		-		190	J	-		-		8.4	J	-		-		-		-		20	11000	8015C	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
7/31/2014	U		U		U		U		U		U		U		U		U		U		U		0.005	6.4	8260C	mg/kg
Vinyl Chloride					*CAS #: 75-01-4*																					
7/31/2014	U		U		U		U		U		U		U		U		-		-		-		0.005	1.7	8260C	mg/kg

Definitions: RL Denotes reporting limit (obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification updated June 2014). RLs are equal to or greater than actual laboratory QLs, except where noted in the data validation report. However, RLs, QLs and method detection limit (DL) are less than the AL except where noted with an "A" qualifier. See data validation for actual laboratory QL. **Q** Denotes data validation qualifie
U Denotes analyte not detected at or above DL. **AL** Denotes permit Action limit (obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification, updated June 2014).
J Denotes is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the DL and estimated due to data validation.
A Laboratory QL and laboratory DL above permit Action limit (see data validation report).
R Denotes result rejected. (-) Denotes not sampled.
NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
For the April 2013 event, Method 8270D aliquots for POND-1 were recollected on September 10, 2013.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	1100	8260C	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	2.2	8260C	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.25	27000	8330B	mg/kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.25	62	8330B	mg/kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
7/31/2014	-		-		-		-		-		-		-		-		0.131	J	U		U		0.25	79	8330B	mg/kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	1800	8270D	mg/kg
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
7/31/2014	-		-		-		-		-		-		-		-		U		U		U		0.25	5.5	8330B	mg/kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.25	1.2	8330B	mg/kg
2-Amino-4,6-Dinitrotoluene					*CAS #: 35572-78-2*																					
7/31/2014	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	8330B	mg/kg
2-Chlorophenol					*CAS #: 95-57-8*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	5100	8270D	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.25	13	8330B	mg/kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		1.6	0.16	8270D	mg/kg
3-Methylphenol					*CAS #: 108-39-4*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	31000	8270D	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.25	62	8330B	mg/kg
4-Amino-2,6-Dinitrotoluene					*CAS #: 19406-51-0*																					
7/31/2014	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.25	1900	8330B	mg/kg
4-Methylphenol					*CAS #: 106-44-5*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	62000	8270D	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		1.6	7	8270D	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.25	110	8330B	mg/kg

See last page of this report for definitions.

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	100000	8270D	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
7/31/2014	-		-		-		-		-		-		-		-		1.6	J	1.3	J	1.8	J	1	15.8	6010C	mg/kg
Barium					*CAS #: 7440-39-3*																					
7/31/2014	-		-		-		-		-		-		-		-		110	J	100	J	81	J	20	190000	6010C	mg/kg
Benzene					*CAS #: 71-43-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	5.4	8260C	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Benzo(a)pyrene					*CAS #: 50-32-8*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.02	0.21	8270D	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	4.9	8260C	mg/kg
Bromomethane					*CAS #: 74-83-9*																					
7/31/2014	-		-		-		-		-		-		-		-		U		U		U		0.005	32	8260C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
7/31/2014	-		-		-		-		-		-		-		-		0.43	J	0.2	J	0.16	J	0.5	800	6010C	mg/kg
Carbon Tetrachloride					*CAS #: 56-23-5*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	3	8260C	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	1400	8260C	mg/kg
Chloroform					*CAS #: 67-66-3*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	1.5	8260C	mg/kg
Chloromethane					*CAS #: 74-87-3*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	500	8260C	mg/kg
Chromium, hexavalent					*CAS #: 18540-29-9*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		1	5.6	7196A	mg/kg
Chromium					*CAS #: 7440-47-3*																					
7/31/2014	-		-		-		-		-		-		-		-		15	J	12	J	14	J	1		6010C	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.02	0.21	8270D	mg/kg

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Fluoranthene					*CAS #: 206-44-0*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	22000	8270D	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	43	8270D	mg/kg
HMX					*CAS #: 2691-41-0*																					
7/31/2014	-		-		-		-		-		-		-		-		U	J	0.224	J	U	J	2.2	49000	8330B	mg/kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Lead					*CAS #: 7439-92-1*																					
7/31/2014	-		-		-		-		-		-		-		-		240	J	210	J	120	J	0.3	800	6010C	mg/kg
Mercury					*CAS #: 7439-97-6*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.1	43	7471A	mg/kg
Methylene Chloride					*CAS #: 75-09-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	960	8260C	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	18	8270D	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.25	24	8330B	mg/kg
Nitroglycerin					*CAS #: 55-63-0*																					
7/31/2014	-		-		-		-		-		-		-		-		1.98		0.741	J	14		2.5	62	8330B	mg/kg
Diphenylamine					*CAS #: 122-39-4*																					
7/31/2014	-		-		-		-		-		-		-		-		0.2	J	0.17	J	0.12	J	1.6	15000	8270D	mg/kg
Perchlorate					*CAS #: 14797-73-0*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.002	720	6850	mg/kg
Phenol					*CAS #: 108-95-2*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.33	180000	8270D	mg/kg
RDX					*CAS #: 121-82-4*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		1	24	8330B	mg/kg
Selenium					*CAS #: 7782-49-2*																					
7/31/2014	-		-		-		-		-		-		-		-		U		U		U		1	5100	6010C	mg/kg
Silver					*CAS #: 7440-22-4*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		1	5100	6010C	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	110	8260C	mg/kg
Tetryl					*CAS #: 479-45-8*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.65	1200	8330B	mg/kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*BG-1A*	*Q*	*BG-1B*	*Q*	*BG-1C*	*Q*	*BG-1D*	*Q*	*BG-2A*	*Q*	*BG-2B*	*Q*	*BG-2C*	*Q*	*BG-2D*	*Q*	*NB-1*	*Q*	*NB-2*	*Q*	*BERM-1*	*Q*	*RL*	*Action Limit*	*Method*	*Unit*
Toluene					*CAS #: 108-88-3*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	45000	8260C	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		20	11000	8015C	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
7/31/2014	-		-		-		-		-		-		-		-		U		U		U		0.005	6.4	8260C	mg/kg
Vinyl Chloride					*CAS #: 75-01-4*																					
7/31/2014	-		-		-		-		-		-		-		-		-		-		-		0.005	1.7	8260C	mg/kg

Definitions: RL Denotes reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above DL. AL Denotes permit Action limit.
J Denotes result is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the DL and estimated due to data validation.
A Denotes laboratory QL and laboratory DL above permit Action limit (see data validation report).
R Denotes result rejected. (-) Denotes not sampled. **AL and RL** obtained from permit modification – Table 1 Attachment II.C-23-24, updated June 2014, Class I Permit Mod

NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
Laboratory QL at or below the RL and AL unless noted (see data validation report). In these cases, the result is evaluated to the method detection limit (MDL/DL). MDL is less than the RL and AL unless noted.

Table 3
Method 8290A Dioxin/Furan Results
July 31, 2014 Event
2,3,7,8 - TCDD Toxicity Equivalent Quotient (TEQ)
Radford Facility AAP, Open Burning Ground Soil Monitoring Program
All results presented in ng/kg=pg/g=ppt

Sample Location ID			PAD-1				PAD-2				PAD-3				PAD-4			
Depth			Lab	Val	0-6 inches		Lab	Val	0-6 inches		Lab	Val	0-6 inches		Lab	Val	0-6 inches	
Constituent	TEF	Action Level	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ
1,2,3,4,6,7,8-HpCDD	0.01		B		9.3	0.093	B		21	0.21	B		24	0.24	B		78	0.78
1,2,3,4,6,7,8-HpCDF	0.01		Q B J	U	ND		B J	J	3.4	0.034	Q B J	J	3.4	0.034	B		9.2	0.092
1,2,3,4,7,8,9-HpCDF	0.01		Q B J	U	ND		B J	U	ND		Q B J	U	ND		Q B J	U	ND	
1,2,3,4,7,8-HxCDD	0.1		Q B J	U	ND		Q B J	J	0.71	0.071	B J	U	ND		B J	J	2.7	0.27
1,2,3,4,7,8-HxCDF	0.1			U	ND		Q B J	J	0.99	0.099	Q B J	U	ND		Q B J	J	1.8	0.18
1,2,3,6,7,8-HxCDD	0.1		Q B J	U	ND		B J	J	1.7	0.17	B J	J	1.2	0.12	B J	J	5.4	0.54
1,2,3,6,7,8-HxCDF	0.1		Q B J	U	ND		Q B J	U	ND		Q B J	U	ND		Q B J	J	1.4	0.14
1,2,3,7,8,9-HxCDD	0.1		Q B J	U	ND		C B J	J	1.9	0.19	Q B J	U	ND		C B	J	8.4	0.84
1,2,3,7,8,9-HxCDF	0.1			U	ND		B J	U	ND			U	ND		Q B J	U	ND	
1,2,3,7,8-PeCDD	1		Q J	J	0.17	0.17	Q J	J	0.65	0.65	Q J	J	0.37	0.37	J	J	4.1	4.1
1,2,3,7,8-PeCDF	0.03			U	ND		Q B J	J	0.31	0.0093	Q B J	J	0.32	0.0096	Q B J	J	0.65	0.0195
2,3,4,6,7,8-HxCDF	0.1			U	ND		B J	U	ND		B J	U	ND		Q B J	U	ND	
2,3,4,7,8-PeCDF	0.3		Q B J	U	ND		B J	U	ND		B J	U	ND		Q B J	J	0.92	0.276
2,3,7,8-TCDD	1			U	ND		Q B J	J	0.15	0.15		U	ND		B		2.5	2.5
2,3,7,8-TCDF	0.1			U	ND		J	J	0.48	0.048	Q J	J	0.19	0.019	X		1.4	0.14
OCDD	0.0003		B	J	560	0.168	B	J	250	0.075	B	J	340	0.102	B	J	630	0.189
OCDF	0.0003		Q B J	U	ND		B J	J	7.6	0.00228	Q B J	U	ND		B		18	0.005
2,3,7,8 Toxicity Equivalence (TEQ) ng/kg		**18 ng/kg**		**J**		***0.43***		**J**		***1.71***		**J**		***0.89***		**J**		***10.07***

Sample Location ID			PAD-5				PAD-6				PAD-7				PAD-8			
Depth			Lab	Val	0-6 inches		Lab	Val	0-6 inches		Lab	Val	0-6 inches		Lab	Val	0-6 inches	
Constituent	TEF	Action Level	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ
1,2,3,4,6,7,8-HpCDD	0.01		B		14	0.14	B		25	0.25	B		18	0.18	B		8.5	0.085
1,2,3,4,6,7,8-HpCDF	0.01		Q B J	J	3.4	0.034	B J		4.6	0.046	BJ	J	4.6	0.046	B J	U	ND	
1,2,3,4,7,8,9-HpCDF	0.01		Q B J	U	ND		Q B J	U	ND		Q B J	U	ND		B J	U	ND	
1,2,3,4,7,8-HxCDD	0.1		Q B J	U	ND		Q B J	U	ND		Q B J	U	ND		B J		ND	
1,2,3,4,7,8-HxCDF	0.1		C B J	J	1	0.1	C B J	J	1.7	0.17	B J	J	1.6	0.16	Q B J	U	ND	
1,2,3,6,7,8-HxCDD	0.1		Q B J	J	0.83	0.083	Q B J	J	1.4	0.14	B J	J	1.2	0.12	Q B J	U	ND	
1,2,3,6,7,8-HxCDF	0.1		Q B J	U	ND		B J	J	0.94	0.094	B J	J	0.94	0.094	B J	U	ND	
1,2,3,7,8,9-HxCDD	0.1		Q B J	J	1.4	0.14	C B J	J	2	0.2	B J	J	1.7	0.17	B J	U	ND	
1,2,3,7,8,9-HxCDF	0.1		Q B J	U	ND		Q B J	U	ND		Q B J	U	ND		Q B J	U	ND	
1,2,3,7,8-PeCDD	1		J	J	0.56	0.56	Q J	J	0.83	0.83	Q J	J	0.57	0.57	Q J	J	0.33	0.33
1,2,3,7,8-PeCDF	0.03		B J	J	0.29	0.0087	Q B J	J	0.47	0.0141	Q B J	J	0.58	0.0174	Q B J	U	ND	
2,3,4,6,7,8-HxCDF	0.1		Q B J	U	ND		B J	J	0.96	0.096	Q B J	U	ND		B J	U	ND	
2,3,4,7,8-PeCDF	0.3		B Q J	U	ND		B J	J	1.1	0.33	Q B J	J	0.86	0.258	Q B J	U	ND	
2,3,7,8-TCDD	1		Q B J	J	0.26	0.26	Q B J	J	0.29	0.29		U	ND			U	ND	
2,3,7,8-TCDF	0.1		Q J	J	0.65	0.065	CON J	J	0.79	0.079	CON Q J	J	0.61	0.061	Q J	J	0.4	0.04
OCDD	0.0003		B	J	160	0.048	B	J	230	0.069	B	J	170	0.051	B	J	110	0.033
OCDF	0.0003		B J	U	ND		B J	U	ND		B J	J	9.5	0.00285	B J	U	ND	
2,3,7,8 Toxicity Equivalence (TEQ) ng/kg		**18 ng/kg**		**J**		***1.44***		**J**		***2.61***		**J**		***1.7***		**J**		***0.49***

JKF/KC
2/18/15

Table 3
Method 8290A Dioxin/Furan Results
July 31, 2014 Event

Sample Location ID			POND-1				SB-1				SB-2				PAD-XX (Blind Dup. - PAD-1)			
Depth			Lab	Val	0-6 inches		Lab	Val	0-6 inches		Lab	Val	0-6 inches		Lab	Val	0-6 inches	
Constituent	TEF	Action Level	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ
1,2,3,4,6,7,8-HpCDD	0.01		B		28	0.28	B		39	0.39	B		64	0.64	B		7	0.07
1,2,3,4,6,7,8-HpCDF	0.01		Q B J		4.6	0.046	Q B J	J	4.6	0.046	B	J	9.2	0.092	B J	U	ND	
1,2,3,4,7,8,9-HpCDF	0.01		Q B J	U	ND		Q B J	U	ND		B J	U	ND			U	ND	
1,2,3,4,7,8-HxCDD	0.1		Q B J	J	0.77	0.077	Q B J	U	ND		B J	J	1.2	0.12	Q B J	U	ND	
1,2,3,4,7,8-HxCDF	0.1		C B J	J	1.2	0.12	Q B J	J	0.82	0.082	C B J	J	3.1	0.31	Q B J	U	ND	
1,2,3,6,7,8-HxCDD	0.1		B J	J	2	0.2	Q B J	J	1.1	0.11	B J	J	2.2	0.22	Q B J	U	ND	
1,2,3,6,7,8-HxCDF	0.1		Q B J	U	ND		Q BJ	U	ND		B J	J	1.6	0.16	Q B J	U	ND	
1,2,3,7,8,9-HxCDD	0.1		C B J	J	2.2	0.22	C B J	J	1.7	0.17	C B J	J	3.1	0.31	Q B J	U	ND	
1,2,3,7,8,9-HxCDF	0.1		Q B J	U	ND			U	ND			U	ND			U	ND	
1,2,3,7,8-PeCDD	1.0		Q J	J	0.78	0.78	Q J	J	0.52	0.52	Q J	J	1.3	1.3	Q J	J	0.35	0.35
1,2,3,7,8-PeCDF	0.03			U	ND		Q B J	J	0.28	0.0084	B J	J	1.1	0.033	Q B J	U	ND	
2,3,4,6,7,8-HxCDF	0.1		Q B J	U	ND		B J	U	ND		B J	J	1.4	0.14	Q B J	U	ND	
2,3,4,7,8-PeCDF	0.3		B J	U	ND		Q B J	U	ND		B J	J	1.8	0.54	Q B J	U	ND	
2,3,7,8-TCDD	1.0			U	ND			U	ND		Q B J	J	0.42	0.42		U	ND	
2,3,7,8-TCDF	0.1		CON Q J		0.65	0.065	Q J	J	0.42	0.042	CON	J	1.7	0.17	J	J	0.14	0.014
OCDD	0.0003		B	J	360	0.108	B	J	1500	0.45	B	J	2200	0.66	B	J	65	0.0195
OCDF	0.0003		B J		11	0.0033	Q B J	J	11	0.0033	J	J	18	0.0054	Q B J	U	ND	
2,3,7,8 Toxicity Equivalence (TEQ) ng/kg		**18 ng/kg**		**J**		***1.90***		**J**		***1.82***		**J**		***5.12***		**J**		***0.45***

Sample Location ID			BERM-1				NB-1				NB-2			
Depth			Lab	Val	0-6 inches		Lab	Val	0-6 inches		Lab	Val	0-6 inches	
Constituent	TEF	Action Level	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ	Flag	Flag	Result	TEQ
1,2,3,4,6,7,8-HpCDD	0.01		B		17	0.17	B		63	0.63	B		42	0.42
1,2,3,4,6,7,8-HpCDF	0.01		B J	J	3.4	0.034	Q B		15	0.15	B	J	7.8	0.078
1,2,3,4,7,8,9-HpCDF	0.01		B J	U	ND		Q B J	U	ND		Q B J	U	ND	
1,2,3,4,7,8-HxCDD	0.1		B J	U	ND		B J	J	1.3	0.13	Q B J	J	0.87	0.087
1,2,3,4,7,8-HxCDF	0.1		C B J	J	1.2	0.12	Q B J	J	4.8	0.48	C B J	J	1.8	0.18
1,2,3,6,7,8-HxCDD	0.1		B J	J	1.6	0.16	B J	J	3.2	0.32	B J	J	2	0.2
1,2,3,6,7,8-HxCDF	0.1		Q B J	U	ND		Q B J	J	2.5	0.25	Q B J	J	1.2	0.12
1,2,3,7,8,9-HxCDD	0.1		Q B J	J	1.8	0.18	C B J	J	4.2	0.42	C B J	J	2.8	0.28
1,2,3,7,8,9-HxCDF	0.1		Q B J	U	ND			U	ND			U	ND	
1,2,3,7,8-PeCDD	1.0		J	J	0.67	0.67	Q J	J	1.9	1.9	Q J	J	1.1	1.1
1,2,3,7,8-PeCDF	0.03		B J	J	0.45	0.0135	Q B J	J	2.2	0.066	B J	J	1.2	0.036
2,3,4,6,7,8-HxCDF	0.1		Q B J	U	ND		Q B J	J	1.8	0.18	B J	U	ND	
2,3,4,7,8-PeCDF	0.3		Q B J	U	ND		B J	J	2.8	0.84	B J	J	1.2	0.36
2,3,7,8-TCDD	1.0			U	ND		Q B J	J	0.47	0.47		U	ND	
2,3,7,8-TCDF	0.1		CON Q	J	1	0.1	CON Q		3.4	0.34	CON Q		1.9	0.19
OCDD	0.0003		B	J	180	0.054	B	J	560	0.168	B	J	410	0.123
OCDF	0.0003		B J	U	ND		B		34	0.0102	B		18	0.0054
2,3,7,8 Toxicity Equivalence (TEQ) ng/kg		**18 ng/kg**		**J**		***1.50***		**J**		***6.35***		**J**		***3.18***

Notes: Analytical Method: SW-846 8290A -TestAmerica Knoxville, Knoxville, TN. P:\B03\200\B03204\B03204-207\WORK\Table 3 - Dioxin-Furan TEF Table OBG 2014.xls

TEF Denotes USEPA Region 3 Toxicity Equivalence Factor based on WHO June 2005 values. (See www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/usersguide.htm).

2,3,7,8 - TCDD Toxicity Equivalence Quotient (TEQ) ng/kg. Calculated by summing the multiplication of detections by the respective TEF of results above the EDL.

QL-Limit of Quantitation/sample specific QL. EDL-Laboratory Estimated Detection Limit See analytical results for sample specific QL. PAD-XX is a blind duplicate for PAD-1.

Data Validation Qualifiers: "Val Flag" denotes data validation data qualifier.

U - denotes not detected at or above the EDL. See certificate of analysis for sample specific estimated detection limit.

JA - Denotes result positively identified, but result is estimated. J - Denotes result estimated. UJ - denotes analyte not detected above DL, EDL/QL estimated due to validation.

Laboratory Data Qualifiers: "Lab Flag" denotes Laboratory data qualifier.

ND denotes analyte not detected above estimated detection limit and constituent specific TEQ was not calculated. X See project narrative. S denotes ion suppression.

J Denotes result reported below QL. Q Denotes the estimated maximum possible concentration. B Denotes method blank contamination (see data validation report). C denotes co-eluting isomer.

CON denotes confirmation analysis. H denotes OCDD/F reported from separate analytical analysis.

Source for Action Level: United States Environmental Protection Agency Regions 3, 6, and 9. (Nov 2013). Regional Screening Levels for Chemical Contaminants at Superfund Sites. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm Action Level updated June 12, 2014.

OKR/KC 2/18/15

Table 4

Summary of Non-Carcinogenic Compounds of Potential Concern (COPC)
Comparision to 1/10 of the Action Level
Open Burning Ground, RFAAP - July 2014 Soil Monitoring Event

Analyte	Sample ID	Method	Result mg/kg	Flag	Action level mg/kg	1/10 Action level mg/kg	Quarter	COPC
Diphenylamine	PAD-7	8270D	0.17	J	15000	1500	7/31/2014	n
Diphenylamine	PAD-3	8270D	3.3	J	15000	1500	7/31/2014	n
Diphenylamine	PAD-4	8270D	0.56	J	15000	1500	7/31/2014	n
Diphenylamine	PAD-5	8270D	0.038	J	15000	1500	7/31/2014	n
Diphenylamine	PAD-1	8270D	0.073	J	15000	1500	7/31/2014	n
Diphenylamine	BERM-1	8270D	0.12	J	15000	1500	7/31/2014	n
Diphenylamine	POND-1	8270D	0.098	J	15000	1500	7/31/2014	n
Diphenylamine	PAD-6	8270D	1.7	J	15000	1500	7/31/2014	n
Diphenylamine	SB-2	8270D	0.079	J	15000	1500	7/31/2014	n
Diphenylamine	NB-2	8270D	0.17	J	15000	1500	7/31/2014	n
Diphenylamine	NB-1	8270D	0.2	J	15000	1500	7/31/2014	n
Diphenylamine	PAD-8	8270D	0.074	J	15000	1500	7/31/2014	n
Perchlorate	SB-1	6850	0.00373	J	720	72	7/31/2014	n
Perchlorate	PAD-7	6850	0.00181	J	720	72	7/31/2014	n
Perchlorate	PAD-6	6850	0.00621	J	720	72	7/31/2014	n
Perchlorate	PAD-5	6850	0.00756	J	720	72	7/31/2014	n
Perchlorate	PAD-4	6850	0.00491	J	720	72	7/31/2014	n
Perchlorate	POND-1	6850	0.00193	J	720	72	7/31/2014	n
HMX	NB-2	8330B	0.224	J	49000	4900	7/31/2014	n
HMX	PAD-4	8330B	0.836	J	49000	4900	7/31/2014	n

Table 4

Summary of Non-Carcinogenic Compounds of Potential Concern (COPC)
Comparision to 1/10 of the Action Level
Open Burning Ground, RFAAP - July 2014 Soil Monitoring Event

Analyte	Sample ID	Method	Result mg/kg	Flag	Action level mg/kg	1/10 Action level mg/kg	Quarter	COPC
Nitroglycerin	PAD-6	8330B	53.1		62	6.2	7/31/2014	n
Nitroglycerin	PAD-5	8330B	11.1		62	6.2	7/31/2014	n
Nitroglycerin	PAD-4	8330B	17.5		62	6.2	7/31/2014	n
Nitroglycerin	PAD-8	8330B	13.2		62	6.2	7/31/2014	n
Nitroglycerin	NB-1	8330B	1.98		62	6.2	7/31/2014	n
Nitroglycerin	PAD-3	8330B	174		62	6.2	7/31/2014	n
Nitroglycerin	PAD-2	8330B	9.17		62	6.2	7/31/2014	n
Nitroglycerin	NB-2	8330B	0.741	J	62	6.2	7/31/2014	n
Nitroglycerin	PAD-1	8330B	23.1		62	6.2	7/31/2014	n
Nitroglycerin	PAD-7	8330B	20.2	J	62	6.2	7/31/2014	n
Nitroglycerin	BERM-1	8330B	14		62	6.2	7/31/2014	n
Nitroglycerin	POND-1	8330B	8.66		62	6.2	7/31/2014	n
Mercury	PAD-6	7471A	0.019	J	43	4.3	7/31/2014	n
Mercury	PAD-5	7471A	0.027	J	43	4.3	7/31/2014	n
Diethylphthalate	POND-1	8270D	0.36		490000	49000	7/31/2014	n
Diethylphthalate	SB-2	8270D	0.51		490000	49000	7/31/2014	n
Diethylphthalate	NB-2	8270D	0.65		490000	49000	7/31/2014	n
Diethylphthalate	NB-1	8270D	1.2		490000	49000	7/31/2014	n
Diethylphthalate	PAD-4	8270D	0.42	J	490000	49000	7/31/2014	n
Diethylphthalate	PAD-6	8270D	0.78	J	490000	49000	7/31/2014	n
Diethylphthalate	PAD-7	8270D	0.17	J	490000	49000	7/31/2014	n
Fluoranthene	PAD-8	8270D	0.004	J	22000	2200	7/31/2014	n
Fluoranthene	PAD-4	8270D	0.029	J	22000	2200	7/31/2014	n
Fluoranthene	PAD-7	8270D	0.005	J	22000	2200	7/31/2014	n
Fluoranthene	PAD-5	8270D	0.006	J	22000	2200	7/31/2014	n
Fluoranthene	PAD-2	8270D	0.005	J	22000	2200	7/31/2014	n
Fluoranthene	PAD-6	8270D	0.076	J	22000	2200	7/31/2014	n

Table 4

Summary of Non-Carcinogenic Compounds of Potential Concern (COPC)
Comparision to 1/10 of the Action Level
Open Burning Ground, RFAAP - July 2014 Soil Monitoring Event

Analyte	Sample ID	Method	Result mg/kg	Flag	Action level mg/kg	1/10 Action level mg/kg	Quarter	COPC
Di-n-butylphthalate	NB-2	8270D	0.54		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-3	8270D	56		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-2	8270D	0.12	J	62000	6200	7/31/2014	n
Di-n-butylphthalate	POND-1	8270D	0.4		62000	6200	7/31/2014	n
Di-n-butylphthalate	BERM-1	8270D	2.1		62000	6200	7/31/2014	n
Di-n-butylphthalate	SB-2	8270D	2.4		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-8	8270D	0.43		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-1	8270D	0.32		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-5	8270D	0.19		62000	6200	7/31/2014	n
Di-n-butylphthalate	NB-1	8270D	0.99		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-4	8270D	1.1		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-6	8270D	20		62000	6200	7/31/2014	n
Di-n-butylphthalate	PAD-7	8270D	0.48	J	62000	6200	7/31/2014	n
Selenium	PAD-5	6010C	0.41	J	5100	510	7/31/2014	n
Barium	PAD-6	6010C	92	J	190000	19000	7/31/2014	n
Barium	NB-1	6010C	110	J	190000	19000	7/31/2014	n
Barium	PAD-1	6010C	89	J	190000	19000	7/31/2014	n
Barium	NB-2	6010C	100	J	190000	19000	7/31/2014	n
Barium	PAD-4	6010C	140	J	190000	19000	7/31/2014	n
Barium	PAD-3	6010C	92	J	190000	19000	7/31/2014	n
Barium	PAD-5	6010C	140	J	190000	19000	7/31/2014	n
Barium	PAD-2	6010C	120	J	190000	19000	7/31/2014	n
Barium	PAD-7	6010C	100	J	190000	19000	7/31/2014	n
Barium	BERM-1	6010C	81	J	190000	19000	7/31/2014	n
Barium	POND-1	6010C	92	J	190000	19000	7/31/2014	n
Barium	PAD-8	6010C	80	J	190000	19000	7/31/2014	n
Barium	SB-2	6010C	120	J	190000	19000	7/31/2014	n
Barium	SB-1	6010C	100	J	190000	19000	7/31/2014	n

Table 4

Summary of Non-Carcinogenic Compounds of Potential Concern (COPC)
Comparision to 1/10 of the Action Level
Open Burning Ground, RFAAP - July 2014 Soil Monitoring Event

Analyte	Sample ID	Method	Result mg/kg	Flag	Action level mg/kg	1/10 Action level mg/kg	Quarter	COPC
Silver	PAD-8	6010C	0.11	J	5100	510	7/31/2014	n
Silver	PAD-5	6010C	0.11	J	5100	510	7/31/2014	n
Silver	PAD-4	6010C	0.15	J	5100	510	7/31/2014	n
Silver	PAD-1	6010C	0.11	J	5100	510	7/31/2014	n
Silver	PAD-3	6010C	0.14	J	5100	510	7/31/2014	n
Silver	PAD-2	6010C	0.29	J	5100	510	7/31/2014	n
Cadmium	PAD-3	6010C	0.1	J	800	80	7/31/2014	n
Cadmium	SB-2	6010C	0.39	J	800	80	7/31/2014	n
Cadmium	SB-1	6010C	0.23	J	800	80	7/31/2014	n
Cadmium	NB-2	6010C	0.2	J	800	80	7/31/2014	n
Cadmium	PAD-6	6010C	0.16	J	800	80	7/31/2014	n
Cadmium	BERM-1	6010C	0.16	J	800	80	7/31/2014	n
Cadmium	PAD-8	6010C	0.059	J	800	80	7/31/2014	n
Cadmium	POND-1	6010C	0.14	J	800	80	7/31/2014	n
Cadmium	PAD-5	6010C	0.11	J	800	80	7/31/2014	n
Cadmium	PAD-7	6010C	0.11	J	800	80	7/31/2014	n
Cadmium	NB-1	6010C	0.43	J	800	80	7/31/2014	n
Cadmium	PAD-2	6010C	0.23	J	800	80	7/31/2014	n
Cadmium	PAD-1	6010C	0.12	J	800	80	7/31/2014	n
Cadmium	PAD-4	6010C	0.27	J	800	80	7/31/2014	n

Notes:
Action Level based on Table 1 Attachment II.C-23-24 of June 2014 Class I permit modification
J - denotes result less than the QL
n - denotes Non-carcinogenic Compound of Potential Concern based on Regional Screening Level (RSL) Summary Table Jan 2015
See data validation report for final validated results.

APPENDIX C

CONSTITUENTS OF POTENTIAL CONCERN (COPCs) LIST

Table 1: Page 1 of 2
Identification of Constituents of Potential Concern
Open Burning Ground Soil Monitoring Program
Radford Army Ammunition Plant
Modified: June 12 2014

Constituent	CASRN	Type of Constituent	In Waste?	Reported in Bang Box Database?	On GW List	To be Sampled?	SW-846 Method	Proposed RL mg/kg	Original Permit Action Level mg/kg (09/28/05)	Action Level mg/kg (As Revised rev 12/03/08)	Action Level mg/kg (As Revised rev 09/27/11)	Updated Action Level mg/kg	Source of Updated Action Level
1,2-Dichloroethane	107-06-2	PIC		Yes		*Yes*	8260C	0.005	31	2.2	2.2	2.2	R3 RSL Ind
1,3,5-Trinitrobenzene	99-35-4	PIC		Yes		*Yes*	8330B	0.25	31000	27000	27000	27000	R3 RSL Ind
2,4,6-Trinitrotoluene	118-96-7	ENER				*Yes*	8330B	0.25	95	79	79	79	R3 RSL Ind
2-amino-4,6-dinitrotoluene	35572-78-2	ENER				*Yes*	8330B	0.25	2000	2000	2000	2000	R3 RSL Ind
4-amino-2,6-dinitrotoluene	19406-51-0	ENER				*Yes*	8330B	0.25	2000	1900	1900	1900	R3 RSL Ind
2,4-Dichlorophenol	120-83-2	PIC		Yes	*	*Yes*	8270D	0.33	3100	1800	1800	1800	R3 RSL Ind
1,3-Dinitrobenzene	99-65-0	ENER				*Yes*	8330B	0.25	100	62	62	62	R3 RSL Ind
2,4-Dinitrotoluene	121-14-2	Both	Yes		Yes	*Yes*	8330B	0.25	2000	1200	5.5	5.5	R3 RSL Ind
2,6-Dinitrotoluene	606-20-2	PIC		Yes	Yes	*Yes*	8330B	0.25	1000	620	620	1.2	R3 RSL Ind
2-Chlorophenol	95-57-8	PIC		Yes	*	*Yes*	8270D	0.33	5100	5100	5100	5100	R3 RSL Ind
3-Methylphenol	108-39-4	PIC		Yes		*Yes*	8270D	0.33	51000	31000	31000	31000	R3 RSL Ind
4-Methylphenol	106-44-5	PIC		Yes		*Yes*	8270D	0.33	5100	3100	3100	62000	R3 RSL Ind
2-Nitrotoluene (ortho)	88-72-2	ENER				*Yes*	8330B	0.25	12	13	13	13	R3 RSL Ind
3-Nitrotoluene (meta)	99-08-1	ENER				*Yes*	8330B	0.25	20000	12000	62	62	R3 RSL Ind
4-Nitrotoluene (para)	99-99-0	ENER				*Yes*	8330B	0.25	170	110	110	110	R3 RSL Ind
3,3-Dimethylbenzidine	119-93-7	PIC		Yes		*Yes*	8270D	1.6	--	0.16	0.16	0.16	R3 RSL Ind
4-Nitrophenol	100-02-7	PIC		Yes		*Yes*	8270D	1.6	7	7	7	7	ECO Risk
Acetophenone	98-86-2	PIC		Yes		*Yes*	8270D	0.33	100000	100000	100000	100000	R3 RSL Ind
Arsenic	7440-38-2	Propellant ingredient	Yes		Yes	*Yes*	6010C	1	15.8	15.8	15.8	15.8	FWB
Barium	7440-39-3	Propellant ingredient	Yes	Yes	Yes	*Yes*	6010C	20	72000	190000	190000	190000	R3 RSL Ind
Benz(a)anthracene	56-55-3	PIC		Yes		*Yes*	8270D	0.33	3.9	2.1	2.1	2.1	R3 RSL Ind
Benzene	71-43-2	Propellant ingredient	Yes		Yes	*Yes*	8260C	0.005	52	5.6	5.4	5.4	R3 RSL Ind
Benzo(a)pyrene	50-32-8	PIC		Yes		*Yes*	8270D	0.02	0.39	0.21	0.21	0.21	R3 RSL Ind
Benzo(b)fluoranthene	205-99-2	PIC		Yes		*Yes*	8270D	0.33	3.9	2.1	2.1	2.1	R3 RSL Ind
Benzo(k)fluoranthene	207-08-9	PIC		Yes		*Yes*	8270D	0.33	39	21	2.1	2.1	R3 RSL Ind
Benzyl chloride	100-44-7	PIC		Yes		*Yes*	8260C	0.005	--	17	4.9	4.9	R3 RSL Ind
bis(2-Ethylhexyl)phthalate	117-81-7	PIC		Yes		*Yes*	8270D	0.33	200	120	120	120	R3 RSL Ind
Butylbenzylphthalate	85-68-7	PIC		Yes		*Yes*	8270D	0.33	200000	910	910	910	R3 RSL Ind
Cadmium	7440-43-9	PIC		Yes		*Yes*	6010C	0.5	510	810	800	800	R3 RSL Ind
Carbon tetrachloride	56-23-5	PIC		Yes	Yes	*Yes*	8260C	0.005	22	1.3	3	3	R3 RSL Ind
Chlorobenzene	108-90-7	Both	Yes	Yes	Yes	*Yes*	8260C	0.005	20000	1500	1400	1400	R3 RSL Ind
Chloroform	67-66-3	PIC		Yes		*Yes*	8260C	0.005	10000	1.5	1.5	1.5	R3 RSL Ind
Chromium, Hexavalent	18540-29-9	PIC		Yes		*Yes*	7196A	1	NA	NA	5.6	5.6	R3 RSL Ind
Chromium, Total	7740-47-3	PIC		Yes	Yes	*Yes*	6010C	1	3100	1400	NA	NA	NA
Dibenz(a,h)anthracene	53-70-3	PIC		Yes		*Yes*	8270D	0.02	0.39	0.21	0.21	0.21	R3 RSL Ind
Diethylphthalate	84-66-2	Propellant ingredient	Yes			*Yes*	8270D	0.33	820000	490000	490000	490000	R3 RSL Ind
Dimethyl phthalate	131-11-3	PIC		Yes		*Yes*	8270D	0.33	10000000	10000000	10000000	10000000	R3 RSL Ind*
Di-n-butyl phthalate	84-74-2	PIC		Yes	Yes	*Yes*	8270D	0.33	100000	62000	62000	62000	R3 RSL Ind
Diphenylamine	122-39-4	Both	Yes	Yes	Yes	*Yes*	8270D	1.6	26000	15000	15000	15000	R3 RSL Ind
Ethanol	64-17-5	Propellant ingredient	Yes				NCA						
Fluoranthene	206-44-0	PIC		Yes		*Yes*	8270D	0.33	41000	22000	22000	22000	R3 RSL Ind
Hexachloroethane	67-72-1	Propellant ingredient	Yes		Yes	*Yes*	8270D	0.33	200	120	120	43	R3 RSL Ind
HMX	2691-41-0	ENER				*Yes*	8330B	2.2	51000	49000	49000	49000	R3 RSL Ind
Indeno(1,2,3-cd)pyrene	193-39-5	PIC		Yes		*Yes*	8270D	0.33	3.9	2.1	2.1	2.1	R3 RSL Ind
Lead	7439-92-1	PIC		Yes	Yes	*Yes*	6010C	0.3	800	800	800	800	~~ALM~~ R3 RSL Ind
Mercury	7439-97-6	Propellant ingredient	Yes		Yes	*Yes*	7471A	0.1	0.13	28	34	43	R3 RSL Ind
Methyl bromide (Bromomethane)	74-83-9	PIC		Yes		*Yes*	8260C	0.005	15	35	32	32	R3 RSL Ind
Methyl chloride (Chloromethane)	74-87-3	Both	Yes	Yes	Yes	*Yes*	8260C	0.005	6	8.4	500	500	R3 RSL Ind
Methylene chloride	75-09-2	Both	Yes	Yes	Yes	*Yes*	8260C	0.005	380	54	53	960	R3 RSL Ind
Naphthalene	91-20-3	PIC		Yes		*Yes*	8270D	0.33	20000	20	18	18	R3 RSL Ind
Nitrobenzene	98-95-3	ENER				*Yes*	8330B	0.25	510	280	24	24	R3 RSL Ind
Nitrogen dioxide (peroxide)	10102-44-0	PIC		Yes			NCA						
Nitroglycerin	55-63-0	ENER	Yes		Yes	**** Yes***	8330B	0.25	200	62	62	62	R3 RSL Ind
Perchlorate	14797-73-0	Propellant ingredient	Yes		Yes	***Yes***	314 or 6850	~~blank~~ 0.002			720	720	R3 RSL Ind
Phenol	108-95-2	PIC		Yes	*	*Yes*	8270D	0.33	310000	180000	180000	180000	R3 RSL Ind
RDX	121-82-4	ENER				*Yes*	8330B	1	26	24	24	24	R3 RSL Ind
Silver	7440-22-4	Propellant ingredient	Yes		Yes	*Yes*	6010C	1	5100	5100	5100	5100	R3 RSL Ind
Selenium	7782-49-2	Background				*Yes*	6010C	~~0.5~~ 1	5100	5100	5100	5100	R3 RSL Ind

Revised 12-3-08
Revised 9-30-10
Revised 9-27-11

Constituent	CASRN	Type of Constituent	In Waste?	Reported in Bang Box Database?	On GW List	To be Sampled?	Method SW-846	Proposed RL mg/kg	Original Permit Action Level mg/kg (09/28/05)	Action Level mg/kg (As Revised rev 12/03/08)	Action Level mg/kg (As Revised rev 09/27/11)	Updated Action Level mg/kg	Source of Updated Action Level
Total Petroleum Hydrocarbons - DRO		Site Accelerant				***Yes***	8015C	~~10~~ 20	11000	11000	11000	11000	DEQ gd
Tetrachloroethylene	127-18-4	PIC		Yes		***Yes***	8260C	0.005	5.3	2.7	2.6	110	R3 RSL Ind
Tetryl	479-45-8	ENER				***Yes***	8330B	0.65	10000	2500	2500	1200	R3 RSL Ind
Toluene	108-88-3	Both	Yes	Yes	Yes	***Yes***	8260C	0.005	200000	46000	45000	45000	R3 RSL Ind
Trichloroethylene	79-01-6	PIC		Yes		***Yes***	8260C	0.005	7.2	14	14	6.4	R3 RSL Ind
Vinyl chloride	75-01-4	PIC		Yes		***Yes***	8260C	0.005	4	1.7	1.7	1.7	R3 RSL Ind
Vinylidene chloride (1,1-Dichloroethene)	75-35-4	PIC		Yes		***Yes***	8260C	0.005	51000	1100	1100	1100	R3 RSL Ind
Polychlorinated Dibenzo(p)dioxins and furans													
1,2,3,4,5,7,8,9-Octachlorodibenzo(p)dioxin (OCDD)	3268-87-9	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin (HpCDD)	35822-46-9	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin (HxCDD)	39227-28-6	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin (HxCDD)	57653-85-7	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin (HxCDD)	19408-74-3	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,7,8-Pentachlorodibenzo(p)dioxin (PeCDD)	40321-76-4	PIC		Yes		***Yes***	8290A	See Note 5					
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	PIC		Yes		***Yes***	8290A	See Note 5					
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	PIC		Yes		***Yes***	8290A	See Note 5					
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	PIC		Yes		***Yes***	8290A	See Note 5					
2,3,7,8-Tetrachlorodibenzo(p)dioxin (TCDD)	1746-01-6	PIC		Yes		***Yes***	8290A	See Note 5					
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	PIC		Yes		***Yes***	8290A	See Note 5					
2,3,7,8-TCDD Toxicity Equivalence Quotient(TEQ)									19 ng/kg	19 ng/kg	18 ng/kg	18 ng/kg	R3 RBC Ind

NOTES:

1. Updated Action Level — AL changed as part of update of Region III Regional Screening Levels (RSL) (formerly known as RBCs) for Industrial Sites .
2. Type of Constituent — "Propellant Ingredient" = Ingredient in propellant compound.
   "PIC" Product of Incomplete Combustion": means that it was reported in the Bangbox Database (see Appendix A-2).
   "Both" Both PIC and Propellant Ingredient.
   "ENER" - Energetic on SW-846 Method 8330 parameter List.
3. In Waste — "Yes" - means it was reported in Radford AAP's waste characterization.
4. **BOLD** Constituent — Constituent not in 40 CFR 261 Appendix VIII List of Hazardous Constituents.
5. Dioxins — Reporting Limit and Action Level will be calculated for each sample and detection, respectively. See Table 2 for example reporting format.
6. NCA — Constituent is not analyzed by commercial laboratories.
7. Source of Updated Action Levels — **"R3 RSL Ind"** United States Environmental Protection Agency Regions 3, 6, and 9. (Accessed March 25, 2014). Regional Screening Levels for Chemical Contaminants at Superfund Sites. Current RSL table dated November 2013. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm
   "R3 RSL Ind*" - These constituents were removed from the September 12, 2008 RBC table. The previous AL (Region III RBC for Industrial Sites from October 2004) is listed.
   "DEQ gd" - Table 5-11 Soil Saturation Values, Page 5-69 of VDEQ Storage Tank Program Technical Manual, Fourth Edition, May 10, 2011.
   "FWB" - Facility Wide Background Study.
   "ECO RISK" - June 23, 2000 EPA memorandum Entitled *Amended Guidance on Ecological Risk Assessment at Military Bases: Process Considerations, Timing of Activities and Inclusion of Stakeholders.*
   "NA" - Not applicable.
8. RL and AL — "RL" is the laboratory reporting limit and is analogous to the Limit of Quantitation (LOQ). "AL" is the Action Level based on published risk based values.
9. Action Level adjusted — for 3,3-Dimethylbenzidine the Action Level of 0.16 mg/kg is below the Proposed Reporting Level of 1.6 mg/kg. The Proposed Reporting Level in this case is set to the level at which the laboratory feels most confident detecting this chemical. Therefore any result above the Action Level and below the Proposed Reporting Limit will be discussed with the VA DEQ to determine if additional evaluation is necessary.
10. Non-pad Sample Locations** (SB-1, SB-2, NB-1, NB-2, Berm-1, and Pond-1) — **Soil samples collected from non burn pad locations only require analysis for the following constituents: Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Bromomethane, Trichloroethene, Bis(2-Ethylexyl) phthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, N-Nitrosodiphenylamine, Dioxins/furans, 2,4,6-Trinitrotoluene, 2-Amino-4, 6-dinitrotoluene, 4-Amino-2, 6-dinitrotoluene, HMX, Nitroglycerin and 2,4-Dinitrotoluene.**

Revised 12-3-08
Revised 9-30-10
Revised 9-27-11

APPENDIX D

CHAINS-OF-CUSTODY AND FIELD NOTES

This report is presented in an electronic version and as a bound hard copy version.

Electronic Version: Depending upon the file size (limited to 50 MB per file), this Attachment/Appendix may be presented in a separate Portable Document Format (PDF) file associated with this report.

Hardcopy Version: This Attachment/Appendix is only provided in PDF on the enclosed compact disc (CD-ROM).

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CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories 2425 New Holland Pike, Lancaster, PA 17605-2425/Barb Weyandt, Manager, 717-656-2300

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS **Carrier:** 12-75Y-02X-Y0-4089-1786 **Tracking Number:** ~~11-11-11-11-4180-4501~~

Box 1: Matrix
SW Surface Water, GW Groundwater, L Leachate, S Soil, T Trip Blank, E Equipment Blank, P Product, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (< 6 deg c), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 5: Sample Container Type
P Plastic, V VOA, AG Amber Glass, CG Clear Glass

Box 4: Sample Type
G Grab, C Composite

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	VOAs 5035/8260C w/ sodium biasulfate	VOAs 5035/8260C w/ methanol	VOAs 5030B/8260B (backup) (*)	VOAs 5030B/8260C	SVOCs 8270D	Dry Weight
Box 4 - Sample Type					G	G	G	G	G	G
Box 3 - Filtered/Unfiltered								U		
Required pH of Sample								<2		
Box 2 - Preservative					G	G	DI H20	A	G	H
Box 5 - Sample Container Type					2-40ml V	1-40ml V	2-40 ml V	2-40 ml V	1-4 oz CG	
PAD-1	7/31	0830	S	5	X	X	X		X	X
PAD-2		0930	S	5	X	X	X		X	X
PAD-3		0950	S	5	X	X	X		X	X
PAD-4		1010	S	5	X	X	X		X	X
PAD-4ms		1010	S	5	X	X	X		X	X
PAD-4msd		1010	S	5	X	X	X		X	X
PAD-5		1040	S	5	X	X	X		X	X
PAD-6		1100	S	5	X	X	X		X	X
PAD-7		1120	S	5	X	X	X		X	X
PAD-8		1130	S	5	X	X	X		X	X
PAD-X		1130	S	5	X	X	X		X	X
Trip Blank	7/31		T	2				X		

GENERAL NOTES:
1. Estimated results required.
2. Report results on a DRY WEIGHT BASIS. 8260C/5035-2 VOA with sodium bisulfate and 1 VOA with methanol. Diasa
(*) use backup if effervescence is observed.
3. Report in mg/kg. VELAP Accreditation Required.
4. Special Pricing – $129/voc ; $1200/svoc

Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced use for MS / MSD...
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced
1 TRIP Blank required FOR EACH DAY

Clients Special Instructions: Level 1 with edd.

Received by lab in Good Condition X Yes ____ No Custody Seal Intact X Yes ____ No Temperature upon arrival 0.1-1.0 Received on Ice X Yes ____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print):	Date: 7/31/14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 8-1-14	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name: ELLE	Time: 940	

7.11.14 1/4

CHAIN OF CUSTODY RECORD 11200 1493145 7551962-80

Laboratory: ELLE, LLC, 2425 New Holland Pike, Lancaster, PA 17605-2425/Barb Weyandt, Manager, 717-656-2300

OKA 7/11

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** **Tracking Number:**

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (<6 deg c); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G			
Box 3 - Filtered/Unfiltered						U			
Required pH of Sample						<2			
Box 2 - Preservative	G	G	H	H	H20	A			
Box 5 - Sample Container Type	2-40ml V	1-40ml V	1-4 oz CG		2-40 ml V	2-40 ml VOA CG			

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	VOAs 5035A/8260C	VOAs 5035A/8260C	SVOCs 8270D	DRY WEIGHT	VOAs 5030B/8260C (backup) (*)	VOAs 5030B/8260C			
NB-1	7/31	1230	S	5	X	X	X	X	X				
NB-2		1210	S	5	X	X	X	X	X				
SB-1		1250	S	5	X	X	X	X	X				
SB-2		1310	S	5	X	X	X	X	X				
BERM-1		0850	S	5	X	X	X	X	X				
POND-1	7/31	0910	S	5	X	X	X	X	X				
Trip Blank	7/31		T	2						X			

GENERAL NOTES:
1. Estimated results required.
2. Report results on a DRY WEIGHT BASIS. 8260C/5035-2 VOA with sodium bisulfate and 1-VOA with methanol.
(*) Use backup if effervescence is observed.
3. Report in mg/kg
4. Special Pricing $129/VOC; $200/SVOC

Sample Effervesced
Sample Effervessed

1 Trip blank per day. Delete if not required.

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition X Yes ____ No Custody Seal Intact X Yes ____ No Temperature upon arrival 0.7-1.0 Received on Ice X Yes ____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 8.1.14	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name:	Time:	Company Name: ELLE	Time: 940	

2/4
7.11.14

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

OC JVC 7/14/2

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** *YES* **Carrier:** **Tracking Number:**

Box 1: Matrix
SW Surface Water — T Trip Blank
GW Groundwater — E Equipment Blank
L Leachate — P Product
S Soil — O Other

Box 2: Preservative
A HCL — E NaOH
B HNO_3 — F ZnAc
C H_2SO_4 — G Other (<6 deg c)
D $Na_2S_2O_3$ — H None

Box 3: Filtered/Unfiltered
F Filtered
U Unfiltered

Box 4: Sample Type
G Grab
C Composite

Box 5: Sample Container Type
P Plastic — V VOA
AG Amber Glass — CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on ice: *YES*

Box 4 - Sample Type					G	G	G						
Box 3 - Filtered/Unfiltered					NA	NA	NA						
Required pH of Sample					NA	NA	NA						
Box 2 - Preservative					G	G	G						
Box 5 - Sample Container Type					1-4 oz AG		1-4ox CG						
Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	Perchlorate - 6850	DRY WEIGHT	(S-8330B -AIR DRY PREP)						
NB-1	7/31	1230	S	2	X	X	X						
NB-2		1210	S	2	X	X	X						
SB-1		1250	S	2	X	X	X						
SB-2		1310	S	2	X	X	X						
BERM-1		0850	S	2	X	X	X						
POND-1	7/31	0910	S	2	X	X	X						

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

4. VELAP Accreditation required.
JVC 7/14/2014

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662
Joshua Pemberton

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0600	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name:	Time:	Company Name:	Time:	

OC JVC 7.11.2014 1/2

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

Client: Draper Aden Associates
Attn:
Address:
Phone:
Fax:
Fax:

Consultant: Draper Aden Associates
Attn: Janet C. Frazier
Address: 2206 South Main Street, Blacksburg, Virginia 24060
Phone: (540) 552-0444
Fax: (540) 552-0291

Sample Site: RAAP, Radford, Virginia
Location: HWMU-13 (Open Burning Ground)
Event: July 2014 - Annual Soil Monitoring
DAA JN: B03204-208
Lab JN:

Project Specific (PS) or Batch (B) QC:
Sample Collection for Project Complete? YES
UPS: 1Z 237-301-01-9446-9138
Carrier:
Tracking Number: 1Z 237-301-01-9435-8927

Box 1: Matrix
SW Surface Water, T Trip Blank
GW Groundwater, E Equipment Blank
L Leachate, P Product
S Soil, O Other

Box 2: Preservative
A HCL, E NaOH
B HNO_3, F ZnAc
C H_2SO_4, G Other (<6 deg C)
D $Na_2S_2O_3$, H None

Box 3: Filtered/Unfiltered
F Filtered
U Unfiltered

Box 4: Sample Type
G Grab
C Composite

Box 5: Sample Container Type
P Plastic, V VOA
AG Amber Glass, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	Perchlorate - 6850	DRY WEIGHT	8330B -AIR DRY (S-PREP)
Box 4 - Sample Type					G	G	G
Box 3 - Filtered/Unfiltered					NA	NA	NA
Required pH of Sample					NA	NA	NA
Box 2 - Preservative					G	G	G
Box 5 - Sample Container Type					1-4 oz AG		1-4ox CG
PAD-1	7/31	0830	S	2	X	X	X
PAD-2		0930	S	2	X	X	X
PAD-3		0950	S	2	X	X	X
PAD-4		1010	S	2	X	X	X
PAD-4ms		1010	S	2	X	X	X
PAD-4msd		1010	S	2	X	X	X
PAD-5		1040	S	2	X	X	X
PAD-6		1100	S	2	X	X	X
PAD-7		1120	S	2	X	X	X
PAD-8		1150	S	2	X	X	X
PAD-X	7/31	1130	S	2	X	X	X

MW-4 is the designated sample for lab to use for MS / MSD...

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662
Joshua Pemberton

Clients Special Instructions:
Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ N
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature): Ken Coddington	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KEN CODDINGTON	Date: 7/31/14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name:	Time:	

QC JYR 7-11-2014 2/21

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

OC JVC 7/14/2

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** *YES* **Carrier:** **Tracking Number:**

Box 1: Matrix
SW Surface Water; T Trip Blank; GW Groundwater; E Equipment Blank; L Leachate; P Product; S Soil; O Other

Box 2: Preservative
A HCL; E NaOH; B HNO_3; F ZnAc; C H_2SO_4; G Other (<6 deg c); D $Na_2S_2O_3$; H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on ice: *YES*

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

4. VELAP Accreditation required.
JVC 7/14/2014

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	Perchlorate - 6850	DRY WEIGHT	8330B -AIR DRY (S-PREP)
Box 4 - Sample Type					G	G	G
Box 3 - Filtered/Unfiltered					NA	NA	NA
Required pH of Sample					NA	NA	NA
Box 2 - Preservative					G	G	G
Box 5 - Sample Container Type					1-4 oz AG		1-4ox CG
NB-1	7/31	1230	S	2	X	X	X
NB-2		1210	S	2	X	X	X
SB-1		1250	S	2	X	X	X
SB-2		1310	S	2	X	X	X
BERM-1		0850	S	2	X	X	X
POND-1	7/31	0910	S	2	X	X	X

Not required on Permit

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662
Joshua Pemberton

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0600	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name:	Time:	Company Name:	Time:	

OC JVC 7.11.2014 1/2

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

Client: Draper Aden Associates
Attn:
Address:
Phone:
Fax:
Fax:

Consultant: Draper Aden Associates
Attn: Janet C. Frazier
Address: 2206 South Main Street, Blacksburg, Virginia 24060
Phone: (540) 552-0444
Fax: (540) 552-0291

Sample Site: RAAP, Radford, Virginia
Location: HWMU-13 (Open Burning Ground)
Event: July 2014 - Annual Soil Monitoring
DAA JN: B03204-208
Lab JN:

Project Specific (PS) or Batch (B) QC:
Sample Collection for Project Complete? YES
Carrier: UPS: 1Z 237 301 01 9446 9138
Tracking Number: 1Z 237 301 01 9435 8927

Box 1: Matrix
SW Surface Water, T Trip Blank
GW Groundwater, E Equipment Blank
L Leachate, P Product
S Soil, O Other

Box 2: Preservative
A HCL, E NaOH
B HNO_3, F ZnAc
C H_2SO_4, G Other (<6 deg C)
D $Na_2S_2O_3$, H None

Box 3: Filtered/Unfiltered
F Filtered
U Unfiltered

Box 4: Sample Type
G Grab
C Composite

Box 5: Sample Container Type
P Plastic, V VOA
AG Amber Glass, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G	G								
Box 3 - Filtered/Unfiltered					NA	NA	NA								
Required pH of Sample					NA	NA	NA								
Box 2 - Preservative					G	G	G								
Box 5 - Sample Container Type					1-4 oz AG		1-4ox CG								
Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	Perchlorate - 6850	DRY WEIGHT	8330B -AIR DRY (S-PREP)								
PAD-1	7/31	0830	S	2	X	X	X								
PAD-2		0930	S	2	X	X	X								
PAD-3		0950	S	2	X	X	X								
PAD-4		1010	S	2	X	X	X								
PAD-4ms		1010	S	2	X	X	X								
PAD-4msd		1010	S	2	X	X	X								
PAD-5		1040	S	2	X	X	X								
PAD-6		1100	S	2	X	X	X								
PAD-7		1120	S	2	X	X	X								
PAD-8		1150	S	2	X	X	X								
PAD-X	7/31	1130	S	2	X	X	X								

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

MW-4 is the designated sample for lab to use for MS / MSD...

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662
Joshua Pemberton

Clients Special Instructions:
Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ N
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature): Ken Coddington	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KEN CODDINGTON	Date: 7/31/14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature: Ken Coddington	Time: 0600	Company Name:	Time:	Company Name:	Time:	

QC JYR 7-11-2014 2/2

3.8

CHAIN OF CUSTODY RECORD

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Mark Loeb, Manager/1-330-966-9387

JWR 7/14/2014

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES WPS: **Carrier:** 12.237-301-01-9368-4308 **Tracking Number:** ~~12.237-301-01-9346-9318~~		

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (<4 deg C); H None 7/31/14

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles			Hexavalent Chromium 7196A/3060A	TPH-DRO 8015C	RCRA Metals 6010C/7471A	Dioxins/Furans 8290A				RCRA Metals 6010C / 7470A	DRY WEIGHT (aliquot from method container)	
Box 4 - Sample Type							G	G	G	G				G		
Box 3 - Filtered/Unfiltered														U		
Required pH of Sample														<2		
Box 2 - Preservative							G	H	H	H				B		
Box 5 - Sample Container Type							1-4 oz CG	1-4 oz CG	1-4 oz CG	1-4 oz CG AG				1- 500 ml P		
PAD-1	7/31	0830	S	4			X	X	X	X					X	
PAD-2		0930	S	3			X		X	X					X	
PAD-3		0950	S	3			X		X	X					X	
PAD-4		1010	S	4			X	X	X	X					X	use for MS / MSD...
PAD-4ms		1010	S	4			X	X	X	X					X	
PAD-4msd		1010	S	4			X	X	X	X					X	
PAD-5		1040	S	3			X		X	X					X	
PAD-6		1100	S	3			X		X	X					X	
PAD-7		1120	S	4			X	X	X	X					X	
PAD-8		1150	S	3			X		X	X					X	
PAD-X		1130	S	3			X	X	X						X	
PAD-XX		0840	S	1						X					X	PAD-XX used for dioxin blind field duplicate only
Equip Blank	7/31		E	1										X		

GENERAL NOTES:

1. Estimated results required.
2. Report results on a DRY WEIGHT BASIS. 3. VELAP required. Dioxin/Furans to TA Knoxville. All other methods TA North Canton
4. report results in mg/kg except for dioxin. JWR 7/11/14
5. VELAP Accreditation required. JWR 7/14/2014

Client's Special Instructions: Level 4 with edd.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Ken Coddington	Date: 7/31/14	#1 Received by (Signature):	Date: 8/1/14	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name: TA Can	Time: 1630	Company Name:	Time:	

JWR 7/11/2014 1/4

CHAIN OF CUSTODY RECORD

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Mark Loeb, Manager/1-800-966-9387

OK JVR 9/14/2014

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** **Tracking Number:**

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (<6 deg C); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles				RCRA Metals 6010C	Dioxins/Furans 8290A				DRY WEIGHT (aliquot from method container)
Box 4 - Sample Type								G	G				
Box 3 - Filtered/Unfiltered													
Required pH of Sample													
Box 2 - Preservative								H	H				
Box 5 - Sample Container Type								1-4 oz CG	1-4 oz CG AG				
NB-1	7/31	1230	S	2				X	X				X
NB-2		1210	S	2				X	X				X
SB-1		1250	S	2				X	X				X
SB-2		1310	S	2				X	X				X
BERM-1		0850	S	2				X	X				X
POND-1	7/31	0910	S	2				X	X				X

GENERAL NOTES:

1. Estimated results required.
2. Report results on a DRY WEIGHT BASIS. 3. VELAP required. Dioxin/Furans to TA Knoxville, All other methods TA North Canton

4. report results in mg/kg except for dioxins
JVR 7-11-2014

Page 28 of 28

Clients Special Instructions: level 4 with edd.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0600	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature): Barry Burns	Date: 8/1/14	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name: TA Con	Time: 1030	Company Name:	Time:	

JVR 7/11/14 2/2

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

JK 9/17/2014

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** Sept ~~July~~ 2014 - Annual Soil Monitoring - verification event **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** UPS: 12-237-301-01-9308 -2664 **Tracking Number:**

Box 1: Matrix SW Surface Water GW Groundwater L Leachate S Soil T Trip Blank E Equipment Blank P Product O Other	**Box 2: Preservative** A HCL B HNO_3 C H_2SO_4 D $Na_2S_2O_3$ E NaOH F ZnAc G Other (<6 deg C) H None	**Box 3: Filtered/Unfiltered** F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic V VOA AG Amber Glass CG Clear Glass	**Box 4: Sample Type** G Grab C Composite **Invoice** **Copy to Consultant:** YES **Bill:** CLIENT OTHER **Preserved and shipped on ice:** YES

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles			2,4-dinitrotoluene only 8330B -AIR DRY	nitroglycerin only 8330B -AIR DRY							
Box 4 - Sample Type							G	G							
Box 3 - Filtered/Unfiltered							NA	NA							
Required pH of Sample							NA	NA							
Box 2 - Preservative							G	G							
Box 5 - Sample Container Type							~~Plastic CG~~	~~Amber CG~~							
							1-1602-CG								
PAD-1	9/18	0830	S	1			X								
PAD-3	9/18	0820	S	1				X							
PAD-4	↓	0800	S	1			X	X							
PAD-4ms		0800	S	1			X	X							
PAD-4msd		0800	S	1			X	X							
PAD-5	↓	0740	S	1			X								
PAD-X	9/18	0815	S	1			X	X							

GENERAL NOTES:

1. **Estimated results required.** **Level 4/comprehensive deliverable**
2. **Report results on a DRY WEIGHT BASIS.** **$. Report results in mg/kg.** (if applicable)

MW-4 is the designated sample for lab to use for MS / MSD...

Clients Special Instructions:

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No

Describe problems, if any:

Sampler Name (Print): Mac Mullins	Date: 09/18/14	#1 Relinquished by (Signature): Ken Coddington	Date: 9/18/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: MacMullins	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KEN CODDINGTON	Date: 9-18-14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature: Ken Coddington	Time: 0600	Company Name:	Time:	Company Name:	Time:	

Microbac OVD
Received: 09/19/2014 10:07
By: BRIAN OGDEN
221000059759

9/17/2014

VLO 9/17/14

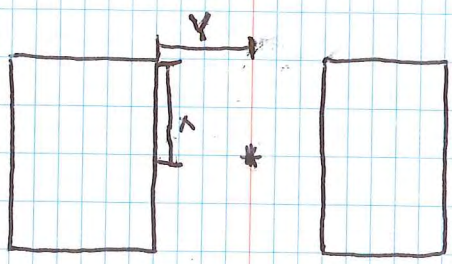
General Notes:

- Weather - Sunny & 70's
- PPE - White flame retardant coveralls, chemical resistant boots, eye protection, nitrile & neoprene gloves.
- ~~Equipment~~ 7/31/14
- Equipment - Deconned dedicated sampling equipment and re-packed sampling trowels in storage foil and ziplock bags after deconning.
- Decon Water - Collected & disposed of at Bio-Plant treatment on plant grounds.
- Decon Material - Collected, bagged & disposed of at on-site waste area.
- All samples collected then stored and transported in coolers on ice.
- All Hexavalent Chromium soil samples collected using a composite (non-stainless steel) sampling trowel. Also, collected from a point 6" above or below the sampling point for other samples.
- Refer to specific diagram for each sampling point's sample location.
- Collected perchlorate with headspace in glass jars. 2-13-15

River Flow

PAD-1

X = 8'
Y = 22'



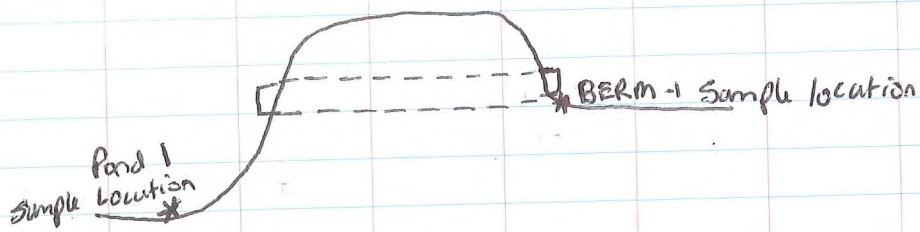
Sample Time (0830)
Samples Collected: (3) SB35 8260C, (1) 8270D/DW
(1) 6850, (1) 8330, (1) 7196A 13060A, (1) 6010C/7471A, (1) 8290A
(1) 8015C

7/31/14

RFAAA
OBG/Unit 13
B03204-207A
KFC/TQE

F.B. #11

PAD-1
location



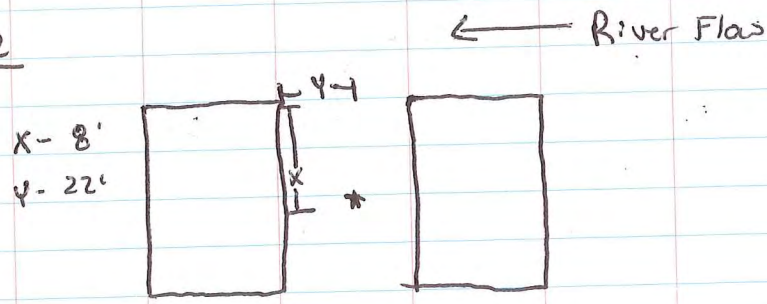
BERM-1

Sample Time (0850)
Samples Collected: (3) 5035A/8260C, (1) 8270D/DW
(1) 6850/DW, (1) 8330B, (1) 6010C, (1) 8290A

POND-1

Sample Time (0910)
Samples Collected: (3) ~~8~~5035A/8260C, (1) 8270D/DW
(1) 6850/DW, (1) 8330B, (1) 6010C, (1) 8290A

PAD-2



Sample Time (0930)
Samples Collected: (3) 5035/8260C, (1) 8270D/DW
(1) 7196A/3060A, (1) 6010C/7471A, (1) 8290A, (1) 6850/DW
(1) 8330B

PAD-XX (Taken from PAD-1)

Sample Time (0840)
Samples Collected: (1) 8290A

7/31/14

RFAAP
OB&G/UNIT-13
B03204-2071A
TQE/KFC

PAD-3

x - 6'
y - 18' Sample Time (0950)
Samples Collected: (3) 5035/8260C, (1) 8270D/DW
(1) 7196A/3060A, (1) 6010C/7471A, (1) 8290A, (1) 6850/DW
(1) 8330B

PAD-4

x - 3'
y - 21' Sample Time (1010)
Samples Collected: (9) 5035/8260C, (3) 8270D/DW
(3) 6850, (3) 8330, (3) 7196A/3060A, (3) 6010C/7471A,
(3) 8290A, (3) 8015C

PAD-5

x - 3'
y - 18' Sample Time (1040)
Samples Collected: (3) 5035/8260C, (1) 8270D/DW
(1) 7196A/3060A, (1) 6010C/7471A, (1) 8290A, (1) 6850/DW
(1) 8330B

PAD-6

x - 2'
y - 24' Sample Time (1100)
Samples Collected: (3) 5035/8260C, (1) 8270D/DW
(1) 7196A/3060A, (1) 6010C/7471A, (1) 8290A, (1) 6850/DW
(1) 8330B

7/31/14

RFAAP
OBG/UNIT-13
B03204-207A
TQE/KFC

F.B.#11

PAD-7

x-3'
Y-24'

Sample Time (1120)
Samples Collected: (3) 5035/8260C, (1) 8270D/DW
(1) 6850, (1) 8330, (1) 7196A/3060A, (1) 6010C/7471A
(1) 8290A, (1) 8015C

PAD-X - (Taken from PAD-7)

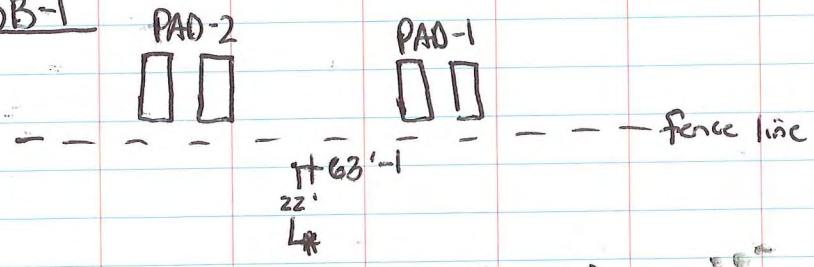
Sample Time (1130)
Samples Collected: (3) 5035/8260C, (1) 8270D/DW
(1) 6850, (1) 8330, (1) 7196A/3060A, (1) 6010C/7471A
(1) 8015C

PAD-8

x-4'
Y-24'

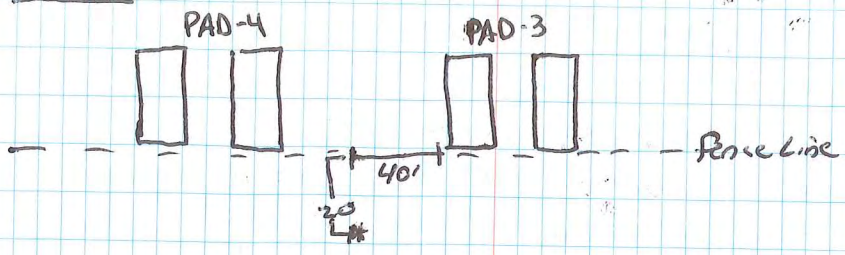
Sample Time (1150)
Samples Collected: (3) 5035/8260C, (1) 8270D/DW
(1) 6850, (1) 8330, (1) 7196A/3060A, (1) 6010C/7471A
(1) 8290A

SB-1



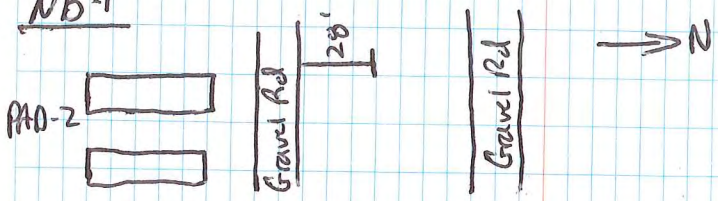
Sample Time (1250)
Samples Collected: (3) 5035A/8260C, (1) 8270D/DW
(1) 6850/DW, (1) 8330B, (1) 6010C, (1) 8290

SB-2



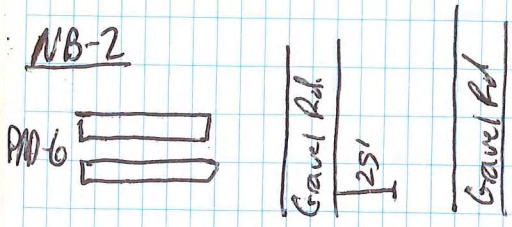
Sample Time (1310)
Samples Collected: (3) 5035A/8260C, (1) 8270D/DW
(1) 6850/DW, (1) 8330B, (1) 6010C, (1) 8290

NB-1



Sample Time (1230)
Samples Collected: (3) 5035A/8260C, (1) 8270D/DW
(1) 6850/DW, (1) 8330B, (1) 6010C, (1) 8290

NB-2



Sample Time (1210)
Samples Collected: (3) 5035A/8260C, (1) 8270D/DW
(1) 6850/DW, (1) 8330B, (1) 6010C, (1) 8290

Equipment Blank
Sample Time (1300) Samples Collected: (1) 6010C/7471A

9/18/14

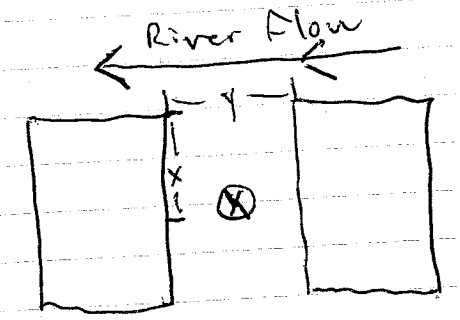
RFMAP
OU4/UNIT-13
B03204-208
KFC/MDM

General Notes:

- Weather - Foggy + 60's
- PPE - Flame retardant coveralls, chemical resistant boots, eye protection, nitrile + neoprene gloves.
- Equipment - Deconned dedicated sampling equipment + re-packed sampling trowels in aluminum foil + Zip loc bags.
- Decon Water - Collected + disposed at BioPlant treatment on plant grounds.
- Decon materials + waste material - Collected, bagged + disposed of at on-site waste area.
- All samples collected then stored + transported on ice.

- Refer to accompanying diagram for each sampling point location.

PAD-5



X = 3'
Y = 18'

Sample time (0740)
Samples collected: (2) 8330B
(135)

F.B #1

1 resistant boots, eye

pling equipment &
1 & 2 ip loc bags.
lant treatment on

llected, bagged &

ansported on ice.

each sampling

X = 3'
Y = 18'

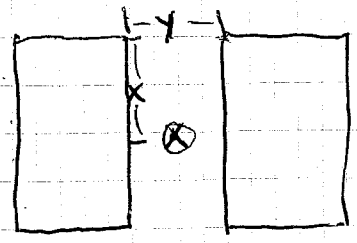
140)
330B

9/18/14

RFAAP
OBA/UNIT-13
B03204-208
KFC/MJW

F.B #11

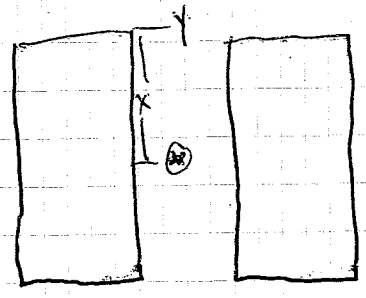
PAD-4



X = 3'
Y = 21'

Sample time (0800)
Samples collected: (6) 8330B

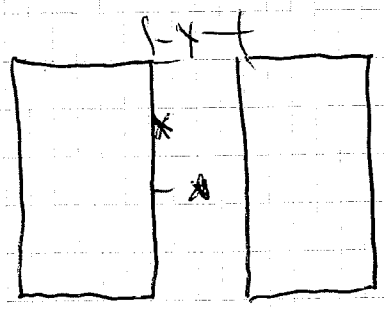
PAD-3



X' = 6'
Y' = 18'

Sample time (0820)
Samples collected: (2) 8330B

PAD-1



X' = 8'
Y' = 22'

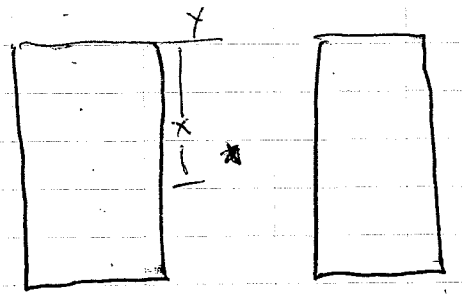
Sample time (0830)
Samples collected: (2) 8330B

9/18/14

RFAAP
OBG/UNIT-13
R03204-208
KFC/MDM

F.B. #11

PAD-X (Taken from PAD-4)



X = 3'
Y = 21'

Sample Time (0815)
Samples collected: (2) 8330B

APPENDIX E

HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS (2005 – 2013)

This report is presented in an electronic version and as a bound hard copy version.

Electronic Version: Depending upon the file size (limited to 50 MB per file), this Attachment/Appendix may be presented in a separate Portable Document Format (PDF) file associated with this report.

Hardcopy Version: This Attachment/Appendix is only provided in PDF on the enclosed compact disc (CD-ROM).

Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U	A	U	A	0.005	51000	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	51000	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	51000	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	51000	SW846 8260B	mg/kg
1/8/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	51000	SW846 8260B	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U	A	U	A	0.005	31	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	31	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	31	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	31	SW846 8260B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.005	31	SW846 8260B	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
11/17/2005	U		1.6		0.51		0.95		U		U		U		U		U		U		U		0.25	31000	SW846 8330	mg/kg
6/9/2006	U		U		2		0.75		U		U		U		U		U		U		U		0.25	31000	SW846 8330	mg/kg
1/11/2007	U		U		3.1		0.71		U		U		U		U		U		U		U		0.25	31000	SW846 8330	mg/kg
6/18/2007	U		U		16		U		U		U		U		U		U		U		U		0.25	31000	SW846 8330	mg/kg
1/8/2008	U		U		0.45		U		U		U		U		0.54		U		U		U		0.25	31000	SW846 8330	mg/kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.25	100	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.25	100	SW846 8330	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	100	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	100	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	100	SW846 8330	mg/kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
11/17/2005	U		9.6		U		3.1		U		2		0.35		U		0.47		U		U		0.25	95	SW846 8330	mg/kg
6/9/2006	U		0.84		44		1.6		U		0.83		0.33		U		U		U		U		0.25	95	SW846 8330	mg/kg
1/11/2007	0.49		2.8		69		U		U		1.7		0.34		0.5		2.1		U		U		0.25	95	SW846 8330	mg/kg
6/18/2007	U		0.74		23		3.6		U		2.2		0.3		U		1.3		1.4		U		0.25	95	SW846 8330	mg/kg
1/8/2008	0.55		0.29		0.75		0.3		U		U		5.3	J	59		U		U		U		0.25	95	SW846 8330	mg/kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	3100	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg

See last page of this report for definitions.

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
11/17/2005	U		0.79		U		1.1		U		0.82		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
6/9/2006	U		1.5		0.26		0.61		U		0.71		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
1/11/2007	U		1.1		0.46		U		U		1		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
6/18/2007	U		0.31		1.9		0.74		U		0.99		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
1/8/2008	0.34		U		U		U		U		U		U		0.73		U		U		U		0.25	2000	SW846 8330	mg/kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
11/17/2005	U		0.55		U		1.5		U		U		U		U		U		U		U		0.25	1000	SW846 8330	mg/kg
6/9/2006	U		U		U		1.5		U		U		U		U		U		U		U		0.25	1000	SW846 8330	mg/kg
1/11/2007	U		0.76		0.35		0.32		U		0.3		U		U		U		U		U		0.25	1000	SW846 8330	mg/kg
6/18/2007	U		U		0.7		0.33		U		U		U		U		U		U		U		0.25	1000	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		0.31		U		U		U		0.25	1000	SW846 8330	mg/kg
2-Amino-4,6-dinitrotoluene					*CAS #: 35572-78-2*																					
11/17/2005	U		1.7		U		0.53		U		U		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
6/9/2006	U		0.29		0.36		U		U		U		0.25		U		U		U		U		0.25	2000	SW846 8330	mg/kg
1/11/2007	U		0.28		0.5		U		U		0.32		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
6/18/2007	U		0.66		0.66		U		U		0.42		0.47		U		0.3		0.48		U		0.25	2000	SW846 8330	mg/kg
1/8/2008	U		U		0.27		U		U		U		0.36		1.7		U		U		U		0.25	2000	SW846 8330	mg/kg
2-Chlorophenol					*CAS #: 95-57-8*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	5100	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.25	12	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.25	12	SW846 8330	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	12	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	12	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	12	SW846 8330	mg/kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
1/8/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	2		SW846 8270C	mg/kg

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Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
3-Methylphenol					*CAS #: 108-39-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	51000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	51000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	51000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	51000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	51000	SW846 8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.25	20000	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.25	20000	SW846 8330	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	20000	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	20000	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	20000	SW846 8330	mg/kg
4-Amino-2,6-dinitrotoluene					*CAS #: 19406-51-0*																					
11/17/2005	U		1.8		U		0.26		U		U		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
6/9/2006	U		0.39		0.34		U		U		0.34		0.28		U		U		U		U		0.25	2000	SW846 8330	mg/kg
1/11/2007	U		0.25		0.28		U		U		0.39		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
6/18/2007	U		0.67		0.82		0.3		U		0.64		0.47	J	U		0.28	J	0.41		U		0.25	2000	SW846 8330	mg/kg
1/8/2008	U		U		0.25		U		U		U		0.59		2.2		U		U		U		0.25	2000	SW846 8330	mg/kg
4-Methylphenol					*CAS #: 106-44-5*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	5100	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		2	7	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		2	7	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		2	7	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		2	7	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		2	7	SW846 8270C	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
11/17/2005	U		0.45		U		0.34		U		U		U		U		U		U		U		0.25	170	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.25	170	SW846 8330	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	170	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	170	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	170	SW846 8330	mg/kg

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Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	100000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
Antimony					*CAS #: 7440-36-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.5	410	SW846 6010B	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.5	410	SW846 6010B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		6	410	SW846 6010B	mg/kg
6/18/2007	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	6	410	SW846 6010B	mg/kg
1/8/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	6	410	SW846 6010B	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
11/17/2005	2		3		1.4		1.8		1.2		1.7		1.2		2		1.7		3		4.6		1	16	SW846 6010B	mg/kg
6/9/2006	2		1.4		1.9		2.2		1.1		1.2		1.7		1.5		1.5		2.6		2.9		1	16	SW846 6010B	mg/kg
1/11/2007	1.8		2		1.9		1.9		U		2		1.8		2.7		4.5		3.6		4.3		1	16	SW846 6010B	mg/kg
6/18/2007	1.1		1.5		1.6		2.1		U		1.7		1.3		1.2		2.2		3.2		4		1	16	SW846 6010B	mg/kg
1/8/2008	2.1		1.2		1.5		1.4		U		U		1.6		2.3		2.6		2.4		2.8		1	16	SW846 6010B	mg/kg
Barium					*CAS #: 7440-39-3*																					
11/17/2005	85.9		127		51.9		88.8		28.4		81.1		78.4		123		105		125		153		20	72000	SW846 6010B	mg/kg
6/9/2006	131		54.4		64.2		79.1		48.8		54.8		135		156		109		110		79.6		20	72000	SW846 6010B	mg/kg
1/11/2007	156		72.9		66.5		78.1		39.3		70.6		99.1		213		134		147		149		20	72000	SW846 6010B	mg/kg
6/18/2007	249		65.9		61.4		71.7		50.7		80.7		156		111		93.5		97.2		83.7		20	72000	SW846 6010B	mg/kg
1/8/2008	172		73.4		81.9		70.8		38		30.3		85.4		133		121		117		141		20	72000	SW846 6010B	mg/kg
Benzene					*CAS #: 71-43-2*																					
11/17/2005	0.0063		U		U		0.0072		U		U		0.008		U		U		U		U	A	0.005	52	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	52	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	52	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	52	SW846 8260B	mg/kg
1/8/2008	U		U		U		0.0071		U		U		U		U		U		U		U		0.005	52	SW846 8260B	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	3.9	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.38	3.9	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	3.9	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	3.9	SW846 8270C	mg/kg

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Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Benzo(a)pyrene					*CAS #: 50-32-8*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	0.39	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.38	0.39	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	0.39	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	0.39	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U	J	U		U		U		0.4	0.39	SW846 8270C	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	3.9	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.38	3.9	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	3.9	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U	J	U		U		U		0.4	3.9	SW846 8270C	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	39	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.38	39	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	39	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	39	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U	J	U		U		U		0.4	39	SW846 8270C	mg/kg
Benzoic acid					*CAS #: 65-85-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		2	4100000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		2	4100000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		2	4100000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		2	4100000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		2	4100000	SW846 8270C	mg/kg
Benzyl chloride					*CAS #: 100-44-7*																					
1/8/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005		SW846 8260B	mg/kg
bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	200	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	200	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		0.82		U		U		0.4	200	SW846 8270C	mg/kg
6/18/2007	U	J	0.51	J	U	J	U		U		U	J	U	J	U		0.48		U	J	U		0.4	200	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	200	SW846 8270C	mg/kg

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Bromomethane					*CAS #: 74-83-9*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U	A	U	A	0.005	15	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	0.0092		U		U		U		U	A	U		0.005	15	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	15	SW846 8260B	mg/kg
6/18/2007	U		0.0066		U		0.005		U		0.0059		0.079		U		0.0067		0.008		U		0.005	15	SW846 8260B	mg/kg
1/8/2008	U		0.02		U		U		U		U		U		U		U		U		U		0.01	15	SW846 8260B	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	200000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	200000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	200000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	200000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	200000	SW846 8270C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.5	510	SW846 6010B	mg/kg
6/9/2006	0.58		U		U		U		U		U		U		U		U		U		U		0.5	510	SW846 6010B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		0.75		U		U		0.5	510	SW846 6010B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.5	510	SW846 6010B	mg/kg
1/8/2008	1.5		U		U		U		U		U		U		U		0.93		U		0.76		0.5	510	SW846 6010B	mg/kg
Carbon tetrachloride					*CAS #: 56-23-5*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U	A	U	A	0.005	22	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	22	SW846 8260B	mg/kg
1/11/2007	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	22	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	22	SW846 8260B	mg/kg
1/8/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	22	SW846 8260B	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U	A	U	A	0.005	20000	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	20000	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	20000	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	20000	SW846 8260B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.005	20000	SW846 8260B	mg/kg
Chloroform					*CAS #: 67-66-3*																					
11/17/2005	U		U		U		U		U		U		0.0071		U		U		U	A	U	A	0.005	10000	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	10000	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	10000	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	10000	SW846 8260B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.005	10000	SW846 8260B	mg/kg

See last page of this report for definitions.

Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Chloromethane					*CAS #: 74-87-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U	A	U	A	0.005	6	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	6	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	6	SW846 8260B	mg/kg
6/18/2007	U		0.0064		U		U		U		U		0.03		U		U		U		U		0.005	6	SW846 8260B	mg/kg
1/8/2008	U		0.016		U		U		U		U		U		U		U		U		U		0.01	6	SW846 8260B	mg/kg
Chromium					*CAS #: 7440-47-3*																					
11/17/2005	24.2		16.7		9.1		12.1		3.8		14.6		13.6		19.1		17.3		21.2		28		1	3100	SW846 6010B	mg/kg
6/9/2006	17.1		9.3		13.8		13.4		7.7		11		11.8		13		18.1		19.8		14.3		1	3100	SW846 6010B	mg/kg
1/11/2007	16		11		10.6		14.7		5.9		14		14.5		16.5		16		27.1		25		1	3100	SW846 6010B	mg/kg
6/18/2007	15.3		7.5		14		13.9		8.4		16.4		13.8		11.7		15.1		19.3		16.2		1	3100	SW846 6010B	mg/kg
1/8/2008	20.1		13.5		13		12.1		7.3		6.7		14		18		13.9		21.1		24.4		1	3100	SW846 6010B	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	0.39	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	0.39	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	0.39	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	0.39	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U	J	U		U		U		0.4	0.39	SW846 8270C	mg/kg
Dibenzofuran					*CAS #: 132-64-9*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	2000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
11/17/2005	U		U		0.96		0.45		U		6.4		0.5		U		U		U		U		0.4	820000	SW846 8270C	mg/kg
6/9/2006	U		U		U		1.2		U		1.8		U		U		U		U		U		0.4	820000	SW846 8270C	mg/kg
1/11/2007	U		U		0.46		U	J	0.41		6.9		U		4.1		U		U		U		0.4	820000	SW846 8270C	mg/kg
6/18/2007	U	J	0.44	J	U	J	0.67		U		4.9	J	1.6	J	U		1.5		U	J	0.58		0.4	820000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		0.95		U		U		U		0.4	820000	SW846 8270C	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	10000000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	10000000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	10000000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	10000000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		1.2		U		U		U		0.4	10000000	SW846 8270C	mg/kg

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Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
11/17/2005	2		U		1.3		U		U		2.3		U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
6/9/2006	U		0.8		1.7		0.38		U		4.1		U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
1/11/2007	U		U		0.47		U	J	U		12		U		11		U		U		U		0.4	100000	SW846 8270C	mg/kg
6/18/2007	U	J	0.83	J	U	J	0.7		U		6.3	J	0.76	J	U		0.48		U	J	U		0.4	100000	SW846 8270C	mg/kg
1/8/2008	1.2		U		U		U		U		U		2		1.4		U		U		U		0.4	100000	SW846 8270C	mg/kg
Di-n-octyl phthalate					*CAS #: 117-84-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	41000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U	J	U		U		U		0.4	41000	SW846 8270C	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	41000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	200	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	200	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	200	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	200	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	200	SW846 8270C	mg/kg
HMX					*CAS #: 2691-41-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		2.2	51000	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		2.2	51000	SW846 8330	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.5	51000	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		0.83		U		U		0.5	51000	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.5	51000	SW846 8330	mg/kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/9/2006	U		U		U	A	U		U		U	A	U		U		U		U		U		0.4	3.9	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	3.9	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U	J	U		U		U		0.4	3.9	SW846 8270C	mg/kg

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Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Lead					*CAS #: 7439-92-1*																					
11/17/2005	414		471		188		208		11.8		660		199		259		140		81.3		104		3	800	SW846 6010B	mg/kg
6/9/2006	234		181		216		242		245		676		317		51.4		63.2		66		128		3	800	SW846 6010B	mg/kg
1/11/2007	201		193		202		164		165		781		339		290		219		68.9		122		0.3	800	SW846 6010B	mg/kg
6/18/2007	271	J	195	J	217	J	191	J	190	J	336		512	J	73.9	J	135	J	149	J	164	J	0.3	800	SW846 6010B	mg/kg
1/8/2008	417		183		579		219		436		251		251	J	684		203		78.2		92.2		0.3	800	SW846 6010B	mg/kg
Mercury					*CAS #: 7439-97-6*																					
11/17/2005	U		U		U		U		U		U		0.127		U		U		U		U		0.11	0.13	SW846 7471A	mg/kg
6/9/2006	U		U		U		U		U		U		0.12		U		U		U		0.11		0.11	0.13	SW846 7471A	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.11	0.13	SW846 7471A	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.11	0.13	SW846 7471A	mg/kg
1/8/2008	U		U		U		U		U		U		0.34		U		U		U		U		0.11	0.13	SW846 7471A	mg/kg
Methylene chloride					*CAS #: 75-09-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U	A	0.005	380	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U		U		0.005	380	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	380	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	380	SW846 8260B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.005	380	SW846 8260B	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	20000	SW846 8270C	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.4	20000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	20000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	20000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	20000	SW846 8270C	mg/kg
Nickel					*CAS #: 7440-02-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.25	510	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.25	510	SW846 8330	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	510	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.25	510	SW846 8330	mg/kg
1/8/2008	0.43		1.1		2		2.5		0.53		0.46		0.61	J	0.91		0.34		0.79		0.45		0.25	510	SW846 8330	mg/kg

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Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Nitroglycerin					*CAS #: 55-63-0*																					
11/17/2005	U		2.8		U		20		U		26		U		U		U		U		U		2.5	200	SW846 8332	mg/kg
6/9/2006	U		3		U		49		U		7.7		U		U		U		U		U		2.5	200	SW846 8332	mg/kg
1/11/2007	17		U		U		U		34		100		U		U		U		U		U		2.5	200	SW846 8332	mg/kg
6/18/2007	U		U		U		5.5		U		8.1		5.7		U		U		U		U		2.5	200	SW846 8332	mg/kg
1/8/2008	U		U		U		6.5		U		U		3.2		5.2		U		U		U		2.5	200	SW846 8332	mg/kg
N-Nitrosodiphenylamine					*CAS #: 86-30-6*																					
11/17/2005	3.5		U		U		U		U		U		U		U		U		U		U		1.6	26000	SW846 8270C	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		1.6	26000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		1.6	26000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		1.6	26000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	26000	SW846 8270C	mg/kg
Phenol					*CAS #: 108-95-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	310000	SW846 8270C	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.4	310000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	310000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	310000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	310000	SW846 8270C	mg/kg
Pyrene					*CAS #: 129-00-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
1/11/2007	U		U		U		U	J	U		U		U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
6/18/2007	U	J	U	J	U	J	U		U		U	J	U	J	U		U		U	J	U		0.4	31000	SW846 8270C	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
RDX					*CAS #: 121-82-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.5	26	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.5	26	SW846 8330	mg/kg
1/11/2007	U		U		U		1.2		U		U		U		U		U		U		U		0.5	26	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.5	26	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.5	26	SW846 8330	mg/kg
Selenium					*CAS #: 7782-49-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.6	5100	SW846 6010B	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.6	5100	SW846 6010B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.6	5100	SW846 6010B	mg/kg
6/18/2007	U		U		0.69		U		U		0.73		U		U		1.3		1.2		1.3		0.6	5100	SW846 6010B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.6	5100	SW846 6010B	mg/kg

See last page of this report for definitions.

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Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Silver					*CAS #: 7440-22-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U	A	0.005	5.3	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	5.3	SW846 8260B	mg/kg
1/11/2007	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	5.3	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	5.3	SW846 8260B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.005	5.3	SW846 8260B	mg/kg
Tetryl					*CAS #: 479-45-8*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.65	10000	SW846 8330	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		0.65	10000	SW846 8330	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		0.65	10000	SW846 8330	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.65	10000	SW846 8330	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.65	10000	SW846 8330	mg/kg
Toluene					*CAS #: 108-88-3*																					
11/17/2005	U		U		U		0.011		U		U		U		U		U		U		U		0.005	200000	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U		U		0.005	200000	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	200000	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	200000	SW846 8260B	mg/kg
1/8/2008	0.007		U		U		U		U		U		U		U		U		U		U		0.005	200000	SW846 8260B	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
11/17/2005	59		-		-		49		-		-		27		-		-		-		-		50	11000	SW846 8015B	mg/kg
6/9/2006	U		-		-		U		-		-		U		-		-		-		-		50	11000	SW846 8015B	mg/kg
1/11/2007	12		-		-		23		-		-		24		-		-		-		-		10	11000	SW846 8015B	mg/kg
6/18/2007	14	J	-		-		20	J	-		-		20	J	-		-		-		-		10	11000	SW846 8015B	mg/kg
1/8/2008	42		-		-		20		-		-		U		-		-		-		-		10	11000	SW846 8015B	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
11/17/2005	0.0072		U		U		U		U		U		U		U		U		U		U	A	0.005	7.2	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	7.2	SW846 8260B	mg/kg
1/11/2007	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	7.2	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	7.2	SW846 8260B	mg/kg
1/8/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	7.2	SW846 8260B	mg/kg

See last page of this report for definitions.

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Table 2A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit .
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*PAD-1*	*Q*	*PAD-2*	*Q*	*PAD-3*	*Q*	*PAD-4*	*Q*	*PAD-5*	*Q*	*PAD-6*	*Q*	*PAD-7*	*Q*	*PAD-8*	*Q*	*POND-1*	*Q*	*SB-1*	*Q*	*SB-2*	*Q*	*QL/RL*	*Action Limit*	*Method*	*Unit*
Vinyl chloride					*CAS #: 75-01-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U	A	U	A	0.005	4	SW846 8260B	mg/kg
6/9/2006	U		U		U		U		U	A	U		U		U		U		U	A	U		0.005	4	SW846 8260B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U	J	U		U	J	U		0.005	4	SW846 8260B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		0.005	4	SW846 8260B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		0.005	4	SW846 8260B	mg/kg
Zinc					*CAS #: 7440-66-6*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg
6/9/2006	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg
1/11/2007	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg
6/18/2007	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg
1/8/2008	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg

Definitions: QL Denotes limit of quantitation. **RL** Denotes reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above QL/RL. **UA** Denotes analyte not detected at or above adjusted sample QL/RL. **J** Denotes analyte reported at or above QL/RL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not **detected** at or above QL/RL and QL/RL is estimated. When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL/RL and adjusted QL/RL is estimated. **R** Denotes result rejected. (-) Denotes not sampled. Action limit obtained from Permit (09/05) -Attachment 1II.C-23 and -24- OBG Soil Monitoring Program. Results for Method 8290 Dioxin/Furan submitted as a separate report.

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	51000	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	51000	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	51000	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	51000	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	51000	SW846 8260B	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	31	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	31	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	31	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	31	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	31	SW846 8260B	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	31000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.25	31000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	31000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	31000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	31000	SW846 8330	mg/kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	100	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.25	100	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	100	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	100	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	100	SW846 8330	mg/kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		0.51		0.25	95	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		0.85		0.25	95	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		1.2		0.25	95	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		1		0.25	95	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		0.43		0.25	95	SW846 8330	mg/kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	3100	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	3100	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	3100	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	3100	SW846 8270C	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		0.25		0.25	2000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		0.42		U		U		0.25	2000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		0.82		U		0.3		0.25	2000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	1000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.25	1000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	1000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	1000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	1000	SW846 8330	mg/kg
2-Amino-4,6-dinitrotoluene					*CAS #: 35572-78-2*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		0.46		0.25	2000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		1.2		0.25	2000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		0.27		0.25	2000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
2-Chlorophenol					*CAS #: 95-57-8*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	5100	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	5100	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	5100	SW846 8270C	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	12	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.25	12	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	12	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	12	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	12	SW846 8330	mg/kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	J	2		SW846 8270C	mg/kg

See last page of this report for definitions.

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Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
3-Methylphenol					*CAS #: 108-39-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	51000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	51000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	51000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	51000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	51000	SW846 8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	20000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.25	20000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	20000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	20000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	20000	SW846 8330	mg/kg
4-Amino-2,6-dinitrotoluene					*CAS #: 19406-51-0*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		0.72		0.25	2000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		1.1		0.25	2000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		0.29		0.25	2000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
4-Methylphenol					*CAS #: 106-44-5*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	5100	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	5100	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	5100	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	5100	SW846 8270C	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		2	7	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	2	7	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		2	7	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	2	7	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		2	7	SW846 8270C	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	170	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.25	170	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	170	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	170	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	170	SW846 8330	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	100000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	100000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	100000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	100000	SW846 8270C	mg/kg
Antimony					*CAS #: 7440-36-0*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.5	410	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.5	410	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		6	410	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U	J	6	410	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	J	6	410	SW846 6010B	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
11/17/2005	-		-		-		-		-		-		-		-		2.5		1.4		1.7		1	16	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		2		1.5		1.7		1	16	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		2.7		1.9		2.6		1	16	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		2.1		1.8		1.2		1	16	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		2.3		U		1.4		1	16	SW846 6010B	mg/kg
Barium					*CAS #: 7440-39-3*																					
11/17/2005	-		-		-		-		-		-		-		-		129		97.7		143		20	72000	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		130		110		107		20	72000	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		162		95.8		126		20	72000	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		125		91.4		92.1		20	72000	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		147		108		91.3		20	72000	SW846 6010B	mg/kg
Benzene					*CAS #: 71-43-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	52	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	52	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	52	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	52	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	52	SW846 8260B	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	3.9	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.38	3.9	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	3.9	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	3.9	SW846 8270C	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Benzo(a)pyrene					*CAS #: 50-32-8*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	0.39	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.38	0.39	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	0.39	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	0.39	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U		0.4	0.39	SW846 8270C	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	3.9	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.38	3.9	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	3.9	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U		0.4	3.9	SW846 8270C	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.38	39	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.38	39	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	39	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	39	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U		0.4	39	SW846 8270C	mg/kg
Benzoic acid					*CAS #: 65-85-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		2	4100000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	2	4100000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		2	4100000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	2	4100000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		2	4100000	SW846 8270C	mg/kg
Benzyl chloride					*CAS #: 100-44-7*																					
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005		SW846 8260B	mg/kg
bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
11/17/2005	U		U		U		U		U		U		U		U		0.69		1.5		0.63		0.4	200	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.4	200	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		0.64		U		U		0.4	200	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		1.9		1.1	J	U	J	0.4	200	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		2.1		1.5		U		0.4	200	SW846 8270C	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Bromomethane					*CAS #: 74-83-9*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	15	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		0.019		U		0.005	15	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		0.0064	J	U		U	J	0.005	15	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		0.0086	J	0.0063	J	0.0065		0.005	15	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.01	15	SW846 8260B	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	200000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	200000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	200000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	200000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	200000	SW846 8270C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.5	510	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.5	510	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.5	510	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.5	510	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.5	510	SW846 6010B	mg/kg
Carbon tetrachloride					*CAS #: 56-23-5*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	22	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	22	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	22	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	22	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	22	SW846 8260B	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	20000	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	20000	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	20000	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	20000	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	20000	SW846 8260B	mg/kg
Chloroform					*CAS #: 67-66-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	10000	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	10000	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	10000	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	10000	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	10000	SW846 8260B	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Chloromethane					*CAS #: 74-87-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	6	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	6	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	6	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	6	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.01	6	SW846 8260B	mg/kg
Chromium					*CAS #: 7440-47-3*																					
11/17/2005	-		-		-		-		-		-		-		-		17.1		11.4		17.9		1	3100	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		15.5		11.6		14.9		1	3100	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		17.2		12.6		15.4		1	3100	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		15.3		15		15.6		1	3100	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		19.3		11.8		16.4		1	3100	SW846 6010B	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	0.39	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	0.39	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	0.39	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	0.39	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U		0.4	0.39	SW846 8270C	mg/kg
Dibenzofuran					*CAS #: 132-64-9*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	2000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	2000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	2000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	2000	SW846 8270C	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
11/17/2005	U		U		U		U		U		U		U		U		0.79		0.7		U		0.4	820000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		0.43		0.37		0.89		0.4	820000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		0.73		0.42		5.2		0.4	820000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	0.63	J	0.4	820000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		0.84		0.43		U		0.4	820000	SW846 8270C	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
11/17/2005	U		U		U		U		U		U		U		U		1.1		U		U		0.4	10000000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	10000000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	10000000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	10000000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		0.48		0.62		U		0.4	10000000	SW846 8270C	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
11/17/2005	U		U		U		U		U		U		U		U		0.48		1.1		U		0.4	100000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.4	100000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		0.75		U		1.6		0.4	100000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	0.46	J	0.4	100000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	100000	SW846 8270C	mg/kg
Di-n-octyl phthalate					*CAS #: 117-84-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	41000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	41000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U		0.4	41000	SW846 8270C	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	41000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	41000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	41000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	41000	SW846 8270C	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	200	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	200	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	200	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	200	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	200	SW846 8270C	mg/kg
HMX					*CAS #: 2691-41-0*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		2.2	51000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		2.2	51000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.5	51000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.5	51000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.5	51000	SW846 8330	mg/kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U	A	0.4	3.9	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	3.9	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	3.9	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U		0.4	3.9	SW846 8270C	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Lead					*CAS #: 7439-92-1*																					
11/17/2005	-		-		-		-		-		-		-		-		219		208		98.1		3	800	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		170		235		367		3	800	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		190		118		164		0.3	800	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		222	J	144	J	103	J	0.3	800	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		181		179		105		0.3	800	SW846 6010B	mg/kg
Mercury					*CAS #: 7439-97-6*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.11	0.13	SW846 7471A	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.11	0.13	SW846 7471A	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.11	0.13	SW846 7471A	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.11	0.13	SW846 7471A	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.11	0.13	SW846 7471A	mg/kg
Methylene chloride					*CAS #: 75-09-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	380	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.005	380	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	380	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	380	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	380	SW846 8260B	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	20000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.4	20000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	20000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	20000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	20000	SW846 8270C	mg/kg
Nickel					*CAS #: 7440-02-0*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.25	510	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.25	510	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	510	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.25	510	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		0.99		1.3		0.34		0.25	510	SW846 8330	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Nitroglycerin					*CAS #: 55-63-0*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		2.5	200	SW846 8332	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		3.2		2.5	200	SW846 8332	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		3.9		2.5	200	SW846 8332	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		2.5	200	SW846 8332	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		2.5	200	SW846 8332	mg/kg
N-Nitrosodiphenylamine					*CAS #: 86-30-6*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		1.6	26000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		1.8		1.6	26000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		1.9		1.6	26000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	1.6	26000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	26000	SW846 8270C	mg/kg
Phenol					*CAS #: 108-95-2*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	310000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.4	310000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	310000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	310000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	310000	SW846 8270C	mg/kg
Pyrene					*CAS #: 129-00-0*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.4	31000	SW846 8270C	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.4	31000	SW846 8270C	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U	J	U	J	0.4	31000	SW846 8270C	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.4	31000	SW846 8270C	mg/kg
RDX					*CAS #: 121-82-4*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.5	26	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.5	26	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.5	26	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.5	26	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.5	26	SW846 8330	mg/kg
Selenium					*CAS #: 7782-49-2*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.6	5100	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.6	5100	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.6	5100	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		1.1		0.84		0.75		0.6	5100	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.6	5100	SW846 6010B	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Silver					*CAS #: 7440-22-4*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	5.3	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	5.3	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	5.3	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	5.3	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	5.3	SW846 8260B	mg/kg
Tetryl					*CAS #: 479-45-8*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		0.65	10000	SW846 8330	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		0.65	10000	SW846 8330	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		0.65	10000	SW846 8330	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		0.65	10000	SW846 8330	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.65	10000	SW846 8330	mg/kg
Toluene					*CAS #: 108-88-3*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	200000	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	200000	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	200000	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	200000	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	200000	SW846 8260B	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
11/17/2005	-		-		-		-		-		-		-		-		-		-		-		50	11000	SW846 8015B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		-		-		-		50	11000	SW846 8015B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		-		-		-		10	11000	SW846 8015B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		-		-		-		10	11000	SW846 8015B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		-		-		-		10	11000	SW846 8015B	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	7.2	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	7.2	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U	J	0.012	J	0.005	7.2	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	7.2	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	7.2	SW846 8260B	mg/kg

Table 2B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit.
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*BG-1A*	*Q*	*BG-1B*	*Q*	*BG-1C*	*Q*	*BG-1D*	*Q*	*BG-2A*	*Q*	*BG-2B*	*Q*	*BG-2C*	*Q*	*BG-2D*	*Q*	*NB-1*	*Q*	*NB-2*	*Q*	*BERM-1*	*Q*	*QL/RL*	*Action Limit*	*Method*	*Unit*
Vinyl chloride					*CAS #: 75-01-4*																					
11/17/2005	U		U		U		U		U		U		U		U		U		U		U		0.005	4	SW846 8260B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U	A	U		U		0.005	4	SW846 8260B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U	J	U		U	J	0.005	4	SW846 8260B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U	J	U	J	U		0.005	4	SW846 8260B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		0.005	4	SW846 8260B	mg/kg
Zinc					*CAS #: 7440-66-6*																					
11/17/2005	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg
6/9/2006	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg
1/11/2007	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg
6/18/2007	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg
1/8/2008	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg

Definitions: QL Denotes limit of quantitation. **RL** Detones reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above QL/RL. **UA** Denotes analyte not detected at or above adjusted sample QL/RL. **J** Denotes analyte reported at or above QL/RL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not **detected** at or above QL/RL and QL/RL is estimated**.** When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL/RL and adjusted QL/RL is estimated. **R** Denotes result rejected. (-) Denotes not sampled. Action limit obtained from Permit (09/05) -Attachment 1II.C-23 and -24- OBG Soil Monitoring Program.

Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	1100	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1100	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1100	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1100	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1100	SW846 8260B	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	2.2	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	2.2	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	2.2	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	2.2	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	2.2	SW846 8260B	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
11/24/2008	U		0.51		2.1		U		U		U		U		U		U		U		U		0.25	27000	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	27000	SW846 8330	mg/kg
12/9/2009	U	J	U	J	1.6	J	0.49	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.25	27000	SW846 8330	mg/kg
3/2/2010	U		U		0.92		7.4		U		0.13		U		U		U		U		U		0.1	27000	8330	mg/kg
11/17/2010	U		U		1.9		0.16	J	U		U		U		U		U		U		U		0.1	27000	8330A	mg/Kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	62	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	62	SW846 8330	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	62	SW846 8330	mg/kg
3/2/2010	U		U		0.26	J	1.6	J	U		U		U		U		U		U		U		0.1	62	8330	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.1	62	8330A	mg/Kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
11/24/2008	U		1.5		2.1		0.4		U		1.7		U		0.42		2		U		U		0.25	79	SW846 8330	mg/kg
1/28/2009	U		0.31		U		0.36		U		0.59		U		U		0.36		0.71		U		0.25	79	SW846 8330	mg/kg
12/9/2009	U	J	1.3	J	1.1	J	0.32	J	U		1.6	J	U	J	1.1	J	1.2	J	U		1.2	J	0.25	79	SW846 8330	mg/kg
3/2/2010	U	J	0.42	J	0.29	J	0.26	J	U	J	1.1	J	0.26	J	0.8	J	0.32	J	U	J	U	J	0.1	79	8330	mg/kg
11/17/2010	0.11		0.43		3.1		0.19		U		0.91		1.5	J	0.16	J	0.3		U		0.14		0.1	79	8330A	mg/Kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	1800	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	1800	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	1800	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	1800	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	1800	SW846 8270C	mg/kg

See last page of this report for definitions.

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Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
11/24/2008	U		0.57		U		U		0.62		1.3		U		U		0.42		U		U		0.25	1200	SW846 8330	mg/kg
1/28/2009	U		0.25		U		U		U		1.8		U		0.45		U		U		U		0.25	1200	SW846 8330	mg/kg
12/9/2009	U		0.37		0.44		0.31		U		0.9		U		U		U		U		U		0.25	1200	SW846 8330	mg/kg
3/2/2010	0.13		0.18		0.34		2.4		0.39		1.1	J	0.21	J	8.5		U		U		U		0.1	1200	8330	mg/kg
11/17/2010	U		0.11		1.4		0.13		U		0.5		U		0.37		U		U		U		0.1	1200	8330A	mg/Kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
11/24/2008	U		0.49		U		U		U		U		U		U		U		U		U		0.25	620	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		0.3		U		U		U		U		U		0.25	620	SW846 8330	mg/kg
12/9/2009	U	J	U	J	0.59	J	1.1	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.25	620	SW846 8330	mg/kg
3/2/2010	U		U	J	0.52		14	J	U		U		U		U		U		U		U		0.2	620	8330	mg/kg
11/17/2010	U		U		0.72		U		U		U		U		U		U		U		U		0.2	620	8330A	mg/Kg
2-Amino-4,6-dinitrotoluene					*CAS #: 35572-78-2*																					
11/24/2008	U		0.48		U		U		U		U		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	2000	SW846 8330	mg/kg
12/9/2009	U		U		U		U		U		U		0.39		U		U		U		U		0.25	2000	SW846 8330	mg/kg
3/2/2010	U	J	0.3	J	U	J	U	J	U	J	0.21	J	U	J	U	J	U	J	U	J	U	J	0.2	2000	8330	mg/kg
11/17/2010	U		0.47		0.27	J	U		U		0.23		U		U		U		U		U		0.2	2000	8330A	mg/Kg
2-Chlorophenol					*CAS #: 95-57-8*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	5100	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	5100	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	5100	SW846 8270C	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	13	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	13	SW846 8330	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	13	SW846 8330	mg/kg
3/2/2010	U		U		U		0.8		U		U		U		U		U		U		U		0.2	13	8330	mg/kg
11/17/2010	U		U		0.2		U		U		U		U		U		U		U		U		0.2	13	8330A	mg/Kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		2	0.16	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		1.6	0.16	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		1.6	0.16	SW846 8270C	mg/kg
3/2/2010	U	J	U	J	U	J	U	A J	U	J	U	A J	U	J	U	J	U	J	U	J	U	J	1.9	0.16	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U	J	U		U		U	J	U	J	2	0.16	SW846 8270C	mg/kg

See last page of this report for definitions.

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Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
3-Methylphenol					*CAS #: 108-39-4*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	31000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	31000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	31000	SW846 8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	12000	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	12000	SW846 8330	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	12000	SW846 8330	mg/kg
3/2/2010	U		U		U		1.2	J	U		U		U		U		U		U		U		0.2	12000	8330	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.2	12000	8330A	mg/Kg
4-Amino-2,6-dinitrotoluene					*CAS #: 19406-51-0*																					
11/24/2008	U		0.58		U		U		U		U		U		U		0.28		U		U		0.25	1900	SW846 8330	mg/kg
1/28/2009	U		U		U		U		0.33		U		U		U		U		U		U		0.25	1900	SW846 8330	mg/kg
12/9/2009	U	J	U	J	U	J	U	J	U	J	U	J	0.31	J	U	J	U	J	U	J	U	J	0.25	1900	SW846 8330	mg/kg
3/2/2010	U	J	0.25	J	U	J	U	J	U	J	0.28	J	U	J	U	J	U	J	U	J	U	J	0.2	1900	8330	mg/kg
11/17/2010	U	J	0.34		0.35		U		U		0.3	J	U		U		U		U		U		0.2	1900	8330A	mg/Kg
4-Methylphenol					*CAS #: 106-44-5*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	3100	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	3100	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	3100	SW846 8270C	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		2	7	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		1.6	7	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		1.6	7	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		1.9	7	SW846 8270C	mg/kg
11/17/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	2	7	SW846 8270C	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	110	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	110	SW846 8330	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	110	SW846 8330	mg/kg
3/2/2010	U		U		U		0.78		U		U		U		U		U		U		U		0.2	110	8330	mg/kg
11/17/2010	U		U		0.26		U		U		U		U		U		U		U		U		0.2	110	8330A	mg/Kg

See last page of this report for definitions.

Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	100000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	100000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	100000	SW846 8270C	mg/kg
11/17/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.4	100000	SW846 8270C	mg/kg
Antimony					*CAS #: 7440-36-0*																					
11/24/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	1	J	U	J	6	410	SW846 6010B	mg/kg
1/28/2009	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	10	410	SW846 6010B	mg/kg
12/9/2009	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	10	410	SW846 6010B	mg/kg
3/2/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	7	410	SW846 6010B	mg/kg
11/17/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	7	410	SW846 6010B	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
11/24/2008	U		2.4		1.1		7.3		U		1.4		1.1		2.2		2.6		3.9		8.3		1	15.8	SW846 6010B	mg/kg
1/28/2009	1.7		2.1		1.2		1.5		U		1.7		2.1		2.7		1.9		3.4		3.2		1	15.8	SW846 6010B	mg/kg
12/9/2009	1.7		2.5		1.7		2.5		1.3		2.3		1.7		2		2.9		3.3		2.8		1	15.8	SW846 6010B	mg/kg
3/2/2010	2		1.5		1.5		2.4		1.4		1.4		1.4		2.7		1.8		2.8		2.6		1	15.8	SW846 6010B	mg/kg
11/17/2010	1.1		2.3		1.9		1.4		U		1.2		1.4		2.4		1.3		2.6		2.4		1	15.8	SW846 6010B	mg/kg
Barium					*CAS #: 7440-39-3*																					
11/24/2008	75.4		113		37.1		101		26.8		70.7		74.6		125		120		147		247		20	190000	SW846 6010B	mg/kg
1/28/2009	77.7		54.7		103		52.9		67.1		216		85.7		102		108		113		166		20	190000	SW846 6010B	mg/kg
12/9/2009	104		110		45.2		74.9		74.7		86.4		107		180		132		127		105		20	190000	SW846 6010B	mg/kg
3/2/2010	102		67.4		42.1		92.7		77.7		92.4		79.7		142		131		145		171		20	190000	SW846 6010B	mg/kg
11/17/2010	128		110		55.2		54.6		62.8		85.4		75	J	144		103		119		136		20	190000	SW846 6010B	mg/kg
Benzene					*CAS #: 71-43-2*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	5.6	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		0.0046		U		U		U		U		U		U		0.005	5.6	SW846 8260B	mg/kg
12/9/2009	0.0075		U		U		U		U		U		U		U		U		U		U		0.005	5.6	SW846 8260B	mg/kg
3/2/2010	0.016		U		0.0064		U		U		U		U		U		U		U		U		0.005	5.6	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	5.6	SW846 8260B	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	2.1	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	2.1	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	2.1	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	2.1	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	2.1	SW846 8270C	mg/kg

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Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Benzo(a)pyrene					*CAS #: 50-32-8*																					
11/24/2008	U		U	J	U		U		U	A	U	JA	U		U		U		U		U		0.02	0.21	SW846 8270C	mg/kg
1/28/2009	U	A J	U	A	U		U	A J	U	J	U	A J	U		U		U		0.05		U		0.02	0.21	SW846 8270C	mg/kg
12/9/2009	U		U		U		U	J	U		U	A	U		U		U	J	0.088		U		0.02	0.21	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U	J	U	A	U		U	J	U		0.058		0.051		0.024	0.21	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U	J	U	J	U		U		U		0.089		0.053		0.02	0.21	SW846 8270C	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
11/24/2008	U		U	J	U		U		U	A	U	JA	U		U		U		U		U		0.4	2.1	SW846 8270C	mg/kg
1/28/2009	U	A J	U	A	U		U	A J	U	J	U	A J	U		U		U		U		U		0.33	2.1	SW846 8270C	mg/kg
12/9/2009	U		U		U		U	J	U		U	A	U		U		U	J	U		U		0.33	2.1	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U	J	U	A	U		U	J	U		U		U		0.4	2.1	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U	J	U	J	U		U		U		U		U		0.4	2.1	SW846 8270C	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
11/24/2008	U		U	J	U		U		U	A	U	JA	U		U		U		U		U		0.4	21	SW846 8270C	mg/kg
1/28/2009	U	A J	U	A	U		U	A J	U	J	U	A J	U		U		U		U		U		0.33	21	SW846 8270C	mg/kg
12/9/2009	U		U		U		U	J	U		U	A	U		U		U	J	U		U		0.33	21	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U	J	U	A	U		U	J	U		U		U		0.4	21	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U	J	U	J	U		U		U		U		U		0.4	21	SW846 8270C	mg/kg
Benzoic acid					*CAS #: 65-85-0*																					
11/24/2008	U	J	U	J	U	J	U		U	A J	U	A J	U	J	U	J	U		U		U		2	2500000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		3.3	2500000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		3.3	2500000	SW846 8270C	mg/kg
3/2/2010	U	J	U	J	U	J	U	AJ	U	J	U	AJ	U	J	U	J	U	J	U	J	U	J	1.9	2500000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U	J	U		U		U	J	U	J	2	2500000	SW846 8270C	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
11/24/2008	U	J	U		U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	10	17	SW846 8260B	mg/kg
1/28/2009	U	J	U		U		U		U		U	J	U		U		U		U		U		0.005	17	SW846 8260B	mg/kg
12/9/2009	U		U		U	J	U		U		U		U		U		U		U		U		0.005	17	SW846 8260B	mg/kg
3/2/2010	U	J	U		U	J	U	J	U		U		U		U		U		U		U		0.005	17	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U	J	U		U		U		U		U	J	0.005	17	SW846 8260B	mg/kg
bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	120	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	120	SW846 8270C	mg/kg
12/9/2009	U		U		0.9		U		U		U	A	U		U		U	J	U		U	A	0.33	120	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	120	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		0.43		U		U		0.4	120	SW846 8270C	mg/kg

See last page of this report for definitions.

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Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Bromomethane					*CAS #: 74-83-9*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	35	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		0.0088		U		U		U		U		U		U		0.005	35	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	35	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	35	SW846 8260B	mg/kg
11/17/2010	U	J	0.0067	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	35	SW846 8260B	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	910	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	910	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	910	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	910	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	910	SW846 8270C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
11/24/2008	2.1		0.61		U		U		U		U		U		U		U		U		0.77		0.5	810	SW846 6010B	mg/kg
1/28/2009	0.86		U		U		U		U		U		U		U		U		U		1.1		0.5	810	SW846 6010B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.5	810	SW846 6010B	mg/kg
3/2/2010	1.4		U		U		U		1.1		U		U		U		U		U		U		0.6	810	SW846 6010B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.6	810	SW846 6010B	mg/kg
Carbon tetrachloride					*CAS #: 56-23-5*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	1.3	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1.3	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1.3	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1.3	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1.3	SW846 8260B	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	1500	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1500	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1500	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1500	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1500	SW846 8260B	mg/kg
Chloroform					*CAS #: 67-66-3*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	1.5	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1.5	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1.5	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1.5	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1.5	SW846 8260B	mg/kg

Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Chloromethane					*CAS #: 74-87-3*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	8.4	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		0.0077		U		U		U		U		U		U		0.005	8.4	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	8.4	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	8.4	SW846 8260B	mg/kg
11/17/2010	U	J	U	J	U	J	U	J	0.0065	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	8.4	SW846 8260B	mg/kg
Chromium					*CAS #: 7440-47-3*																					
11/24/2008	18.9		15.6		8.3		15.2		6.6		18.7		11.1		11.8		18.6		25.7		19.5		1	1400	SW846 6010B	mg/kg
1/28/2009	21.3		10.8		15.3		9.8		11.3		14.3		14.6		15.1		17.7		21.3		21.9		1	1400	SW846 6010B	mg/kg
12/9/2009	21.8		17.7		12		15.7		12.3		20.4		13.3		21.3		20.5		23.2		19.4		1	1400	SW846 6010B	mg/kg
3/2/2010	32.5	J	10.5	J	9.4	J	15.7	J	14	J	14.7	J	12.9	J	21	J	19.4	J	25.6	J	30.7	J	1	1400	SW846 6010B	mg/kg
11/17/2010	16.6		14.9		14		11.9		10		25.1		14.1		15		18.7		22.1		24.9		1	1400	SW846 6010B	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
11/24/2008	U		U	J	U		U		U	A	U	JA	U		U		U		U		U		0.02	0.21	SW846 8270C	mg/kg
1/28/2009	U	A J	U	A	U		U	A J	U	J	U	A J	U		U		U		U		U		0.02	0.21	SW846 8270C	mg/kg
12/9/2009	U		U		U		U	J	U		U	A	U		U		U	J	U		U		0.02	0.21	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U	J	U	A	U		U	J	U		U		U		0.024	0.21	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U	J	U	J	U		U		U		U		U		0.02	0.21	SW846 8270C	mg/kg
Dibenzofuran					*CAS #: 132-64-9*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	2000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	2000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	2000	SW846 8270C	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
11/24/2008	U		U		U		0.44		U	A	6		U		U		U		U		U		0.4	490000	SW846 8270C	mg/kg
1/28/2009	1.1	J	U	A	U	J	U	A	1.4	J	2.4	J	0.64	J	U	J	U	J	U	J	U		0.33	490000	SW846 8270C	mg/kg
12/9/2009	U	J	0.6	J	U	J	0.42	J	U	J	2.4	J	0.83	J	U	J	1.4	J	U	J	0.53	J	0.33	490000	SW846 8270C	mg/kg
3/2/2010	U		0.47		U		4.3		0.64		6.2		0.48		U		U		U		U		0.4	490000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		3.7		0.67		U		U		U		U		0.4	490000	SW846 8270C	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
11/24/2008	U		U		U		0.81		U	A	U	A	U		U		U		U		U		0.4	10000000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	10000000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		0.44		U	J	U		U		0.33	10000000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	10000000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	10000000	SW846 8270C	mg/kg

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Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
11/24/2008	U		0.54		U		0.88		U	A	7.6		U		U		0.82		U		U		0.4	62000	SW846 8270C	mg/kg
1/28/2009	2.1		4.6		U		9.5		0.59		4.4		U		U		U		0.81		U		0.33	62000	SW846 8270C	mg/kg
12/9/2009	1.1		0.41		U		0.6		U		3.4		U		U		U	J	U		0.61		0.33	62000	SW846 8270C	mg/kg
3/2/2010	U		U		U		2.1		0.88		3.1		U		U		U		U		U		0.4	62000	SW846 8270C	mg/kg
11/17/2010	1.2		1.6		1		0.55		U		3.5		U		U		U		U		2.1		0.4	62000	SW846 8270C	mg/kg
Di-n-octyl phthalate					*CAS #: 117-84-0*																					
11/24/2008	U		U	J	U		U		U	A	U	JA	U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
1/28/2009	U	A J	U	A	U		U	A J	U	J	U	A J	U		U		U		U		U		0.33	41000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U	J	U		U	A	U		U		U	J	U		U		0.33	41000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U	J	U	A	U		U	J	U		U		U		0.4	41000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	41000	SW846 8270C	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	22000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	22000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	22000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	22000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	22000	SW846 8270C	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.05	120	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	0.005	120	SW846 8270C	mg/kg
12/9/2009	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	AJ	U	A	U	A	0.005	120	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.06	120	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.06	120	SW846 8270C	mg/kg
HMX					*CAS #: 2691-41-0*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.5	49000	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		2.2	49000	SW846 8330	mg/kg
12/9/2009	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	2.2	49000	SW846 8330	mg/kg
3/2/2010	U		U	J	0.34	J	U		U		U	J	U		32	J	U		U		U		0.2	49000	8330	mg/kg
11/17/2010	U		U		U		U	J	U		U		U		U		U		U		U		0.2	49000	8330A	mg/Kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
11/24/2008	U		U	J	U		U		U	A	U	JA	U		U		U		U		U		0.4	2.1	SW846 8270C	mg/kg
1/28/2009	U	A J	U	A	U		U	A J	U	J	U	A J	U		U		U		U		U		0.33	2.1	SW846 8270C	mg/kg
12/9/2009	U		U		U		U	J	U		U	A	U		U		U	J	U		U		0.33	2.1	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U	J	U	A	U		U	J	U		U		U		0.4	2.1	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U	J	U	J	U		U		U		U		U		0.4	2.1	SW846 8270C	mg/kg

See last page of this report for definitions.

Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Lead					*CAS #: 7439-92-1*																					
11/24/2008	359		382		363		346		163		792		221		239		256		93.9		188		0.3	800	SW846 6010B	mg/kg
1/28/2009	631	J	213	J	21.2	J	146	J	596	J	565	J	444	J	255	J	193	J	129	J	185	J	0.3	800	SW846 6010B	mg/kg
12/9/2009	215		387		506		251		362		714		227		149		279		78.1		216		0.3	800	SW846 6010B	mg/kg
3/2/2010	564		215		251		421		686		775		279	J	433		139		74.8		42.5		0.3	800	SW846 6010B	mg/kg
11/17/2010	99.9		265		175		161		449		674		251		303		96.3		75.2		126		0.3	800	SW846 6010B	mg/kg
Mercury					*CAS #: 7439-97-6*																					
11/24/2008	U	J	U	J	U	J	U	J	U	J	0.12	J	U	J	U	J	U		U		U		0.11	28	SW846 7471A	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.1	28	SW846 7471A	mg/kg
12/9/2009	U		U		U		U		U		0.19		U		0.12		U		U		U		0.1	28	SW846 7471A	mg/kg
3/2/2010	U		U		U		U		U		U		U		0.14		U		U		U		0.11	28	SW846 7471A	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.1	28	SW846 7471A	mg/kg
Methylene chloride					*CAS #: 75-09-2*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.005	54	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	54	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	54	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	54	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	54	SW846 8260B	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	20	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	20	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	20	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	20	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	20	SW846 8270C	mg/kg
Nickel					*CAS #: 7440-02-0*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		4	20000	SW846 6010B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		4	20000	SW846 6010B	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.25	280	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	280	SW846 8330	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.25	280	SW846 8330	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.1	280	8330	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.1	280	8330A	mg/Kg

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Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Nitroglycerin					*CAS #: 55-63-0*																					
11/24/2008	U		U		U		5.1		U		30		2.6	J	U		3.9		U		U		2.5	62	SW846 8332	mg/kg
1/28/2009	U		U		U		U		5.7		8		U	J	U		U		U		U		2.5	62	SW846 8332	mg/kg
12/9/2009	U	J	U	J	U	J	6.5	J	U	J	6.7	J	6.9	J	U	J	U	J	U	J	U	J	2.5	62	SW846 8332	mg/kg
3/2/2010	U	J	0.68	J	1.2	J	2.3	J	2.6	J	35	J	4.2	J	2.6	J	0.29	J	U	J	U	J	0.2	62	8332	mg/kg
11/17/2010	1	J	0.63	J	0.5	J	3.1	J	6.9	J	1.6	J	0.45	J	0.27	J	U	J	U	J	3.3	J	0.2	62	8332	mg/Kg
N-Nitrosodiphenylamine					*CAS #: 86-30-6*																					
11/24/2008	U		U		U		0.61		U	A	U	A	U		U		U		U		U		0.4	15000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		1.6	15000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		1.6	15000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	0.72		U	A	U		U		U		U		U		0.4	15000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	15000	SW846 8270C	mg/kg
Phenol					*CAS #: 108-95-2*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	180000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	180000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	180000	SW846 8270C	mg/kg
3/2/2010	U		U		U		U	A	U		U	A	U		U		U		U		U		0.4	180000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	180000	SW846 8270C	mg/kg
Pyrene					*CAS #: 129-00-0*																					
11/24/2008	U		U		U		U		U	A	U	A	U		U		U		U		U		0.4	17000	SW846 8270C	mg/kg
1/28/2009	U	A	U	A	U		U	A	U		U	A	U		U		U		U		U		0.33	17000	SW846 8270C	mg/kg
12/9/2009	U		U		U		U		U		U	A	U		U		U	J	U		U		0.33	17000	SW846 8270C	mg/kg
3/2/2010	U		U		U		-		U		U	A	U		U		U		U		U		0.4	17000	SW846 8270C	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.4	17000	SW846 8270C	mg/kg
RDX					*CAS #: 121-82-4*																					
11/24/2008	U		U		U		0.53		U		U		U		U		U		U		U		0.5	24	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		1	24	SW846 8330	mg/kg
12/9/2009	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	1	24	SW846 8330	mg/kg
3/2/2010	U	J	U		U	J	1.1	J	U		U	J	U		U		U		U		U		0.2	24	8330	mg/kg
11/17/2010	U		U		U	J	U		U		U		U		U		U		U		U		0.2	24	8330A	mg/Kg
Selenium					*CAS #: 7782-49-2*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		0.69		0.6	5100	SW846 6010B	mg/kg
1/28/2009	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	0.5	5100	SW846 6010B	mg/kg
12/9/2009	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	U	A	0.5	5100	SW846 6010B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.6	5100	SW846 6010B	mg/kg
11/17/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.6	5100	SW846 6010B	mg/kg

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Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	QL/RL	Action Limit	Method	Unit
Silver					*CAS #: 7440-22-4*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	2.7	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	2.7	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	2.7	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	2.7	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	2.7	SW846 8260B	mg/kg
Tetryl					*CAS #: 479-45-8*																					
11/24/2008	U		U		U		U		U		U		U		U		U		U		U		0.65	2500	SW846 8330	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.65	2500	SW846 8330	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.65	2500	SW846 8330	mg/kg
3/2/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.25	2500	8330	mg/kg
11/17/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.25	2500	8330A	mg/Kg
Toluene					*CAS #: 108-88-3*																					
11/24/2008	U		0.011		U		U		U		U	J	U		U		U		U		U		0.005	46000	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	46000	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	46000	SW846 8260B	mg/kg
3/2/2010	0.016		U		U		U		U		U		U		U		U		U		U		0.005	46000	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	46000	SW846 8260B	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
11/24/2008	17		-		-		46		-		-		28		-		-		-		-		11	11000	SW846 8015B	mg/kg
1/28/2009	72		-		-		59		-		-		37		-		-		-		-		10	11000	SW846 8015B	mg/kg
12/9/2009	14	J	-		-		64	J	-		-		18	J	-		-		-		-		10	11000	SW846 8015B	mg/kg
3/2/2010	31	J	-		-		64	J	-		-		22	J	-		-		-		-		12	11000	SW846 8015B	mg/kg
11/17/2010	31		-		-		560		-		-		23		-		-		-		-		11	11000	SW846 8015B	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	14	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	14	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	14	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	14	SW846 8260B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	14	SW846 8260B	mg/kg

See last page of this report for definitions.

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Table 3A - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*PAD-1*	*Q*	*PAD-2*	*Q*	*PAD-3*	*Q*	*PAD-4*	*Q*	*PAD-5*	*Q*	*PAD-6*	*Q*	*PAD-7*	*Q*	*PAD-8*	*Q*	*POND-1*	*Q*	*SB-1*	*Q*	*SB-2*	*Q*	*QL/RL*	*Action Limit*	*Method*	*Unit*
Vinyl chloride					*CAS #: 75-01-4*																					
11/24/2008	U		U		U		U		U		U	J	U		U		U		U		U		0.005	1.7	SW846 8260B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1.7	SW846 8260B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		0.005	1.7	SW846 8260B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		0.005	1.7	SW846 8260B	mg/kg
11/17/2010	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	1.7	SW846 8260B	mg/kg
Zinc					*CAS #: 7440-66-6*																					
11/24/2008	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U		U		U		2500	310000	SW846 6010B	mg/kg
1/28/2009	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg
12/9/2009	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg
3/2/2010	U		U		U		U		U		U		U		U		U		U		U		2	310000	SW846 6010B	mg/kg
11/17/2010	U		U		U		U		U		U		U		U		U		U		U		2	310000	SW846 6010B	mg/kg

Definitions: QL Denotes laboratory limit of quantitation. **RL** Denotes permit reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above QL/RL.
UA Denotes analyte not detected at or above adjusted sample QL/RL. **J** Denotes analyte reported at or above QL/RL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not **detected** at or above QL/RL and QL/RL is estimated**.** When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL/RL and adjusted QL/RL is estimated.
R Denotes result rejected. (-) Denotes not sampled. **Action limit** obtained from permit modification approved December 18, 2008.

NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
QL at or below the permit RL and action limit unless noted (see data validation report). In these cases, the result is evaluated to the method detection limit (MDL/DL). MDL is less than the RL and action limit unless noted.

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	1100	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1100	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1100	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1100	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1100	SW846 8260B	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	2.2	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	2.2	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	2.2	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	2.2	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	2.2	SW846 8260B	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	27000	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	27000	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.25	27000	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.1	27000	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.1	27000	8330A	mg/Kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	62	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	62	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	62	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.1	62	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.1	62	8330A	mg/Kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		1.2		0.25	79	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		0.26		0.25	79	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		0.48	J	U	J	4.9	J	0.25	79	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		0.15	J	U	J	0.32	J	0.1	79	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		0.38		0.1	79	8330A	mg/Kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	1800	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	1800	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	1800	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	1800	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	1800	SW846 8270C	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		0.33		0.25	1200	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	1200	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		0.37	J	0.62		0.25	1200	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		0.13	J	U		U	J	0.1	1200	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		1.2		U		21		0.1	1200	8330A	mg/Kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	620	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	620	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.25	620	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	620	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		1.8	J	0.2	620	8330A	mg/Kg
2-Amino-4,6-dinitrotoluene					*CAS #: 35572-78-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	2000	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.2	2000	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	2000	8330A	mg/Kg
2-Chlorophenol					*CAS #: 95-57-8*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	5100	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	5100	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	5100	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	5100	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	5100	SW846 8270C	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	13	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	13	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	13	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	13	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	13	8330A	mg/Kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		2	0.16	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	1.6	0.16	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		1.6	0.16	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U	J	U	A J	U	J	1.9	0.16	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U		2	0.16	SW846 8270C	mg/kg

See last page of this report for definitions.

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
3-Methylphenol					*CAS #: 108-39-4*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	31000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	31000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	31000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	31000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	31000	SW846 8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	12000	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	12000	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	12000	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	12000	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	12000	8330A	mg/Kg
4-Amino-2,6-dinitrotoluene					*CAS #: 19406-51-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	1900	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	1900	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.25	1900	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.2	1900	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	1900	8330A	mg/Kg
4-Methylphenol					*CAS #: 106-44-5*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	3100	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	3100	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	3100	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	3100	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	3100	SW846 8270C	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		2	7	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	1.6	7	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		1.6	7	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		1.9	7	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	2	7	SW846 8270C	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	110	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	110	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	110	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	110	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	110	8330A	mg/Kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	100000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	100000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	100000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	100000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.4	100000	SW846 8270C	mg/kg
Antimony					*CAS #: 7440-36-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	J	6	410	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	J	U	J	U	J	10	410	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U	J	10	410	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	7	410	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	7	410	SW846 6010B	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
11/24/2008	-		-		-		-		-		-		-		-		2.3		1.5		1.9		1	15.8	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		2.3		1.2		1.2		1	15.8	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		1.8		1.5		1.8		1	15.8	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		1.8		1.5		U		1	15.8	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		2		1.3		1.7		1	15.8	SW846 6010B	mg/kg
Barium					*CAS #: 7440-39-3*																					
11/24/2008	-		-		-		-		-		-		-		-		135		99.6		98.2		20	190000	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		150		95.5		85.8		20	190000	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		113		84.5		87.3		20	190000	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		140		95.2		100		20	190000	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		122		93		94.4		20	190000	SW846 6010B	mg/kg
Benzene					*CAS #: 71-43-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	5.6	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	5.6	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	5.6	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	5.6	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	5.6	SW846 8260B	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	2.1	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	2.1	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	2.1	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	2.1	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	2.1	SW846 8270C	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Benzo(a)pyrene					*CAS #: 50-32-8*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U	J	U		0.02	0.21	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	J	U	A J	U	A	0.02	0.21	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U		0.02	0.21	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.024	0.21	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.02	0.21	SW846 8270C	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U	J	U		0.4	2.1	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	J	U	A J	U	A	0.33	2.1	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U		0.33	2.1	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	2.1	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	2.1	SW846 8270C	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U	J	U		0.4	21	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	J	U	A J	U	A	0.33	21	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U		0.33	21	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	21	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	21	SW846 8270C	mg/kg
Benzoic acid					*CAS #: 65-85-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		2	2500000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	3.3	2500000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		3.3	2500000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U	J	U	AJ	U	J	1.9	2500000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U		2	2500000	SW846 8270C	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
11/24/2008	-		-		-		-		-		-		-		-		U	J	U	J	U	A J	10	17	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	17	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	17	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	17	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	17	SW846 8260B	mg/kg
bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	120	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	120	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		0.96		U		U		0.33	120	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		0.48		1.7		U		0.4	120	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		0.61		0.99		U		0.4	120	SW846 8270C	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Bromomethane					*CAS #: 74-83-9*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	35	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		0.0089		U		0.005	35	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		0.0073		U		U		0.005	35	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	35	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	35	SW846 8260B	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	910	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	910	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	910	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	910	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	910	SW846 8270C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.5	810	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.5	810	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.5	810	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.6	810	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.6	810	SW846 6010B	mg/kg
Carbon tetrachloride					*CAS #: 56-23-5*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	1.3	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1.3	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1.3	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1.3	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1.3	SW846 8260B	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	1500	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1500	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1500	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1500	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1500	SW846 8260B	mg/kg
Chloroform					*CAS #: 67-66-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	1.5	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1.5	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1.5	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1.5	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1.5	SW846 8260B	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Chloromethane					*CAS #: 74-87-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	8.4	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	8.4	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	8.4	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	8.4	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	8.4	SW846 8260B	mg/kg
Chromium					*CAS #: 7440-47-3*																					
11/24/2008	-		-		-		-		-		-		-		-		18.2		12.7		15.9		1	1400	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		18.8		10.3		14.4		1	1400	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		15.2		13.3		19.1		1	1400	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		17	J	11.5	J	13.3	J	1	1400	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		18		12.5		26.1		1	1400	SW846 6010B	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U	J	U		0.02	0.21	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	J	U	A J	U	A	0.02	0.21	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U		0.02	0.21	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.024	0.21	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.02	0.21	SW846 8270C	mg/kg
Dibenzofuran					*CAS #: 132-64-9*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	2000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	2000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	2000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	2000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	2000	SW846 8270C	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
11/24/2008	-		-		-		-		-		-		-		-		2		0.69		0.73		0.4	490000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		1.1	J	2.8	J	U	A	0.33	490000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		2.0	J	0.43	J	U	J	0.33	490000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		1.1		U	A	U		0.4	490000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		0.82		1.4		1.8		0.4	490000	SW846 8270C	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	0.39		U		0.4	10000000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	10000000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		2.1		U		U		0.33	10000000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		1		U		0.4	10000000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	10000000	SW846 8270C	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
11/24/2008	-		-		-		-		-		-		-		-		0.91		U		0.83		0.4	62000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		1.2		1.9		0.33	62000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		0.85		U		U		0.33	62000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		0.48		U	A	U		0.4	62000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		0.69		2.3		1.7		0.4	62000	SW846 8270C	mg/kg
Di-n-octyl phthalate					*CAS #: 117-84-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U	J	U		0.4	41000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	J	U	A J	U	A	0.33	41000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U		0.33	41000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	41000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	41000	SW846 8270C	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	22000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	22000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	22000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	22000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	22000	SW846 8270C	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.05	120	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	A	U	A	U	A	0.005	120	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	A	U	A	U	A	0.005	120	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.06	120	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.06	120	SW846 8270C	mg/kg
HMX					*CAS #: 2691-41-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.5	49000	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		2.2	49000	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U	J	2.2	49000	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		2.3	J	U	J	0.2	49000	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	49000	8330A	mg/Kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U	J	U		0.4	2.1	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	J	U	A J	U	A	0.33	2.1	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U		0.33	2.1	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	2.1	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	2.1	SW846 8270C	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Lead					*CAS #: 7439-92-1*																					
11/24/2008	-		-		-		-		-		-		-		-		251		203		131		0.3	800	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		236	J	340	J	82.5	J	0.3	800	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		291		140		55.7		0.3	800	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		198		168		81.5		0.3	800	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		167		184		310		0.3	800	SW846 6010B	mg/kg
Mercury					*CAS #: 7439-97-6*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.11	28	SW846 7471A	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.1	28	SW846 7471A	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.1	28	SW846 7471A	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.11	28	SW846 7471A	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.1	28	SW846 7471A	mg/kg
Methylene chloride					*CAS #: 75-09-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	54	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	54	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	54	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	54	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	54	SW846 8260B	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	20	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	20	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	20	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	20	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	20	SW846 8270C	mg/kg
Nickel					*CAS #: 7440-02-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		4	20000	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		4	20000	SW846 6010B	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.25	280	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	280	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.25	280	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.1	280	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.1	280	8330A	mg/Kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Nitroglycerin					*CAS #: 55-63-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		2.5	62	SW846 8332	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		6.4		U		U		2.5	62	SW846 8332	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		12	J	5.6	J	U	J	2.5	62	SW846 8332	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		2.4	J	2.1	J	0.64	J	0.2	62	8332	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		1.3	J	0.79	J	15	J	0.2	62	8332	mg/Kg
N-Nitrosodiphenylamine					*CAS #: 86-30-6*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	15000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		0.9		U	A	1.6	15000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		1.6	15000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	15000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		0.75		0.4	15000	SW846 8270C	mg/kg
Phenol					*CAS #: 108-95-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	180000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	180000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	180000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	180000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	180000	SW846 8270C	mg/kg
Pyrene					*CAS #: 129-00-0*																					
11/24/2008	-		-		-		-		-		-		-		-		U	A	U		U		0.4	17000	SW846 8270C	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U	A	U	A	0.33	17000	SW846 8270C	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.33	17000	SW846 8270C	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U	A	U		0.4	17000	SW846 8270C	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.4	17000	SW846 8270C	mg/kg
RDX					*CAS #: 121-82-4*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.5	24	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		1	24	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	J	U	J	U	J	1	24	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	24	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.2	24	8330A	mg/Kg
Selenium					*CAS #: 7782-49-2*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.6	5100	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U	A	U		U	A	0.5	5100	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U	A	U	A	U	A	0.5	5100	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.6	5100	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.6	5100	SW846 6010B	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	QL/RL	Action Limit	Method	Unit
Silver					*CAS #: 7440-22-4*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	2.7	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	2.7	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	2.7	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	2.7	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	2.7	SW846 8260B	mg/kg
Tetryl					*CAS #: 479-45-8*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		0.65	2500	SW846 8330	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.65	2500	SW846 8330	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.65	2500	SW846 8330	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.25	2500	8330	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.25	2500	8330A	mg/Kg
Toluene					*CAS #: 108-88-3*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	46000	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	46000	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	46000	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	46000	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	46000	SW846 8260B	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
11/24/2008	-		-		-		-		-		-		-		-		-		-		-		11	11000	SW846 8015B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		-		-		-		10	11000	SW846 8015B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		-		-		-		10	11000	SW846 8015B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		-		-		-		12	11000	SW846 8015B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		-		-		-		11	11000	SW846 8015B	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	14	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	14	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	14	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	14	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	14	SW846 8260B	mg/kg

Table 3B - Summary of Analytical Results for Soil Samples Above the Permit Reporting Limit
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*BG-1A*	*Q*	*BG-1B*	*Q*	*BG-1C*	*Q*	*BG-1D*	*Q*	*BG-2A*	*Q*	*BG-2B*	*Q*	*BG-2C*	*Q*	*BG-2D*	*Q*	*NB-1*	*Q*	*NB-2*	*Q*	*BERM-1*	*Q*	*QL/RL*	*Action Limit*	*Method*	*Unit*
Vinyl chloride					*CAS #: 75-01-4*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U	A	0.005	1.7	SW846 8260B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1.7	SW846 8260B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		0.005	1.7	SW846 8260B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		0.005	1.7	SW846 8260B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	1.7	SW846 8260B	mg/kg
Zinc					*CAS #: 7440-66-6*																					
11/24/2008	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg
1/28/2009	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg
12/9/2009	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg
3/2/2010	-		-		-		-		-		-		-		-		U		U		U		2	310000	SW846 6010B	mg/kg
11/17/2010	-		-		-		-		-		-		-		-		U		U		U		2	310000	SW846 6010B	mg/kg

Definitions: QL Denotes limit of quantitation. **RL** Denotes reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above QL/RL. **UA** Denotes analyte not detected at or above adjusted sample QL/RL. **J** Denotes analyte reported at or above QL/RL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not **detected** at or above QL/RL and QL/RL is estimated**.** When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL/RL and adjusted QL/RL is estimated. **R** Denotes result rejected. (-) Denotes not sampled. Action limit and RL obtained from permit modification approved December 18, 2008.

NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
QL at or below the permit RL and action limit unless noted (see data validation report). In these cases, the result is evaluated to the method detection limit (MDL/DL). MDL is less than the RL and action limit unless noted.

Table 2A - Summary of Analytical Results Above RL
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					CAS #: 75-35-4																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	1100	SW846 8260B	mg/kg
1,2-Dichloroethane					CAS #: 107-06-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	2.2	SW846 8260B	mg/kg
1,3,5-Trinitrobenzene					CAS #: 99-35-4																					
1/31/2011	U		U		0.5		U		U		U		U		U		U		U		U		0.25	27000	SW-846 8330A	mg/Kg
1,3-Dinitrobenzene					CAS #: 99-65-0																					
1/31/2011	U		U		U		U	J	U		U	J	U		U		U		U		U		0.25	62	SW-846 8330A	mg/Kg
2,4,6-Trinitrotoluene					CAS #: 118-96-7																					
1/31/2011	0.37		0.71	J	0.77		0.51		U		3.9		U		0.34		U		U		U		0.25	79	SW-846 8330A	mg/Kg
2,4-Dichlorophenol					CAS #: 120-83-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	1800	SW846 8270C	mg/kg
2,4-Dinitrotoluene					CAS #: 121-14-2																					
1/31/2011	0.28	J	U		U		U		U		1.0	J	U		U		U		U		U		0.25	1200	SW-846 8330A	mg/Kg
2,6-Dinitrotoluene					CAS #: 606-20-2																					
1/31/2011	U		U		U		U		U		0.31		U		U		U		U		U		0.25	620	SW-846 8330A	mg/Kg
2-Amino-4,6-dinitrotoluene					CAS #: 35572-78-2																					
1/31/2011	U		U		0.37		U		U		0.62		U		U		U		U		U		0.25	2000	SW-846 8330A	mg/Kg
2-Chlorophenol					CAS #: 95-57-8																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	5100	SW846 8270C	mg/kg
2-Nitrotoluene					CAS #: 88-72-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.25	13	SW-846 8330A	mg/Kg
3,3'-Dimethylbenzidine					CAS #: 119-93-7																					
1/31/2011	U	A	U		U		U		U		U	A	U		U		U		U		U		1.6	0.16	SW846 8270C	mg/kg
3-Methylphenol					CAS #: 108-39-4																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	31000	SW846 8270C	mg/kg
3-Nitrotoluene					CAS #: 99-08-1																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.25	12000	SW-846 8330A	mg/Kg
4-Amino-2,6-dinitrotoluene					CAS #: 19406-51-0																					
1/31/2011	U		U		0.27		U		U		0.72		U		U		U		U		U		0.25	1900	SW-846 8330A	mg/Kg
4-Methylphenol					CAS #: 106-44-5																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	3100	SW846 8270C	mg/kg
4-Nitrophenol					CAS #: 100-02-7																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		1.6	7	SW846 8270C	mg/kg
4-Nitrotoluene					CAS #: 99-99-0																					
1/31/2011	U		U		U		U		U		0.41		U		U		U		U		U		0.25	110	SW-846 8330A	mg/Kg

See last page of this report for definitions.

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Table 2A - Summary of Analytical Results Above RL
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Acetophenone					CAS #: 98-86-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	100000	SW846 8270C	mg/kg
Antimony					CAS #: 7440-36-0																					
1/31/2011	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	10	410	SW846 6010B	mg/kg
Arsenic					CAS #: 7440-38-2																					
1/31/2011	2.4		1.3		1.8		2.6		1.2		1.5		1.5		2.1		1.8		U		3		1	15.8	SW846 6010B	mg/kg
Barium					CAS #: 7440-39-3																					
1/31/2011	119		70		78.4		62.2		84.6		82.9		92.6		138		108		89.7		160		20	190000	SW846 6010B	mg/kg
Benzene					CAS #: 71-43-2																					
1/31/2011	0.0069		U		U		U		U		U		U		U		U		U		U		0.005	5.6	SW846 8260B	mg/kg
Benzo(a)anthracene					CAS #: 56-55-3																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	2.1	SW846 8270C	mg/kg
Benzo(a)pyrene					CAS #: 50-32-8																					
1/31/2011	U		U		U		U		U		U		U		U	J	U		U		0.056		0.02	0.21	SW846 8270C	mg/kg
Benzo(b)fluoranthene					CAS #: 205-99-2																					
1/31/2011	U		U		U		U		U		U		U		U	J	U		U		U		0.33	2.1	SW846 8270C	mg/kg
Benzo(k)fluoranthene					CAS #: 207-08-9																					
1/31/2011	U		U		U		U		U		U		U		U	J	U		U		U		0.33	21	SW846 8270C	mg/kg
Benzoic acid					CAS #: 65-85-0																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		3.3	2500000	SW846 8270C	mg/kg
Benzyl chloride					CAS #: 100-44-7																					
1/31/2011	U	J	U		U		U		U		U		U		U		U		U		U	J	0.005	17	SW846 8260B	mg/kg
bis(2-Ethylhexyl) phthalate					CAS #: 117-81-7																					
1/31/2011	U	J	U	J	U	J	2.3	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.33	120	SW846 8270C	mg/kg
Bromomethane					CAS #: 74-83-9																					
1/31/2011	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	35	SW846 8260B	mg/kg
Butyl benzyl phthalate					CAS #: 85-68-7																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	910	SW846 8270C	mg/kg
Cadmium					CAS #: 7440-43-9																					
1/31/2011	1.1	J	U	J	0.68	J	1.7	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.5	810	SW846 6010B	mg/kg
Carbon tetrachloride					CAS #: 56-23-5																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	1.3	SW846 8260B	mg/kg
Chlorobenzene					CAS #: 108-90-7																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	1500	SW846 8260B	mg/kg
Chloroform					CAS #: 67-66-3																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	1.5	SW846 8260B	mg/kg

See last page of this report for definitions.

Table 2A - Summary of Analytical Results Above RL
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Chloromethane					CAS #: 74-87-3																					
1/31/2011	0.007	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	0.005	8.4	SW846 8260B	mg/kg
Chromium					CAS #: 7440-47-3																					
1/31/2011	82.1	J	11.9	J	16.6	J	21	J	11.4	J	19.7	J	13.8	J	15.9	J	17	J	14.7	J	28	J	1	1400	SW846 6010B	mg/kg
Dibenz(a,h)anthracene					CAS #: 53-70-3																					
1/31/2011	U		U		U		U		U		U		U		U	J	U		U		U		0.02	0.21	SW846 8270C	mg/kg
Dibenzofuran					CAS #: 132-64-9																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	2000	SW846 8270C	mg/kg
Diethyl phthalate					CAS #: 84-66-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		0.54		U		0.33	490000	SW846 8270C	mg/kg
Dimethyl phthalate					CAS #: 131-11-3																					
1/31/2011	U		U		U		U		U		U		U		2.3		U		U		U		0.33	10000000	SW846 8270C	mg/kg
Di-n-butyl phthalate					CAS #: 84-74-2																					
1/31/2011	21		U		2.3		U		U		U		U		U		0.4		U		U		0.33	62000	SW846 8270C	mg/kg
Di-n-octyl phthalate					CAS #: 117-84-0																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	41000	SW846 8270C	mg/kg
Fluoranthene					CAS #: 206-44-0																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	22000	SW846 8270C	mg/kg
Hexachloroethane					CAS #: 67-72-1																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	120	SW846 8270C	mg/kg
HMX					CAS #: 2691-41-0																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		2.2	49000	SW-846 8330A	mg/Kg
Indeno(1,2,3-cd)pyrene					CAS #: 193-39-5																					
1/31/2011	U		U		U		U		U		U		U		U	J	U		U		U		0.33	2.1	SW846 8270C	mg/kg
Lead					CAS #: 7439-92-1																					
1/31/2011	196		436		526		189		61.1		708		286		226		110		51.4		68		0.3	800	SW846 6010B	mg/kg
Mercury					CAS #: 7439-97-6																					
1/31/2011	U		U		U		U		U		0.15		0.14		U		U		U		U		0.1	28	SW846 7471A	mg/kg
Methylene chloride					CAS #: 75-09-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	54	SW846 8260B	mg/kg
Naphthalene					CAS #: 91-20-3																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	20	SW846 8270C	mg/kg
Nickel					CAS #: 7440-02-0																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		330	20000	SW846 6010B	mg/kg
Nitrobenzene					CAS #: 98-95-3																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.25	280	SW-846 8330A	mg/Kg

See last page of this report for definitions.

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Table 2A - Summary of Analytical Results Above RL
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Nitroglycerin					CAS #: 55-63-0																					
1/31/2011	U	J	5.1	J	U	J	3.8	J	U	J	35	J	U	J	U	J	U	J	U	J	U	J	2.5	62	SW-846 8332	mg/Kg
N-Nitrosodiphenylamine					CAS #: 86-30-6																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		1.6	15000	SW846 8270C	mg/kg
Phenol					CAS #: 108-95-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	180000	SW846 8270C	mg/kg
Pyrene					CAS #: 129-00-0																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.33	17000	SW846 8270C	mg/kg
RDX					CAS #: 121-82-4																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		1	24	SW-846 8330A	mg/Kg
Selenium					CAS #: 7782-49-2																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.5	5100	SW846 6010B	mg/kg
Silver					CAS #: 7440-22-4																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		1	5100	SW846 6010B	mg/kg
Tetrachloroethene					CAS #: 127-18-4																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	2.7	SW846 8260B	mg/kg
Tetryl					CAS #: 479-45-8																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.65	2500	SW-846 8330A	mg/Kg
Toluene					CAS #: 108-88-3																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	46000	SW846 8260B	mg/kg
TPH (as Diesel)					CAS #: Q797																					
1/31/2011	34		-		-		23		-		-		18	J	-		-		-		-		10	11000	SW846 8015B	mg/kg
Trichloroethene					CAS #: 79-01-6																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	14	SW846 8260B	mg/kg
Vinyl chloride					CAS #: 75-01-4																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		0.005	1.7	SW846 8260B	mg/kg
Zinc					CAS #: 7440-66-6																					
1/31/2011	U		U		U		U		U		U		U		U		U		U		U		2500	310000	SW846 6010B	mg/kg

Definitions: RL Denotes permit reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above RL. AL Denotes permit Action limit.
J Denotes analyte reported at or above RL and associated result is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the RL and estimated due to data validation.
A Denotes sample required dilution and laboratory QL and laboratory detection limit adjusted accordingly. Lab QL and laboratory detection limit above permit Action limit.
R Denotes result rejected. (-) Denotes not sampled. **Action limit and RL** obtained from permit modification – Table 1 Attachment II.C-24, updated December 18, 2008, Class 1 permit modification.

NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
Laboratory QL at or below the permit RL and action limit unless noted (see data validation report). In these cases, the result is evaluated to the method detection limit (MDL/DL). MDL is less than the RL and action limit unless noted.

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	1100	SW846 8260B	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	2.2	SW846 8260B	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.25	27000	SW-846 8330A	mg/Kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.25	62	SW-846 8330A	mg/Kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
1/31/2011	-		-		-		-		-		-		-		-		U		5.7		3.7		0.25	79	SW-846 8330A	mg/Kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	1800	SW846 8270C	mg/kg
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
1/31/2011	-		-		-		-		-		-		-		-		0.29	J	U		U		0.25	1200	SW-846 8330A	mg/Kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.25	620	SW-846 8330A	mg/Kg
2-Amino-4,6-dinitrotoluene					*CAS #: 35572-78-2*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		0.49		0.25	2000	SW-846 8330A	mg/Kg
2-Chlorophenol					*CAS #: 95-57-8*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	5100	SW846 8270C	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.25	13	SW-846 8330A	mg/Kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		1.6	0.16	SW846 8270C	mg/kg
3-Methylphenol					*CAS #: 108-39-4*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	31000	SW846 8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.25	12000	SW-846 8330A	mg/Kg
4-Amino-2,6-dinitrotoluene					*CAS #: 19406-51-0*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		0.59		0.25	1900	SW-846 8330A	mg/Kg
4-Methylphenol					*CAS #: 106-44-5*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	3100	SW846 8270C	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		1.6	7	SW846 8270C	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.25	110	SW-846 8330A	mg/Kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Acetophenone					CAS #: 98-86-2																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	100000	SW846 8270C	mg/kg
Antimony					CAS #: 7440-36-0																					
1/31/2011	-		-		-		-		-		-		-		-		U	J	U	J	U	J	10	410	SW846 6010B	mg/kg
Arsenic					CAS #: 7440-38-2																					
1/31/2011	-		-		-		-		-		-		-		-		2.2		U		1.3		1	15.8	SW846 6010B	mg/kg
Barium					CAS #: 7440-39-3																					
1/31/2011	-		-		-		-		-		-		-		-		151		97.7		75.4		20	190000	SW846 6010B	mg/kg
Benzene					CAS #: 71-43-2																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	5.6	SW846 8260B	mg/kg
Benzo(a)anthracene					CAS #: 56-55-3																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	2.1	SW846 8270C	mg/kg
Benzo(a)pyrene					CAS #: 50-32-8																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.02	0.21	SW846 8270C	mg/kg
Benzo(b)fluoranthene					CAS #: 205-99-2																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	2.1	SW846 8270C	mg/kg
Benzo(k)fluoranthene					CAS #: 207-08-9																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	21	SW846 8270C	mg/kg
Benzoic acid					CAS #: 65-85-0																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		3.3	2500000	SW846 8270C	mg/kg
Benzyl chloride					CAS #: 100-44-7																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	17	SW846 8260B	mg/kg
bis(2-Ethylhexyl) phthalate					CAS #: 117-81-7																					
1/31/2011	-		-		-		-		-		-		-		-		0.98	J	U	J	U	J	0.33	120	SW846 8270C	mg/kg
Bromomethane					CAS #: 74-83-9																					
1/31/2011	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	35	SW846 8260B	mg/kg
Butyl benzyl phthalate					CAS #: 85-68-7																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	910	SW846 8270C	mg/kg
Cadmium					CAS #: 7440-43-9																					
1/31/2011	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.5	810	SW846 6010B	mg/kg
Carbon tetrachloride					CAS #: 56-23-5																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	1.3	SW846 8260B	mg/kg
Chlorobenzene					CAS #: 108-90-7																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	1500	SW846 8260B	mg/kg
Chloroform					CAS #: 67-66-3																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	1.5	SW846 8260B	mg/kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Chloromethane					CAS #: 74-87-3																					
1/31/2011	-		-		-		-		-		-		-		-		U	J	U	J	U	J	0.005	8.4	SW846 8260B	mg/kg
Chromium					CAS #: 7440-47-3																					
1/31/2011	-		-		-		-		-		-		-		-		17.9	J	15	J	12.7	J	1	1400	SW846 6010B	mg/kg
Dibenz(a,h)anthracene					CAS #: 53-70-3																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.02	0.21	SW846 8270C	mg/kg
Dibenzofuran					CAS #: 132-64-9																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	2000	SW846 8270C	mg/kg
Diethyl phthalate					CAS #: 84-66-2																					
1/31/2011	-		-		-		-		-		-		-		-		0.64		U		U		0.33	490000	SW846 8270C	mg/kg
Dimethyl phthalate					CAS #: 131-11-3																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	10000000	SW846 8270C	mg/kg
Di-n-butyl phthalate					CAS #: 84-74-2																					
1/31/2011	-		-		-		-		-		-		-		-		0.58		U		1.5		0.33	62000	SW846 8270C	mg/kg
Di-n-octyl phthalate					CAS #: 117-84-0																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	41000	SW846 8270C	mg/kg
Fluoranthene					CAS #: 206-44-0																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	22000	SW846 8270C	mg/kg
Hexachloroethane					CAS #: 67-72-1																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	120	SW846 8270C	mg/kg
HMX					CAS #: 2691-41-0																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		2.2	49000	SW-846 8330A	mg/Kg
Indeno(1,2,3-cd)pyrene					CAS #: 193-39-5																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	2.1	SW846 8270C	mg/kg
Lead					CAS #: 7439-92-1																					
1/31/2011	-		-		-		-		-		-		-		-		219		45.8		85.6		0.3	800	SW846 6010B	mg/kg
Mercury					CAS #: 7439-97-6																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.1	28	SW846 7471A	mg/kg
Methylene chloride					CAS #: 75-09-2																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	54	SW846 8260B	mg/kg
Naphthalene					CAS #: 91-20-3																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	20	SW846 8270C	mg/kg
Nickel					CAS #: 7440-02-0																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		330	20000	SW846 6010B	mg/kg
Nitrobenzene					CAS #: 98-95-3																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.25	280	SW-846 8330A	mg/Kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Nitroglycerin					CAS #: 55-63-0																					
1/31/2011	-		-		-		-		-		-		-		-		U	J	U	J	U	J	2.5	62	SW-846 8332	mg/Kg
N-Nitrosodiphenylamine					CAS #: 86-30-6																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		1.6	15000	SW846 8270C	mg/kg
Phenol					CAS #: 108-95-2																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	180000	SW846 8270C	mg/kg
Pyrene					CAS #: 129-00-0																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.33	17000	SW846 8270C	mg/kg
RDX					CAS #: 121-82-4																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		1	24	SW-846 8330A	mg/Kg
Selenium					CAS #: 7782-49-2																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.5	5100	SW846 6010B	mg/kg
Silver					CAS #: 7440-22-4																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		1	5100	SW846 6010B	mg/kg
Tetrachloroethene					CAS #: 127-18-4																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	2.7	SW846 8260B	mg/kg
Tetryl					CAS #: 479-45-8																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.65	2500	SW-846 8330A	mg/Kg
Toluene					CAS #: 108-88-3																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	46000	SW846 8260B	mg/kg
TPH (as Diesel)					CAS #: Q797																					
1/31/2011	-		-		-		-		-		-		-		-		-		-		-		10	11000	SW846 8015B	mg/kg
Trichloroethene					CAS #: 79-01-6																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	14	SW846 8260B	mg/kg
Vinyl chloride					CAS #: 75-01-4																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		0.005	1.7	SW846 8260B	mg/kg
Zinc					CAS #: 7440-66-6																					
1/31/2011	-		-		-		-		-		-		-		-		U		U		U		2500	310000	SW846 6010B	mg/kg

Definitions: RL Denotes permit reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above RL. AL Denotes permit Action limit.
J Denotes analyte reported at or above RL and associated result is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the RL and estimated due to data validation.
A Denotes sample required dilution and laboratory QL and laboratory detection limit adjusted accordingly. Lab QL and laboratory detection limit above permit Action limit.
R Denotes result rejected. (-) Denotes not sampled. **Action limit and RL** obtained from permit modification – Table 1 Attachment II.C-24, updated December 18, 2008, Class 1 permit modification.

NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
Laboratory QL at or below the permit RL and action limit unless noted (see data validation report). In these cases, the result is evaluated to the method detection limit (MDL/DL). MDL is less than the RL and action limit unless noted.

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	1100	8260B	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	2.2	8260B	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.25	27000	8330A	mg/Kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
4/5/2012	U		U		U		0.16	J	U		U		U		U		-		-		-		0.25	62	8330A	mg/Kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
4/5/2012	0.075	J	0.15	J	0.84	J	0.63	J	0.06	J	0.051	J	1.4	J	0.23	J	0.22	J	U	J	U	J	0.25	79	8330A	mg/Kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.33	1800	8270C	mg/kg
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
4/5/2012	0.094	J	U	J	0.078	J	2.9	J	0.077	J	U	J	0.83	J	0.084	J	0.072	J	U	J	U	J	0.25	5.5	8330A	mg/Kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
4/5/2012	U		U		0.1	J	U		U		U		U		U		-		-		-		0.25	620	8330A	mg/Kg
2-Amino-4,6-dinitrotoluene					*CAS #: 35572-78-2*																					
4/5/2012	U		0.096	J	0.13	J	U		U		U		0.17	J	U		U		U		U		0.25	2000	8330A	mg/Kg
2-Chlorophenol					*CAS #: 95-57-8*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.33	5100	8270C	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
4/5/2012	U		U		U		0.059	J	U		U		U		U		-		-		-		0.25	13	8330A	mg/Kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
4/5/2012	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	-		-		-		1.6	0.16	8270C	mg/kg
3-Methylphenol					*CAS #: 106-44-5*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.33	3100	8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.25	62	8330A	mg/Kg
4-Amino-2,6-dinitrotoluene					*CAS #: 19406-51-0*																					
4/5/2012	U		0.12	J	0.073	J	U		U		U		0.22		0.23	J	U		U		U		0.25	1900	8330A	mg/Kg
4-Methylphenol					*CAS #: 106-44-5*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.33	3100	8270C	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		1.6	7	8270C	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
4/5/2012	U		U		U		0.096	J	U		U		U		U		-		-		-		0.25	110	8330A	mg/Kg

See last page of this report for definitions.

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*PAD-1*	*Q*	*PAD-2*	*Q*	*PAD-3*	*Q*	*PAD-4*	*Q*	*PAD-5*	*Q*	*PAD-6*	*Q*	*PAD-7*	*Q*	*PAD-8*	*Q*	*POND-1*	*Q*	*SB-1*	*Q*	*SB-2*	*Q*	*RL*	*Action Limit*	*Method*	*Unit*
Acetophenone					*CAS #: 98-86-2*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.33	100000	8270C	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
4/5/2012	1.6		1.6		1.7		2.5		1.9		2		1.7		2.9		2		3.3		3.5		1	15.8	6010B	mg/Kg
Barium					*CAS #: 7440-39-3*																					
4/5/2012	94		86		73		390		310		85		95		120		120		110		190		20	190000	6010B	mg/Kg
Benzene					*CAS #: 71-43-2*																					
4/5/2012	0.001	J	0.001	J	0.001	J	0.0009	J	0.001	J	0.004	J	0.0007	J	0.0006	J	-		-		-		0.005	5.4	8260B	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
4/5/2012	0.008	J	0.004	J	0.02	J	U		U		U		0.009	J	0.046		-		-		-		0.33	2.1	8270C	mg/kg
Benzo(a)pyrene					*CAS #: 50-32-8*																					
4/5/2012	0.008	J	U		0.022		0.009	J	U		U		0.008	J	0.04		-		-		-		0.02	0.21	8270C	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
4/5/2012	0.012	J	0.008	J	0.029	J	0.014	J	0.006	J	U		0.013	J	0.13	J	-		-		-		0.33	2.1	8270C	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
4/5/2012	0.011	J	0.005	J	0.014	J	U	J	U		U		U		0.035	J	-		-		-		0.33	2.1	8270C	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	4.9	8260B	mg/kg
Bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
4/5/2012	U		0.49		U		0.21		U		U		U		0.089	J	0.15	J	U		U		0.33	120	8270C	mg/kg
Bromomethane					*CAS #: 74-83-9*																					
4/5/2012	U		0.004	J	U		U		U		0.003	J	U		0.002	J	U		U	J	U		0.005	32	8260B	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.33	910	8270C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
4/5/2012	0.15	J	0.19	J	0.47		0.33		0.1	J	0.37		0.13	J	0.12	J	0.34		0.25		0.15	J	0.5	800	6010B	mg/Kg
Carbon Tetrachloride					*CAS #: 56-23-5*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	3	8260B	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	1400	8260B	mg/kg
Chloroform					*CAS #: 67-66-3*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	1.5	8260B	mg/kg
Chloromethane					*CAS #: 74-87-3*																					
4/5/2012	U		0.013		U		0.007		U		0.007		U		0.009		-		-		-		0.005	500	8260B	mg/kg
Chromium, hexavalent					*CAS #: 18540-29-9*																					
4/5/2012	U		0.58	J	U		U		U		1.7	J	U		0.41	J	-		-		-		1	5.6	7196A	mg/Kg

See last page of this report for definitions.

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Chromium					*CAS #: 7440-47-3*																					
4/5/2012	18	J	13	J	12	J	16	J	14	J	19	J	15	J	17	J	19	J	20	J	35	J	1	1400	6010B	mg/Kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
4/5/2012	0.013	J	0.006	J	U		U	J	U		U		U		U		-		-		-		0.02	0.21	8270C	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
4/5/2012	U		0.16	J	0.2		0.4		U		10		0.58		0.19	J	0.72		0.14	J	U		0.33	490000	8270C	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
4/5/2012	U		U		U		0.26		U		U		U		0.081	J	U		U		U		0.33	1000000	8270C	mg/kg
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
4/5/2012	0.13	J	0.095	J	0.086	J	1.3		0.31		12		0.23	J	0.25		4.8		U		U		0.33	62000	8270C	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
4/5/2012	0.004	J	0.005	J	0.049		0.007	J	U		U		0.026		0.12		-		-		-		0.33	22000	8270C	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.33	120	8270C	mg/kg
HMX					*CAS #: 2691-41-0*																					
4/5/2012	U	J	U	J	U	J	0.62	J	U		U	J	U	J	U	J	U	J	U	J	U	J	2.2	49000	8330A	mg/Kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
4/5/2012	0.009	J	0.005	J	0.009	J	U	J	0.004	J	U		U		0.038	J	-		-		-		0.33	2.1	8270C	mg/kg
Lead					*CAS #: 7439-92-1*																					
4/5/2012	120		160		240		410		81		510		560	J	270		180		94		54		0.3	800	6010B	mg/Kg
Mercury					*CAS #: 7439-97-6*																					
4/5/2012	U		U		0.031	J	0.016	J	0.029	J	0.086	J	0.12		0.063	J	-		-		-		0.1	34	7471A	mg/Kg
Methylene Chloride					*CAS #: 75-09-2*																					
4/5/2012	U		0.012		U		U		U		U		U		U		-		-		-		0.005	53	8260B	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
4/5/2012	0.004	J	U		0.027		0.018	J	0.005	J	U		0.007	J	U		-		-		-		0.33	18	8270C	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.25	24	8330A	mg/Kg
Nitroglycerin					*CAS #: 55-63-0*																					
4/5/2012	1.3		0.12	J	1.2		15		13		1.1		8.1	J	0.57		2.4		U		0.05	J	2.5	62	8332	mg/Kg
Diphenylamine					*CAS #: 122-39-4*																					
4/5/2012	U	J	0.067	J	U	J	0.13	J	0.11	J	1.5	J	0.12	J	U	J	0.46	J	U	J	U	J	1.6	15000	8270C	mg/kg
Perchlorate					*CAS #: 14797-73-0*																					
4/5/2012	U		U		0.0106	J	0.0016	J	0.0012	J	0.0481	J	0.0164	J	0.0056	J	-		-		-		0.002	720	6850	mg/kg
Phenol					*CAS #: 108-95-2*																					
4/5/2012	U		U		U		U		U		U		U		0.02	J	-		-		-		0.33	180000	8270C	mg/kg

See last page of this report for definitions.

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*PAD-1*	*Q*	*PAD-2*	*Q*	*PAD-3*	*Q*	*PAD-4*	*Q*	*PAD-5*	*Q*	*PAD-6*	*Q*	*PAD-7*	*Q*	*PAD-8*	*Q*	*POND-1*	*Q*	*SB-1*	*Q*	*SB-2*	*Q*	*RL*	*Action Limit*	*Method*	*Unit*
RDX					*CAS #: 121-82-4*																					
4/5/2012	U		U		U		1.2		U		U		0.091	J	U		-		-		-		1	24	8330A	mg/Kg
Selenium					*CAS #: 7782-49-2*																					
4/5/2012	U		U		U		U		U		U		U		U		U		0.68		1.2		0.5	5100	6010B	mg/Kg
Silver					*CAS #: 7440-22-4*																					
4/5/2012	U		U		U		U		U		U		U		0.33	J	-		-		-		1	5100	6010B	mg/Kg
Tetrachloroethene					*CAS #: 127-18-4*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	2.6	8260B	mg/kg
Tetryl					*CAS #: 479-45-8*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.65	2500	8330A	mg/Kg
Toluene					*CAS #: 108-88-3*																					
4/5/2012	U		U		U		U		U		0.002	J	U		U		-		-		-		0.005	45000	8260B	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
4/5/2012	U		-		-		53		-		-		20		-		-		-		-		10	11000	8015B	mg/Kg
Trichloroethene					*CAS #: 79-01-6*																					
4/5/2012	0.001	J	U		U		U		U		U		U		U		U		U		U		0.005	14	8260B	mg/kg
Vinyl Chloride					*CAS #: 75-01-4*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.005	1.7	8260B	mg/kg

Definitions: RL Denotes reporting limit (obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification). RLs are equal to or greater than actual laboratory QLs, except where noted in the data validation report. However, RLs, QLs and method detection limit (DL) are less than the AL except where noted with an "A" qualifier. See data validation for actual laboratory QL. **Q** Denotes data validation qualifie
U Denotes analyte not detected at or above DL. **AL** Denotes permit Action limit (obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification).
J Denotes is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the DL and estimated due to data validation.
A Laboratory QL and laboratory DL above permit Action limit (see data validation report).
R Denotes result rejected. (-) Denotes not sampled.
NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	1100	8260B	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	2.2	8260B	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.25	27000	8330A	mg/Kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.25	62	8330A	mg/Kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
4/5/2012	-		-		-		-		-		-		-		-		0.097	J	U	J	0.26	J	0.25	79	8330A	mg/Kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	1800	8270C	mg/kg
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
4/5/2012	-		-		-		-		-		-		-		-		0.071	J	U	J	0.14	J	0.25	5.5	8330A	mg/Kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.25	620	8330A	mg/Kg
2-Amino-4,6-dinitrotoluene					*CAS #: 35572-78-2*																					
4/5/2012	-		-		-		-		-		-		-		-		U		U		0.15	J	0.25	2000	8330A	mg/Kg
2-Chlorophenol					*CAS #: 95-57-8*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	5100	8270C	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.25	13	8330A	mg/Kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		1.6	0.16	8270C	mg/kg
3-Methylphenol					*CAS #: 106-44-5*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	3100	8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.25	62	8330A	mg/Kg
4-Amino-2,6-dinitrotoluene					*CAS #: 19406-51-0*																					
4/5/2012	-		-		-		-		-		-		-		-		U		U		0.18	J	0.25	1900	8330A	mg/Kg
4-Methylphenol					*CAS #: 106-44-5*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	3100	8270C	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		1.6	7	8270C	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.25	110	8330A	mg/Kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	100000	8270C	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
4/5/2012	-		-		-		-		-		-		-		-		2.4		1.6		2.1		1	15.8	6010B	mg/Kg
Barium					*CAS #: 7440-39-3*																					
4/5/2012	-		-		-		-		-		-		-		-		150		100		100		20	190000	6010B	mg/Kg
Benzene					*CAS #: 71-43-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	5.4	8260B	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270C	mg/kg
Benzo(a)pyrene					*CAS #: 50-32-8*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.02	0.21	8270C	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270C	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270C	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	4.9	8260B	mg/kg
Bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
4/5/2012	-		-		-		-		-		-		-		-		1.1		0.092	J	0.25		0.33	120	8270C	mg/kg
Bromomethane					*CAS #: 74-83-9*																					
4/5/2012	-		-		-		-		-		-		-		-		U		0.004	J	U		0.005	32	8260B	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	910	8270C	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
4/5/2012	-		-		-		-		-		-		-		-		0.38		0.18	J	0.27		0.5	800	6010B	mg/Kg
Carbon Tetrachloride					*CAS #: 56-23-5*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	3	8260B	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	1400	8260B	mg/kg
Chloroform					*CAS #: 67-66-3*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	1.5	8260B	mg/kg
Chloromethane					*CAS #: 74-87-3*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	500	8260B	mg/kg
Chromium, hexavalent					*CAS #: 18540-29-9*																					
4/5/2012	1.1		0.57	J	0.63	J	1		0.71	J	0.7	J	0.89	J	1.9		-		-		-		1	5.6	7196A	mg/Kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Chromium					*CAS #: 7440-47-3*																					
4/5/2012	-		-		-		-		-		-		-		-		18	J	12	J	17	J	1	1400	6010B	mg/Kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.02	0.21	8270C	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
4/5/2012	-		-		-		-		-		-		-		-		0.7		0.46		0.48		0.33	490000	8270C	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
4/5/2012	-		-		-		-		-		-		-		-		0.15	J	0.31		U		0.33	1000000	8270C	mg/kg
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
4/5/2012	-		-		-		-		-		-		-		-		0.33		0.24		0.93		0.33	62000	8270C	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	22000	8270C	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	120	8270C	mg/kg
HMX					*CAS #: 2691-41-0*																					
4/5/2012	-		-		-		-		-		-		-		-		U	J	0.18	J	U	J	2.2	49000	8330A	mg/Kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270C	mg/kg
Lead					*CAS #: 7439-92-1*																					
4/5/2012	-		-		-		-		-		-		-		-		230		200		400		0.3	800	6010B	mg/Kg
Mercury					*CAS #: 7439-97-6*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.1	34	7471A	mg/Kg
Methylene Chloride					*CAS #: 75-09-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	53	8260B	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	18	8270C	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.25	24	8330A	mg/Kg
Nitroglycerin					*CAS #: 55-63-0*																					
4/5/2012	-		-		-		-		-		-		-		-		0.91		0.44		8.5		2.5	62	8332	mg/Kg
Diphenylamine					*CAS #: 122-39-4*																					
4/5/2012	-		-		-		-		-		-		-		-		0.094	J	U	J	0.095	J	1.6	15000	8270C	mg/kg
Perchlorate					*CAS #: 14797-73-0*																					
4/5/2012	U		U		U		U		U		U		U		U		-		-		-		0.002	720	6850	mg/kg
Phenol					*CAS #: 108-95-2*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.33	180000	8270C	mg/kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*BG-1A*	*Q*	*BG-1B*	*Q*	*BG-1C*	*Q*	*BG-1D*	*Q*	*BG-2A*	*Q*	*BG-2B*	*Q*	*BG-2C*	*Q*	*BG-2D*	*Q*	*NB-1*	*Q*	*NB-2*	*Q*	*BERM-1*	*Q*	*RL*	*Action Limit*	*Method*	*Unit*
RDX					*CAS #: 121-82-4*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		1	24	8330A	mg/Kg
Selenium					*CAS #: 7782-49-2*																					
4/5/2012	-		-		-		-		-		-		-		-		U		U		U		0.5	5100	6010B	mg/Kg
Silver					*CAS #: 7440-22-4*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		1	5100	6010B	mg/Kg
Tetrachloroethene					*CAS #: 127-18-4*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	2.6	8260B	mg/kg
Tetryl					*CAS #: 479-45-8*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.65	2500	8330A	mg/Kg
Toluene					*CAS #: 108-88-3*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	45000	8260B	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		10	11000	8015B	mg/Kg
Trichloroethene					*CAS #: 79-01-6*																					
4/5/2012	-		-		-		-		-		-		-		-		U		U		0.006		0.005	14	8260B	mg/kg
Vinyl Chloride					*CAS #: 75-01-4*																					
4/5/2012	-		-		-		-		-		-		-		-		-		-		-		0.005	1.7	8260B	mg/kg

Definitions: RL Denotes reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above DL. AL Denotes permit Action limit.
J Denotes result is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the DL and estimated due to data validation.
A Denotes laboratory QL and laboratory DL above permit Action limit (see data validation report).
R Denotes result rejected. (-) Denotes not sampled. **AL and RL** obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification.

NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
Laboratory QL at or below the RL and AL unless noted (see data validation report). In these cases, the result is evaluated to the method detection limit (MDL/DL). MDL is less than the RL and AL unless noted.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	1100	8260C	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	2.2	8260C	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.25	27000	8330A	mg/kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.25	62	8330A	mg/kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
4/9/2013	-		-		-		-		-		-		-		-		U	J	U	J	0.2	J	0.25	79	8330A	mg/kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	1800	8270D	mg/kg
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
4/9/2013	-		-		-		-		-		-		-		-		U		U		0.11	J	0.25	5.5	8330A	mg/kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.25	620	8330A	mg/kg
2-Amino-4,6-Dinitrotoluene					*CAS #: 35572-78-2*																					
4/9/2013	-		-		-		-		-		-		-		-		U		U		0.21	J	0.25	2000	8330A	mg/kg
2-Chlorophenol					*CAS #: 95-57-8*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	5100	8270D	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.25	13	8330A	mg/kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		1.6	0.16	8270D	mg/kg
3-Methylphenol					*CAS #: 106-44-5*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	3100	8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.25	62	8330A	mg/kg
4-Amino-2,6-Dinitrotoluene					*CAS #: 19406-51-0*																					
4/9/2013	-		-		-		-		-		-		-		-		U		U		0.34	J	0.25	1900	8330A	mg/kg
4-Methylphenol					*CAS #: 106-44-5*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	3100	8270D	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		1.6	7	8270D	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.25	110	8330A	mg/kg

See last page of this report for definitions.

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	100000	8270D	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
4/9/2013	-		-		-		-		-		-		-		-		2.3		1.6	J	1.8		1	15.8	6010C	mg/kg
Barium					*CAS #: 7440-39-3*																					
4/9/2013	-		-		-		-		-		-		-		-		120		98		140		20	190000	6010C	mg/kg
Benzene					*CAS #: 71-43-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	5.4	8260C	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Benzo(a)pyrene					*CAS #: 50-32-8*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.02	0.21	8270D	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	4.9	8260C	mg/kg
bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
4/9/2013	-		-		-		-		-		-		-		-		1.7		U		0.11	J	0.33	120	8270D	mg/kg
Bromomethane					*CAS #: 74-83-9*																					
4/9/2013	-		-		-		-		-		-		-		-		U		U		U		0.005	32	8260C	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	910	8270D	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
4/9/2013	-		-		-		-		-		-		-		-		0.42	J	0.22	J	0.2	J	0.5	800	6010C	mg/kg
Carbon Tetrachloride					*CAS #: 56-23-5*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	3	8260C	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	1400	8260C	mg/kg
Chloroform					*CAS #: 67-66-3*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	1.5	8260C	mg/kg
Chloromethane					*CAS #: 74-87-3*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	500	8260C	mg/kg
Chromium, hexavalent					*CAS #: 18540-29-9*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		1	5.6	7196A	mg/kg

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	BG-1A	Q	BG-1B	Q	BG-1C	Q	BG-1D	Q	BG-2A	Q	BG-2B	Q	BG-2C	Q	BG-2D	Q	NB-1	Q	NB-2	Q	BERM-1	Q	RL	Action Limit	Method	Unit
Chromium					*CAS #: 7440-47-3*																					
4/9/2013	-		-		-		-		-		-		-		-		15	J	13	J	19	J	1	1400	6010C	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.02	0.21	8270D	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
4/9/2013	-		-		-		-		-		-		-		-		1.1	J	0.6	J	0.36	J	0.33	490000	8270D	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
4/9/2013	-		-		-		-		-		-		-		-		1.6		U		U		0.33	1000000	8270D	mg/kg
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
4/9/2013	-		-		-		-		-		-		-		-		1.2	J	U		0.39	J	0.33	62000	8270D	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	22000	8270D	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	120	8270D	mg/kg
HMX					*CAS #: 2691-41-0*																					
4/9/2013	-		-		-		-		-		-		-		-		U	J	U	J	U	J	2.2	49000	8330A	mg/kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	2.1	8270D	mg/kg
Lead					*CAS #: 7439-92-1*																					
4/9/2013	-		-		-		-		-		-		-		-		230	J	210	J	170	J	0.3	800	6010C	mg/kg
Mercury					*CAS #: 7439-97-6*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.1	34	7471A	mg/kg
Methylene Chloride					*CAS #: 75-09-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	53	8260C	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	18	8270D	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.25	24	8330A	mg/kg
Nitroglycerin					*CAS #: 55-63-0*																					
4/9/2013	-		-		-		-		-		-		-		-		1.29	J	0.991	J	0.615	J	2.5	62	8332	mg/kg
Diphenylamine					*CAS #: 122-39-4*																					
4/9/2013	-		-		-		-		-		-		-		-		U	J	0.3	J	0.37	J	1.6	15000	8270D	mg/kg
Perchlorate					*CAS #: 14797-73-0*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.002	720	6850	mg/kg
Phenol					*CAS #: 108-95-2*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.33	180000	8270D	mg/kg

Table 2B - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*BG-1A*	*Q*	*BG-1B*	*Q*	*BG-1C*	*Q*	*BG-1D*	*Q*	*BG-2A*	*Q*	*BG-2B*	*Q*	*BG-2C*	*Q*	*BG-2D*	*Q*	*NB-1*	*Q*	*NB-2*	*Q*	*BERM-1*	*Q*	*RL*	*Action Limit*	*Method*	*Unit*
RDX					*CAS #: 121-82-4*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		1	24	8330A	mg/kg
Selenium					*CAS #: 7782-49-2*																					
4/9/2013	-		-		-		-		-		-		-		-		U		U		U		0.5	5100	6010C	mg/kg
Silver					*CAS #: 7440-22-4*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		1	5100	6010C	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	2.6	8260C	mg/kg
Tetryl					*CAS #: 479-45-8*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.65	2500	8330A	mg/kg
Toluene					*CAS #: 108-88-3*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	45000	8260C	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		10	11000	8015B	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
4/9/2013	-		-		-		-		-		-		-		-		U		U		U		0.005	14	8260C	mg/kg
Vinyl Chloride					*CAS #: 75-01-4*																					
4/9/2013	-		-		-		-		-		-		-		-		-		-		-		0.005	1.7	8260C	mg/kg

Definitions: RL Denotes reporting limit. **Q** Denotes data validation qualifier. **U** Denotes analyte not detected at or above DL. AL Denotes permit Action limit.
J Denotes result is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the DL and estimated due to data validation.
A Denotes laboratory QL and laboratory DL above permit Action limit (see data validation report).
R Denotes result rejected. (-) Denotes not sampled. **AL and RL** obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification.

NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
Laboratory QL at or below the RL and AL unless noted (see data validation report). In these cases, the result is evaluated to the method detection limit (MDL/DL). MDL is less than the RL and AL unless noted.

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
1,1-Dichloroethene					*CAS #: 75-35-4*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	1100	8260C	mg/kg
1,2-Dichloroethane					*CAS #: 107-06-2*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	2.2	8260C	mg/kg
1,3,5-Trinitrobenzene					*CAS #: 99-35-4*																					
4/9/2013	U		U		0.22	J	0.24	J	U		U		U		U		-		-		-		0.25	27000	8330A	mg/kg
1,3-Dinitrobenzene					*CAS #: 99-65-0*																					
4/9/2013	U		U		U		0.17	J	U		U		U		U		-		-		-		0.25	62	8330A	mg/kg
2,4,6-Trinitrotoluene					*CAS #: 118-96-7*																					
4/9/2013	2.3	J	0.39	J	0.32	J	1.4	J	U	J	U	J	U	J	U	J	0.34	J	U	J	U	J	0.25	79	8330A	mg/kg
2,4-Dichlorophenol					*CAS #: 120-83-2*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	1800	8270D	mg/kg
2,4-Dinitrotoluene					*CAS #: 121-14-2*																					
4/9/2013	0.58	J	0.33	J	U		U		U		0.23	J	U		U		U		U		U		0.25	5.5	8330A	mg/kg
2,6-Dinitrotoluene					*CAS #: 606-20-2*																					
4/9/2013	1.4	J	U		U		0.33	J	U		U		U		U		-		-		-		0.25	620	8330A	mg/kg
2-Amino-4,6-Dinitrotoluene					*CAS #: 35572-78-2*																					
4/9/2013	U		0.33	J	0.15	J	U		U		U		U		U		U		U		U		0.25	2000	8330A	mg/kg
2-Chlorophenol					*CAS #: 95-57-8*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	5100	8270D	mg/kg
2-Nitrotoluene					*CAS #: 88-72-2*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.25	13	8330A	mg/kg
3,3'-Dimethylbenzidine					*CAS #: 119-93-7*																					
4/9/2013	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	U	AJ	-		-		-		1.6	0.16	8270D	mg/kg
3-Methylphenol					*CAS #: 106-44-5*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	3100	8270C	mg/kg
3-Nitrotoluene					*CAS #: 99-08-1*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.25	62	8330A	mg/kg
4-Amino-2,6-Dinitrotoluene					*CAS #: 19406-51-0*																					
4/9/2013	U		0.53	J	0.3	J	U		U		U		U		U		U		U		U		0.25	1900	8330A	mg/kg
4-Methylphenol					*CAS #: 106-44-5*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	3100	8270D	mg/kg
4-Nitrophenol					*CAS #: 100-02-7*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		1.6	7	8270D	mg/kg
4-Nitrotoluene					*CAS #: 99-99-0*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.25	110	8330A	mg/kg

See last page of this report for definitions.

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Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Acetophenone					*CAS #: 98-86-2*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	100000	8270D	mg/kg
Arsenic					*CAS #: 7440-38-2*																					
4/9/2013	1.6		2.4		1.9		2.6		2.1		1.7		1.9		1.9		2.2		2.7		3.1		1	15.8	6010C	mg/kg
Barium					*CAS #: 7440-39-3*																					
4/9/2013	89		110		74		82		90		79		120		94		110		100		150		20	190000	6010C	mg/kg
Benzene					*CAS #: 71-43-2*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	5.4	8260C	mg/kg
Benzo(a)anthracene					*CAS #: 56-55-3*																					
4/9/2013	U		0.005	J	0.028	J	0.52		U		U		0.008	J	U		-		-		-		0.33	2.1	8270D	mg/kg
Benzo(a)pyrene					*CAS #: 50-32-8*																					
4/9/2013	U	J	0.009	J	0.028	J	0.017	J	U		U	J	0.01	J	U		-		-		-		0.02	0.21	8270D	mg/kg
Benzo(b)fluoranthene					*CAS #: 205-99-2*																					
4/9/2013	0.005	J	0.018	J	0.07	J	0.82		U		0.023	J	0.016	J	U		-		-		-		0.33	2.1	8270D	mg/kg
Benzo(k)fluoranthene					*CAS #: 207-08-9*																					
4/9/2013	U	J	0.007	J	0.06	J	0.32	J	U		U	J	0.005	J	U		-		-		-		0.33	2.1	8270D	mg/kg
Benzyl Chloride					*CAS #: 100-44-7*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	4.9	8260C	mg/kg
bis(2-Ethylhexyl) phthalate					*CAS #: 117-81-7*																					
4/9/2013	U		0.2		U		U		U		U		U		U		0.1	J	U		U		0.33	120	8270D	mg/kg
Bromomethane					*CAS #: 74-83-9*																					
4/9/2013	U		U		U		U		U		U		U		U		U		U		U		0.005	32	8260C	mg/kg
Butyl benzyl phthalate					*CAS #: 85-68-7*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	910	8270D	mg/kg
Cadmium					*CAS #: 7440-43-9*																					
4/9/2013	0.12	J	0.39	J	0.15	J	0.29	J	0.089	J	0.22	J	0.12	J	0.084	J	0.36	J	0.32	J	0.3	J	0.5	800	6010C	mg/kg
Carbon Tetrachloride					*CAS #: 56-23-5*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	3	8260C	mg/kg
Chlorobenzene					*CAS #: 108-90-7*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	1400	8260C	mg/kg
Chloroform					*CAS #: 67-66-3*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	1.5	8260C	mg/kg
Chloromethane					*CAS #: 74-87-3*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	500	8260C	mg/kg
Chromium, hexavalent					*CAS #: 18540-29-9*																					
4/9/2013	U		0.73	J	0.97		0.91	J	U		U		U		U		-		-		-		1	5.6	7196A	mg/kg

See last page of this report for definitions.

Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	PAD-1	Q	PAD-2	Q	PAD-3	Q	PAD-4	Q	PAD-5	Q	PAD-6	Q	PAD-7	Q	PAD-8	Q	POND-1	Q	SB-1	Q	SB-2	Q	RL	Action Limit	Method	Unit
Chromium					*CAS #: 7440-47-3*																					
4/9/2013	13	J	14	J	21	J	16	J	12	J	18	J	10	J	17	J	18	J	18	J	27	J	1	1400	6010C	mg/kg
Dibenz(a,h)anthracene					*CAS #: 53-70-3*																					
4/9/2013	U	j	U		0.033	J	0.064	J	U		U	J	U		U		-		-		-		0.02	0.21	8270D	mg/kg
Diethyl phthalate					*CAS #: 84-66-2*																					
4/9/2013	0.096	J	0.38	J	U		0.51	J	U		2.6	J	U		U		0.57		0.24	J	U		0.33	490000	8270D	mg/kg
Dimethyl phthalate					*CAS #: 131-11-3*																					
4/9/2013	U		U		U		U		U		U		U		U		U		U		U		0.33	1000000	8270D	mg/kg
Di-n-butyl phthalate					*CAS #: 84-74-2*																					
4/9/2013	0.75	J	0.3	J	17	J	0.58	J	U		22	J	0.087	J	0.5	J	0.58		U		U		0.33	62000	8270D	mg/kg
Fluoranthene					*CAS #: 206-44-0*																					
4/9/2013	U		0.006	J	0.028	J	1		0.004	J	U		0.014	J	U		-		-		-		0.33	22000	8270D	mg/kg
Hexachloroethane					*CAS #: 67-72-1*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	120	8270D	mg/kg
HMX					*CAS #: 2691-41-0*																					
4/9/2013	U	J	U	J	U	J	1.7	J	U	J	U	J	U	J	U	J	U	J	U	J	U	J	2.2	49000	8330A	mg/kg
Indeno(1,2,3-cd)pyrene					*CAS #: 193-39-5*																					
4/9/2013	U	J	0.01	J	0.038	J	0.36		U		U	J	0.006	J	U		-		-		-		0.33	2.1	8270D	mg/kg
Lead					*CAS #: 7439-92-1*																					
4/9/2013	42	J	210	J	300	J	150	J	45	J	710	J	77	J	30	J	140	J	69	J	53	J	0.3	800	6010C	mg/kg
Mercury					*CAS #: 7439-97-6*																					
4/9/2013	U		U		U		U		U		0.027	J	U		U		-		-		-		0.1	34	7471A	mg/kg
Methylene Chloride					*CAS #: 75-09-2*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	53	8260C	mg/kg
Naphthalene					*CAS #: 91-20-3*																					
4/9/2013	U		0.008	J	U		0.05	J	0.004	J	U		0.004	J	U		-		-		-		0.33	18	8270D	mg/kg
Nitrobenzene					*CAS #: 98-95-3*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.25	24	8330A	mg/kg
Nitroglycerin					*CAS #: 55-63-0*																					
4/9/2013	18.2	J	3.3	J	18.8	J	10.6	J	7.26	J	13.5	J	2.89	J	U		U		U		U		2.5	62	8332	mg/kg
Diphenylamine					*CAS #: 122-39-4*																					
4/9/2013	0.11	J	0.091	J	1.1	J	0.35	J	U	J	1	J	0.065	J	0.12	J	0.2		U	J	U	J	1.6	15000	8270D	mg/kg
Perchlorate					*CAS #: 14797-73-0*																					
4/9/2013	U	J	U	J	U	J	U	J	U	J	0.00418	J	0.00263	J	U	J	-		-		-		0.002	720	6850	mg/kg
Phenol					*CAS #: 108-95-2*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.33	180000	8270D	mg/kg

See last page of this report for definitions.

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Table 2A - Summary of Analytical Results
Open Burning Ground - Soil Monitoring Program

All Results Reported on a Dry Weight Basis

Event Date	*PAD-1*	*Q*	*PAD-2*	*Q*	*PAD-3*	*Q*	*PAD-4*	*Q*	*PAD-5*	*Q*	*PAD-6*	*Q*	*PAD-7*	*Q*	*PAD-8*	*Q*	*POND-1*	*Q*	*SB-1*	*Q*	*SB-2*	*Q*	*RL*	*Action Limit*	*Method*	*Unit*
RDX					*CAS #: 121-82-4*																					
4/9/2013	U	J	U	J	U	J	4.7	J	U	J	0.17	J	U	J	U	J	-		-		-		1	24	8330A	mg/kg
Selenium					*CAS #: 7782-49-2*																					
4/9/2013	U		U		U		U		U		U		U		U		U		0.73	J	U		0.5	5100	6010C	mg/kg
Silver					*CAS #: 7440-22-4*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		1	5100	6010C	mg/kg
Tetrachloroethene					*CAS #: 127-18-4*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	2.6	8260C	mg/kg
Tetryl					*CAS #: 479-45-8*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.65	2500	8330A	mg/kg
Toluene					*CAS #: 108-88-3*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	45000	8260C	mg/kg
TPH (as Diesel)					*CAS #: Q797*																					
4/9/2013	U		-		-		52		-		-		U		-		-		-		-		10	11000	8015B	mg/kg
Trichloroethene					*CAS #: 79-01-6*																					
4/9/2013	U		U		U		U		U		U		U		U		U		U		U		0.005	14	8260C	mg/kg
Vinyl Chloride					*CAS #: 75-01-4*																					
4/9/2013	U		U		U		U		U		U		U		U		-		-		-		0.005	1.7	8260C	mg/kg

Definitions: RL Denotes reporting limit (obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification). RLs are equal to or greater than actual laboratory QLs, except where noted in the data validation report. However, RLs, QLs and method detection limit (DL) are less than the AL except where noted with an "A" qualifier. See data validation for actual laboratory QL. **Q** Denotes data validation qualifie
U Denotes analyte not detected at or above DL. **AL** Denotes permit Action limit (obtained from permit modification – Table 1 Attachment II.C-23-24, updated September 27, 2011, Class 3 permit modification).
J Denotes is estimated. **UJ** Denotes analyte was analyzed for but not detected at or above the DL and estimated due to data validation.
A Laboratory QL and laboratory DL above permit Action limit (see data validation report).
R Denotes result rejected. (-) Denotes not sampled.
NOTES:
Results for Method 8290 Dioxin/Furan submitted as a separate report.
For the April 2013 event, Method 8270D aliquots for POND-1 were recollected on September 10, 2013.

See last page of this report for definitions.

APPENDIX F

LABORATORY CERTIFICATES OF ANALYSIS AND DATA VALIDATION REPORTS

This report is presented in an electronic version and as a bound hard copy version.

Electronic Version: Depending upon the file size (limited to 50 MB per file), this Attachment/Appendix may be presented in a separate Portable Document Format (PDF) file associated with this report.

Hardcopy Version: This Attachment/Appendix is only provided in PDF on the enclosed compact disc (CD-ROM).

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Data Validation Summary- 2014 Annual Soil Monitoring Event Soil Monitoring Program for the Open Burning Ground (OBG) Radford Facility Army Ammunition Plant, Radford, Virginia Permit for the Treatment of Hazardous Waste by Open Burning EPA ID# VA1210020730

The Radford Facility Army Ammunition Plant (RFAAP) is required to perform annual soil monitoring at the Open Burning Ground (OBG) located at the RFAAP in Radford, Virginia. Annual soil monitoring is required to be performed under their *Final Permit for the Treatment of Hazardous Waste by Open Burning* (effective date October 28, 2005; revised September 27, 2011) in accordance with Permit Attachment II.C – *Soil Monitoring Program for the Open Burning Ground (Modified June 12, 2014)*.

On behalf of BAE Systems, Ordnance Systems Inc. (BAE), Draper Aden Associates of Blacksburg, Virginia performed a comprehensive data validation of the analytical results for the July 31, 2014 soil monitoring event. The following information summarizes data validation for the event.

Permit Modifications

- The sampling frequency was reduced from semiannual to annual monitoring as part of the Class 3 Permit Modification approved by the Virginia Department of Environmental Quality (VDEQ) in correspondence dated September 27, 2011. Additionally, the September 27, 2011 Class 3 Permit Modification reduced the list of Constituents of Potential Concern (COPCs) for the Unit and added hexavalent chromium and perchlorate.

- A Class 1 Permit Modification was approved on June 12, 2014 for the Unit and updated the permit Action Levels.

Sample Collection/Analytical Services

Draper Aden Associates, of Blacksburg, Virginia, collected soil samples from sample locations PAD-1 through PAD-8, NB-1, NB-2, SB-1, SB-2, BERM-1 and POND-1.

The samples were sent via overnight courier to Eurofins Lancaster Laboratories Environmental, Inc. (ELLE), of Lancaster, Pennsylvania; to TestAmerica North Canton (TestAmerica), of North Canton, Ohio; and to Microbac Laboratories, Ohio Valley Division (Microbac), of Marietta, Ohio. Samples were analyzed for target analytes listed on Table 1 in Attachment II.C-23 and 24 of the operating permit. (See table below - *Summary of OBG Soil Sample Locations and Required Analytical Methods).* Results were generated from a laboratory accredited under the Virginia Laboratory Accreditation Program. Samples were analyzed for volatiles, semivolatiles, explosives, perchlorate, inorganics, hexavalent chromium, mercury, total petroleum hydrocarbons - diesel range organics, and dioxin/furans by SW-846 Methods 8260C/5035A, 8270D, 8330B, 6850, 6010C, 7196A, 7471A, 8015B and 8290A, respectively (see chain of

custody for analyte lists). As well, samples were analyzed for total residue as percent solids by MCAWW 160.3 MOD.1.

Sample PAD-7 was selected as the blind field sample duplicate for the analyses except dioxin analysis. PAD-1 was selected as the blind field sample duplicate for the dioxin analysis based on historical detections. PAD-4 was selected as the project specific matrix spike and matrix spike duplicate (MS/MSD) sample for each method of analysis. The blind field sample duplicate identification was PAD-X for PAD-7 and PAD-XX for PAD-1. A trip blank (water sample) was submitted for volatile organic analysis (Method 8260C). An equipment blank (water sample) was submitted for inorganic analysis (6010C, 7470A).

ELLE performed the Methods 8260C and 8270D analyses. TestAmerica performed the Methods 8290A, 8015C, 6010C, 7196A, and 7471A analyses. Microbac performed the Method 6850 analysis and 8330B analyses. On behalf of BAE, each laboratory submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results.

Receipt of Monitoring Event Data

The original certificate of analysis for the event was received on September 4, 2014.

Summary of OBG Soil Sample Locations and Required Analytical Methods

SW-846 Method/ SDG	***Sample Location***													
	PAD-1	***PAD-2***	***PAD-3***	***PAD-4***	***PAD-5***	***PAD-6***	***PAD-7***	***PAD-8***	***NB-1***	***NB-2***	***SB-1***	***SB-2***	***BERM-1***	***POND-1***
8260C/5035A Volatiles SDG: RAE24	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*
8270D Semivolatiles SDG: RAE24	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*
8330B Explosives and Nitroglycerin SDG: LL14080080, L14080081, L14091205 (verification)	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*
6850 Perchlorate SDG: L14080080, L14080081	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*						
6010C Inorganics SDGs: 240-40177-1	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*
7196A Hexavalent Chromium SDG: 240-40177-1	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*						
7471A Mercury SDG: 240-40177-1	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*						
8015C –TPH-DRO SDG: 240-40177-1	*X*			*X*			*X*							
8290A Dioxins/Furans SDGs: 240-40177-1	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*

See Table 1- Attachment II.C-23-24 (June 2014) of the operating permit for specific monitoring parameters for each sample location.
PAD-X - blind field duplicate for PAD-7, all analyses except dioxin analysis.
PAD-XX - blind field duplicate for PAD-1, dioxin analysis only.

The chain of custody and permit required target analytes are provided as an attachment.

Data Analysis and Validation

Samples were analyzed by *SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates).* All data were evaluated in general accordance with:

- *Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods*, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates).
- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999 where applicable.
- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, June 2008, where applicable.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review,* January 2010.
- *USEPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review*, September 2011.

Data validation included recalculation of 10% of the data, except where noted. A summary table of data validation results and a data validation report for each analytical method are provided as an attachment (see CD ROM).

Reporting of Results

As required by the permit modification, results were reported at or above the method detection limit (DL) for the target analytes (constituents) listed on Table 1 in Attachment II.C-23 and 24 of the operating permit. Detections less than the laboratory QL were validated and qualified as "J" to note the results were estimated concentrations. Laboratory QLs and DLs were equal to or less than the Reporting Limit (RL) noted on Table 1, except where noted. RLs, QLs and DLs were less than the permit AL except where noted below. Actual QLs vary due to soil factors or dilutions. Results were reported on a dry weight basis or as required by the method.

For 8270D, 3,3-dimethylbenzidine reporting, the laboratory QL and laboratory DL were above the AL. 3,3-Dimethylbenzidine was not detected at or above the DL and the 3,3-dimethylbenzidine results were reported with an "A" qualifier to note the QL and DL were above the AL.

For Method 8290A Dioxin/Furan reporting, the laboratory reported results on a dry weight basis to the estimated detection limit (EDL) for each isomer. Results between the EDL and sample specific reporting limit were flagged "J" to denote results were estimated concentrations. Detections above the EDL were used in the 2,3,7,8-TCDD Toxicity Equivalent Quotient (TEQ) calculation. TEQ calculations are presented in Table 3, submitted as an attachment.

The ALs listed in the summary tables reflect the June 2014 revised ALs.

Special Project Notes

- For Method 8270D, VDEQ requested notification if 3,3-dimethylbenzidine is detected less than the QL, since the QL for this analyte, 1 mg/kg, and detection limit (DL), 0.5 mg/kg are above the AL, 0.16 mg/kg. For this event, 3,3-dimethylbenzidine was not detected at or above the detection limit. 3,3-Dimethylbenzidine will continue to be monitored with future events.

- For 8270D, PAD-3, PAD-4, and PAD-6, were analyzed and reported in dilution. The laboratory QLs and DLs were adjusted to reflect the dilution. The adjusted QLs and DLs were greater than the RL for several analytes; however, the adjusted QLs and DLs were less than the AL, except as noted above, and no data qualification was needed. See data validation report for specific details.

- The laboratory inadvertently reported Method 8015B instead of 8015C. The laboratory stated that they will send a revised document or correspondence stating that the data should be reported as Method 8015C. This information is pending from the laboratory.

Summary of Results

- No results were rejected.

Verification Events

Verification monitoring was conducted on September 18, 2014 to confirm or refute the initial results for 2,4-dinitotoluene (PAD-1, PAD-4, PAD-5) and nitroglycerin (PAD-3 and PAD-4). Except for nitroglycerin detected above the Action Level (AL) at PAD-3, verification sample results were less than the AL and no additional action was required. Due to the detection of nitroglycerin above the AL at PAD-3, additional post-verification sampling at PAD-3 was conducted as per the permit. Permit required activities associated with this detection are ongoing and results will be submitted under separate cover.

Accuracy

Accuracy was evaluated using the percent recovery obtained from the laboratory control sample (LCS), matrix spike and matrix spike duplicate (MS/MSD) samples, and the surrogate spike. LCS and MS/MSD recoveries were within the acceptance criteria, except where noted on the attached data validation report.

Precision

Precision was evaluated using the relative percent difference (RPD) data obtained from the MS/MSD and sample/blind field duplicate results. For metals, a control limit of 60 RPD was used due to expected soil variability. For all other blind field duplicate/sample results, the control limit of <35 RPD and 2x the QL was used, where applicable.

MS/MSD RPD criteria were within acceptance criteria, except where noted on the attached data validation report.

Completeness

Completeness was evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data. Valid analytical data are results not qualified as rejected.

All results were accepted. The completeness for the data set is 100%.

Representativeness

Representativeness: data collected at the site met accuracy and precision requirements, except where noted. Samples were collected using standardized procedures and at specified sample locations. Samples were analyzed using standardized, accepted analytical methods using traceable standard to ensure that accurate and reproducible data were generated. None of the data required qualification for exceeding holding time requirements. Data from the July 2014 soil monitoring event were considered representative.

Comparability

Comparability: data collected at the site met comparability requirements. Samples were collected using standardized procedures and at specified sample locations. Samples were analyzed using standardized, accepted analytical methods using traceable standard to ensure that accurate and reproducible data were generated. Data has been presented using standardized units for evaluation from event to event. Data from the July 2014 soil monitoring event were considered comparable.

Draper Aden Associates
Engineering • Surveying • Environmental Services

This Report has been prepared by:

2/18/2015

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Memorandum

To:	File
From:	Kathy Olsen, Environmental Scientist KO/PM 2/18/2015
Date:	January 14, 2015
Project Name:	Open Burning Ground Soil Monitoring Program
Project Number:	JN: B03204-208
Subject:	Data Validation Report – July 2014 Soil Monitoring Event
cc:	

This memorandum documents the manual data validation of the analytical results from samples collected during the July 31, 2014 Open Burning Ground soil sampling event at the Radford Facility Army Ammunition Plant (RFAAP) located in Radford, Virginia.

Draper Aden Associates, of Blacksburg, Virginia, collected the following soil samples: PAD-1 through PAD-8, NB-1, NB-2, SB-1, SB-2, BERM-1 and POND-1. PAD-X was submitted to the laboratory as a blind field sample duplicate for PAD-7, except for dioxin analysis. PAD-XX was submitted to the laboratory as a blind field sample duplicate for PAD-1 for dioxin analysis only. Additional sample aliquot was submitted for sample PAD-4, the sample selected for MS/MSD analysis, except where noted.

Soil samples were analyzed by USEPA SW-846 Test Methods for Evaluating Solid Wastes (SW-846) Methods 8260C, 8270D, 8290A, 8330B, 8015C, 6850, 6010C, 7196A, 7471A and total residue as percent solids by MCAWW 160.3 MOD. The trip blank was analyzed for only Method 8260C volatile organics and the equipment blank was analyzed for only total metals. Final analytical results were received by Draper Aden Associates on August 22, 2014.

The samples were sent via overnight courier to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania; to TestAmerica North Canton (TestAmerica), of North Canton, Ohio; and to Microbac Laboratories Ohio Valley Division, (Microbac), of Marietta, Ohio. TestAmerica subcontracted work to TestAmerica, Knoxville of Knoxville, Tennessee.

ELLE performed the Methods 8260C and 8270D analyses. TestAmerica, North Canton performed the Methods 8015B, 6010C, 7196A, 7471A analyses; TestAmerica, Knoxville performed the 8290A analysis. Microbac performed the Method 6850 and 8330B analyses. Each laboratory submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results.

Data were evaluated in general accordance with:

- *Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods*, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates

- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999 where applicable
- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, June 2008, where applicable.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review,* January 2010
- *USEPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review*, September 2011

Draper Aden Associates, of Blacksburg, Virginia, performed comprehensive data validation, including recalculation of a minimum ten percent of the data, except where noted otherwise. A summary of data validation results for each analytical method is provided below. A summary table of data validation results by sample location is provided as an attachment. No results were rejected.

The Chain of Custody (COC) and project specific target analyte list are provided as an attachment. The laboratory reported the soil results on a dry weight basis, unless noted below.

As required by the permit, the laboratories reported results at or above the method detection limit (DL) for the target analytes (constituents) listed on Table 1, in Attachment II.C-23 -24 of the operating permit. Final validated results were reported to at or above the laboratory DL. Reported detections greater than the DL but less than the laboratory quantitation limit (QL) were considered estimated concentrations. These estimated detections were reported with the "J" qualifier. Laboratory QLs and DLs were equal to or less than the reporting limit (RL) and action limit (AL) noted on Table 1, except where noted below.

The COC documentation was complete, except where noted. The laboratories received the samples on ice, in good condition with custody seals intact. The COC noted that the perchlorate samples were collected in clear glass; however, the samples were collected in amber glass as recommended by the method.

Each laboratory provided results from an accredited performance evaluation (PE) study performed on a solid matrix. The results are on file at Draper Aden Associates. Results were generated from a laboratory accredited under the Virginia Laboratory Accreditation Program.

Method 8260C/5035A (Soil)/5030B (Water) – Volatile Organic Constituents

Technical holding time and sample preservation criteria were met. QC history documentation, instrument performance check (tuning) criteria, initial calibration, calibration verification, blank, surrogate, MS/MSD, LCS/LCSD and internal standard requirements were met, except where noted below. Additional data validation criteria that were evaluated are presented on the attached data validation report. Deviations from specific quality control criteria that were identified during the data review process are summarized below.

Carbon tetrachloride did not meet the continuing calibration verification (CV) standard percent difference/drift requirement (±20%). Carbon tetrachloride was not detected at or above the detection limit (DL) or QL in any sample and sample results for this analyte were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency.

The internal standard area for 1,4-dichlorobenzene-d4 in samples PAD-4 and SB-2 was outside the lower area control limit; this internal standard was associated with benzyl chloride only. Benzyl chloride was a target analyte for PAD-4 only. Benzyl chloride was not detected at or above the DL or QL in any sample and sample results for this analyte were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. The remaining internal standard criteria were met.

Field duplicate/sample results exhibited acceptable precision (RPD <35), where applicable. No data transcription or calculation check errors were noted. Soil samples were collected in the field in general accordance with Method 5035A. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

Method 8270D/3546 – Semivolatile Organic Constituents

Technical holding time and sample preservation criteria were met except where noted below. Samples were extracted using Method 3546. Instrument performance check (tuning) criteria, initial calibration, calibration verification, blank, surrogate, MS/MSD, LCS, and internal standard requirements were met, except where noted below. Additional data validation criteria that were evaluated are presented on the attached data validation report. Deviations from specific quality control criteria that were identified during the data review process are summarized below.

The MS/MSD did not recover for 3,3'-dimethylbenzidine. The MS recovered low for diphenylamine. Results for these analytes were qualified as estimated due to the MS/MSD recoveries.

The internal standard area for perylene-d12 was outside the control limit for samples PAD-1, PAD-7, and PAD-X. These samples were reanalyzed with similar internal standard recoveries. The original analysis was reported as the final results. Analytes associated with this internal standard were validated and qualified as estimated due to the observed QC deficiency (benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene).

The laboratory DL and QL for 3,3'-dimethylbenzidine was above the AL; however, 3,3'-dimethylbenzidine was not reported at or above the QL in any sample and results were qualified with "A" to note this difference.

PAD-3, PAD-4 and PAD-6 were diluted prior to analysis due to matrix interference. Similar interferences for these samples were noted in previous events. The diluted samples were analyzed and the resulting laboratory QLs and DLs for the target analytes were adjusted by the dilution factor. For several analytes, the adjusted QLs and/or DLs were greater than the RL.

However, the adjusted laboratory QL and DL were below the AL for each target analyte and no data qualification was required, unless noted above.

PAD-4 was reanalyzed undiluted for benzo(a)pyrene. The reanalysis result for benzo(a)pyrene was reported as the final result (see data validation report). The internal standard area for perylene-d12 was below the lower control limit for sample PAD-4 for the reanalysis. Benzo(a)pyrene in PAD-4 was validated and qualified as estimated due to the observed QC deficiency.

3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. 3-Methylphenol and 4-methylphenol as reported represent the combined total of both analytes.

N-nitrosodiphenylamine decomposes to diphenylamine. The reported diphenylamine result represent the combined total of both analytes.

The relative percent difference between PAD-7 and PAD-X for di-n-butylphthalate did not meet acceptance criteria (<35%) and results for di-n-butylphthalate in these samples were qualified as estimated. The remaining field duplicate/sample results between PAD-7 and PAD-X exhibited acceptable precision or no data qualification was needed.

No data transcription or calculation check errors were noted. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

Method 8290A – Dioxins/Furans

Technical holding time and sample preservation criteria were met except where noted below. Instrument performance check (tuning) criteria, initial calibration, calibration verification, blank, surrogate, MS/MSD, LCS, and internal standard requirements were met, except where noted below. Additional data validation criteria that were evaluated are presented on the attached data validation reports. Deviations from specific quality control criteria that were identified during the data review process are summarized below.

With the exception of 1,2,3,7,8-PeCDD and 2,3,7,8-TCDF, laboratory blank contamination was detected below the QL in method blank for the remaining congeners and detected results were qualified by the laboratory with the "B" qualifier. Detected results for these congeners that were less than the QL and less than five times the detected contamination concentration in the method blank were qualified as "U" (as allowed by USEPA CLP National Functional Guidelines for Dioxin/Furan Data Review). The remaining blank criteria were met or no data qualification was needed (see Table 3).

OCDD recovered low in the MSD sample for PAD-4. OCDD recovered within acceptable criteria in the MS sample for PAD-4. The inconsistency between the MS and MSD indicated a lack of sample homogeneity. Results for OCDD were qualified as estimated due to this QC disparity.

Several samples were qualified by the laboratory with the "Q" qualifier. This qualifier indicated that the data did not meet criteria for identification. For these samples, the results were qualified as estimated to note that the result is the estimated maximum possible concentration (EMPC) and the identification is suspect.

1,2,3,7,8,9-HpCDD for samples PAD-2, PAD-4, PAD-6, POND-1, SB-1, SB-2, NB-1 and NB-2; and 1,2,3,4,7,8-HxCDF for samples PAD-5, PAD-6 and POND-1, SB-2, BERM-1 and NB-2 were qualified by the laboratory as "C" to denote coalition with another isomer and results for this congener in these samples were validated as "J" to note this QC deficiency.

2,3,7,8-TCDF results above the QL were confirmed on a separate column, except as noted below. 2,3,7,8-TCDF result in PAD-4, PAD-4MS, and PAD-4MSD was reported from the confirmation column only. The PAD-4 result for 2,3,7,8-TCDF was qualified "X" by the laboratory to note this discrepancy (see laboratory narrative for clarification).

The Toxicity Equivalence (TEQ) was calculated from the product of detections above the detection limit for each congener and their individual Toxicity Equivalence Factor (TEF) value. Results for each sample location are presented on the attached Table 3. The TEQ for each sample location was calculated using estimated concentrations; therefore the final TEQ for each result was considered estimated and qualified as "J." TEF values were based on USEPA Region 3 TEF – World Health Organization June 2005 values. (See www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/usersguide.htm). TEF factors noted above reflect current research.

Field duplicate/sample results between PAD-1 and PAD-XX exhibited acceptable precision (RPD <35), where applicable. Sample weights varied and sample QL and DLs were adjusted accordingly. No data transcription or calculation check errors were noted. No detections were reported above the AL.

Method 8330B – Nitroaromatics and Nitramines

Technical holding time and sample preservation criteria were met except where noted below. Initial calibration, calibration verification, blank, surrogate, MS/MSD, and LCS requirements were met, except where noted below. Additional data validation criteria that were evaluated are presented on the attached data validation report. Deviations from specific quality control criteria that were identified during the data review process are summarized below.

Tetryl did not meet the continuing calibration verification (CV) standard percent difference/drift requirement (±20%). Tetryl was not detected at or above the DL and QL in any sample and sample results for this analyte were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency.

2,4,6-Trinitrotoluene recovered high in the MS/MSD. 2,6-Dinitrotoluene recovered high in the MS. The inconsistency with the MS and MSD results indicated a lack of sample homogeneity. Detected sample results for these analytes were qualified as estimated to note this QC deficiency.

4-Amino-2,6-dinitrotoluene recovered low in the MS and HMX recovered low in the MS/MSD. The inconsistency with the MS and MSD results indicated a lack of sample homogeneity. Results for these analytes were qualified as estimated due to the observed QC deficiency. The remaining MS/MSD criteria were met or no data qualification was required.

2,4-Dinitrotoluene was detected above the action limit in PAD-1, PAD-4 and PAD-5. A verification event was performed on September 18, 2014 to confirm or refute these detections. PAD-X was also collected as a field duplicate for PAD-4. 2,4-Dinitrotoluene was not confirmed above the action limit in these samples and the verification result was reported as the final result.

Nitroglycerin was detected above the action limit in PAD-3 and PAD-4. A verification event was performed on September 18, 2014 to confirm or refute these detections. PAD-X was also collected as a field duplicate for PAD-4. Nitroglycerin was confirmed above the action limit in PAD-3 and the original result was reported. Nitroglycerin was not confirmed above the action limit in PAD-4 and the verification result (PAD-X) was reported as the final result.

The relative percent difference between PAD-7 and PAD-X for nitroglycerin did not meet acceptance criteria (<35%) and these two results were qualified as estimated. The remaining field duplicate/sample results between PAD-7 and PAD-X exhibited acceptable precision or no data qualification was needed.

No data transcription or calculation check errors were noted. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

Method 8015C/3540C-Soxhlet Extraction – TPH (as Diesel Range Organics)

Technical holding time and sample preservation criteria were met. Initial calibration, calibration verification, blank, surrogate, MS/MSD, and LCS requirements were met, except where noted below. Deviations from specific quality control criteria that were identified during the data review process are summarized below.

The MS did not recover TPH (DRO). Results for this analytes were qualified as estimated due to the MS recoveries. The MSD was not analyzed due to sample loss during extraction. The remaining MS/LCS criteria were met.

The laboratory inadvertently reported Method 8015B instead of Method 8015C. The laboratory stated that a revision stating Method 8015C is pending.

Field duplicate/sample results between PAD-7 and PAD-X exhibited acceptable precision (RPD<35), where applicable. No data transcription or calculation check errors were noted. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

SW-846 Method 6850 – Perchlorate

Technical holding time and sample preservation criteria were met. The instrument performance check, instrument calibration, blank, surrogate, MS/MSD, LCS, and sample/field

sample duplicate results were met, except where noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

The MS recovered low and the MSD recovered high for PAD-4 for perchlorate (63/460%). The inconsistency with the MS and MSD results indicated a lack of sample homogeneity. Associated detected results for perchlorate were qualified as estimated due to this QC discrepancy. See data validation for qualified results.

Laboratory results for non-PAD locations are not required by the permit and were not submitted on final summary tables for the annual event.

Field duplicate/sample results between PAD-7 and PAD-X exhibited acceptable precision (RDP<35), where applicable. No data transcription or calculation check errors were noted. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

SW-846 Method 6010C/3050B (soil)/3005A (water) – Inorganics (total)

Technical holding time and sample preservation criteria were met. Instrument calibration and calibration verification requirements were met. QL standards, blanks, interference check samples, MS/MSD, LCS and serial dilution samples were analyzed as required and acceptable criteria were met except where noted below. No data transcription or calculation check errors were noted. Deviations from quality control acceptance criteria that were identified during the data review process are summarized below.

The MS/MSD for PAD-4 recovered low for lead. For lead, the original sample concentration exceeded the matrix spike concentration by more than a factor of four and therefore no data qualification was required.

The MS and/or MSD recovered low for arsenic, barium and chromium. Results for arsenic, barium and chromium were qualified as estimated due to the low MS/MSD recoveries. The remaining MS/MSD criteria were met.

Chromium and lead did not meet the serial dilution percent difference requirement (10%). Results for chromium and lead were qualified as estimate "J" to note the observed QC deficiency. The inconsistency with the sample and serial dilution indicated a lack of sample homogeneity.

Field duplicate/sample results exhibited acceptable precision (RPD <60), where applicable. No data transcription or calculation check errors were noted. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

SW-846 Method 7196A/3060A (Soil) – Hexavalent Chromium

Technical holding time and sample preservation criteria were met. Instrument calibration and calibration verification criteria were met. Blank, duplicate, and laboratory control sample results were within control limits, except where noted below. The method of standard additions

was used for the analysis of the extracts. No deviations from specific control limits and QA/QC controls were identified during the data review process.

The laboratory used batch QC (LCS/LCSD) to meet the MS/MSD criteria and no data qualifications were needed.

Field duplicate/sample results between PAD-7 and PAD-X exhibited acceptable precision, where applicable. No data transcription or calculation check errors were noted. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

SW-846 Method 7470A (Water)/7471A (Soil) – Mercury-total

Technical holding time and sample preservation criteria were met. Instrument calibration and calibration verification criteria were met. QL standards, blanks, MS/MSD, and LCS samples were analyzed as required and applicable criteria were met, except where noted below. No deviations from quality control acceptance criteria were identified during the data review process.

Field duplicate/sample results between PAD-7 and PAD-X exhibited acceptable precision, where applicable. No data transcription or calculation check errors were noted. Sample weights varied and sample QL and DLs were adjusted accordingly. No detections were reported above the AL.

SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANIC DATA VALIDATION

Eurofins Lancaster Laboratories Environmental, Lancaster, PA; SDG: RAE24

Comments: *Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 5 gram sample (Method 5035A) or 5 ml (Method 5030C). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

Does Laboratory analyte list correspond to analyte list requested? _X_ yes ___ no

A. QC DELIVERABLES PACKAGE:

1. Was the case narrative present/signed by a lab representative? ☑ YES ☐ NO
2. Was the Chain of Custody present/signed by a lab representative? ☑ YES ☐ NO
3. Were the sample results included for the sample locations? ☑ YES ☐ NO
4. Were the required target analytes reported? ☑ YES ☐ NO
5. Were the analyte RLs reported on sample summary sheets in agreement with the instrument specific MDL study? ☑ YES ☐ NO
6. Were sample locations, analytes and QLs in agreement with the electronic deliverable (EDD)? ☑ YES ☐ NO

Comments: QC deliverables package requirements were met. Project reporting limits were supported by the low calibration standard.

B. QC HISTORY DOCUMENTATION CRITERIA:

1. Was an instrument specific MDL study provided, which included DL and RL values for the target analytes? ☑ YES ☐ NO
2. Was the calibration range specified? ☑ YES ☐ NO
3. Was the initial demonstration of proficiency data provided for each target analyte? ☑ YES ☐ NO

Comments: QC history documentation provided as a revision.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1. Was the 14-day sample collection to analysis holding time met? ☑ YES ☐ NO
2. Were the samples received at ≤6°C, zero headspace? ☑ YES ☐ NO
3. Was the pH of each sample adjusted to < 2 with HCl? (water) ☑ YES ☐ NO

Comments: Applicable holding time and preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

1. Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period during which standards or samples were analyzed? ☑ YES ☐ NO
2. Was there documentation of the injection of 5-50 ng bromofluorobenzene (BFB)? ☑ YES ☐ NO
3. If the BFB spectra was taken from a calibration standard was the on-column amount 5-50 ng? ☑ NA ☐ YES ☐ NO

4. Were the ion abundance criteria met? ☑ YES ☐ NO
5. Were calibration, blank, and sample analyses performed within 12 hours of tuning? ☑ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Was the internal standard (IS) which was selected for target analyte RF calculation the IS which had the closest retention time? ☑ YES ☐ NO
2. Were the target analytes included in the ICAL? ☑ YES ☐ NO
3. Were any calibration levels removed from the curve that would negatively influence the data integrity? ☐ YES ☑ NO
4. Did the ICALs consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL? ☑ YES ☐ NO
6. Was the calibration curve developed using the same purge volume used for sample analysis? ☑ YES ☐ NO
7. Were 8260C minimum Relative Response Factor (RRF) criteria met? *Refer to Table 4- SW-846 Method 8260C (Rev3 2/06) for specific analyte RRFs* ☑ YES ☐ NO
8. Was each target analyte %RSD ≤ 20%? ☐ YES ☑ NO
9. Was the correlation coefficient >0.99 for target analytes with ≥20 % RSD? (*System recalibrated if >10% analytes fail above condition)* ☑ YES ☐ NO
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
11. Was the recovery within 70-130%? ☑ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL ? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☑ YES ☐ NO
2. For linear regression curves, was the concentration of the low calibration point within ±30% for detected analytes only? ☑ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☑ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☑ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met? *Refer to Table 4- SW-846 Method 8260C (Rev3 2/06) for specific analyte RRFs* ☑ YES ☐ NO
3. Did the target analytes and system monitoring analytes (surrogates) have the % D within ± 20%? ☐ YES ☑ NO
   If "NO", list analytes that exceed these criteria:

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes

(surrogates) have % Ds within ± 20%? ☐ YES ☑ NO

Comments: Calibration verification criteria except as discussed above.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards, prior to sample analysis, and once for every 12 hour period beginning with the injection of BFB? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ YES ☐ NO
3. Were the trip blanks and method blanks interference free? ☑ YES ☐ NO
4. List target analytes detected in the blanks:
5. Was the blank concentration <5% of the MCL for the analyte? ☑ YES ☐ NO
6. Did any samples contain high concentrations of VOCs in excess of the linear range of the calibration curve? ☐ YES ☑ NO
7. Were one or more blanks analyzed following the high concentration sample to prevent cross contamination? ☑ NA ☐ YES ☐ NO

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? ☑ YES ☐ NO
   - dibromofluoromethane (68-110%)
   - 4-bromofluorobenzene (59-113%)
   - toluene-d_8 (84-138%)
   - 1,2-dichloroethane-d_4 (70-121%)
2. Were recoveries within the specified ranges? ☑ YES ☐ NO
   If "NO", corrective action is required. Flagging of the data as estimated is not acceptable until corrective action has been attempted.
3. Were samples with surrogates outside the QC window reanalyzed? *NA*

Comments: The surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	*%R Soil*	*RPD Soil*
1,1-dichloroethene	59-172	22
trichloroethene	62-137	24
benzene	66-142	21
toluene	59-139	21
chlorobenzene	60-133	21

1. Was a matrix spike and matrix spike duplicate (MS/MSD) analyzed per sample batch or every 20 samples, whichever may occur first? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. List MS target analytes not within recovery ranges: *See comment*
   Target analyte recoveries within CLP or laboratory control limits for soils
5. Was a LCS analyzed to address failed MS criteria? ☑ YES ☐ NO
6. Did the LCS for the failed MS analyte(s) fall within the recovery ranges and was the problem identified as matrix interference? ☑ YES ☐ NO

7. Were any analytes flagged as estimated concentrations? ☑ YES ☐ NO
8. List analytes flagged as estimated concentrations: *See comment.*
9. RPD ≤20 if not otherwise specified. ☑ YES ☐ NO

Comments: MS/MSD criteria were met. CLP guidelines for %R were used; if no CLP guidelines, laboratory control limits were used.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain the required target analytes? ☑ YES ☐ NO
3. List the LCS acceptance criteria: 80-120% / 70-130% (poor purge analytes)
4. List the LCS analytes which were not within the specified ranges: *None*
5. Were any analytes flagged as estimated due to LCS criteria? ☑ YES ☐ NO

Comments: See data validation summary.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards used? ☑ YES ☐ NO
   - fluorobenzene, chlorobenzene-d_5,1,4-dichlorobenzene-d_4
2. Were IS areas within - 50% to + 100% of the last CV? ☑ YES ☐ NO
3. Were IS retention times within ± 30 seconds of the last CV? ☑ YES ☐ NO

Comments: Internal standard criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
   * Characteristic ions maximize in the same scan or within one scan of each other
   * Characteristic ions present in the standard spectra and the sample spectra for analytes detected above the RL
   * Relative intensities of ions between the standard and sample spectra within ± 30 %
3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments: Target analyte identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should have been based on a calibration curve using the first or higher order regression fit of the five calibration points.

1. Evaluate analytes detected above the RL whose %RSD was >20%: *none*
   a. Was the quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
   b. Was the curve forced through the origin? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a target analyte concentration

that exceeded the initial calibration range? ☐ YES ☑ NO
-If so, was the sample reanalyzed at a higher dilution? ☑ NA ☐ YES ☐ NO

3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met.

N. LIBRARY SEARCHES:

Comments: Library searches were not requested with this

O. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: The IDOCs remain on file at the laboratory. No other corrective action was taken.

SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Eurofins Lancaster Laboratories Environmental, Lancaster, PA, SDGs: RAE24

Semivolatile (a.k.a, base/neutral and acid extractables) analysis involves sample preparation using SW-846 Method 3550B or 3546, as specified). The semivolatile extracts are concentrated through evaporation. Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).

Does Laboratory analyte list correspond to list requested? _X_ yes ___ no

A. QC DELIVERABLES PACKAGE:

1. Was the case narrative present/signed by a lab representative? ☑ YES ☐ NO
2. Was the Chain of Custody present/signed by a lab representative? ☑ YES ☐ NO
3. Were the sample results included for the sample locations? ☑ YES ☐ NO
4. Did the laboratory report the required target analytes? ☑ YES ☐ NO
5. Were the analyte RLs reported on sample summary sheets supported by the instrument specific MDL study? ☑ YES ☐ NO

Comments: QC deliverables package requirements were met.

B. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1. Was the 14-day sample collection to extraction holding time met? ☑ YES ☐ NO
2. Was the 40-day extraction to analysis holding time met? ☑ YES ☐ NO
3. Were the samples received at $\leq 6^{o}C$? ☑ YES ☐ NO

Comments: Sample collection to extraction/analysis holding times were met. Preservation criteria were met.

C. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:
(Tuning, Injection Port and Column Performance)

1. Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period of standard and/or sample analysis? ☑ YES ☐ NO
2. Was there documentation of the injection of 50 ng of DFTPP? ☑ YES ☐ NO
3. Were the ion abundance criteria met? ☑ YES ☐ NO
4. Was the injection port inertness verified by analysis of 4,4'-DDT? (breakdown <20%) ☑ YES ☐ NO
   - If no, does associated data require qualification? ☑ NA ☐ YES ☐ NO
   - Was the injection port inertness check acceptable? ☐ NA ☑ YES ☐ NO
5. Was column performance checked through the analysis of peak tailing of pentachlorophenol (<3%) and benzidine (<5%)? ☑ YES ☐ NO
   - If no, does associated data require qualification? ☑ NA ☐ YES ☐ NO
   - Was column performance check acceptable? ☐ NA ☑ YES ☐ NO

Comments: Instrument performance check criteria were met.

D. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Were the initial calibrations (ICAL) and any directly associated blanks and samples analyzed within 12-hours of the associated instrument performance (tune) check? ☑ YES ☐ NO
2. Were quantitation ions, used and listed on data, randomly checked against primary quantitation ions as required by Method 8270D and the RFP? ☑ YES ☐ NO
3. Were target analytes included in the ICAL? ☑ YES ☐ NO
4. Did the ICAL consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? ☑ YES ☐ NO
6. Were calibration standards dropped to meet calibration criteria? ☐ YES ☑ NO
7. Were 8270D minimum RRF criteria met?
   Relative Response Factor-range (RRF 0.010-0.900) ☑ YES ☐ NO
   **Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*
8. Was each target analyte %RSD ≤ 20%? ☐ YES ☑ NO
9. Was the correlation coefficient or coefficient of determination >0.99 for target analytes with > 20% RSD? ☑ YES ☐ NO
   **System recalibrated if >10% analytes fail above condition*
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
11. Was the recovery within 70-130%? ☑ YES ☐ NO
12. Was ICV standard prepared from different source from ICAL ? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☑ YES ☐ NO
2. For linear regression curves, was the concentration of the low calibration point within ±30%? ☑ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☑ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

E. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or run independently on another 12-hour analysis period. ☑ YES ☐ NO
2. Was each target analyte % difference/drift ≤ 20%? ☑ YES ☐ NO
   (Corrective action if >20% of analytes in ICAL fail above condition)
3. Were 8270D minimum RRF criteria met?
   Relative Response Factor-range (RRF 0.010-0.900) ☑ YES ☐ NO
   **Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*

Method Validation Performance Criteria:

1. Did target analytes and system monitoring analytes (surrogates) have % Ds within ± 20.0%? ☑ YES ☐ NO
   If "NO," list analytes that exceed this criterion: see attached table

Comments: Calibration verification standard criteria were met.

F. BLANK CRITERIA:

1. Was a method/extraction blank analyzed on each GC/MS system used for sample analysis? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ NA ☐ YES ☐ NO
3. Were the blank samples interference free? ☑ YES ☐ NO
4. List target analytes detected in the blanks: *None*

Comments: Blank criteria were met.

G. SURROGATE CRITERIA:

1. Were the following surrogates used? ☑ YES ☐ NO
   - phenol – d_5 (24-113%)
   - 2-fluorophenol (25-121%)
   - 2,4,6-tribromophenol (19-122%)
   - nitrobenzene – d_5 (23-120%)
   - 2-fluorobiphenyl (30-115%)
   - p-terphenyl - d_{14} (18-137%)
2. Were recoveries within the specified ranges? ☑ YES ☐ NO
3. Were any two base/neutral or acid surrogates out of specification or did any one base/neutral or acid extractable surrogate have a recovery of less than 10%? ☐ YES ☑ NO
   If yes, was reextraction/reanalysis performed to confirm that the non-compliance was due to matrix effects rather than laboratory deficiencies? ☑ NA ☐ YES ☐ NO

Comments: Surrogate recovery criteria were met.

H. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	% R Soil	% RPD Soil
Phenol	26-90	35
2-Chlorophenol	25-102	50
N-Nitroso-di-n-propylamine	41-126	38
4-Chloro-3-methylphenol	26-103	33
Acenaphthene	31-137	19
4-Nitrophenol	11-114	50
2,4-Dinitrotoluene	28-89	47
Pyrene	35-142	36

1. Was a MS/MSD analyzed per sample batch? ☑ YES ☐ NO
2. Did the MS/MSD contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. MS/MSD acceptance range (RPD ≤30 if not otherwise specified): *See certificate of analysis*
5. Were any analytes qualified as estimated due to MS/MSD criteria? ☑ YES ☐ NO
   - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met except where discussed in the data review summary above.

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain required target analytes? ☑ YES ☐ NO
3. List the LCS target analytes and laboratory recovery range:
   See semivolatile certificate of analysis.
4. Were any analytes qualified as estimated due to LCS criteria? ☐ YES ☑ NO

Comments: LCS criteria were met.

J. INTERNAL STANDARDS CRITERIA:

1. Were the following internal standards (IS) used? ☑ YES ☐ NO
   - 1,4-Dichlorobenzene-d_4
   - Naphthalene-d_8
   - Acenapththene-d_{10}
   - Phenanthrene-d_{10}
   - Chrysene-d_{12}
   - Perylene-d_{12}
2. Were IS areas within ± 50% of last CV? ☐ YES ☑ NO
3. Were IS retention times within ± 30 seconds of last CV? ☑ YES ☐ NO

Comments: The internal standard criteria were met except as discussed in the data review summary above.

K. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
   * Characteristic ions maximize in the same scan or within one scan of each other
   * Characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the RL
   * Relative intensities of the ions between the standard and sample spectra within ± 30%
3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments: Target analyte identification criteria were met.

L. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).

1. Evaluate analytes detected above the RL whose %RSD was >20%: *None*
   a. Was quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
   b. Was the curve forced through the origin? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of a target analyte that exceeded the initial calibration range? ☑ YES ☐ NO

-If so, was the sample reanalyzed at a higher dilution? ☑ YES ☐ NO

3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met.

M. LIBRARY SEARCHES:

Comments: Library searches were not requested with this data set.

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: The IDOCs remain on file at the laboratory. No other corrective action was taken.

SW-846 METHOD 8290A (GC/MS) DIOXIN/FURAN DATA VALIDATION

TestAmerica, Knoxville, TN, SDGs: 240-40177-1

Comments: *Target analytes are separated and quantified using a high-resolution gas chromatography and low resolution/mass spectrometry (HRGC/HRMS) extracted with methylene chloride and toluene.*

A. QC DELIVERABLES PACKAGE:

- ☑ Case narrative and Chain of custody present and signed by a laboratory representative
- ☑ Sample results included for the sample locations
- ☑ Project specific target analytes reported at or above permit QL
- ☑ MDL study performed for target analytes and supports permit QL
- ☑ Initial demonstration of proficiency performed (on file at laboratory)
- ☑ Electronic data file reviewed

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ Holding time: extraction within 1 year; analysis within 45 days of extraction
- ☑ Amber glass used for collection (water);
- ☑ Glass used for collection (solid – amber recommended)
- ☑ Samples received at ≤6°C

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

- ☑ Instrument MS performance check solution analyzed at the beginning of each 12-hour period of standard and/or sample analysis (PFK)
- ☑ Window defining mixture (WDM) analyzed at the beginning of each 12-hour period of standard and/or sample analysis
- ☑ Isomer specificity check analyzed at the beginning of each 12-hour period of standard and/or sample analysis
- ☑ Instrument Stability Check at the beginning of each 12-hour period

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ Target analytes included in the ICAL
- ☑ ICAL consisted of a minimum of 5 calibration standards (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or permit QL
- ☑ Analyte %RSD for RR ± 20%/I.S. %RSD for RRF ±35%
- ☑ Ion abundance ratios within control limits

E. CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☑ Calibration verification standard analyzed at the beginning/end of each 12-hour period following the instrument performance check analyses and prior to the method blank and sample analysis
- ☑ Midpoint calibration standard
- ☑ Ion abundance ratios within control limits
- ☑ Analytes have %Difference/Drift for RR within ± 25.0% /I.S. %D for RRF ± 35% (See comment above)

F. BLANK REVIEW CRITERIA:

- ☑ Method/extraction blank analyzed on each extraction
- ☑ Method blank analyzed after calibration and before analytical samples and every 12 hours
- ☑ Interference free

G. LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☑ LCS analyzed with target analytes
- ☑ LCS recovered within laboratory control limits

H. INTERNAL STANDARDS REVIEW CRITERIA:

- ☑ Internal standard added to each extract
- ☑ Internal standard recovery within 40-135%

I. MATRIX SPIKE/MATRIX SPIKE DUPLICATE:

- ☑ MS/MSD recovered within limits, %R within 31-154% range (see comment above)
- ☑ One MS/MSD or duplicate per batch of samples

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data. New detections evaluated as follows:
- ☑ RRTs of the 2,3,7,8-compounds within RRT window acceptable limits
- ☑ RTs of the non-2,3,7,8-compounds within RT windows acceptable limits (WDM)
- ☑ Ion abundance ratios within criteria

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data.
- ☑ 2,3,7,8-TCDF confirmation performed on detected results above the QL
- ☑ Results that exceed the initial calibration range were reanalyzed at a higher dilution.
- ☑ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report).

L. REPORTING:

- ☑ 2,3,7,8-TCDF confirmation performed on results > QL; confirmation results reported
- ☑ Detected results requiring validation are presented on the attached data validation report
- ☑ Isomers reported to at or above the estimated detection limit (EDL)
- ☑ Results above the EDL were included in the TEQ calculation
- ☑ Estimated results were included in the TEQ calculation
- ☑ Non-detections (i.e., not detected above EDL) were not included in the TEQ calculation.
- ☑ Results reported to at or above the TEQ. TEQ calculations are attached.

SW-846 METHOD 8015B GAS CHROMATOGRAPHY TPH-DRO DATA VALIDATION

TestAmerica, North Canton, OH; JN: 240-40177-1

Comment: *Method 8015B involves a solvent extraction (SW-846 Method 3540C) followed by injection onto a capillary column gas chromatograph (GC). Target analytes are separated and quantified by GC and flame ionization detector.*

A. QC DELIVERABLES PACKAGE:

1. Was the case narrative present/signed by a lab representative? ☑ YES ☐ NO
2. Was the Chain of Custody present/signed by a lab representative? ☑ YES ☐ NO
3. Were the sample results included for the sample locations? ☑ YES ☐ NO
4. Did the laboratory report the project specific analyte list? ☑ YES ☐ NO
5. Were QLs supported by the instrument specific MDL study? ☑ YES ☐ NO

Comments: QC deliverables requirements were met.

B. INSTRUMENT QC HISTORY DOCUMENTATION CRITERIA:

1. Were instrument specific DLs for each target analyte provided? ☑ YES ☐ NO
2. Were instrument specific QLs for each target analyte provided? ☑ YES ☐ NO
3. Were the instrument specific check sample data provided? ☑ YES ☐ NO

Comments: QC history documentation criteria were met.

C. CHECK SAMPLE CRITERIA: *(Initial Demonstration of Capability)*

1. Did the check sample contain the required target analytes? ☑ YES ☐ NO
2. Were the check samples analyzed in quadruplicate? ☑ YES ☐ NO
3. Were the average recoveries reported for the target analytes? ☑ YES ☐ NO

Comments: Check sample criteria were met.

D. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1. Was the 14-day sample collection to analysis holding time met? ☑ YES ☐ NO
2. Were the samples received at $\leq 6^{o}C$? ☑ YES ☐ NO

Comments: Preservation and holding time criteria were met.

E. INITIAL GC CALIBRATION CRITERIA:

1. Were target analytes included in the ICAL? ☑ YES ☐ NO
2. Was a minimum five-point calibration performed prior to analyses? ☑ YES ☐ NO
3. Were calibration standards dropped to meet calibration criteria? ☐ YES ☑ NO
4. Was the lowest calibration standard at or below the QL MCL, regulatory compliance or action limit? ☑ YES ☐ NO
5. Were Calibration Factors for the target analytes provided? ☑ YES ☐ NO
6. Were the Relative Standard Deviation (RSD) for target analyte CFs <20% over the established working range? ☑ YES ☐ NO

7. Quantitation Method used by the laboratory: *Average CF*
8. List target analytes with a RSD >20% over the working range: *None*

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION (CV) CRITERIA:

1. Was a CV standard performed once every 12-hours? ☑ YES ☐ NO
2. Did analyte responses have a % Difference (%D) within ± 15%? ☑ YES ☐ NO
3. Was a mid-concentration standard analyzed after 10 samples (recommended) and at the end of the analytical sequence (required)? ☑ YES ☐ NO
4. Were the target analytes included in the CV? ☑ YES ☐ NO

Comments: Calibration verification criteria were met.

G. BLANK CRITERIA:

1. Was a method blank analyzed? ☑ YES ☐ NO
2. Was a trip blank analyzed per analytical batch? ☑ NA ☐ YES ☐ NO
3. List the target analytes identified in the blanks: *None*

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

1. Were the samples spiked with a surrogate? ☑ YES ☐ NO
2. Was the surrogate recovery within control limits? ☑ YES ☐ NO

Comments: Surrogate criteria were met. Surrogate added: n-Nonane 10-110% R.

I. RETENTION TIME (RT) CRITERIA:

1. Were the daily Retention Time (RT) windows reported (C10-C32)? ☑ YES ☐ NO
2. Were surrogate, MS/MSD/LCS RTs within the RT window? ☑ YES ☐ NO

Comments: Retention time criteria were met.

J. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

1. Was a MS/MSD analyzed per sample batch or every 20 samples? ☑ YES ☐ NO
2. Did the MS/MSD contain target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. List the laboratory's % recovery ranges: *10%-124%*
5. List MS target analytes not within the laboratory recovery ranges: *See Comment*
6. Was a LCS standard analyzed to address failed MS criteria? ☑ YES ☐ NO
7. Did the LCS for the failed MS analyte fall within the acceptable recovery ranges and was the problem identified as matrix interference? ☑ YES ☐ NO
8. Were any analytes flagged as estimated concentrations? ☑ YES ☐ NO

Comments: MS/MSD criteria were met except as noted above.

K. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain the required target analytes? ☑ YES ☐ NO
3. List the LCS analytes and the laboratory's acceptable recovery range: *52%-120%.*
4. List the LCS analyte not within the acceptable recovery range: *None.*

Comments: LCS criteria were met.

L. TARGET ANALYTE IDENTIFICATION/QUANTIFICATION:

1. Were the RRTs of the reported analytes within the RT windows? ☑ YES ☐ NO
2. Were RT shifts observed when compared to the last CV? ☐ YES ☑ NO
3. Were the reported analytes confirmed? ☑ YES ☐ NO
4. Were the analyte concentrations which were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO
5. Were dilutions required? ☐ YES ☑ NO
6. Result quantified according to Method 8000? ☑ YES ☐ NO

Comments: No target analytes were confirmed detected above action limit.

M. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: The IDOCs remain on file at the laboratory. No other corrective action was taken.

SW-846 METHOD 8330B (GC) ORGANIC DATA VALIDATION

Mircrobac Laboratories, Inc., Marietta, OH; SDG: L14080080, L14080081, L14091205

A. QC DELIVERABLES PACKAGE:

- ☑ Case narrative present and signed by a laboratory representative
- ☑ Chain of Custody present and signed by a laboratory representative
- ☑ Sample results included for the sample locations
- ☑ Results provided for project specific analytes
- ☑ Quantitation limits (QLs) at permit or project required QL
- ☑ MDL study supports QL
- ☑ Initial demonstration of proficiency performed (on file at laboratory)

B. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- ☑ 14-day sample collection to extraction holding time
- ☑ 40-day extraction to analysis holding time
- ☑ Samples received at $\leq 6^{o}C$
- ☑ Soil samples homogenized and air dried as per method

C. INITIAL CALIBRATION CRITERIA:

- ☑ Each analyte included in the ICAL
- ☑ ICAL consist of a minimum of 5 calibration levels
- ☑ A calibration standard at or below the associated MCL, regulatory compliance, or action limit
- ☑ Calibration levels removed from the curve should not negatively impact the data integrity
- ☑ Linear calibration model used. Correlation coefficient/coefficient of determination >0.99
- ☑ Initial calibration verification analyzed (70-130% Recovery)

D. CALIBRATION VERIFICATION (CV) CRITERIA:

- ☑ CV analyzed at the beginning of each day, after every 20 samples, and at end of the day
- ☑ Analytes have % Difference/Drift within ± 20%.

E. BLANK CRITERIA:

- ☑ Method blank analyzed
- ☑ Sample results evaluated for blank influence, where applicable.
- ☑ Blank analyzed after result exceeding calibration range, if required

F. SURROGATE CRITERIA:

- ☑ 1,2-dinitrobenzene (80-120% Recovery)
- ☑ Surrogate added to the samples

G. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☑ MS/MSD and LCS analyzed for target analytes, where applicable
- ☑ MS/MSD and LCS in range, project specific analytes (laboratory criteria used)

H. REPORTING:

- ☑ Detected analytes or results requiring qualification are presented on the attached table(s).
- ☑ Laboratory reported results to at or above MDL.
- ☑ Results validated to the MDL.
- ☑ Confirmation by secondary column or diode array or mass spectral detection
- ☑ Soil sample results reported on dry weight (dry weight correction factor not applicable as entire soil sample is allowed to dry at room temperature before ground and passed through a 10-mesh sieve)

SW-846 METHOD 6850 (HPLC/MS) PERCHLORATE DATA VALIDATION

Mircrobac Laboratories, Inc., Marietta, OH; SDG: L14080080 and L14080081

Comments: *Method 6850 - uses high performance liquid chromatography (HPLC) coupled with electrospray ionization (ESI) tandem mass spectrometry (MS) for the determination of perchlorate in aqueous and solid matrices.*

A. QC DELIVERABLES PACKAGE:

- ☑ Case narrative and Chain of custody present and signed by a laboratory representative
- ☑ Sample results included for the sample locations
- ☑ Project specific target analytes reported at or above the method detection limit (DL)
- ☑ MDL study performed for target analytes and supports QL
- ☑ Initial demonstration of proficiency performed (on file at laboratory)
- ☑ Electronic data file reviewed

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ Holding time: analyze water samples and extracts of solid samples within 28 days of collection or preparation, respectively
- ☑ Aqueous and soil samples collected and stored with headspace
- ☑ Aqueous samples filtered with 0.2 µm filter in the field –
- ☑ Soils samples: collected in glass amber jars, water samples collected in plastic and -Microbac confirmed filtering of supernatant with 0.45 micron filter prior to analysis

C. INSTUMENT TUNING:

- ☑ Laboratory stated instrument tuned as per manufacturer's instructions

D. INITIAL CALIBRATION REVIEW CRITERIA:

- ☑ Target analytes included in the ICAL
- ☑ ICAL consisted of a minimum of 6 calibration standards recommended (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or permit QL

E. INITIAL/ CONTINUING CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☑ Initial calibration (ICV) prepared from different source from daily standards
- ☑ ICV analyzed immediately after the calibration standards
- ☑ Continuing calibration verification (CCV) standard analyzed at the prior to sample analysis; every 10 samples and at the end of the analytical run
- ☑ Intermediate calibration standard (alternating low to mid concentrations recommended)
- ☑ Initial and continuing verification % recoveries within 85-115%
- ☑ Area counts of internal standards (IS) in CCV must be between 50-150% of the average IS area counts in the standards from the associated ICAL.
- ☑ Low-level calibration verification (LLOQ) standard at or near the QL analyzed daily with recoveries 50-150%

F. BLANK REVIEW CRITERIA:

- ☑ Method blank analyzed on each extraction
- ☑ Method blank analyzed after calibration and before analytical samples

G. LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☑ LCS analyzed with target analytes – matrix matched per batch of 20 samples
- ☑ Concentration near midpoint
- ☑ LCS recovered within limits (80-120%)

H. MATRIX SPIKE/MATRIX SPIKE DUPLICATE/DUPLICATE:

- ☑ MS/MSD recovered within limits, %R within range (80-120%-aqueous /70-130%-solids)
- ☑ One MS/MSD and/or duplicate per batch of 20 samples
- ☑ MS/MSD/DUP RDP is 15% / RPD is 50% for detections near low calibration standard

I. INTERNAL STANDARDS REVIEW CRITERIA:

- ☑ Internal standard added to each extract
- ☑ Area count 50-150% of area count of CCV
- ☑ RT of IS within ±30 seconds of CCV

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

- ☑ The calculated 83/85 area counts ratios within ±30% for area counts of mid-range standard
- ☑ Retention time should not vary by more than 0.2 min

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☑ Quantitation based on internal standard calibration

L. REPORTING:

- ☑ Detected results requiring validation are presented on the attached data validation report
- ☑ Soils/sediments reported on dry-weight basis
- ☑ Results reported within calibration range
- ☑ Results reported to detection limit

M. ADDITIONAL COMMENTS:

INORGANIC DATA EVALUATION FOR ICP SW-846 METHOD 6010C

Test America North Canton, North Canton, OH; JN: 240-40177-1
Preparation Method: 3005A (water)/3050B (soil)

"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTION CRITERIA:
Data Quality Objective: Representativeness
- ☑ Chain of custody - including sampler signatures, date and time of sampling, sample ID, analysis requested; Custody transfers must be signed and dated
- ☑ Specific detection limits/quantitation limit (QLs) for target analytes
- ☑ Standard analyzed at or below the QL (LLQC), digested, 70-130% recovery, analyzed after MDL determination and as needed
- ☑ Passed single blind performance evaluation study within 12 months
- ☑ Passing MDL check sample
- ☑ Target analytes analyzed by requested method

B. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:
Data Quality Objective: Laboratory Method Sensitivity
- ☑ IDOC on file with the laboratory

C. TECHNICAL HOLDING TIME / PRESERVATION / DIGESTION METHOD:
Data Quality Objective: Representativeness
- ☑ 6 month holding time, pH <2 w/ HNO_3
- ☑ Digestion method: 3005A (waters)/3050B (soils)

D. INSTRUMENT CALIBRATION CRITERIA:
Data Quality Objective: Laboratory Accuracy
- ☑ 1 calibration blank and at least 1 standard
  1 calibration blank and at least 3 standards (alternate calibration)
- ☑ Linear curve fit with correlation coefficient r ≥0.998

E. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:
Data Quality Objective: Laboratory Accuracy
- ☑ ICV, analyzed prior to analysis (90-110% R)
- ☑ LLICV concentration at QL, prior to analysis (70-130% R)
- ☑ CCV prior to analysis, after every 10 samples, end of analysis, 90-110%
- ☑ LLCCV concentration at QL, prior to analysis, after each batch of 20 samples and end of analysis (70-130% R)

F. BLANK SAMPLE CRITERIA:
Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation
- Trip Blank (check only if analyzed)
- Equipment Blank (check only if analyzed)
- ☑ Method/Other Lab Blanks (check only if analyzed)
- ☑ Interference free
- ☑ CCB 10 sample frequency

G. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:
Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections
- ☑ ICS analyzed at beginning of analytical run (80-120% ICSAB Recovery)

H. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:
Data Quality Objective: Method Precision in Sample Matrix
- ☑ All analytes, one MSD or sample duplicate per batch of 20 samples

- ☑ RPD ≤ 20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

I. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☑ Recovery of MS analytes within 75-125%
- ☑ All analytes, spiked prior to digestion, one MS per batch of 20 samples
- ☑ Post digestion spike if MS/MSD recoveries fail (80-120 %R)

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☑ LCS for all analytes
- ☑ Recovery 80-120% all analytes
- ☑ Independent source for LCS standard

K. SERIAL DILUTION CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☑ Similar matrix
- ☑ <10% Difference (applicable when concentration >10X QL)

L. SAMPLE RESULTS CRITERIA:

Data Quality Objective: n/a

- ☑ Results reported within ICP linear calibration range
- ☑ Results reported to detection limit

INORGANIC DATA EVALUATION FOR HEXAVALENT CHROMIUM (Cr VI) BY SW-METHOD 7196A

Test America North Canton, North Canton, OH; JN: 240-40177-1
Preparation Method: 3060A

"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:
- ☑ Specific detection limit / QLs for target analyte
- ☑ Passed single blind performance evaluation study within 12 months
- ☑ IDOC for analyst on file with laboratory

B. METHOD INFORMATION DOCUMENTATION:
- ☑ Cr (VI) extracted and analyzed by requested methods

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:
- ☑ Cool ≤6° C; 30 days to extraction/7 days (268 hours) from extraction to analysis
- ☑ Collection and storage without the use of stainless steel devices

D. INSTRUMENT CALIBRATION CRITERIA:
- ☑ 1 calibration blank and at least 3 standards; correlation coefficient ≥ 0.995
- ☑ Color measurement at 540 nm.

E. INITIAL / CONTINUING CALIBRATION VALIDATION CRITERIA:
- ☑ 15 sample frequency/CCV/CCV/ICV Recovery within 90-110%

F. BLANK SAMPLE CRITERIA:
- ☑ Extraction blank per batch; Interference free
- ☑ Continuing calibration blank analysis every 15 samples

G. MATRIX DUPLICATE SAMPLE CRITERIA:
- ☑ One sample duplicate for every 20 samples
- ☑ RPD ≤20 between sample and duplicate results > 4X QL
  (Control limit +/- the laboratory QL used when the original and/or the duplicate sample is < four times the laboratory reporting limit.)

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:
- ☑ %Recovery 85-115%

I. LABORATORY CONTROL SAMPLE (LCS) SAMPLE CRITERIA:
- ☑ One soluble and insoluble LCS analyzed for every 20 samples; LCS 80-120%

J. SAMPLE RESULTS / QUANTITAION CRITERIA:
- ☑ Method of Standard Addition (MSA) performed for each sample
- ☑ Correlation coefficient ≥ 0.995 for each sample analyzed by MSA
- ☑ Sample results reported within calibration range using MSA
- ☑ Sample results reported to the method detection limit
- ☑ Minimum 10% data calculation checks

Example MSA Calculation:
For each sample, calculate the linear regression and correlation coefficient of each spiked aliquot using:

$$y = m x + b$$

y = response
x = concentration of the standard
m = slope
b = y-intercept

Verify that the correlation coefficient (R) is ≥ 0.995

After calculating the slope and y-intercept for each sample, calculate the concentration of the sample results from MSA using:

$$x = b/m$$

Calculation of PAD-2 by Method of Standard (MSA) Addition:

Spike Add Conc. (mg/kg)	Absorbance
0	0.011
0.79	0.021
3.95	0.07
19.76	0.303
R	0.99998
slope (m)	0.01481
y-intercept (b)	0.01055
Sample Result (x): x = b/m (mg/kg) (wet weight)	0.7124

INORGANIC DATA EVALUATION FOR MERCURY BY COLD VAPOR AA SW-846 METHOD 7470A (WATER)/7471A (SOIL)

Test America North Canton, North Canton, OH; JN: 240-40177-1

Does Laboratory analyte list correspond to analyte list requested? X yes ___no
"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:
- ☑ Specific detection limits/quantitation limit (QLs) for target analyte
- ☑ Standard analyzed at the QL (70-130% R)
- ☑ Passed single blind performance evaluation study within 12 months
- ☑ IDOC for analyst on file at laboratory

B. METHOD INFORMATION DOCUMENTATION:
- ☑ Mercury analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:
- ☑ 28 day holding time
- ☑ (Water) Adjust pH <2 w/ HNO_3

D. INSTRUMENT CALIBRATION CRITERIA:
- ☑ 1 calibration blank and at least 3 standards
- ☑ Correlation coefficient for curve ≥ 0.995
- ☑ Instrument calibrated for every analytical sequence for every method

E. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:
- ☑ 10 sample frequency for CCV
- ☑ Recovery within 80-120%

F. BLANK SAMPLE CRITERIA:
- N/A Trip Blank (check only if analyzed)
- ☑ Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed)
- ☑ Interference free

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:
- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:
- ☑ Recovery within 75-125% range
- ☑ One MS per batch of 20 samples
- ☑ Spike added prior to digestion

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:
- ☑ LCS for mercury
- ☑ Recovery within 80-120%
- ☑ Independent source for LCS

J. SAMPLE RESULTS CRITERIA:

- ☑ Sample results reported within instrument calibration range
- ☑ Sample results reported to the method detection limit
- ☑ Minimum 10% data calculation checks

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Summary of Target Analytes

Open Burning Ground (OBG) Soil Monitoring Program-HWMU 13 Event Date: July 2014 (Third Quarter 2014)

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
1,1-Dichloroethene											
Trip Blank2	0.8	U	U		5	0.8	0.005	1100	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	0.8	U	U		5	0.8	0.005	1100	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.005	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.001	U	U		0.005	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.005	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.001	U	U		0.005	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	1100	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
1,2-Dichloroethane											
Trip Blank2	1	U	U		5	1	0.005	2.2	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	1	U	U		5	1	0.005	2.2	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.005	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.005	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.001	U	U		0.005	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-5	0.001	U	U		0.005	0.001	0.005	2.2	8260C	mg/kg	Analyte not detected at or above DL or QL.
1,3,5-Trinitrobenzene											
PAD-2	0.26	U	U		0.26	0.104	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	27000	8330B	mg/kg	Analyte not detected at or above DL or QL.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
1,3-Dinitrobenzene											
PAD-2	0.26	U	U		0.26	0.104	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
2,4,6-Trinitrotoluene											
SB-2	0.527		0.527	J	0.257	0.103	0.25	79	8330B	mg/kg	MS/MSD recovered high (144/139%).
POND-1	0.327		0.327	J	0.252	0.101	0.25	79	8330B	mg/kg	MS/MSD recovered high (144/139%).
PAD-2	0.26	U	U		0.26	0.104	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	0.249	U	U		0.249	0.083	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
NB-2	0.247	U	U		0.247	0.0989	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
SB-1	0.241	U	U		0.241	0.0964	0.25	79	8330B	mg/kg	Analyte not detected at or above DL or QL.
NB-1	0.131	J	0.131	J	0.247	0.0986	0.25	79	8330B	mg/kg	Result < QL. MS/MSD recovered high (144/139%).
2,4-Dichlorophenol											
PAD-6	0.18	U	U		0.35	0.18	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.17	U	U		0.35	0.17	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.092	U	U		0.18	0.092	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
PAD-X	0.018	U	U		0.035	0.018	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-5	0.017	U	U		0.034	0.017	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.017	U	U		0.034	0.017	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.017	U	U		0.034	0.017	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.017	U	U		0.034	0.017	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.017	U	U		0.035	0.017	0.33	1800	8270D	mg/kg	Analyte not detected at or above DL or QL.

Summary of Target Analytes

Open Burning Ground (OBG) Soil Monitoring Program-HWMU 13 Event Date: July 2014 (Third Quarter 2014)

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
2,4-Dinitrotoluene											
PAD-4	3.18		3.18		0.252	0.101	0.25	5.5	8330B	mg/kg	Verification event performed on September 18, 2014. Verification result reported. Verification duplicate result (PAD-X) was ND. Original result 13.4 mg/kg.
POND-1	2.28		2.28		0.252	0.101	0.25	5.5	8330B	mg/kg	No action taken.
PAD-5	0.433		0.433		0.248	0.099	0.25	5.5	8330B	mg/kg	Verification event performed on September 18, 2014. Verification result reported. Original result 6.76 mg/kg
PAD-2	0.26	U	U		0.26	0.104	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
SB-2	0.257	U	U		0.257	0.103	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.249		U		0.249	0.0997	0.25	5.5	8330B	mg/kg	Verification event performed on September 18, 2014. Verification result reported. Original result 9.07 mg/kg.
BERM-1	0.249	U	U		0.249	0.083	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
NB-2	0.247	U	U		0.247	0.0989	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
NB-1	0.247	U	U		0.247	0.0986	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
SB-1	0.241	U	U		0.241	0.0964	0.25	5.5	8330B	mg/kg	Analyte not detected at or above DL or QL.
2,6-Dinitrotoluene											
PAD-1	0.418		0.418	J	0.253	0.101	0.25	1.2	8330B	mg/kg	MS recovered high (132%).
PAD-2	0.26	U	U		0.26	0.104	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-8	0.249	U	U		0.249	0.0996	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	1.2	8330B	mg/kg	Analyte not detected at or above DL or QL.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
2-Amino-4,6-Dinitrotoluene											
PAD-2	0.26	U	U		0.26	0.104	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
SB-2	0.257	U	U		0.257	0.103	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
POND-1	0.252	U	U		0.252	0.101	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	0.249	U	U		0.249	0.083	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
NB-2	0.247	U	U		0.247	0.0989	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
NB-1	0.247	U	U		0.247	0.0986	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
SB-1	0.241	U	U		0.241	0.0964	0.25	2000	8330B	mg/kg	Analyte not detected at or above DL or QL.
2-Chlorophenol											
PAD-6	0.18	U	U		0.35	0.18	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.17	U	U		0.35	0.17	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.092	U	U		0.18	0.092	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
PAD-X	0.018	U	U		0.035	0.018	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-7	0.017	U	U		0.035	0.017	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.017	U	U		0.034	0.017	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.017	U	U		0.034	0.017	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.017	U	U		0.034	0.017	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.017	U	U		0.034	0.017	0.33	5100	8270D	mg/kg	Analyte not detected at or above DL or QL.
2-Nitrotoluene											
PAD-2	0.26	U	U		0.26	0.104	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	13	8330B	mg/kg	Analyte not detected at or above DL or QL.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
3,3'-Dimethylbenzidine											
PAD-6	5.3	U	U	AJ	11	5.3	1.6	0.16	8270D	mg/kg	Analyzed in dilution (1:10). Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover.
PAD-3	5.2	U	U	AJ	10	5.2	1.6	0.16	8270D	mg/kg	Analyte not detected at or above DL or QL. QL and DL exceeds the AL. Analyzed in dilution (1:10). MS/MSD did not recover.
PAD-4	2.8	U	U	AJ	5.5	2.8	1.6	0.16	8270D	mg/kg	Analyzed in dilution (1:5). Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover.
PAD-X	0.53	U	U	AJ	1.1	0.53	1.6	0.16	8270D	mg/kg	Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover. Field duplicate for PAD-7.
PAD-7	0.52	U	U	AJ	1	0.52	1.6	0.16	8270D	mg/kg	Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover.
PAD-2	0.51	U	U	AJ	1	0.51	1.6	0.16	8270D	mg/kg	Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover.
PAD-1	0.51	U	U	AJ	1	0.51	1.6	0.16	8270D	mg/kg	Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover.
PAD-8	0.51	U	U	AJ	1	0.51	1.6	0.16	8270D	mg/kg	Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover.
PAD-5	0.51	U	U	AJ	1	0.51	1.6	0.16	8270D	mg/kg	Analyte not detected at or above DL or QL. QL and DL exceeds the AL. MS/MSD did not recover.
3-Methylphenol											
PAD-6	0.18	U	U		0.35	0.18	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-3	0.17	U	U		0.35	0.17	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-4	0.092	U	U		0.18	0.092	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5). 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-X	0.018	U	U		0.035	0.018	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds. Field duplicate for PAD-7.
PAD-1	0.017	U	U		0.034	0.017	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-2	0.017	U	U		0.034	0.017	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-8	0.017	U	U		0.034	0.017	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-7	0.017	U	U		0.035	0.017	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-5	0.017	U	U		0.034	0.017	0.33	31000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
3-Nitrotoluene											
PAD-2	0.26	U	U		0.26	0.104	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
4-Amino-2,6-Dinitrotoluene											
PAD-2	0.26	U	U	J	0.26	0.104	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
SB-2	0.257	U	U	J	0.257	0.103	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
PAD-5	0.255	U	U	J	0.255	0.102	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
PAD-X	0.254	U	U	J	0.254	0.101	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%). Field duplicate for PAD-7.
PAD-1	0.253	U	U	J	0.253	0.101	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
POND-1	0.252	U	U	J	0.252	0.101	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
BERM-1	0.249	U	U	J	0.249	0.12	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
PAD-8	0.249	U	U	J	0.249	0.0996	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
NB-1	0.247	U	U	J	0.247	0.0986	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
PAD-4	0.247	U	U	J	0.247	0.0986	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
NB-2	0.247	U	U	J	0.247	0.0989	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
PAD-3	0.244	U	U	J	0.244	0.0977	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
PAD-7	0.243	U	U	J	0.243	0.0973	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
PAD-6	0.242	U	U	J	0.242	0.0966	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).
SB-1	0.241	U	U	J	0.241	0.0964	0.25	1900	8330B	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (72%).

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
4-Methylphenol											
PAD-6	0.18	U	U		0.35	0.18	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-3	0.17	U	U		0.35	0.17	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-4	0.092	U	U		0.18	0.092	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5). 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-X	0.018	U	U		0.035	0.018	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. Result represents total of both compounds. Field duplicate for PAD-7.
PAD-5	0.017	U	U		0.034	0.017	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-8	0.017	U	U		0.034	0.017	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-7	0.017	U	U		0.035	0.017	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-2	0.017	U	U		0.034	0.017	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
PAD-1	0.017	U	U		0.034	0.017	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL. 3-Methylphenol and 4-Methylphenol cannot be resolved. The result represents the total of both compounds.
4-Nitrophenol											
PAD-6	1.8	U	U		5.3	1.8	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	1.7	U	U		5.2	1.7	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.92	U	U		2.8	0.92	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
PAD-X	0.18	U	U		0.53	0.18	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.17	U	U		0.51	0.17	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.17	U	U		0.51	0.17	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.17	U	U		0.51	0.17	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.17	U	U		0.51	0.17	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.17	U	U		0.52	0.17	1.6	7	8270D	mg/kg	Analyte not detected at or above DL or QL.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
4-Nitrotoluene											
PAD-2	0.26	U	U		0.26	0.104	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	110	8330B	mg/kg	Analyte not detected at or above DL or QL.
Acetophenone											
PAD-6	0.18	U	U		0.35	0.18	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.17	U	U		0.35	0.17	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.092	U	U		0.18	0.092	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
PAD-X	0.018	U	U		0.035	0.018	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-5	0.017	U	U		0.034	0.017	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.017	U	U		0.034	0.017	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.017	U	U		0.034	0.017	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.017	U	U		0.035	0.017	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.017	U	U		0.034	0.017	0.33	100000	8270D	mg/kg	Analyte not detected at or above DL or QL.
Arsenic											
SB-2	2.2		2.2	J	1.9	0.39	1	15.8	6010C	mg/kg	MSD recovered low (71%).
PAD-2	2.2		2.2	J	1.5	0.3	1	15.8	6010C	mg/kg	MSD recovered low (71%).
SB-1	2.1		2.1	J	1.7	0.35	1	15.8	6010C	mg/kg	MSD recovered low (71%).
PAD-4	2		2	J	1.5	0.31	1	15.8	6010C	mg/kg	MSD recovered low (71%).
PAD-7	1.9		1.9	J	1.4	0.29	1	15.8	6010C	mg/kg	MSD recovered low (71%).
BERM-1	1.8		1.8	J	1.4	0.28	1	15.8	6010C	mg/kg	MSD recovered low (71%).
POND-1	1.7		1.7	J	1.3	0.27	1	15.8	6010C	mg/kg	MSD recovered low (71%).
PAD-5	1.6		1.6	J	1.3	0.27	1	15.8	6010C	mg/kg	MSD recovered low (71%).
NB-1	1.6		1.6	J	1.6	0.32	1	15.8	6010C	mg/kg	MSD recovered low (71%).
PAD-8	1.4		1.4	J	1.4	0.28	1	15.8	6010C	mg/kg	MSD recovered low (71%).
PAD-1	1.4		1.4	J	1.4	0.27	1	15.8	6010C	mg/kg	MSD recovered low (71%).
PAD-X	1.4		1.4	J	1.2	0.24	1	15.8	6010C	mg/kg	MSD recovered low (71%). Field duplicate for PAD-X. RPD = 30
NB-2	1.3	J	1.3	J	1.7	0.35	1	15.8	6010C	mg/kg	Result < QL. MSD recovered low (71%).
PAD-3	1.2	J	1.2	J	1.4	0.27	1	15.8	6010C	mg/kg	Result < QL. MSD recovered low (71%).
PAD-6	0.88	J	0.88	J	1.5	0.29	1	15.8	6010C	mg/Kg	Result < QL. MSD recovered low (71%).

Summary of Target Analytes

Open Burning Ground (OBG) Soil Monitoring Program-HWMU 13 Event Date: July 2014 (Third Quarter 2014)

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Barium											
PAD-5	140	B	140	J	18	0.11	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-4	140		140	J	21	0.12	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-2	120	B	120	J	20	0.12	20	190000	6010C	mg/kg	MSD recovered low (44%).
SB-2	120	B	120	J	26	0.15	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-X	120	B	120	J	16	0.097	20	190000	6010C	mg/kg	MSD recovered low (44%). Field duplicate for PAD-7. RPD = 18.
NB-1	110	B	110	J	21	0.13	20	190000	6010C	mg/kg	MSD recovered low (44%).
NB-2	100	B	100	J	23	0.14	20	190000	6010C	mg/kg	MSD recovered low (44%).
SB-1	100	B	100	J	23	0.14	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-7	100	B	100	J	19	0.12	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-6	92	B	92	J	20	0.12	20	190000	6010C	mg/kg	MSD recovered low (44%).
POND-1	92	B	92	J	18	0.11	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-3	92	B	92	J	18	0.11	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-1	89	B	89	J	18	0.11	20	190000	6010C	mg/kg	MSD recovered low (44%).
BERM-1	81	B	81	J	19	0.11	20	190000	6010C	mg/kg	MSD recovered low (44%).
PAD-8	80	B	80	J	19	0.11	20	190000	6010C	mg/kg	MSD recovered low (44%).
Benzene											
Trip Blank1	0.5	U	U		5	0.5	0.005	5.4	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank2	0.5	U	U		5	0.5	0.005	5.4	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-4	0.0007	U	U		0.007	0.0007	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.0006	U	U		0.006	0.0006	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.0005	U	U		0.005	0.0005	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-3	0.0005	U	U		0.005	0.0005	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.0005	U	U		0.005	0.0005	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.0005	U	U		0.005	0.0005	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.0005	U	U		0.005	0.0005	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.0005	U	U		0.005	0.0005	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.0005	U	U		0.005	0.0005	0.005	5.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
Benzo(a)anthracene											
PAD-6	0.035	U	U		0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.035	U	U		0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.027	J	0.027	J	0.094	0.018	0.33	2.1	8270D	mg/kg	Result < QL. Analyzed in dilution (1:5).
PAD-2	0.005	J	0.005	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Result < QL.
PAD-X	0.004	U	U		0.018	0.004	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-8	0.003	U	U		0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.003	U	U		0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.003	U	U		0.018	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.003	U	U		0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL.

SEE LAST PAGE FOR DATA QUALIFIER DEFINITIONS.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Benzo(a)pyrene											
PAD-6	0.035	U	U	J	0.18	0.035	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-3	0.035	U	U	J	0.18	0.035	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-4	0.018	U	U	J	0.094	0.018	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5). The internal standard (IS) area was outside control limits. Result estimated.
PAD-X	0.004	U	U	J	0.018	0.004	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated. Field duplicate for PAD-7.
PAD-7	0.003	U	U	J	0.018	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-1	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-5	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-2	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-8	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
Benzo(b)fluoranthene											
PAD-6	0.035	U	U	J	0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-3	0.035	U	U	J	0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-4	0.018	U	U	J	0.094	0.018	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5). The internal standard (IS) area was outside control limits. Result estimated.
PAD-X	0.014	J	0.014	J	0.018	0.004	0.33	2.1	8270D	mg/kg	Result < QL. The internal standard (IS) area was outside control limits. Result estimated. Field duplicate for PAD-7. RPD not calculable.
PAD-2	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-5	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-7	0.003	U	U	J	0.018	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-1	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-8	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Benzo(k)fluoranthene											
PAD-3	0.035	U	U	J	0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-6	0.035	U	U	J	0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-4	0.018	U	U	J	0.094	0.018	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5). The internal standard (IS) area was outside control limits. Result estimated.
PAD-X	0.004	U	U	J	0.018	0.004	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated. Field duplicate for PAD-7.
PAD-1	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-7	0.003	U	U	J	0.018	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-2	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-5	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-8	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
Benzyl Chloride											
Trip Blank2	1	U	U		5	1	0.005	4.9	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	1	U	U		5	1	0.005	4.9	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.004	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.004	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.005	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.004	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-5	0.001	U	U		0.004	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.004	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.004	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.001	U	U		0.004	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U	J	0.006	0.001	0.005	4.9	8260C	mg/kg	Analyte not detected at or above DL or QL. Internal standard recovered outside the lower area control limit.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
bis(2-Ethylhexyl)phthalate											
PAD-3	7.9		7.9		1.8	0.69	0.33	120	8270D	mg/kg	Analyzed in dilution (1:10).
NB-1	0.7		0.7		0.2	0.079	0.33	120	8270D	mg/kg	No action taken.
PAD-6	0.7	U	U		1.8	0.7	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
SB-2	0.47		0.47		0.23	0.09	0.33	120	8270D	mg/kg	No action taken.
PAD-4	0.37	U	U		0.94	0.37	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
NB-2	0.34		0.34		0.19	0.075	0.33	120	8270D	mg/kg	No action taken.
PAD-1	0.31		0.31		0.17	0.068	0.33	120	8270D	mg/kg	No action taken.
PAD-X	0.18	J	0.18	J	0.18	0.071	0.33	120	8270D	mg/kg	Result < QL. Field duplicate for PAD-7. RPD not calculable.
SB-1	0.086	U	U		0.22	0.086	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	0.082	J	0.082	J	0.17	0.068	0.33	120	8270D	mg/kg	Result < QL.
PAD-7	0.07	U	U		0.18	0.07	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL.
POND-1	0.069	U	U		0.18	0.069	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.068	U	U		0.17	0.068	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.068	U	U		0.17	0.068	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.067	U	U		0.17	0.067	0.33	120	8270D	mg/kg	Analyte not detected at or above DL or QL.
Bromomethane											
Trip Blank1	1	U	U		5	1	0.005	32	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank2	1	U	U		5	1	0.005	32	8260C	ug/l	Analyte not detected at or above DL or QL.
SB-2	0.003	U	U		0.008	0.003	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.003	U	U		0.007	0.003	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
NB-1	0.003	U	U		0.007	0.003	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
SB-1	0.003	U	U		0.007	0.003	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
NB-2	0.002	U	U		0.006	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
POND-1	0.002	U	U		0.006	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.002	U	U		0.006	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.002	U	U		0.005	0.002	0.005	32	8260C	mg/kg	Analyte not detected at or above DL or QL.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Butylbenzylphthalate											
PAD-6	0.7	U	U		1.8	0.7	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.69	U	U		1.7	0.69	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.37	U	U		0.92	0.37	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
PAD-X	0.071	U	U		0.18	0.071	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-7	0.07	U	U		0.17	0.07	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.068	U	U		0.17	0.068	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.068	U	U		0.17	0.068	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.068	U	U		0.17	0.068	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.067	U	U		0.17	0.067	0.33	910	8270D	mg/kg	Analyte not detected at or above DL or QL.
Cadmium											
NB-1	0.43	J	0.43	J	0.53	0.038	0.5	800	6010C	mg/kg	Result < QL.
SB-2	0.39	J	0.39	J	0.64	0.046	0.5	800	6010C	mg/kg	Result < QL.
PAD-4	0.27	J	0.27	J	0.51	0.037	0.5	800	6010C	mg/kg	Result < QL.
PAD-2	0.23	J	0.23	J	0.51	0.036	0.5	800	6010C	mg/kg	Result < QL.
SB-1	0.23	J	0.23	J	0.58	0.041	0.5	800	6010C	mg/kg	Result < QL.
NB-2	0.2	J	0.2	J	0.58	0.042	0.5	800	6010C	mg/kg	Result < QL.
BERM-1	0.16	J	0.16	J	0.47	0.034	0.5	800	6010C	mg/kg	Result < QL.
PAD-6	0.16	J	0.16	J	0.49	0.035	0.5	800	6010C	mg/kg	Result < QL.
POND-1	0.14	J	0.14	J	0.45	0.032	0.5	800	6010C	mg/kg	Result < QL.
PAD-X	0.12	J	0.12	J	0.41	0.029	0.5	800	6010C	mg/kg	Result < QL. Field duplicate for PAD-7.
PAD-1	0.12	J	0.12	J	0.45	0.033	0.5	800	6010C	mg/kg	Result < QL.
PAD-7	0.11	J	0.11	J	0.48	0.035	0.5	800	6010C	mg/kg	Result < QL.
PAD-5	0.11	J	0.11	J	0.45	0.032	0.5	800	6010C	mg/kg	Result < QL.
PAD-3	0.1	J	0.1	J	0.46	0.033	0.5	800	6010C	mg/kg	Result < QL.
PAD-8	0.059	J	0.059	J	0.46	0.033	0.5	800	6010C	mg/kg	Result < QL.
Carbon Tetrachloride											
Trip Blank2	1	U	U		5	1	0.005	3	8260C	ug/l	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
Trip Blank1	1	U	U		5	1	0.005	3	8260C	ug/l	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-5	0.001	U	U	J	0.005	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-2	0.001	U	U	J	0.005	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-X	0.001	U	U	J	0.005	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%). Field duplicate for PAD-7.
PAD-8	0.001	U	U	J	0.005	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-4	0.001	U	U	J	0.007	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-3	0.001	U	U	J	0.005	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-7	0.001	U	U	J	0.006	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-6	0.001	U	U	J	0.005	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).
PAD-1	0.001	U	U	J	0.005	0.001	0.005	3	8260C	mg/kg	Analyte not detected at or above DL or QL. CV %D > +/- 20 (26%).

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Chlorobenzene											
Trip Blank2	0.8	U	U		5	0.8	0.005	1400	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	0.8	U	U		5	0.8	0.005	1400	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.001	U	U		0.005	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.005	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.001	U	U		0.005	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.005	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	1400	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
Chloroform											
Trip Blank1	0.8	U	U		5	0.8	0.005	1.5	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank2	0.8	U	U		5	0.8	0.005	1.5	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.005	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.005	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.001	U	U		0.005	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.001	U	U		0.005	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	1.5	8260C	mg/kg	Analyte not detected at or above DL or QL.
Chloromethane											
Trip Blank2	1	U	U		5	1	0.005	500	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	1	U	U		5	1	0.005	500	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-4	0.003	U	U		0.007	0.003	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.002	U	U		0.005	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.002	U	U		0.006	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.002	U	U		0.005	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.002	U	U		0.005	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.002	U	U		0.005	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.002	U	U		0.005	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.002	U	U		0.005	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.002	U	U		0.005	0.002	0.005	500	8260C	mg/kg	Analyte not detected at or above DL or QL.

Summary of Target Analytes

Open Burning Ground (OBG) Soil Monitoring Program-HWMU 13 Event Date: July 2014 (Third Quarter 2014)

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Chromium											
PAD-2	35		35	J	1	0.2	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-6	30		30	J	0.98	0.2	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
SB-2	21		21	J	1.3	0.26	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
SB-1	19		19	J	1.2	0.23	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-3	17		17	J	0.91	0.18	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-4	16		16	J	1	0.21	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
NB-1	15		15	J	1.1	0.21	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
BERM-1	14		14	J	0.94	0.19	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-1	13		13	J	0.91	0.18	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
POND-1	13		13	J	0.9	0.18	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-7	13		13	J	0.96	0.19	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-8	13		13	J	0.93	0.19	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-5	13		13	J	0.9	0.18	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
NB-2	12		12	J	1.2	0.23	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
PAD-X	11		11	J	0.81	0.16	1		6010C	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%). Field duplicate for PAD-7. RPD = 16.7
Chromium, hexavalent											
PAD-3	2.4		2.4		0.84	0.29	1	5.6	7196A	mg/kg	No action taken.
PAD-6	1.6		1.6		0.84	0.28	1	5.6	7196A	mg/kg	No action taken.
PAD-4	0.88	U	U		0.88	0.3	1	5.6	7196A	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.86	U	U		0.86	0.29	1	5.6	7196A	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.85	U	U		0.85	0.29	1	5.6	7196A	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7
PAD-5	0.82	U	U		0.82	0.28	1	5.6	7196A	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.82	U	U		0.82	0.28	1	5.6	7196A	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.82	U	U		0.82	0.28	1	5.6	7196A	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.74	J	0.74	J	0.83	0.28	1	5.6	7196A	mg/kg	Result < QL.

SEE LAST PAGE FOR DATA QUALIFIER DEFINITIONS.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Dibenz(a,h)anthracene											
PAD-3	0.035	U	U	J	0.18	0.035	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-6	0.035	U	U	J	0.18	0.035	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-4	0.018	U	U	J	0.094	0.018	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5). The internal standard (IS) area was outside control limits. Result estimated.
PAD-X	0.004	U	U	J	0.018	0.004	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated. Field duplicate for PAD-7.
PAD-8	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-5	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-1	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-2	0.003	U	U	J	0.017	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-7	0.003	U	U	J	0.018	0.003	0.02	0.21	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
Diethylphthalate											
NB-1	1.2		1.2		0.2	0.079	0.33	490000	8270D	mg/kg	No action taken.
PAD-6	0.78	J	0.78	J	1.8	0.7	0.33	490000	8270D	mg/kg	Result < QL. Analyzed in dilution (1:10).
PAD-3	0.69	U	U		1.7	0.69	0.33	490000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
NB-2	0.65		0.65		0.19	0.075	0.33	490000	8270D	mg/kg	No action taken.
SB-2	0.51		0.51		0.23	0.09	0.33	490000	8270D	mg/kg	No action taken.
PAD-4	0.42	J	0.42	J	0.92	0.37	0.33	490000	8270D	mg/kg	Result < QL. Analyzed in dilution (1:5).
POND-1	0.36		0.36		0.17	0.069	0.33	490000	8270D	mg/kg	No action taken.
PAD-X	0.27		0.27		0.18	0.071	0.33	490000	8270D	mg/kg	No action taken. Field duplicate for PAD-7. RPD not calculable.
PAD-7	0.17	J	0.17	J	0.17	0.07	0.33	490000	8270D	mg/kg	Result < QL.
SB-1	0.086	U	U		0.21	0.086	0.33	490000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.068	U	U		0.17	0.068	0.33	490000	8270D	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	0.068	U	U		0.17	0.068	0.33	490000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.068	U	U		0.17	0.068	0.33	490000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.068	U	U		0.17	0.068	0.33	490000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.067	U	U		0.17	0.067	0.33	490000	8270D	mg/kg	Analyte not detected at or above DL or QL.

Summary of Target Analytes

Open Burning Ground (OBG) Soil Monitoring Program-HWMU 13 Event Date: July 2014 (Third Quarter 2014)

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Dimethylphthalate											
PAD-6	0.7	U	U		1.8	0.7	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.69	U	U		1.7	0.69	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.37	U	U		0.92	0.37	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
NB-1	0.33		0.33		0.2	0.079	0.33	10000000	8270D	mg/kg	No action taken.
PAD-8	0.15	J	0.15	J	0.17	0.067	0.33	10000000	8270D	mg/kg	Result < QL.
SB-2	0.09	U	U		0.23	0.09	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
SB-1	0.086	U	U		0.21	0.086	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
NB-2	0.075	U	U		0.19	0.075	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.071	U	U		0.18	0.071	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-7	0.07	U	U		0.17	0.07	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
POND-1	0.069	U	U		0.17	0.069	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.068	U	U		0.17	0.068	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.068	U	U		0.17	0.068	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.068	U	U		0.17	0.068	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	0.068	U	U		0.17	0.068	0.33	10000000	8270D	mg/kg	Analyte not detected at or above DL or QL.
Di-n-butylphthalate											
PAD-3	56		56		3.5	1.4	0.33	62000	8270D	mg/kg	Analyzed in dilution (1:20).
PAD-6	20		20		1.8	0.7	0.33	62000	8270D	mg/kg	Analyzed in dilution (1:10).
SB-2	2.4		2.4		0.23	0.09	0.33	62000	8270D	mg/kg	No action taken.
BERM-1	2.1		2.1		0.17	0.068	0.33	62000	8270D	mg/kg	No action taken.
PAD-X	2		2	J	0.18	0.071	0.33	62000	8270D	mg/kg	Field duplicate for PAD-7. RPD = 122. Result estimated.
PAD-4	1.1		1.1		0.92	0.37	0.33	62000	8270D	mg/kg	Analyzed in dilution (1:5).
NB-1	0.99		0.99		0.2	0.079	0.33	62000	8270D	mg/kg	No action taken.
NB-2	0.54		0.54		0.19	0.075	0.33	62000	8270D	mg/kg	No action taken.
PAD-7	0.48		0.48	J	0.17	0.07	0.33	62000	8270D	mg/kg	RPD for field duplicate (PAD-X) = 122. Result estimated.
PAD-8	0.43		0.43		0.17	0.067	0.33	62000	8270D	mg/kg	No action taken.
POND-1	0.4		0.4		0.17	0.069	0.33	62000	8270D	mg/kg	No action taken.
PAD-1	0.32		0.32		0.17	0.068	0.33	62000	8270D	mg/kg	No action taken.
PAD-5	0.19		0.19		0.17	0.068	0.33	62000	8270D	mg/kg	No action taken.
PAD-2	0.12	J	0.12	J	0.17	0.068	0.33	62000	8270D	mg/kg	Result < QL.
SB-1	0.086	U	U		0.21	0.086	0.33	62000	8270D	mg/kg	Analyte not detected at or above DL or QL.

SEE LAST PAGE FOR DATA QUALIFIER DEFINITIONS.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Diphenylamine											
PAD-3	3.3		3.3	J	1.7	0.35	1.6	15000	8270D	mg/kg	Analyzed in dilution (1:10). MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-6	1.7	J	1.7	J	1.8	0.35	1.6	15000	8270D	mg/kg	Result < QL. Analyzed in dilution (1:10). MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-4	0.56	J	0.56	J	0.92	0.18	1.6	15000	8270D	mg/kg	Result < QL. Analyzed in dilution (1:5). MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
NB-1	0.2	J	0.2	J	0.2	0.039	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-7	0.17	J	0.17	J	0.17	0.035	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
NB-2	0.17	J	0.17	J	0.19	0.038	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-X	0.16	J	0.16	J	0.18	0.035	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). Field duplicate for PAD-7. RPD not calculable. Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
BERM-1	0.12	J	0.12	J	0.17	0.034	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
POND-1	0.098	J	0.098	J	0.17	0.035	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
SB-2	0.079	J	0.079	J	0.23	0.045	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-8	0.074	J	0.074	J	0.17	0.034	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-1	0.073	J	0.073	J	0.17	0.034	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
SB-1	0.043	U	U	J	0.21	0.043	1.6	15000	8270D	mg/kg	Analyte not detected. MS recovered low (49%). Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-5	0.038	J	0.038	J	0.17	0.034	1.6	15000	8270D	mg/kg	Result < QL. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.
PAD-2	0.034	U	U	J	0.17	0.034	1.6	15000	8270D	mg/kg	Analyte not detected. MS recovered low (49%). N-nitrosodiphenylamine decomposes to diphenylamine. Result represents total of both compounds.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Fluoranthene											
PAD-6	0.076	J	0.076	J	0.18	0.035	0.33	22000	8270D	mg/kg	Result < QL. Analyzed in dilution (1:10).
PAD-3	0.035	U	U		0.18	0.035	0.33	22000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.029	J	0.029	J	0.094	0.018	0.33	22000	8270D	mg/kg	Result < QL. Analyzed in dilution (1:5).
PAD-X	0.007	J	0.007	J	0.018	0.004	0.33	22000	8270D	mg/kg	Result < QL. Field duplicate for PAD-7. RPD not calculable.
PAD-5	0.006	J	0.006	J	0.017	0.003	0.33	22000	8270D	mg/kg	Result < QL.
PAD-2	0.005	J	0.005	J	0.017	0.003	0.33	22000	8270D	mg/kg	Result < QL.
PAD-7	0.005	J	0.005	J	0.018	0.003	0.33	22000	8270D	mg/kg	Result < QL.
PAD-8	0.004	J	0.004	J	0.017	0.003	0.33	22000	8270D	mg/kg	Result < QL.
PAD-1	0.003	U	U		0.017	0.003	0.33	22000	8270D	mg/kg	Analyte not detected at or above DL or QL.
Hexachloroethane											
PAD-6	0.35	U	U		1.8	0.35	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.35	U	U		1.7	0.35	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.18	U	U		0.92	0.18	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
PAD-X	0.035	U	U		0.18	0.035	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-7	0.035	U	U		0.17	0.035	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.034	U	U		0.17	0.034	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.034	U	U		0.17	0.034	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.034	U	U		0.17	0.034	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.034	U	U		0.17	0.034	0.33	43	8270D	mg/kg	Analyte not detected at or above DL or QL.
HMX											
PAD-4	0.836		0.836	J	0.247	0.0986	2.2	49000	8330B	mg/kg	MS/MSD recovered low (33/31%).
PAD-2	0.26	U	U	J	0.26	0.104	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
SB-2	0.257	U	U	J	0.257	0.103	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
PAD-5	0.255	U	U	J	0.255	0.102	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
PAD-X	0.254	U	U	J	0.254	0.101	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%). Field duplicate for PAD-7.
PAD-1	0.253	U	U	J	0.253	0.101	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
POND-1	0.252	U	U	J	0.252	0.101	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
PAD-8	0.249	U	U	J	0.249	0.0996	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
BERM-1	0.249	U	U	J	0.249	0.21	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
NB-1	0.247	U	U	J	0.247	0.0986	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
PAD-3	0.244	U	U	J	0.244	0.0977	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
PAD-7	0.243	U	U	J	0.243	0.0973	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
PAD-6	0.242	U	U	J	0.242	0.0966	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
SB-1	0.241	U	U	J	0.241	0.0964	2.2	49000	8330B	mg/kg	Analyte not detected at or above DL or QL. MS/MSD recovered low (33/31%).
NB-2	0.224	J	0.224	J	0.247	0.0989	2.2	49000	8330B	mg/kg	Result < QL. MS/MSD recovered low (33/31%).

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Indeno(1,2,3-cd)pyrene											
PAD-3	0.035	U	U	J	0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-6	0.035	U	U	J	0.18	0.035	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10). The internal standard (IS) area was outside control limits. Result estimated.
PAD-4	0.018	U	U	J	0.094	0.018	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5). The internal standard (IS) area was outside control limits. Result estimated.
PAD-X	0.004	U	U	J	0.018	0.004	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated. Field duplicate for PAD-7.
PAD-7	0.003	U	U	J	0.018	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-8	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-1	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-5	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
PAD-2	0.003	U	U	J	0.017	0.003	0.33	2.1	8270D	mg/kg	Analyte not detected at or above DL or QL. The internal standard (IS) area was outside control limits. Result estimated.
Lead											
PAD-6	610		610	J	0.98	0.19	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
PAD-3	280		280	J	0.91	0.17	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
PAD-4	270		270	J	1	0.2	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
NB-1	240		240	J	1.1	0.2	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
NB-2	210		210	J	1.2	0.22	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
PAD-2	160		160	J	1	0.19	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
PAD-5	150		150	J	0.9	0.17	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
BERM-1	120		120	J	0.94	0.18	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
SB-2	120		120	J	1.3	0.25	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
PAD-8	110		110	J	0.93	0.18	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
POND-1	86		86	J	0.9	0.17	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
PAD-X	82		82	J	0.81	0.15	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%). Field duplicate for PAD-7. RPD = 1
PAD-7	81		81	J	0.96	0.18	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
SB-1	54		54	J	1.2	0.22	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).
PAD-1	38		38	J	0.91	0.17	0.3	800	6010C	mg/kg	Serial dilution %D > 10 (14%).

Summary of Target Analytes

Open Burning Ground (OBG) Soil Monitoring Program-HWMU 13 Event Date: July 2014 (Third Quarter 2014)

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Mercury											
PAD-1	0.11	U	U		0.11	0.016	0.1	43	7471A	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.11	U	U		0.11	0.017	0.1	43	7471A	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.11	U	U		0.11	0.017	0.1	43	7471A	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7
PAD-2	0.11	U	U		0.11	0.016	0.1	43	7471A	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.11	U	U		0.11	0.016	0.1	43	7471A	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.099	U	U		0.099	0.015	0.1	43	7471A	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.093	U	U		0.093	0.014	0.1	43	7471A	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.027	J	0.027	J	0.11	0.017	0.1	43	7471A	mg/kg	Result < QL.
PAD-6	0.019	J	0.019	J	0.11	0.016	0.1	43	7471A	mg/kg	Result < QL.
Methylene Chloride											
Trip Blank1	2	U	U		5	2	0.005	960	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank2	2	U	U		5	2	0.005	960	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-4	0.003	U	U		0.007	0.003	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.002	U	U		0.005	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-3	0.002	U	U		0.005	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.002	U	U		0.005	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.002	U	U		0.005	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.002	U	U		0.005	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.002	U	U		0.006	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.002	U	U		0.005	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.002	U	U		0.005	0.002	0.005	960	8260C	mg/kg	Analyte not detected at or above DL or QL.
Naphthalene											
PAD-6	0.035	U	U		0.18	0.035	0.33	18	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.035	U	U		0.18	0.035	0.33	18	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.034	J	0.034	J	0.094	0.018	0.33	18	8270D	mg/kg	Result < QL. Analyzed in dilution (1:5).
PAD-X	0.01	J	0.01	J	0.018	0.004	0.33	18	8270D	mg/kg	Result < QL. Field duplicate for PAD-7. RPD not calculable.
PAD-7	0.007	J	0.007	J	0.018	0.003	0.33	18	8270D	mg/kg	Result < QL.
PAD-5	0.005	J	0.005	J	0.017	0.003	0.33	18	8270D	mg/kg	Result < QL.
PAD-8	0.003	U	U		0.017	0.003	0.33	18	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.003	U	U		0.017	0.003	0.33	18	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.003	U	U		0.017	0.003	0.33	18	8270D	mg/kg	Analyte not detected at or above DL or QL.

SEE LAST PAGE FOR DATA QUALIFIER DEFINITIONS.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Nitrobenzene											
PAD-2	0.26	U	U		0.26	0.104	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.247	U	U		0.247	0.0986	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	0.25	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
Nitroglycerin											
PAD-3	174		174		24.4	9.77	2.5	62	8330B	mg/kg	Analyzed in dilution (1:100). Verification event performed on September 18, 2014. Verification result confirmed original result. Original result reported. Verification result 128 mg/kg.
PAD-6	53.1		53.1		4.83	1.93	2.5	62	8330B	mg/kg	Analyzed in dilution (1:20).
PAD-X	30.1		30.1	J	2.54	1.01	2.5	62	8330B	mg/kg	Analyzed in dilution (1:10). Field duplicate for PAD-7. RPD = 39.4. Result estimated.
PAD-1	23.1		23.1		2.53	1.01	2.5	62	8330B	mg/kg	Analyzed in dilution (1:10).
PAD-7	20.2		20.2	J	2.43	0.973	2.5	62	8330B	mg/kg	Analyzed in dilution (1:10). RPD for field duplicate (PAD-X) = 39.4. Result estimated.
PAD-4	17.5		17.5		0.252	0.101	2.5	62	8330B	mg/kg	Analyzed in dilution (1:10). Verification event performed on September 18, 2014. Verification result (PAD-X) reported. Original result 118 mg/kg
BERM-1	14		14		1.25	0.498	2.5	62	8330B	mg/kg	Analyzed in dilution (1:5).
PAD-8	13.2		13.2		1.25	0.498	2.5	62	8330B	mg/kg	Analyzed in dilution (1:5).
PAD-5	11.1		11.1		1.28	0.511	2.5	62	8330B	mg/kg	Analyzed in dilution (1:5).
PAD-2	9.17		9.17		0.26	0.104	2.5	62	8330B	mg/kg	No action taken.
POND-1	8.66		8.66		0.252	0.101	2.5	62	8330B	mg/kg	No action taken.
NB-1	1.98		1.98		0.247	0.0986	2.5	62	8330B	mg/kg	No action taken.
NB-2	0.741	J	0.741	J	0.247	0.0989	2.5	62	8330B	mg/kg	Result < QL.
SB-2	0.257	U	U		0.257	0.103	2.5	62	8330B	mg/kg	Analyte not detected at or above DL or QL.
SB-1	0.241	U	U		0.241	0.0964	2.5	62	8330B	mg/kg	Analyte not detected at or above DL or QL.

Summary of Target Analytes

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Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Perchlorate											
PAD-5	0.00756		0.0075	J	0.00205	0.00103	0.002	720	6850	mg/kg	MS recovered low (63%). MSD recovered high (460%).
PAD-6	0.00621		0.0062	J	0.00204	0.00102	0.002	720	6850	mg/kg	MS recovered low (63%). MSD recovered high (460%).
PAD-X	0.00536		0.0053	J	0.00217	0.00109	0.002	720	6850	mg/kg	MS recovered low (63%). MSD recovered high (460%). Field duplicate for PAD-7. RPD not calculable.
PAD-4	0.00491		0.0049	J	0.00233	0.00116	0.002	720	6850	mg/kg	MS recovered low (63%). MSD recovered high (460%).
PAD-3	0.00212	U	U	J	0.00212	0.00106	0.002	720	6850	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (63%). MSD recovered high (460%).
PAD-1	0.00204	U	U	J	0.00204	0.00102	0.002	720	6850	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (63%). MSD recovered high (460%).
PAD-2	0.00204	U	U	J	0.00204	0.00102	0.002	720	6850	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (63%). MSD recovered high (460%).
PAD-8	0.00203	U	U	J	0.00203	0.00101	0.002	720	6850	mg/kg	Analyte not detected at or above DL or QL. MS recovered low (63%). MSD recovered high (460%).
PAD-7	0.00181	J	0.0018	J	0.0021	0.00105	0.002	720	6850	mg/kg	Result < QL. MS recovered low (63%). MSD recovered high (460%).
Phenol											
PAD-6	0.18	U	U		0.35	0.18	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-3	0.17	U	U		0.35	0.17	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:10).
PAD-4	0.092	U	U		0.18	0.092	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL. Analyzed in dilution (1:5).
PAD-X	0.018	U	U		0.035	0.018	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-8	0.017	U	U		0.034	0.017	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.017	U	U		0.034	0.017	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.017	U	U		0.034	0.017	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.017	U	U		0.034	0.017	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.017	U	U		0.035	0.017	0.33	180000	8270D	mg/kg	Analyte not detected at or above DL or QL.
RDX											
PAD-4	5.28		5.28		0.247	0.0986	1	24	8330B	mg/kg	No action taken.
PAD-2	0.26	U	U		0.26	0.104	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.255	U	U		0.255	0.102	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.254	U	U		0.254	0.101	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.253	U	U		0.253	0.101	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.249	U	U		0.249	0.0996	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.244	U	U		0.244	0.0977	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.243	U	U		0.243	0.0973	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.242	U	U		0.242	0.0966	1	24	8330B	mg/kg	Analyte not detected at or above DL or QL.

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Selenium											
SB-2	2.6	U	U		2.6	0.58	1	5100	6010C	mg/Kg	Analyte not detected at or above DL or QL.
SB-1	2.3	U	U		2.3	0.52	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
NB-2	2.3	U	U		2.3	0.52	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	2.1	U	U		2.1	0.46	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
NB-1	2.1	U	U		2.1	0.47	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	2	U	U		2	0.46	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	2	U	U		2	0.44	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	1.9	U	U		1.9	0.42	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	1.9	U	U		1.9	0.43	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	1.9	U	U		1.9	0.42	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	1.8	U	U		1.8	0.41	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	1.8	U	U		1.8	0.41	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
POND-1	1.8	U	U		1.8	0.4	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	1.6	U	U		1.6	0.37	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-5	0.41	J	0.41	J	1.8	0.4	1	5100	6010C	mg/kg	Result < QL.
Silver											
PAD-6	0.98	U	U		0.98	0.098	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.96	U	U		0.96	0.096	1	5100	6010C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.29	J	0.29	J	1	0.1	1	5100	6010C	mg/kg	Result < QL.
PAD-4	0.15	J	0.15	J	1	0.1	1	5100	6010C	mg/kg	Result < QL.
PAD-3	0.14	J	0.14	J	0.91	0.091	1	5100	6010C	mg/kg	Result < QL.
PAD-1	0.11	J	0.11	J	0.91	0.091	1	5100	6010C	mg/kg	Result < QL.
PAD-8	0.11	J	0.11	J	0.93	0.093	1	5100	6010C	mg/kg	Result < QL.
PAD-5	0.11	J	0.11	J	0.9	0.09	1	5100	6010C	mg/kg	Result < QL.
PAD-X	0.083	J	0.083	J	0.81	0.081	1	5100	6010C	mg/kg	Result < QL. Field duplicate for PAD-7.
Tetrachloroethene											
Trip Blank2	0.8	U	U		5	0.8	0.005	110	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	0.8	U	U		5	0.8	0.005	110	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-1	0.001	U	U		0.005	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.005	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.001	U	U		0.005	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-6	0.001	U	U		0.005	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	110	8260C	mg/kg	Analyte not detected at or above DL or QL.

Summary of Target Analytes

Open Burning Ground (OBG) Soil Monitoring Program-HWMU 13 Event Date: July 2014 (Third Quarter 2014)

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Tetryl											
PAD-5	0.255	U	U	J	0.255	0.102	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
PAD-X	0.254	U	U	J	0.254	0.101	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20. Field duplicate for PAD-7.
PAD-1	0.253	U	U	J	0.253	0.101	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
PAD-8	0.249	U	U	J	0.249	0.0996	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
PAD-4	0.247	U	U	J	0.247	0.0986	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
PAD-3	0.244	U	U	J	0.244	0.0977	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
PAD-7	0.243	U	U	J	0.243	0.0973	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
PAD-6	0.242	U	U	J	0.242	0.0966	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
PAD-2	0.15	U	U	J	0.26	0.104	0.65	1200	8330B	mg/kg	Analyte not detected at or above DL or QL. CV %D >+/- 20.
Toluene											
Trip Blank1	0.7	U	U		5	0.7	0.005	45000	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank2	0.7	U	U		5	0.7	0.005	45000	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.005	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.001	U	U		0.005	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-2	0.001	U	U		0.005	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.001	U	U		0.005	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	45000	8260C	mg/kg	Analyte not detected at or above DL or QL.
TPH (as Diesel)											
PAD-4	190		190	J	18	4.5	20	11000	8015C	mg/kg	MS did not recover. Result estimated
PAD-1	17	U	U	J	17	4.2	20	11000	8015C	mg/kg	Analyte not detected at or above the DL or QL. MS did not recover.
PAD-X	8.7	J	8.7	J	18	4.4	20	11000	8015C	mg/kg	Result < QL. MS did not recover. Result estimated
PAD-7	8.4	J	8.4	J	18	4.4	20	11000	8015C	mg/kg	Result < QL. MS did not recover. Result estimated

Analyte/ Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note
Trichloroethene											
Trip Blank2	1	U	U		5	1	0.005	6.4	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	1	U	U		5	1	0.005	6.4	8260C	ug/l	Analyte not detected at or above DL or QL.
SB-2	0.002	U	U		0.008	0.002	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-1	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
BERM-1	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
NB-1	0.001	U	U		0.007	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
SB-1	0.001	U	U		0.007	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.001	U	U		0.005	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
NB-2	0.001	U	U		0.006	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
POND-1	0.001	U	U		0.006	0.001	0.005	6.4	8260C	mg/kg	Analyte not detected at or above DL or QL.
Vinyl Chloride											
Trip Blank2	0.5	U	U		2	0.5	0.005	1.7	8260C	ug/l	Analyte not detected at or above DL or QL.
Trip Blank1	0.5	U	U		2	0.5	0.005	1.7	8260C	ug/l	Analyte not detected at or above DL or QL.
PAD-3	0.001	U	U		0.005	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-7	0.001	U	U		0.006	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-5	0.001	U	U		0.005	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-X	0.001	U	U		0.005	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL. Field duplicate for PAD-7.
PAD-1	0.001	U	U		0.005	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-6	0.001	U	U		0.005	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-2	0.001	U	U		0.005	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-8	0.001	U	U		0.005	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.
PAD-4	0.001	U	U		0.007	0.001	0.005	1.7	8260C	mg/kg	Analyte not detected at or above DL or QL.

Analyte/ Sample ID	Laboratory Result Q	Validated Result Q	LAB QL	LAB DL	RL	AL	Method	Unit	Data Validation Note

Definitions:

Data validation qualifier:

QL Denotes laboratory quantitation limit (varies due to soil factors)
DL Denotes laboratory method detection limit (varies due to soil factors)
RL Denotes reporting limit as specified in Table 1 Attachment II.C-23-24, updated September 27, 2011 Class 3 Permit Modification
AL Denotes Action level as specified in Table 1 Attachment II.C-23-24, updated September 27, 2011 Class 3 Permit Modification.
U Denotes the analyte was analyzed for, but was not detected at or above the DL. DL < AL except if qualified with "A" (see below).
J Denotes result is an estimated value. See sample specific note presented on data validation report table for further explanation.
UJ Denotes the analyte was analyzed for, but was not detected at or above the DL. However, the lab QL/DL estimated due to data validation. See sample specific note presented on data validation report table for further explanation.
A Laboratory QL and laboratory DL above permit AL.
R Denotes sample result was rejected. See sample specific note presented on data validation report table for further explanation.
Q Denotes Data Qualifier.

Laboratory data qualifiers:
B Denotes target analyte detected > lab DL and associated concentration is considered estimated. This is a laboratory data qualifier for inorganics, where applicable
J Denotes target analyte detected > lab DL and associated concentration is considered estimated.

Note-Dioxin/Furan results presented in a separate table.
Analyses performed by laboratories listed in data validation report.
PAD-X is field sample duplicate for PAD-7, unless noted.

NOTE (1):

- Results reported on a dry weight basis, where applicable.
- See laboratory report for definition of laboratory result qualifiers, if needed.
- AL does not apply to equipment blank or Trip blank.
- For April 2012 sampling event, PAD-6 for 8270C was analyzed in dilution. The DL for several analytes was greater than the RL but less than the AL. See sample specific note presented on data validation report table for further explanation

Janet Frazier

From: Loeb, Mark <Mark.Loeb@testamericainc.com>
Sent: Thursday, February 19, 2015 1:06 PM
To: Janet Frazier
Subject: FW: Info for Cyanide letter to WSSC

Hi Janet,

I received this from QA in response.

MJL

MARK J. LOEB
Project Manager

TestAmerica
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From: Shepperd, Dee
Sent: Thursday, February 19, 2015 12:51 PM
To: Loeb, Mark
Subject: SDG 240-40177-1 TPH DRO by 8015C

Ms. Janet Frazier,

Because we do our best to meet all of our clients' project needs, we often run several methods, or method revisions concurrently. For TPH DRO, we analyze and report Diesel Range Organics for a variety of clients by both 8015B and 8015C. Operationally, the only difference between these method revisions is the Continuing Calibration Verification (CCV) acceptance criteria. In the 8015C version, the requirement is plus or minus 20 percent. This is less stringent than the 8015B requirement of plus or minus 15 percent.

The TPH DRO results for SDG 240-40177-1 from August of 2014 were inadvertently logged and reported as 8015B. This correspondence confirms that the method of analysis meets and is the same as method 8015C. I understand concern with method updates if the methodology is changed in the most recent version; however, in the case of 8015B to 8015C, this is not the case. Only the CCV limits were changed to less stringent criteria in the newer version. Because the laboratory analyzes by both method revisions concurrently, the more strict criteria are met so that sample results can meet the requirements of either version of the method. I assure you that sample results for TPH DRO are acceptable and valid when measured by the more recent update to the method. Our project manager has updated the information in the LIMS to ensure that TPH DRO will be reported as compliant with Method 8015C for future sample submissions for the RAAP, Radford, Virginia project.

Please feel free to contact me if you have any questions or need more information on this matter.

Sincerely,

Dee Shepperd
Quality Assurance Manager

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Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Facility: HWMU 13/OBG Soil Monitoring Event: 7/31/2014

Analyte	Sample ID	Laboratory Result	Q	Validated Result	Q	LAB QL	RL	Unit	Validation Notes
Method: 6010C									
Arsenic	PAD-7	1.9		1.9	J	1.4	1	mg/kg	MSD recovered low (71%).
	PAD-X	1.4		1.4	J	1.2	1	mg/kg	MSD recovered low (71%). Field duplicate for PAD-X. RPD = 30
Chromium	PAD-7	13		13	J	0.96	1	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%).
	PAD-X	11		11	J	0.81	1	mg/kg	MS/MSD recovered low (66/53%). Serial dilution %D > 10 (19%). Field duplicate for PAD-7. RPD = 16.7
Lead	PAD-7	81		81	J	0.96	0.3	mg/kg	Serial dilution %D > 10 (14%).
	PAD-X	82		82	J	0.81	0.3	mg/kg	Serial dilution %D > 10 (14%). Field duplicate for PAD-7. RPD = 1
Method: 6850									
Perchlorate	PAD-X	0.00536		0.00536	J	0.00217	0.002	mg/kg	MS recovered low (63%). MSD recovered high (460%). Field duplicate for PAD-7. RPD not calculable.
Method: 8330B									
Nitroglycerin	PAD-7	20.2		20.2	J	2.43	2.5	mg/kg	Analyzed in dilution (1:10). RPD for field duplicate (PAD-X) = 39.4. Result estimated.
	PAD-X	30.1		30.1	J	2.54	2.5	mg/kg	Analyzed in dilution (1:10). Field duplicate for PAD-7. RPD = 39.4. Result estimated.

Definitions:

Data Validation Qualifiers:

QL Denotes Lab quantitation limit. **Q** Denotes data qualifier. **RL** Denotes reporting limit (obtained from permit modification – Table 1 Attachment II.C-23-24, updated June 2014, Class 1 permit modification). RLs are equal to or greater than actual laboratory QLs, except where noted in the data validation report. **J** Denotes analyte result is estimated.

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Abridged data package. Full deliverable available.

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground
Soil and Water Samples
Collected on 07/31/14

SDG# RAE24

GROUP	SAMPLE NUMBERS
1493145	7551962-7551980

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date: 08/18/2014**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAE24
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground

Lab Sample Number	Lab Sample Code	Client Sample Description
7551962	PAD-1	PAD-1 Grab Soil July 2014 Annual Soil Monitoring
7551963	PAD-2	PAD-2 Grab Soil July 2014 Annual Soil Monitoring
7551964	PAD-3	PAD-3 Grab Soil July 2014 Annual Soil Monitoring
7551965	PAD-4	PAD-4 Grab Soil July 2014 Annual Soil Monitoring
7551966	PAD-4	PAD-4 MS Grab Soil July 2014 Annual Soil Monitoring
7551967	PAD-4	PAD-4 MSD Grab Soil July 2014 Annual Soil Monitoring
7551968	PAD-5	PAD-5 Grab Soil July 2014 Annual Soil Monitoring
7551969	PAD-6	PAD-6 Grab Soil July 2014 Annual Soil Monitoring
7551970	PAD-7	PAD-7 Grab Soil July 2014 Annual Soil Monitoring
7551971	PAD-8	PAD-8 Grab Soil July 2014 Annual Soil Monitoring
7551972	PAD-X	PAD-X Grab Soil July 2014 Annual Soil Monitoring
7551973	PADTB	Trip Blank Water July 2014 Annual Soil Monitoring
7551974	NB--1	NB-1 Grab Soil July 2014 Annual Soil Monitoring
7551975	NB--2	NB-2 Grab Soil July 2014 Annual Soil Monitoring
7551976	SB--1	SB-1 Grab Soil July 2014 Annual Soil Monitoring
7551977	SB--2	SB-2 Grab Soil July 2014 Annual Soil Monitoring
7551978	BERM1	BERM-1 Grab Soil July 2014 Annual Soil Monitoring
7551979	POND1	POND-1 Grab Soil July 2014 Annual Soil Monitoring
7551980	NB-TB	Trip Blank Water July 2014 Annual Soil Monitoring

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Sample pH Log

SDG: RAE24

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
7551973	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7551980	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11995 VOCs- Solid by 8260C

The soil sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

10726 SVOA 8270D (microwave)

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

10813 BNA Soil Microwave APP IX

The sample aliquot is extracted using microwave extraction with 1:1 methylene chloride and acetone. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3546, Revision 0, February 2007.

00111 Moisture
00118 Moisture
00121 Moisture Duplicate

A well-mixed sample is placed in a tared container and dried to a constant weight in an oven at 103-105C. The increase in weight is the total solids.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2540 G-1997

07579 GC/MS-5g Field Preserv.MeOH-NC

The sample is collected and preserved with methanol in the field using vials that were prepared and pre-weighed at the laboratory. The vial preparation consists of adding 5 mls of methanol to a 40-ml vial. Once in the field, 5 +/- 0.5 g of soil is added to the vial and then iced at 4 +/- 2 degree C until the time they are returned to the lab. Upon receipt from the field, the container is re-weighed to determine the exact weight of the soil added to the vial. Since an approximate amount of soil is added to the vials in the field, the dilution factors may vary from sample to sample.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5035, November 2004.

02392 GC/MS - Field Preserved NaHSO4

The samples is collected and preserved in the field with sodium bisulfate for low level analysis using vials that were pre-prepared and pre-weighed at the laboratory. The vial preparation consists of adding 5 ml of sodium bisulfate to a 40 ml vial. Once in the field, 5g +/- .5 of soil is added to the vial and then iced at 4 +/- 2 degree C until the time they are returned to the lab. Upon receipt from the field, the vial is re-weighed to determine the exact weight of the soil added to the container with preservative.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5035, November 2004.

06176 GC/MS - LL Water Prep

The samples are collected in DI vials in the field. The vial preparation consists of adding 5 mLs of DI water and a stir bar to a 40-ml vial. Once in the field, 5 +/- 0.5 g of soil is to be added to the vial and then iced at 4 +/- 2 degree C until the time they are returned to the lab. Upon receipt from the field, the container is re-weighed to determine the exact weight of the soil added to the vial. The sample is then frozen at -10 to -20 degree C within 48 hours of collection.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5035, November 2004.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

August 13, 2014

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground

Submittal Date: 08/01/2014
Group Number: 1493145
SDG: RAE24
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
PAD-1 Grab Soil	7551962
PAD-2 Grab Soil	7551963
PAD-3 Grab Soil	7551964
PAD-4 Grab Soil	7551965
PAD-4 MS Grab Soil	7551966
PAD-4 MSD Grab Soil	7551967
PAD-5 Grab Soil	7551968
PAD-6 Grab Soil	7551969
PAD-7 Grab Soil	7551970
PAD-8 Grab Soil	7551971
PAD-X Grab Soil	7551972
Trip Blank Water	7551973
NB-1 Grab Soil	7551974
NB-2 Grab Soil	7551975
SB-1 Grab Soil	7551976
SB-2 Grab Soil	7551977
BERM-1 Grab Soil	7551978
POND-1 Grab Soil	7551979
Trip Blank Water	7551980

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Draper Aden Associates, Inc. Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground
LL Group #: 1493145

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Batch #: B142201AA (Sample number(s): 7551962-7551972, 7551974-7551979 UNSPK: 7551965)

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: Toluene, Tetrachloroethene, Chlorobenzene

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 7551962, 7551970, 7551972

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect. The reported data is from the initial analysis of the sample.

Batch #: 14218SLG026 (Sample number(s): 7551962-7551972, 7551974-7551979 UNSPK: 7551965)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 3,3'-Dimethylbenzidine

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: 3,3'-Dimethylbenzidine, NDPA as diphenylamine

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: Hexachloroethane, NDPA as diphenylamine

SM 2540 G-1997, Wet Chemistry

Batch #: 14219820004A (Sample number(s): 7551962-7551972 BKG: 7551965)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture

Batch #: 14219820004B (Sample number(s): 7551974-7551979 BKG: 7551974)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture

Batch #: 14220820001A (Sample number(s): 7551965-7551967 BKG: 7551965)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture, Moisture, Moisture Duplicate

Sample Description: PAD-1 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551962
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 08:30 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-1 SDG#: RAE24-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.005	1.02
11995	Benzyl Chloride	100-44-7	N.D.	0.001	0.004	1.02
11995	Bromomethane	74-83-9	N.D.	0.002	0.005	1.02
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.005	1.02
11995	Chlorobenzene	108-90-7	N.D.	0.001	0.005	1.02
11995	Chloroform	67-66-3	N.D.	0.001	0.005	1.02
11995	Chloromethane	74-87-3	N.D.	0.002	0.005	1.02
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.005	1.02
11995	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.005	1.02
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	1.02
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.005	1.02
11995	Toluene	108-88-3	N.D.	0.001	0.005	1.02
11995	Trichloroethene	79-01-6	N.D.	0.001	0.005	1.02
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.005	1.02
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.	0.017	0.034	1
10726	Benzo(a)anthracene	56-55-3	N.D.	0.003	0.017	1
10726	Benzo(a)pyrene	50-32-8	N.D.	0.003	0.017	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.003	0.017	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.003	0.017	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.068	0.17	1
10726	Di-n-butylphthalate	84-74-2	0.32	0.068	0.17	1
10726	2-Chlorophenol	95-57-8	N.D.	0.017	0.034	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.003	0.017	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.017	0.034	1
10726	Diethylphthalate	84-66-2	N.D.	0.068	0.17	1
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	0.51	1.0	1
10726	Dimethylphthalate	131-11-3	N.D.	0.068	0.17	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	0.31	0.068	0.17	1
10726	Fluoranthene	206-44-0	N.D.	0.003	0.017	1
10726	Hexachloroethane	67-72-1	N.D.	0.034	0.17	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.003	0.017	1
10726	4-Methylphenol	106-44-5	N.D.	0.017	0.034	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	0.003	0.017	1
10726	NDPA as diphenylamine	n.a.	0.073 J	0.034	0.17	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	N.D.	0.17	0.51	1
10726	Phenol	108-95-2	N.D.	0.017	0.034	1

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect. The reported data is from the initial analysis of the sample.

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: PAD-1 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551962
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 08:30 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-1 SDG#: RAE24-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	2.7	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014	12:19	Chelsea B Stong	1.02
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	08:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	08:30	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	08:30	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014	00:05	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-2 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551963
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 09:30 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-2 SDG#: RAE24-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.		0.0005	0.005	0.93
11995	Benzyl Chloride	100-44-7	N.D.		0.001	0.004	0.93
11995	Bromomethane	74-83-9	N.D.		0.002	0.005	0.93
11995	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.005	0.93
11995	Chlorobenzene	108-90-7	N.D.		0.001	0.005	0.93
11995	Chloroform	67-66-3	N.D.		0.001	0.005	0.93
11995	Chloromethane	74-87-3	N.D.		0.002	0.005	0.93
11995	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.005	0.93
11995	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.005	0.93
11995	Methylene Chloride	75-09-2	N.D.		0.002	0.005	0.93
11995	Tetrachloroethene	127-18-4	N.D.		0.001	0.005	0.93
11995	Toluene	108-88-3	N.D.		0.001	0.005	0.93
11995	Trichloroethene	79-01-6	N.D.		0.001	0.005	0.93
11995	Vinyl Chloride	75-01-4	N.D.		0.001	0.005	0.93
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**		**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.		0.017	0.034	1
10726	Benzo(a)anthracene	56-55-3	0.005	J	0.003	0.017	1
10726	Benzo(a)pyrene	50-32-8	N.D.		0.003	0.017	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.		0.003	0.017	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.		0.003	0.017	1
10726	Butylbenzylphthalate	85-68-7	N.D.		0.068	0.17	1
10726	Di-n-butylphthalate	84-74-2	0.12	J	0.068	0.17	1
10726	2-Chlorophenol	95-57-8	N.D.		0.017	0.034	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.		0.003	0.017	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		0.017	0.034	1
10726	Diethylphthalate	84-66-2	N.D.		0.068	0.17	1
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.		0.51	1.0	1
10726	Dimethylphthalate	131-11-3	N.D.		0.068	0.17	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		0.068	0.17	1
10726	Fluoranthene	206-44-0	0.005	J	0.003	0.017	1
10726	Hexachloroethane	67-72-1	N.D.		0.034	0.17	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.003	0.017	1
10726	4-Methylphenol	106-44-5	N.D.		0.017	0.034	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	N.D.		0.003	0.017	1
10726	NDPA as diphenylamine	n.a.	N.D.		0.034	0.17	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	4-Nitrophenol	100-02-7	N.D.		0.17	0.51	1
10726	Phenol	108-95-2	N.D.		0.017	0.034	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	3.0		0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-2 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551963
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 09:30 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-2 SDG#: RAE24-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014	12:41	Chelsea B Stong	0.93
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	09:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	09:30	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	09:30	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014	00:30	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-3 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551964
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 09:50 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-3 SDG#: RAE24-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.99
11995	Benzyl Chloride	100-44-7	N.D.	0.001	0.004	0.99
11995	Bromomethane	74-83-9	N.D.	0.002	0.005	0.99
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.005	0.99
11995	Chlorobenzene	108-90-7	N.D.	0.001	0.005	0.99
11995	Chloroform	67-66-3	N.D.	0.001	0.005	0.99
11995	Chloromethane	74-87-3	N.D.	0.002	0.005	0.99
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.005	0.99
11995	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.005	0.99
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.99
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.005	0.99
11995	Toluene	108-88-3	N.D.	0.001	0.005	0.99
11995	Trichloroethene	79-01-6	N.D.	0.001	0.005	0.99
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.005	0.99
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.	0.17	0.35	10
10726	Benzo(a)anthracene	56-55-3	N.D.	0.035	0.18	10
10726	Benzo(a)pyrene	50-32-8	N.D.	0.035	0.18	10
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.035	0.18	10
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.035	0.18	10
10726	Butylbenzylphthalate	85-68-7	N.D.	0.69	1.7	10
10726	Di-n-butylphthalate	84-74-2	56	1.4	3.5	20
10726	2-Chlorophenol	95-57-8	N.D.	0.17	0.35	10
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.035	0.18	10
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.17	0.35	10
10726	Diethylphthalate	84-66-2	N.D.	0.69	1.7	10
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	5.2	10	10
10726	Dimethylphthalate	131-11-3	N.D.	0.69	1.7	10
10726	bis(2-Ethylhexyl)phthalate	117-81-7	7.9	0.69	1.8	10
10726	Fluoranthene	206-44-0	N.D.	0.035	0.18	10
10726	Hexachloroethane	67-72-1	N.D.	0.35	1.7	10
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.035	0.18	10
10726	4-Methylphenol	106-44-5	N.D.	0.17	0.35	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	0.035	0.18	10
10726	NDPA as diphenylamine	n.a.	3.3	0.35	1.7	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	N.D.	1.7	5.2	10
10726	Phenol	108-95-2	N.D.	0.17	0.35	10
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	4.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-3 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551964
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 09:50 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-3 SDG#: RAE24-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014	13:04	Chelsea B Stong	0.99
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	09:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	09:50	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:07	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:08	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	09:50	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/11/2014	22:22	Holly Berry	10
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/11/2014	23:11	Holly Berry	20
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-4 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551965
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-4 SDG#: RAE24-04BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0007	0.007	1.32
11995	Benzyl Chloride	100-44-7	N.D.	0.001	0.006	1.32
11995	Bromomethane	74-83-9	N.D.	0.003	0.007	1.32
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.007	1.32
11995	Chlorobenzene	108-90-7	N.D.	0.001	0.007	1.32
11995	Chloroform	67-66-3	N.D.	0.001	0.007	1.32
11995	Chloromethane	74-87-3	N.D.	0.003	0.007	1.32
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.007	1.32
11995	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.007	1.32
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.007	1.32
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.007	1.32
11995	Toluene	108-88-3	N.D.	0.001	0.007	1.32
11995	Trichloroethene	79-01-6	N.D.	0.001	0.007	1.32
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.007	1.32
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.	0.092	0.18	5
10726	Benzo(a)anthracene	56-55-3	0.027 J	0.018	0.094	5
10726	Benzo(a)pyrene	50-32-8	N.D.	0.018	0.094	5
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.018	0.094	5
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.018	0.094	5
10726	Butylbenzylphthalate	85-68-7	N.D.	0.37	0.92	5
10726	Di-n-butylphthalate	84-74-2	1.1	0.37	0.92	5
10726	2-Chlorophenol	95-57-8	N.D.	0.092	0.18	5
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.018	0.094	5
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.092	0.18	5
10726	Diethylphthalate	84-66-2	0.42 J	0.37	0.92	5
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	2.8	5.5	5
10726	Dimethylphthalate	131-11-3	N.D.	0.37	0.92	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.37	0.94	5
10726	Fluoranthene	206-44-0	0.029 J	0.018	0.094	5
10726	Hexachloroethane	67-72-1	N.D.	0.18	0.92	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.018	0.094	5
10726	4-Methylphenol	106-44-5	N.D.	0.092	0.18	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	0.034 J	0.018	0.094	5
10726	NDPA as diphenylamine	n.a.	0.56 J	0.18	0.92	5
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	N.D.	0.92	2.8	5
10726	Phenol	108-95-2	N.D.	0.092	0.18	5
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	10.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-4 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551965
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-4 SDG#: RAE24-04BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014 13:26	Chelsea B Stong	1.32
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014 10:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014 10:10	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014 16:07	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014 16:07	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014 10:10	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014 01:18	Catherine E Bachman	5
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014 09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	2	14220820001A	08/08/2014 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-4 MS Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551966
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-4 SDG#: RAE24-04MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.030	0.0007	0.007	1.3
11995	Benzyl Chloride	100-44-7	0.024	0.001	0.006	1.3
11995	Bromomethane	74-83-9	0.026	0.003	0.007	1.3
11995	Carbon Tetrachloride	56-23-5	0.036	0.001	0.007	1.3
11995	Chlorobenzene	108-90-7	0.026	0.001	0.007	1.3
11995	Chloroform	67-66-3	0.034	0.001	0.007	1.3
11995	Chloromethane	74-87-3	0.026	0.003	0.007	1.3
11995	1,2-Dichloroethane	107-06-2	0.035	0.001	0.007	1.3
11995	1,1-Dichloroethene	75-35-4	0.031	0.001	0.007	1.3
11995	Methylene Chloride	75-09-2	0.030	0.003	0.007	1.3
11995	Tetrachloroethene	127-18-4	0.028	0.001	0.007	1.3
11995	Toluene	108-88-3	0.028	0.001	0.007	1.3
11995	Trichloroethene	79-01-6	0.030	0.001	0.007	1.3
11995	Vinyl Chloride	75-01-4	0.028	0.001	0.007	1.3
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	1.8	0.093	0.19	5
10726	Benzo(a)anthracene	56-55-3	1.5	0.019	0.095	5
10726	Benzo(a)pyrene	50-32-8	1.7	0.019	0.095	5
10726	Benzo(b)fluoranthene	205-99-2	1.8	0.019	0.095	5
10726	Benzo(k)fluoranthene	207-08-9	1.9	0.019	0.095	5
10726	Butylbenzylphthalate	85-68-7	1.9	0.37	0.93	5
10726	Di-n-butylphthalate	84-74-2	3.4	0.37	0.93	5
10726	2-Chlorophenol	95-57-8	1.8	0.093	0.19	5
10726	Dibenz(a,h)anthracene	53-70-3	1.6	0.019	0.095	5
10726	2,4-Dichlorophenol	120-83-2	1.7	0.093	0.19	5
10726	Diethylphthalate	84-66-2	2.1	0.37	0.93	5
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	2.8	5.6	5
10726	Dimethylphthalate	131-11-3	1.8	0.37	0.93	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	2.0	0.37	0.95	5
10726	Fluoranthene	206-44-0	1.6	0.019	0.095	5
10726	Hexachloroethane	67-72-1	1.9	0.19	0.93	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1.5	0.019	0.095	5
10726	4-Methylphenol	106-44-5	1.6	0.093	0.19	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	1.9	0.019	0.095	5
10726	NDPA as diphenylamine	n.a.	1.5	0.19	0.93	5
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	1.5 J	0.93	2.8	5
10726	Phenol	108-95-2	1.9	0.093	0.19	5
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00118	Moisture	n.a.	10.4	0.50	0.50	1

*=This limit was used in the evaluation of the final result

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Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: PAD-4 MS Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551966
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-4 SDG#: RAE24-04MS

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014 13:52	Chelsea B Stong	1.3
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014 10:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014 10:10	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014 16:05	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014 16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014 10:10	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014 01:42	Catherine E Bachman	5
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014 09:10	Katheryne V Sponheimer	1
00118	Moisture	SM 2540 G-1997	2	14220820001A	08/08/2014 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-4 MSD Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551967
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-4 SDG#: RAE24-04MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.036	0.0009	0.009	1.53
11995	Benzyl Chloride	100-44-7	0.031	0.002	0.007	1.53
11995	Bromomethane	74-83-9	0.034	0.003	0.009	1.53
11995	Carbon Tetrachloride	56-23-5	0.046	0.002	0.009	1.53
11995	Chlorobenzene	108-90-7	0.037	0.002	0.009	1.53
11995	Chloroform	67-66-3	0.040	0.002	0.009	1.53
11995	Chloromethane	74-87-3	0.034	0.003	0.009	1.53
11995	1,2-Dichloroethane	107-06-2	0.038	0.002	0.009	1.53
11995	1,1-Dichloroethene	75-35-4	0.039	0.002	0.009	1.53
11995	Methylene Chloride	75-09-2	0.035	0.003	0.009	1.53
11995	Tetrachloroethene	127-18-4	0.044	0.002	0.009	1.53
11995	Toluene	108-88-3	0.040	0.002	0.009	1.53
11995	Trichloroethene	79-01-6	0.038	0.002	0.009	1.53
11995	Vinyl Chloride	75-01-4	0.036	0.002	0.009	1.53
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	1.8	0.092	0.18	5
10726	Benzo(a)anthracene	56-55-3	1.4	0.018	0.094	5
10726	Benzo(a)pyrene	50-32-8	1.6	0.018	0.094	5
10726	Benzo(b)fluoranthene	205-99-2	2.1	0.018	0.094	5
10726	Benzo(k)fluoranthene	207-08-9	1.8	0.018	0.094	5
10726	Butylbenzylphthalate	85-68-7	1.8	0.37	0.92	5
10726	Di-n-butylphthalate	84-74-2	3.1	0.37	0.92	5
10726	2-Chlorophenol	95-57-8	1.7	0.092	0.18	5
10726	Dibenz(a,h)anthracene	53-70-3	1.7	0.018	0.094	5
10726	2,4-Dichlorophenol	120-83-2	1.6	0.092	0.18	5
10726	Diethylphthalate	84-66-2	2.0	0.37	0.92	5
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	2.8	5.5	5
10726	Dimethylphthalate	131-11-3	1.7	0.37	0.92	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1.9	0.37	0.94	5
10726	Fluoranthene	206-44-0	1.5	0.018	0.094	5
10726	Hexachloroethane	67-72-1	1.3	0.18	0.92	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1.6	0.018	0.094	5
10726	4-Methylphenol	106-44-5	1.4	0.092	0.18	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	1.9	0.018	0.094	5
10726	NDPA as diphenylamine	n.a.	2.4	0.18	0.92	5
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	1.4 J	0.92	2.8	5
10726	Phenol	108-95-2	1.9	0.092	0.18	5
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00118	Moisture	n.a.	10.4	0.50	0.50	1
00121	Moisture Duplicate	n.a.	11.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-4 MSD Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551967
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-4 SDG#: RAE24-04MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014	14:14	Chelsea B Stong	1.53
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	10:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	10:10	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:05	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	10:10	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014	02:07	Catherine E Bachman	5
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00118	Moisture	SM 2540 G-1997	2	14220820001A	08/08/2014	17:22	Scott W Freisher	1
00121	Moisture Duplicate	SM 2540 G-1997	2	14220820001A	08/08/2014	17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-5 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551968
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:40 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-5 SDG#: RAE24-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.95
11995	Benzyl Chloride	100-44-7	N.D.	0.001	0.004	0.95
11995	Bromomethane	74-83-9	N.D.	0.002	0.005	0.95
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.005	0.95
11995	Chlorobenzene	108-90-7	N.D.	0.001	0.005	0.95
11995	Chloroform	67-66-3	N.D.	0.001	0.005	0.95
11995	Chloromethane	74-87-3	N.D.	0.002	0.005	0.95
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.005	0.95
11995	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.005	0.95
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.95
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.005	0.95
11995	Toluene	108-88-3	N.D.	0.001	0.005	0.95
11995	Trichloroethene	79-01-6	N.D.	0.001	0.005	0.95
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.005	0.95
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.	0.017	0.034	1
10726	Benzo(a)anthracene	56-55-3	N.D.	0.003	0.017	1
10726	Benzo(a)pyrene	50-32-8	N.D.	0.003	0.017	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.003	0.017	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.003	0.017	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.068	0.17	1
10726	Di-n-butylphthalate	84-74-2	0.19	0.068	0.17	1
10726	2-Chlorophenol	95-57-8	N.D.	0.017	0.034	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.003	0.017	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.017	0.034	1
10726	Diethylphthalate	84-66-2	N.D.	0.068	0.17	1
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	0.51	1.0	1
10726	Dimethylphthalate	131-11-3	N.D.	0.068	0.17	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.068	0.17	1
10726	Fluoranthene	206-44-0	0.006 J	0.003	0.017	1
10726	Hexachloroethane	67-72-1	N.D.	0.034	0.17	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.003	0.017	1
10726	4-Methylphenol	106-44-5	N.D.	0.017	0.034	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	0.005 J	0.003	0.017	1
10726	NDPA as diphenylamine	n.a.	0.038 J	0.034	0.17	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	N.D.	0.17	0.51	1
10726	Phenol	108-95-2	N.D.	0.017	0.034	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	2.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: PAD-5 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551968
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 10:40 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-5 SDG#: RAE24-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014 14:36	Chelsea B Stong	0.95
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014 10:40	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014 16:05	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014 16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014 10:40	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014 02:31	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014 09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014 18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-6 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551969
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:00 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-6 SDG#: RAE24-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.005	0.94
11995	Benzyl Chloride	100-44-7	N.D.	0.001	0.004	0.94
11995	Bromomethane	74-83-9	N.D.	0.002	0.005	0.94
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.005	0.94
11995	Chlorobenzene	108-90-7	N.D.	0.001	0.005	0.94
11995	Chloroform	67-66-3	N.D.	0.001	0.005	0.94
11995	Chloromethane	74-87-3	N.D.	0.002	0.005	0.94
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.005	0.94
11995	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.005	0.94
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	0.94
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.005	0.94
11995	Toluene	108-88-3	N.D.	0.001	0.005	0.94
11995	Trichloroethene	79-01-6	N.D.	0.001	0.005	0.94
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.005	0.94
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.	0.18	0.35	10
10726	Benzo(a)anthracene	56-55-3	N.D.	0.035	0.18	10
10726	Benzo(a)pyrene	50-32-8	N.D.	0.035	0.18	10
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.035	0.18	10
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.035	0.18	10
10726	Butylbenzylphthalate	85-68-7	N.D.	0.70	1.8	10
10726	Di-n-butylphthalate	84-74-2	20	0.70	1.8	10
10726	2-Chlorophenol	95-57-8	N.D.	0.18	0.35	10
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.035	0.18	10
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.18	0.35	10
10726	Diethylphthalate	84-66-2	0.78 J	0.70	1.8	10
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	5.3	11	10
10726	Dimethylphthalate	131-11-3	N.D.	0.70	1.8	10
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.70	1.8	10
10726	Fluoranthene	206-44-0	0.076 J	0.035	0.18	10
10726	Hexachloroethane	67-72-1	N.D.	0.35	1.8	10
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.035	0.18	10
10726	4-Methylphenol	106-44-5	N.D.	0.18	0.35	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	0.035	0.18	10
10726	NDPA as diphenylamine	n.a.	1.7 J	0.35	1.8	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	N.D.	1.8	5.3	10
10726	Phenol	108-95-2	N.D.	0.18	0.35	10
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	5.5	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-6 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551969
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:00 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-6 SDG#: RAE24-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014	14:59	Chelsea B Stong	0.94
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	11:00	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	11:00	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/11/2014	21:34	Holly Berry	10
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-7 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551970
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:20 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-7 SDG#: RAE24-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0006	0.006	1.09
11995	Benzyl Chloride	100-44-7	N.D.	0.001	0.005	1.09
11995	Bromomethane	74-83-9	N.D.	0.002	0.006	1.09
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.006	1.09
11995	Chlorobenzene	108-90-7	N.D.	0.001	0.006	1.09
11995	Chloroform	67-66-3	N.D.	0.001	0.006	1.09
11995	Chloromethane	74-87-3	N.D.	0.002	0.006	1.09
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.006	1.09
11995	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.006	1.09
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.006	1.09
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.006	1.09
11995	Toluene	108-88-3	N.D.	0.001	0.006	1.09
11995	Trichloroethene	79-01-6	N.D.	0.001	0.006	1.09
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.006	1.09
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.	0.017	0.035	1
10726	Benzo(a)anthracene	56-55-3	N.D.	0.003	0.018	1
10726	Benzo(a)pyrene	50-32-8	N.D.	0.003	0.018	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.003	0.018	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.003	0.018	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.070	0.17	1
10726	Di-n-butylphthalate	84-74-2	0.48	0.070	0.17	1
10726	2-Chlorophenol	95-57-8	N.D.	0.017	0.035	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.003	0.018	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.017	0.035	1
10726	Diethylphthalate	84-66-2	0.17 J	0.070	0.17	1
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	0.52	1.0	1
10726	Dimethylphthalate	131-11-3	N.D.	0.070	0.17	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.070	0.18	1
10726	Fluoranthene	206-44-0	0.005 J	0.003	0.018	1
10726	Hexachloroethane	67-72-1	N.D.	0.035	0.17	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.003	0.018	1
10726	4-Methylphenol	106-44-5	N.D.	0.017	0.035	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	0.007 J	0.003	0.018	1
10726	NDPA as diphenylamine	n.a.	0.17 J	0.035	0.17	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	N.D.	0.17	0.52	1
10726	Phenol	108-95-2	N.D.	0.017	0.035	1

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect. The reported data is from the initial analysis of the sample.

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: PAD-7 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551970
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:20 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-7 SDG#: RAE24-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	5.9	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014 15:21	Chelsea B Stong	1.09
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014 11:20	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014 16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014 16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014 11:20	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014 03:19	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014 09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014 18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-8 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551971
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:50 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-8 SDG#: RAE24-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.005	1.03
11995	Benzyl Chloride	100-44-7	N.D.	0.001	0.004	1.03
11995	Bromomethane	74-83-9	N.D.	0.002	0.005	1.03
11995	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.005	1.03
11995	Chlorobenzene	108-90-7	N.D.	0.001	0.005	1.03
11995	Chloroform	67-66-3	N.D.	0.001	0.005	1.03
11995	Chloromethane	74-87-3	N.D.	0.002	0.005	1.03
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.005	1.03
11995	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.005	1.03
11995	Methylene Chloride	75-09-2	N.D.	0.002	0.005	1.03
11995	Tetrachloroethene	127-18-4	N.D.	0.001	0.005	1.03
11995	Toluene	108-88-3	N.D.	0.001	0.005	1.03
11995	Trichloroethene	79-01-6	N.D.	0.001	0.005	1.03
11995	Vinyl Chloride	75-01-4	N.D.	0.001	0.005	1.03
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.	0.017	0.034	1
10726	Benzo(a)anthracene	56-55-3	N.D.	0.003	0.017	1
10726	Benzo(a)pyrene	50-32-8	N.D.	0.003	0.017	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	0.003	0.017	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	0.003	0.017	1
10726	Butylbenzylphthalate	85-68-7	N.D.	0.067	0.17	1
10726	Di-n-butylphthalate	84-74-2	0.43	0.067	0.17	1
10726	2-Chlorophenol	95-57-8	N.D.	0.017	0.034	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	0.003	0.017	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	0.017	0.034	1
10726	Diethylphthalate	84-66-2	N.D.	0.067	0.17	1
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.	0.51	1.0	1
10726	Dimethylphthalate	131-11-3	0.15 J	0.067	0.17	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.067	0.17	1
10726	Fluoranthene	206-44-0	0.004 J	0.003	0.017	1
10726	Hexachloroethane	67-72-1	N.D.	0.034	0.17	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.003	0.017	1
10726	4-Methylphenol	106-44-5	N.D.	0.017	0.034	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	0.003	0.017	1
10726	NDPA as diphenylamine	n.a.	0.074 J	0.034	0.17	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	4-Nitrophenol	100-02-7	N.D.	0.17	0.51	1
10726	Phenol	108-95-2	N.D.	0.017	0.034	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	2.2	0.50	0.50	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: PAD-8 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551971
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:50 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-8 SDG#: RAE24-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014 15:43	Chelsea B Stong	1.03
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014 11:50	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014 16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014 16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014 11:50	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014 03:43	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014 09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014 18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: PAD-X Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551972
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:30 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-X SDG#: RAE24-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.		0.0005	0.005	1.01
11995	Benzyl Chloride	100-44-7	N.D.		0.001	0.004	1.01
11995	Bromomethane	74-83-9	N.D.		0.002	0.005	1.01
11995	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.005	1.01
11995	Chlorobenzene	108-90-7	N.D.		0.001	0.005	1.01
11995	Chloroform	67-66-3	N.D.		0.001	0.005	1.01
11995	Chloromethane	74-87-3	N.D.		0.002	0.005	1.01
11995	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.005	1.01
11995	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.005	1.01
11995	Methylene Chloride	75-09-2	N.D.		0.002	0.005	1.01
11995	Tetrachloroethene	127-18-4	N.D.		0.001	0.005	1.01
11995	Toluene	108-88-3	N.D.		0.001	0.005	1.01
11995	Trichloroethene	79-01-6	N.D.		0.001	0.005	1.01
11995	Vinyl Chloride	75-01-4	N.D.		0.001	0.005	1.01
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**		**mg/kg**	**mg/kg**	
10726	Acetophenone	98-86-2	N.D.		0.018	0.035	1
10726	Benzo(a)anthracene	56-55-3	N.D.		0.004	0.018	1
10726	Benzo(a)pyrene	50-32-8	N.D.		0.004	0.018	1
10726	Benzo(b)fluoranthene	205-99-2	0.014	J	0.004	0.018	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.		0.004	0.018	1
10726	Butylbenzylphthalate	85-68-7	N.D.		0.071	0.18	1
10726	Di-n-butylphthalate	84-74-2	2.0		0.071	0.18	1
10726	2-Chlorophenol	95-57-8	N.D.		0.018	0.035	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.		0.004	0.018	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		0.018	0.035	1
10726	Diethylphthalate	84-66-2	0.27		0.071	0.18	1
10726	3,3'-Dimethylbenzidine	119-93-7	N.D.		0.53	1.1	1
10726	Dimethylphthalate	131-11-3	N.D.		0.071	0.18	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	0.18	J	0.071	0.18	1
10726	Fluoranthene	206-44-0	0.007	J	0.004	0.018	1
10726	Hexachloroethane	67-72-1	N.D.		0.035	0.18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.004	0.018	1
10726	4-Methylphenol	106-44-5	N.D.		0.018	0.035	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	0.01	J	0.004	0.018	1
10726	NDPA as diphenylamine	n.a.	0.16	J	0.035	0.18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	4-Nitrophenol	100-02-7	N.D.		0.18	0.53	1
10726	Phenol	108-95-2	N.D.		0.018	0.035	1

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect. The reported data is from the initial analysis of the sample.

*=This limit was used in the evaluation of the final result

Sample Description: PAD-X Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551972
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 11:30 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PAD-X SDG#: RAE24-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00111	Moisture	n.a.	6.1	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	B142201AA	08/08/2014 16:05	Chelsea B Stong	1.01
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014 16:05	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014 16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014 11:30	Client Supplied	1
10726	23 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014 04:07	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014 09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004A	08/07/2014 18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: Trip Blank Water
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # WW 7551973
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

PADTB SDG#: RAE24-10TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.5	5	1
11997	Benzyl Chloride	100-44-7	N.D.	1	5	1
11997	Bromomethane	74-83-9	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	5	1
11997	Chlorobenzene	108-90-7	N.D.	0.8	5	1
11997	Chloroform	67-66-3	N.D.	0.8	5	1
11997	Chloromethane	74-87-3	N.D.	1	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	5	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.8	5	1
11997	Methylene Chloride	75-09-2	N.D.	2	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.8	5	1
11997	Toluene	108-88-3	N.D.	0.7	5	1
11997	Trichloroethene	79-01-6	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	2	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	L142181AA	08/06/2014 15:58	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L142181AA	08/06/2014 15:58	Sarah A Guill	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: NB-1 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551974
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 12:30 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

NB--1 SDG#: RAE24-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Bromomethane	74-83-9	N.D.	0.003	0.007	1.15
11995	Trichloroethene	79-01-6	N.D.	0.001	0.007	1.15
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Di-n-butylphthalate	84-74-2	0.99	0.079	0.20	1
10726	Diethylphthalate	84-66-2	1.2	0.079	0.20	1
10726	Dimethylphthalate	131-11-3	0.33	0.079	0.20	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	0.70	0.079	0.20	1
10726	NDPA as diphenylamine	n.a.	0.20 J	0.039	0.20	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	16.7	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B142201AA	08/08/2014	16:27	Chelsea B Stong	1.15
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	12:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	12:30	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	12:30	Client Supplied	1
10726	5 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014	04:32	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004B	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: NB-2 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551975
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 12:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

NB--2 SDG#: RAE24-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Bromomethane	74-83-9	N.D.	0.002	0.006	1.04
11995	Trichloroethene	79-01-6	N.D.	0.001	0.006	1.04
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Di-n-butylphthalate	84-74-2	0.54	0.075	0.19	1
10726	Diethylphthalate	84-66-2	0.65	0.075	0.19	1
10726	Dimethylphthalate	131-11-3	N.D.	0.075	0.19	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	0.34	0.075	0.19	1
10726	NDPA as diphenylamine	n.a.	0.17 J	0.038	0.19	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	12.0	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B142201AA	08/08/2014	16:49	Chelsea B Stong	1.04
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	12:10	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:06	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	12:10	Client Supplied	1
10726	5 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014	04:56	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004B	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SB-1 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551976
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 12:50 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

SB--1 SDG#: RAE24-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Bromomethane	74-83-9	N.D.	0.003	0.007	1.08
11995	Trichloroethene	79-01-6	N.D.	0.001	0.007	1.08
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Di-n-butylphthalate	84-74-2	N.D.	0.086	0.21	1
10726	Diethylphthalate	84-66-2	N.D.	0.086	0.21	1
10726	Dimethylphthalate	131-11-3	N.D.	0.086	0.21	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.086	0.22	1
10726	NDPA as diphenylamine	n.a.	N.D.	0.043	0.21	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	22.9	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B142201AA	08/08/2014	17:12	Chelsea B Stong	1.08
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	12:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	12:50	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:07	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:07	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	12:50	Client Supplied	1
10726	5 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014	05:20	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004B	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SB-2 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551977
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 13:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

SB--2 SDG#: RAE24-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Bromomethane	74-83-9	N.D.	0.003	0.008	1.15
11995	Trichloroethene	79-01-6	N.D.	0.002	0.008	1.15
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Di-n-butylphthalate	84-74-2	2.4	0.090	0.23	1
10726	Diethylphthalate	84-66-2	0.51	0.090	0.23	1
10726	Dimethylphthalate	131-11-3	N.D.	0.090	0.23	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	0.47	0.090	0.23	1
10726	NDPA as diphenylamine	n.a.	0.079 J	0.045	0.23	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	26.8	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B142201AA	08/08/2014	17:34	Chelsea B Stong	1.15
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	13:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	13:10	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:07	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:07	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	13:10	Client Supplied	1
10726	5 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/08/2014	05:45	Catherine E Bachman	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004B	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: BERM-1 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551978
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 08:50 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

BERM1 SDG#: RAE24-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Bromomethane	74-83-9	N.D.	0.002	0.005	1.03
11995	Trichloroethene	79-01-6	N.D.	0.001	0.005	1.03
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Di-n-butylphthalate	84-74-2	2.1	0.068	0.17	1
10726	Diethylphthalate	84-66-2	N.D.	0.068	0.17	1
10726	Dimethylphthalate	131-11-3	N.D.	0.068	0.17	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	0.082 J	0.068	0.17	1
10726	NDPA as diphenylamine	n.a.	0.12 J	0.034	0.17	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	2.9	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B142201AA	08/08/2014	17:56	Chelsea B Stong	1.03
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	08:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	08:50	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:06	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:05	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	08:50	Client Supplied	1
10726	5 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/11/2014	20:46	Holly Berry	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004B	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: POND-1 Grab Soil
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # SW 7551979
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014 09:10 by TE

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

POND1 SDG#: RAE24-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Bromomethane	74-83-9	N.D.	0.002	0.006	1.06
11995	Trichloroethene	79-01-6	N.D.	0.001	0.006	1.06
GC/MS Semivolatiles	**SW-846 8270D**		**mg/kg**	**mg/kg**	**mg/kg**	
10726	Di-n-butylphthalate	84-74-2	0.40	0.069	0.17	1
10726	Diethylphthalate	84-66-2	0.36	0.069	0.17	1
10726	Dimethylphthalate	131-11-3	N.D.	0.069	0.17	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.069	0.18	1
10726	NDPA as diphenylamine	n.a.	0.098 J	0.035	0.17	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	5.0	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B142201AA	08/08/2014	18:18	Chelsea B Stong	1.06
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	1	201421335264	07/31/2014	09:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035	2	201421335264	07/31/2014	09:10	Client Supplied	1
06176	GC/MS - LL Water Prep	SW-846 5035	1	201421335264	08/01/2014	16:07	Larry E Bevins	1
06176	GC/MS - LL Water Prep	SW-846 5035	2	201421335264	08/01/2014	16:07	Larry E Bevins	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035	1	201421335264	07/31/2014	09:10	Client Supplied	1
10726	5 SVOC 8270D compounds-RAAP	SW-846 8270D	1	14218SLG026	08/11/2014	21:10	Holly Berry	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	14218SLG026	08/07/2014	09:10	Katheryne V Sponheimer	1
00111	Moisture	SM 2540 G-1997	1	14219820004B	08/07/2014	18:34	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: Trip Blank Water
July 2014 Annual Soil Monitoring
RAAP - Radford, VA - HWMU13/Open Burning Ground

LL Sample # WW 7551980
LL Group # 1493145
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 07/31/2014

Submitted: 08/01/2014 09:40
Reported: 08/13/2014 21:18

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

NB-TB SDG#: RAE24-17TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.5	5	1
11997	Benzyl Chloride	100-44-7	N.D.	1	5	1
11997	Bromomethane	74-83-9	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	5	1
11997	Chlorobenzene	108-90-7	N.D.	0.8	5	1
11997	Chloroform	67-66-3	N.D.	0.8	5	1
11997	Chloromethane	74-87-3	N.D.	1	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	5	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.8	5	1
11997	Methylene Chloride	75-09-2	N.D.	2	5	1
11997	Tetrachloroethene	127-18-4	N.D.	0.8	5	1
11997	Toluene	108-88-3	N.D.	0.7	5	1
11997	Trichloroethene	79-01-6	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	2	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	14 VOC 8260C compounds-RAAP	SW-846 8260C	1	L142181AA	08/06/2014 16:20	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L142181AA	08/06/2014 16:20	Sarah A Guill	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1493145
Reported: 08/13/14 at 09:18 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B142201AA	Sample number(s): 7551962-7551972,7551974-7551979								
Benzene	N.D.	0.0005	0.005	mg/kg	102		80-120		
Benzyl Chloride	N.D.	0.001	0.004	mg/kg	108		64-120		
Bromomethane	N.D.	0.002	0.005	mg/kg	86		32-162		
Carbon Tetrachloride	N.D.	0.001	0.005	mg/kg	122		69-130		
Chlorobenzene	N.D.	0.001	0.005	mg/kg	104		80-120		
Chloroform	N.D.	0.001	0.005	mg/kg	110		80-120		
Chloromethane	N.D.	0.002	0.005	mg/kg	83		56-120		
1,2-Dichloroethane	N.D.	0.001	0.005	mg/kg	112		66-136		
1,1-Dichloroethene	N.D.	0.001	0.005	mg/kg	100		73-129		
Methylene Chloride	N.D.	0.002	0.005	mg/kg	100		80-124		
Tetrachloroethene	N.D.	0.001	0.005	mg/kg	111		78-120		
Toluene	N.D.	0.001	0.005	mg/kg	98		80-120		
Trichloroethene	N.D.	0.001	0.005	mg/kg	108		80-120		
Vinyl Chloride	N.D.	0.001	0.005	mg/kg	88		59-120		
Batch number: L142181AA	Sample number(s): 7551973,7551980								
Benzene	N.D.	0.5	5	ug/l	106		78-120		
Benzyl Chloride	N.D.	1.	5	ug/l	87		51-120		
Bromomethane	N.D.	1.	5	ug/l	98		58-120		
Carbon Tetrachloride	N.D.	1.	5	ug/l	105		74-130		
Chlorobenzene	N.D.	0.8	5	ug/l	96		80-120		
Chloroform	N.D.	0.8	5	ug/l	110		80-122		
Chloromethane	N.D.	1.	5	ug/l	94		63-120		
1,2-Dichloroethane	N.D.	1.	5	ug/l	107		65-135		
1,1-Dichloroethene	N.D.	0.8	5	ug/l	105		76-124		
Methylene Chloride	N.D.	2.	5	ug/l	108		80-120		
Tetrachloroethene	N.D.	0.8	5	ug/l	100		80-120		
Toluene	N.D.	0.7	5	ug/l	100		80-120		
Trichloroethene	N.D.	1.	5	ug/l	109		80-120		
Vinyl Chloride	N.D.	0.5	2	ug/l	100		63-120		
Batch number: 14218SLG026	Sample number(s): 7551962-7551972,7551974-7551979								
Acetophenone	N.D.	0.017	0.033	mg/kg	106		76-108		
Benzo(a)anthracene	N.D.	0.003	0.017	mg/kg	104		76-119		
Benzo(a)pyrene	N.D.	0.003	0.017	mg/kg	107		84-122		
Benzo(b)fluoranthene	N.D.	0.003	0.017	mg/kg	112		78-129		
Benzo(k)fluoranthene	N.D.	0.003	0.017	mg/kg	103		79-120		
Butylbenzylphthalate	N.D.	0.067	0.17	mg/kg	115		80-118		
Di-n-butylphthalate	N.D.	0.067	0.17	mg/kg	110		84-120		
2-Chlorophenol	N.D.	0.017	0.033	mg/kg	113		80-122		
Dibenz(a,h)anthracene	N.D.	0.003	0.017	mg/kg	103		81-123		
2,4-Dichlorophenol	N.D.	0.017	0.033	mg/kg	109		81-123		
Diethylphthalate	N.D.	0.067	0.17	mg/kg	109		81-118		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1493145
Reported: 08/13/14 at 09:18 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
3,3'-Dimethylbenzidine	N.D.	0.50	1.0	mg/kg	109*		36-84		
Dimethylphthalate	N.D.	0.067	0.17	mg/kg	106		82-113		
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17	mg/kg	115		75-124		
Fluoranthene	N.D.	0.003	0.017	mg/kg	100		75-118		
Hexachloroethane	N.D.	0.033	0.17	mg/kg	108		78-114		
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017	mg/kg	101		76-122		
4-Methylphenol	N.D.	0.017	0.033	mg/kg	105		75-119		
Naphthalene	N.D.	0.003	0.017	mg/kg	102		83-112		
NDPA as diphenylamine	N.D.	0.033	0.17	mg/kg	108		70-130		
4-Nitrophenol	N.D.	0.17	0.50	mg/kg	93		64-121		
Phenol	N.D.	0.017	0.033	mg/kg	115		75-117		
Batch number: 14219820004A	Sample number(s): 7551962-7551964,7551968-7551972								
Moisture					100		99-101		
Batch number: 14219820004B	Sample number(s): 7551974-7551979								
Moisture					100		99-101		
Batch number: 14220820001A	Sample number(s): 7551965-7551967								
Moisture					100		99-101		
Moisture					100		99-101		
Moisture Duplicate					100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: B142201AA	Sample number(s): 7551962-7551972,7551974-7551979 UNSPK: 7551965								
Benzene	104	106	55-143	18	30				
Benzyl Chloride	82	90	30-130	26	30				
Bromomethane	91	99	42-168	25	30				
Carbon Tetrachloride	123	136	51-165	26	30				
Chlorobenzene	91	108	49-135	34*	30				
Chloroform	116	118	61-142	18	30				
Chloromethane	90	99	36-143	26	30				
1,2-Dichloroethane	120	112	54-143	10	30				
1,1-Dichloroethene	105	114	61-149	24	30				
Methylene Chloride	104	104	60-149	16	30				
Tetrachloroethene	98	128	42-149	43*	30				
Toluene	95	116	50-146	36*	30				
Trichloroethene	103	111	53-144	24	30				
Vinyl Chloride	96	104	50-154	25	30				
Batch number: L142181AA	Sample number(s): 7551973,7551980 UNSPK: P550394								
Benzene	116	113	72-134	3	30				
Benzyl Chloride	88	85	53-117	3	30				
Bromomethane	107	104	47-129	3	30				
Carbon Tetrachloride	119	117	75-148	2	30				
Chlorobenzene	105	102	87-124	3	30				
Chloroform	117	114	81-134	3	30				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1493145
Reported: 08/13/14 at 09:18 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Chloromethane	104	104	61-125	0	30				
1,2-Dichloroethane	115	109	63-142	5	30				
1,1-Dichloroethene	121	116	79-137	4	30				
Methylene Chloride	114	110	78-133	4	30				
Tetrachloroethene	111	109	80-128	1	30				
Toluene	110	107	80-125	3	30				
Trichloroethene	122	117	88-133	4	30				
Vinyl Chloride	117	116	66-133	1	30				
Batch number: 14218SLG026	Sample number(s): 7551962-7551972,7551974-7551979 UNSPK: 7551965								
Acetophenone	97	96	67-111	3	30				
Benzo(a)anthracene	82	73	32-150	12	30				
Benzo(a)pyrene	90	85	36-151	7	30				
Benzo(b)fluoranthene	96	112	29-150	14	30				
Benzo(k)fluoranthene	100	99	35-146	2	30				
Butylbenzylphthalate	103	97	50-137	7	30				
Di-n-butylphthalate	125	111	57-130	9	30				
2-Chlorophenol	97	93	35-152	6	30				
Dibenz(a,h)anthracene	87	90	54-142	2	30				
2,4-Dichlorophenol	93	86	39-153	9	30				
Diethylphthalate	92	86	54-127	6	30				
3,3'-Dimethylbenzidine	0*	0*	10-103	0	30				
Dimethylphthalate	99	95	45-135	6	30				
bis(2-Ethylhexyl)phthalate	105	102	52-138	4	30				
Fluoranthene	85	82	41-135	5	30				
Hexachloroethane	100	70	24-138	36*	30				
Indeno(1,2,3-cd)pyrene	81	87	44-147	6	30				
4-Methylphenol	84	78	29-143	9	30				
Naphthalene	100	99	44-142	2	30				
NDPA as diphenylamine	49*	102	70-130	49*	30				
4-Nitrophenol	83	77	25-142	8	30				
Phenol	101	101	61-130	1	30				
Batch number: 14219820004A	Sample number(s): 7551962-7551964,7551968-7551972 BKG: P551965								
Moisture						11.7	9.7	19*	5
Batch number: 14219820004B	Sample number(s): 7551974-7551979 BKG: 7551974								
Moisture						16.7	15.5	7*	5
Batch number: 14220820001A	Sample number(s): 7551965-7551967 BKG: 7551965								
Moisture						10.4	11.9	13*	5
Moisture						10.4	11.9	13*	5
Moisture Duplicate						10.4	11.9	13*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1493145
Reported: 08/13/14 at 09:18 PM

Surrogate Quality Control

Analysis Name: VOCs- Solid by 8260C
Batch number: B142201AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7551962	106	107	94	95
7551963	105	105	96	93
7551964	107	106	99	96
7551965	109	105	107	80
7551966	107	109	100	97
7551967	103	97	113	84
7551968	106	102	100	87
7551969	105	105	96	92
7551970	108	103	98	90
7551971	108	103	97	89
7551972	108	101	99	87
7551974	113	112	96	90
7551975	113	117	94	89
7551976	111	109	101	84
7551977	115	111	104	77
7551978	110	103	95	91
7551979	110	105	97	87
Blank	104	104	95	95
LCS	103	103	98	99
MS	107	109	100	97
MSD	103	97	113	84
Limits:	50-141	54-135	52-141	50-131

Analysis Name: 8260C VOCs
Batch number: L142181AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7551973	103	101	93	97
7551980	105	101	94	97
Blank	104	102	94	100
LCS	102	98	96	102
MS	103	100	96	101
MSD	102	98	96	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: 67 SVOC 8270D cmpds
Batch number: 14218SLG026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7551962	94	61	80	104	97	108
7551963	99	90	84	103	98	106
7551964	89	90	72	94	97	101
7551965	93	96	85	104	95	102
7551966	96	95	83	97	96	100
7551967	91	94	77	94	90	96
7551968	97	81	80	104	98	107
7551969	105	104	89	107	106	115
7551970	90	45	73	105	97	110
7551971	100	101	84	98	94	102
7551972	95	65	75	101	96	107

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1493145
Reported: 08/13/14 at 09:18 PM

Surrogate Quality Control

7551974				95	91	97
7551975				98	93	102
7551976				101	93	102
7551977				98	91	99
7551978				102	97	103
7551979				100	95	101
Blank	98	100	99	102	97	111
LCS	110	109	96	105	100	115
MS	96	95	83	97	96	100
MSD	91	94	77	94	90	96
Limits:	44-129	40-141	36-142	54-123	63-124	61-142

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

CHAIN OF CUSTODY RECORD 1200 1493145 7551962-80

Laboratory: Eurofins Lancaster Laboratories 2425 New Holland Pike, Lancaster, PA 17605-2425/Barb Weyandt, Manager, 717-656-2300

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS **Carrier:** 12.75Y-02X-Y0-4089-1786 **Tracking Number:** 4180-4501

Box 1: Matrix
SW Surface Water, GW Groundwater, L Leachate, S Soil, T Trip Blank, E Equipment Blank, P Product, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (< 6 deg c), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 5: Sample Container Type
P Plastic, V VOA, AG Amber Glass, CG Clear Glass

Box 4: Sample Type
G Grab, C Composite

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	VOAs 5035/8260C w/ sodium biasulfate	VOAs 5035/8260C w/ methanol	VOAs 5030B/8260B (backup) (*)	VOAs 5030B/8260C	SVOCs 8270D	Dry Weight
Box 4 - Sample Type					G	G	G	G	G	G
Box 3 - Filtered/Unfiltered								U		
Required pH of Sample								<2		
Box 2 - Preservative					G	G	DI H20	A	G	H
Box 5 - Sample Container Type					2-40ml V	1-40ml V	2-40 ml V	2-40 ml V	1-4 oz CG	
PAD-1	7/31	0835	S	5	X	X	X		X	X
PAD-2		0935	S	5	X	X	X		X	X
PAD-3		0950	S	5	X	X	X		X	X
PAD-4		1010	S	5	X	X	X		X	X
PAD-4ms		1010	S	5	X	X	X		X	X
PAD-4msd		1010	S	5	X	X	X		X	X
PAD-5		1040	S	5	X	X	X		X	X
PAD-6		1100	S	5	X	X	X		X	X
PAD-7		1120	S	5	X	X	X		X	X
PAD-8		1130	S	5	X	X	X		X	X
PAD-X		1135	S	5	X	X	X		X	X
Trip Blank	7/31		T	2				X		

GENERAL NOTES:
1. Estimated results required.
2. Report results on a DRY WEIGHT BASIS. 8260C/5035-2 VOA with sodium bisulfate and 1 VOA with methanol. "Diasa
(*) use backup if effervescence is observed.
3. Report in mg/kg. VELAP Accreditation Required.
4. Special Pricing – $129/voc ; $1200/svoc

Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced use for MS / MSD...
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced
Sample Effervesced

1 TRIP Blank required FOR EACH DAY

Clients Special Instructions: Level 1 with edd.

Received by lab in Good Condition X Yes ____ No Custody Seal Intact X Yes ____ No Temperature upon arrival 0.7-1.0 Received on Ice X Yes ____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print):	Date: 7/31/14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 8/1/14	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name: ELLE	Time: 940	

7.11.14 1/4

CHAIN OF CUSTODY RECORD 11200 1493145 7551962-80

Laboratory: ELLE, LLC, 2425 New Holland Pike, Lancaster, PA 17605-2425/Barb Weyandt, Manager, 717-656-2300

OKD 7/1/14

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** **Tracking Number:**

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (<6 deg c); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G			
Box 3 - Filtered/Unfiltered						U			
Required pH of Sample						<2			
Box 2 - Preservative	G	G	H	H	H20	A			
Box 5 - Sample Container Type	2-40ml V	1-40ml V	1-4 oz CG		2-40 ml V	2-40 ml VOA CG			

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	VOAs 5035A/8260C	VOAs 5035A/8260C	SVOCs 8270D	DRY WEIGHT	VOAs 5030B/8260C (backup) (*)	VOAs 5030B/8260C				
NB-1	7/31	1230	S	5	X	X	X	X	X					
NB-2		1210	S	5	X	X	X	X	X					
SB-1		1250	S	5	X	X	X	X	X					
SB-2		1310	S	5	X	X	X	X	X					
BERM-1		0850	S	5	X	X	X	X	X					Sample Effervesed
POND-1	7/31	0910	S	5	X	X	X	X	X					Sample Effervessed
Trip Blank	7/31		T	2						X				1 Trip blank per day. Delete if not required.

GENERAL NOTES:
1. Estimated results required.
2. Report results on a DRY WEIGHT BASIS. 8260C/5035-2 VOA with sodium bisulfate and 1-VOA with methanol.

(*) Use backup if effervesence is observed.
3. Report in mg/kg
4. Special Pricing $129/VOC ; $200/SVOC

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition X Yes ____ No Custody Seal Intact X Yes ____ No Temperature upon arrival 0.7-1.0 Received on Ice X Yes ____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 8-1-14	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name:	Time:	Company Name: ELLE	Time: 940	

2/4
7.11.14

1493145

Open Burning Ground (OBG) – Unit 13
Radford Army Ammunition Plant
Annual Soil Monitoring Event
Based on revised permit effective June 12, 2014

ANALYTICAL METHOD: 8260C/5035A (SOIL) 8260C/5030 (Trip Blank)
TYPE METHOD: GCMS
CLASS: VOLATILE

Analyte List for: All PAD Samples and Trip Blank

No.	Constituent	CASRN
1	1,2-Dichloroethane	107-06-2
2	Benzene	71-43-2
3	Benzyl chloride	100-44-7
4	Carbon tetrachloride	56-23-5
5	Chlorobenzene	108-90-7
6	Chloroform	67-66-3
7	Methyl bromide (Bromomethane)	74-83-9
8	Methyl chloride (Chloromethane)	74-87-3
9	Methylene chloride	75-09-2
10	Tetrachloroethylene	127-18-4
11	Toluene	108-88-3
12	Trichloroethylene	79-01-6
13	Vinyl chloride	75-01-4
14	Vinylidene chloride (1,1-Dichloroethene)	75-35-4

1

Analyte List for SB-1, SB-2, NB-1, NB-2, Berm-1 and Pond-1 ONLY

No.	ANALYTE	CAS RN
1.	Trichloroethene	79-01-6
2.	Bromomethane	74-83-9

1

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1493145

Open Burning Ground (OBG) – Unit 13
Radford Army Ammunition Plant
Annual Soil Monitoring Event
Based on revised permit effective June 12, 2014

ANALYTICAL METHOD: 8270D/3546
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

Analyte List for: All PAD Samples

No.	Constituent	CASRN
1	2,4-Dichlorophenol	120-83-2
2	2-Chlorophenol	95-57-8
3	3-Methylphenol	108-39-4
4	4-Methylphenol	106-44-5
5	3,3-Dimethylbenzidine	119-93-7
6	4-Nitrophenol	100-02-7
7	Acetophenone	98-86-2
8	Benz(a)anthracene	56-55-3
9	Benzo(a)pyrene	50-32-8
10	Benzo(b)fluoranthene	205-99-2
11	Benzo(k)fluoranthene	207-08-9
12	bis(2-Ethylhexyl)phthalate	117-81-7
13	Butylbenzylphthalate	85-68-7
14	Dibenz(a,h)anthracene	53-70-3
15	Diethylphthalate	84-66-2
16	Dimethyl phthalate	131-11-3
17	Di-n-butyl phthalate	84-74-2
18	Diphenylamine	122-39-4
19	Fluoranthene	206-44-0
20	Hexachloroethane	67-72-1
21	Indeno(1,2,3-cd)pyrene	193-39-5
22	Naphthalene	91-20-3
23	Phenol	108-95-2

Analyte List for SB-1, SB-2, NB-1, NB-2, Berm-1 and Pond-1 ONLY

No.	ANALYTE	CAS RN
1.	Bis(2-ethylhexyl) phthalate ✓	117-81-7
2.	Diethylphthalate ✓	84-66-2
3.	Dimethylphthalate ✓	131-11-3
4.	Di-n-butylphthalate ✓	84-74-2
5.	N-nitrosodiphenylamine/diphenylamine ✓	122-39-4

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Sample Administration Receipt Documentation Log

Doc Log ID: 22241

Group Number(s): 1493145

Client: Draper Aden Associates

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	08/01/2014 9:40
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Total Trip Blank Qty:	6
Custody Seal Present:	Yes	Trip Blank Type:	HCL
Custody Seal Intact:	Yes	Air Quality Samples Present:	No
Samples Chilled:	Yes	Air Quality Flow Controllers Present:	N/A
Paperwork Enclosed:	Yes	Flow Controller Quantity:	0
Samples Intact:	Yes	Air Quality Returns:	N/A
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		
Sample IDs on COC match Containers:	No		
Sample Date/Times match COC:	Yes		
VOA Vial Headspace ≥ 6mm:	No		
VOA IDs (≥ 6mm):	N/A		

Unpacked by Brandy Barclay (2299) at 11:47 on 08/01/2014

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Samples Collected Same Day as Receipt?	Elevated Temp?
1	DT146	0.7	DT	Wet	Y	Bagged	N	N
2	DT146	1.0	DT	Wet	Y	Bagged	N	N

2425 New Holland Pike
Lancaster, PA 17601-2815
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.cor

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Sample Administration Receipt Documentation Log

Doc Log ID: 22241

Group Number(s): 1493145

Client: Draper Aden Associates

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
PAD-1	6	5	
PAD-2	6	5	
PAD-3	6	5	
PAD-4	6	5	
PAD-4 ms	6	5	
PAD-4 msd	6	5	
PAD-X	4	5	
NB-1	6	5	
SB-1	6	5	
SB-2	6	5	
BERM-1	6	5	
POND-1	6	5	

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
PAD-1	POND-1	3 vials, time is 0830

2425 New Holland Pike
Lancaster, Pennsylvania 17601

T | 717-656-2300
F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Microbac

Laboratory Report Number: L14091205

Abridged data package.
Full deliverable available.

Janet Frazier
Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Michelle Taylor – Client Services Specialist
(740) 373-4071
Michelle.Taylor@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on October 01 2014

David Vandenberg – Managing Director

State of Origin: VA
Accrediting Authority: Common Wealth of Virginia ID:460187
QAPP: Microbac OVD

Microbac

Lab Report #: L14091205
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0019957	I	4.0		1Z2373010193082664	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac

Lab Report #: L14091205
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
PAD-1	L14091205-01	09/18/2014 08:30	09/19/2014 10:07
PAD-3	L14091205-02	09/18/2014 08:20	09/19/2014 10:07
PAD-4	L14091205-03	09/18/2014 08:00	09/19/2014 10:07
PAD-4MS	L14091205-04	09/18/2014 08:00	09/19/2014 10:07
PAD-4MSD	L14091205-05	09/18/2014 08:00	09/19/2014 10:07
PAD-5	L14091205-06	09/18/2014 07:40	09/19/2014 10:07
PAD-X	L14091205-07	09/18/2014 08:15	09/19/2014 10:07

Microbac REPORT L14091205
PREPARED FOR Draper Aden Associates
WORK ID:

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1.0 Summary Data

1.1 Narratives

Login Number: L14091205
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: 2,4-Dinitrotoluene, Nitroglycerin. Please see the applicable QC report for a detailed presentation of the failures. This was due to the presence of these analytes in the reference sample.

Sample #	Analyte	Date	Result	Lower	Upper	Type
L14091205-04	2,4-Dinitrotoluene	2014-09-26 20:56:15	-203	80	125	Recovery
L14091205-04	Nitroglycerin	2014-09-26 20:56:15	-812	50	150	Recovery

L14091205-05	2,4-Dinitrotoluene	2014-09-26 21:35:20	-203	80	125	Recovery

SAMPLES

Samples: Samples 02, 03, and 07 were run at dilutions so the results would be within calibration range.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 89568
Approved By: Eric Lawson

1.2 Certificate of Analysis

Microbac

Lab Report #: L14091205
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14091205-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-1	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 18:59
Collect Date:	09/18/2014 08:30	**Dilution:**	1	**File ID:**	5L013645.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2		ND	0.249	0.0997

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.2	50	150	

ND	Not detected at or above the reporting limit (RL/MDL).

Certificate of Analysis

Sample #:	L14091205-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 19:38
Collect Date:	09/18/2014 08:20	**Dilution:**	1	**File ID:**	5L013646.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	128	I	0.248	0.0990

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	82.7	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/30/2014 10:43
Collect Date:	09/18/2014 08:20	**Dilution:**	50	**File ID:**	5L013660.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	123		12.4	4.95

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14091205-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 20:17
Collect Date:	09/18/2014 08:00	**Dilution:**	1	**File ID:**	5L013647.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	3.18		0.252	0.101
Nitroglycerin	55-63-0	70.4	I	0.252	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.6	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/30/2014 11:22
Collect Date:	09/18/2014 08:00	**Dilution:**	20	**File ID:**	5L013661.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	67.8		5.04	2.01

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14091205-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4MS	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 20:56
Collect Date:	09/18/2014 08:00	**Dilution:**	1	**File ID:**	5L013648.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	1.16		0.250	0.100
Nitroglycerin	55-63-0	62.3	I	0.250	0.100

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.4	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4MSD	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 21:35
Collect Date:	09/18/2014 08:00	**Dilution:**	1	**File ID:**	5L013649.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	1.14		0.252	0.101
Nitroglycerin	55-63-0	48.9	I	0.252	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.5	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-5	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 22:14
Collect Date:	09/18/2014 07:40	**Dilution:**	1	**File ID:**	5L013650.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	0.433		0.248	0.0990

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	93.7	50	150	

Sample #:	L14091205-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 22:53
Collect Date:	09/18/2014 08:15	**Dilution:**	1	**File ID:**	5L013651.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2		ND	0.248	0.0993
Nitroglycerin	55-63-0	21.9	I	0.248	0.0993

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.2	50	150	

I	Semiquantitative result (out of instrument calibration range)
ND	Not detected at or above the reporting limit (RL/MDL).

Certificate of Analysis

Sample #:	L14091205-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/30/2014 12:01
Collect Date:	09/18/2014 08:15	**Dilution:**	10	**File ID:**	5L013662.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	17.5		2.48	0.993

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	76.2	50	150	

2.1.1 Explosives (8330B)

Login Number: L14091205
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: 2,4-Dinitrotoluene, Nitroglycerin. Please see the applicable QC report for a detailed presentation of the failures. This was due to the presence of these analytes in the reference sample.

Sample #	Analyte	Date	Result	Lower	Upper	Type
L14091205-04	2,4-Dinitrotoluene	2014-09-26 20:56:15	-203	80	125	Recovery
L14091205-04	Nitroglycerin	2014-09-26 20:56:15	-812	50	150	Recovery

L14091205-05	2,4-Dinitrotoluene	2014-09-26 21:35:20	-203	80	125	Recovery

SAMPLES

Samples: Samples 02, 03, and 07 were run at dilutions so the results would be within calibration range.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 89568
Approved By: Eric Lawson

Microbac

Lab Report #: L14091205
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14091205-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-1	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 18:59
Collect Date:	09/18/2014 08:30	**Dilution:**	1	**File ID:**	5L013645.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2		ND	0.249	0.0997

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.2	50	150	

ND	Not detected at or above the reporting limit (RL/MDL).

Certificate of Analysis

Sample #:	L14091205-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 19:38
Collect Date:	09/18/2014 08:20	**Dilution:**	1	**File ID:**	5L013646.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	128	I	0.248	0.0990

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	82.7	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/30/2014 10:43
Collect Date:	09/18/2014 08:20	**Dilution:**	50	**File ID:**	5L013660.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	123		12.4	4.95

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14091205-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 20:17
Collect Date:	09/18/2014 08:00	**Dilution:**	1	**File ID:**	5L013647.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	3.18		0.252	0.101
Nitroglycerin	55-63-0	70.4	I	0.252	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.6	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/30/2014 11:22
Collect Date:	09/18/2014 08:00	**Dilution:**	20	**File ID:**	5L013661.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	67.8		5.04	2.01

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14091205-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4MS	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 20:56
Collect Date:	09/18/2014 08:00	**Dilution:**	1	**File ID:**	5L013648.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	1.16		0.250	0.100
Nitroglycerin	55-63-0	62.3	I	0.250	0.100

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.4	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4MSD	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 21:35
Collect Date:	09/18/2014 08:00	**Dilution:**	1	**File ID:**	5L013649.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	1.14		0.252	0.101
Nitroglycerin	55-63-0	48.9	I	0.252	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.5	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14091205-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-5	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 22:14
Collect Date:	09/18/2014 07:40	**Dilution:**	1	**File ID:**	5L013650.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	0.433		0.248	0.0990

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	93.7	50	150	

Sample #:	L14091205-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/26/2014 22:53
Collect Date:	09/18/2014 08:15	**Dilution:**	1	**File ID:**	5L013651.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2		ND	0.248	0.0993
Nitroglycerin	55-63-0	21.9	I	0.248	0.0993

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.2	50	150	

I	Semiquantitative result (out of instrument calibration range)
ND	Not detected at or above the reporting limit (RL/MDL).

Certificate of Analysis

Sample #:	L14091205-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	09/25/2014 13:53
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG494269	**Analyst:**	ECL	**Run Date:**	09/30/2014 12:01
Collect Date:	09/18/2014 08:15	**Dilution:**	10	**File ID:**	5L013662.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	17.5		2.48	0.993

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	76.2	50	150	

2.1.1.2 QC Summary Data

Example 8330 Calculations

Sample Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot (y = mx + b)

y = response of analyte as area (from quantitation report)
x = concentration analyte
m = slope from curve
b = intercept from curve

Step 2: Retrieve y from quantitation report

Step 3: Retreive extraction data from logsheet

Vf = Final extract volume (mL)
Vi = Initial vome of sample (mL) or initial weight (g)

Step 4: Solve for concentration in extract (x):

x = (y - b)/m = [(7.774 -(- 0.04773)]/ 0.1711 = 45.2

Step 5: Solve for analyte concentration in sample (Cx):

Cx = (x) (Vf /Vi)

Example CCV Calculation: **(Vf/Vi) = 1**
HMX

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Concentration (ug/L):	45.16830115

Example Water Calculation:

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Volume of extract (mL):	10.00
Volume of sample extracted (mL):	1000.00
Concentration (ug/L):	0.451683011

Example Soil Calculation:
1,3,5-Trinitrobenzene

Slope from curve, m:	0.411263
Intercept from curve, b:	-0.0850241
Area of analyte, y:	20.26089
Volume of extract (mL):	20.00
Weight of sample extracted (g):	2.00
Concentration (ug/kg):	494.7178351
Concentration (mg/kg):	0.494717835

Microbac Laboratories Inc.
Continuous Sample Extract Log

Workgroup: WG494024 TIME ON: 14:15 OFF: 08:15 ON: _____ OFF: _____
Analyst: CSH
Spike Analyst: CSH
Method: METHOD
Run Date: 09/25/2014 13:53
SOP: EXTNT02 Revison 11
Spike Witness: CPD
Surr Solution: STD66107

	SAMPLE #	Type	Reference	Prod	pH	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14091205-01	SAMP		8330-SPE		10.03 g	1 mL			40 mL	Transparent
2	L14091205-02	SAMP		8330-SPE		10.1 g	1 mL			40 mL	Transparent
3	L14091205-03	RS01		8330-SPE		9.93 g	1 mL			40 mL	Transparent
4	L14091205-04	MS01	L14091205-03	8330-SPE		9.99 g	1 mL	1 mL	STD66441	40 mL	Transparent
5	L14091205-05	SD01	L14091205-03	8330-SPE		9.92 g	1 mL	1 mL	STD66441	40 mL	Transparent
6	L14091205-06	SAMP		8330-SPE		10.1 g	1 mL			40 mL	Transparent
7	L14091205-07	SAMP		8330-SPE		10.07 g	1 mL			40 mL	Transparent
8	WG494024-01	BLANK		8330-SPE		10 g	1 mL			40 mL	Transparent
9	WG494024-02	LCS		8330-SPE		10 g	1 mL	1 mL	STD66441	40 mL	Transparent
10	WG494024-03	REF	L14091205-03	8330-SPE		9.93 g	1 mL			40 mL	Transparent
11	WG494024-04	MS	L14091205-03	8330-SPE		9.99 g	1 mL	1 mL	STD66441	40 mL	Transparent
12	WG494024-05	MSD	L14091205-03	8330-SPE		9.92 g	1 mL	1 mL	STD66441	40 mL	Transparent

CTRL TEMP ON@ 3.1C, OFF@3.2

BATH TEMP ON@ 12C, OFF@16

Analyst: Chris Hill

Reviewer: [illegible]

EXTRACT - Modified 01/23/2009
PDF ID: 3781102
Report generated: 09/26/2014 10:30

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 177 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L012964.F	WG483233-01 8330 ICAL 2500 PPB	1	1	STD65351	07/09/14 13:26
2	5L012965.F	WG483233-02 8330 ICAL 1000 PPB	1	1	STD65351	07/09/14 14:05
3	5L012966.F	WG483233-03 8330 ICAL 500 PPB	1	1	STD65351	07/09/14 14:44
4	5L012967.F	WG483233-04 8330 ICAL 100 PPB	1	1	STD65351	07/09/14 15:23
5	5L012968.F	WG483233-05 8330 ICAL 50 PPB	1	1	STD65351	07/09/14 16:02
6	5L012969.F	WG483233-06 8330 ICAL 25 PPB	1	1	STD65351	07/09/14 16:41
7	5L012970.F	WG483233-07 8330 ALT 500 PPB	1	1	STD65377	07/09/14 17:20
8	5L012971.F	WG482432-01 BLANK	1	1		07/09/14 18:00
9	5L012972.F	WG482432-02 LCS	1	1		07/09/14 18:39
10	5L012973.F	WG482432-03 LCS DUP	1	1		07/09/14 19:18
11	5L012974.F	L14061431-02	1	1		07/09/14 19:57
12	5L012975.F	L14061431-04	1	1		07/09/14 20:36
13	5L012976.F	L14061689-10	1	1		07/09/14 21:15
14	5L012977.F	L14061689-12	1	1		07/09/14 21:54
15	5L012978.F	L14061689-14	1	1		07/09/14 22:33
16	5L012979.F	L14061689-16	1	1		07/09/14 23:12
17	5L012980.F	L14061689-18	1	1		07/09/14 23:51
18	5L012981.F	WG483357-01 8330 CCV 500 PPB	1	1	STD65351	07/10/14 00:30
19	5L012982.F	WG482631-01 BLANK	1	1		07/10/14 01:09
20	5L012983.F	WG482631-02 LCS	1	1		07/10/14 01:48
21	5L012984.F	WG482631-03 LCS DUP	1	1		07/10/14 02:28
22	5L012985.F	L14061689-29	1	1		07/10/14 03:07
23	5L012986.F	L14061689-31	1	1		07/10/14 03:46
24	5L012987.F	L14061689-33	1	1		07/10/14 04:25
25	5L012988.F	L14061689-35	1	1		07/10/14 05:04
26	5L012989.F	L14061689-37	1	1		07/10/14 05:43
27	5L012990.F	WG483357-02 8330 CCV 500 PPB	1	1	STD65351	07/10/14 06:22
28	5L012991.F	AcCN Rinse	1	1		07/10/14 07:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	WG483233-07 8330 ALT 500 PPB: Tetryl failed marginally low.			

Page: 1 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238
CCV STD: STD65351 LCS STD: STD65237

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Required second column confirmation	RDX
	L14061431-02			
12	X		Required second column confirmation	RDX
	L14061431-04			
18				
	WG483357-01 8330 CCV 500 PPB: Tetryl failed low.			
20				
	WG482631-02 LCS: 6 analytes failed high. There were no hits in samples associated with this LCS.			
21				
	WG482631-03 LCS DUP: 6 analytes failed high. There were no hits in samples associated with this LCS.			
23				
	L14061689-31: 1,2-DNB surrogate failed marginally low. Sample took several hours to filter and not all the sample would filter.			
27				
	WG483357-02 8330 CCV 500 PPB: Tetryl failed low.			

Page: 2 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 092614
Analyst1: ECL Analyst2: NA
Method: 8330 SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#:
Eluent ID#:
Workgroups: Column 1 ID: ULTRACARB 5 Column 2 ID: NA

Internal STD: NA Surrogate STD: STD66107 Calibration STD
CCV STD: STD66671 LCS STD: STD66441 MS/MSD STD:

Comments: Pressure = 185 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013642.F	WG494272-01 8330 CCV 500 PPB	1	1	STD66671	09/26/14 17:01
2	5L013643.F	WG494024-01 BLANK	7	1		09/26/14 17:41
3	5L013644.F	WG494024-02 LCS	7	1		09/26/14 18:20
4	5L013645.F	L14091205-01	7	1		09/26/14 18:59
5	5L013646.F	L14091205-02	7	1		09/26/14 19:38
6	5L013647.F	L14091205-03 REF	7	1		09/26/14 20:17
7	5L013648.F	L14091205-04 MS	7	1		09/26/14 20:56
8	5L013649.F	L14091205-05 MSD	7	1		09/26/14 21:35
9	5L013650.F	L14091205-06	7	1		09/26/14 22:14
10	5L013651.F	L14091205-07	7	1		09/26/14 22:53
11	5L013652.F	L14091113-03 10x	1	10		09/26/14 23:32
12	5L013653.F	WG494272-02 8330 CCV 500 PPB	1	1	STD66671	09/27/14 00:11
13	5L013654.F	L14091296-02 10x	1	10		09/27/14 00:50
14	5L013655.F	L14091369-02 10x	1	10		09/27/14 01:29
15	5L013656.F	L14091190-04 5x	1	5		09/27/14 02:08
16	5L013657.F	L14091296-03 5x	1	5		09/27/14 02:47
17	5L013658.F	WG494272-03 8330 CCV 500 PPB	1	1	STD66671	09/27/14 03:26

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1				
	WG494272-01 8330 CCV 500 PPB: Tetryl failed high. Non target analyte.			
5	X	50	Over Calibration Range	Nitroglycerin
	L14091205-02			
6	X	20	Over Calibration Range	Nitroglycerin
	WG494024-03			
7				
	L14091205-04 MS: 2,4-DNT and nitroglycerin failed low due to SMI.			
8				
	L14091205-05 MSD: 2,4-DNT and nitroglycerin failed low due to SMI.			
10	X	10	Over Calibration Range	Nitroglycerin
	L14091205-07			

Page: 1 Approved: 30-SEP-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 093014
Analyst1: ECL Analyst2: NA
Method: 8330 SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#:
Eluent ID#:

Column 1 ID: ULTRACARB 5 Column 2 ID: NA

Workgroups:

Internal STD: NA Surrogate STD: STD66107 Calibration STD
CCV STD: STD66671 LCS STD: MS/MSD STD:

Comments: Pressure = 187 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013659.F	WG494466-01 8330 CCV 500 PPB	1	1	STD66671	09/30/14 09:54
2	5L013660.F	L14091205-02 50x	7	50		09/30/14 10:43
3	5L013661.F	L14091205-03 20x	7	20		09/30/14 11:22
4	5L013662.F	L14091205-07 10x	7	10		09/30/14 12:01
5	5L013663.F	WG494466-02 8330 CCV 500 PPB	1	1	STD66671	09/30/14 12:40

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 30-SEP-14

Microbac Laboratories Inc.

Data Checklist

Date: 09-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62106
Analytical Workgroups: L14061431, L14061689

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
10-JUL-2014

Secondary Reviewer:
10-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-10-2014 19:08:43

Microbac Laboratories Inc.

Data Checklist

Date: 26-SEP-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 63754
Analytical Workgroups: L14091205, L14091113, L14091190, L14091296, L14091369

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	JBK

Primary Reviewer:
29-SEP-2014

Secondary Reviewer:
30-SEP-2014

CHECKLIST1 - Modified 03/05/2008
Generated: SEP-30-2014 08:55:47

Microbac Laboratories Inc.

Data Checklist

Date: 30-SEP-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 63778
Analytical Workgroups: L14091205

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	NA
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	NA
Recoveries	NA
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	JBK

Primary Reviewer:
30-SEP-2014

Secondary Reviewer:
30-SEP-2014

CHECKLIST1 - Modified 03/05/2008
Generated: SEP-30-2014 16:10:12

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B AAB#: WG494269

Login Number: L14091205

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
PAD-1	01	09/18/14					09/25/2014	7.2	14		09/26/14	1.2	40	
PAD-3	02	09/18/14					09/25/2014	7.2	14		09/26/14	1.2	40	
PAD-3	02	09/18/14					09/25/2014	7.2	14		09/30/14	4.9	40	
PAD-4	03	09/18/14					09/25/2014	7.2	14		09/30/14	4.9	40	
PAD-4	03	09/18/14					09/25/2014	7.2	14		09/26/14	1.3	40	
PAD-4MS	04	09/18/14					09/25/2014	7.2	14		09/26/14	1.3	40	
PAD-4MSD	05	09/18/14					09/25/2014	7.2	14		09/26/14	1.3	40	
PAD-5	06	09/18/14					09/25/2014	7.3	14		09/26/14	1.3	40	
PAD-X	07	09/18/14					09/25/2014	7.2	14		09/26/14	1.4	40	
PAD-X	07	09/18/14					09/25/2014	7.2	14		09/30/14	4.9	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3786512
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14091205
Instrument Id: HPLC5
Workgroup (AAB#): WG494269

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Soil

Sample Number	Dilution	Tag	1
L14091205-01	1.00	01	85.2
L14091205-02	1.00	01	82.7
L14091205-02	50.0	DL01	DL
L14091205-03	1.00	01	85.6
L14091205-03	20.0	DL01	DL
L14091205-04	1.00	01	85.4
L14091205-05	1.00	01	90.5
L14091205-06	1.00	01	93.7
L14091205-07	1.00	01	90.2
L14091205-07	10.0	DL01	76.2
WG494024-01	1.00	01	92.1
WG494024-02	1.00	01	94.9

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3786521
Report generated: 09/30/2014 15:14

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14091205
Blank File ID: 5L013643.F
Prep Date: 09/25/14 13:53
Analyzed Date: 09/26/14 17:41
Analyst: ECL

Work Group: WG494269
Blank Sample ID: WG494024-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG494024-02	5L013644.F	09/26/14 18:20	01
PAD-1	L14091205-01	5L013645.F	09/26/14 18:59	01
PAD-3	L14091205-02	5L013646.F	09/26/14 19:38	01
PAD-4	L14091205-03	5L013647.F	09/26/14 20:17	01
PAD-4MS	L14091205-04	5L013648.F	09/26/14 20:56	01
PAD-4MSD	L14091205-05	5L013649.F	09/26/14 21:35	01
PAD-5	L14091205-06	5L013650.F	09/26/14 22:14	01
PAD-X	L14091205-07	5L013651.F	09/26/14 22:53	01
PAD-3	L14091205-02	5L013660.F	09/30/14 10:43	DL01
PAD-4	L14091205-03	5L013661.F	09/30/14 11:22	DL01
PAD-X	L14091205-07	5L013662.F	09/30/14 12:01	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3786513
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14091205 Prep Date: 09/25/14 13:53 Sample ID: WG494024-01
Instrument ID: HPLC5 Run Date: 09/26/14 17:41 Prep Method: METHOD
File ID: 5L013643.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG494269 Matrix: Soil Units: mg/kg
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
2,4-Dinitrotoluene	0.100	0.250	0.100	1	U
Nitroglycerin	0.100	0.250	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	92.1	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3786514
30-SEP-2014 15:14

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14091205 Run Date: 09/26/2014 Sample ID: WG494024-02
Instrument ID: HPLC5 Run Time: 18:20 Prep Method: METHOD
File ID: 5L013644.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG494269 Matrix: Soil Units: mg/kg
QC Key: STD Lot#: STD66441 Cal ID: HPLC5-09-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
2,4-Dinitrotoluene	1.00	0.998	99.8	80 - 125	
Nitroglycerin	1.00	0.910	91.0	50 - 150	

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	94.9	50 - 150	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3786515
Report generated: 09/30/2014 15:14

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14091205 Cal ID: HPLC5- 09-JUL-14 Worknum: WG494269

Instrument ID: HPLC5 Contract #: Prep Method: METHOD

Parent ID: L14091205-03 File ID: 5L013647.F Dil: 1 Method: 8330B

Sample ID: L14091205-04 MS File ID: 5L013648.F Dil: 1 Matrix: Soil

Sample ID: L14091205-05 MSD File ID: 5L013649.F Dil: 1 Units: mg/kg

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
2,4-Dinitrotoluene	3.18	1.00	1.16	-203	1.01	1.14	-203	1.29	80 - 125	20	*
Nitroglycerin	70.4	1.00	62.3	-812	1.01	48.9	-2130	24.0	50 - 150	20	*#

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 3786516
Report generated 09/29/2014 18:16

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14091205
Analytical Method: 8330B
ICAL Workgroup: WG483233

Instrument ID: HPLC5
Initial Calibration Date: 09-JUL-14 16:41
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
2,4-Dinitrotoluene		1.780	3.81	1.00000	
Nitroglycerin		5.043	17.4	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

This method always uses linear calibration model (R)

INT_CAL - Modified 03/06/2008
PDF File ID: 3786517
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14091205

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-01			WG483233-02			WG483233-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4-Dinitrotoluene	2500	1377.43542	1.815	1000	549.588623	1.820	500	269.683533	1.854
Nitroglycerin	2500	515.997803	4.845	1000	205.258530	4.872	500	101.567825	4.923

INT_CAL - Modified 03/06/2008
PDF File ID: 3786517
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14091205

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-04			WG483233-05			WG483233-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4-Dinitrotoluene	100	55.6826248	1.796	50.0	29.6646767	1.686	25.0	14.6111479	1.711
Nitroglycerin	100	21.8829861	4.570	50.0	12.5522137	3.983	25.0	3.53736115	7.067

INT_CAL - Modified 03/06/2008
PDF File ID: 3786517
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14091205 Run Date: 07/09/2014 Sample ID: WG483233-07
Instrument ID: HPLC5 Run Time: 17:20 Method: 8330B
File ID: 5L012970.F Analyst: ECL QC Key: STD
ICal Workgroup: WG483233 Cal ID: HPLC5 - 09-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2,4-Dinitrotoluene		500	502	ug/L	1.81	0.500	30	
Nitroglycerin		500	502	ug/L	4.83	0.400	30	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3786518
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14091205
Run Date: 09/26/2014
Sample ID: WG494272-01
Instrument ID: HPLC5
Run Time: 17:01
Method: 8330B
File ID: 5L013642.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG494269
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4-Dinitrotoluene		0.500	0.518	mg/kg	1.76	3.54	20	
Nitroglycerin		0.500	0.508	mg/kg	4.77	1.70	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3786519
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14091205
Run Date: 09/27/2014
Sample ID: WG494272-02
Instrument ID: HPLC5
Run Time: 00:11
Method: 8330B
File ID: 5L013653.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG494269
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4-Dinitrotoluene		0.500	0.500	mg/kg	1.82	0.0137	20	
Nitroglycerin		0.500	0.499	mg/kg	4.86	0.206	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3786519
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14091205
Run Date: 09/30/2014
Sample ID: WG494466-01
Instrument ID: HPLC5
Run Time: 09:54
Method: 8330B
File ID: 5L013659.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG494269
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4-Dinitrotoluene		0.500	0.493	mg/kg	1.85	1.43	20	
Nitroglycerin		0.500	0.490	mg/kg	4.95	2.00	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3786519
Report generated 09/30/2014 15:14

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14091205
Run Date: 09/30/2014
Sample ID: WG494466-02
Instrument ID: HPLC5
Run Time: 12:40
Method: 8330B
File ID: 5L013663.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG494269
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4-Dinitrotoluene		0.500	0.489	mg/kg	1.86	2.25	20	
Nitroglycerin		0.500	0.478	mg/kg	5.07	4.38	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3786519
Report generated 09/30/2014 15:14

3.0 Attachments

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** Sept ~~July~~ 2014 - Annual Soil Monitoring - verification event **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** UPS: 12-237-301-01-9308 -2664 **Tracking Number:**

Box 1: Matrix SW Surface Water GW Groundwater L Leachate S Soil T Trip Blank E Equipment Blank P Product O Other	**Box 2: Preservative** A HCL B HNO_3 C H_2SO_4 D $Na_2S_2O_3$ E NaOH F ZnAc G Other (<6 deg C) H None	**Box 3: Filtered/Unfiltered** F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic AG Amber Glass V VOA CG Clear Glass	**Box 4: Sample Type** G Grab C Composite	**Invoice** **Copy to Consultant:** YES **Bill:** CLIENT OTHER **Preserved and shipped on ice:** YES

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles			2,4-dinitrotoluene only 8330B -AIR DRY	nitroglycerin only 8330B -AIR DRY							
Box 4 - Sample Type							G	G							
Box 3 - Filtered/Unfiltered							NA	NA							
Required pH of Sample							NA	NA							
Box 2 - Preservative							G	G							
Box 5 - Sample Container Type							~~Non CG~~	~~Non CG~~							
							1-1602-CG								
PAD-1	9/18	0830	S	1			X								
PAD-3	9/18	0820	S	1				X							
PAD-4	↓	0800	S	1			X	X							
PAD-4ms		0800	S	1			X	X							
PAD-4msd		0800	S	1			X	X							
PAD-5	↓	0740	S	1			X								
PAD-X	9/18	0815	S	1			X	X							

GENERAL NOTES:

1. **Estimated results required.** **Level 4/comprehensive deliverable**
2. **Report results on a DRY WEIGHT BASIS.** **$. Report results in mg/kg.** (if applicable)

MW-4 is the designated sample for lab to use for MS / MSD...

Clients Special Instructions:

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No

Describe problems, if any:

Sampler Name (Print): Mic Mullins	Date: 09/18/14	#1 Relinquished by (Signature):	Date: 9/18/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Mic Mullins	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KEN CODDINGTON	Date: 9-18-14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name:	Time:	

Microbac OVD
Received: 09/19/2014 10:07
By: BRIAN OGDEN
221000059759

9/17/2014

Microbac

Laboratory Report Number: L14080080

Abridged data package. Full deliverable available.

Janet Frazier
Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Michelle Taylor – Client Services Specialist
(740) 373-4071
Michelle.Taylor@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on August 13 2014

David Vandenberg – Managing Director

State of Origin: VA
Accrediting Authority: N/A ID:N/A
QAPP: Microbac OVD

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00110942	I	2.0		1Z2373010194358927	X
00110379	I	3.0		1Z2373010194469138	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	NA
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
NB-1	L14080080-01	07/31/2014 12:30	08/01/2014 09:40
NB-2	L14080080-02	07/31/2014 12:10	08/01/2014 09:40
SB-1	L14080080-03	07/31/2014 12:50	08/01/2014 09:40
SB-2	L14080080-04	07/31/2014 13:10	08/01/2014 09:40
BERM-1	L14080080-05	07/31/2014 08:50	08/01/2014 09:40
POND-1	L14080080-06	07/31/2014 09:10	08/01/2014 09:40

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac REPORT L14080080
PREPARED FOR Draper Aden Associates
WORK ID:

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1.0 Summary Data

1.1 Narratives

Login Number: L14080080
Department: General Chromatography
Analyst: John W. Richards Jr.

METHOD

Analysis SW-846 6850

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Samples: All acceptance criteria were met.

Internal Standards: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87266
Approved By: Mike Cochran

Login Number: L14080080
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Samples: Sample 05 was analyzed at a dilution to be within calibration range. All sample results were confirmed by diode array detection.

Due to analyst error the analytical sequence on 08-11-14 (dilution analysis) was named 101114 instead of 081114.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87318
Approved By: Mike Cochran

1.2 Certificate of Analysis

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080080-01	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	NB-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 16:47
Collect Date:	07/31/2014 12:30	**Dilution:**	1	**File ID:**	1LM.LM26457
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.5

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00236	0.00118

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	NB-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 18:50
Collect Date:	07/31/2014 12:30	**Dilution:**	1	**File ID:**	5L013259.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.5

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	0.131	J	0.247	0.0986
2,4-Dinitrotoluene	121-14-2		ND	0.247	0.0986
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.247	0.0986
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.247	0.0986
HMX	2691-41-0		ND	0.247	0.0986
Nitroglycerin	55-63-0	1.98		0.247	0.0986

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	87.1	50	150	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-02	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	NB-2	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 17:06
Collect Date:	07/31/2014 12:10	**Dilution:**	1	**File ID:**	1LM.LM26458
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00234	0.00117

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	NB-2	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 19:29
Collect Date:	07/31/2014 12:10	**Dilution:**	1	**File ID:**	5L013260.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		ND	0.247	0.0989
2,4-Dinitrotoluene	121-14-2		ND	0.247	0.0989
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.247	0.0989
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.247	0.0989
HMX	2691-41-0	0.224	J	0.247	0.0989
Nitroglycerin	55-63-0	0.741		0.247	0.0989

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	88.4	50	150	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-03	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	SB-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 17:25
Collect Date:	07/31/2014 12:50	**Dilution:**	1	**File ID:**	1LM.LM26459
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	77.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00373		0.00257	0.00128

Sample #:	L14080080-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	SB-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 20:08
Collect Date:	07/31/2014 12:50	**Dilution:**	1	**File ID:**	5L013261.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	77.7

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		ND	0.241	0.0964
2,4-Dinitrotoluene	121-14-2		ND	0.241	0.0964
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.241	0.0964
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.241	0.0964
HMX	2691-41-0		ND	0.241	0.0964
Nitroglycerin	55-63-0		ND	0.241	0.0964

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.0	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-04	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	SB-2	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 17:44
Collect Date:	07/31/2014 13:10	**Dilution:**	1	**File ID:**	1LM.LM26460
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	72.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00276	0.00138

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	SB-2	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 21:26
Collect Date:	07/31/2014 13:10	**Dilution:**	1	**File ID:**	5L013263.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	72.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	0.527		0.257	0.103
2,4-Dinitrotoluene	121-14-2		ND	0.257	0.103
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.257	0.103
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.257	0.103
HMX	2691-41-0		ND	0.257	0.103
Nitroglycerin	55-63-0		ND	0.257	0.103

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	87.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-05	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	BERM-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 18:03
Collect Date:	07/31/2014 08:50	**Dilution:**	1	**File ID:**	1LM.LM26461
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00205	0.00103

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	BERM-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 22:05
Collect Date:	07/31/2014 08:50	**Dilution:**	1	**File ID:**	5L013264.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		ND	0.249	0.0996
2,4-Dinitrotoluene	121-14-2		ND	0.249	0.0996
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.249	0.0996
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.249	0.0996
HMX	2691-41-0		ND	0.249	0.0996

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.2	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	BERM-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 16:06
Collect Date:	07/31/2014 08:50	**Dilution:**	5	**File ID:**	5L013305.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	14.0		1.25	0.498

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	77.4	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080080-06	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	POND-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 19:19
Collect Date:	07/31/2014 09:10	**Dilution:**	1	**File ID:**	1LM.LM26465
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00193	J	0.00210	0.00105

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Certificate of Analysis

Sample #:	L14080080-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	POND-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 22:44
Collect Date:	07/31/2014 09:10	**Dilution:**	1	**File ID:**	5L013265.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	0.327		0.252	0.101
2,4-Dinitrotoluene	121-14-2	2.28		0.252	0.101
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.252	0.101
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.252	0.101
HMX	2691-41-0		ND	0.252	0.101
Nitroglycerin	55-63-0	8.66		0.252	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	92.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Sample #: L14080080-01 **Client ID:** NB-1 **Matrix:** Soil **Collect Date:** 07/31/2014 12:30

Analyte	Result	Units	Qualifier
Percent Solids	84.5	weight %	

Sample #: L14080080-02 **Client ID:** NB-2 **Matrix:** Soil **Collect Date:** 07/31/2014 12:10

Analyte	Result	Units	Qualifier
Percent Solids	85.2	weight %	

Sample #: L14080080-03 **Client ID:** SB-1 **Matrix:** Soil **Collect Date:** 07/31/2014 12:50

Analyte	Result	Units	Qualifier
Percent Solids	77.7	weight %	

Sample #: L14080080-04 **Client ID:** SB-2 **Matrix:** Soil **Collect Date:** 07/31/2014 13:10

Analyte	Result	Units	Qualifier
Percent Solids	72.2	weight %	

Sample #: L14080080-05 **Client ID:** BERM-1 **Matrix:** Soil **Collect Date:** 07/31/2014 08:50

Analyte	Result	Units	Qualifier
Percent Solids	97.2	weight %	

Sample #: L14080080-06 **Client ID:** POND-1 **Matrix:** Soil **Collect Date:** 07/31/2014 09:10

Analyte	Result	Units	Qualifier
Percent Solids	95.0	weight %	

2.1.1 6850 LC/MS Data

Login Number: L14080080
Department: General Chromatography
Analyst: John W. Richards Jr.

METHOD

Analysis SW-846 6850

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Samples: All acceptance criteria were met.

Internal Standards: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87266
Approved By: Mike Cochran

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080080-01	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	NB-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 16:47
Collect Date:	07/31/2014 12:30	**Dilution:**	1	**File ID:**	1LM.LM26457
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.5

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00236	0.00118

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-02	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	NB-2	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 17:06
Collect Date:	07/31/2014 12:10	**Dilution:**	1	**File ID:**	1LM.LM26458
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00234	0.00117

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-03	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	SB-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 17:25
Collect Date:	07/31/2014 12:50	**Dilution:**	1	**File ID:**	1LM.LM26459
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	77.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00373		0.00257	0.00128

Sample #:	L14080080-04	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	SB-2	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 17:44
Collect Date:	07/31/2014 13:10	**Dilution:**	1	**File ID:**	1LM.LM26460
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	72.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00276	0.00138

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-05	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	BERM-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 18:03
Collect Date:	07/31/2014 08:50	**Dilution:**	1	**File ID:**	1LM.LM26461
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00205	0.00103

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080080-06	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	POND-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 19:19
Collect Date:	07/31/2014 09:10	**Dilution:**	1	**File ID:**	1LM.LM26465
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00193	J	0.00210	0.00105

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Certificate of Analysis

Example Calculation 6850 - Perchlorate

Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, y = mx + b

y = response ratio = response of analyte / response of internal standard (IS) = Rx/Ristd

x = amount ratio = concentration analyte/concentration internal standard (IS) = Cx / Cistd

m = slope from curve (1.45)

b = intercept from curve (-0.00242)

y = 1.45x + -0.00242

Step 2: Substitute the value for y

where y = 12600/226000 = 0.055752

Step 3: Solve for x

x = (y - b)/m = 0.0040119

Step 4: Solve for analyte concentration Cx

Cx = (Cis)(x) = (5 ug/L)(0.040119) = 0.200594 ug/L

Example Calculation - Water:

Slope from curve, m:	1.45
Intercept from curve, b:	-0.00242
Response of analyte, Rx:	12600
Response of Internal Standard , Ristd:	226000
Concentration of IS, Cistd (ug/L):	5.00
Response Ratio:	0.05575
Amount Ratio:	0.04012
Analyte Concentration, Cx (ug/L) :	0.200594

Example Calculation - Soil:

Analyte Concentration, Cx (ug/L):	0.20059
Amount of soil extracted (g):	5.00
Final volume of extract (mL):	50.00
Percent solids (Pct wt.)	100
Concentration in soil (ug/kg):	2.005938

MICROBAC

Semivolatile Sample Extract Log

Parameter: Perchlorate
SOP #: HPLC 06
Analyst: JWR
Spike/Surrogate analyst: JWR
Surrogate #: NA
Spike # A: ST065195
Ext Solvent: DI-H_2O
Ext Solvent: NA
Ext Disk: NA

Matrix: Soil
Rev #: 06
Date/Time Extracted: 08/08/14/10:50
Witness: [illegible]

Spike # B: NA
Lot #:
Lot #: NA
Lot #: NA

Extraction Work Group: WG487543
Analytical Work Group: WG487548
Run ID: R3642660

Analytical Balance ID: BAL 019
Reagent: Tubes Lot #: COA17547
Reagent: Sand Lot #: COA16150
Other: IS Lot #: COA17578

Color Code
T = Transparent
C = Colored
O = Opaque

	Sample ID	Test Code	pH	Initial Wt / Vol	JWR ~~Surrogate~~ IS Amount	Amount Spike	Final Volume	Extract Color	Comments
1	WG487543-01	6850		5.056 g	0.25ml	1.0ml	50ml		MCT (2ug/kg)(10,000us)
2	WG487543-02	↓		5.004 g	↓	NA	↓		Blank
3	WG487543-03	↓		5.032 g	↓	1.0ml	↓		LCS (2ug/kg)
4	L14080080-01	↓		5.020 g	↓	NA	↓		
5	-02	↓		5.017 g	↓	NA	↓		
6	-03	↓		5.018 g	↓	NA	↓		
7	-04	↓		5.025 g	↓	NA	↓		
8	-05	↓		5.009 g	↓	NA	↓		
9	-06	↓		5.008 g	↓	NA	↓		
10	L14080081-01	↓		5.013 g	↓	NA	↓		
11	-02	↓		5.011 g	↓	NA	↓		
12	-03	↓		5.012 g	↓	NA	↓		
13	-04 RS	↓		5.021 g	↓	NA	↓		WG487543-04 Ref
14	-05 MS	↓		5.010 g	↓	1.0ml	↓		WG487543-05 MS (@2ug/kg)
15	-06 MSD	↓		5.004 g	↓	1.0ml	↓		WG487543-06 MSD(@2ug/kg)
16	-07	↓		5.009 g	↓	NA	↓		
17	-08	↓		5.065 g	↓	NA	↓		
18	-09	↓		5.074 g	↓	NA	↓		
19	-10	↓		5.045 g	↓	NA	↓		
20	-11	↓		5.047 g	↓	NA	↓		
21	L14071742-02	↓		5.005 g	↓	NA	↓		PT(Lot#7057-30)
22									
23									
24									

Reviewed by: [illegible] 8/8/14

Analytical WG487548 (soils)

Perchlorate Conductivity Check

(perchlorate1)

Conductivity Probe Calibration Check: 1396 /1410 µs/cm

Working MCT Level: 10,000 µs/cm

Sample	Conductivity (µs/cm)	Pretreatment or Dilution Needed
WG487543-01 MCT	9,930.0	
-02 Blank	0.4	
-03 LCS	0.8	
L14071742-02	83.1	
L14080080-01	19.7	
-02	14.2	
-03	30.7	
-04	36.0	
-05	40.8	
-06	60.5	
L14080081-01	56.0	
-02	48.4	
-03	49.3	
-04 RS	81.3	
-05 MS	62.9	
-06 MSD	97.3	
-07	88.4	
-08	63.3	
-09	69.3	
-10	50.5	
-11	82.5	

Analyst: MJR

Date/Time: 08/08/2014 14:20

DCN#104446

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 070714_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Workgroups: Column 1 ID: KP-RPPX250 Column 2 ID: NA
Analytical WG483063 (waters)
Internal STD: COA17578 Surrogate STD: NA Calibration STD STD65194 (07/07/2014)
CCV STD: STD65194 LCS STD: STD65194 MS/MSD STD: STD65194

Comments: ICAL WG483039 : Alternate Source STD65196

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	1LM.LM26049	WG483039-01 CCB	1	1		07/07/14 15:12
2	1LM.LM26050	WG483039-02 STD (0.10 ug/L)	1	1	STD65194	07/07/14 15:31
3	1LM.LM26051	WG483039-03 STD (0.20 ug/L)	1	1	STD65194	07/07/14 15:49
4	1LM.LM26052	WG483039-04 STD (0.50 ug/L)	1	1	STD65194	07/07/14 16:08
5	1LM.LM26053	WG483039-05 STD (1.00 ug/L)	1	1	STD65194	07/07/14 16:27
6	1LM.LM26054	WG483039-06 STD (2.00 ug/L)	1	1	STD65194	07/07/14 16:46
7	1LM.LM26055	WG483039-07 STD (5.00 ug/L)	1	1	STD65194	07/07/14 17:05
8	1LM.LM26056	WG483039-08 STD (10.0 ug/L)	1	1	STD65194	07/07/14 17:24
9	1LM.LM26057	WG483039-09 SSCV (1.0 ug/L)	1	1	STD65196	07/07/14 17:43
10	1LM.LM26058	WG483065-01 CCB	1	1		07/07/14 18:02
11	1LM.LM26059	WG483065-02 CCV (1.0ug/L)	1	1	STD65194	07/07/14 18:21
12	1LM.LM26060	WG483063-10 MRL (0.2ug/L)	1	1	STD65194	07/07/14 18:40
13	1LM.LM26061	WG483063-01 MCT (0.2ug/L)	1	1	STD65194	07/07/14 18:59
14	1LM.LM26062	WG483063-02 BLANK	1	1		07/07/14 19:18
15	1LM.LM26063	WG483063-03 LCS (0.2ug/L)	1	1	STD65194	07/07/14 19:37
16	1LM.LM26064	L14061344-01	1	1		07/07/14 19:56
17	1LM.LM26065	L14061344-02	1	1		07/07/14 20:15
18	1LM.LM26066	L14061344-03	1	1		07/07/14 20:34
19	1LM.LM26067	L14061344-04	1	1		07/07/14 20:52
20	1LM.LM26068	L14061344-05 RS	1	1		07/07/14 21:11
21	1LM.LM26069	L14061344-06 MS	1	1	STD65194	07/07/14 21:30
22	1LM.LM26070	L14061344-07 MSD	1	1	STD65194	07/07/14 21:49
23	1LM.LM26071	WG483065-03 CCV (1.0ug/L)	1	1	STD65194	07/07/14 22:08
24	1LM.LM26072	WG483063-11 MRL (0.2ug/L)	1	1	STD65194	07/07/14 22:27
25	1LM.LM26073	WG483065-04 CCB	1	1		07/07/14 22:46
26	1LM.LM26074	L14061344-08	1	1		07/07/14 23:05
27	1LM.LM26075	L14061344-09	1	1		07/07/14 23:24
28	1LM.LM26076	L14061344-10	1	1		07/07/14 23:43
29	1LM.LM26077	L14061344-17	1	1		07/08/14 00:02
30	1LM.LM26078	L14061344-11 (NR)	1	1		07/08/14 00:21
31	1LM.LM26079	L14061344-12	1	1		07/08/14 00:40
32	1LM.LM26080	L14061344-13	1	1		07/08/14 00:59
33	1LM.LM26081	L14061344-14 RS	1	1		07/08/14 01:18

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 070714_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Workgroups: Column 1 ID: KP-RPPX250 Column 2 ID: NA
Analytical WG483063 (waters)
Internal STD: COA17578 Surrogate STD: NA STD65194 (07/07/2014)
CCV STD: STD65194 LCS STD: STD65194 STD65194

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	1LM.LM26082	L14061344-15 MS	1	1	STD65194	07/08/14 01:37
35	1LM.LM26083	L14061344-16 MSD	1	1	STD65194	07/08/14 01:55
36	1LM.LM26084	WG483065-05 CCV (1.0ug/L)	1	1	STD65194	07/08/14 02:14
37	1LM.LM26085	WG483063-12 MRL (0.2ug/L)	1	1	STD65194	07/08/14 02:33
38	1LM.LM26086	WG483065-06 CCB	1	1		07/08/14 02:52
39	1LM.LM26087	WG483065-07 CCV (1.0ug/L)	1	1	STD65194	07/08/14 10:30
40	1LM.LM26088	WG483063-13 MRL (0.2ug/L)	1	1	STD65194	07/08/14 10:48
41	1LM.LM26089	WG483065-08 CCB	1	1		07/08/14 11:07
42	1LM.LM26090	L14061344-02 (RR Neat) (NR)	1	1		07/08/14 11:26
43	1LM.LM26091	L14061344-03 (RR Neat) (NR)	1	1		07/08/14 11:45
44	1LM.LM26092	L14061344-11 (RR 10x)	1	10		07/08/14 12:04
45	1LM.LM26093	WG483065-09 CCV (1.0ug/L)	1	1	STD65194	07/08/14 12:23
46	1LM.LM26094	WG483063-14 MRL (0.2ug/L)	1	1	STD65194	07/08/14 12:42
47	1LM.LM26095	WG483065-10 CCB	1	1		07/08/14 13:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
17				
	L14061344-02 : The results for this sample do not correlate with the results for it's field duplicate (L14061344-03). This sample will be refiltered from it's bottle and reanalyzed neat on the end of this run for comparison of results.			
18				
	L14061344-03 : This sample is a field duplicate of sample L14061344-02. The results for this sample do not correlate with the results of sample L14061344-02. This sample will be refiltered from it's bottle and reanalyzed neat on the end of this run for comparison of results.			
30	X	10	Over Calibration Range	
	L14061344-11 (NR) : This sample was reanalyzed at a 10x dilution on the end of this run.			
42				
	L14061344-02 (RR Neat) (NR) : The results for this sample due to refiltration have not changed. The initial results for this sample analyzed neat will be reported.			
43				
	L14061344-03 (RR Neat) (NR) : The results for this sample due to refiltration have not changed. The initial results for this sample analyzed neat will be reported.			

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 080814_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Column 1 ID: KP-RPPX250 Column 2 ID: NA

Workgroups: Analytical WG487548 (soils)

Internal STD: COA17578 Surrogate STD: NA Calibration STD STD65194 (07/07/2014)

CCV STD: STD65194 LCS STD: STD65194 MS/MSD STD: STD65194

Comments: Sample L14071742-02 was analyzed at dilutions based on the concentration range provided with its mixing instructions.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	1LM.LM26449	WG487555-01 CCB	1	1		08/08/14 14:16
2	1LM.LM26450	WG487555-02 CCV (1.0ug/L)	1	1	STD65194	08/08/14 14:35
3	1LM.LM26451	WG487548-07 MRL (2.0ug/kg)	7	1	STD65194	08/08/14 14:54
4	1LM.LM26452	WG487548-01 MCT (2.0ug/kg)	7	1	STD65194	08/08/14 15:13
5	1LM.LM26453	WG487548-02 BLANK	7	1		08/08/14 15:31
6	1LM.LM26454	WG487548-03 LCS (2.0ug/kg)	7	1	STD65194	08/08/14 15:50
7	1LM.LM26455	L14071742-02 PT (5x) (NR)	7	5		08/08/14 16:09
8	1LM.LM26456	L14071742-02 PT (25x)	7	25		08/08/14 16:28
9	1LM.LM26457	L14080080-01	7	1		08/08/14 16:47
10	1LM.LM26458	L14080080-02	7	1		08/08/14 17:06
11	1LM.LM26459	L14080080-03	7	1		08/08/14 17:25
12	1LM.LM26460	L14080080-04	7	1		08/08/14 17:44
13	1LM.LM26461	L14080080-05	7	1		08/08/14 18:03
14	1LM.LM26462	WG487555-03 CCV (1.0ug/L)	1	1	STD65194	08/08/14 18:22
15	1LM.LM26463	WG487548-08 MRL (2.0ug/kg)	7	1	STD65194	08/08/14 18:41
16	1LM.LM26464	WG487555-04 CCB	1	1		08/08/14 19:00
17	1LM.LM26465	L14080080-06	7	1		08/08/14 19:19
18	1LM.LM26466	L14080081-01	7	1		08/08/14 19:38
19	1LM.LM26467	L14080081-02	7	1		08/08/14 19:56
20	1LM.LM26468	L14080081-03	7	1		08/08/14 20:15
21	1LM.LM26469	L14080081-04 RS	7	1		08/08/14 20:34
22	1LM.LM26470	L14080081-05 MS	7	1	STD65194	08/08/14 20:53
23	1LM.LM26471	L14080081-06 MSD	7	1	STD65194	08/08/14 21:12
24	1LM.LM26472	L14080081-07	7	1		08/08/14 21:31
25	1LM.LM26473	L14080081-08	7	1		08/08/14 21:50
26	1LM.LM26474	L14080081-09	7	1		08/08/14 22:09
27	1LM.LM26475	WG487555-05 CCV (1.0ug/L)	1	1	STD65194	08/08/14 22:28
28	1LM.LM26476	WG487548-09 MRL (2.0ug/kg)	7	1	STD65194	08/08/14 22:47
29	1LM.LM26477	WG487555-06 CCB	1	1		08/08/14 23:06
30	1LM.LM26478	L14080081-10	7	1		08/08/14 23:25
31	1LM.LM26479	L14080081-11	7	1		08/08/14 23:44
32	1LM.LM26480	WG487555-07 CCV (1.0ug/L)	1	1	STD65194	08/09/14 00:03
33	1LM.LM26481	WG487548-10 MRL (2.0ug/kg)	7	1	STD65194	08/09/14 00:22

Page: 1 Approved: 12-AUG-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 080814_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Column 1 ID: KP-RPPX250 Column 2 ID: NA

Workgroups: Analytical WG487548 (soils)

Internal STD: COA17578 Surrogate STD: NA STD65194 (07/07/2014)
CCV STD: STD65194 LCS STD: STD65194 STD65194

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	1LM.LM26482	WG487555-08 CCB	1	1		08/09/14 00:41

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	L14071742-02 PT (5x) (NR) : Results for this sample will be reported from its analysis at a 25x dilution.			
22				
	L14080081-05 MS : The MS %Rec is below the advisory limit. The parent sample and MS have a matrix composed of a non-homogeneous mixture of dark brown soil, small rocks and, what appears to be, white crystals.			
23				
	L14080081-06 MSD : The MSD %Rec is above the advisory limit. The parent sample and MSD have a matrix composed of a non-homogeneous mixture of dark brown soil, small rocks and, what appears to be, white crystals.			

Page: 2 Approved: 12-AUG-14

Microbac Laboratories Inc.

Data Checklist

Date: 07-JUL-2014
Analyst: JWR
Analyst: NA
Method: 6850
Instrument: LCMS1
Curve Workgroup: WG483039
Runlog ID: 62054
Analytical Workgroups: L14061344

ANALYTICAL	
System Performance Check	NA
DFTPP (GCMS)	NA
Endrin/DDT breakdown (8081/GCMS)	NA
Pentachlorophenol/benzidine tailing (GCMS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (GCMS)	X
Continuing calibration blank (CCB) (IC/LCMS)	X
Limit of quantitation verification (LOQV) (LCMS)	X
Special standards	NA
Blanks	X
TCL hits	ND
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Interference check sample (ICS) (LCMS)	MCT
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	X
Library searches (GCMS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
08-JUL-2014
John Richards

Secondary Reviewer:
09-JUL-2014
Michael Cadwell

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-09-2014 10:15:45

Microbac Laboratories Inc.

Data Checklist

Date: 08-AUG-2014
Analyst: JWR
Analyst: NA
Method: 6850
Instrument: LCMS1
Curve Workgroup: NA
Runlog ID: 62758
Analytical Workgroups: L14071742-02 (PT) L14080080, 0081 (SOILS)

ANALYTICAL	
System Performance Check	NA
DFTPP (GCMS)	NA
Endrin/DDT breakdown (8081/GCMS)	NA
Pentachlorophenol/benzidine tailing (GCMS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (GCMS)	X
Continuing calibration blank (CCB) (IC/LCMS)	X
Limit of quantitation verification (LOQV) (LCMS)	X
Special standards	NA
Blanks	X
TCL hits	ND
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	MS=LOW : MSD=HIGH
%RPD	%RPD=HIGH
Interference check sample (ICS) (LCMS)	MCT
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	X
Library searches (GCMS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
11-AUG-2014

Secondary Reviewer:
12-AUG-2014

CHECKLIST1 - Modified 03/05/2008
Generated: AUG-12-2014 08:22:26

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6850 AAB#: WG487548

Login Number: L14080080

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
NB-1	01	07/31/14					08/08/2014	7.9	28		08/08/14	.2	28	
NB-2	02	07/31/14					08/08/2014	7.9	28		08/08/14	.3	28	
SB-1	03	07/31/14					08/08/2014	7.9	28		08/08/14	.3	28	
SB-2	04	07/31/14					08/08/2014	7.9	28		08/08/14	.3	28	
BERM-1	05	07/31/14					08/08/2014	8.1	28		08/08/14	.3	28	
POND-1	06	07/31/14					08/08/2014	8.1	28		08/08/14	.4	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3702129
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14080080
Blank File ID: 1LM.LM26453
Prep Date: 08/08/14 10:50
Analyzed Date: 08/08/14 15:31
Analyst: JWR

Work Group: WG487548
Blank Sample ID: WG487548-02
Instrument ID: LCMS1
Method: 6850

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
QCMRL	WG487548-07	1LM.LM26451	08/08/14 14:54	01
MCT	WG487548-01	1LM.LM26452	08/08/14 15:13	01
LCS	WG487548-03	1LM.LM26454	08/08/14 15:50	01
NB-1	L14080080-01	1LM.LM26457	08/08/14 16:47	01
NB-2	L14080080-02	1LM.LM26458	08/08/14 17:06	01
SB-1	L14080080-03	1LM.LM26459	08/08/14 17:25	01
SB-2	L14080080-04	1LM.LM26460	08/08/14 17:44	01
BERM-1	L14080080-05	1LM.LM26461	08/08/14 18:03	01
QCMRL	WG487548-08	1LM.LM26463	08/08/14 18:41	01
POND-1	L14080080-06	1LM.LM26465	08/08/14 19:19	01
QCMRL	WG487548-09	1LM.LM26476	08/08/14 22:47	01
QCMRL	WG487548-10	1LM.LM26481	08/09/14 00:22	01

Report Name: BLANK_SUMMARY
PDF File ID: 3702130
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14080080 Prep Date: 08/08/14 10:50 Sample ID: WG487548-02
Instrument ID: LCMS1 Run Date: 08/08/14 15:31 Prep Method: 6850
File ID: 1LM.LM26453 Analyst: JWR Method: 6850
Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg
Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Perchlorate	0.000999	0.00200	0.000999	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3702131
12-AUG-2014 08:56

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14080080 Run Date: 08/08/2014 Sample ID: WG487548-03
Instrument ID: LCMS1 Run Time: 15:50 Prep Method: 6850
File ID: 1LM.LM26454 Analyst: JWR Method: 6850
Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg
QC Key: STD Lot#: STD65194 Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Perchlorate	0.00199	0.00200	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3702132
Report generated: 08/12/2014 08:56

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14080080
Analytical Method: 6850
ICAL Workgroup: WG483039

Instrument ID: LCMS1
Initial Calibration Date: 07-JUL-14 17:24
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Perchlorate		1.267	2.44	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 3702711
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080080

Analytical Method: 6850

Instrument ID: LCMS1

Initial Calibration Date: 07-JUL-14 17:24

Column ID: F

Analyte	WG483039-02			WG483039-03			WG483039-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Perchlorate	0.100	7880.00000	1.313	0.200	15400.0000	1.266	0.500	38300.0000	1.274

INT_CAL - Modified 03/06/2008
PDF File ID: 3702711
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080080

Analytical Method: 6850

Instrument ID: LCMS1

Initial Calibration Date: 07-JUL-14 17:24

Column ID: F

Analyte	WG483039-05			WG483039-06			WG483039-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Perchlorate	1.00	75700.0000	1.262	2.00	148000.000	1.221	5.00	376000.000	1.273

INT_CAL - Modified 03/06/2008
PDF File ID: 3702711
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080080

Analytical Method: 6850

Instrument ID: LCMS1

Initial Calibration Date: 07-JUL-14 17:24

Column ID: F

Analyte	WG483039-08		
	CONC	RESP	RF
Perchlorate	10.0	734000.000	1.257

INT_CAL - Modified 03/06/2008
PDF File ID: 3702711
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14080080 Run Date: 07/07/2014 Sample ID: WG483039-09
Instrument ID: LCMS1 Run Time: 17:43 Method: 6850
File ID: 1LM.LM26057 Analyst: JWR QC Key: STD
ICal Workgroup: WG483039 Cal ID: LCMS1 - 07-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Perchlorate		1.00	0.993	ug/L	1.25	0.700	15	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3702712
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080080
Run Date: 08/08/2014
Sample ID: WG487555-01
Instrument ID: LCMS1
Run Time: 14:16
Method: 6850
File ID: 1LM.LM26449
Analyst: JWR
Units: ug/L
Workgroup (AAB#): WG487548
Cal ID: LCMS1 - 07-JUL-14
Matrix: WATER
QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702135
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080080 Run Date: 08/08/2014 Sample ID: WG487555-04
Instrument ID: LCMS1 Run Time: 19:00 Method: 6850
File ID: 1LM.LM26464 Analyst: JWR Units: ug/L
Workgroup (AAB#): WG487548 Cal ID: LCMS1 - 07-JUL-14
Matrix: WATER QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702135
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080080 Run Date: 08/08/2014 Sample ID: WG487555-06

Instrument ID: LCMS1 Run Time: 23:06 Method: 6850

File ID: 1LM.LM26477 Analyst: JWR Units: ug/L

Workgroup (AAB#): WG487548 Cal ID: LCMS1 - 07-JUL-14

Matrix: WATER QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702135
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080080 Run Date: 08/09/2014 Sample ID: WG487555-08
Instrument ID: LCMS1 Run Time: 00:41 Method: 6850
File ID: 1LM.LM26482 Analyst: JWR Units: ug/L
Workgroup (AAB#): WG487548 Cal ID: LCMS1 - 07-JUL-14
Matrix: WATER QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702135
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Instrument ID: LCMS1
File ID: 1LM.LM26450
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/08/2014
Run Time: 14:35
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-02
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00105	mg/kg	1.33	5.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702134
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Instrument ID: LCMS1
File ID: 1LM.LM26462
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/08/2014
Run Time: 18:22
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-03
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00104	mg/kg	1.31	4.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702134
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Instrument ID: LCMS1
File ID: 1LM.LM26475
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/08/2014
Run Time: 22:28
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-05
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00101	mg/kg	1.28	1.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702134
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Instrument ID: LCMS1
File ID: 1LM.LM26480
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/09/2014
Run Time: 00:03
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-07
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00102	mg/kg	1.28	2.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702134
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080080 Run Date: 08/08/2014 Sample ID: WG487548-07

Instrument ID: LCMS1 Run Time: 14:54 Prep Method: 6850

File ID: 1LM.LM26451 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00199	99.5	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702133
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080080 Run Date: 08/08/2014 Sample ID: WG487548-08

Instrument ID: LCMS1 Run Time: 18:41 Prep Method: 6850

File ID: 1LM.LM26463 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00211	106	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702133
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080080 Run Date: 08/08/2014 Sample ID: WG487548-09

Instrument ID: LCMS1 Run Time: 22:47 Prep Method: 6850

File ID: 1LM.LM26476 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00200	100	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702133
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080080 Run Date: 08/09/2014 Sample ID: WG487548-10

Instrument ID: LCMS1 Run Time: 00:22 Prep Method: 6850

File ID: 1LM.LM26481 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00206	103	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702133
Report generated 08/12/2014 08:56

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO AVERAGE OF ICAL)

Login Number: L14080080
Instrument ID: LCMS1
Workgroup (AAB#): WG487548

ICAL CCV Number: WG483039-05
CAL ID: LCMS1-07-JUL-14
Matrix: SOLID

Sample Number	Dilution	Tag	IS-1
WG483039	NA	NA	300000
Upper Limit	NA	NA	450000
Lower Limit	NA	NA	150000
L14080080-01	1.00	01	234000
L14080080-02	1.00	01	231000
L14080080-03	1.00	01	229000
L14080080-04	1.00	01	233000
L14080080-05	1.00	01	236000
L14080080-06	1.00	01	239000
WG487548-02	1.00	01	241000
WG487548-03	1.00	01	235000

IS-1 - O18LP

Underline = Response outside limits

INTERNAL_STD_AVG_ICAL - Modified 03/10/2010
PDF File ID: 3702136
Report generated 08/12/2014 08:56

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	L14080080-01
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26457
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 16:47	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	3380	1140	2.96	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	L14080080-02
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26458
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 17:06	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	3260	1120	2.91	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	L14080080-03
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26459
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 17:25	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	16900	5620	3.01	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	L14080080-04
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26460
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 17:44	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	5330	1650	3.23	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	L14080080-05
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26461
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 18:03	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	2020	902	2.24	2.3	3.8	*

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	L14080080-06
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26465
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 19:19	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	11300	3580	3.16	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-02
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26050
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 15:31	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	7880	2520	3.13	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-03
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26051
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 15:49	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	15400	5440	2.83	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-04
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26052
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 16:08	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	38300	12800	2.99	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-05
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26053
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 16:27	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	75700	26300	2.88	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-06
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26054
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 16:46	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	148000	53000	2.79	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-07
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26055
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 17:05	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	376000	128000	2.94	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-08
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26056
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 17:24	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	734000	247000	2.97	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG483039-09
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26057
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 17:43	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	76400	25700	2.97	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	WG487548-01
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26452
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 15:13	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	13400	4910	2.73	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	WG487548-02
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26453
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 15:31	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	0.000	0.000	2.3	3.8	*

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	WG487548-03
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26454
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 15:50	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	12100	4290	2.82	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	WG487548-07
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26451
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 14:54	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	12300	4190	2.94	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	WG487548-08
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26463
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 18:41	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	13000	4370	2.97	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	WG487548-09
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26476
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 22:47	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	12700	4450	2.85	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**	6850	**Samplenum:**	WG487548-10
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26481
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/09/2014 00:22	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	13300	4710	2.82	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-01
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26449
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 14:16	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	0.000	0.000	2.3	3.8	*

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-02
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26450
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 14:35	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	62100	21100	2.94	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-03
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26462
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 18:22	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	64100	21700	2.95	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-04
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26464
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 19:00	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	165	0.000	2.3	3.8	*

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-05
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26475
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 22:28	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	63300	22000	2.88	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-06
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26477
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 23:06	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	227	0.000	2.3	3.8	*

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-07
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26480
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/09/2014 00:03	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	63000	20800	3.03	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080080	**Prep Method:**		**Samplenum:**	WG487555-08
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26482
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/09/2014 00:41	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	96.6	0.000	2.3	3.8	*

2.1.2 Explosives (8330B)

Login Number: L14080080
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Samples: Sample 05 was analyzed at a dilution to be within calibration range. All sample results were confirmed by diode array detection.

Due to analyst error the analytical sequence on 08-11-14 (dilution analysis) was named 101114 instead of 081114.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87318
Approved By: Mike Cochran

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080080-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	NB-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 18:50
Collect Date:	07/31/2014 12:30	**Dilution:**	1	**File ID:**	5L013259.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	84.5

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	0.131	J	0.247	0.0986
2,4-Dinitrotoluene	121-14-2		ND	0.247	0.0986
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.247	0.0986
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.247	0.0986
HMX	2691-41-0		ND	0.247	0.0986
Nitroglycerin	55-63-0	1.98		0.247	0.0986

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	87.1	50	150	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	NB-2	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 19:29
Collect Date:	07/31/2014 12:10	**Dilution:**	1	**File ID:**	5L013260.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		ND	0.247	0.0989
2,4-Dinitrotoluene	121-14-2		ND	0.247	0.0989
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.247	0.0989
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.247	0.0989
HMX	2691-41-0	0.224	J	0.247	0.0989
Nitroglycerin	55-63-0	0.741		0.247	0.0989

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	88.4	50	150	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	SB-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 20:08
Collect Date:	07/31/2014 12:50	**Dilution:**	1	**File ID:**	5L013261.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	77.7

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		ND	0.241	0.0964
2,4-Dinitrotoluene	121-14-2		ND	0.241	0.0964
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.241	0.0964
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.241	0.0964
HMX	2691-41-0		ND	0.241	0.0964
Nitroglycerin	55-63-0		ND	0.241	0.0964

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.0	50	150	

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080080-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	SB-2	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 21:26
Collect Date:	07/31/2014 13:10	**Dilution:**	1	**File ID:**	5L013263.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	72.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	0.527		0.257	0.103
2,4-Dinitrotoluene	121-14-2		ND	0.257	0.103
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.257	0.103
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.257	0.103
HMX	2691-41-0		ND	0.257	0.103
Nitroglycerin	55-63-0		ND	0.257	0.103

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	87.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14080080
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080080-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	BERM-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 22:05
Collect Date:	07/31/2014 08:50	**Dilution:**	1	**File ID:**	5L013264.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		ND	0.249	0.0996
2,4-Dinitrotoluene	121-14-2		ND	0.249	0.0996
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.249	0.0996
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.249	0.0996
HMX	2691-41-0		ND	0.249	0.0996

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.2	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080080-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	BERM-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 16:06
Collect Date:	07/31/2014 08:50	**Dilution:**	5	**File ID:**	5L013305.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	14.0		1.25	0.498

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	77.4	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080080-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	POND-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 22:44
Collect Date:	07/31/2014 09:10	**Dilution:**	1	**File ID:**	5L013265.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	95.0

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	0.327		0.252	0.101
2,4-Dinitrotoluene	121-14-2	2.28		0.252	0.101
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.252	0.101
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.252	0.101
HMX	2691-41-0		ND	0.252	0.101
Nitroglycerin	55-63-0	8.66		0.252	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	92.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

2.1.2.2 QC Summary Data

Example 8330 Calculations

Sample Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot (y = mx + b)

y = response of analyte as area (from quantitation report)
x = concentration analyte
m = slope from curve
b = intercept from curve

Step 2: Retrieve y from quantitation report

Step 3: Retreive extraction data from logsheet

Vf = Final extract volume (mL)
Vi = Initial vome of sample (mL) or initial weight (g)

Step 4: Solve for concentration in extract (x):

x = (y - b)/m = [(7.774 -(- 0.04773)]/ 0.1711 = 45.2

Step 5: Solve for analyte concentration in sample (Cx):

Cx = (x) (Vf /Vi)

Example CCV Calculation: **(Vf/Vi) = 1**
HMX

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Concentration (ug/L):	45.16830115

Example Water Calculation:

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Volume of extract (mL):	10.00
Volume of sample extracted (mL):	1000.00
Concentration (ug/L):	0.451683011

Example Soil Calculation:
1,3,5-Trinitrobenzene

Slope from curve, m:	0.411263
Intercept from curve, b:	-0.0850241
Area of analyte, y:	20.26089
Volume of extract (mL):	20.00
Weight of sample extracted (g):	2.00
Concentration (ug/kg):	494.7178351
Concentration (mg/kg):	0.494717835

Microbac Laboratories Inc.
Continuous Sample Extract Log

Workgroup: WG487088 TIME ON: 16:15 OFF: 10:15 ON: _____ OFF: _____
Analyst: CSH Acetonitrile Lot #: COA17588
Spike Analyst: CSH WATER Lot #: COA17319
Method: METHOD
Run Date: 08/06/2014 11:37
SOP: EXTNT02 Revison 11
Spike Witness: JDH
Surr Solution: STD65797

	SAMPLE #	Type	Reference	Prod	pH	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14080080-01	SAMP		8330-SPE		10.14 g	1 mL			40 mL	Transparent
2	L14080080-02	SAMP		8330-SPE		10.11 g	1 mL			40 mL	Transparent
3	L14080080-03	SAMP		8330-SPE		10.37 g	1 mL			40 mL	Transparent
4	L14080080-04	SAMP		8330-SPE		9.73 g	1 mL			40 mL	Transparent
5	L14080080-05	SAMP		8330-SPE		10.04 g	1 mL			40 mL	Transparent
6	L14080080-06	SAMP		8330-SPE		9.91 g	1 mL			40 mL	Transparent
7	L14080081-01	SAMP		8330-SPE		9.89 g	1 mL			40 mL	Transparent
8	L14080081-02	SAMP		8330-SPE		9.61 g	1 mL			40 mL	Transparent
9	L14080081-03	SAMP		8330-SPE		10.24 g	1 mL			40 mL	Transparent
10	L14080081-04	RS01		8330-SPE		10.14 g	1 mL			40 mL	Transparent
11	L14080081-05	MS01	L14080081-04	8330-SPE		10.05 g	1 mL	1 mL	STD65796	40 mL	Transparent
12	L14080081-06	SD01	L14080081-04	8330-SPE		10.04 g	1 mL	1 mL	STD65796	40 mL	Transparent
13	L14080081-07	SAMP		8330-SPE		9.79 g	1 mL			40 mL	Transparent
14	L14080081-08	SAMP		8330-SPE		10.35 g	1 mL			40 mL	Transparent
15	L14080081-09	SAMP		8330-SPE		10.28 g	1 mL			40 mL	Transparent
16	L14080081-10	SAMP		8330-SPE		10.04 g	1 mL			40 mL	Transparent
17	L14080081-11	SAMP		8330-SPE		9.86 g	1 mL			40 mL	Transparent
18	L14080244-02	SAMP		8330-SPE		10.33 g	1 mL			40 mL	Transparent
19	L14080244-04	SAMP		8330-SPE		10.33 g	1 mL			40 mL	Transparent
20	L14080244-06	SAMP		8330-SPE		9.9 g	1 mL			40 mL	Transparent
21	L14080244-08	SAMP		8330-SPE		10.19 g	1 mL			40 mL	Transparent
22	L14080244-10	SAMP		8330-SPE		10.2 g	1 mL			40 mL	Transparent
23	WG487088-01	BLANK		8330-SPE		10 g	1 mL			40 mL	Transparent
24	WG487088-02	LCS		8330-SPE		10 g	1 mL	1 mL	STD65796	40 mL	Transparent
25	WG487088-03	LCS		8330-SPE		10 g	1 mL	1 mL	STD65691	40 mL	Transparent
26	WG487088-04	REF	L14080081-04	8330-SPE		10.14 g	1 mL			40 mL	Transparent
27	WG487088-05	MS	L14080081-04	8330-SPE		10.05 g	1 mL	1 mL	STD65796	40 mL	Transparent
28	WG487088-06	MSD	L14080081-04	8330-SPE		10.04 g	1 mL	1 mL	STD65796	40 mL	Transparent

CTRL TEMP ON@ 3.1C, OFF@ 3.1C

BATH TEMP ON@ 13C, OFF@ 15C

Analyst: Chris Hill

Reviewer: Richard Davis

EXTRACT - Modified 01/23/2009
PDF ID: 3697010
Report generated: 08/07/2014 12:24

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 177 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L012964.F	WG483233-01 8330 ICAL 2500 PPB	1	1	STD65351	07/09/14 13:26
2	5L012965.F	WG483233-02 8330 ICAL 1000 PPB	1	1	STD65351	07/09/14 14:05
3	5L012966.F	WG483233-03 8330 ICAL 500 PPB	1	1	STD65351	07/09/14 14:44
4	5L012967.F	WG483233-04 8330 ICAL 100 PPB	1	1	STD65351	07/09/14 15:23
5	5L012968.F	WG483233-05 8330 ICAL 50 PPB	1	1	STD65351	07/09/14 16:02
6	5L012969.F	WG483233-06 8330 ICAL 25 PPB	1	1	STD65351	07/09/14 16:41
7	5L012970.F	WG483233-07 8330 ALT 500 PPB	1	1	STD65377	07/09/14 17:20
8	5L012971.F	WG482432-01 BLANK	1	1		07/09/14 18:00
9	5L012972.F	WG482432-02 LCS	1	1		07/09/14 18:39
10	5L012973.F	WG482432-03 LCS DUP	1	1		07/09/14 19:18
11	5L012974.F	L14061431-02	1	1		07/09/14 19:57
12	5L012975.F	L14061431-04	1	1		07/09/14 20:36
13	5L012976.F	L14061689-10	1	1		07/09/14 21:15
14	5L012977.F	L14061689-12	1	1		07/09/14 21:54
15	5L012978.F	L14061689-14	1	1		07/09/14 22:33
16	5L012979.F	L14061689-16	1	1		07/09/14 23:12
17	5L012980.F	L14061689-18	1	1		07/09/14 23:51
18	5L012981.F	WG483357-01 8330 CCV 500 PPB	1	1	STD65351	07/10/14 00:30
19	5L012982.F	WG482631-01 BLANK	1	1		07/10/14 01:09
20	5L012983.F	WG482631-02 LCS	1	1		07/10/14 01:48
21	5L012984.F	WG482631-03 LCS DUP	1	1		07/10/14 02:28
22	5L012985.F	L14061689-29	1	1		07/10/14 03:07
23	5L012986.F	L14061689-31	1	1		07/10/14 03:46
24	5L012987.F	L14061689-33	1	1		07/10/14 04:25
25	5L012988.F	L14061689-35	1	1		07/10/14 05:04
26	5L012989.F	L14061689-37	1	1		07/10/14 05:43
27	5L012990.F	WG483357-02 8330 CCV 500 PPB	1	1	STD65351	07/10/14 06:22
28	5L012991.F	AcCN Rinse	1	1		07/10/14 07:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	WG483233-07 8330 ALT 500 PPB: Tetryl failed marginally low.			

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238
CCV STD: STD65351 LCS STD: STD65237

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Required second column confirmation	RDX
	L14061431-02			
12	X		Required second column confirmation	RDX
	L14061431-04			
18				
	WG483357-01 8330 CCV 500 PPB: Tetryl failed low.			
20				
	WG482631-02 LCS: 6 analytes failed high. There were no hits in samples associated with this LCS.			
21				
	WG482631-03 LCS DUP: 6 analytes failed high. There were no hits in samples associated with this LCS.			
23				
	L14061689-31: 1,2-DNB surrogate failed marginally low. Sample took several hours to filter and not all the sample would filter.			
27				
	WG483357-02 8330 CCV 500 PPB: Tetryl failed low.			

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 080714
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:

Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65797 Calibration STD
CCV STD: STD65351 LCS STD: STD65796 MS/MSD STD: STD65796

Comments: Pressure = 179 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013251.F	WG487336-01 8330 CCV 500 PPB	1	1	STD65351	08/07/14 13:37
2	5L013252.F	WG487118-01 BLANK	1	1		08/07/14 14:16
3	5L013253.F	WG487118-02 LCS	1	1		08/07/14 14:55
4	5L013254.F	WG487118-03 LCS DUP	1	1		08/07/14 15:34
5	5L013255.F	L14080230-05	1	1		08/07/14 16:13
6	5L013256.F	L14080244-13	1	1		08/07/14 16:52
7	5L013257.F	WG487088-01 BLANK	7	1		08/07/14 17:32
8	5L013258.F	WG487088-02 LCS	7	1		08/07/14 18:11
9	5L013259.F	L14080080-01	7	1		08/07/14 18:50
10	5L013260.F	L14080080-02	7	1		08/07/14 19:29
11	5L013261.F	L14080080-03	7	1		08/07/14 20:08
12	5L013262.F	WG487336-02 8330 CCV 500 PPB	1	1	STD65351	08/07/14 20:47
13	5L013263.F	L14080080-04	7	1		08/07/14 21:26
14	5L013264.F	L14080080-05	7	1		08/07/14 22:05
15	5L013265.F	L14080080-06	7	1		08/07/14 22:44
16	5L013266.F	L14080081-01	7	1		08/07/14 23:23
17	5L013267.F	L14080081-02	7	1		08/08/14 00:02
18	5L013268.F	L14080081-03	7	1		08/08/14 00:41
52	5L013269.F	L14080081-04 REF	7	1		08/08/14 01:20
53	5L013270.F	L14080081-05 MS	7	1		08/08/14 02:00
54	5L013271.F	L14080081-06 MSD	7	1		08/08/14 02:39
22	5L013272.F	L14080081-07	7	1		08/08/14 03:18
23	5L013273.F	WG487336-03 8330 CCV 500 PPB	1	1	STD65351	08/08/14 03:57
24	5L013274.F	L14080081-08	7	1		08/08/14 04:36
25	5L013275.F	L14080081-09	7	1		08/08/14 05:15
26	5L013276.F	L14080081-10	7	1		08/08/14 05:54
27	5L013277.F	L14080081-11	7	1		08/08/14 06:33
28	5L013278.F	L14080244-02	7	1		08/08/14 07:12
29	5L013279.F	L14080244-04	7	1		08/08/14 07:51
30	5L013280.F	L14080244-06	7	1		08/08/14 08:30
31	5L013281.F	L14080244-08	7	1		08/08/14 09:09
32	5L013282.F	L14080244-10	7	1		08/08/14 09:48
33	5L013283.F	Solvent Rinse	1	1		08/08/14 10:28

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 080714
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797
CCV STD: STD65351 LCS STD: STD65796 STD65796

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	5L013284.F	WG487336-04 8330 CCV 500 PPB	1	1	STD65351	08/08/14 10:48
35	5L013285.F	WG487361-01 PETN CCV 500 PPB	1	1	STD63527	08/08/14 11:27
36	5L013286.F	WG487118-01 BLANK	1	1		08/08/14 11:47
37	5L013287.F	WG487118-04 LCS	1	1		08/08/14 12:06
38	5L013288.F	L14080230-05	1	1		08/08/14 12:25
39	5L013289.F	L14080244-13	1	1		08/08/14 12:44
40	5L013290.F	WG487088-01 BLANK	7	1		08/08/14 13:04
41	5L013291.F	WG487088-03 LCS	7	1		08/08/14 13:23
42	5L013292.F	L14080244-02	7	1		08/08/14 13:42
43	5L013293.F	L14080244-04	7	1		08/08/14 14:01
44	5L013294.F	L14080244-06	7	1		08/08/14 14:21
45	5L013295.F	L14080244-08	7	1		08/08/14 14:40
46	5L013296.R	WG487361-02 PETN CCV 500 PPB	1	1	STD63527	08/08/14 14:59
47	5L013297.F	WG487361-02 PETN CCV 500 PPB	1	1	STD63527	08/08/14 15:18
48	5L013298.F	L14080244-10	7	1		08/08/14 15:38
49	5L013299.R	WG487361-03 PETN CCV 500 PPB	1	1	STD63527	08/08/14 15:57
50	5L013300.F	WG487361-03 PETN CCV 500 PPB	1	1	STD63527	08/08/14 16:16
51	5L013301.F	Solvent Rinse	1	1		08/08/14 16:37

Comments

Seq.	Rerun	Dil.	Reason	Analytes
14	X	5	Over Calibration Range	Nitroglycerin
	L14080080-05			
16	X	10	Over Calibration Range	Nitroglycerin
	L14080081-01			
18	X	100	Over Calibration Range	Nitroglycerin
	L14080081-03			
52	X	50	Over Calibration Range	Nitroglycerin
	L14080081-04: Also need a 5x dilution for 2,4-DNT.			
53				
	L14080081-05 MS: 5 analytes failed low and 2 anlaytes failed high.			
54				
	L14080081-06 MSD:: 4 analytes failed low and 3 analytes failed high.			
22	X	5	Over Calibration Range	Nitroglycerin
	L14080081-07			
23				

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 080714
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797
CCV STD: STD65351 LCS STD: STD65796 STD65796

Comments

Seq.	Rerun	Dil.	Reason	Analytes
	WG487336-03 8330 CCV 500 PPB: Tetryl failed low.			
24	X	20	Over Calibration Range	Nitroglycerin
	L14080081-08			
25	X	10	Over Calibration Range	Nitroglycerin
	L14080081-09			
26	X	5	Over Calibration Range	Nitroglycerin
	L14080081-10			
27	X	10	Over Calibration Range	Nitroglycerin
	L14080081-11			
46				
	WG487361-02 PETN CCV 500 PPB: Wrong vial injected. Not used.			
49				
	WG487361-03 PETN CCV 500 PPB: Wrong vial injected. Not used.			

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 081114
Analyst1: JWR Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00180133
Eluent ID#:

Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Workgroups: Analytical WG487385 (Reruns @ dilutions only)

Internal STD: NA Surrogate STD: STD65797 Calibration STD NA

CCV STD: STD65351 LCS STD: NA MS/MSD STD: NA

Comments: System backpressure = 185bar.
The %Rec for Tetryl was below the advisory limit for all CCV's, however, none of these samples were reanalyzed at a dilution for Tetryl.

Due to analyst error the analytical sequence was named 101114 instead of 081114.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013304.F	WG487829-01 CCV	1	1	STD65351	08/11/14 15:27
2	5L013305.F	L14080080-05 5x	7	5		08/11/14 16:06
3	5L013306.F	L14080081-01 10x	7	10		08/11/14 16:45
4	5L013307.F	L14080081-03 100x	7	100		08/11/14 17:24
5	5L013308.F	L14080081-04 5x	7	5		08/11/14 18:03
6	5L013309.F	L14080081-04 50x	7	50		08/11/14 18:42
7	5L013310.F	WG487829-02 CCV	1	1	STD65351	08/11/14 19:21
8	5L013311.F	L14080081-07 5x	7	5		08/11/14 20:00
9	5L013312.F	L14080081-08 20x	7	20		08/11/14 20:39
10	5L013313.F	L14080081-09 10x	7	10		08/11/14 21:18
11	5L013314.F	L14080081-10 5x	7	5		08/11/14 21:57
12	5L013315.F	L14080081-11 10x	7	10		08/11/14 22:36
13	5L013316.F	WG487829-03 CCV	1	1	STD65351	08/11/14 23:16
14	5L013317.F	AcCN Rinse	1	1		08/11/14 23:55

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 13-AUG-14

Microbac Laboratories Inc.

Data Checklist

Date: 09-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62106
Analytical Workgroups: L14061431, L14061689

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
10-JUL-2014

Secondary Reviewer:
10-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-10-2014 19:08:43

Microbac Laboratories Inc.

Data Checklist

Date: 07-AUG-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62730
Analytical Workgroups: L14080080, L14080081, L14080230, L14080244

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	X
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
08-AUG-2014

Secondary Reviewer:
11-AUG-2014

CHECKLIST1 - Modified 03/05/2008
Generated: AUG-11-2014 09:23:21

Microbac Laboratories Inc.

Data Checklist

Date: 11-AUG-2014
Analyst: JWR
Analyst: NA
Method: 8330-PLUS
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62797
Analytical Workgroups: L14080080, 0081 (SOILS) (RERUNS AT DILUTIONS ONLY)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	185 BAR
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	NA
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	NA
Recoveries	NA
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA (DIODE ARRAY CONF'D AS NEAT)
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
12-AUG-2014
John Richards

Secondary Reviewer:
13-AUG-2014
Michael Cochran

CHECKLIST1 - Modified 03/05/2008
Generated: AUG-13-2014 08:33:46

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B AAB#: WG487385

Login Number: L14080080

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
NB-1	01	07/31/14					08/06/2014	6	14		08/07/14	1.3	40	
NB-2	02	07/31/14					08/06/2014	6	14		08/07/14	1.3	40	
SB-1	03	07/31/14					08/06/2014	5.9	14		08/07/14	1.4	40	
SB-2	04	07/31/14					08/06/2014	5.9	14		08/07/14	1.4	40	
BERM-1	05	07/31/14					08/06/2014	6.1	14		08/07/14	1.4	40	
BERM-1	05	07/31/14					08/06/2014	6.1	14		08/11/14	5.2	40	
POND-1	06	07/31/14					08/06/2014	6.1	14		08/07/14	1.5	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3699873
Report generated 08/13/2014 11:14

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14080080
Instrument Id: HPLC5
Workgroup (AAB#): WG487385

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Soil

Sample Number	Dilution	Tag	1
L14080080-01	1.00	01	87.1
L14080080-02	1.00	01	88.4
L14080080-03	1.00	01	85.0
L14080080-04	1.00	01	87.5
L14080080-05	1.00	01	89.2
L14080080-05	5.00	DL01	77.4
L14080080-06	1.00	01	92.5
WG487088-01	1.00	01	90.4
WG487088-02	1.00	01	101

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3699880
Report generated: 08/13/2014 11:15

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14080080
Blank File ID: 5L013257.F
Prep Date: 08/06/14 11:37
Analyzed Date: 08/07/14 17:32
Analyst: ECL

Work Group: WG487385
Blank Sample ID: WG487088-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG487088-02	5L013258.F	08/07/14 18:11	01
NB-1	L14080080-01	5L013259.F	08/07/14 18:50	01
NB-2	L14080080-02	5L013260.F	08/07/14 19:29	01
SB-1	L14080080-03	5L013261.F	08/07/14 20:08	01
SB-2	L14080080-04	5L013263.F	08/07/14 21:26	01
BERM-1	L14080080-05	5L013264.F	08/07/14 22:05	01
POND-1	L14080080-06	5L013265.F	08/07/14 22:44	01
BERM-1	L14080080-05	5L013305.F	08/11/14 16:06	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3699874
Report generated 08/13/2014 11:14

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14080080 Prep Date: 08/06/14 11:37 Sample ID: WG487088-01
Instrument ID: HPLC5 Run Date: 08/07/14 17:32 Prep Method: METHOD
File ID: 5L013257.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG487385 Matrix: Soil Units: mg/kg
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
2,4,6-Trinitrotoluene	0.100	0.250	0.100	1	U
2,4-Dinitrotoluene	0.100	0.250	0.100	1	U
2-Amino-4,6-dinitrotoluene	0.100	0.250	0.100	1	U
4-Amino-2,6-dinitrotoluene	0.100	0.250	0.100	1	U
HMX	0.100	0.250	0.100	1	U
Nitroglycerin	0.100	0.250	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	90.4	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 3699875
13-AUG-2014 11:14

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14080080 Run Date: 08/07/2014 Sample ID: WG487088-02
Instrument ID: HPLC5 Run Time: 18:11 Prep Method: METHOD
File ID: 5L013258.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG487385 Matrix: Soil Units: mg/kg
QC Key: STD Lot#: STD65796 Cal ID: HPLC5-09-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
2,4,6-Trinitrotoluene	1.00	0.930	93.0	40 - 130	
2,4-Dinitrotoluene	1.00	0.989	98.9	80 - 125	
2-Amino-4,6-dinitrotoluene	1.00	1.01	101	80 - 125	
4-Amino-2,6-dinitrotoluene	1.00	0.963	96.3	80 - 125	
HMX	1.00	1.04	104	75 - 125	
Nitroglycerin	1.00	0.848	84.8	50 - 150	

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	101	50 - 150	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3699876
Report generated: 08/13/2014 11:14

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14080080
Analytical Method: 8330B
ICAL Workgroup: WG483233

Instrument ID: HPLC5
Initial Calibration Date: 09-JUL-14 16:41
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
2,4,6-Trinitrotoluene		2.544	2.55	1.00000	
2,4-Dinitrotoluene		1.780	3.81	1.00000	
2-Amino-4,6-Dinitrotoluene		2.763	5.50	1.00000	
4-Amino-2,6-Dinitrotoluene		4.276	3.89	1.00000	
HMX		5.860	3.94	1.00000	
Nitroglycerin		5.043	17.4	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

This method always uses linear calibration model (R)

INT_CAL - Modified 03/06/2008
PDF File ID: 3699877
Report generated 08/13/2014 11:14

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080080

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-01			WG483233-02			WG483233-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trinitrotoluene	2500	967.202881	2.585	1000	385.309113	2.595	500	190.716125	2.622
2,4-Dinitrotoluene	2500	1377.43542	1.815	1000	549.588623	1.820	500	269.683533	1.854
2-Amino-4,6-Dinitrotoluene	2500	877.059021	2.850	1000	349.451172	2.862	500	172.491531	2.899
4-Amino-2,6-Dinitrotoluene	2500	570.305420	4.384	1000	228.319305	4.380	500	112.675064	4.438
HMX	2500	414.851227	6.026	1000	168.394058	5.938	500	84.8615189	5.892
Nitroglycerin	2500	515.997803	4.845	1000	205.258530	4.872	500	101.567825	4.923

INT_CAL - Modified 03/06/2008
PDF File ID: 3699877
Report generated 08/13/2014 11:14

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080080

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-04			WG483233-05			WG483233-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trinitrotoluene	100	39.8029480	2.512	50.0	20.2711296	2.467	25.0	10.0692062	2.483
2,4-Dinitrotoluene	100	55.6826248	1.796	50.0	29.6646767	1.686	25.0	14.6111479	1.711
2-Amino-4,6-Dinitrotoluene	100	35.7217560	2.799	50.0	18.9889889	2.633	25.0	9.87414837	2.532
4-Amino-2,6-Dinitrotoluene	100	23.2509079	4.301	50.0	12.1103840	4.129	25.0	6.20706463	4.028
HMX	100	17.3945694	5.749	50.0	9.14081383	5.470	25.0	4.10940647	6.084
Nitroglycerin	100	21.8829861	4.570	50.0	12.5522137	3.983	25.0	3.53736115	7.067

INT_CAL - Modified 03/06/2008
PDF File ID: 3699877
Report generated 08/13/2014 11:14

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14080080 Run Date: 07/09/2014 Sample ID: WG483233-07
Instrument ID: HPLC5 Run Time: 17:20 Method: 8330B
File ID: 5L012970.F Analyst: ECL QC Key: STD
ICal Workgroup: WG483233 Cal ID: HPLC5 - 09-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	500	ug/L	2.59	0	30	
2,4-Dinitrotoluene		500	502	ug/L	1.81	0.500	30	
2-Amino-4,6-Dinitrotoluene		500	501	ug/L	2.85	0.100	30	
4-Amino-2,6-Dinitrotoluene		500	522	ug/L	4.20	4.40	30	
HMX		500	485	ug/L	6.14	3.10	30	
Nitroglycerin		500	502	ug/L	4.83	0.400	30	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3699878
Report generated 08/13/2014 11:15

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080 Run Date: 08/07/2014 Sample ID: WG487336-01
Instrument ID: HPLC5 Run Time: 13:37 Method: 8330B
File ID: 5L013251.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		0.500	0.477	mg/kg	2.71	4.60	20	
2,4-Dinitrotoluene		0.500	0.495	mg/kg	1.84	0.979	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.497	mg/kg	2.87	0.587	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.501	mg/kg	4.37	0.265	20	
HMX		0.500	0.521	mg/kg	5.72	4.15	20	
Nitroglycerin		0.500	0.488	mg/kg	4.97	2.49	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699879
Report generated 08/13/2014 11:15

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Run Date: 08/07/2014
Sample ID: WG487336-02
Instrument ID: HPLC5
Run Time: 20:47
Method: 8330B
File ID: 5L013262.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG487385
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		0.500	0.469	mg/kg	2.76	6.16	20	
2,4-Dinitrotoluene		0.500	0.491	mg/kg	1.85	1.79	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.491	mg/kg	2.91	1.86	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.489	mg/kg	4.47	2.13	20	
HMX		0.500	0.515	mg/kg	5.79	2.93	20	
Nitroglycerin		0.500	0.480	mg/kg	5.05	3.92	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699879
Report generated 08/13/2014 11:15

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Run Date: 08/08/2014
Sample ID: WG487336-03
Instrument ID: HPLC5
Run Time: 03:57
Method: 8330B
File ID: 5L013273.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG487385
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		0.500	0.466	mg/kg	2.77	6.71	20	
2,4-Dinitrotoluene		0.500	0.528	mg/kg	1.72	5.58	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.519	mg/kg	2.75	3.77	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.487	mg/kg	4.50	2.63	20	
HMX		0.500	0.483	mg/kg	6.15	3.32	20	
Nitroglycerin		0.500	0.541	mg/kg	4.48	8.24	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699879
Report generated 08/13/2014 11:15

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Run Date: 08/11/2014
Sample ID: WG487829-01
Instrument ID: HPLC5
Run Time: 15:27
Method: 8330B
File ID: 5L013304.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG487385
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		0.500	0.488	mg/kg	2.65	2.38	20	
2,4-Dinitrotoluene		0.500	0.503	mg/kg	1.81	0.584	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.511	mg/kg	2.79	2.29	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.515	mg/kg	4.25	2.93	20	
HMX		0.500	0.502	mg/kg	5.93	0.403	20	
Nitroglycerin		0.500	0.500	mg/kg	4.85	0.0542	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699879
Report generated 08/13/2014 11:15

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080080
Run Date: 08/11/2014
Sample ID: WG487829-02
Instrument ID: HPLC5
Run Time: 19:21
Method: 8330B
File ID: 5L013310.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG487385
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		0.500	0.487	mg/kg	2.66	2.64	20	
2,4-Dinitrotoluene		0.500	0.500	mg/kg	1.82	0.0192	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.508	mg/kg	2.81	1.56	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.510	mg/kg	4.30	1.90	20	
HMX		0.500	0.503	mg/kg	5.91	0.677	20	
Nitroglycerin		0.500	0.499	mg/kg	4.86	0.170	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699879
Report generated 08/13/2014 11:15

2.2.1 Percent Solids Data

Example Percent Solids Calculations

1.0 Calculating the percent solids of a sample.

$$\%Solids = \frac{WT3 - WT1}{WT2 - WT1} \times F$$

Where:	
WT1 = Weight, in grams, of the empty container	1.30 g
WT2 = Weight, in grams, of the container and wet sample	21.274 g
WT3 = Weight, in grams, of the container and dried sample	5.21 g
F = Factor to get units as percent weight	100
%Solids = Percent solids present in sample.	19.58%

2.0 Calculating the percent moisture of a sample.

% Moisture = 100 - % Solids from 1.0 calculation

Microbac Laboratories Inc.

PERCENT SOLIDS

Workgroup (AAB#): WG486795 Analyst: ERP ADT(on): 08/04/2014 10:08
Method: D2216-90 Instrument: BAL014 ADT(off): 08/05/2014 07:36
SOP: K0003 Rev: 13

SAMPLE NUMBER	EMPTY PAN WT 1	WET WT 2	DRY WT 3A	DRY WT 3B	DRY WT 3C	PERCENT SOLID	PERCENT MOISTURE
L14071741-08	1.296	5.294	5.26			99.15	
L14071741-09	1.301	5.359	5.333			99.36	
L14071741-10	1.3	5.06	5.024			99.04	
L14071741-19	1.295	5.141	5.113			99.27	
L14071741-20	1.304	5.235	5.193			98.93	
L14071742-02	1.295	6.046	5.771			94.21	
L14080068-01	1.298	22.715	19.97			87.18	
L14080068-02	1.288	20.202	17.382			85.09	
L14080068-04	1.299	24.089	19.507			79.89	
L14080068-05	1.296	22.201	18.085			80.31	
L14080068-06	1.296	22.201	18.085			80.31	
L14080068-07	1.296	22.201	18.085			80.31	
L14080068-09	1.295	20.98	20.283			96.46	
L14080068-10	1.292	22.832	19.623			85.10	
L14080077-01	1.296	23.175	19.025			81.03	
L14080080-01	1.298	20.02	17.124			84.53	
L14080080-02	1.293	20.086	17.301			85.18	
L14080080-03	1.302	21.552	17.027			77.65	
L14080080-04	1.299	20.102	14.867			72.16	
L14080080-05	1.306	24.249	23.599			97.17	
L14080080-06	1.291	20.899	19.912			94.97	
L14080081-01	1.297	21.625	21.148			97.65	
L14080081-02	1.291	20.256	19.847			97.84	
L14080081-03	1.295	21.489	20.321			94.22	
L14080081-04	1.297	21.519	18.618			85.65	
L14080081-05	1.297	21.519	18.618			85.65	
L14080081-06	1.297	21.519	18.618			85.65	
L14080081-07	1.295	21.113	20.554			97.18	
L14080081-08	1.313	21.233	20.588			96.76	
L14080081-09	1.3	22.442	21.113			93.71	
L14080081-10	1.299	22.374	21.921			97.85	
L14080081-11	1.294	20.12	18.447			91.11	
L14080084-01	1.304	22.308	20.418			91.00	
WG486795-01	1.295	21.113	20.554			97.18	2.821
WG486795-02	1.294	20.12	18.447			91.11	8.887
WG486795-03	1.296	21.488	21.002			97.59	2.407
WG486795-04	1.299	20.508	19.397			94.22	5.784

Analyst: Erin Potter

PERCENT_SOLIDS - Modified 04/24/2008
PDF ID: 3692837
Report generated: 08/05/2014 07:47

3.0 Attachments

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** **Tracking Number:**

Box 1: Matrix
SW Surface Water, T Trip Blank, GW Groundwater, E Equipment Blank, L Leachate, P Product, S Soil, O Other

Box 2: Preservative
A HCL, E NaOH, B HNO_3, F ZnAc, C H_2SO_4, G Other (<6 deg c), D $Na_2S_2O_3$, H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, V VOA, AG Amber Glass, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G	G						
Box 3 - Filtered/Unfiltered					NA	NA	NA						
Required pH of Sample					NA	NA	NA						
Box 2 - Preservative					G	G	G						
Box 5 - Sample Container Type					1-4 oz AG		1-4ox CG						
Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	Perchlorate - 6850	DRY WEIGHT	8330B -AIR DRY (S-PREP)						
NB-1	7/31	1230	S	2	X	X	X						
NB-2		1210	S	2	X	X	X						
SB-1		1250	S	2	X	X	X						
SB-2		1310	S	2	X	X	X						
BERM-1		0850	S	2	X	X	X						
POND-1	7/31	0910	S	2	X	X	X						

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

4. VELAP Accreditation required.
JVK 7/14/2014

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name:	Time:	Company Name:	Time:	

QC JVK 7.11.2014 1/2

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 - Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** *YES* UPS: 1Z 237-301-01-9446-9138 **Carrier:** **Tracking Number:** 1Z 237-301-01-9435-8927

Box 1: Matrix
SW Surface Water, T Trip Blank, GW Groundwater, E Equipment Blank, L Leachate, P Product, S Soil, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (<6 deg C), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, V VOA, AG Amber Glass, CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on ice: *YES*

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	Perchlorate - 6850	DRY WEIGHT	8330B -AIR DRY (S-PREP)
Box 4 - Sample Type					G	G	G
Box 3 - Filtered/Unfiltered					NA	NA	NA
Required pH of Sample					NA	NA	NA
Box 2 - Preservative					G	G	G
Box 5 - Sample Container Type					1-4 oz AG		1-4ox CG
PAD-1	7/31	0830	S	2	X	X	X
PAD-2		0930	S	2	X	X	X
PAD-3		0950	S	2	X	X	X
PAD-4		1010	S	2	X	X	X
PAD-4ms		1010	S	2	X	X	X
PAD-4msd		1010	S	2	X	X	X
PAD-5		1040	S	2	X	X	X
PAD-6		1100	S	2	X	X	X
PAD-7		1120	S	2	X	X	X
PAD-8		1150	S	2	X	X	X
PAD-X	7/31	1130	S	2	X	X	X

MW-4 is the designated sample for lab to use for MS / MSD...

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662
Joshua Pemberton

Clients Special Instructions:
Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ N
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature): Ken Goddington	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KEN GODDINGTON	Date: 7/31/14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name:	Time:	

QC JVR 7-11-2014 2/21

ANALYTICAL METHOD: 8330B (AIR DRY PREP) - Microbac, Marietta, OH
TYPE METHOD: Explosives

Analyte List for: All PAD Samples

Constituent	CASRN	SW-846 Method
Nitroglycerin	55-63-0	8330B
1,3,5-Trinitrobenzene	99-35-4	8330B
2,4,6-Trinitrotoluene	118-96-7	8330B
2-amino-4,6-dinitrotoluene	35572-78-2	8330B
4-amino-2,6-dinitrotoluene	19406-51-0	8330B
1,3-Dinitrobenzene	99-65-0	8330B
2,4-Dinitrotoluene	121-14-2	8330B
2,6-Dinitrotoluene	606-20-2	8330B
2-Nitrotoluene (ortho)	88-72-2	8330B
3-Nitrotoluene (meta)	99-08-1	8330B
4-Nitrotoluene (para)	99-99-0	8330B
HMX	2691-41-0	8330B
Nitrobenzene	98-95-3	8330B
RDX	121-82-4	8330B
Tetryl	479-45-8	8330B

Analyte List for SB-1, SB-2, NB-1, NB-2, Berm-1 and Pond-1 ONLY

Method 8330B (~~SIR~~ AIR DRY PREP) : - Microbac, Marietta, OH

No.	PARAMETER	CAS RN
1.	2,4,6-trinitrotoluene (2,4,6-TNT)	118-96-7
2.	2,4-dinitrotoluene (2,4-DNT)	121-14-2
3.	HMX	2691-41-0
4.	2-amino-4,6-dinitrotoluene	35572-78-2
5.	4-amino-2,6-dinitrotoluene	19406-51-0
6.	Nitroglycerin	55-63-0

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662

T:\Environmental\BBG\Databases\RAAP\Sample Event Set Up\Semi-Annual Events\HWMU-13\Annual OBG Soil Event\2014- Unit 13-OBG - Target Analyte List --Soil Samples.doc

Microbac

Laboratory Report Number: L14080081

Abridged data package. Full deliverable available.

Janet Frazier
Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Michelle Taylor – Client Services Specialist
(740) 373-4071
Michelle.Taylor@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on August 13 2014

David Vandenberg – Managing Director

State of Origin: VA
Accrediting Authority: N/A ID:N/A
QAPP: Microbac OVD

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00110942	I	2.0		1Z2373010194358927	X
00110379	I	3.0		1Z2373010194469138	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	NA
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
PAD-1	L14080081-01	07/31/2014 08:30	08/01/2014 09:41
PAD-2	L14080081-02	07/31/2014 09:30	08/01/2014 09:41
PAD-3	L14080081-03	07/31/2014 09:50	08/01/2014 09:41
PAD-4	L14080081-04	07/31/2014 10:10	08/01/2014 09:41
PAD-4-MS	L14080081-05	07/31/2014 10:10	08/01/2014 09:41
PAD-4-MSD	L14080081-06	07/31/2014 10:10	08/01/2014 09:41
PAD-5	L14080081-07	07/31/2014 10:40	08/01/2014 09:41
PAD-6	L14080081-08	07/31/2014 11:00	08/01/2014 09:41
PAD-7	L14080081-09	07/31/2014 11:20	08/01/2014 09:41
PAD-8	L14080081-10	07/31/2014 11:50	08/01/2014 09:41
PAD-X	L14080081-11	07/31/2014 11:30	08/01/2014 09:41

Microbac REPORT L14080081
PREPARED FOR Draper Aden Associates
WORK ID:

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1.0 Summary Data

1.1 Narratives

Login Number: L14080081
Department: General Chromatography
Analyst: John W. Richards Jr.

METHOD

Analysis SW-846 6850

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: These failures were due to matrix.

Sample #	Analyte	Date	Result	Lower	Upper	Type
L14080081-05	Perchlorate	2014-08-08 20:53:49	62.5	70	130	Recovery
L14080081-06	Perchlorate	2014-08-08 21:12:48	460	70	130	Recovery

SAMPLES

Samples: All acceptance criteria were met.

Internal Standards: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87267
Approved By: Mike Cochran

Login Number: L14080081
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: Recoveries out of range were observed for the following analyte: Tetryl. Please see the applicable QC report for a detailed presentation of the failures.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries and/or RPDs out of range were observed for 8 analytes. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: Samples 01, 03, 04 and 07-11 were analyzed at dilutions to be within calibration range. All sample results were confirmed by diode array detection.

Due to analyst error the analytical sequence on 08-11-14 (dilution analysis) was named 101114 instead of 081114.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87319
Approved By: Mike Cochran

1.2 Certificate of Analysis

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080081-01	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 19:38
Collect Date:	07/31/2014 08:30	**Dilution:**	1	**File ID:**	1LM.LM26466
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00204	0.00102

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 23:23
Collect Date:	07/31/2014 08:30	**Dilution:**	1	**File ID:**	5L013266.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.253	0.101
1,3-Dinitrobenzene	99-65-0		ND	0.253	0.101
2,4,6-Trinitrotoluene	118-96-7		ND	0.253	0.101
2,4-Dinitrotoluene	121-14-2	9.07		0.253	0.101
2,6-Dinitrotoluene	606-20-2	0.418		0.253	0.101
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.253	0.101
2-Nitrotoluene	88-72-2		ND	0.253	0.101
3-Nitrotoluene	99-08-1		ND	0.253	0.101
4-Nitrotoluene	99-99-0		ND	0.253	0.101
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.253	0.101
HMX	2691-41-0		ND	0.253	0.101
Nitrobenzene	98-95-3		ND	0.253	0.101
RDX	121-82-4		ND	0.253	0.101
Tetryl	479-45-8		ND	0.253	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.3	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 16:45
Collect Date:	07/31/2014 08:30	**Dilution:**	10	**File ID:**	5L013306.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	23.1		2.53	1.01

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	87.1	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-02	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-2	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 19:56
Collect Date:	07/31/2014 09:30	**Dilution:**	1	**File ID:**	1LM.LM26467
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00204	0.00102

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-2	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 00:02
Collect Date:	07/31/2014 09:30	**Dilution:**	1	**File ID:**	5L013267.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.260	0.104
1,3-Dinitrobenzene	99-65-0		ND	0.260	0.104
2,4,6-Trinitrotoluene	118-96-7		ND	0.260	0.104
2,4-Dinitrotoluene	121-14-2		ND	0.260	0.104
2,6-Dinitrotoluene	606-20-2		ND	0.260	0.104
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.260	0.104
2-Nitrotoluene	88-72-2		ND	0.260	0.104
3-Nitrotoluene	99-08-1		ND	0.260	0.104
4-Nitrotoluene	99-99-0		ND	0.260	0.104
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.260	0.104
HMX	2691-41-0		ND	0.260	0.104
Nitrobenzene	98-95-3		ND	0.260	0.104
RDX	121-82-4		ND	0.260	0.104
Tetryl	479-45-8		ND	0.260	0.104
Nitroglycerin	55-63-0	9.17		0.260	0.104

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.3	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-03	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-3	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 20:15
Collect Date:	07/31/2014 09:50	**Dilution:**	1	**File ID:**	1LM.LM26468
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00212	0.00106

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 00:41
Collect Date:	07/31/2014 09:50	**Dilution:**	1	**File ID:**	5L013268.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.2

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.244	0.0977
1,3-Dinitrobenzene	99-65-0		ND	0.244	0.0977
2,4,6-Trinitrotoluene	118-96-7		ND	0.244	0.0977
2,4-Dinitrotoluene	121-14-2		ND	0.244	0.0977
2,6-Dinitrotoluene	606-20-2		ND	0.244	0.0977
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.244	0.0977
2-Nitrotoluene	88-72-2		ND	0.244	0.0977
3-Nitrotoluene	99-08-1		ND	0.244	0.0977
4-Nitrotoluene	99-99-0		ND	0.244	0.0977
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.244	0.0977
HMX	2691-41-0		ND	0.244	0.0977
Nitrobenzene	98-95-3		ND	0.244	0.0977
RDX	121-82-4		ND	0.244	0.0977
Tetryl	479-45-8		ND	0.244	0.0977

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.0	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 17:24
Collect Date:	07/31/2014 09:50	**Dilution:**	100	**File ID:**	5L013307.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.2

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	174		24.4	9.77

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-4	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 20:34
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	1LM.LM26469
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00491		0.00233	0.00116

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 01:20
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	5L013269.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.247	0.0986
1,3-Dinitrobenzene	99-65-0		ND	0.247	0.0986
2,4,6-Trinitrotoluene	118-96-7		ND	0.247	0.0986
2,6-Dinitrotoluene	606-20-2		ND	0.247	0.0986
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.247	0.0986
2-Nitrotoluene	88-72-2		ND	0.247	0.0986
3-Nitrotoluene	99-08-1		ND	0.247	0.0986
4-Nitrotoluene	99-99-0		ND	0.247	0.0986
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.247	0.0986
HMX	2691-41-0	0.836		0.247	0.0986
Nitrobenzene	98-95-3		ND	0.247	0.0986
RDX	121-82-4	5.28		0.247	0.0986
Tetryl	479-45-8		ND	0.247	0.0986

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	95.7	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 18:03
Collect Date:	07/31/2014 10:10	**Dilution:**	5	**File ID:**	5L013308.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	13.4		1.23	0.493

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	79.7	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 18:42
Collect Date:	07/31/2014 10:10	**Dilution:**	50	**File ID:**	5L013309.F
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	118		12.3	4.93

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14080081-05	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-4-MS	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 20:53
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	1LM.LM26470
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00636		0.00233	0.00117

Sample #:	L14080081-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4-MS	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 02:00
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	5L013270.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4	1.10		0.249	0.0995
1,3-Dinitrobenzene	99-65-0	0.978		0.249	0.0995
2,4,6-Trinitrotoluene	118-96-7	1.44		0.249	0.0995
2,4-Dinitrotoluene	121-14-2	1.15		0.249	0.0995
2,6-Dinitrotoluene	606-20-2	1.31		0.249	0.0995
2-Amino-4,6-dinitrotoluene	35572-78-2	1.19		0.249	0.0995
2-Nitrotoluene	88-72-2	1.05		0.249	0.0995
3-Nitrotoluene	99-08-1	1.18		0.249	0.0995
4-Nitrotoluene	99-99-0	0.990		0.249	0.0995
4-Amino-2,6-dinitrotoluene	19406-51-0	0.713		0.249	0.0995
HMX	2691-41-0	1.17		0.249	0.0995
Nitrobenzene	98-95-3	0.869		0.249	0.0995
RDX	121-82-4	1.37		0.249	0.0995
Tetryl	479-45-8	0.985		0.249	0.0995
Nitroglycerin	55-63-0	41.7	I	0.249	0.0995

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	97.6	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14080081-06	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-4-MSD	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 21:12
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	1LM.LM26471
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.0156		0.00233	0.00117

Sample #:	L14080081-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4-MSD	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 02:39
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	5L013271.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4	1.17		0.249	0.0996
1,3-Dinitrobenzene	99-65-0	1.02		0.249	0.0996
2,4,6-Trinitrotoluene	118-96-7	1.38		0.249	0.0996
2,4-Dinitrotoluene	121-14-2	1.21		0.249	0.0996
2,6-Dinitrotoluene	606-20-2	1.24		0.249	0.0996
2-Amino-4,6-dinitrotoluene	35572-78-2	1.11		0.249	0.0996
2-Nitrotoluene	88-72-2	1.01		0.249	0.0996
3-Nitrotoluene	99-08-1	1.27		0.249	0.0996
4-Nitrotoluene	99-99-0	0.964		0.249	0.0996
4-Amino-2,6-dinitrotoluene	19406-51-0	0.822		0.249	0.0996
HMX	2691-41-0	1.15		0.249	0.0996
Nitrobenzene	98-95-3	0.875		0.249	0.0996
RDX	121-82-4	1.19		0.249	0.0996
Tetryl	479-45-8	1.15		0.249	0.0996
Nitroglycerin	55-63-0	86.8	I	0.249	0.0996

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	98.9	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14080081-07	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-5	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 21:31
Collect Date:	07/31/2014 10:40	**Dilution:**	1	**File ID:**	1LM.LM26472
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00756		0.00205	0.00103

Sample #:	L14080081-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-5	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 03:18
Collect Date:	07/31/2014 10:40	**Dilution:**	1	**File ID:**	5L013272.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.255	0.102
1,3-Dinitrobenzene	99-65-0		ND	0.255	0.102
2,4,6-Trinitrotoluene	118-96-7		ND	0.255	0.102
2,4-Dinitrotoluene	121-14-2	6.76		0.255	0.102
2,6-Dinitrotoluene	606-20-2		ND	0.255	0.102
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.255	0.102
2-Nitrotoluene	88-72-2		ND	0.255	0.102
3-Nitrotoluene	99-08-1		ND	0.255	0.102
4-Nitrotoluene	99-99-0		ND	0.255	0.102
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.255	0.102
HMX	2691-41-0		ND	0.255	0.102
Nitrobenzene	98-95-3		ND	0.255	0.102
RDX	121-82-4		ND	0.255	0.102
Tetryl	479-45-8		ND	0.255	0.102

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	103	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-5	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 20:00
Collect Date:	07/31/2014 10:40	**Dilution:**	5	**File ID:**	5L013311.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	11.1		1.28	0.511

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	81.2	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-08	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-6	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 21:50
Collect Date:	07/31/2014 11:00	**Dilution:**	1	**File ID:**	1LM.LM26473
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00621		0.00204	0.00102

Sample #:	L14080081-08	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-6	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 04:36
Collect Date:	07/31/2014 11:00	**Dilution:**	1	**File ID:**	5L013274.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.242	0.0966
1,3-Dinitrobenzene	99-65-0		ND	0.242	0.0966
2,4,6-Trinitrotoluene	118-96-7		ND	0.242	0.0966
2,4-Dinitrotoluene	121-14-2		ND	0.242	0.0966
2,6-Dinitrotoluene	606-20-2		ND	0.242	0.0966
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.242	0.0966
2-Nitrotoluene	88-72-2		ND	0.242	0.0966
3-Nitrotoluene	99-08-1		ND	0.242	0.0966
4-Nitrotoluene	99-99-0		ND	0.242	0.0966
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.242	0.0966
HMX	2691-41-0		ND	0.242	0.0966
Nitrobenzene	98-95-3		ND	0.242	0.0966
RDX	121-82-4		ND	0.242	0.0966
Tetryl	479-45-8		ND	0.242	0.0966

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.4	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-08	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-6	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 20:39
Collect Date:	07/31/2014 11:00	**Dilution:**	20	**File ID:**	5L013312.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	53.1		4.83	1.93

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	62.5	50	150	

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14080081-09	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-7	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 22:09
Collect Date:	07/31/2014 11:20	**Dilution:**	1	**File ID:**	1LM.LM26474
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00181	J	0.00210	0.00105

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Certificate of Analysis

Sample #:	L14080081-09	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-7	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 05:15
Collect Date:	07/31/2014 11:20	**Dilution:**	1	**File ID:**	5L013275.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.243	0.0973
1,3-Dinitrobenzene	99-65-0		ND	0.243	0.0973
2,4,6-Trinitrotoluene	118-96-7		ND	0.243	0.0973
2,4-Dinitrotoluene	121-14-2		ND	0.243	0.0973
2,6-Dinitrotoluene	606-20-2		ND	0.243	0.0973
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.243	0.0973
2-Nitrotoluene	88-72-2		ND	0.243	0.0973
3-Nitrotoluene	99-08-1		ND	0.243	0.0973
4-Nitrotoluene	99-99-0		ND	0.243	0.0973
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.243	0.0973
HMX	2691-41-0		ND	0.243	0.0973
Nitrobenzene	98-95-3		ND	0.243	0.0973
RDX	121-82-4		ND	0.243	0.0973
Tetryl	479-45-8		ND	0.243	0.0973

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	88.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-09	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-7	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 21:18
Collect Date:	07/31/2014 11:20	**Dilution:**	10	**File ID:**	5L013313.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	20.2		2.43	0.973

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	78.5	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-10	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-8	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 23:25
Collect Date:	07/31/2014 11:50	**Dilution:**	1	**File ID:**	1LM.LM26478
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00203	0.00101

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-8	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 05:54
Collect Date:	07/31/2014 11:50	**Dilution:**	1	**File ID:**	5L013276.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.249	0.0996
1,3-Dinitrobenzene	99-65-0		ND	0.249	0.0996
2,4,6-Trinitrotoluene	118-96-7		ND	0.249	0.0996
2,4-Dinitrotoluene	121-14-2		ND	0.249	0.0996
2,6-Dinitrotoluene	606-20-2		ND	0.249	0.0996
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.249	0.0996
2-Nitrotoluene	88-72-2		ND	0.249	0.0996
3-Nitrotoluene	99-08-1		ND	0.249	0.0996
4-Nitrotoluene	99-99-0		ND	0.249	0.0996
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.249	0.0996
HMX	2691-41-0		ND	0.249	0.0996
Nitrobenzene	98-95-3		ND	0.249	0.0996
RDX	121-82-4		ND	0.249	0.0996
Tetryl	479-45-8		ND	0.249	0.0996

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	88.9	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-8	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 21:57
Collect Date:	07/31/2014 11:50	**Dilution:**	5	**File ID:**	5L013314.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	13.2		1.25	0.498

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	78.7	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-11	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-X	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 23:44
Collect Date:	07/31/2014 11:30	**Dilution:**	1	**File ID:**	1LM.LM26479
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.1

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00536		0.00217	0.00109

Sample #:	L14080081-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 06:33
Collect Date:	07/31/2014 11:30	**Dilution:**	1	**File ID:**	5L013277.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.1

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.254	0.101
1,3-Dinitrobenzene	99-65-0		ND	0.254	0.101
2,4,6-Trinitrotoluene	118-96-7		ND	0.254	0.101
2,4-Dinitrotoluene	121-14-2		ND	0.254	0.101
2,6-Dinitrotoluene	606-20-2		ND	0.254	0.101
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.254	0.101
2-Nitrotoluene	88-72-2		ND	0.254	0.101
3-Nitrotoluene	99-08-1		ND	0.254	0.101
4-Nitrotoluene	99-99-0		ND	0.254	0.101
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.254	0.101
HMX	2691-41-0		ND	0.254	0.101
Nitrobenzene	98-95-3		ND	0.254	0.101
RDX	121-82-4		ND	0.254	0.101
Tetryl	479-45-8		ND	0.254	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	91.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 22:36
Collect Date:	07/31/2014 11:30	**Dilution:**	10	**File ID:**	5L013315.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.1

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	30.1		2.54	1.01

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	78.0	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Sample #: L14080081-01 **Client ID:** PAD-1 **Matrix:** Soil **Collect Date:** 07/31/2014 08:30

Analyte	Result	Units	Qualifier
Percent Solids	97.7	weight %	

Sample #: L14080081-02 **Client ID:** PAD-2 **Matrix:** Soil **Collect Date:** 07/31/2014 09:30

Analyte	Result	Units	Qualifier
Percent Solids	97.8	weight %	

Sample #: L14080081-03 **Client ID:** PAD-3 **Matrix:** Soil **Collect Date:** 07/31/2014 09:50

Analyte	Result	Units	Qualifier
Percent Solids	94.2	weight %	

Sample #: L14080081-04 **Client ID:** PAD-4 **Matrix:** Soil **Collect Date:** 07/31/2014 10:10

Analyte	Result	Units	Qualifier
Percent Solids	85.7	weight %	

Sample #: L14080081-05 **Client ID:** PAD-4-MS **Matrix:** Soil **Collect Date:** 07/31/2014 10:10

Analyte	Result	Units	Qualifier
Percent Solids	85.7	weight %	

Sample #: L14080081-06 **Client ID:** PAD-4-MSD **Matrix:** Soil **Collect Date:** 07/31/2014 10:10

Analyte	Result	Units	Qualifier
Percent Solids	85.7	weight %	

Sample #: L14080081-07 **Client ID:** PAD-5 **Matrix:** Soil **Collect Date:** 07/31/2014 10:40

Analyte	Result	Units	Qualifier
Percent Solids	97.2	weight %	

Sample #: L14080081-08 **Client ID:** PAD-6 **Matrix:** Soil **Collect Date:** 07/31/2014 11:00

Analyte	Result	Units	Qualifier
Percent Solids	96.8	weight %	

Sample #: L14080081-09 **Client ID:** PAD-7 **Matrix:** Soil **Collect Date:** 07/31/2014 11:20

Analyte	Result	Units	Qualifier
Percent Solids	93.7	weight %	

Sample #: L14080081-10 **Client ID:** PAD-8 **Matrix:** Soil **Collect Date:** 07/31/2014 11:50

Analyte	Result	Units	Qualifier
Percent Solids	97.9	weight %	

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Sample #: L14080081-11 **Client ID:** PAD-X **Matrix:** Soil **Collect Date:** 07/31/2014 11:30

Analyte	Result	Units	Qualifier
Percent Solids	91.1	weight %	

2.1.1 6850 LC/MS Data

Login Number: L14080081
Department: General Chromatography
Analyst: John W. Richards Jr.

METHOD

Analysis SW-846 6850

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: These failures were due to matrix.

Sample #	Analyte	Date	Result	Lower	Upper	Type
L14080081-05	Perchlorate	2014-08-08 20:53:49	62.5	70	130	Recovery
L14080081-06	Perchlorate	2014-08-08 21:12:48	460	70	130	Recovery

SAMPLES

Samples: All acceptance criteria were met.

Internal Standards: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87267
Approved By: Mike Cochran

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080081-01	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-1	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 19:38
Collect Date:	07/31/2014 08:30	**Dilution:**	1	**File ID:**	1LM.LM26466
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00204	0.00102

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-02	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-2	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 19:56
Collect Date:	07/31/2014 09:30	**Dilution:**	1	**File ID:**	1LM.LM26467
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00204	0.00102

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080081-03	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-3	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 20:15
Collect Date:	07/31/2014 09:50	**Dilution:**	1	**File ID:**	1LM.LM26468
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00212	0.00106

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-4	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 20:34
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	1LM.LM26469
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00491		0.00233	0.00116

Sample #:	L14080081-05	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-4-MS	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 20:53
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	1LM.LM26470
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00636		0.00233	0.00117

Sample #:	L14080081-06	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-4-MSD	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 21:12
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	1LM.LM26471
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.0156		0.00233	0.00117

Sample #:	L14080081-07	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-5	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 21:31
Collect Date:	07/31/2014 10:40	**Dilution:**	1	**File ID:**	1LM.LM26472
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00756		0.00205	0.00103

Certificate of Analysis

Sample #:	L14080081-08	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-6	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 21:50
Collect Date:	07/31/2014 11:00	**Dilution:**	1	**File ID:**	1LM.LM26473
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00621		0.00204	0.00102

Sample #:	L14080081-09	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-7	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 22:09
Collect Date:	07/31/2014 11:20	**Dilution:**	1	**File ID:**	1LM.LM26474
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00181	J	0.00210	0.00105
J	Estimated value; the analyte concentration was less than the RL/LOQ.				

Certificate of Analysis

Sample #:	L14080081-10	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-8	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 23:25
Collect Date:	07/31/2014 11:50	**Dilution:**	1	**File ID:**	1LM.LM26478
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0		ND	0.00203	0.00101

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080081-11	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	PAD-X	**Prep Method:**	6850	**Prep Date:**	08/08/2014 10:50
Matrix:	Soil	**Analytical Method:**	6850	**Cal Date:**	07/07/2014 17:24
Workgroup #:	WG487548	**Analyst:**	JWR	**Run Date:**	08/08/2014 23:44
Collect Date:	07/31/2014 11:30	**Dilution:**	1	**File ID:**	1LM.LM26479
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.1

Analyte	CAS #	Result	Qual	RL	MDL
Perchlorate	14797-73-0	0.00536		0.00217	0.00109

2.1.1.2 QC Summary Data

Example Calculation 6850 - Perchlorate

Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, y = mx + b

y = response ratio = response of analyte / response of internal standard (IS) = Rx/Ristd

x = amount ratio = concentration analyte/concentration internal standard (IS) = Cx / Cistd

m = slope from curve (1.45)

b = intercept from curve (-0.00242)

y = 1.45x + -0.00242

Step 2: Substitute the value for y

where y = 12600/226000 = 0.055752

Step 3: Solve for x

x = (y - b)/m = 0.0040119

Step 4: Solve for analyte concentration Cx

Cx = (Cis)(x) = (5 ug/L)(0.040119) = 0.200594 ug/L

Example Calculation - Water:

Slope from curve, m:	1.45
Intercept from curve, b:	-0.00242
Response of analyte, Rx:	12600
Response of Internal Standard , Ristd:	226000
Concentration of IS, Cistd (ug/L):	5.00
Response Ratio:	0.05575
Amount Ratio:	0.04012
Analyte Concentration, Cx (ug/L) :	0.200594

Example Calculation - Soil:

Analyte Concentration, Cx (ug/L):	0.20059
Amount of soil extracted (g):	5.00
Final volume of extract (mL):	50.00
Percent solids (Pct wt.)	100
Concentration in soil (ug/kg):	2.005938

MICROBAC

Semivolatile Sample Extract Log

Parameter: Perchlorate
SOP #: HPLC 06
Analyst: JWR
Spike/Surrogate analyst: JWR
Surrogate #: NA
Spike # A: ST065195
Ext Solvent: DI-H_2O
Ext Solvent: NA
Ext Disk: NA

Matrix: Soil
Rev #: 06
Date/Time Extracted: 08/08/14/10:50
Witness: [illegible]

Spike # B: NA
Lot #:
Lot #: NA
Lot #: NA

Extraction Work Group: WG487543
Analytical Work Group: WG487548
Run ID: R3642660

Analytical Balance ID: BAL 019
Reagent: Tubes Lot #: COA17547
Reagent: Sand Lot #: COA16150
Other: IS Lot #: COA17578

Color Code
T = Transparent
C = Colored
O = Opaque

	Sample ID	Test Code	pH	Initial Wt / Vol	JWR ~~Surrogate~~ IS Amount	Amount Spike	Final Volume	Extract Color	Comments
1	WG487543-01	6850		5.056 g	0.25ml	1.0ml	50ml		MCT (2ug/kg)(10,000us)
2	WG487543-02	↓		5.004 g	↓	NA	↓		Blank
3	WG487543-03	↓		5.032 g	↓	1.0ml	↓		LCS (2ug/kg)
4	L14080080-01	↓		5.020 g	↓	NA	↓		
5	-02	↓		5.017 g	↓	NA	↓		
6	-03	↓		5.018 g	↓	NA	↓		
7	-04	↓		5.025 g	↓	NA	↓		
8	-05	↓		5.009 g	↓	NA	↓		
9	-06	↓		5.008 g	↓	NA	↓		
10	L14080081-01	↓		5.013 g	↓	NA	↓		
11	-02	↓		5.011 g	↓	NA	↓		
12	-03	↓		5.012 g	↓	NA	↓		
13	-04 RS	↓		5.021 g	↓	NA	↓		WG487543-04 Ref
14	-05 MS	↓		5.010 g	↓	1.0ml	↓		WG487543-05 MS (@2ug/kg)
15	-06 MSD	↓		5.004 g	↓	1.0ml	↓		WG487543-06 MSD(@2ug/kg)
16	-07	↓		5.009 g	↓	NA	↓		
17	-08	↓		5.065 g	↓	NA	↓		
18	-09	↓		5.074 g	↓	NA	↓		
19	-10	↓		5.045 g	↓	NA	↓		
20	-11	↓		5.047 g	↓	NA	↓		
21	L14071742-02	↓		5.005 g	↓	NA	↓		PT(Lot#7057-30)
22									
23									
24									

Reviewed by: [illegible] 8/8/14

Analytical WG487548 (soils)

Perchlorate Conductivity Check

(perchlorate1)

Conductivity Probe Calibration Check: 1396 /1410 µs/cm

Working MCT Level: 10,000 µs/cm

Sample	Conductivity (µs/cm)	Pretreatment or Dilution Needed
WG487543-01 MCT	9,930.0	
-02 Blank	0.4	
-03 LCS	0.8	
L14071742-02	83.1	
L14080080-01	19.7	
-02	14.2	
-03	30.7	
-04	36.0	
-05	40.8	
-06	60.5	
L14080081-01	56.0	
-02	48.4	
-03	49.3	
-04 RS	81.3	
-05 MS	62.9	
-06 MSD	97.3	
-07	88.4	
-08	63.3	
-09	69.3	
-10	50.5	
-11	82.5	

Analyst: MJR

Date/Time: 08/08/2014 14:20

DCN#104446

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 070714_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Workgroups: Column 1 ID: KP-RPPX250 Column 2 ID: NA
Analytical WG483063 (waters)
Internal STD: COA17578 Surrogate STD: NA Calibration STD STD65194 (07/07/2014)
CCV STD: STD65194 LCS STD: STD65194 MS/MSD STD: STD65194

Comments: ICAL WG483039 : Alternate Source STD65196

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	1LM.LM26049	WG483039-01 CCB	1	1		07/07/14 15:12
2	1LM.LM26050	WG483039-02 STD (0.10 ug/L)	1	1	STD65194	07/07/14 15:31
3	1LM.LM26051	WG483039-03 STD (0.20 ug/L)	1	1	STD65194	07/07/14 15:49
4	1LM.LM26052	WG483039-04 STD (0.50 ug/L)	1	1	STD65194	07/07/14 16:08
5	1LM.LM26053	WG483039-05 STD (1.00 ug/L)	1	1	STD65194	07/07/14 16:27
6	1LM.LM26054	WG483039-06 STD (2.00 ug/L)	1	1	STD65194	07/07/14 16:46
7	1LM.LM26055	WG483039-07 STD (5.00 ug/L)	1	1	STD65194	07/07/14 17:05
8	1LM.LM26056	WG483039-08 STD (10.0 ug/L)	1	1	STD65194	07/07/14 17:24
9	1LM.LM26057	WG483039-09 SSCV (1.0 ug/L)	1	1	STD65196	07/07/14 17:43
10	1LM.LM26058	WG483065-01 CCB	1	1		07/07/14 18:02
11	1LM.LM26059	WG483065-02 CCV (1.0ug/L)	1	1	STD65194	07/07/14 18:21
12	1LM.LM26060	WG483063-10 MRL (0.2ug/L)	1	1	STD65194	07/07/14 18:40
13	1LM.LM26061	WG483063-01 MCT (0.2ug/L)	1	1	STD65194	07/07/14 18:59
14	1LM.LM26062	WG483063-02 BLANK	1	1		07/07/14 19:18
15	1LM.LM26063	WG483063-03 LCS (0.2ug/L)	1	1	STD65194	07/07/14 19:37
16	1LM.LM26064	L14061344-01	1	1		07/07/14 19:56
17	1LM.LM26065	L14061344-02	1	1		07/07/14 20:15
18	1LM.LM26066	L14061344-03	1	1		07/07/14 20:34
19	1LM.LM26067	L14061344-04	1	1		07/07/14 20:52
20	1LM.LM26068	L14061344-05 RS	1	1		07/07/14 21:11
21	1LM.LM26069	L14061344-06 MS	1	1	STD65194	07/07/14 21:30
22	1LM.LM26070	L14061344-07 MSD	1	1	STD65194	07/07/14 21:49
23	1LM.LM26071	WG483065-03 CCV (1.0ug/L)	1	1	STD65194	07/07/14 22:08
24	1LM.LM26072	WG483063-11 MRL (0.2ug/L)	1	1	STD65194	07/07/14 22:27
25	1LM.LM26073	WG483065-04 CCB	1	1		07/07/14 22:46
26	1LM.LM26074	L14061344-08	1	1		07/07/14 23:05
27	1LM.LM26075	L14061344-09	1	1		07/07/14 23:24
28	1LM.LM26076	L14061344-10	1	1		07/07/14 23:43
29	1LM.LM26077	L14061344-17	1	1		07/08/14 00:02
30	1LM.LM26078	L14061344-11 (NR)	1	1		07/08/14 00:21
31	1LM.LM26079	L14061344-12	1	1		07/08/14 00:40
32	1LM.LM26080	L14061344-13	1	1		07/08/14 00:59
33	1LM.LM26081	L14061344-14 RS	1	1		07/08/14 01:18

Page: 1 Approved: 09-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 070714_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Workgroups: Column 1 ID: KP-RPPX250 Column 2 ID: NA
Analytical WG483063 (waters)
Internal STD: COA17578 Surrogate STD: NA STD65194 (07/07/2014)
CCV STD: STD65194 LCS STD: STD65194 STD65194

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	1LM.LM26082	L14061344-15 MS	1	1	STD65194	07/08/14 01:37
35	1LM.LM26083	L14061344-16 MSD	1	1	STD65194	07/08/14 01:55
36	1LM.LM26084	WG483065-05 CCV (1.0ug/L)	1	1	STD65194	07/08/14 02:14
37	1LM.LM26085	WG483063-12 MRL (0.2ug/L)	1	1	STD65194	07/08/14 02:33
38	1LM.LM26086	WG483065-06 CCB	1	1		07/08/14 02:52
39	1LM.LM26087	WG483065-07 CCV (1.0ug/L)	1	1	STD65194	07/08/14 10:30
40	1LM.LM26088	WG483063-13 MRL (0.2ug/L)	1	1	STD65194	07/08/14 10:48
41	1LM.LM26089	WG483065-08 CCB	1	1		07/08/14 11:07
42	1LM.LM26090	L14061344-02 (RR Neat) (NR)	1	1		07/08/14 11:26
43	1LM.LM26091	L14061344-03 (RR Neat) (NR)	1	1		07/08/14 11:45
44	1LM.LM26092	L14061344-11 (RR 10x)	1	10		07/08/14 12:04
45	1LM.LM26093	WG483065-09 CCV (1.0ug/L)	1	1	STD65194	07/08/14 12:23
46	1LM.LM26094	WG483063-14 MRL (0.2ug/L)	1	1	STD65194	07/08/14 12:42
47	1LM.LM26095	WG483065-10 CCB	1	1		07/08/14 13:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
17				
	L14061344-02 : The results for this sample do not correlate with the results for it's field duplicate (L14061344-03). This sample will be refiltered from it's bottle and reanalyzed neat on the end of this run for comparison of results.			
18				
	L14061344-03 : This sample is a field duplicate of sample L14061344-02. The results for this sample do not correlate with the results of sample L14061344-02. This sample will be refiltered from it's bottle and reanalyzed neat on the end of this run for comparison of results.			
30	X	10	Over Calibration Range	
	L14061344-11 (NR) : This sample was reanalyzed at a 10x dilution on the end of this run.			
42				
	L14061344-02 (RR Neat) (NR) : The results for this sample due to refiltration have not changed. The initial results for this sample analyzed neat will be reported.			
43				
	L14061344-03 (RR Neat) (NR) : The results for this sample due to refiltration have not changed. The initial results for this sample analyzed neat will be reported.			

Page: 2 Approved: 09-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 080814_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Column 1 ID: KP-RPPX250 Column 2 ID: NA

Workgroups: Analytical WG487548 (soils)

Internal STD: COA17578 Surrogate STD: NA Calibration STD STD65194 (07/07/2014)

CCV STD: STD65194 LCS STD: STD65194 MS/MSD STD: STD65194

Comments: Sample L14071742-02 was analyzed at dilutions based on the concentration range provided with its mixing instructions.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	1LM.LM26449	WG487555-01 CCB	1	1		08/08/14 14:16
2	1LM.LM26450	WG487555-02 CCV (1.0ug/L)	1	1	STD65194	08/08/14 14:35
3	1LM.LM26451	WG487548-07 MRL (2.0ug/kg)	7	1	STD65194	08/08/14 14:54
4	1LM.LM26452	WG487548-01 MCT (2.0ug/kg)	7	1	STD65194	08/08/14 15:13
5	1LM.LM26453	WG487548-02 BLANK	7	1		08/08/14 15:31
6	1LM.LM26454	WG487548-03 LCS (2.0ug/kg)	7	1	STD65194	08/08/14 15:50
7	1LM.LM26455	L14071742-02 PT (5x) (NR)	7	5		08/08/14 16:09
8	1LM.LM26456	L14071742-02 PT (25x)	7	25		08/08/14 16:28
9	1LM.LM26457	L14080080-01	7	1		08/08/14 16:47
10	1LM.LM26458	L14080080-02	7	1		08/08/14 17:06
11	1LM.LM26459	L14080080-03	7	1		08/08/14 17:25
12	1LM.LM26460	L14080080-04	7	1		08/08/14 17:44
13	1LM.LM26461	L14080080-05	7	1		08/08/14 18:03
14	1LM.LM26462	WG487555-03 CCV (1.0ug/L)	1	1	STD65194	08/08/14 18:22
15	1LM.LM26463	WG487548-08 MRL (2.0ug/kg)	7	1	STD65194	08/08/14 18:41
16	1LM.LM26464	WG487555-04 CCB	1	1		08/08/14 19:00
17	1LM.LM26465	L14080080-06	7	1		08/08/14 19:19
18	1LM.LM26466	L14080081-01	7	1		08/08/14 19:38
19	1LM.LM26467	L14080081-02	7	1		08/08/14 19:56
20	1LM.LM26468	L14080081-03	7	1		08/08/14 20:15
21	1LM.LM26469	L14080081-04 RS	7	1		08/08/14 20:34
22	1LM.LM26470	L14080081-05 MS	7	1	STD65194	08/08/14 20:53
23	1LM.LM26471	L14080081-06 MSD	7	1	STD65194	08/08/14 21:12
24	1LM.LM26472	L14080081-07	7	1		08/08/14 21:31
25	1LM.LM26473	L14080081-08	7	1		08/08/14 21:50
26	1LM.LM26474	L14080081-09	7	1		08/08/14 22:09
27	1LM.LM26475	WG487555-05 CCV (1.0ug/L)	1	1	STD65194	08/08/14 22:28
28	1LM.LM26476	WG487548-09 MRL (2.0ug/kg)	7	1	STD65194	08/08/14 22:47
29	1LM.LM26477	WG487555-06 CCB	1	1		08/08/14 23:06
30	1LM.LM26478	L14080081-10	7	1		08/08/14 23:25
31	1LM.LM26479	L14080081-11	7	1		08/08/14 23:44
32	1LM.LM26480	WG487555-07 CCV (1.0ug/L)	1	1	STD65194	08/09/14 00:03
33	1LM.LM26481	WG487548-10 MRL (2.0ug/kg)	7	1	STD65194	08/09/14 00:22

Page: 1 Approved: 12-AUG-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: LCMS1 Dataset: 080814_JWR.TXT
Analyst1: JWR Analyst2: NA
Method: 6850 SOP: HPLC06 Rev: 6

Maintenance Log ID: Syringe Filter Lot#: 130818254-1
Eluent ID#:

Column 1 ID: KP-RPPX250 Column 2 ID: NA

Workgroups: Analytical WG487548 (soils)

Internal STD: COA17578 Surrogate STD: NA STD65194 (07/07/2014)
CCV STD: STD65194 LCS STD: STD65194 STD65194

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	1LM.LM26482	WG487555-08 CCB	1	1		08/09/14 00:41

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	L14071742-02 PT (5x) (NR) : Results for this sample will be reported from its analysis at a 25x dilution.			
22				
	L14080081-05 MS : The MS %Rec is below the advisory limit. The parent sample and MS have a matrix composed of a non-homogeneous mixture of dark brown soil, small rocks and, what appears to be, white crystals.			
23				
	L14080081-06 MSD : The MSD %Rec is above the advisory limit. The parent sample and MSD have a matrix composed of a non-homogeneous mixture of dark brown soil, small rocks and, what appears to be, white crystals.			

Page: 2 Approved: 12-AUG-14

Microbac Laboratories Inc.

Data Checklist

Date: 07-JUL-2014
Analyst: JWR
Analyst: NA
Method: 6850
Instrument: LCMS1
Curve Workgroup: WG483039
Runlog ID: 62054
Analytical Workgroups: L14061344

ANALYTICAL	
System Performance Check	NA
DFTPP (GCMS)	NA
Endrin/DDT breakdown (8081/GCMS)	NA
Pentachlorophenol/benzidine tailing (GCMS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (GCMS)	X
Continuing calibration blank (CCB) (IC/LCMS)	X
Limit of quantitation verification (LOQV) (LCMS)	X
Special standards	NA
Blanks	X
TCL hits	ND
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Interference check sample (ICS) (LCMS)	MCT
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	X
Library searches (GCMS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
08-JUL-2014
John Richards

Secondary Reviewer:
09-JUL-2014
Michael Cadwell

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-09-2014 10:15:45

Microbac Laboratories Inc.

Data Checklist

Date: 08-AUG-2014
Analyst: JWR
Analyst: NA
Method: 6850
Instrument: LCMS1
Curve Workgroup: NA
Runlog ID: 62758
Analytical Workgroups: L14071742-02 (PT) L14080080, 0081 (SOILS)

ANALYTICAL	
System Performance Check	NA
DFTPP (GCMS)	NA
Endrin/DDT breakdown (8081/GCMS)	NA
Pentachlorophenol/benzidine tailing (GCMS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (GCMS)	X
Continuing calibration blank (CCB) (IC/LCMS)	X
Limit of quantitation verification (LOQV) (LCMS)	X
Special standards	NA
Blanks	X
TCL hits	ND
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	MS=LOW : MSD=HIGH
%RPD	%RPD=HIGH
Interference check sample (ICS) (LCMS)	MCT
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	X
Library searches (GCMS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
11-AUG-2014

Secondary Reviewer:
12-AUG-2014

CHECKLIST1 - Modified 03/05/2008
Generated: AUG-12-2014 08:22:26

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6850 AAB#: WG487548

Login Number: L14080081

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
PAD-1	01	07/31/14					08/08/2014	8.1	28		08/08/14	.4	28	
PAD-2	02	07/31/14					08/08/2014	8.1	28		08/08/14	.4	28	
PAD-3	03	07/31/14					08/08/2014	8	28		08/08/14	.4	28	
PAD-4	04	07/31/14					08/08/2014	8	28		08/08/14	.4	28	
PAD-4-MS	05	07/31/14					08/08/2014	8	28		08/08/14	.4	28	
PAD-4-MSD	06	07/31/14					08/08/2014	8	28		08/08/14	.4	28	
PAD-5	07	07/31/14					08/08/2014	8	28		08/08/14	.4	28	
PAD-6	08	07/31/14					08/08/2014	8	28		08/08/14	.5	28	
PAD-7	09	07/31/14					08/08/2014	8	28		08/08/14	.5	28	
PAD-8	10	07/31/14					08/08/2014	8	28		08/08/14	.5	28	
PAD-X	11	07/31/14					08/08/2014	8	28		08/08/14	.5	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3702137
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14080081
Blank File ID: 1LM.LM26453
Prep Date: 08/08/14 10:50
Analyzed Date: 08/08/14 15:31
Analyst: JWR

Work Group: WG487548
Blank Sample ID: WG487548-02
Instrument ID: LCMS1
Method: 6850

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
QCMRL	WG487548-07	1LM.LM26451	08/08/14 14:54	01
MCT	WG487548-01	1LM.LM26452	08/08/14 15:13	01
LCS	WG487548-03	1LM.LM26454	08/08/14 15:50	01
QCMRL	WG487548-08	1LM.LM26463	08/08/14 18:41	01
PAD-1	L14080081-01	1LM.LM26466	08/08/14 19:38	01
PAD-2	L14080081-02	1LM.LM26467	08/08/14 19:56	01
PAD-3	L14080081-03	1LM.LM26468	08/08/14 20:15	01
PAD-4	L14080081-04	1LM.LM26469	08/08/14 20:34	01
PAD-4-MS	L14080081-05	1LM.LM26470	08/08/14 20:53	01
PAD-4-MSD	L14080081-06	1LM.LM26471	08/08/14 21:12	01
PAD-5	L14080081-07	1LM.LM26472	08/08/14 21:31	01
PAD-6	L14080081-08	1LM.LM26473	08/08/14 21:50	01
PAD-7	L14080081-09	1LM.LM26474	08/08/14 22:09	01
QCMRL	WG487548-09	1LM.LM26476	08/08/14 22:47	01
PAD-8	L14080081-10	1LM.LM26478	08/08/14 23:25	01
PAD-X	L14080081-11	1LM.LM26479	08/08/14 23:44	01
QCMRL	WG487548-10	1LM.LM26481	08/09/14 00:22	01

Report Name: BLANK_SUMMARY
PDF File ID: 3702138
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14080081 Prep Date: 08/08/14 10:50 Sample ID: WG487548-02
Instrument ID: LCMS1 Run Date: 08/08/14 15:31 Prep Method: 6850
File ID: 1LM.LM26453 Analyst: JWR Method: 6850
Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg
Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Perchlorate	0.000999	0.00200	0.000999	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3702139
12-AUG-2014 08:57

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14080081 Run Date: 08/08/2014 Sample ID: WG487548-03
Instrument ID: LCMS1 Run Time: 15:50 Prep Method: 6850
File ID: 1LM.LM26454 Analyst: JWR Method: 6850
Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg
QC Key: STD Lot#: STD65194 Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Perchlorate	0.00199	0.00200	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3702140
Report generated: 08/12/2014 08:57

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14080081 Cal ID: LCMS1- 07-JUL-14 Worknum: WG487548

Instrument ID: LCMS1 Contract #: Prep Method: 6850

Parent ID: L14080081-04 File ID: 1LM.LM26469 Dil: 1 Method: 6850

Sample ID: L14080081-05 MS File ID: 1LM.LM26470 Dil: 1 Matrix: Soil

Sample ID: L14080081-06 MSD File ID: 1LM.LM26471 Dil: 1 Units: mg/kg

Percent Solid: 85.7

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Perchlorate	0.00491	0.00233	0.00636	62.5	0.00233	0.0156	460	84.3	70 - 130	15	*#

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 3702141
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14080081
Analytical Method: 6850
ICAL Workgroup: WG483039

Instrument ID: LCMS1
Initial Calibration Date: 07-JUL-14 17:24
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Perchlorate		1.267	2.44	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 3702720
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080081

Analytical Method: 6850

Instrument ID: LCMS1

Initial Calibration Date: 07-JUL-14 17:24

Column ID: F

Analyte	WG483039-02			WG483039-03			WG483039-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Perchlorate	0.100	7880.00000	1.313	0.200	15400.0000	1.266	0.500	38300.0000	1.274

INT_CAL - Modified 03/06/2008
PDF File ID: 3702720
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080081

Analytical Method: 6850

Instrument ID: LCMS1

Initial Calibration Date: 07-JUL-14 17:24

Column ID: F

Analyte	WG483039-05			WG483039-06			WG483039-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Perchlorate	1.00	75700.0000	1.262	2.00	148000.000	1.221	5.00	376000.000	1.273

INT_CAL - Modified 03/06/2008
PDF File ID: 3702720
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080081

Analytical Method: 6850

Instrument ID: LCMS1

Initial Calibration Date: 07-JUL-14 17:24

Column ID: F

Analyte	WG483039-08		
	CONC	RESP	RF
Perchlorate	10.0	734000.000	1.257

INT_CAL - Modified 03/06/2008

PDF File ID: 3702720

Report generated 08/12/2014 08:57

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14080081 Run Date: 07/07/2014 Sample ID: WG483039-09
Instrument ID: LCMS1 Run Time: 17:43 Method: 6850
File ID: 1LM.LM26057 Analyst: JWR QC Key: STD
ICal Workgroup: WG483039 Cal ID: LCMS1 - 07-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Perchlorate		1.00	0.993	ug/L	1.25	0.700	15	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3702721
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080081
Run Date: 08/08/2014
Sample ID: WG487555-01
Instrument ID: LCMS1
Run Time: 14:16
Method: 6850
File ID: 1LM.LM26449
Analyst: JWR
Units: ug/L
Workgroup (AAB#): WG487548
Cal ID: LCMS1 - 07-JUL-14
Matrix: WATER
QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702144
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080081
Run Date: 08/08/2014
Sample ID: WG487555-04
Instrument ID: LCMS1
Run Time: 19:00
Method: 6850
File ID: 1LM.LM26464
Analyst: JWR
Units: ug/L
Workgroup (AAB#): WG487548
Cal ID: LCMS1 - 07-JUL-14
Matrix: WATER
QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702144
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080081
Run Date: 08/08/2014
Sample ID: WG487555-06
Instrument ID: LCMS1
Run Time: 23:06
Method: 6850
File ID: 1LM.LM26477
Analyst: JWR
Units: ug/L
Workgroup (AAB#): WG487548
Cal ID: LCMS1 - 07-JUL-14
Matrix: WATER
QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702144
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L14080081 Run Date: 08/09/2014 Sample ID: WG487555-08

Instrument ID: LCMS1 Run Time: 00:41 Method: 6850

File ID: 1LM.LM26482 Analyst: JWR Units: ug/L

Workgroup (AAB#): WG487548 Cal ID: LCMS1 - 07-JUL-14

Matrix: WATER QAPP: STD

Analytes	MDL	RDL	Concentration	Qualifier
Perchlorate	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 3702144
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081
Instrument ID: LCMS1
File ID: 1LM.LM26450
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/08/2014
Run Time: 14:35
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-02
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00105	mg/kg	1.33	5.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702143
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081
Instrument ID: LCMS1
File ID: 1LM.LM26462
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/08/2014
Run Time: 18:22
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-03
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00104	mg/kg	1.31	4.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702143
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081
Instrument ID: LCMS1
File ID: 1LM.LM26475
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/08/2014
Run Time: 22:28
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-05
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00101	mg/kg	1.28	1.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702143
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081
Instrument ID: LCMS1
File ID: 1LM.LM26480
Workgroup (AAB#): WG487548
Matrix: WATER

Run Date: 08/09/2014
Run Time: 00:03
Analyst: JWR
Cal ID: LCMS1 - 07-JUL-14

Sample ID: WG487555-07
Method: 6850
QC Key: STD

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Perchlorate		0.00100	0.00102	mg/kg	1.28	2.00	15	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3702143
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080081 Run Date: 08/08/2014 Sample ID: WG487548-07

Instrument ID: LCMS1 Run Time: 14:54 Prep Method: 6850

File ID: 1LM.LM26451 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00199	99.5	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702142
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080081 Run Date: 08/08/2014 Sample ID: WG487548-08

Instrument ID: LCMS1 Run Time: 18:41 Prep Method: 6850

File ID: 1LM.LM26463 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00211	106	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702142
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080081 Run Date: 08/08/2014 Sample ID: WG487548-09

Instrument ID: LCMS1 Run Time: 22:47 Prep Method: 6850

File ID: 1LM.LM26476 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00200	100	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702142
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

QCMRL SAMPLE

Login Number: L14080081 Run Date: 08/09/2014 Sample ID: WG487548-10

Instrument ID: LCMS1 Run Time: 00:22 Prep Method: 6850

File ID: 1LM.LM26481 Analyst: JWR Method: 6850

Workgroup (AAB#): WG487548 Matrix: Soil Units: mg/kg

Contract #: Cal ID: LCMS1-07-JUL-14

Analytes	Expected	Found	% Rec	Limits	Q
Perchlorate	0.00200	0.00206	103	70 - 130	

QCMRL - Modified 03/06/2007
PDF File ID: 3702142
Report generated 08/12/2014 08:57

Microbac Laboratories Inc.

INTERNAL STANDARD AREA SUMMARY
(COMPARED TO AVERAGE OF ICAL)

Login Number: L14080081
Instrument ID: LCMS1
Workgroup (AAB#): WG487548

ICAL CCV Number: WG483039-05
CAL ID: LCMS1-07-JUL-14
Matrix: SOLID

Sample Number	Dilution	Tag	IS-1
WG483039	NA	NA	300000
Upper Limit	NA	NA	450000
Lower Limit	NA	NA	150000
L14080081-01	1.00	01	229000
L14080081-02	1.00	01	237000
L14080081-03	1.00	01	236000
L14080081-04	1.00	01	242000
L14080081-05	1.00	01	236000
L14080081-06	1.00	01	233000
L14080081-07	1.00	01	243000
L14080081-08	1.00	01	239000
L14080081-09	1.00	01	242000
L14080081-10	1.00	01	249000
L14080081-11	1.00	01	240000
WG487548-02	1.00	01	241000
WG487548-03	1.00	01	235000

IS-1 - O18LP

Underline = Response outside limits

INTERNAL_STD_AVG_ICAL - Modified 03/10/2010
PDF File ID: 3702145
Report generated 08/12/2014 08:57

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-01
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26466
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 19:38	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	2120	696	3.05	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-02
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26467
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 19:56	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	3230	1200	2.69	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-03
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26468
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 20:15	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	2400	691	3.47	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-04
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26469
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 20:34	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	25900	8920	2.90	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-05
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26470
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 20:53	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	32600	11600	2.81	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-06
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26471
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 21:12	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	78700	26700	2.95	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-07
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26472
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 21:31	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	45100	16100	2.80	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-08
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26473
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 21:50	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	36800	12500	2.94	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-09
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26474
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 22:09	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	10700	4260	2.51	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-10
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26478
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 23:25	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	2330	817	2.85	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	L14080081-11
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26479
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 23:44	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	30000	10600	2.83	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-02
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26050
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 15:31	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	7880	2520	3.13	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-03
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26051
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 15:49	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	15400	5440	2.83	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-04
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26052
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 16:08	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	38300	12800	2.99	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-05
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26053
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 16:27	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	75700	26300	2.88	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-06
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26054
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 16:46	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	148000	53000	2.79	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-07
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26055
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 17:05	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	376000	128000	2.94	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-08
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26056
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 17:24	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	734000	247000	2.97	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG483039-09
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26057
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	07/07/2014 17:43	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	76400	25700	2.97	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	WG487548-01
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26452
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 15:13	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	13400	4910	2.73	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	WG487548-02
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26453
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 15:31	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	0.000	0.000	2.3	3.8	*

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	WG487548-03
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26454
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 15:50	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	12100	4290	2.82	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	WG487548-07
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26451
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 14:54	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	12300	4190	2.94	2.3	3.8	

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	WG487548-08
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26463
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 18:41	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	13000	4370	2.97	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	WG487548-09
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26476
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/08/2014 22:47	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	12700	4450	2.85	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**	6850	**Samplenum:**	WG487548-10
Instrument:	LCMS1	**Prep Date:**	08/08/2014 10:50	**File ID:**	1LM.LM26481
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Soil
Worknum:	WG487548	**Analysis Date:**	08/09/2014 00:22	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	13300	4710	2.82	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-01
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26449
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 14:16	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	0.000	0.000	2.3	3.8	*

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-02
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26450
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 14:35	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	62100	21100	2.94	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-03
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26462
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 18:22	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	64100	21700	2.95	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-04
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26464
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 19:00	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	165	0.000	2.3	3.8	*

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-05
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26475
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 22:28	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	63300	22000	2.88	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-06
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26477
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/08/2014 23:06	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	227	0.000	2.3	3.8	*

Perchlorate Ion Ratios

Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-07
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26480
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/09/2014 00:03	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	63000	20800	3.03	2.3	3.8	

Perchlorate Ion Ratios
Microbac Laboratories Inc.

Login #:	L14080081	**Prep Method:**		**Samplenum:**	WG487555-08
Instrument:	LCMS1	**Prep Date:**		**File ID:**	1LM.LM26482
Analyst:	JWR	**Anal Method:**	6850	**Matrix:**	Water
Worknum:	WG487548	**Analysis Date:**	08/09/2014 00:41	**Units:**	mg/kg

Analyte	Res #1	Res #2	Ratio	Lower	Upper	Q
PERCHLORATE	0.000	96.6	0.000	2.3	3.8	*

2.1.2 Explosives (8330B)

Login Number: L14080081
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: Recoveries out of range were observed for the following analyte: Tetryl. Please see the applicable QC report for a detailed presentation of the failures.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries and/or RPDs out of range were observed for 8 analytes. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: Samples 01, 03, 04 and 07-11 were analyzed at dilutions to be within calibration range. All sample results were confirmed by diode array detection.

Due to analyst error the analytical sequence on 08-11-14 (dilution analysis) was named 101114 instead of 081114.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 87319
Approved By: Mike Cochran

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080081-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/07/2014 23:23
Collect Date:	07/31/2014 08:30	**Dilution:**	1	**File ID:**	5L013266.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.253	0.101
1,3-Dinitrobenzene	99-65-0		ND	0.253	0.101
2,4,6-Trinitrotoluene	118-96-7		ND	0.253	0.101
2,4-Dinitrotoluene	121-14-2	9.07		0.253	0.101
2,6-Dinitrotoluene	606-20-2	0.418		0.253	0.101
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.253	0.101
2-Nitrotoluene	88-72-2		ND	0.253	0.101
3-Nitrotoluene	99-08-1		ND	0.253	0.101
4-Nitrotoluene	99-99-0		ND	0.253	0.101
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.253	0.101
HMX	2691-41-0		ND	0.253	0.101
Nitrobenzene	98-95-3		ND	0.253	0.101
RDX	121-82-4		ND	0.253	0.101
Tetryl	479-45-8		ND	0.253	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.3	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-1	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 16:45
Collect Date:	07/31/2014 08:30	**Dilution:**	10	**File ID:**	5L013306.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.7

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	23.1		2.53	1.01

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	87.1	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-2	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 00:02
Collect Date:	07/31/2014 09:30	**Dilution:**	1	**File ID:**	5L013267.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.8

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.260	0.104
1,3-Dinitrobenzene	99-65-0		ND	0.260	0.104
2,4,6-Trinitrotoluene	118-96-7		ND	0.260	0.104
2,4-Dinitrotoluene	121-14-2		ND	0.260	0.104
2,6-Dinitrotoluene	606-20-2		ND	0.260	0.104
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.260	0.104
2-Nitrotoluene	88-72-2		ND	0.260	0.104
3-Nitrotoluene	99-08-1		ND	0.260	0.104
4-Nitrotoluene	99-99-0		ND	0.260	0.104
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.260	0.104
HMX	2691-41-0		ND	0.260	0.104
Nitrobenzene	98-95-3		ND	0.260	0.104
RDX	121-82-4		ND	0.260	0.104
Tetryl	479-45-8		ND	0.260	0.104
Nitroglycerin	55-63-0	9.17		0.260	0.104

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.3	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 00:41
Collect Date:	07/31/2014 09:50	**Dilution:**	1	**File ID:**	5L013268.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	94.2

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.244	0.0977
1,3-Dinitrobenzene	99-65-0		ND	0.244	0.0977
2,4,6-Trinitrotoluene	118-96-7		ND	0.244	0.0977
2,4-Dinitrotoluene	121-14-2		ND	0.244	0.0977
2,6-Dinitrotoluene	606-20-2		ND	0.244	0.0977
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.244	0.0977
2-Nitrotoluene	88-72-2		ND	0.244	0.0977
3-Nitrotoluene	99-08-1		ND	0.244	0.0977
4-Nitrotoluene	99-99-0		ND	0.244	0.0977
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.244	0.0977
HMX	2691-41-0		ND	0.244	0.0977
Nitrobenzene	98-95-3		ND	0.244	0.0977
RDX	121-82-4		ND	0.244	0.0977
Tetryl	479-45-8		ND	0.244	0.0977

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.0	50	150	

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14080081
Lab Project #: 3070.001
Project Name: Draper Aden Associates
Lab Contact: Michelle Taylor

Certificate of Analysis

Sample #:	L14080081-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-3	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 17:24
Collect Date:	07/31/2014 09:50	**Dilution:**	100	**File ID:**	5L013307.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	94.2

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	174		24.4	9.77

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 01:20
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	5L013269.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.247	0.0986
1,3-Dinitrobenzene	99-65-0		ND	0.247	0.0986
2,4,6-Trinitrotoluene	118-96-7		ND	0.247	0.0986
2,6-Dinitrotoluene	606-20-2		ND	0.247	0.0986
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.247	0.0986
2-Nitrotoluene	88-72-2		ND	0.247	0.0986
3-Nitrotoluene	99-08-1		ND	0.247	0.0986
4-Nitrotoluene	99-99-0		ND	0.247	0.0986
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.247	0.0986
HMX	2691-41-0	0.836		0.247	0.0986
Nitrobenzene	98-95-3		ND	0.247	0.0986
RDX	121-82-4	5.28		0.247	0.0986
Tetryl	479-45-8		ND	0.247	0.0986

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	95.7	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 18:03
Collect Date:	07/31/2014 10:10	**Dilution:**	5	**File ID:**	5L013308.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
2,4-Dinitrotoluene	121-14-2	13.4		1.23	0.493

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	79.7	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 18:42
Collect Date:	07/31/2014 10:10	**Dilution:**	50	**File ID:**	5L013309.F
Sample Tag:	DL02	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	118		12.3	4.93

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14080081-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4-MS	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 02:00
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	5L013270.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4	1.10		0.249	0.0995
1,3-Dinitrobenzene	99-65-0	0.978		0.249	0.0995
2,4,6-Trinitrotoluene	118-96-7	1.44		0.249	0.0995
2,4-Dinitrotoluene	121-14-2	1.15		0.249	0.0995
2,6-Dinitrotoluene	606-20-2	1.31		0.249	0.0995
2-Amino-4,6-dinitrotoluene	35572-78-2	1.19		0.249	0.0995
2-Nitrotoluene	88-72-2	1.05		0.249	0.0995
3-Nitrotoluene	99-08-1	1.18		0.249	0.0995
4-Nitrotoluene	99-99-0	0.990		0.249	0.0995
4-Amino-2,6-dinitrotoluene	19406-51-0	0.713		0.249	0.0995
HMX	2691-41-0	1.17		0.249	0.0995
Nitrobenzene	98-95-3	0.869		0.249	0.0995
RDX	121-82-4	1.37		0.249	0.0995
Tetryl	479-45-8	0.985		0.249	0.0995
Nitroglycerin	55-63-0	41.7	I	0.249	0.0995

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	97.6	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14080081-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-4-MSD	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 02:39
Collect Date:	07/31/2014 10:10	**Dilution:**	1	**File ID:**	5L013271.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	85.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4	1.17		0.249	0.0996
1,3-Dinitrobenzene	99-65-0	1.02		0.249	0.0996
2,4,6-Trinitrotoluene	118-96-7	1.38		0.249	0.0996
2,4-Dinitrotoluene	121-14-2	1.21		0.249	0.0996
2,6-Dinitrotoluene	606-20-2	1.24		0.249	0.0996
2-Amino-4,6-dinitrotoluene	35572-78-2	1.11		0.249	0.0996
2-Nitrotoluene	88-72-2	1.01		0.249	0.0996
3-Nitrotoluene	99-08-1	1.27		0.249	0.0996
4-Nitrotoluene	99-99-0	0.964		0.249	0.0996
4-Amino-2,6-dinitrotoluene	19406-51-0	0.822		0.249	0.0996
HMX	2691-41-0	1.15		0.249	0.0996
Nitrobenzene	98-95-3	0.875		0.249	0.0996
RDX	121-82-4	1.19		0.249	0.0996
Tetryl	479-45-8	1.15		0.249	0.0996
Nitroglycerin	55-63-0	86.8	I	0.249	0.0996

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	98.9	50	150	

I	Semiquantitative result (out of instrument calibration range)

Certificate of Analysis

Sample #:	L14080081-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-5	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 03:18
Collect Date:	07/31/2014 10:40	**Dilution:**	1	**File ID:**	5L013272.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.255	0.102
1,3-Dinitrobenzene	99-65-0		ND	0.255	0.102
2,4,6-Trinitrotoluene	118-96-7		ND	0.255	0.102
2,4-Dinitrotoluene	121-14-2	6.76		0.255	0.102
2,6-Dinitrotoluene	606-20-2		ND	0.255	0.102
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.255	0.102
2-Nitrotoluene	88-72-2		ND	0.255	0.102
3-Nitrotoluene	99-08-1		ND	0.255	0.102
4-Nitrotoluene	99-99-0		ND	0.255	0.102
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.255	0.102
HMX	2691-41-0		ND	0.255	0.102
Nitrobenzene	98-95-3		ND	0.255	0.102
RDX	121-82-4		ND	0.255	0.102
Tetryl	479-45-8		ND	0.255	0.102

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	103	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-5	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 20:00
Collect Date:	07/31/2014 10:40	**Dilution:**	5	**File ID:**	5L013311.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.2

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	11.1		1.28	0.511

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	81.2	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-08	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-6	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 04:36
Collect Date:	07/31/2014 11:00	**Dilution:**	1	**File ID:**	5L013274.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.242	0.0966
1,3-Dinitrobenzene	99-65-0		ND	0.242	0.0966
2,4,6-Trinitrotoluene	118-96-7		ND	0.242	0.0966
2,4-Dinitrotoluene	121-14-2		ND	0.242	0.0966
2,6-Dinitrotoluene	606-20-2		ND	0.242	0.0966
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.242	0.0966
2-Nitrotoluene	88-72-2		ND	0.242	0.0966
3-Nitrotoluene	99-08-1		ND	0.242	0.0966
4-Nitrotoluene	99-99-0		ND	0.242	0.0966
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.242	0.0966
HMX	2691-41-0		ND	0.242	0.0966
Nitrobenzene	98-95-3		ND	0.242	0.0966
RDX	121-82-4		ND	0.242	0.0966
Tetryl	479-45-8		ND	0.242	0.0966

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.4	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-08	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-6	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 20:39
Collect Date:	07/31/2014 11:00	**Dilution:**	20	**File ID:**	5L013312.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	96.8

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	53.1		4.83	1.93

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	62.5	50	150	

DL	Surrogate or spike compound was diluted out

Certificate of Analysis

Sample #:	L14080081-09	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-7	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 05:15
Collect Date:	07/31/2014 11:20	**Dilution:**	1	**File ID:**	5L013275.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.243	0.0973
1,3-Dinitrobenzene	99-65-0		ND	0.243	0.0973
2,4,6-Trinitrotoluene	118-96-7		ND	0.243	0.0973
2,4-Dinitrotoluene	121-14-2		ND	0.243	0.0973
2,6-Dinitrotoluene	606-20-2		ND	0.243	0.0973
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.243	0.0973
2-Nitrotoluene	88-72-2		ND	0.243	0.0973
3-Nitrotoluene	99-08-1		ND	0.243	0.0973
4-Nitrotoluene	99-99-0		ND	0.243	0.0973
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.243	0.0973
HMX	2691-41-0		ND	0.243	0.0973
Nitrobenzene	98-95-3		ND	0.243	0.0973
RDX	121-82-4		ND	0.243	0.0973
Tetryl	479-45-8		ND	0.243	0.0973

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	88.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-09	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-7	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 21:18
Collect Date:	07/31/2014 11:20	**Dilution:**	10	**File ID:**	5L013313.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	93.7

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	20.2		2.43	0.973

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	78.5	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-8	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 05:54
Collect Date:	07/31/2014 11:50	**Dilution:**	1	**File ID:**	5L013276.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.249	0.0996
1,3-Dinitrobenzene	99-65-0		ND	0.249	0.0996
2,4,6-Trinitrotoluene	118-96-7		ND	0.249	0.0996
2,4-Dinitrotoluene	121-14-2		ND	0.249	0.0996
2,6-Dinitrotoluene	606-20-2		ND	0.249	0.0996
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.249	0.0996
2-Nitrotoluene	88-72-2		ND	0.249	0.0996
3-Nitrotoluene	99-08-1		ND	0.249	0.0996
4-Nitrotoluene	99-99-0		ND	0.249	0.0996
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.249	0.0996
HMX	2691-41-0		ND	0.249	0.0996
Nitrobenzene	98-95-3		ND	0.249	0.0996
RDX	121-82-4		ND	0.249	0.0996
Tetryl	479-45-8		ND	0.249	0.0996

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	88.9	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-8	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 21:57
Collect Date:	07/31/2014 11:50	**Dilution:**	5	**File ID:**	5L013314.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	97.9

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	13.2		1.25	0.498

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	78.7	50	150	

*	Surrogate or spike compound out of range

Certificate of Analysis

Sample #:	L14080081-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/08/2014 06:33
Collect Date:	07/31/2014 11:30	**Dilution:**	1	**File ID:**	5L013277.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	91.1

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		ND	0.254	0.101
1,3-Dinitrobenzene	99-65-0		ND	0.254	0.101
2,4,6-Trinitrotoluene	118-96-7		ND	0.254	0.101
2,4-Dinitrotoluene	121-14-2		ND	0.254	0.101
2,6-Dinitrotoluene	606-20-2		ND	0.254	0.101
2-Amino-4,6-dinitrotoluene	35572-78-2		ND	0.254	0.101
2-Nitrotoluene	88-72-2		ND	0.254	0.101
3-Nitrotoluene	99-08-1		ND	0.254	0.101
4-Nitrotoluene	99-99-0		ND	0.254	0.101
4-Amino-2,6-dinitrotoluene	19406-51-0		ND	0.254	0.101
HMX	2691-41-0		ND	0.254	0.101
Nitrobenzene	98-95-3		ND	0.254	0.101
RDX	121-82-4		ND	0.254	0.101
Tetryl	479-45-8		ND	0.254	0.101

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	91.5	50	150	

ND	Not detected at or above the reporting limit (RL).

Certificate of Analysis

Sample #:	L14080081-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	PAD-X	**Prep Method:**	METHOD	**Prep Date:**	08/06/2014 11:37
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG487385	**Analyst:**	ECL	**Run Date:**	08/11/2014 22:36
Collect Date:	07/31/2014 11:30	**Dilution:**	10	**File ID:**	5L013315.F
Sample Tag:	DL01	**Units:**	mg/kg	**Percent Solid:**	91.1

Analyte	CAS #	Result	Qual	RL	MDL
Nitroglycerin	55-63-0	30.1		2.54	1.01

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	78.0	50	150	

*	Surrogate or spike compound out of range

2.1.2.2 QC Summary Data

Example 8330 Calculations

Sample Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot (y = mx + b)

y = response of analyte as area (from quantitation report)
x = concentration analyte
m = slope from curve
b = intercept from curve

Step 2: Retrieve y from quantitation report

Step 3: Retreive extraction data from logsheet

Vf = Final extract volume (mL)
Vi = Initial vome of sample (mL) or initial weight (g)

Step 4: Solve for concentration in extract (x):

x = (y - b)/m = [(7.774 -(- 0.04773)]/ 0.1711 = 45.2

Step 5: Solve for analyte concentration in sample (Cx):

Cx = (x) (Vf /Vi)

Example CCV Calculation: **(Vf/Vi) = 1**
HMX

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Concentration (ug/L):	45.16830115

Example Water Calculation:

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Volume of extract (mL):	10.00
Volume of sample extracted (mL):	1000.00
Concentration (ug/L):	0.451683011

Example Soil Calculation:
1,3,5-Trinitrobenzene

Slope from curve, m:	0.411263
Intercept from curve, b:	-0.0850241
Area of analyte, y:	20.26089
Volume of extract (mL):	20.00
Weight of sample extracted (g):	2.00
Concentration (ug/kg):	494.7178351
Concentration (mg/kg):	0.494717835

Microbac Laboratories Inc.
Continuous Sample Extract Log

Workgroup: WG487088 TIME ON: 16:15 OFF: 10:15 ON: _____ OFF: _____
Analyst: CSH Acetonitrile Lot #: COA17588
Spike Analyst: CSH WATER Lot #: COA17319
Method: METHOD
Run Date: 08/06/2014 11:37
SOP: EXTNT02 Revison 11
Spike Witness: JDH
Surr Solution: STD65797

	SAMPLE #	Type	Reference	Prod	pH	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14080080-01	SAMP		8330-SPE		10.14 g	1 mL			40 mL	Transparent
2	L14080080-02	SAMP		8330-SPE		10.11 g	1 mL			40 mL	Transparent
3	L14080080-03	SAMP		8330-SPE		10.37 g	1 mL			40 mL	Transparent
4	L14080080-04	SAMP		8330-SPE		9.73 g	1 mL			40 mL	Transparent
5	L14080080-05	SAMP		8330-SPE		10.04 g	1 mL			40 mL	Transparent
6	L14080080-06	SAMP		8330-SPE		9.91 g	1 mL			40 mL	Transparent
7	L14080081-01	SAMP		8330-SPE		9.89 g	1 mL			40 mL	Transparent
8	L14080081-02	SAMP		8330-SPE		9.61 g	1 mL			40 mL	Transparent
9	L14080081-03	SAMP		8330-SPE		10.24 g	1 mL			40 mL	Transparent
10	L14080081-04	RS01		8330-SPE		10.14 g	1 mL			40 mL	Transparent
11	L14080081-05	MS01	L14080081-04	8330-SPE		10.05 g	1 mL	1 mL	STD65796	40 mL	Transparent
12	L14080081-06	SD01	L14080081-04	8330-SPE		10.04 g	1 mL	1 mL	STD65796	40 mL	Transparent
13	L14080081-07	SAMP		8330-SPE		9.79 g	1 mL			40 mL	Transparent
14	L14080081-08	SAMP		8330-SPE		10.35 g	1 mL			40 mL	Transparent
15	L14080081-09	SAMP		8330-SPE		10.28 g	1 mL			40 mL	Transparent
16	L14080081-10	SAMP		8330-SPE		10.04 g	1 mL			40 mL	Transparent
17	L14080081-11	SAMP		8330-SPE		9.86 g	1 mL			40 mL	Transparent
18	L14080244-02	SAMP		8330-SPE		10.33 g	1 mL			40 mL	Transparent
19	L14080244-04	SAMP		8330-SPE		10.33 g	1 mL			40 mL	Transparent
20	L14080244-06	SAMP		8330-SPE		9.9 g	1 mL			40 mL	Transparent
21	L14080244-08	SAMP		8330-SPE		10.19 g	1 mL			40 mL	Transparent
22	L14080244-10	SAMP		8330-SPE		10.2 g	1 mL			40 mL	Transparent
23	WG487088-01	BLANK		8330-SPE		10 g	1 mL			40 mL	Transparent
24	WG487088-02	LCS		8330-SPE		10 g	1 mL	1 mL	STD65796	40 mL	Transparent
25	WG487088-03	LCS		8330-SPE		10 g	1 mL	1 mL	STD65691	40 mL	Transparent
26	WG487088-04	REF	L14080081-04	8330-SPE		10.14 g	1 mL			40 mL	Transparent
27	WG487088-05	MS	L14080081-04	8330-SPE		10.05 g	1 mL	1 mL	STD65796	40 mL	Transparent
28	WG487088-06	MSD	L14080081-04	8330-SPE		10.04 g	1 mL	1 mL	STD65796	40 mL	Transparent

CTRL TEMP ON@ 3.1C, OFF@ 3.1C

BATH TEMP ON@ 13C, OFF@ 15C

Analyst: Chris Hill

Reviewer: Richard Davis

EXTRACT - Modified 01/23/2009
PDF ID: 3697012
Report generated: 08/07/2014 12:25

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 177 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L012964.F	WG483233-01 8330 ICAL 2500 PPB	1	1	STD65351	07/09/14 13:26
2	5L012965.F	WG483233-02 8330 ICAL 1000 PPB	1	1	STD65351	07/09/14 14:05
3	5L012966.F	WG483233-03 8330 ICAL 500 PPB	1	1	STD65351	07/09/14 14:44
4	5L012967.F	WG483233-04 8330 ICAL 100 PPB	1	1	STD65351	07/09/14 15:23
5	5L012968.F	WG483233-05 8330 ICAL 50 PPB	1	1	STD65351	07/09/14 16:02
6	5L012969.F	WG483233-06 8330 ICAL 25 PPB	1	1	STD65351	07/09/14 16:41
7	5L012970.F	WG483233-07 8330 ALT 500 PPB	1	1	STD65377	07/09/14 17:20
8	5L012971.F	WG482432-01 BLANK	1	1		07/09/14 18:00
9	5L012972.F	WG482432-02 LCS	1	1		07/09/14 18:39
10	5L012973.F	WG482432-03 LCS DUP	1	1		07/09/14 19:18
11	5L012974.F	L14061431-02	1	1		07/09/14 19:57
12	5L012975.F	L14061431-04	1	1		07/09/14 20:36
13	5L012976.F	L14061689-10	1	1		07/09/14 21:15
14	5L012977.F	L14061689-12	1	1		07/09/14 21:54
15	5L012978.F	L14061689-14	1	1		07/09/14 22:33
16	5L012979.F	L14061689-16	1	1		07/09/14 23:12
17	5L012980.F	L14061689-18	1	1		07/09/14 23:51
18	5L012981.F	WG483357-01 8330 CCV 500 PPB	1	1	STD65351	07/10/14 00:30
19	5L012982.F	WG482631-01 BLANK	1	1		07/10/14 01:09
20	5L012983.F	WG482631-02 LCS	1	1		07/10/14 01:48
21	5L012984.F	WG482631-03 LCS DUP	1	1		07/10/14 02:28
22	5L012985.F	L14061689-29	1	1		07/10/14 03:07
23	5L012986.F	L14061689-31	1	1		07/10/14 03:46
24	5L012987.F	L14061689-33	1	1		07/10/14 04:25
25	5L012988.F	L14061689-35	1	1		07/10/14 05:04
26	5L012989.F	L14061689-37	1	1		07/10/14 05:43
27	5L012990.F	WG483357-02 8330 CCV 500 PPB	1	1	STD65351	07/10/14 06:22
28	5L012991.F	AcCN Rinse	1	1		07/10/14 07:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	WG483233-07 8330 ALT 500 PPB: Tetryl failed marginally low.			

Page: 1 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:

Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65238
CCV STD: STD65351 LCS STD: STD65237

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Required second column confirmation	RDX
	L14061431-02			
12	X		Required second column confirmation	RDX
	L14061431-04			
18				
	WG483357-01 8330 CCV 500 PPB: Tetryl failed low.			
20				
	WG482631-02 LCS: 6 analytes failed high. There were no hits in samples associated with this LCS.			
21				
	WG482631-03 LCS DUP: 6 analytes failed high. There were no hits in samples associated with this LCS.			
23				
	L14061689-31: 1,2-DNB surrogate failed marginally low. Sample took several hours to filter and not all the sample would filter.			
27				
	WG483357-02 8330 CCV 500 PPB: Tetryl failed low.			

Page: 2 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 080714
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:

Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65797 Calibration STD
CCV STD: STD65351 LCS STD: STD65796 MS/MSD STD: STD65796

Comments: Pressure = 179 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013251.F	WG487336-01 8330 CCV 500 PPB	1	1	STD65351	08/07/14 13:37
2	5L013252.F	WG487118-01 BLANK	1	1		08/07/14 14:16
3	5L013253.F	WG487118-02 LCS	1	1		08/07/14 14:55
4	5L013254.F	WG487118-03 LCS DUP	1	1		08/07/14 15:34
5	5L013255.F	L14080230-05	1	1		08/07/14 16:13
6	5L013256.F	L14080244-13	1	1		08/07/14 16:52
7	5L013257.F	WG487088-01 BLANK	7	1		08/07/14 17:32
8	5L013258.F	WG487088-02 LCS	7	1		08/07/14 18:11
9	5L013259.F	L14080080-01	7	1		08/07/14 18:50
10	5L013260.F	L14080080-02	7	1		08/07/14 19:29
11	5L013261.F	L14080080-03	7	1		08/07/14 20:08
12	5L013262.F	WG487336-02 8330 CCV 500 PPB	1	1	STD65351	08/07/14 20:47
13	5L013263.F	L14080080-04	7	1		08/07/14 21:26
14	5L013264.F	L14080080-05	7	1		08/07/14 22:05
15	5L013265.F	L14080080-06	7	1		08/07/14 22:44
16	5L013266.F	L14080081-01	7	1		08/07/14 23:23
17	5L013267.F	L14080081-02	7	1		08/08/14 00:02
18	5L013268.F	L14080081-03	7	1		08/08/14 00:41
52	5L013269.F	L14080081-04 REF	7	1		08/08/14 01:20
53	5L013270.F	L14080081-05 MS	7	1		08/08/14 02:00
54	5L013271.F	L14080081-06 MSD	7	1		08/08/14 02:39
22	5L013272.F	L14080081-07	7	1		08/08/14 03:18
23	5L013273.F	WG487336-03 8330 CCV 500 PPB	1	1	STD65351	08/08/14 03:57
24	5L013274.F	L14080081-08	7	1		08/08/14 04:36
25	5L013275.F	L14080081-09	7	1		08/08/14 05:15
26	5L013276.F	L14080081-10	7	1		08/08/14 05:54
27	5L013277.F	L14080081-11	7	1		08/08/14 06:33
28	5L013278.F	L14080244-02	7	1		08/08/14 07:12
29	5L013279.F	L14080244-04	7	1		08/08/14 07:51
30	5L013280.F	L14080244-06	7	1		08/08/14 08:30
31	5L013281.F	L14080244-08	7	1		08/08/14 09:09
32	5L013282.F	L14080244-10	7	1		08/08/14 09:48
33	5L013283.F	Solvent Rinse	1	1		08/08/14 10:28

Page: 1 Approved: 11-AUG-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 080714
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797
CCV STD: STD65351 LCS STD: STD65796 STD65796

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	5L013284.F	WG487336-04 8330 CCV 500 PPB	1	1	STD65351	08/08/14 10:48
35	5L013285.F	WG487361-01 PETN CCV 500 PPB	1	1	STD63527	08/08/14 11:27
36	5L013286.F	WG487118-01 BLANK	1	1		08/08/14 11:47
37	5L013287.F	WG487118-04 LCS	1	1		08/08/14 12:06
38	5L013288.F	L14080230-05	1	1		08/08/14 12:25
39	5L013289.F	L14080244-13	1	1		08/08/14 12:44
40	5L013290.F	WG487088-01 BLANK	7	1		08/08/14 13:04
41	5L013291.F	WG487088-03 LCS	7	1		08/08/14 13:23
42	5L013292.F	L14080244-02	7	1		08/08/14 13:42
43	5L013293.F	L14080244-04	7	1		08/08/14 14:01
44	5L013294.F	L14080244-06	7	1		08/08/14 14:21
45	5L013295.F	L14080244-08	7	1		08/08/14 14:40
46	5L013296.R	WG487361-02 PETN CCV 500 PPB	1	1	STD63527	08/08/14 14:59
47	5L013297.F	WG487361-02 PETN CCV 500 PPB	1	1	STD63527	08/08/14 15:18
48	5L013298.F	L14080244-10	7	1		08/08/14 15:38
49	5L013299.R	WG487361-03 PETN CCV 500 PPB	1	1	STD63527	08/08/14 15:57
50	5L013300.F	WG487361-03 PETN CCV 500 PPB	1	1	STD63527	08/08/14 16:16
51	5L013301.F	Solvent Rinse	1	1		08/08/14 16:37

Comments

Seq.	Rerun	Dil.	Reason	Analytes
14	X	5	Over Calibration Range	Nitroglycerin
	L14080080-05			
16	X	10	Over Calibration Range	Nitroglycerin
	L14080081-01			
18	X	100	Over Calibration Range	Nitroglycerin
	L14080081-03			
52	X	50	Over Calibration Range	Nitroglycerin
	L14080081-04: Also need a 5x dilution for 2,4-DNT.			
53				
	L14080081-05 MS: 5 analytes failed low and 2 anlaytes failed high.			
54				
	L14080081-06 MSD:: 4 analytes failed low and 3 analytes failed high.			
22	X	5	Over Calibration Range	Nitroglycerin
	L14080081-07			
23				

Page: 2 Approved: 11-AUG-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 080714
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797
CCV STD: STD65351 LCS STD: STD65796 STD65796

Comments

Seq.	Rerun	Dil.	Reason	Analytes
	WG487336-03 8330 CCV 500 PPB: Tetryl failed low.			
24	X	20	Over Calibration Range	Nitroglycerin
	L14080081-08			
25	X	10	Over Calibration Range	Nitroglycerin
	L14080081-09			
26	X	5	Over Calibration Range	Nitroglycerin
	L14080081-10			
27	X	10	Over Calibration Range	Nitroglycerin
	L14080081-11			
46				
	WG487361-02 PETN CCV 500 PPB: Wrong vial injected. Not used.			
49				
	WG487361-03 PETN CCV 500 PPB: Wrong vial injected. Not used.			

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 081114
Analyst1: JWR Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00180133
Eluent ID#:

Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Workgroups: Analytical WG487385 (Reruns @ dilutions only)

Internal STD: NA Surrogate STD: STD65797 Calibration STD NA

CCV STD: STD65351 LCS STD: NA MS/MSD STD: NA

Comments: System backpressure = 185bar.
The %Rec for Tetryl was below the advisory limit for all CCV's, however, none of these samples were reanalyzed at a dilution for Tetryl.

Due to analyst error the analytical sequence was named 101114 instead of 081114.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013304.F	WG487829-01 CCV	1	1	STD65351	08/11/14 15:27
2	5L013305.F	L14080080-05 5x	7	5		08/11/14 16:06
3	5L013306.F	L14080081-01 10x	7	10		08/11/14 16:45
4	5L013307.F	L14080081-03 100x	7	100		08/11/14 17:24
5	5L013308.F	L14080081-04 5x	7	5		08/11/14 18:03
6	5L013309.F	L14080081-04 50x	7	50		08/11/14 18:42
7	5L013310.F	WG487829-02 CCV	1	1	STD65351	08/11/14 19:21
8	5L013311.F	L14080081-07 5x	7	5		08/11/14 20:00
9	5L013312.F	L14080081-08 20x	7	20		08/11/14 20:39
10	5L013313.F	L14080081-09 10x	7	10		08/11/14 21:18
11	5L013314.F	L14080081-10 5x	7	5		08/11/14 21:57
12	5L013315.F	L14080081-11 10x	7	10		08/11/14 22:36
13	5L013316.F	WG487829-03 CCV	1	1	STD65351	08/11/14 23:16
14	5L013317.F	AcCN Rinse	1	1		08/11/14 23:55

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 13-AUG-14

Microbac Laboratories Inc.

Data Checklist

Date: 09-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62106
Analytical Workgroups: L14061431, L14061689

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
10-JUL-2014

Secondary Reviewer:
10-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-10-2014 19:08:43

Microbac Laboratories Inc.

Data Checklist

Date: 07-AUG-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62730
Analytical Workgroups: L14080080, L14080081, L14080230, L14080244

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	X
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
08-AUG-2014

Secondary Reviewer:
11-AUG-2014

CHECKLIST1 - Modified 03/05/2008
Generated: AUG-11-2014 09:23:21

Microbac Laboratories Inc.

Data Checklist

Date: 11-AUG-2014
Analyst: JWR
Analyst: NA
Method: 8330-PLUS
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62797
Analytical Workgroups: L14080080, 0081 (SOILS) (RERUNS AT DILUTIONS ONLY)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	185 BAR
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	NA
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	NA
Recoveries	NA
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA (DIODE ARRAY CONF'D AS NEAT)
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
12-AUG-2014
John Richards

Secondary Reviewer:
13-AUG-2014
Michael Cochran

CHECKLIST1 - Modified 03/05/2008
Generated: AUG-13-2014 08:33:46

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B AAB#: WG487385

Login Number: L14080081

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
PAD-1	01	07/31/14					08/06/2014	6.1	14		08/11/14	5.2	40	
PAD-1	01	07/31/14					08/06/2014	6.1	14		08/07/14	1.5	40	
PAD-2	02	07/31/14					08/06/2014	6.1	14		08/08/14	1.5	40	
PAD-3	03	07/31/14					08/06/2014	6.1	14		08/11/14	5.2	40	
PAD-3	03	07/31/14					08/06/2014	6.1	14		08/08/14	1.5	40	
PAD-4	04	07/31/14					08/06/2014	6.1	14		08/08/14	1.6	40	
PAD-4	04	07/31/14					08/06/2014	6.1	14		08/11/14	5.3	40	
PAD-4	04	07/31/14					08/06/2014	6.1	14		08/11/14	5.3	40	
PAD-4-MS	05	07/31/14					08/06/2014	6.1	14		08/08/14	1.6	40	
PAD-4-MSD	06	07/31/14					08/06/2014	6.1	14		08/08/14	1.6	40	
PAD-5	07	07/31/14					08/06/2014	6	14		08/11/14	5.3	40	
PAD-5	07	07/31/14					08/06/2014	6	14		08/08/14	1.7	40	
PAD-6	08	07/31/14					08/06/2014	6	14		08/11/14	5.4	40	
PAD-6	08	07/31/14					08/06/2014	6	14		08/08/14	1.7	40	
PAD-7	09	07/31/14					08/06/2014	6	14		08/11/14	5.4	40	
PAD-7	09	07/31/14					08/06/2014	6	14		08/08/14	1.7	40	
PAD-8	10	07/31/14					08/06/2014	6	14		08/11/14	5.4	40	
PAD-8	10	07/31/14					08/06/2014	6	14		08/08/14	1.8	40	
PAD-X	11	07/31/14					08/06/2014	6	14		08/08/14	1.8	40	
PAD-X	11	07/31/14					08/06/2014	6	14		08/11/14	5.5	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3699881
Report generated 08/13/2014 11:22

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14080081
Instrument Id: HPLC5
Workgroup (AAB#): WG487385

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Soil

Sample Number	Dilution	Tag	1
L14080081-01	1.00	01	90.3
L14080081-01	10.0	DL01	87.1
L14080081-02	1.00	01	89.3
L14080081-03	1.00	01	90.0
L14080081-03	100	DL01	DL
L14080081-04	1.00	01	95.7
L14080081-04	5.00	DL01	79.7
L14080081-04	50.0	DL02	DL
L14080081-05	1.00	01	97.6
L14080081-06	1.00	01	98.9
L14080081-07	1.00	01	103
L14080081-07	5.00	DL01	81.2
L14080081-08	1.00	01	90.4
L14080081-08	20.0	DL01	DL
L14080081-09	1.00	01	88.5
L14080081-09	10.0	DL01	78.5
L14080081-10	1.00	01	88.9
L14080081-10	5.00	DL01	78.7
L14080081-11	1.00	01	91.5
L14080081-11	10.0	DL01	78.0
WG487088-01	1.00	01	90.4
WG487088-02	1.00	01	101

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3699889
Report generated: 08/13/2014 11:23

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14080081
Blank File ID: 5L013257.F
Prep Date: 08/06/14 11:37
Analyzed Date: 08/07/14 17:32
Analyst: ECL

Work Group: WG487385
Blank Sample ID: WG487088-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG487088-02	5L013258.F	08/07/14 18:11	01
PAD-1	L14080081-01	5L013266.F	08/07/14 23:23	01
PAD-2	L14080081-02	5L013267.F	08/08/14 00:02	01
PAD-3	L14080081-03	5L013268.F	08/08/14 00:41	01
PAD-4	L14080081-04	5L013269.F	08/08/14 01:20	01
PAD-4-MS	L14080081-05	5L013270.F	08/08/14 02:00	01
PAD-4-MSD	L14080081-06	5L013271.F	08/08/14 02:39	01
PAD-5	L14080081-07	5L013272.F	08/08/14 03:18	01
PAD-6	L14080081-08	5L013274.F	08/08/14 04:36	01
PAD-7	L14080081-09	5L013275.F	08/08/14 05:15	01
PAD-8	L14080081-10	5L013276.F	08/08/14 05:54	01
PAD-X	L14080081-11	5L013277.F	08/08/14 06:33	01
PAD-1	L14080081-01	5L013306.F	08/11/14 16:45	DL01
PAD-3	L14080081-03	5L013307.F	08/11/14 17:24	DL01
PAD-4	L14080081-04	5L013308.F	08/11/14 18:03	DL01
PAD-4	L14080081-04	5L013309.F	08/11/14 18:42	DL02
PAD-5	L14080081-07	5L013311.F	08/11/14 20:00	DL01
PAD-6	L14080081-08	5L013312.F	08/11/14 20:39	DL01
PAD-7	L14080081-09	5L013313.F	08/11/14 21:18	DL01
PAD-8	L14080081-10	5L013314.F	08/11/14 21:57	DL01
PAD-X	L14080081-11	5L013315.F	08/11/14 22:36	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3699882
Report generated 08/13/2014 11:22

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14080081 Prep Date: 08/06/14 11:37 Sample ID: WG487088-01
Instrument ID: HPLC5 Run Date: 08/07/14 17:32 Prep Method: METHOD
File ID: 5L013257.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG487385 Matrix: Soil Units: mg/kg
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
1,3,5-Trinitrobenzene	0.100	0.250	0.100	1	U
1,3-Dinitrobenzene	0.100	0.250	0.100	1	U
2,4,6-Trinitrotoluene	0.100	0.250	0.100	1	U
2,4-Dinitrotoluene	0.100	0.250	0.100	1	U
2,6-Dinitrotoluene	0.100	0.250	0.100	1	U
2-Amino-4,6-dinitrotoluene	0.100	0.250	0.100	1	U
2-Nitrotoluene	0.100	0.250	0.100	1	U
3-Nitrotoluene	0.100	0.250	0.100	1	U
4-Nitrotoluene	0.100	0.250	0.100	1	U
4-Amino-2,6-dinitrotoluene	0.100	0.250	0.100	1	U
HMX	0.100	0.250	0.100	1	U
Nitrobenzene	0.100	0.250	0.100	1	U
RDX	0.100	0.250	0.100	1	U
Tetryl	0.100	0.250	0.100	1	U
Nitroglycerin	0.100	0.250	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	90.4	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 3699883
13-AUG-2014 11:22

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14080081 Run Date: 08/07/2014 Sample ID: WG487088-02
Instrument ID: HPLC5 Run Time: 18:11 Prep Method: METHOD
File ID: 5L013258.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG487385 Matrix: Soil Units: mg/kg
QC Key: STD Lot#: STD65796 Cal ID: HPLC5-09-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
1,3,5-Trinitrobenzene	1.00	1.00	100	75 - 125	
1,3-Dinitrobenzene	1.00	0.970	97.0	80 - 125	
2,4,6-Trinitrotoluene	1.00	0.930	93.0	40 - 130	
2,4-Dinitrotoluene	1.00	0.989	98.9	80 - 125	
2,6-Dinitrotoluene	1.00	1.04	104	80 - 120	
2-Amino-4,6-dinitrotoluene	1.00	1.01	101	80 - 125	
2-Nitrotoluene	1.00	0.998	99.8	80 - 125	
3-Nitrotoluene	1.00	0.999	99.9	75 - 120	
4-Nitrotoluene	1.00	0.970	97.0	75 - 125	
4-Amino-2,6-dinitrotoluene	1.00	0.963	96.3	80 - 125	
HMX	1.00	1.04	104	75 - 125	
Nitrobenzene	1.00	0.969	96.9	75 - 125	
RDX	1.00	0.985	98.5	70 - 135	
Tetryl	1.00	0.978	97.8	10 - 150	
Nitroglycerin	1.00	0.848	84.8	50 - 150	

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	101	50 - 150	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3699884
Report generated: 08/13/2014 11:22

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14080081 Cal ID: HPLC5- 09-JUL-14 Worknum: WG487385
Instrument ID: HPLC5 Contract #: Prep Method: METHOD
Parent ID: L14080081-04 File ID: 5L013269.F Dil: 1 Method: 8330B
Sample ID: L14080081-05 MS File ID: 5L013270.F Dil: 1 Matrix: Soil
Sample ID: L14080081-06 MSD File ID: 5L013271.F Dil: 1 Units: mg/kg

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,3-Dinitrobenzene	ND	0.995	0.978	98.3	0.996	1.02	103	4.42	80 - 125	20	
2,4,6-Trinitrotoluene	ND	0.995	1.44	144	0.996	1.38	139	3.80	40 - 130	20	*
2,4-Dinitrotoluene	13.5	0.995	1.15	-1240	0.996	1.21	-1230	5.32	80 - 125	20	*
2,6-Dinitrotoluene	ND	0.995	1.31	132	0.996	1.24	125	5.31	80 - 120	20	*
2-Amino-4,6-dinitrotoluene	ND	0.995	1.19	120	0.996	1.11	112	6.84	80 - 125	20	
2-Nitrotoluene	ND	0.995	1.05	106	0.996	1.01	101	4.27	80 - 125	20	
3-Nitrotoluene	ND	0.995	1.18	118	0.996	1.27	127	7.30	75 - 120	20	*
4-Amino-2,6-dinitrotoluene	ND	0.995	0.713	71.7	0.996	0.822	82.5	14.2	80 - 125	20	*
4-Nitrotoluene	ND	0.995	0.990	99.5	0.996	0.964	96.8	2.69	75 - 125	20	
HMX	0.836	0.995	1.17	33.3	0.996	1.15	31.1	1.92	75 - 125	20	*
Nitrobenzene	ND	0.995	0.869	87.4	0.996	0.875	87.9	0.665	75 - 125	20	
Nitroglycerin	98.6	0.995	41.7	-5710	0.996	86.8	-1180	70.1	50 - 150	20	*#
RDX	5.28	0.995	1.37	-393	0.996	1.19	-411	14.0	70 - 135	20	*
1,3,5-Trinitrobenzene	ND	0.995	1.10	111	0.996	1.17	118	5.93	75 - 125	20	
Tetryl	ND	0.995	0.985	99	0.996	1.15	116	15.8	10 - 150	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 3699885
Report generated 08/13/2014 11:22

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14080081
Analytical Method: 8330B
ICAL Workgroup: WG483233

Instrument ID: HPLC5
Initial Calibration Date: 09-JUL-14 16:41
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
1,3,5-Trinitrobenzene		2.550	2.33	1.00000	
1,3-Dinitrobenzene		1.664	3.67	1.00000	
2,4,6-Trinitrotoluene		2.544	2.55	1.00000	
2,4-Dinitrotoluene		1.780	3.81	1.00000	
2,6-Dinitrotoluene		4.224	7.45	1.00000	
2-Amino-4,6-Dinitrotoluene		2.763	5.50	1.00000	
2-Nitrotoluene		4.544	16.2	1.00000	
3-Nitrotoluene		4.038	9.75	1.00000	
4-Amino-2,6-Dinitrotoluene		4.276	3.89	1.00000	
4-Nitrotoluene		5.486	11.9	1.00000	
HMX		5.860	3.94	1.00000	
Nitrobenzene		2.367	3.48	1.00000	
Nitroglycerin		5.043	17.4	1.00000	
RDX		4.468	19.1	1.00000	
Tetryl		4.637	8.15	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

This method always uses linear calibration model (R)

INT_CAL - Modified 03/06/2008
PDF File ID: 3699886
Report generated 08/13/2014 11:22

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080081

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-01			WG483233-02			WG483233-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,3,5-Trinitrobenzene	2500	983.380676	2.542	1000	389.593018	2.567	500	191.390671	2.612
1,3-Dinitrobenzene	2500	1476.04382	1.694	1000	585.618530	1.708	500	288.898346	1.731
2,4,6-Trinitrotoluene	2500	967.202881	2.585	1000	385.309113	2.595	500	190.716125	2.622
2,4-Dinitrotoluene	2500	1377.43542	1.815	1000	549.588623	1.820	500	269.683533	1.854
2,6-Dinitrotoluene	2500	566.146790	4.416	1000	226.939255	4.406	500	111.609299	4.480
2-Amino-4,6-Dinitrotoluene	2500	877.059021	2.850	1000	349.451172	2.862	500	172.491531	2.899
2-Nitrotoluene	2500	510.656860	4.896	1000	203.632919	4.911	500	100.318611	4.984
3-Nitrotoluene	2500	588.019409	4.252	1000	232.781448	4.296	500	114.895737	4.352
4-Amino-2,6-Dinitrotoluene	2500	570.305420	4.384	1000	228.319305	4.380	500	112.675064	4.438
4-Nitrotoluene	2500	425.738861	5.872	1000	168.683578	5.928	500	83.4175415	5.994
HMX	2500	414.851227	6.026	1000	168.394058	5.938	500	84.8615189	5.892
Nitrobenzene	2500	1046.62891	2.389	1000	413.062103	2.421	500	203.071854	2.462
Nitroglycerin	2500	515.997803	4.845	1000	205.258530	4.872	500	101.567825	4.923
RDX	2500	484.308258	5.162	1000	195.345810	5.119	500	98.4699020	5.078
Tetryl	2500	561.568787	4.452	1000	229.507370	4.357	500	111.646652	4.478

INT_CAL - Modified 03/06/2008
PDF File ID: 3699886
Report generated 08/13/2014 11:22

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14080081

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-04			WG483233-05			WG483233-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,3,5-Trinitrobenzene	100	39.6013336	2.525	50.0	20.3841457	2.453	25.0	9.60364914	2.603
1,3-Dinitrobenzene	100	60.0506744	1.665	50.0	31.7738209	1.574	25.0	15.5059214	1.612
2,4,6-Trinitrotoluene	100	39.8029480	2.512	50.0	20.2711296	2.467	25.0	10.0692062	2.483
2,4-Dinitrotoluene	100	55.6826248	1.796	50.0	29.6646767	1.686	25.0	14.6111479	1.711
2,6-Dinitrotoluene	100	23.3991280	4.274	50.0	12.2992725	4.065	25.0	6.74628210	3.706
2-Amino-4,6-Dinitrotoluene	100	35.7217560	2.799	50.0	18.9889889	2.633	25.0	9.87414837	2.532
2-Nitrotoluene	100	21.1870880	4.720	50.0	11.4625940	4.362	25.0	7.37310982	3.391
3-Nitrotoluene	100	24.1719761	4.137	50.0	13.3029776	3.759	25.0	7.28425598	3.432
4-Amino-2,6-Dinitrotoluene	100	23.2509079	4.301	50.0	12.1103840	4.129	25.0	6.20706463	4.028
4-Nitrotoluene	100	17.8079243	5.615	50.0	10.0566874	4.972	25.0	5.51677179	4.532
HMX	100	17.3945694	5.749	50.0	9.14081383	5.470	25.0	4.10940647	6.084
Nitrobenzene	100	41.7326241	2.396	50.0	21.9563217	2.277	25.0	11.0660400	2.259
Nitroglycerin	100	21.8829861	4.570	50.0	12.5522137	3.983	25.0	3.53736115	7.067
RDX	100	22.6424503	4.416	50.0	13.9189634	3.592	25.0	7.26337814	3.442
Tetryl	100	21.5942669	4.631	50.0	11.3265085	4.414	25.0	4.55197477	5.492

INT_CAL - Modified 03/06/2008
PDF File ID: 3699886
Report generated 08/13/2014 11:22

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14080081 Run Date: 07/09/2014 Sample ID: WG483233-07
Instrument ID: HPLC5 Run Time: 17:20 Method: 8330B
File ID: 5L012970.F Analyst: ECL QC Key: STD
ICal Workgroup: WG483233 Cal ID: HPLC5 - 09-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Sym-Trinitrobenzene		500	450	ug/L	2.84	9.90	30	
1,3-Dinitrobenzene		500	489	ug/L	1.74	2.10	30	
2,4,6-Trinitrotoluene		500	500	ug/L	2.59	0	30	
2,4-Dinitrotoluene		500	502	ug/L	1.81	0.500	30	
2,6-Dinitrotoluene		500	529	ug/L	4.16	5.80	30	
2-Amino-4,6-Dinitrotoluene		500	501	ug/L	2.85	0.100	30	
2-Nitrotoluene		500	522	ug/L	4.67	4.40	30	
3-Nitrotoluene		500	524	ug/L	4.06	4.90	30	
4-Nitrotoluene		500	514	ug/L	5.70	2.80	30	
4-Amino-2,6-Dinitrotoluene		500	522	ug/L	4.20	4.40	30	
HMX		500	485	ug/L	6.14	3.10	30	
Nitrobenzene		500	489	ug/L	2.46	2.20	30	
RDX		500	511	ug/L	4.93	2.20	30	
Tetryl		500	353	ug/L	6.28	29.3	30	
Nitroglycerin		500	502	ug/L	4.83	0.400	30	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3699887
Report generated 08/13/2014 11:23

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081 Run Date: 08/07/2014 Sample ID: WG487336-01
Instrument ID: HPLC5 Run Time: 13:37 Method: 8330B
File ID: 5L013251.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.506	mg/kg	2.53	1.18	20	
1,3-Dinitrobenzene		0.500	0.500	mg/kg	1.70	0.0360	20	
2,4,6-Trinitrotoluene		0.500	0.477	mg/kg	2.71	4.60	20	
2,4-Dinitrotoluene		0.500	0.495	mg/kg	1.84	0.979	20	
2,6-Dinitrotoluene		0.500	0.505	mg/kg	4.36	0.905	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.497	mg/kg	2.87	0.587	20	
2-Nitrotoluene		0.500	0.503	mg/kg	4.84	0.690	20	
3-Nitrotoluene		0.500	0.499	mg/kg	4.27	0.264	20	
4-Nitrotoluene		0.500	0.502	mg/kg	5.84	0.302	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.501	mg/kg	4.37	0.265	20	
HMX		0.500	0.521	mg/kg	5.72	4.15	20	
Nitrobenzene		0.500	0.489	mg/kg	2.46	2.24	20	
RDX		0.500	0.511	mg/kg	4.93	2.14	20	
Tetryl		0.500	0.444	mg/kg	5.00	11.2	20	
Nitroglycerin		0.500	0.488	mg/kg	4.97	2.49	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699888
Report generated 08/13/2014 11:23

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081 Run Date: 08/07/2014 Sample ID: WG487336-02
Instrument ID: HPLC5 Run Time: 20:47 Method: 8330B
File ID: 5L013262.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.487	mg/kg	2.63	2.55	20	
1,3-Dinitrobenzene		0.500	0.499	mg/kg	1.70	0.137	20	
2,4,6-Trinitrotoluene		0.500	0.469	mg/kg	2.76	6.16	20	
2,4-Dinitrotoluene		0.500	0.491	mg/kg	1.85	1.79	20	
2,6-Dinitrotoluene		0.500	0.498	mg/kg	4.42	0.350	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.491	mg/kg	2.91	1.86	20	
2-Nitrotoluene		0.500	0.530	mg/kg	4.60	6.09	20	
3-Nitrotoluene		0.500	0.484	mg/kg	4.40	3.23	20	
4-Nitrotoluene		0.500	0.539	mg/kg	5.44	7.77	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.489	mg/kg	4.47	2.13	20	
HMX		0.500	0.515	mg/kg	5.79	2.93	20	
Nitrobenzene		0.500	0.486	mg/kg	2.48	2.81	20	
RDX		0.500	0.508	mg/kg	4.96	1.62	20	
Tetryl		0.500	0.343	mg/kg	6.47	31.3	20	*
Nitroglycerin		0.500	0.480	mg/kg	5.05	3.92	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699888
Report generated 08/13/2014 11:23

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081 Run Date: 08/08/2014 Sample ID: WG487336-03
Instrument ID: HPLC5 Run Time: 03:57 Method: 8330B
File ID: 5L013273.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.443	mg/kg	2.89	11.3	20	
1,3-Dinitrobenzene		0.500	0.493	mg/kg	1.73	1.49	20	
2,4,6-Trinitrotoluene		0.500	0.466	mg/kg	2.77	6.71	20	
2,4-Dinitrotoluene		0.500	0.528	mg/kg	1.72	5.58	20	
2,6-Dinitrotoluene		0.500	0.551	mg/kg	4.00	10.2	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.519	mg/kg	2.75	3.77	20	
2-Nitrotoluene		0.500	0.489	mg/kg	4.98	2.16	20	
3-Nitrotoluene		0.500	0.526	mg/kg	4.04	5.25	20	
4-Nitrotoluene		0.500	0.472	mg/kg	6.21	5.70	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.487	mg/kg	4.50	2.63	20	
HMX		0.500	0.483	mg/kg	6.15	3.32	20	
Nitrobenzene		0.500	0.492	mg/kg	2.45	1.67	20	
RDX		0.500	0.511	mg/kg	4.93	2.11	20	
Tetryl		0.500	0.196	mg/kg	11.3	60.8	20	*
Nitroglycerin		0.500	0.541	mg/kg	4.48	8.24	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699888
Report generated 08/13/2014 11:23

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081 Run Date: 08/08/2014 Sample ID: WG487336-04
Instrument ID: HPLC5 Run Time: 10:48 Method: 8330B
File ID: 5L013284.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.407	mg/kg	3.15	18.6	20	
1,3-Dinitrobenzene		0.500	0.506	mg/kg	1.68	1.10	20	
2,4,6-Trinitrotoluene		0.500	0.461	mg/kg	2.81	7.83	20	
2,4-Dinitrotoluene		0.500	0.503	mg/kg	1.81	0.556	20	
2,6-Dinitrotoluene		0.500	0.517	mg/kg	4.26	3.36	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.508	mg/kg	2.81	1.66	20	
2-Nitrotoluene		0.500	0.506	mg/kg	4.82	1.18	20	
3-Nitrotoluene		0.500	0.499	mg/kg	4.27	0.286	20	
4-Nitrotoluene		0.500	0.498	mg/kg	5.88	0.320	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.505	mg/kg	4.34	0.978	20	
HMX		0.500	0.499	mg/kg	5.96	0.184	20	
Nitrobenzene		0.500	0.462	mg/kg	2.61	7.64	20	
RDX		0.500	0.541	mg/kg	4.66	8.19	20	
Tetryl		0.500	0.105	mg/kg	21.2	79.0	20	*
Nitroglycerin		0.500	0.470	mg/kg	5.16	5.95	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699888
Report generated 08/13/2014 11:23

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081 Run Date: 08/11/2014 Sample ID: WG487829-01
Instrument ID: HPLC5 Run Time: 15:27 Method: 8330B
File ID: 5L013304.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.509	mg/kg	2.51	1.84	20	
1,3-Dinitrobenzene		0.500	0.500	mg/kg	1.70	0.0819	20	
2,4,6-Trinitrotoluene		0.500	0.488	mg/kg	2.65	2.38	20	
2,4-Dinitrotoluene		0.500	0.503	mg/kg	1.81	0.584	20	
2,6-Dinitrotoluene		0.500	0.516	mg/kg	4.27	3.13	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.511	mg/kg	2.79	2.29	20	
2-Nitrotoluene		0.500	0.510	mg/kg	4.78	1.93	20	
3-Nitrotoluene		0.500	0.495	mg/kg	4.30	1.10	20	
4-Nitrotoluene		0.500	0.489	mg/kg	5.99	2.11	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.515	mg/kg	4.25	2.93	20	
HMX		0.500	0.502	mg/kg	5.93	0.403	20	
Nitrobenzene		0.500	0.486	mg/kg	2.48	2.84	20	
RDX		0.500	0.498	mg/kg	5.05	0.325	20	
Tetryl		0.500	0.400	mg/kg	5.55	20.1	20	*
Nitroglycerin		0.500	0.500	mg/kg	4.85	0.0542	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699888
Report generated 08/13/2014 11:23

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081 Run Date: 08/11/2014 Sample ID: WG487829-02
Instrument ID: HPLC5 Run Time: 19:21 Method: 8330B
File ID: 5L013310.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.506	mg/kg	2.53	1.16	20	
1,3-Dinitrobenzene		0.500	0.500	mg/kg	1.70	0.0430	20	
2,4,6-Trinitrotoluene		0.500	0.487	mg/kg	2.66	2.64	20	
2,4-Dinitrotoluene		0.500	0.500	mg/kg	1.82	0.0192	20	
2,6-Dinitrotoluene		0.500	0.514	mg/kg	4.28	2.78	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.508	mg/kg	2.81	1.56	20	
2-Nitrotoluene		0.500	0.504	mg/kg	4.84	0.714	20	
3-Nitrotoluene		0.500	0.494	mg/kg	4.31	1.25	20	
4-Nitrotoluene		0.500	0.490	mg/kg	5.98	2.00	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.510	mg/kg	4.30	1.90	20	
HMX		0.500	0.503	mg/kg	5.91	0.677	20	
Nitrobenzene		0.500	0.500	mg/kg	2.41	0.0334	20	
RDX		0.500	0.508	mg/kg	4.96	1.53	20	
Tetryl		0.500	0.295	mg/kg	7.52	41.0	20	*
Nitroglycerin		0.500	0.499	mg/kg	4.86	0.170	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699888
Report generated 08/13/2014 11:23

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14080081 Run Date: 08/11/2014 Sample ID: WG487829-03
Instrument ID: HPLC5 Run Time: 23:16 Method: 8330B
File ID: 5L013316.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG487385 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.487	mg/kg	2.63	2.57	20	
1,3-Dinitrobenzene		0.500	0.500	mg/kg	1.70	0.0134	20	
2,4,6-Trinitrotoluene		0.500	0.485	mg/kg	2.67	3.09	20	
2,4-Dinitrotoluene		0.500	0.500	mg/kg	1.82	0.0150	20	
2,6-Dinitrotoluene		0.500	0.512	mg/kg	4.30	2.47	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.508	mg/kg	2.81	1.57	20	
2-Nitrotoluene		0.500	0.510	mg/kg	4.78	1.94	20	
3-Nitrotoluene		0.500	0.490	mg/kg	4.34	1.97	20	
4-Nitrotoluene		0.500	0.495	mg/kg	5.92	1.06	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.508	mg/kg	4.31	1.56	20	
HMX		0.500	0.500	mg/kg	5.95	0.0181	20	
Nitrobenzene		0.500	0.490	mg/kg	2.46	1.96	20	
RDX		0.500	0.520	mg/kg	4.85	4.01	20	
Tetryl		0.500	0.212	mg/kg	10.5	57.6	20	*
Nitroglycerin		0.500	0.497	mg/kg	4.88	0.585	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3699888
Report generated 08/13/2014 11:23

2.2.1 Percent Solids Data

Example Percent Solids Calculations

1.0 Calculating the percent solids of a sample.

$$\%Solids = \frac{WT3 - WT1}{WT2 - WT1} \times F$$

Where:	
WT1 = Weight, in grams, of the empty container	1.30 g
WT2 = Weight, in grams, of the container and wet sample	21.274 g
WT3 = Weight, in grams, of the container and dried sample	5.21 g
F = Factor to get units as percent weight	100
%Solids = Percent solids present in sample.	19.58%

2.0 Calculating the percent moisture of a sample.

% Moisture = 100 - % Solids from 1.0 calculation

Microbac Laboratories Inc.

PERCENT SOLIDS

Workgroup (AAB#): WG486795 Analyst: ERP ADT(on): 08/04/2014 10:08
Method: D2216-90 Instrument: BAL014 ADT(off): 08/05/2014 07:36
SOP: K0003 Rev: 13

SAMPLE NUMBER	EMPTY PAN WT 1	WET WT 2	DRY WT 3A	DRY WT 3B	DRY WT 3C	PERCENT SOLID	PERCENT MOISTURE
L14071741-08	1.296	5.294	5.26			99.15	
L14071741-09	1.301	5.359	5.333			99.36	
L14071741-10	1.3	5.06	5.024			99.04	
L14071741-19	1.295	5.141	5.113			99.27	
L14071741-20	1.304	5.235	5.193			98.93	
L14071742-02	1.295	6.046	5.771			94.21	
L14080068-01	1.298	22.715	19.97			87.18	
L14080068-02	1.288	20.202	17.382			85.09	
L14080068-04	1.299	24.089	19.507			79.89	
L14080068-05	1.296	22.201	18.085			80.31	
L14080068-06	1.296	22.201	18.085			80.31	
L14080068-07	1.296	22.201	18.085			80.31	
L14080068-09	1.295	20.98	20.283			96.46	
L14080068-10	1.292	22.832	19.623			85.10	
L14080077-01	1.296	23.175	19.025			81.03	
L14080080-01	1.298	20.02	17.124			84.53	
L14080080-02	1.293	20.086	17.301			85.18	
L14080080-03	1.302	21.552	17.027			77.65	
L14080080-04	1.299	20.102	14.867			72.16	
L14080080-05	1.306	24.249	23.599			97.17	
L14080080-06	1.291	20.899	19.912			94.97	
L14080081-01	1.297	21.625	21.148			97.65	
L14080081-02	1.291	20.256	19.847			97.84	
L14080081-03	1.295	21.489	20.321			94.22	
L14080081-04	1.297	21.519	18.618			85.65	
L14080081-05	1.297	21.519	18.618			85.65	
L14080081-06	1.297	21.519	18.618			85.65	
L14080081-07	1.295	21.113	20.554			97.18	
L14080081-08	1.313	21.233	20.588			96.76	
L14080081-09	1.3	22.442	21.113			93.71	
L14080081-10	1.299	22.374	21.921			97.85	
L14080081-11	1.294	20.12	18.447			91.11	
L14080084-01	1.304	22.308	20.418			91.00	
WG486795-01	1.295	21.113	20.554			97.18	2.821
WG486795-02	1.294	20.12	18.447			91.11	8.887
WG486795-03	1.296	21.488	21.002			97.59	2.407
WG486795-04	1.299	20.508	19.397			94.22	5.784

Analyst: Erin Potter

PERCENT_SOLIDS - Modified 04/24/2008
PDF ID: 3692839
Report generated: 08/05/2014 07:47

3.0 Attachments

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** *YES* **Carrier:** **Tracking Number:**

Box 1: Matrix
SW Surface Water, T Trip Blank, GW Groundwater, E Equipment Blank, L Leachate, P Product, S Soil, O Other

Box 2: Preservative
A HCL, E NaOH, B HNO_3, F ZnAc, C H_2SO_4, G Other (<6 deg c), D $Na_2S_2O_3$, H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, V VOA, AG Amber Glass, CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER*
Preserved and shipped on ice: *YES*

Box 4 - Sample Type					G	G	G						
Box 3 - Filtered/Unfiltered					NA	NA	NA						
Required pH of Sample					NA	NA	NA						
Box 2 - Preservative					G	G	G						
Box 5 - Sample Container Type					1-4oz AG		1-4ox CG						
Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles	Perchlorate - 6850	DRY WEIGHT	8330B -AIR DRY (S-PREP)						
NB-1	7/31	1230	S	2	X	X	X						
NB-2		1210	S	2	X	X	X						
SB-1		1250	S	2	X	X	X						
SB-2		1310	S	2	X	X	X						
BERM-1		0850	S	2	X	X	X						
POND-1	7/31	0910	S	2	X	X	X						

Not required on Permit

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

4. VELAP Accreditation required.
JVR 7/14/2014

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name:	Time:	Company Name:	Time:	

QC JVR 7.11.2014 1/2

CHAIN OF CUSTODY RECORD

Laboratory: Microbac Laboratories- Ohio Valley Division 158 Starlite Drive, Marietta, OH 45750 contact: Michelle Taylor X 4167

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 - Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS: 12-237-301-01-9446-9138 **Carrier:** **Tracking Number:** 12-237-301-01-9435-8927

Box 1: Matrix
SW Surface Water, T Trip Blank, GW Groundwater, E Equipment Blank, L Leachate, P Product, S Soil, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (<6 deg C), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, V VOA, AG Amber Glass, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G	G									
Box 3 - Filtered/Unfiltered					NA	NA	NA									
Required pH of Sample					NA	NA	NA									
Box 2 - Preservative					G	G	G									
Box 5 - Sample Container Type					1-4 oz AG		1-4ox CG									
Sample ID	**Date: 2014**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**Perchlorate - 6850**	**DRY WEIGHT**	**8330B -AIR DRY (S-PREP)**									
PAD-1	7/31	0830	S	2	X	X	X									
PAD-2		0930	S	2	X	X	X									
PAD-3		0950	S	2	X	X	X									
PAD-4		1010	S	2	X	X	X									
PAD-4ms		1010	S	2	X	X	X									
PAD-4msd		1010	S	2	X	X	X									
PAD-5		1040	S	2	X	X	X									
PAD-6		1100	S	2	X	X	X									
PAD-7		1120	S	2	X	X	X									
PAD-8		1150	S	2	X	X	X									
PAD-X	7/31	1130	S	2	X	X	X									

GENERAL NOTES:
1. Estimated results required. Level 4/comprehensive deliverable
2. Report results on a DRY WEIGHT BASIS. $. Report results in mg/kg.

MW-4 is the designated sample for lab to use for MS / MSD...

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662
Joshua Pemberton

Clients Special Instructions:
Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ N
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature): Ken Goddington	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KEN GODDINGTON	Date: 7/31/14	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name:	Time:	Company Name:	Time:	

QC JVR 7-11-2014 2/21

ANALYTICAL METHOD: 8330B (AIR DRY PREP) - Microbac, Marietta, OH
TYPE METHOD: Explosives

Analyte List for: All PAD Samples

Constituent	CASRN	SW-846 Method
Nitroglycerin	55-63-0	8330B
1,3,5-Trinitrobenzene	99-35-4	8330B
2,4,6-Trinitrotoluene	118-96-7	8330B
2-amino-4,6-dinitrotoluene	35572-78-2	8330B
4-amino-2,6-dinitrotoluene	19406-51-0	8330B
1,3-Dinitrobenzene	99-65-0	8330B
2,4-Dinitrotoluene	121-14-2	8330B
2,6-Dinitrotoluene	606-20-2	8330B
2-Nitrotoluene (ortho)	88-72-2	8330B
3-Nitrotoluene (meta)	99-08-1	8330B
4-Nitrotoluene (para)	99-99-0	8330B
HMX	2691-41-0	8330B
Nitrobenzene	98-95-3	8330B
RDX	121-82-4	8330B
Tetryl	479-45-8	8330B

Analyte List for SB-1, SB-2, NB-1, NB-2, Berm-1 and Pond-1 ONLY

Method 8330B (~~SIR~~ AIR DRY PREP) : - Microbac, Marietta, OH

No.	PARAMETER	CAS RN
1.	2,4,6-trinitrotoluene (2,4,6-TNT)	118-96-7
2.	2,4-dinitrotoluene (2,4-DNT)	121-14-2
3.	HMX	2691-41-0
4.	2-amino-4,6-dinitrotoluene	35572-78-2
5.	4-amino-2,6-dinitrotoluene	19406-51-0
6.	Nitroglycerin	55-63-0

Microbac OVD
Received: 08/01/2014 09:41
By: JOSHUA PEMBERTON 221000057662

T:\Environmental\BBG\Databases\RAAP\Sample Event Set Up\Semi-Annual Events\HWMU-13\Annual OBG Soil Event\2014- Unit 13-OBG - Target Analyte List --Soil Samples.doc

2/2

ANALYTICAL REPORT

Job Number: 240-40177-1

Job Description: RAAP, HWMU-13 (Open Burning Ground)

For:
Draper Aden Associates, Inc.
2206 South Main street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Mark J Loeb
Project Manager II
9/2/2014 11:34 AM

Mark J Loeb, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
(330)966-9387
mark.loeb@testamericainc.com
09/02/2014

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RAAP, HWMU-13 (Open Burning Ground)

Report Number: 240-40177-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 8290A Dioxins/Furans and 160.3 MOD Percent Moisture (Sample 10 only for % Moisture) analysis was performed at the TestAmerica Knoxville Laboratory. A complete copy of their report is included in the subcontract data section of this report.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 8/1/2014 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4º C and 3.8º C.

DIESEL RANGE ORGANICS (DRO)

Samples PAD-1 (240-40177-1), PAD-4 (240-40177-4), PAD-7 (240-40177-7) and PAD-X (240-40177-9) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 08/05/2014 and analyzed on 08/07/2014.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Diesel failed the recovery criteria low for the MS of sample PAD-4MS (240-40177-4) in batch 240-141745. Refer to the QC report for details.

The following sample was unable to be analyzed due to a crack in the glassware causing sample loss during sample extraction: PAD-4 (240-40177-4 MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples PAD-1 (240-40177-1), PAD-2 (240-40177-2), PAD-3 (240-40177-3), PAD-4 (240-40177-4), PAD-5 (240-40177-5), PAD-6 (240-40177-6), PAD-7 (240-40177-7), PAD-8 (240-40177-8), PAD-X (240-40177-9), NB-1 (240-40177-12), NB-2 (240-40177-13), SB-1 (240-40177-14), SB-2 (240-40177-15), BERM-1 (240-40177-16) and POND-1 (240-40177-17) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 08/04/2014 and analyzed on 08/05/2014.

Barium was detected in method blank MB 240-141359/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Chromium and Lead failed the recovery criteria low for the MS of sample PAD-4MS (240-40177-4) in batch 240-141635.

Arsenic, Barium, Chromium and Lead failed the recovery criteria low for the MSD of sample PAD-4MSD (240-40177-4) in batch 240-141635. Barium exceeded the RPD limit.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)

Sample EQUIP BLANK (240-40177-11) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 08/04/2014 and analyzed on 08/05/2014.

Barium was detected in method blank MB 240-141314/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Sample EQUIP BLANK (240-40177-11) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 08/04/2014 and analyzed on 08/06/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples PAD-1 (240-40177-1), PAD-2 (240-40177-2), PAD-3 (240-40177-3), PAD-4 (240-40177-4), PAD-5 (240-40177-5), PAD-6 (240-40177-6), PAD-7 (240-40177-7), PAD-8 (240-40177-8) and PAD-X (240-40177-9) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 08/04/2014 and analyzed on 08/05/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Samples PAD-1 (240-40177-1), PAD-2 (240-40177-2), PAD-3 (240-40177-3), PAD-4 (240-40177-4), PAD-5 (240-40177-5), PAD-6 (240-40177-6), PAD-7 (240-40177-7), PAD-8 (240-40177-8) and PAD-X (240-40177-9) were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared on 08/13/2014 and analyzed on 08/14/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples PAD-1 (240-40177-1), PAD-2 (240-40177-2), PAD-3 (240-40177-3), PAD-4 (240-40177-4), PAD-5 (240-40177-5), PAD-6 (240-40177-6), PAD-7 (240-40177-7), PAD-8 (240-40177-8), PAD-X (240-40177-9), NB-1 (240-40177-12), NB-2 (240-40177-13), SB-1 (240-40177-14), SB-2 (240-40177-15), BERM-1 (240-40177-16) and POND-1 (240-40177-17) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 08/04/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SAMPLE SUMMARY

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-40177-1	PAD-1	Solid	07/31/2014 0830	08/01/2014 1030
240-40177-2	PAD-2	Solid	07/31/2014 0930	08/01/2014 1030
240-40177-3	PAD-3	Solid	07/31/2014 0950	08/01/2014 1030
240-40177-4	PAD-4	Solid	07/31/2014 1010	08/01/2014 1030
240-40177-4MS	PAD-4	Solid	07/31/2014 1010	08/01/2014 1030
240-40177-4MSDM SD	PAD-4	Solid	07/31/2014 1010	08/01/2014 1030
240-40177-4DU	PAD-4	Solid	07/31/2014 1010	08/01/2014 1030
240-40177-5	PAD-5	Solid	07/31/2014 1040	08/01/2014 1030
240-40177-6	PAD-6	Solid	07/31/2014 1100	08/01/2014 1030
240-40177-7	PAD-7	Solid	07/31/2014 1120	08/01/2014 1030
240-40177-8	PAD-8	Solid	07/31/2014 1150	08/01/2014 1030
240-40177-9	PAD-X	Solid	07/31/2014 1130	08/01/2014 1030
240-40177-10	PAD-XX	Solid	07/31/2014 0840	08/01/2014 1030
240-40177-11EB	EQUIP BLANK	Water	07/31/2014 0000	08/01/2014 1030
240-40177-12	NB-1	Solid	07/31/2014 1230	08/01/2014 1030
240-40177-13	NB-2	Solid	07/31/2014 1210	08/01/2014 1030
240-40177-14	SB-1	Solid	07/31/2014 1250	08/01/2014 1030
240-40177-15	SB-2	Solid	07/31/2014 1310	08/01/2014 1030
240-40177-16	BERM-1	Solid	07/31/2014 0850	08/01/2014 1030
240-40177-17	POND-1	Solid	07/31/2014 0910	08/01/2014 1030

EXECUTIVE SUMMARY - Detections

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-40177-1	**PAD-1**					
Arsenic		1.4		1.4	mg/Kg	6010C
Barium		89	B	18	mg/Kg	6010C
Cadmium		0.12	J	0.45	mg/Kg	6010C
Chromium		13		0.91	mg/Kg	6010C
Lead		38		0.91	mg/Kg	6010C
Silver		0.11	J	0.91	mg/Kg	6010C
Percent Solids		97		0.10	%	Moisture
Percent Moisture		2.5		0.10	%	Moisture
240-40177-2	**PAD-2**					
Arsenic		2.2		1.5	mg/Kg	6010C
Barium		120	B	20	mg/Kg	6010C
Cadmium		0.23	J	0.51	mg/Kg	6010C
Chromium		35		1.0	mg/Kg	6010C
Lead		160		1.0	mg/Kg	6010C
Silver		0.29	J	1.0	mg/Kg	6010C
Cr (VI)		0.74	J	0.83	mg/Kg	7196A
Percent Solids		96		0.10	%	Moisture
Percent Moisture		4.2		0.10	%	Moisture
240-40177-3	**PAD-3**					
Arsenic		1.2	J	1.4	mg/Kg	6010C
Barium		92	B	18	mg/Kg	6010C
Cadmium		0.10	J	0.46	mg/Kg	6010C
Chromium		17		0.91	mg/Kg	6010C
Lead		280		0.91	mg/Kg	6010C
Silver		0.14	J	0.91	mg/Kg	6010C
Cr (VI)		2.4		0.84	mg/Kg	7196A
Percent Solids		95		0.10	%	Moisture
Percent Moisture		5.3		0.10	%	Moisture
240-40177-4	**PAD-4**					
Diesel		190		18	mg/Kg	8015B
Arsenic		2.0		1.5	mg/Kg	6010C
Barium		140	B	21	mg/Kg	6010C
Cadmium		0.27	J	0.51	mg/Kg	6010C
Chromium		16		1.0	mg/Kg	6010C
Lead		270		1.0	mg/Kg	6010C
Silver		0.15	J	1.0	mg/Kg	6010C
Percent Solids		91		0.10	%	Moisture
Percent Moisture		9.1		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-40177-5	**PAD-5**					
Arsenic		1.6		1.3	mg/Kg	6010C
Barium		140	B	18	mg/Kg	6010C
Cadmium		0.11	J	0.45	mg/Kg	6010C
Chromium		13		0.90	mg/Kg	6010C
Lead		150		0.90	mg/Kg	6010C
Selenium		0.41	J	1.8	mg/Kg	6010C
Silver		0.11	J	0.90	mg/Kg	6010C
Mercury		0.027	J	0.11	mg/Kg	7471A
Percent Solids		97		0.10	%	Moisture
Percent Moisture		2.9		0.10	%	Moisture
240-40177-6	**PAD-6**					
Arsenic		0.88	J	1.5	mg/Kg	6010C
Barium		92	B	20	mg/Kg	6010C
Cadmium		0.16	J	0.49	mg/Kg	6010C
Chromium		30		0.98	mg/Kg	6010C
Lead		610		0.98	mg/Kg	6010C
Mercury		0.019	J	0.11	mg/Kg	7471A
Cr (VI)		1.6		0.84	mg/Kg	7196A
Percent Solids		95		0.10	%	Moisture
Percent Moisture		4.6		0.10	%	Moisture
240-40177-7	**PAD-7**					
Diesel		8.4	J	18	mg/Kg	8015B
Arsenic		1.9		1.4	mg/Kg	6010C
Barium		100	B	19	mg/Kg	6010C
Cadmium		0.11	J	0.48	mg/Kg	6010C
Chromium		13		0.96	mg/Kg	6010C
Lead		81		0.96	mg/Kg	6010C
Percent Solids		93		0.10	%	Moisture
Percent Moisture		7.0		0.10	%	Moisture
240-40177-8	**PAD-8**					
Arsenic		1.4		1.4	mg/Kg	6010C
Barium		80	B	19	mg/Kg	6010C
Cadmium		0.059	J	0.46	mg/Kg	6010C
Chromium		13		0.93	mg/Kg	6010C
Lead		110		0.93	mg/Kg	6010C
Silver		0.11	J	0.93	mg/Kg	6010C
Percent Solids		97		0.10	%	Moisture
Percent Moisture		2.6		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-40177-9	**PAD-X**					
Diesel		8.7	J	18	mg/Kg	8015B
Arsenic		1.4		1.2	mg/Kg	6010C
Barium		120	B	16	mg/Kg	6010C
Cadmium		0.12	J	0.41	mg/Kg	6010C
Chromium		11		0.81	mg/Kg	6010C
Lead		82		0.81	mg/Kg	6010C
Silver		0.083	J	0.81	mg/Kg	6010C
Percent Solids		94		0.10	%	Moisture
Percent Moisture		5.9		0.10	%	Moisture
240-40177-12	**NB-1**					
Arsenic		1.6		1.6	mg/Kg	6010C
Barium		110	B	21	mg/Kg	6010C
Cadmium		0.43	J	0.53	mg/Kg	6010C
Chromium		15		1.1	mg/Kg	6010C
Lead		240		1.1	mg/Kg	6010C
Percent Solids		85		0.10	%	Moisture
Percent Moisture		15		0.10	%	Moisture
240-40177-13	**NB-2**					
Arsenic		1.3	J	1.7	mg/Kg	6010C
Barium		100	B	23	mg/Kg	6010C
Cadmium		0.20	J	0.58	mg/Kg	6010C
Chromium		12		1.2	mg/Kg	6010C
Lead		210		1.2	mg/Kg	6010C
Percent Solids		84		0.10	%	Moisture
Percent Moisture		16		0.10	%	Moisture
240-40177-14	**SB-1**					
Arsenic		2.1		1.7	mg/Kg	6010C
Barium		100	B	23	mg/Kg	6010C
Cadmium		0.23	J	0.58	mg/Kg	6010C
Chromium		19		1.2	mg/Kg	6010C
Lead		54		1.2	mg/Kg	6010C
Percent Solids		78		0.10	%	Moisture
Percent Moisture		22		0.10	%	Moisture

EXECUTIVE SUMMARY - Detections

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
240-40177-15	**SB-2**					
Arsenic		2.2		1.9	mg/Kg	6010C
Barium		120	B	26	mg/Kg	6010C
Cadmium		0.39	J	0.64	mg/Kg	6010C
Chromium		21		1.3	mg/Kg	6010C
Lead		120		1.3	mg/Kg	6010C
Percent Solids		71		0.10	%	Moisture
Percent Moisture		29		0.10	%	Moisture
240-40177-16	**BERM-1**					
Arsenic		1.8		1.4	mg/Kg	6010C
Barium		81	B	19	mg/Kg	6010C
Cadmium		0.16	J	0.47	mg/Kg	6010C
Chromium		14		0.94	mg/Kg	6010C
Lead		120		0.94	mg/Kg	6010C
Percent Solids		96		0.10	%	Moisture
Percent Moisture		3.7		0.10	%	Moisture
240-40177-17	**POND-1**					
Arsenic		1.7		1.3	mg/Kg	6010C
Barium		92	B	18	mg/Kg	6010C
Cadmium		0.14	J	0.45	mg/Kg	6010C
Chromium		13		0.90	mg/Kg	6010C
Lead		86		0.90	mg/Kg	6010C
Percent Solids		94		0.10	%	Moisture
Percent Moisture		6.4		0.10	%	Moisture

METHOD SUMMARY

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Diesel Range Organics (DRO) (GC)	TAL CAN	SW846 8015B	
Soxhlet Extraction	TAL CAN		SW846 3540C
Metals (ICP)	TAL CAN	SW846 6010C	
Preparation, Metals	TAL CAN		SW846 3050B
Mercury (CVAA)	TAL CAN	SW846 7471A	
Preparation, Mercury	TAL CAN		SW846 7471A
Chromium, Hexavalent	TAL CAN	SW846 7196A	
Alkaline Digestion (Chromium, Hexavalent)	TAL CAN		SW846 3060A
Percent Moisture	TAL CAN	EPA Moisture	
General Sub Contract Method	TAL KNX	Subcontract	
Matrix: Water			
Metals (ICP)	TAL CAN	SW846 6010C	
Preparation, Total Recoverable or Dissolved Metals	TAL CAN		SW846 3005A
Mercury (CVAA)	TAL CAN	SW846 7470A	
Preparation, Mercury	TAL CAN		SW846 7470A

Lab References:

TAL CAN = TestAmerica Canton

TAL KNX = TestAmerica Knoxville

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Method	Analyst	Analyst ID
SW846 8015B	Bolgrin, Deborah	DEB
SW846 6010C	Counts, Karen	KLC
SW846 7470A	Martin, Aaron	AMM2
SW846 7471A	Martin, Aaron	AMM2
SW846 7196A	Burns, Jill	JMB
EPA Moisture	Linville, Jenae	JL

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-1**

Lab Sample ID: 240-40177-1 Date Sampled: 07/31/2014 0830
Client Matrix: Solid % Moisture: 2.5 Date Received: 08/01/2014 1030

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-141745	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-141526	Initial Weight/Volume:	30.20 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	08/07/2014 0159			Injection Volume:	1 uL
Prep Date:	08/05/2014 1016			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel		17	U	4.2	17

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	82		40 - 160

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-4**

Lab Sample ID: 240-40177-4 Date Sampled: 07/31/2014 1010
Client Matrix: Solid % Moisture: 9.1 Date Received: 08/01/2014 1030

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-141745	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-141526	Initial Weight/Volume:	30.05 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	08/07/2014 0237			Injection Volume:	1 uL
Prep Date:	08/05/2014 1016			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel		190		4.5	18

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	97		40 - 160

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-7**

Lab Sample ID: 240-40177-7 Date Sampled: 07/31/2014 1120
Client Matrix: Solid % Moisture: 7.0 Date Received: 08/01/2014 1030

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-141745	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-141526	Initial Weight/Volume:	30.01 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	08/07/2014 0355			Injection Volume:	1 uL
Prep Date:	08/05/2014 1016			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel		8.4	J	4.4	18

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	81		40 - 160

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-X**

Lab Sample ID: 240-40177-9 Date Sampled: 07/31/2014 1130
Client Matrix: Solid % Moisture: 5.9 Date Received: 08/01/2014 1030

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	240-141745	Instrument ID:	A2HP5F
Prep Method:	3540C	Prep Batch:	240-141526	Initial Weight/Volume:	29.85 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	08/07/2014 0433			Injection Volume:	1 uL
Prep Date:	08/05/2014 1016			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Diesel		8.7	J	4.4	18

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl (Surr)	78		40 - 160

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-1**

Lab Sample ID: 240-40177-1 Date Sampled: 07/31/2014 0830
Client Matrix: Solid % Moisture: 2.5 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	08/05/2014 0734			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.4		0.27	1.4
Barium		89	B	0.11	18
Cadmium		0.12	J	0.033	0.45
Chromium		13		0.18	0.91
Lead		38		0.17	0.91
Selenium		1.8	U	0.41	1.8
Silver		0.11	J	0.091	0.91

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	08/05/2014 1545			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11	U	0.016	0.11

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-2**

Lab Sample ID: 240-40177-2 Date Sampled: 07/31/2014 0930
Client Matrix: Solid % Moisture: 4.2 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	08/05/2014 0746			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.2		0.30	1.5
Barium		120	B	0.12	20
Cadmium		0.23	J	0.036	0.51
Chromium		35		0.20	1.0
Lead		160		0.19	1.0
Selenium		2.0	U	0.46	2.0
Silver		0.29	J	0.10	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	08/05/2014 1554			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11	U	0.016	0.11

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-3**

Lab Sample ID: 240-40177-3 Date Sampled: 07/31/2014 0950
Client Matrix: Solid % Moisture: 5.3 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	08/05/2014 0750			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.2	J	0.27	1.4
Barium		92	B	0.11	18
Cadmium		0.10	J	0.033	0.46
Chromium		17		0.18	0.91
Lead		280		0.17	0.91
Selenium		1.8	U	0.41	1.8
Silver		0.14	J	0.091	0.91

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.68 g
Analysis Date:	08/05/2014 1607			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.093	U	0.014	0.093

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-4**

Lab Sample ID: 240-40177-4 Date Sampled: 07/31/2014 1010
Client Matrix: Solid % Moisture: 9.1 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	08/05/2014 0714			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.0		0.31	1.5
Barium		140	B	0.12	21
Cadmium		0.27	J	0.037	0.51
Chromium		16		0.21	1.0
Lead		270		0.20	1.0
Selenium		2.1	U	0.46	2.1
Silver		0.15	J	0.10	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	08/05/2014 1510			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11	U	0.017	0.11

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-5**

Lab Sample ID: 240-40177-5 Date Sampled: 07/31/2014 1040
Client Matrix: Solid % Moisture: 2.9 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	08/05/2014 0754			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.6		0.27	1.3
Barium		140	B	0.11	18
Cadmium		0.11	J	0.032	0.45
Chromium		13		0.18	0.90
Lead		150		0.17	0.90
Selenium		0.41	J	0.40	1.8
Silver		0.11	J	0.090	0.90

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	08/05/2014 1523			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.027	J	0.017	0.11

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-6**

Lab Sample ID: 240-40177-6 Date Sampled: 07/31/2014 1100
Client Matrix: Solid % Moisture: 4.6 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	08/05/2014 0758			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		0.88	J	0.29	1.5
Barium		92	B	0.12	20
Cadmium		0.16	J	0.035	0.49
Chromium		30		0.20	0.98
Lead		610		0.19	0.98
Selenium		2.0	U	0.44	2.0
Silver		0.98	U	0.098	0.98

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	08/05/2014 1550			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.019	J	0.016	0.11

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-7**

Lab Sample ID: 240-40177-7 Date Sampled: 07/31/2014 1120
Client Matrix: Solid % Moisture: 7.0 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	08/05/2014 0802			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.9		0.29	1.4
Barium		100	B	0.12	19
Cadmium		0.11	J	0.035	0.48
Chromium		13		0.19	0.96
Lead		81		0.18	0.96
Selenium		1.9	U	0.43	1.9
Silver		0.96	U	0.096	0.96

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	08/05/2014 1542			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11	U	0.016	0.11

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-8**

Lab Sample ID: 240-40177-8 Date Sampled: 07/31/2014 1150
Client Matrix: Solid % Moisture: 2.6 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	08/05/2014 0807			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.4		0.28	1.4
Barium		80	B	0.11	19
Cadmium		0.059	J	0.033	0.46
Chromium		13		0.19	0.93
Lead		110		0.18	0.93
Selenium		1.9	U	0.42	1.9
Silver		0.11	J	0.093	0.93

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	08/05/2014 1557			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.099	U	0.015	0.099

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **PAD-X**

Lab Sample ID: 240-40177-9 Date Sampled: 07/31/2014 1130
Client Matrix: Solid % Moisture: 5.9 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.31 g
Analysis Date:	08/05/2014 0811			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.4		0.24	1.2
Barium		120	B	0.097	16
Cadmium		0.12	J	0.029	0.41
Chromium		11		0.16	0.81
Lead		82		0.15	0.81
Selenium		1.6	U	0.37	1.6
Silver		0.083	J	0.081	0.81

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	240-141667	Instrument ID:	H4
Prep Method:	7471A	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	08/05/2014 1600			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.11	U	0.017	0.11

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **EQUIP BLANK**

Lab Sample ID: 240-40177-11EB Date Sampled: 07/31/2014 0000
Client Matrix: Water Date Received: 08/01/2014 1030

6010C Metals (ICP)-Total Recoverable

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3005A	Prep Batch:	240-141314	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/05/2014 0927			Final Weight/Volume:	50 mL
Prep Date:	08/04/2014 0919				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Silver	10	U	2.2	10
Arsenic	15	U	3.2	15
Barium	200	U	0.67	200
Cadmium	5.0	U	0.66	5.0
Chromium	10	U	2.2	10
Lead	10	U	1.9	10
Selenium	20	U	4.1	20

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-141786	Instrument ID:	H1
Prep Method:	7470A	Prep Batch:	240-141321	Lab File ID:	080614A-HG1.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	08/06/2014 1527			Final Weight/Volume:	50 mL
Prep Date:	08/04/2014 1425				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **NB-1**

Lab Sample ID: 240-40177-12 Date Sampled: 07/31/2014 1230
Client Matrix: Solid % Moisture: 15.4 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	08/05/2014 0815			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.6		0.32	1.6
Barium		110	B	0.13	21
Cadmium		0.43	J	0.038	0.53
Chromium		15		0.21	1.1
Lead		240		0.20	1.1
Selenium		2.1	U	0.47	2.1

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **NB-2**

Lab Sample ID: 240-40177-13 Date Sampled: 07/31/2014 1210
Client Matrix: Solid % Moisture: 16.0 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	08/05/2014 0819			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.3	J	0.35	1.7
Barium		100	B	0.14	23
Cadmium		0.20	J	0.042	0.58
Chromium		12		0.23	1.2
Lead		210		0.22	1.2
Selenium		2.3	U	0.52	2.3

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **SB-1**

Lab Sample ID: 240-40177-14 Date Sampled: 07/31/2014 1250
Client Matrix: Solid % Moisture: 21.8 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	08/05/2014 0823			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.1		0.35	1.7
Barium		100	B	0.14	23
Cadmium		0.23	J	0.041	0.58
Chromium		19		0.23	1.2
Lead		54		0.22	1.2
Selenium		2.3	U	0.52	2.3

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **SB-2**

Lab Sample ID: 240-40177-15 Date Sampled: 07/31/2014 1310
Client Matrix: Solid % Moisture: 28.9 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	08/05/2014 0835			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.2		0.39	1.9
Barium		120	B	0.15	26
Cadmium		0.39	J	0.046	0.64
Chromium		21		0.26	1.3
Lead		120		0.25	1.3
Selenium		2.6	U	0.58	2.6

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **BERM-1**

Lab Sample ID: 240-40177-16 Date Sampled: 07/31/2014 0850
Client Matrix: Solid % Moisture: 3.7 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	08/05/2014 0839			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.8		0.28	1.4
Barium		81	B	0.11	19
Cadmium		0.16	J	0.034	0.47
Chromium		14		0.19	0.94
Lead		120		0.18	0.94
Selenium		1.9	U	0.42	1.9

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Client Sample ID: **POND-1**

Lab Sample ID: 240-40177-17 Date Sampled: 07/31/2014 0910
Client Matrix: Solid % Moisture: 6.4 Date Received: 08/01/2014 1030

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	240-141635	Instrument ID:	I9
Prep Method:	3050B	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0			Initial Weight/Volume:	1.19 g
Analysis Date:	08/05/2014 0843			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.7		0.27	1.3
Barium		92	B	0.11	18
Cadmium		0.14	J	0.032	0.45
Chromium		13		0.18	0.90
Lead		86		0.17	0.90
Selenium		1.8	U	0.40	1.8

General Chemistry

Client Sample ID: **PAD-1**

Lab Sample ID: 240-40177-1 Date Sampled: 07/31/2014 0830

Client Matrix: Solid % Moisture: 2.5 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.82	U	mg/Kg	0.28	0.82	1.0	7196A
Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1113						DryWt Corrected: Y
Prep Batch: 240-142649	Prep Date: 08/13/2014 1020						
Percent Solids	97		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	2.5		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-2**

Lab Sample ID: 240-40177-2 Date Sampled: 07/31/2014 0930
Client Matrix: Solid % Moisture: 4.2 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.74	J	mg/Kg	0.28	0.83	1.0	7196A
Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1115						DryWt Corrected: Y
Prep Batch: 240-142649	Prep Date: 08/13/2014 1020						
Percent Solids	96		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	4.2		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-3**

Lab Sample ID: 240-40177-3 Date Sampled: 07/31/2014 0950

Client Matrix: Solid % Moisture: 5.3 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	2.4		mg/Kg	0.29	0.84	1.0	7196A
	Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1119					DryWt Corrected: Y
	Prep Batch: 240-142649	Prep Date: 08/13/2014 1020					
Percent Solids	95		%	0.10	0.10	1.0	Moisture
	Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805					DryWt Corrected: N
Percent Moisture	5.3		%	0.10	0.10	1.0	Moisture
	Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805					DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-4**

Lab Sample ID: 240-40177-4 Date Sampled: 07/31/2014 1010

Client Matrix: Solid % Moisture: 9.1 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.88	U	mg/Kg	0.30	0.88	1.0	7196A
Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1122						DryWt Corrected: Y
Prep Batch: 240-142649	Prep Date: 08/13/2014 1020						
Percent Solids	91		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	9.1		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-5**

Lab Sample ID: 240-40177-5 Date Sampled: 07/31/2014 1040

Client Matrix: Solid % Moisture: 2.9 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.82	U	mg/Kg	0.28	0.82	1.0	7196A
Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1135						DryWt Corrected: Y
Prep Batch: 240-142649	Prep Date: 08/13/2014 1020						
Percent Solids	97		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	2.9		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-6**

Lab Sample ID: 240-40177-6 Date Sampled: 07/31/2014 1100

Client Matrix: Solid % Moisture: 4.6 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	1.6		mg/Kg	0.28	0.84	1.0	7196A
	Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1136					DryWt Corrected: Y
	Prep Batch: 240-142649	Prep Date: 08/13/2014 1020					
Percent Solids	95		%	0.10	0.10	1.0	Moisture
	Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805					DryWt Corrected: N
Percent Moisture	4.6		%	0.10	0.10	1.0	Moisture
	Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805					DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-7**

Lab Sample ID: 240-40177-7 Date Sampled: 07/31/2014 1120

Client Matrix: Solid % Moisture: 7.0 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.86	U	mg/Kg	0.29	0.86	1.0	7196A
Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1142						DryWt Corrected: Y
Prep Batch: 240-142649	Prep Date: 08/13/2014 1020						
Percent Solids	93		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	7.0		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-8**

Lab Sample ID: 240-40177-8 Date Sampled: 07/31/2014 1150
Client Matrix: Solid % Moisture: 2.6 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.82	U	mg/Kg	0.28	0.82	1.0	7196A
Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1144						DryWt Corrected: Y
Prep Batch: 240-142649	Prep Date: 08/13/2014 1020						
Percent Solids	97		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	2.6		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **PAD-X**

Lab Sample ID: 240-40177-9 Date Sampled: 07/31/2014 1130
Client Matrix: Solid % Moisture: 5.9 Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cr (VI)	0.85	U	mg/Kg	0.29	0.85	1.0	7196A
Analysis Batch: 240-142857	Analysis Date: 08/14/2014 1146						DryWt Corrected: Y
Prep Batch: 240-142649	Prep Date: 08/13/2014 1020						
Percent Solids	94		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	5.9		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **NB-1**

Lab Sample ID: 240-40177-12 Date Sampled: 07/31/2014 1230
Client Matrix: Solid Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	85		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	15		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **NB-2**

Lab Sample ID: 240-40177-13 Date Sampled: 07/31/2014 1210

Client Matrix: Solid Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	84		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	16		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-1**

Lab Sample ID: 240-40177-14 Date Sampled: 07/31/2014 1250
Client Matrix: Solid Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	78		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	22		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **SB-2**

Lab Sample ID: 240-40177-15 Date Sampled: 07/31/2014 1310
Client Matrix: Solid Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	71		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	29		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **BERM-1**

Lab Sample ID: 240-40177-16 Date Sampled: 07/31/2014 0850

Client Matrix: Solid Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	96		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	3.7		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

General Chemistry

Client Sample ID: **POND-1**

Lab Sample ID: 240-40177-17 Date Sampled: 07/31/2014 0910

Client Matrix: Solid Date Received: 08/01/2014 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Percent Solids	94		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N
Percent Moisture	6.4		%	0.10	0.10	1.0	Moisture
Analysis Batch: 240-141274	Analysis Date: 08/04/2014 0805						DryWt Corrected: N

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Surrogate Recovery Report

8015B Diesel Range Organics (DRO) (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH1 %Rec
240-40177-1	PAD-1	82
240-40177-4	PAD-4	97
240-40177-7	PAD-7	81
240-40177-9	PAD-X	78
MB 240-141526/23-A		67
LCS 240-141526/24-A		70
240-40177-4 MS	PAD-4 MS	110

Surrogate	Acceptance Limits
OTPH = o-Terphenyl (Surr)	40-160

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Method Blank - Batch: 240-141526

Method: 8015B
Preparation: 3540C

Lab Sample ID:	MB 240-141526/23-A	Analysis Batch:	240-141745	Instrument ID:	A2HP5F
Client Matrix:	Solid	Prep Batch:	240-141526	Lab File ID:	P5F80610.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	08/06/2014 1853	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	08/05/2014 1016			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Diesel	17	U	4.1	17

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	67	40 - 160

Lab Control Sample - Batch: 240-141526

Method: 8015B
Preparation: 3540C

Lab Sample ID:	LCS 240-141526/24-A	Analysis Batch:	240-141745	Instrument ID:	A2HP5F
Client Matrix:	Solid	Prep Batch:	240-141526	Lab File ID:	P5F80611.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	08/06/2014 1932	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	08/05/2014 1016			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Diesel	83.3	63.6	76	52 - 120	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	70	40 - 160

Matrix Spike - Batch: 240-141526

Method: 8015B
Preparation: 3540C

Lab Sample ID:	240-40177-4	Analysis Batch:	240-141745	Instrument ID:	A2HP5F
Client Matrix:	Solid	Prep Batch:	240-141526	Lab File ID:	P5F80623.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.89 g
Analysis Date:	08/07/2014 0316	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	08/05/2014 1016			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Diesel	190	92.0	168	-27	10 - 124	F1

Surrogate	% Rec	Acceptance Limits
o-Terphenyl (Surr)	110	40 - 160

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Method Blank - Batch: 240-141314

Method: 6010C
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 240-141314/1-A	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-141314	Lab File ID:	I9080514A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/05/2014 0903	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/04/2014 0919				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	15	U	3.2	15
Barium	0.791	J	0.67	200
Cadmium	5.0	U	0.66	5.0
Chromium	10	U	2.2	10
Lead	10	U	1.9	10
Silver	10	U	2.2	10
Selenium	20	U	4.1	20

Lab Control Sample - Batch: 240-141314

Method: 6010C
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 240-141314/2-A	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Water	Prep Batch:	240-141314	Lab File ID:	I9080514A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/05/2014 0907	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/04/2014 0919				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	2000	1940	97	80 - 120	
Barium	2000	1870	94	80 - 120	
Cadmium	50.0	51.8	104	80 - 120	
Chromium	200	188	94	80 - 120	
Lead	500	459	92	80 - 120	
Silver	50.0	54.1	108	80 - 120	
Selenium	2000	2160	108	80 - 120	

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Method Blank - Batch: 240-141359

Method: 6010C
Preparation: 3050B

Lab Sample ID:	MB 240-141359/1-A	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	08/05/2014 0706	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	1.5	U	0.30	1.5
Barium	1.50	J	0.12	20
Cadmium	0.50	U	0.036	0.50
Chromium	1.0	U	0.20	1.0
Lead	1.0	U	0.19	1.0
Silver	1.0	U	0.10	1.0
Selenium	2.0	U	0.45	2.0

Lab Control Sample - Batch: 240-141359

Method: 6010C
Preparation: 3050B

Lab Sample ID:	LCS 240-141359/2-A	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	08/05/2014 0710	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	200	193	97	80 - 120	
Barium	200	192	96	80 - 120	
Cadmium	5.00	5.14	103	80 - 120	
Chromium	20.0	19.4	97	80 - 120	
Lead	50.0	47.5	95	80 - 120	
Silver	5.00	5.27	105	80 - 120	
Selenium	200	199	99	80 - 120	

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Post Digestion Spike - Batch: 240-141359

Method: 6010C
Preparation: 3050B

Lab Sample ID:	240-40177-4	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.07 g
Analysis Date:	08/05/2014 0722	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	2.0	30.8	30.4	92	80 - 120	
Barium	140	5.14	139	NC	80 - 120	
Chromium	16	20.6	34.1	86	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-141359

Method: 6010C
Preparation: 3050B

MS Lab Sample ID:	240-40177-4	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	08/05/2014 0726			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				
Leach Date:	N/A				

MSD Lab Sample ID:	240-40177-4	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	08/05/2014 0730			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	80	71	75 - 125	12	20		F1
Barium	79	44	75 - 125	27	20		F1 F2
Cadmium	88	78	75 - 125	11	20		
Chromium	66	53	75 - 125	9	20	F1	F1
Lead	-165	-170	75 - 125	1	20	4	4
Selenium	84	75	75 - 125	12	20		
Silver	91	82	75 - 125	10	20		

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-141359

Method: 6010C
Preparation: 3050B

MS Lab Sample ID:	240-40177-4	Units:	mg/Kg	MSD Lab Sample ID:	240-40177-4
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	08/05/2014 0726			Analysis Date:	08/05/2014 0730
Prep Date:	08/04/2014 1134			Prep Date:	08/04/2014 1134
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Arsenic	2.0		198	198	161		144	F1
Barium	140		198	198	294		223	F1 F2
Cadmium	0.27	J	4.96	4.96	4.64		4.14	
Chromium	16		19.8	19.8	29.5	F1	26.9	F1
Lead	270		49.6	49.6	189	4	187	4
Selenium	2.1	U	198	198	166		148	
Silver	0.15	J	4.96	4.96	4.66		4.23	

Serial Dilution - Batch: 240-141359

Method: 6010C
Preparation: 3050B

Lab Sample ID:	240-40177-4	Analysis Batch:	240-141635	Instrument ID:	I9
Client Matrix:	Solid	Prep Batch:	240-141359	Lab File ID:	I9080514A.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.07 g
Analysis Date:	08/05/2014 0718	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1134				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	%Diff	Limit	Qual
Arsenic	2.0		1.73	NC	10	J
Barium	140		151	10	10	
Cadmium	0.27	J	0.452	NC	10	J
Chromium	16		19.5	19	10	V
Lead	270		308	14	10	V
Silver	0.15	J	5.1	NC	10	U
Selenium	2.1	U	10	NC	10	U

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Method Blank - Batch: 240-141321

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 240-141321/1-A	Analysis Batch:	240-141786	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-141321	Lab File ID:	080614A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/06/2014 1448	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/04/2014 1425				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.12	0.20

Lab Control Sample - Batch: 240-141321

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 240-141321/2-A	Analysis Batch:	240-141786	Instrument ID:	H1
Client Matrix:	Water	Prep Batch:	240-141321	Lab File ID:	080614A-HG1.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	08/06/2014 1450	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	08/04/2014 1425				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	5.00	5.07	101	81 - 123	

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Method Blank - Batch: 240-141377

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 240-141377/1-A	Analysis Batch:	240-141667	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	08/05/2014 1505	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.10	U	0.015	0.10

Lab Control Sample - Batch: 240-141377

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 240-141377/2-A	Analysis Batch:	240-141667	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	08/05/2014 1508	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.833	0.798	96	73 - 121	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-141377

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-40177-4	Analysis Batch:	240-141667	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	08/05/2014 1512			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				
Leach Date:	N/A				

MSD Lab Sample ID:	240-40177-4	Analysis Batch:	240-141667	Instrument ID:	H4
Client Matrix:	Solid	Prep Batch:	240-141377	Lab File ID:	080514A-HG4.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	08/05/2014 1515			Final Weight/Volume:	100 mL
Prep Date:	08/04/2014 1500				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	111	111	11 - 192	0	20		

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 240-141377

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	240-40177-4	Units:	mg/Kg	MSD Lab Sample ID:	240-40177-4
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	08/05/2014 1512			Analysis Date:	08/05/2014 1515
Prep Date:	08/04/2014 1500			Prep Date:	08/04/2014 1500
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.11	U	0.183	0.183	0.204	0.204

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Method Blank - Batch: 240-142649

Method: 7196A
Preparation: 3060A

Lab Sample ID:	MB 240-142649/9-A	Analysis Batch:	240-142857	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-142649	Lab File ID:	142649.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	08/14/2014 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/13/2014 1020				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cr (VI)	0.80	U	0.27	0.80

Lab Control Sample Insoluble - Batch: 240-142649

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSI 240-142649/11-A	Analysis Batch:	240-142857	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-142649	Lab File ID:	142649.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	08/14/2014 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/13/2014 1020				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	643	652	101	75 - 125	

Lab Control Sample Soluble - Batch: 240-142649

Method: 7196A
Preparation: 3060A

Lab Sample ID:	LCSS 240-142649/10-A	Analysis Batch:	240-142857	Instrument ID:	ERNIE-CR
Client Matrix:	Solid	Prep Batch:	240-142649	Lab File ID:	142649.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2.50 g
Analysis Date:	08/14/2014 0000	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	08/13/2014 1020				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cr (VI)	20.0	19.6	98	90 - 110	

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

Duplicate - Batch: 240-141274

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-40177-16	Analysis Batch:	240-141274	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	08/04/2014 0805	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	96	96	0.1	20	
Percent Moisture	3.7	3.9	4	20	

Duplicate - Batch: 240-141274

Method: Moisture
Preparation: N/A

Lab Sample ID:	240-40177-4	Analysis Batch:	240-141274	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	08/04/2014 0805	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	91	91	0.2	20	
Percent Moisture	9.1	8.9	2	20	

DATA REPORTING QUALIFIERS

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Lab Section	Qualifier	Description
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	F1	MS and/or MSD Recovery exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	F1	MS and/or MSD Recovery exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F2	MS/MSD RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	V	Serial Dilution exceeds the control limits
General Chemistry		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 240-141526					
LCS 240-141526/24-A	Lab Control Sample	T	Solid	3540C	
MB 240-141526/23-A	Method Blank	T	Solid	3540C	
240-40177-1	PAD-1	T	Solid	3540C	
240-40177-4	PAD-4	T	Solid	3540C	
240-40177-4MS	Matrix Spike	T	Solid	3540C	
240-40177-7	PAD-7	T	Solid	3540C	
240-40177-9	PAD-X	T	Solid	3540C	
Analysis Batch:240-141745					
LCS 240-141526/24-A	Lab Control Sample	T	Solid	8015B	240-141526
MB 240-141526/23-A	Method Blank	T	Solid	8015B	240-141526
240-40177-1	PAD-1	T	Solid	8015B	240-141526
240-40177-4	PAD-4	T	Solid	8015B	240-141526
240-40177-4MS	Matrix Spike	T	Solid	8015B	240-141526
240-40177-7	PAD-7	T	Solid	8015B	240-141526
240-40177-9	PAD-X	T	Solid	8015B	240-141526

Report Basis

T = Total

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 240-141314					
LCS 240-141314/2-A	Lab Control Sample	R	Water	3005A	
MB 240-141314/1-A	Method Blank	R	Water	3005A	
240-40177-11EB	EQUIP BLANK	R	Water	3005A	
Prep Batch: 240-141321					
LCS 240-141321/2-A	Lab Control Sample	T	Water	7470A	
MB 240-141321/1-A	Method Blank	T	Water	7470A	
240-40177-11EB	EQUIP BLANK	T	Water	7470A	
Prep Batch: 240-141359					
LCS 240-141359/2-A	Lab Control Sample	T	Solid	3050B	
MB 240-141359/1-A	Method Blank	T	Solid	3050B	
240-40177-1	PAD-1	T	Solid	3050B	
240-40177-2	PAD-2	T	Solid	3050B	
240-40177-3	PAD-3	T	Solid	3050B	
240-40177-4	PAD-4	T	Solid	3050B	
240-40177-4MS	Matrix Spike	T	Solid	3050B	
240-40177-4MSD	Matrix Spike Duplicate	T	Solid	3050B	
240-40177-5	PAD-5	T	Solid	3050B	
240-40177-6	PAD-6	T	Solid	3050B	
240-40177-7	PAD-7	T	Solid	3050B	
240-40177-8	PAD-8	T	Solid	3050B	
240-40177-9	PAD-X	T	Solid	3050B	
240-40177-12	NB-1	T	Solid	3050B	
240-40177-13	NB-2	T	Solid	3050B	
240-40177-14	SB-1	T	Solid	3050B	
240-40177-15	SB-2	T	Solid	3050B	
240-40177-16	BERM-1	T	Solid	3050B	
240-40177-17	POND-1	T	Solid	3050B	
Prep Batch: 240-141377					
LCS 240-141377/2-A	Lab Control Sample	T	Solid	7471A	
MB 240-141377/1-A	Method Blank	T	Solid	7471A	
240-40177-1	PAD-1	T	Solid	7471A	
240-40177-2	PAD-2	T	Solid	7471A	
240-40177-3	PAD-3	T	Solid	7471A	
240-40177-4	PAD-4	T	Solid	7471A	
240-40177-4MS	Matrix Spike	T	Solid	7471A	
240-40177-4MSD	Matrix Spike Duplicate	T	Solid	7471A	
240-40177-5	PAD-5	T	Solid	7471A	
240-40177-6	PAD-6	T	Solid	7471A	
240-40177-7	PAD-7	T	Solid	7471A	
240-40177-8	PAD-8	T	Solid	7471A	
240-40177-9	PAD-X	T	Solid	7471A	

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:240-141635					
LCS 240-141314/2-A	Lab Control Sample	R	Water	6010C	240-141314
MB 240-141314/1-A	Method Blank	R	Water	6010C	240-141314
LCS 240-141359/2-A	Lab Control Sample	T	Solid	6010C	240-141359
MB 240-141359/1-A	Method Blank	T	Solid	6010C	240-141359
240-40177-1	PAD-1	T	Solid	6010C	240-141359
240-40177-2	PAD-2	T	Solid	6010C	240-141359
240-40177-3	PAD-3	T	Solid	6010C	240-141359
240-40177-4	PAD-4	T	Solid	6010C	240-141359
240-40177-4MS	Matrix Spike	T	Solid	6010C	240-141359
240-40177-4MSD	Matrix Spike Duplicate	T	Solid	6010C	240-141359
240-40177-5	PAD-5	T	Solid	6010C	240-141359
240-40177-6	PAD-6	T	Solid	6010C	240-141359
240-40177-7	PAD-7	T	Solid	6010C	240-141359
240-40177-8	PAD-8	T	Solid	6010C	240-141359
240-40177-9	PAD-X	T	Solid	6010C	240-141359
240-40177-11EB	EQUIP BLANK	R	Water	6010C	240-141314
240-40177-12	NB-1	T	Solid	6010C	240-141359
240-40177-13	NB-2	T	Solid	6010C	240-141359
240-40177-14	SB-1	T	Solid	6010C	240-141359
240-40177-15	SB-2	T	Solid	6010C	240-141359
240-40177-16	BERM-1	T	Solid	6010C	240-141359
240-40177-17	POND-1	T	Solid	6010C	240-141359
Analysis Batch:240-141667					
LCS 240-141377/2-A	Lab Control Sample	T	Solid	7471A	240-141377
MB 240-141377/1-A	Method Blank	T	Solid	7471A	240-141377
240-40177-1	PAD-1	T	Solid	7471A	240-141377
240-40177-2	PAD-2	T	Solid	7471A	240-141377
240-40177-3	PAD-3	T	Solid	7471A	240-141377
240-40177-4	PAD-4	T	Solid	7471A	240-141377
240-40177-4MS	Matrix Spike	T	Solid	7471A	240-141377
240-40177-4MSD	Matrix Spike Duplicate	T	Solid	7471A	240-141377
240-40177-5	PAD-5	T	Solid	7471A	240-141377
240-40177-6	PAD-6	T	Solid	7471A	240-141377
240-40177-7	PAD-7	T	Solid	7471A	240-141377
240-40177-8	PAD-8	T	Solid	7471A	240-141377
240-40177-9	PAD-X	T	Solid	7471A	240-141377
Analysis Batch:240-141786					
LCS 240-141321/2-A	Lab Control Sample	T	Water	7470A	240-141321
MB 240-141321/1-A	Method Blank	T	Water	7470A	240-141321
240-40177-11EB	EQUIP BLANK	T	Water	7470A	240-141321

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis

R = Total Recoverable

T = Total

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:240-141274					
240-40177-1	PAD-1	T	Solid	Moisture	
240-40177-2	PAD-2	T	Solid	Moisture	
240-40177-3	PAD-3	T	Solid	Moisture	
240-40177-4	PAD-4	T	Solid	Moisture	
240-40177-4DU	Duplicate	T	Solid	Moisture	
240-40177-5	PAD-5	T	Solid	Moisture	
240-40177-6	PAD-6	T	Solid	Moisture	
240-40177-7	PAD-7	T	Solid	Moisture	
240-40177-8	PAD-8	T	Solid	Moisture	
240-40177-9	PAD-X	T	Solid	Moisture	
240-40177-12	NB-1	T	Solid	Moisture	
240-40177-13	NB-2	T	Solid	Moisture	
240-40177-14	SB-1	T	Solid	Moisture	
240-40177-15	SB-2	T	Solid	Moisture	
240-40177-16	BERM-1	T	Solid	Moisture	
240-40177-16DU	Duplicate	T	Solid	Moisture	
240-40177-17	POND-1	T	Solid	Moisture	
Prep Batch: 240-142649					
LCSI 240-142649/11-A	Lab Control Sample Insoluble	T	Solid	3060A	
LCSS 240-142649/10-A	Lab Control Sample Soluble	T	Solid	3060A	
MB 240-142649/9-A	Method Blank	T	Solid	3060A	
240-40177-1	PAD-1	T	Solid	3060A	
240-40177-2	PAD-2	T	Solid	3060A	
240-40177-3	PAD-3	T	Solid	3060A	
240-40177-4	PAD-4	T	Solid	3060A	
240-40177-5	PAD-5	T	Solid	3060A	
240-40177-6	PAD-6	T	Solid	3060A	
240-40177-7	PAD-7	T	Solid	3060A	
240-40177-8	PAD-8	T	Solid	3060A	
240-40177-9	PAD-X	T	Solid	3060A	
Analysis Batch:240-142857					
LCSI 240-142649/11-A	Lab Control Sample Insoluble	T	Solid	7196A	240-142649
LCSS 240-142649/10-A	Lab Control Sample Soluble	T	Solid	7196A	240-142649
MB 240-142649/9-A	Method Blank	T	Solid	7196A	240-142649
240-40177-1	PAD-1	T	Solid	7196A	240-142649
240-40177-2	PAD-2	T	Solid	7196A	240-142649
240-40177-3	PAD-3	T	Solid	7196A	240-142649
240-40177-4	PAD-4	T	Solid	7196A	240-142649
240-40177-5	PAD-5	T	Solid	7196A	240-142649
240-40177-6	PAD-6	T	Solid	7196A	240-142649
240-40177-7	PAD-7	T	Solid	7196A	240-142649
240-40177-8	PAD-8	T	Solid	7196A	240-142649
240-40177-9	PAD-X	T	Solid	7196A	240-142649

Client: Draper Aden Associates, Inc.

Job Number: 240-40177-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis

T = Total

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Laboratory Chronicle

Lab ID: 240-40177-1 **Client ID:** PAD-1

Sample Date/Time: 07/31/2014 08:30 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3540C	240-40177-D-1-C		240-141745	240-141526	08/05/2014 10:16	1	TAL CAN	SDE
A:8015B	240-40177-D-1-C		240-141745	240-141526	08/07/2014 01:59	1	TAL CAN	DEB
P:3050B	240-40177-D-1-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-D-1-A		240-141635	240-141359	08/05/2014 07:34	1	TAL CAN	KLC
P:7471A	240-40177-D-1-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-D-1-B		240-141667	240-141377	08/05/2014 15:45	1	TAL CAN	AMM2
P:3060A	240-40177-C-1-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-C-1-A		240-142857	240-142649	08/14/2014 11:13	1	TAL CAN	JMB
A:Moisture	240-40177-A-1		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-2 **Client ID:** PAD-2

Sample Date/Time: 07/31/2014 09:30 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-C-2-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-C-2-A		240-141635	240-141359	08/05/2014 07:46	1	TAL CAN	KLC
P:7471A	240-40177-C-2-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-C-2-B		240-141667	240-141377	08/05/2014 15:54	1	TAL CAN	AMM2
P:3060A	240-40177-B-2-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-B-2-A		240-142857	240-142649	08/14/2014 11:15	1	TAL CAN	JMB
A:Moisture	240-40177-A-2		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-3 **Client ID:** PAD-3

Sample Date/Time: 07/31/2014 09:50 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-C-3-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-C-3-A		240-141635	240-141359	08/05/2014 07:50	1	TAL CAN	KLC
P:7471A	240-40177-C-3-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-C-3-B		240-141667	240-141377	08/05/2014 16:07	1	TAL CAN	AMM2
P:3060A	240-40177-B-3-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-B-3-A		240-142857	240-142649	08/14/2014 11:19	1	TAL CAN	JMB
A:Moisture	240-40177-A-3		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Laboratory Chronicle

Lab ID: 240-40177-4 **Client ID:** PAD-4

Sample Date/Time: 07/31/2014 10:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3540C	240-40177-J-4-A		240-141745	240-141526	08/05/2014 10:16	1	TAL CAN	SDE
A:8015B	240-40177-J-4-A		240-141745	240-141526	08/07/2014 02:37	1	TAL CAN	DEB
P:3050B	240-40177-F-4-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-F-4-A		240-141635	240-141359	08/05/2014 07:14	1	TAL CAN	KLC
P:7471A	240-40177-F-4-D		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-F-4-D		240-141667	240-141377	08/05/2014 15:10	1	TAL CAN	AMM2
P:3060A	240-40177-I-4-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-I-4-A		240-142857	240-142649	08/14/2014 11:22	1	TAL CAN	JMB
A:Moisture	240-40177-A-4		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-4 **Client ID:** PAD-4

Sample Date/Time: 07/31/2014 10:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3540C	240-40177-J-4-B MS		240-141745	240-141526	08/05/2014 10:16	1	TAL CAN	SDE
A:8015B	240-40177-J-4-B MS		240-141745	240-141526	08/07/2014 03:16	1	TAL CAN	DEB
P:3050B	240-40177-F-4-B MS		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-F-4-B MS		240-141635	240-141359	08/05/2014 07:26	1	TAL CAN	KLC
P:7471A	240-40177-F-4-E MS		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-F-4-E MS		240-141667	240-141377	08/05/2014 15:12	1	TAL CAN	AMM2

Lab ID: 240-40177-4 **Client ID:** PAD-4

Sample Date/Time: 07/31/2014 10:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-F-4-C MSD		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-F-4-C MSD		240-141635	240-141359	08/05/2014 07:30	1	TAL CAN	KLC
P:7471A	240-40177-F-4-F MSD		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-F-4-F MSD		240-141667	240-141377	08/05/2014 15:15	1	TAL CAN	AMM2

Lab ID: 240-40177-4 **Client ID:** PAD-4

Sample Date/Time: 07/31/2014 10:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:Moisture	240-40177-B-4 DU		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Laboratory Chronicle

Lab ID: **240-40177-4 SD** **Client ID:** **PAD-4**

Sample Date/Time: 07/31/2014 10:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-F-4-A SD ^5		240-141635	240-141359	08/04/2014 11:34	5	TAL CAN	DEE
A:6010C	240-40177-F-4-A SD ^5		240-141635	240-141359	08/05/2014 07:18	5	TAL CAN	KLC
P:3050B	240-40177-F-4-A PDS		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-F-4-A PDS		240-141635	240-141359	08/05/2014 07:22	1	TAL CAN	KLC

Lab ID: **240-40177-5** **Client ID:** **PAD-5**

Sample Date/Time: 07/31/2014 10:40 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-C-5-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-C-5-A		240-141635	240-141359	08/05/2014 07:54	1	TAL CAN	KLC
P:7471A	240-40177-C-5-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-C-5-B		240-141667	240-141377	08/05/2014 15:23	1	TAL CAN	AMM2
P:3060A	240-40177-B-5-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-B-5-A		240-142857	240-142649	08/14/2014 11:35	1	TAL CAN	JMB
A:Moisture	240-40177-A-5		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: **240-40177-6** **Client ID:** **PAD-6**

Sample Date/Time: 07/31/2014 11:00 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-6-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-6-A		240-141635	240-141359	08/05/2014 07:58	1	TAL CAN	KLC
P:7471A	240-40177-B-6-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-B-6-B		240-141667	240-141377	08/05/2014 15:50	1	TAL CAN	AMM2
P:3060A	240-40177-C-6-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-C-6-A		240-142857	240-142649	08/14/2014 11:36	1	TAL CAN	JMB
A:Moisture	240-40177-A-6		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Laboratory Chronicle

Lab ID: **240-40177-7** **Client ID:** **PAD-7**

Sample Date/Time: 07/31/2014 11:20 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3540C	240-40177-B-7-A		240-141745	240-141526	08/05/2014 10:16	1	TAL CAN	SDE
A:8015B	240-40177-B-7-A		240-141745	240-141526	08/07/2014 03:55	1	TAL CAN	DEB
P:3050B	240-40177-D-7-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-D-7-A		240-141635	240-141359	08/05/2014 08:02	1	TAL CAN	KLC
P:7471A	240-40177-D-7-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-D-7-B		240-141667	240-141377	08/05/2014 15:42	1	TAL CAN	AMM2
P:3060A	240-40177-D-7-C		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-D-7-C		240-142857	240-142649	08/14/2014 11:42	1	TAL CAN	JMB
A:Moisture	240-40177-A-7		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: **240-40177-8** **Client ID:** **PAD-8**

Sample Date/Time: 07/31/2014 11:50 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-8-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-8-A		240-141635	240-141359	08/05/2014 08:07	1	TAL CAN	KLC
P:7471A	240-40177-B-8-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-B-8-B		240-141667	240-141377	08/05/2014 15:57	1	TAL CAN	AMM2
P:3060A	240-40177-C-8-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-C-8-A		240-142857	240-142649	08/14/2014 11:44	1	TAL CAN	JMB
A:Moisture	240-40177-A-8		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: **240-40177-9** **Client ID:** **PAD-X**

Sample Date/Time: 07/31/2014 11:30 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3540C	240-40177-C-9-C		240-141745	240-141526	08/05/2014 10:16	1	TAL CAN	SDE
A:8015B	240-40177-C-9-C		240-141745	240-141526	08/07/2014 04:33	1	TAL CAN	DEB
P:3050B	240-40177-C-9-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-C-9-A		240-141635	240-141359	08/05/2014 08:11	1	TAL CAN	KLC
P:7471A	240-40177-C-9-B		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	240-40177-C-9-B		240-141667	240-141377	08/05/2014 16:00	1	TAL CAN	AMM2
P:3060A	240-40177-B-9-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	240-40177-B-9-A		240-142857	240-142649	08/14/2014 11:46	1	TAL CAN	JMB
A:Moisture	240-40177-A-9		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Laboratory Chronicle

Lab ID: 240-40177-11 **Client ID:** EQUIP BLANK

Sample Date/Time: 07/31/2014 00:00 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	240-40177-A-11-A		240-141635	240-141314	08/04/2014 09:19	1	TAL CAN	ADS
A:6010C	240-40177-A-11-A		240-141635	240-141314	08/05/2014 09:27	1	TAL CAN	KLC
P:7470A	240-40177-A-11-B		240-141786	240-141321	08/04/2014 14:25	1	TAL CAN	ADS
A:7470A	240-40177-A-11-B		240-141786	240-141321	08/06/2014 15:27	1	TAL CAN	AMM2

Lab ID: 240-40177-12 **Client ID:** NB-1

Sample Date/Time: 07/31/2014 12:30 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-12-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-12-A		240-141635	240-141359	08/05/2014 08:15	1	TAL CAN	KLC
A:Moisture	240-40177-A-12		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-13 **Client ID:** NB-2

Sample Date/Time: 07/31/2014 12:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-13-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-13-A		240-141635	240-141359	08/05/2014 08:19	1	TAL CAN	KLC
A:Moisture	240-40177-A-13		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-14 **Client ID:** SB-1

Sample Date/Time: 07/31/2014 12:50 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-14-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-14-A		240-141635	240-141359	08/05/2014 08:23	1	TAL CAN	KLC
A:Moisture	240-40177-A-14		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-15 **Client ID:** SB-2

Sample Date/Time: 07/31/2014 13:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-15-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-15-A		240-141635	240-141359	08/05/2014 08:35	1	TAL CAN	KLC
A:Moisture	240-40177-A-15		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Laboratory Chronicle

Lab ID: 240-40177-16 **Client ID:** BERM-1

Sample Date/Time: 07/31/2014 08:50 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-16-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-16-A		240-141635	240-141359	08/05/2014 08:39	1	TAL CAN	KLC
A:Moisture	240-40177-A-16		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-16 DU **Client ID:** BERM-1

Sample Date/Time: 07/31/2014 08:50 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:Moisture	240-40177-A-16 DU		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: 240-40177-17 **Client ID:** POND-1

Sample Date/Time: 07/31/2014 09:10 Received Date/Time: 08/01/2014 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3050B	240-40177-B-17-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	240-40177-B-17-A		240-141635	240-141359	08/05/2014 08:43	1	TAL CAN	KLC
A:Moisture	240-40177-A-17		240-141274		08/04/2014 08:05	1	TAL CAN	JL

Lab ID: MB **Client ID:** N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3540C	MB 240-141526/23-A		240-141745	240-141526	08/05/2014 10:16	1	TAL CAN	SDE
A:8015B	MB 240-141526/23-A		240-141745	240-141526	08/06/2014 18:53	1	TAL CAN	DEB
P:3050B	MB 240-141359/1-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	MB 240-141359/1-A		240-141635	240-141359	08/05/2014 07:06	1	TAL CAN	KLC
P:3005A	MB 240-141314/1-A		240-141635	240-141314	08/04/2014 09:19	1	TAL CAN	ADS
A:6010C	MB 240-141314/1-A		240-141635	240-141314	08/05/2014 09:03	1	TAL CAN	KLC
P:7470A	MB 240-141321/1-A		240-141786	240-141321	08/04/2014 14:25	1	TAL CAN	ADS
A:7470A	MB 240-141321/1-A		240-141786	240-141321	08/06/2014 14:48	1	TAL CAN	AMM2
P:7471A	MB 240-141377/1-A		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	MB 240-141377/1-A		240-141667	240-141377	08/05/2014 15:05	1	TAL CAN	AMM2
P:3060A	MB 240-142649/9-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	MB 240-142649/9-A		240-142857	240-142649	08/14/2014 00:00	1	TAL CAN	JMB

Client: Draper Aden Associates, Inc. Job Number: 240-40177-1

Laboratory Chronicle

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3540C	LCS 240-141526/24-A		240-141745	240-141526	08/05/2014 10:16	1	TAL CAN	SDE
A:8015B	LCS 240-141526/24-A		240-141745	240-141526	08/06/2014 19:32	1	TAL CAN	DEB
P:3050B	LCS 240-141359/2-A		240-141635	240-141359	08/04/2014 11:34	1	TAL CAN	DEE
A:6010C	LCS 240-141359/2-A		240-141635	240-141359	08/05/2014 07:10	1	TAL CAN	KLC
P:3005A	LCS 240-141314/2-A		240-141635	240-141314	08/04/2014 09:19	1	TAL CAN	ADS
A:6010C	LCS 240-141314/2-A		240-141635	240-141314	08/05/2014 09:07	1	TAL CAN	KLC
P:7470A	LCS 240-141321/2-A		240-141786	240-141321	08/04/2014 14:25	1	TAL CAN	ADS
A:7470A	LCS 240-141321/2-A		240-141786	240-141321	08/06/2014 14:50	1	TAL CAN	AMM2
P:7471A	LCS 240-141377/2-A		240-141667	240-141377	08/04/2014 15:00	1	TAL CAN	DEE
A:7471A	LCS 240-141377/2-A		240-141667	240-141377	08/05/2014 15:08	1	TAL CAN	AMM2

Lab ID: **LCSI** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3060A	LCSI 240-142649/11-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
P:3060A	LCSS 240-142649/10-A		240-142857	240-142649	08/13/2014 10:20	1	TAL CAN	JMB
A:7196A	LCSI 240-142649/11-A		240-142857	240-142649	08/14/2014 00:00	1	TAL CAN	JMB
A:7196A	LCSS 240-142649/10-A		240-142857	240-142649	08/14/2014 00:00	1	TAL CAN	JMB

Lab References:
TAL CAN = TestAmerica Canton

Subcontract Data

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Trace Level Organics 61
Raw Sample Data DB-5 Column..... 62
Raw Sample Data DB-225 Column..... 648
Standards Data DB-5 Column..... 729
Initial Calibration 140516iepa.pdf 730
Continuing Calibration 140822s4.pdf..... 986
Continuing Calibration 140823s1.pdf..... 1050
Continuing Calibration 140823s2.pdf..... 1108
Continuing Calibration 140823s3.pdf..... 1171
Continuing Calibration 140823s4.pdf..... 1229
Continuing Calibration 140824s1.pdf..... 1293
Continuing Calibration 140825s1.pdf..... 1351
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Continuing Calibration 140825s3.pdf..... 1472
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Continuing Calibration 140825s1.pdf..... 1774
Continuing Calibration 140825s2.pdf..... 1788
Raw QC Data 1803
Miscellaneous Data..... 1992

Percent Moisture 2000

Sample Receipt Documentation 2019

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 240-40177-1

RAAP, HWMU-13

Lot #: H4H060409

Mark Loeb

TestAmerica North Canton
4101 Shuffel Street NW
North Canton, OH 44720

TESTAMERICA LABORATORIES, INC.

Ryan Henry

Ryan Henry
Project Manager

August 26, 2014

ANALYTICAL METHODS SUMMARY

H4H060409

PARAMETER	ANALYTICAL METHOD
Dibenzodioxins and Dibenzofurans, HRGC/HRMS	SW846 8290A
Percent Moisture	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

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WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
M4J37	001	PAD-1	07/31/14	08:30
M4J4A	002	PAD-2	07/31/14	09:30
M4J4D	003	PAD-3	07/31/14	09:50
M4J4F	004	PAD-4	07/31/14	10:10
M4J4G	005	PAD-5	07/31/14	10:40
M4J4J	006	PAD-6	07/31/14	11:00
M4J4L	007	PAD-7	07/31/14	11:20
M4J4M	008	PAD-8	07/31/14	11:50
M4J4N	009	NB-1	07/31/14	12:30
M4J4P	010	NB-2	07/31/14	12:10
M4J4Q	011	SB-1	07/31/14	12:50
M4J4R	012	SB-2	07/31/14	13:10
M4J4T	013	BERM-1	07/31/14	08:50
M4J4V	014	POND-1	07/31/14	09:10
M4J4W	015	PAD-XX	07/31/14	08:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

For solid and sediments samples, when percent moisture is included in the report header field, the sample results are reported on a dry weight basis. When percent moisture is not contained in the header field, sample results are reported on an as received or wet weight basis.

The matrix spike duplicate on sample PAD-4 exhibited native OCDD below the lower acceptance criterion (31%) at 12%. The laboratory control sample was within limits indicating a lack of sample homogeneity.

All positive 2378-TCDF results at or above the minimum level were confirmed on a DB-225 column.

The 2378-TCDF result for samples PAD-4 (Original), PAD-4 (Matrix Spike) and PAD-4 (Matrix Spike Duplicate) are reported with an "X" qualifier to indicate that this analyte was reported from the DB-225 analytical column analysis. All other analytes for these samples were reported from the Rtx-5 analytical column analysis. The DB-225 analytical column raw data is included in the data package after each Rtx-5 column analysis.

The following flags are used to qualify results for chlorinated dioxin and furan results:

J – The reported result is an estimate. The amount reported is below the Minimum Level (ML). The qualitative definition of the ML is "the lowest level at which the analytical system must give a reliable signal and an acceptable calibration point". The ML was introduced in EPA Methods 1624 and 1625 in 1980 and was promulgated in these methods in 1984 at 40 CFR Part 136, Appendix A. For the purposes of this report, the ML is qualitatively defined as described above, and quantitatively defined as follows:

Minimum Level: The concentration or mass of analyte in the sample that corresponds to the lowest calibration level in the initial calibration. It represents a concentration (in the sample extract) equivalent to that of the lowest calibration standard, after corrections for method-specified sample weights, volumes and cleanup procedures has been employed.

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Example: The lowest calibration level for TCDD in the initial calibration is 0.5 pg/uL. A mass of 10 pg of 2,3,7,8-TCDD in the sample would result in a concentration of 0.5 pg/uL in the sample extract (at a final volume of 20 uL). Since the concentration in the sample extract corresponds to the concentration in the lowest calibration standard, the 10 pg mass in the sample components is the ML. If the sample extract is further diluted, the ML will increase by the dilution factor.

Example: A 1/10 dilution is performed on the sample extract described above. The ML for 2,3,7,8-TCDD becomes 100 pg rather than the default of 10 pg.

E – The reported result is an estimate. The amount reported is above the Upper Calibration Level (UCL) described below. The quantitative definition of the UCL is listed below:

Upper Calibration Level: The concentration or mass of analyte in the sample that corresponds to the highest calibration level in the initial calibration. It is equivalent to the concentration of the highest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.

Example: The maximum calibration level for TCDD in the initial calibration is 200 pg/uL. A mass of 4000 pg of 2,3,7,8-TCDD in the sampling components would result in a concentration of 200 pg/uL in the sample extract (at a final volume of 20 uL). Since the concentration in the sample extract corresponds to the concentration in the highest calibration standard, the 4000 pg mass in the sample components is the UCL. If the sample extract is further diluted, the ML will increase by the dilution factor.

Example: A 1/10 dilution is performed on the sample extract described above. The UCL for 2,3,7,8-TCDD becomes 40,000 pg rather than the default of 4000 pg. In this example, all positive 2,3,7,8-TCDD results above 40,000 pg are flagged with an E.

B – The analyte is present in the associated method blank at a detectable level. For this analysis, there is no method specified reporting level other than the qualitative criterion that peaks must exhibit a signal-to-noise ratio of $\geq$2.5 to 1. Therefore, the presence of any reportable amount of the analyte in the blank will result in a B qualifier on all associated samples.

Q – Estimated maximum possible concentration. This qualifier is used when the result is generated from chromatographic data that does not meet all the qualitative criteria for a positive identification given in the method. These criteria include the following:

- Ion abundance ratios must be within specified limits (+/-15% of theoretical ion abundance ratio).
- Retention time criteria (relative to the method-specified isotope labeled retention time standard).
- Co-maximization criterion. The two quantitation ion peaks must reach their maxima within 2 seconds of each other.
- Polychlorinated dibenzofuran purity. No peak can be identified as a polychlorinated dibenzofuran if a polychlorinated diphenyl ether peak maximizes within +/- 2 seconds of the furan candidate.

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S – Ion suppression evident. The trace indicating the signal from the lock mass of the calibration compound shows a deflection at the retention time of the analyte. This may indicate a temporary suppression of the instrument sensitivity due to a matrix-borne interference.

C – Coeluting Isomer. The isomer is known to coelute with another member of its homologue group, or the peak shape is shouldered, indicating the likelihood of a coeluting isomer.

X – Other. See explanation in narrative.

Laboratory studies supporting risk assessment and Total Maximum Daily Load (TMDL) evaluations, frequently use qualified data reported as low as the Method Detection Limit (MDL), or the Estimated Detection Limit (EDL). Several of EPA's isotope dilution methods employ the EDL.[1,2,3] The EDL is based on a direct measurement of the signal-to-noise (S/N) ratio acquired during sample analysis. This S/N measurement is used to calculate the concentration in the sample corresponding to the minimum intensity of the smallest quantifiable peak. The EDL reflects the amount of the particular analyte which would be required to cause a positive result for the particular analysis. Because the S/N obtained covaries with recovery, instrument sensitivity and sample-specific cleanup efficacy, the EDL is a more valid measure of the sensitivity of the entire analytical process for the specific sample than is an MDL run periodically on a reference matrix.

The EDL is typically calculated according to the following equation:

$$\text{Estimated Detection Limit} = \frac{N \times 2.5 \times Qis}{His \times RRF \times W \times S}$$

Where:

N	=	peak to peak noise of quantitation ion signal in the region of the ion chromatogram where the compound of interest is expected to elute
His	=	peak height of quantitation ion for appropriate internal standard
Qis	=	ng of internal standard added to sample
RRF	=	mean relative response factor of compound obtained during initial calibration
W	=	amount of sample extracted (grams or liters)
S	=	percent solids (optional, if results are requested to be reported on dry weight basis)

(The area of the internal standard is sometimes used instead of height, along with an area-to-height conversion factor.)

This method of estimating the detection limit differs from the MDL in that it does not carry the requirement that the sample be statistically distinguished as being from a contaminated population. As results approach the EDL, the risk of false positives and the analytical uncertainty increase significantly. However, a low false positive well below the ML or MDL is often closer to the true value than an assumption that the target analyte is present at the detection or reporting limits. For relatively clean samples, MDL studies may give an elevated

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estimate of the detection limit. Additionally, on contaminated samples, the MDL may give a falsely low estimate of the detection limit.

$$\text{Analyte Concentration} = \frac{As \times Qis}{Ais \times RRF \times W \times S}$$

Where:

As	=	Sum of areas of the target peaks
Qis	=	ng of internal standard added to sample
Ais	=	Sum of areas of the internal standard peaks
RRF	=	mean relative response factor of compound obtained during initial calibration
W	=	amount of sample extracted (grams or liters)
S	=	percent solids (optional, if results are requested to be reported on dry weight basis)

In sample data, peaks must have an intensity of $\geq$2.5 times the height of the background noise in order to be considered. Careful examination of the two equations above reveals that for the concentration of the smallest peak detectable (per the EDL equation) to exactly equal the smallest peaks that are calculated, requires that the average height to area ratio obtained during the calibration must equal the area to height ratio for every peak obtained near 2.5 times the noise. When the area to height ratio on a peak in a sample is less than the average obtained during calibration, the calculated result will correspond to a peak that would have been less than 2.5 times the noise on the calibration. This is the result of normal variability. Because the source methods for the EDL (SW-846 8290 and 8280A) do not provide for censoring of results by any other magnitude standard than being 2.5 times the noise, the laboratory does not censor at the calculated EDL. Hence, detections may be reported below the estimated detection limits.

Footnotes:

1. Code of Federal Regulations, Part 136, Chapter 1, Appendix 1, October 1994: Method 1613 Tetra- Through Octa-Chlorinated Dioxins and Furans by Isotope Dilution High Resolution Gas Chromatography/High Resolution Mass Spectrometry.
2. U.S. EPA. Test Methods for Evaluating Solid Waste, Volume II, SW-846, Update III, December 1996. Method 8280A: The Analysis of Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by High Resolution Gas Chromatography/Low Resolution Mass Spectrometry.
3. U.S. EPA. Test Methods for Evaluating Solid Waste, SW-846. Third Edition. March 1995 Method 8290: Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

CERTIFICATION SUMMARY

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Knoxville	L-A-B	DoD ELAP		L2311
TestAmerica Knoxville	Arkansas DEQ	State Program	6	88-0688
TestAmerica Knoxville	California	State Program	9	2423
TestAmerica Knoxville	Colorado	State Program	8	N/A
TestAmerica Knoxville	Connecticut	State Program	1	PH-0223
TestAmerica Knoxville	Florida	NELAC	4	E87177
TestAmerica Knoxville	Georgia	State Program	4	906
TestAmerica Knoxville	Hawaii	State Program	9	N/A
TestAmerica Knoxville	Indiana	State Program	5	C-TN-02
TestAmerica Knoxville	Iowa	State Program	7	375
TestAmerica Knoxville	Kansas	NELAC	7	E-10349
TestAmerica Knoxville	Kentucky	State Program	4	90101
TestAmerica Knoxville	Louisiana DOHH	State Program	6	LA110001
TestAmerica Knoxville	Louisiana DEQ	NELAC	6	83979
TestAmerica Knoxville	Maryland	State Program	3	277
TestAmerica Knoxville	Michigan	State Program	5	9933
TestAmerica Knoxville	Minnesota	NELAC	5	047-999-429
TestAmerica Knoxville	Nevada	State Program	9	TN00009
TestAmerica Knoxville	New Jersey	NELAC	2	TN001
TestAmerica Knoxville	New York	NELAC	2	10781
TestAmerica Knoxville	North Carolina DENR	State Program	4	64
TestAmerica Knoxville	North Carolina DHHS	State Program	4	21705
TestAmerica Knoxville	Ohio	OVAP	5	CL0059
TestAmerica Knoxville	Oklahoma	State Program	6	9415
TestAmerica Knoxville	Pennsylvania	NELAC	3	68-00576
TestAmerica Knoxville	South Carolina	State Program	4	84001
TestAmerica Knoxville	Tennessee	State Program	4	2014
TestAmerica Knoxville	Texas	NELAC	6	T104704380-TX
TestAmerica Knoxville	Federal	USDA		P330-11-00035
TestAmerica Knoxville	Utah	NELAC	8	QUAN3
TestAmerica Knoxville	Virginia	NELAC	3	460176
TestAmerica Knoxville	Virginia	State Program	3	165
TestAmerica Knoxville	Washington	State Program	10	C593
TestAmerica Knoxville	West Virginia DEP	State Program	3	345
TestAmerica Knoxville	West Virginia DHHR	State Program	3	9955C

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Sample Data Summary

TestAmerica Canton

Sample ID: PAD-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 001	**Work Order #....:**	M4J371AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	2.5
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.078	pg/g
1,2,3,7,8-PeCDD	**0.17**	**Q J**	**5.1**	**0.032**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.28**	**Q B J**	**5.1**	**0.042**	**pg/g**
1,2,3,6,7,8-HxCDD	**0.42**	**Q B J**	**5.1**	**0.045**	**pg/g**
1,2,3,7,8,9-HxCDD	**0.53**	**Q B J**	**5.1**	**0.041**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**9.3**	**B**	**5.1**	**0.076**	**pg/g**
OCDD	**560**	**B**	**10**	**0.19**	**pg/g**
2,3,7,8-TCDF	ND		1.0	0.016	pg/g
1,2,3,7,8-PeCDF	ND		5.1	0.022	pg/g
2,3,4,7,8-PeCDF	**0.14**	**Q B J**	**5.1**	**0.023**	**pg/g**
1,2,3,4,7,8-HxCDF	ND		5.1	0.024	pg/g
1,2,3,6,7,8-HxCDF	**0.15**	**Q B J**	**5.1**	**0.023**	**pg/g**
2,3,4,6,7,8-HxCDF	ND		5.1	0.027	pg/g
1,2,3,7,8,9-HxCDF	ND		5.1	0.033	pg/g
1,2,3,4,6,7,8-HpCDF	**0.86**	**Q B J**	**5.1**	**0.028**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.30**	**Q B J**	**5.1**	**0.041**	**pg/g**
OCDF	**1.7**	**Q B J**	**10**	**0.030**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	69	40 - 135
13C-1,2,3,7,8-PeCDD	62	40 - 135
13C-1,2,3,4,7,8-HxCDD	69	40 - 135
13C-1,2,3,6,7,8-HxCDD	68	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	72	40 - 135
13C-2,3,7,8-TCDF	66	40 - 135
13C-1,2,3,7,8-PeCDF	67	40 - 135
13C-2,3,4,7,8-PeCDF	62	40 - 135
13C-1,2,3,4,7,8-HxCDF	67	40 - 135
13C-1,2,3,6,7,8-HxCDF	65	40 - 135
13C-2,3,4,6,7,8-HxCDF	66	40 - 135
13C-1,2,3,7,8,9-HxCDF	64	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	74	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	71	40 - 135
13C-OCDF	63	40 - 135

TestAmerica Canton

Sample ID: PAD-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 001	**Work Order #....:**	M4J371AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	2.5
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 002	**Work Order #....:**	M4J4A1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	4.2
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.15	Q B J	1.0	0.092	pg/g
1,2,3,7,8-PeCDD	0.65	Q J	5.2	0.044	pg/g
1,2,3,4,7,8-HxCDD	0.71	Q B J	5.2	0.049	pg/g
1,2,3,6,7,8-HxCDD	1.7	B J	5.2	0.052	pg/g
1,2,3,7,8,9-HxCDD	1.9	C B J	5.2	0.047	pg/g
1,2,3,4,6,7,8-HpCDD	21	B	5.2	0.070	pg/g
OCDD	250	B	10	0.11	pg/g
2,3,7,8-TCDF	0.48	J	1.0	0.062	pg/g
1,2,3,7,8-PeCDF	0.31	Q B J	5.2	0.048	pg/g
2,3,4,7,8-PeCDF	0.57	B J	5.2	0.050	pg/g
1,2,3,4,7,8-HxCDF	0.99	Q B J	5.2	0.030	pg/g
1,2,3,6,7,8-HxCDF	0.48	Q B J	5.2	0.028	pg/g
2,3,4,6,7,8-HxCDF	0.37	B J	5.2	0.029	pg/g
1,2,3,7,8,9-HxCDF	0.11	B J	5.2	0.040	pg/g
1,2,3,4,6,7,8-HpCDF	3.4	B J	5.2	0.028	pg/g
1,2,3,4,7,8,9-HpCDF	0.47	B J	5.2	0.037	pg/g
OCDF	7.6	B J	10	0.034	pg/g

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	63	40 - 135
13C-1,2,3,7,8-PeCDD	65	40 - 135
13C-1,2,3,4,7,8-HxCDD	68	40 - 135
13C-1,2,3,6,7,8-HxCDD	65	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	73	40 - 135
13C-OCDD	61	40 - 135
13C-2,3,7,8-TCDF	66	40 - 135
13C-1,2,3,7,8-PeCDF	68	40 - 135
13C-2,3,4,7,8-PeCDF	63	40 - 135
13C-1,2,3,4,7,8-HxCDF	67	40 - 135
13C-1,2,3,6,7,8-HxCDF	68	40 - 135
13C-2,3,4,6,7,8-HxCDF	69	40 - 135
13C-1,2,3,7,8,9-HxCDF	64	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	69	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	70	40 - 135
13C-OCDF	53	40 - 135

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Sample ID: PAD-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 002	**Work Order #....:**	M4J4A1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	4.2
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-3

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 003	**Work Order #....:**	M4J4D1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	5.3
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.1	0.090	pg/g
1,2,3,7,8-PeCDD	**0.37**	**Q J**	**5.3**	**0.046**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.25**	**B J**	**5.3**	**0.051**	**pg/g**
1,2,3,6,7,8-HxCDD	**1.2**	**B J**	**5.3**	**0.050**	**pg/g**
1,2,3,7,8,9-HxCDD	**0.95**	**Q B J**	**5.3**	**0.048**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**24**	**B**	**5.3**	**0.089**	**pg/g**
OCDD	**340**	**B**	**11**	**0.18**	**pg/g**
2,3,7,8-TCDF	**0.19**	**Q J**	**1.1**	**0.040**	**pg/g**
1,2,3,7,8-PeCDF	**0.32**	**Q B J**	**5.3**	**0.043**	**pg/g**
2,3,4,7,8-PeCDF	**0.40**	**B J**	**5.3**	**0.044**	**pg/g**
1,2,3,4,7,8-HxCDF	**0.48**	**Q B J**	**5.3**	**0.031**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.50**	**Q B J**	**5.3**	**0.029**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.22**	**B J**	**5.3**	**0.031**	**pg/g**
1,2,3,7,8,9-HxCDF	ND		5.3	0.040	pg/g
1,2,3,4,6,7,8-HpCDF	**3.4**	**Q B J**	**5.3**	**0.044**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.59**	**Q B J**	**5.3**	**0.055**	**pg/g**
OCDF	**6.3**	**Q B J**	**11**	**0.029**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	63	40 - 135
13C-1,2,3,7,8-PeCDD	63	40 - 135
13C-1,2,3,4,7,8-HxCDD	64	40 - 135
13C-1,2,3,6,7,8-HxCDD	68	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	70	40 - 135
13C-2,3,7,8-TCDF	71	40 - 135
13C-1,2,3,7,8-PeCDF	65	40 - 135
13C-2,3,4,7,8-PeCDF	61	40 - 135
13C-1,2,3,4,7,8-HxCDF	68	40 - 135
13C-1,2,3,6,7,8-HxCDF	65	40 - 135
13C-2,3,4,6,7,8-HxCDF	69	40 - 135
13C-1,2,3,7,8,9-HxCDF	66	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	69	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	74	40 - 135
13C-OCDF	64	40 - 135

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Sample ID: PAD-3

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 003	**Work Order #....:**	M4J4D1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	5.3
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-4

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 004	**Work Order #....:**	M4J4F1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	9.1
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	2.5	B	1.1	0.19	pg/g
1,2,3,7,8-PeCDD	4.1	J	5.5	0.11	pg/g
1,2,3,4,7,8-HxCDD	2.7	B J	5.5	0.11	pg/g
1,2,3,6,7,8-HxCDD	5.4	B J	5.5	0.12	pg/g
1,2,3,7,8,9-HxCDD	8.4	C B	5.5	0.11	pg/g
1,2,3,4,6,7,8-HpCDD	78	B	5.5	0.10	pg/g
OCDD	630	B	11	0.13	pg/g
2,3,7,8-TCDF	1.4	X	1.1	0.12	pg/g
1,2,3,7,8-PeCDF	0.65	Q B J	5.5	0.073	pg/g
2,3,4,7,8-PeCDF	0.92	Q B J	5.5	0.073	pg/g
1,2,3,4,7,8-HxCDF	1.8	Q B J	5.5	0.031	pg/g
1,2,3,6,7,8-HxCDF	1.4	Q B J	5.5	0.033	pg/g
2,3,4,6,7,8-HxCDF	0.77	Q B J	5.5	0.033	pg/g
1,2,3,7,8,9-HxCDF	0.19	Q B J	5.5	0.041	pg/g
1,2,3,4,6,7,8-HpCDF	9.2	B	5.5	0.050	pg/g
1,2,3,4,7,8,9-HpCDF	0.92	Q B J	5.5	0.061	pg/g
OCDF	18	B	11	0.027	pg/g

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	69	40 - 135
13C-1,2,3,7,8-PeCDD	62	40 - 135
13C-1,2,3,4,7,8-HxCDD	67	40 - 135
13C-1,2,3,6,7,8-HxCDD	62	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	75	40 - 135
13C-OCDD	70	40 - 135
13C-2,3,7,8-TCDF	68	40 - 135
13C-1,2,3,7,8-PeCDF	63	40 - 135
13C-2,3,4,7,8-PeCDF	62	40 - 135
13C-1,2,3,4,7,8-HxCDF	69	40 - 135
13C-1,2,3,6,7,8-HxCDF	61	40 - 135
13C-2,3,4,6,7,8-HxCDF	67	40 - 135
13C-1,2,3,7,8,9-HxCDF	67	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	69	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	75	40 - 135
13C-OCDF	61	40 - 135

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Sample ID: PAD-4

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 004	**Work Order #....:**	M4J4F1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	9.1
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

X See project narrative.

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Sample ID: PAD-5

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 005	**Work Order #....:**	M4J4G1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	2.9
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.3 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.26	Q B J	1.0	0.089	pg/g
1,2,3,7,8-PeCDD	0.56	J	5.0	0.048	pg/g
1,2,3,4,7,8-HxCDD	0.50	Q B J	5.0	0.048	pg/g
1,2,3,6,7,8-HxCDD	0.83	Q B J	5.0	0.054	pg/g
1,2,3,7,8,9-HxCDD	1.4	Q B J	5.0	0.048	pg/g
1,2,3,4,6,7,8-HpCDD	14	B	5.0	0.044	pg/g
OCDD	160	B	10	0.079	pg/g
2,3,7,8-TCDF	0.65	Q J	1.0	0.050	pg/g
1,2,3,7,8-PeCDF	0.29	B J	5.0	0.042	pg/g
2,3,4,7,8-PeCDF	0.48	B J	5.0	0.039	pg/g
1,2,3,4,7,8-HxCDF	1.0	C B J	5.0	0.025	pg/g
1,2,3,6,7,8-HxCDF	0.49	Q B J	5.0	0.025	pg/g
2,3,4,6,7,8-HxCDF	0.48	Q B J	5.0	0.025	pg/g
1,2,3,7,8,9-HxCDF	0.18	Q B J	5.0	0.030	pg/g
1,2,3,4,6,7,8-HpCDF	3.4	Q B J	5.0	0.028	pg/g
1,2,3,4,7,8,9-HpCDF	0.47	Q B J	5.0	0.035	pg/g
OCDF	7.0	B J	10	0.032	pg/g

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	69	40 - 135
13C-1,2,3,7,8-PeCDD	61	40 - 135
13C-1,2,3,4,7,8-HxCDD	69	40 - 135
13C-1,2,3,6,7,8-HxCDD	62	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	66	40 - 135
13C-2,3,7,8-TCDF	71	40 - 135
13C-1,2,3,7,8-PeCDF	66	40 - 135
13C-2,3,4,7,8-PeCDF	65	40 - 135
13C-1,2,3,4,7,8-HxCDF	69	40 - 135
13C-1,2,3,6,7,8-HxCDF	63	40 - 135
13C-2,3,4,6,7,8-HxCDF	67	40 - 135
13C-1,2,3,7,8,9-HxCDF	67	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	74	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	77	40 - 135
13C-OCDF	62	40 - 135

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Sample ID: PAD-5

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 005	**Work Order #....:**	M4J4G1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	2.9
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.3 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-6

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 006	**Work Order #....:**	M4J4J1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	4.6
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.29	Q B J	1.0	0.084	pg/g
1,2,3,7,8-PeCDD	0.83	Q J	5.2	0.063	pg/g
1,2,3,4,7,8-HxCDD	0.62	Q B J	5.2	0.039	pg/g
1,2,3,6,7,8-HxCDD	1.4	Q B J	5.2	0.042	pg/g
1,2,3,7,8,9-HxCDD	2.0	C B J	5.2	0.038	pg/g
1,2,3,4,6,7,8-HpCDD	25	B	5.2	0.055	pg/g
OCDD	230	B	10	0.079	pg/g
1,2,3,7,8-PeCDF	0.47	Q B J	5.2	0.035	pg/g
2,3,4,7,8-PeCDF	1.1	B J	5.2	0.033	pg/g
1,2,3,4,7,8-HxCDF	1.7	C B J	5.2	0.029	pg/g
1,2,3,6,7,8-HxCDF	0.94	Q B J	5.2	0.027	pg/g
2,3,4,6,7,8-HxCDF	0.96	B J	5.2	0.031	pg/g
1,2,3,7,8,9-HxCDF	0.24	Q B J	5.2	0.038	pg/g
1,2,3,4,6,7,8-HpCDF	4.6	B J	5.2	0.030	pg/g
1,2,3,4,7,8,9-HpCDF	1.1	Q B J	5.2	0.041	pg/g
OCDF	9.1	B J	10	0.030	pg/g

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	40 - 135
13C-1,2,3,7,8-PeCDD	66	40 - 135
13C-1,2,3,4,7,8-HxCDD	74	40 - 135
13C-1,2,3,6,7,8-HxCDD	67	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	80	40 - 135
13C-OCDD	78	40 - 135
13C-1,2,3,7,8-PeCDF	68	40 - 135
13C-2,3,4,7,8-PeCDF	67	40 - 135
13C-1,2,3,4,7,8-HxCDF	74	40 - 135
13C-1,2,3,6,7,8-HxCDF	70	40 - 135
13C-2,3,4,6,7,8-HxCDF	72	40 - 135
13C-1,2,3,7,8,9-HxCDF	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	78	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	78	40 - 135
13C-OCDF	67	40 - 135

TestAmerica Canton

Sample ID: PAD-6

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 006	**Work Order #....:**	M4J4J1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture**	4.6
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-6

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 006	**Work Order #....:**	M4J4J1AD	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	4.6
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D12C	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Confirmation Run

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDF	**0.79**	**J**	**1.0**	**0.056**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	70	40 - 135

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

J Estimated Result.

TestAmerica Canton

Sample ID: PAD-7

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 007	**Work Order #....:**	M4J4L1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	7.0
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.1 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.1	0.098	pg/g
1,2,3,7,8-PeCDD	**0.57**	**Q J**	**5.3**	**0.053**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.50**	**Q B J**	**5.3**	**0.044**	**pg/g**
1,2,3,6,7,8-HxCDD	**1.2**	**B J**	**5.3**	**0.046**	**pg/g**
1,2,3,7,8,9-HxCDD	**1.7**	**B J**	**5.3**	**0.042**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**18**	**B**	**5.3**	**0.054**	**pg/g**
OCDD	**170**	**B**	**11**	**0.091**	**pg/g**
1,2,3,7,8-PeCDF	**0.58**	**Q B J**	**5.3**	**0.054**	**pg/g**
2,3,4,7,8-PeCDF	**0.86**	**Q B J**	**5.3**	**0.050**	**pg/g**
1,2,3,4,7,8-HxCDF	**1.6**	**B J**	**5.3**	**0.027**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.94**	**B J**	**5.3**	**0.026**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.70**	**Q B J**	**5.3**	**0.030**	**pg/g**
1,2,3,7,8,9-HxCDF	**0.35**	**Q B J**	**5.3**	**0.035**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**4.6**	**B J**	**5.3**	**0.028**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.98**	**Q B J**	**5.3**	**0.036**	**pg/g**
OCDF	**9.5**	**B J**	**11**	**0.022**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	40 - 135
13C-1,2,3,7,8-PeCDD	59	40 - 135
13C-1,2,3,4,7,8-HxCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	66	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	79	40 - 135
13C-OCDD	73	40 - 135
13C-1,2,3,7,8-PeCDF	65	40 - 135
13C-2,3,4,7,8-PeCDF	65	40 - 135
13C-1,2,3,4,7,8-HxCDF	74	40 - 135
13C-1,2,3,6,7,8-HxCDF	71	40 - 135
13C-2,3,4,6,7,8-HxCDF	70	40 - 135
13C-1,2,3,7,8,9-HxCDF	70	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	75	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	77	40 - 135
13C-OCDF	69	40 - 135

TestAmerica Canton

Sample ID: PAD-7

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 007	**Work Order #....:**	M4J4L1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	7.0
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.1 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-7

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 007	**Work Order #....:**	M4J4L1AD	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	7.0
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.1 g	**Instrument ID....:**	D12C	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Confirmation Run

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDF	**0.61**	**Q J**	**1.1**	**0.080**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	70	40 - 135

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-8

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 008	**Work Order #....:**	M4J4M1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	2.6
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.2 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.081	pg/g
1,2,3,7,8-PeCDD	**0.33**	**Q J**	**5.0**	**0.032**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.27**	**B J**	**5.0**	**0.031**	**pg/g**
1,2,3,6,7,8-HxCDD	**0.54**	**Q B J**	**5.0**	**0.033**	**pg/g**
1,2,3,7,8,9-HxCDD	**0.75**	**B J**	**5.0**	**0.030**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**8.5**	**B**	**5.0**	**0.041**	**pg/g**
OCDD	**110**	**B**	**10**	**0.037**	**pg/g**
2,3,7,8-TCDF	**0.40**	**Q J**	**1.0**	**0.034**	**pg/g**
1,2,3,7,8-PeCDF	**0.20**	**Q B J**	**5.0**	**0.029**	**pg/g**
2,3,4,7,8-PeCDF	**0.24**	**Q B J**	**5.0**	**0.029**	**pg/g**
1,2,3,4,7,8-HxCDF	**0.47**	**Q B J**	**5.0**	**0.022**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.27**	**B J**	**5.0**	**0.020**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.24**	**B J**	**5.0**	**0.023**	**pg/g**
1,2,3,7,8,9-HxCDF	**0.12**	**Q B J**	**5.0**	**0.028**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**1.6**	**B J**	**5.0**	**0.025**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.33**	**B J**	**5.0**	**0.032**	**pg/g**
OCDF	**3.8**	**B J**	**10**	**0.016**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	72	40 - 135
13C-1,2,3,7,8-PeCDD	70	40 - 135
13C-1,2,3,4,7,8-HxCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	70	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	81	40 - 135
13C-OCDD	76	40 - 135
13C-2,3,7,8-TCDF	74	40 - 135
13C-1,2,3,7,8-PeCDF	69	40 - 135
13C-2,3,4,7,8-PeCDF	68	40 - 135
13C-1,2,3,4,7,8-HxCDF	72	40 - 135
13C-1,2,3,6,7,8-HxCDF	71	40 - 135
13C-2,3,4,6,7,8-HxCDF	73	40 - 135
13C-1,2,3,7,8,9-HxCDF	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	76	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	79	40 - 135
13C-OCDF	69	40 - 135

TestAmerica Canton

Sample ID: PAD-8

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 008	**Work Order #....:**	M4J4M1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	2.6
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.2 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: NB-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 009	**Work Order #....:**	M4J4N1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	15
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.3 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	**0.47**	**Q B J**	**1.1**	**0.13**	**pg/g**
1,2,3,7,8-PeCDD	**1.9**	**Q J**	**5.7**	**0.11**	**pg/g**
1,2,3,4,7,8-HxCDD	**1.3**	**B J**	**5.7**	**0.051**	**pg/g**
1,2,3,6,7,8-HxCDD	**3.2**	**B J**	**5.7**	**0.052**	**pg/g**
1,2,3,7,8,9-HxCDD	**4.2**	**C B J**	**5.7**	**0.049**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**63**	**B**	**5.7**	**0.083**	**pg/g**
OCDD	**560**	**B**	**11**	**0.12**	**pg/g**
1,2,3,7,8-PeCDF	**2.2**	**Q B J**	**5.7**	**0.10**	**pg/g**
2,3,4,7,8-PeCDF	**2.8**	**B J**	**5.7**	**0.096**	**pg/g**
1,2,3,4,7,8-HxCDF	**4.8**	**Q B J**	**5.7**	**0.050**	**pg/g**
1,2,3,6,7,8-HxCDF	**2.5**	**Q B J**	**5.7**	**0.048**	**pg/g**
2,3,4,6,7,8-HxCDF	**1.8**	**Q B J**	**5.7**	**0.051**	**pg/g**
1,2,3,7,8,9-HxCDF	ND		5.7	0.061	pg/g
1,2,3,4,6,7,8-HpCDF	**15**	**Q B**	**5.7**	**0.060**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**1.6**	**Q B J**	**5.7**	**0.075**	**pg/g**
OCDF	**34**	**B**	**11**	**0.036**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	75	40 - 135
13C-1,2,3,7,8-PeCDD	66	40 - 135
13C-1,2,3,4,7,8-HxCDD	77	40 - 135
13C-1,2,3,6,7,8-HxCDD	73	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	79	40 - 135
13C-OCDD	75	40 - 135
13C-1,2,3,7,8-PeCDF	70	40 - 135
13C-2,3,4,7,8-PeCDF	66	40 - 135
13C-1,2,3,4,7,8-HxCDF	75	40 - 135
13C-1,2,3,6,7,8-HxCDF	71	40 - 135
13C-2,3,4,6,7,8-HxCDF	74	40 - 135
13C-1,2,3,7,8,9-HxCDF	74	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	77	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	82	40 - 135
13C-OCDF	67	40 - 135

TestAmerica Canton

Sample ID: NB-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 009	**Work Order #....:**	M4J4N1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	15
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.3 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: NB-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 009	**Work Order #....:**	M4J4N1AD	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	15
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.3 g	**Instrument ID....:**	D12C	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Confirmation Run

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDF	**3.4**	**Q**	**1.1**	**0.17**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	72	40 - 135

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: NB-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 010	**Work Order #....:**	M4J4P1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	16
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.2	0.091	pg/g
1,2,3,7,8-PeCDD	**1.1**	**Q J**	**6.0**	**0.056**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.87**	**Q B J**	**6.0**	**0.053**	**pg/g**
1,2,3,6,7,8-HxCDD	**2.0**	**B J**	**6.0**	**0.054**	**pg/g**
1,2,3,7,8,9-HxCDD	**2.8**	**C B J**	**6.0**	**0.050**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**42**	**B**	**6.0**	**0.069**	**pg/g**
OCDD	**410**	**B**	**12**	**0.093**	**pg/g**
1,2,3,7,8-PeCDF	**1.2**	**B J**	**6.0**	**0.064**	**pg/g**
2,3,4,7,8-PeCDF	**1.2**	**B J**	**6.0**	**0.059**	**pg/g**
1,2,3,4,7,8-HxCDF	**1.8**	**C B J**	**6.0**	**0.030**	**pg/g**
1,2,3,6,7,8-HxCDF	**1.2**	**Q B J**	**6.0**	**0.028**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.56**	**B J**	**6.0**	**0.029**	**pg/g**
1,2,3,7,8,9-HxCDF	ND		6.0	0.037	pg/g
1,2,3,4,6,7,8-HpCDF	**7.8**	**B**	**6.0**	**0.040**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**1.0**	**Q B J**	**6.0**	**0.053**	**pg/g**
OCDF	**18**	**B**	**12**	**0.032**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	40 - 135
13C-1,2,3,7,8-PeCDD	68	40 - 135
13C-1,2,3,4,7,8-HxCDD	73	40 - 135
13C-1,2,3,6,7,8-HxCDD	70	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	81	40 - 135
13C-OCDD	71	40 - 135
13C-1,2,3,7,8-PeCDF	67	40 - 135
13C-2,3,4,7,8-PeCDF	68	40 - 135
13C-1,2,3,4,7,8-HxCDF	74	40 - 135
13C-1,2,3,6,7,8-HxCDF	73	40 - 135
13C-2,3,4,6,7,8-HxCDF	74	40 - 135
13C-1,2,3,7,8,9-HxCDF	74	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	76	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	78	40 - 135
13C-OCDF	66	40 - 135

TestAmerica Canton

Sample ID: NB-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 010	**Work Order #....:**	M4J4P1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	16
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: NB-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 010	**Work Order #....:**	M4J4P1AD	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	16
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D12C	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Confirmation Run

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDF	**1.9**	**Q**	**1.2**	**0.099**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	68	40 - 135

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: SB-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 011	**Work Order #....:**	M4J4Q1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	22
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.1 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.3	0.12	pg/g
1,2,3,7,8-PeCDD	**0.52**	**Q J**	**6.3**	**0.066**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.57**	**Q B J**	**6.3**	**0.070**	**pg/g**
1,2,3,6,7,8-HxCDD	**1.1**	**Q B J**	**6.3**	**0.069**	**pg/g**
1,2,3,7,8,9-HxCDD	**1.7**	**C B J**	**6.3**	**0.066**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**39**	**B**	**6.3**	**0.13**	**pg/g**
OCDD	**1500**	**B**	**13**	**0.16**	**pg/g**
2,3,7,8-TCDF	**0.42**	**Q J**	**1.3**	**0.049**	**pg/g**
1,2,3,7,8-PeCDF	**0.28**	**Q B J**	**6.3**	**0.058**	**pg/g**
2,3,4,7,8-PeCDF	**0.35**	**Q B J**	**6.3**	**0.057**	**pg/g**
1,2,3,4,7,8-HxCDF	**0.82**	**Q B J**	**6.3**	**0.037**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.60**	**Q B J**	**6.3**	**0.032**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.35**	**B J**	**6.3**	**0.036**	**pg/g**
1,2,3,7,8,9-HxCDF	ND		6.3	0.043	pg/g
1,2,3,4,6,7,8-HpCDF	**4.6**	**Q B J**	**6.3**	**0.074**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.52**	**Q B J**	**6.3**	**0.096**	**pg/g**
OCDF	**11**	**B Q J**	**13**	**0.020**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	73	40 - 135
13C-1,2,3,7,8-PeCDD	64	40 - 135
13C-1,2,3,4,7,8-HxCDD	75	40 - 135
13C-1,2,3,6,7,8-HxCDD	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	86	40 - 135
13C-OCDD	81	40 - 135
13C-2,3,7,8-TCDF	76	40 - 135
13C-1,2,3,7,8-PeCDF	70	40 - 135
13C-2,3,4,7,8-PeCDF	68	40 - 135
13C-1,2,3,4,7,8-HxCDF	75	40 - 135
13C-1,2,3,6,7,8-HxCDF	73	40 - 135
13C-2,3,4,6,7,8-HxCDF	75	40 - 135
13C-1,2,3,7,8,9-HxCDF	74	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	81	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	86	40 - 135
13C-OCDF	75	40 - 135

TestAmerica Canton

Sample ID: SB-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 011	**Work Order #....:**	M4J4Q1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	22
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.1 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: SB-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 012	**Work Order #....:**	M4J4R1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	29
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	**0.42**	**Q B J**	**1.4**	**0.15**	**pg/g**
1,2,3,7,8-PeCDD	**1.3**	**Q J**	**7.0**	**0.073**	**pg/g**
1,2,3,4,7,8-HxCDD	**1.2**	**B J**	**7.0**	**0.093**	**pg/g**
1,2,3,6,7,8-HxCDD	**2.2**	**B J**	**7.0**	**0.078**	**pg/g**
1,2,3,7,8,9-HxCDD	**3.1**	**C B J**	**7.0**	**0.080**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**64**	**B**	**7.0**	**0.084**	**pg/g**
OCDD	**2200**	**B**	**14**	**0.27**	**pg/g**
1,2,3,7,8-PeCDF	**1.1**	**B J**	**7.0**	**0.093**	**pg/g**
2,3,4,7,8-PeCDF	**1.8**	**B J**	**7.0**	**0.096**	**pg/g**
1,2,3,4,7,8-HxCDF	**3.1**	**C B J**	**7.0**	**0.042**	**pg/g**
1,2,3,6,7,8-HxCDF	**1.6**	**B J**	**7.0**	**0.039**	**pg/g**
2,3,4,6,7,8-HxCDF	**1.4**	**B J**	**7.0**	**0.042**	**pg/g**
1,2,3,7,8,9-HxCDF	ND		7.0	0.049	pg/g
1,2,3,4,6,7,8-HpCDF	**9.2**	**B**	**7.0**	**0.066**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.95**	**B J**	**7.0**	**0.088**	**pg/g**
OCDF	**18**	**B**	**14**	**0.033**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	67	40 - 135
13C-1,2,3,7,8-PeCDD	66	40 - 135
13C-1,2,3,4,7,8-HxCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	70	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	87	40 - 135
13C-OCDD	78	40 - 135
13C-1,2,3,7,8-PeCDF	69	40 - 135
13C-2,3,4,7,8-PeCDF	66	40 - 135
13C-1,2,3,4,7,8-HxCDF	75	40 - 135
13C-1,2,3,6,7,8-HxCDF	72	40 - 135
13C-2,3,4,6,7,8-HxCDF	73	40 - 135
13C-1,2,3,7,8,9-HxCDF	75	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	83	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	83	40 - 135
13C-OCDF	71	40 - 135

TestAmerica Canton

Sample ID: SB-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 012	**Work Order #....:**	M4J4R1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/24/14	**Percent Moisture**	29
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: SB-2

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 012	**Work Order #....:**	M4J4R1AD	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	29
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D12C	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Confirmation Run

PARAMETER	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDF	**1.7**	**1.4**	**0.15**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	74	40 - 135

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

TestAmerica Canton

Sample ID: BERM-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 013	**Work Order #....:**	M4J4T1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	3.7
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.2 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Melissa A. Davidson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.088	pg/g
1,2,3,7,8-PeCDD	**0.67**	**J**	**5.1**	**0.048**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.64**	**B J**	**5.1**	**0.052**	**pg/g**
1,2,3,6,7,8-HxCDD	**1.6**	**B J**	**5.1**	**0.051**	**pg/g**
1,2,3,7,8,9-HxCDD	**1.8**	**Q B J**	**5.1**	**0.048**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**17**	**B**	**5.1**	**0.070**	**pg/g**
OCDD	**180**	**B**	**10**	**0.079**	**pg/g**
1,2,3,7,8-PeCDF	**0.45**	**B J**	**5.1**	**0.046**	**pg/g**
2,3,4,7,8-PeCDF	**0.69**	**Q B J**	**5.1**	**0.046**	**pg/g**
1,2,3,4,7,8-HxCDF	**1.2**	**C B J**	**5.1**	**0.028**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.64**	**Q B J**	**5.1**	**0.028**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.78**	**Q B J**	**5.1**	**0.029**	**pg/g**
1,2,3,7,8,9-HxCDF	**0.22**	**Q B J**	**5.1**	**0.035**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**3.4**	**B J**	**5.1**	**0.023**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.64**	**B J**	**5.1**	**0.030**	**pg/g**
OCDF	**7.5**	**B J**	**10**	**0.026**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	40 - 135
13C-1,2,3,7,8-PeCDD	62	40 - 135
13C-1,2,3,4,7,8-HxCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	73	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	90	40 - 135
13C-OCDD	77	40 - 135
13C-1,2,3,7,8-PeCDF	67	40 - 135
13C-2,3,4,7,8-PeCDF	63	40 - 135
13C-1,2,3,4,7,8-HxCDF	78	40 - 135
13C-1,2,3,6,7,8-HxCDF	75	40 - 135
13C-2,3,4,6,7,8-HxCDF	77	40 - 135
13C-1,2,3,7,8,9-HxCDF	77	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	89	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	90	40 - 135
13C-OCDF	72	40 - 135

TestAmerica Canton

Sample ID: BERM-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 013	**Work Order #....:**	M4J4T1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	3.7
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.2 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Melissa A. Davidson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: BERM-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 013	**Work Order #....:**	M4J4T1AD	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	3.7
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.2 g	**Instrument ID....:**	D12C	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Confirmation Run

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDF	**1.0**	**Q**	**1.0**	**0.23**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	69	40 - 135

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: POND-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 014	**Work Order #....:**	M4J4V1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	6.4
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Melissa A. Davidson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.1	0.11	pg/g
1,2,3,7,8-PeCDD	**0.78**	**Q J**	**5.3**	**0.074**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.77**	**Q B J**	**5.3**	**0.070**	**pg/g**
1,2,3,6,7,8-HxCDD	**2.0**	**B J**	**5.3**	**0.073**	**pg/g**
1,2,3,7,8,9-HxCDD	**2.2**	**C B J**	**5.3**	**0.067**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**28**	**B**	**5.3**	**0.078**	**pg/g**
OCDD	**360**	**B**	**11**	**0.11**	**pg/g**
1,2,3,7,8-PeCDF	ND		5.3	0.052	pg/g
2,3,4,7,8-PeCDF	**0.68**	**B J**	**5.3**	**0.048**	**pg/g**
1,2,3,4,7,8-HxCDF	**1.2**	**C B J**	**5.3**	**0.024**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.66**	**Q B J**	**5.3**	**0.022**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.46**	**Q B J**	**5.3**	**0.024**	**pg/g**
1,2,3,7,8,9-HxCDF	**0.10**	**Q B J**	**5.3**	**0.029**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**4.6**	**Q B J**	**5.3**	**0.032**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.35**	**Q B J**	**5.3**	**0.039**	**pg/g**
OCDF	**11**	**B J**	**11**	**0.018**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	69	40 - 135
13C-1,2,3,7,8-PeCDD	62	40 - 135
13C-1,2,3,4,7,8-HxCDD	77	40 - 135
13C-1,2,3,6,7,8-HxCDD	75	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	89	40 - 135
13C-OCDD	77	40 - 135
13C-1,2,3,7,8-PeCDF	65	40 - 135
13C-2,3,4,7,8-PeCDF	66	40 - 135
13C-1,2,3,4,7,8-HxCDF	77	40 - 135
13C-1,2,3,6,7,8-HxCDF	77	40 - 135
13C-2,3,4,6,7,8-HxCDF	77	40 - 135
13C-1,2,3,7,8,9-HxCDF	77	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	83	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	91	40 - 135
13C-OCDF	72	40 - 135

TestAmerica Canton

Sample ID: POND-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 014	**Work Order #....:**	M4J4V1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	6.4
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Melissa A. Davidson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: POND-1

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 014	**Work Order #....:**	M4J4V1AD	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	6.4
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D12C	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

Confirmation Run

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDF	**0.65**	**Q J**	**1.1**	**0.14**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	72	40 - 135

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

TestAmerica Canton

Sample ID: PAD-XX

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 015	**Work Order #....:**	M4J4W1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	13
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.1 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Melissa A. Davidson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.1	0.080	pg/g
1,2,3,7,8-PeCDD	**0.35**	**Q J**	**5.7**	**0.049**	**pg/g**
1,2,3,4,7,8-HxCDD	**0.34**	**Q B J**	**5.7**	**0.055**	**pg/g**
1,2,3,6,7,8-HxCDD	**0.51**	**Q B J**	**5.7**	**0.053**	**pg/g**
1,2,3,7,8,9-HxCDD	**0.52**	**Q B J**	**5.7**	**0.051**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**7.0**	**B**	**5.7**	**0.040**	**pg/g**
OCDD	**65**	**B**	**11**	**0.090**	**pg/g**
2,3,7,8-TCDF	**0.14**	**J**	**1.1**	**0.045**	**pg/g**
1,2,3,7,8-PeCDF	**0.11**	**Q B J**	**5.7**	**0.034**	**pg/g**
2,3,4,7,8-PeCDF	**0.21**	**Q B J**	**5.7**	**0.032**	**pg/g**
1,2,3,4,7,8-HxCDF	**0.26**	**Q B J**	**5.7**	**0.024**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.21**	**Q B J**	**5.7**	**0.023**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.25**	**Q B J**	**5.7**	**0.025**	**pg/g**
1,2,3,7,8,9-HxCDF	ND		5.7	0.032	pg/g
1,2,3,4,6,7,8-HpCDF	**1.3**	**B J**	**5.7**	**0.029**	**pg/g**
1,2,3,4,7,8,9-HpCDF	ND		5.7	0.037	pg/g
OCDF	**2.6**	**Q B J**	**11**	**0.016**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	67	40 - 135
13C-1,2,3,7,8-PeCDD	57	40 - 135
13C-1,2,3,4,7,8-HxCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	70	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	84	40 - 135
13C-OCDD	74	40 - 135
13C-2,3,7,8-TCDF	72	40 - 135
13C-1,2,3,7,8-PeCDF	62	40 - 135
13C-2,3,4,7,8-PeCDF	63	40 - 135
13C-1,2,3,4,7,8-HxCDF	74	40 - 135
13C-1,2,3,6,7,8-HxCDF	70	40 - 135
13C-2,3,4,6,7,8-HxCDF	74	40 - 135
13C-1,2,3,7,8,9-HxCDF	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	80	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	85	40 - 135
13C-OCDF	68	40 - 135

TestAmerica Canton

Sample ID: PAD-XX

Trace Level Organic Compounds

Lot - Sample #....:	H4H060409 - 015	**Work Order #....:**	M4J4W1AC	**Matrix....:**	SOLID
Date Sampled....:	07/31/14	**Date Received....:**	08/06/14	**Dilution Factor:**	1
Prep Date....:	08/14/14	**Analysis Date....:**	08/25/14	**Percent Moisture**	13
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10.1 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Melissa A. Davidson				

Sample results, minimum levels, and estimated detection limits are reported on a dry weight basis and have been adjusted for percent moisture.

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	H4H140000 - 014B	**Work Order #....:**	M4MAM1AA	**Matrix....:**	SOLID
Dilution Factor:	1				
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture:**	0.0
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	**0.021**	**Q J**	**1.0**	**0.011**	**pg/g**
1,2,3,7,8-PeCDD	ND		5.0	0.011	pg/g
1,2,3,4,7,8-HxCDD	**0.14**	**Q J**	**5.0**	**0.022**	**pg/g**
1,2,3,6,7,8-HxCDD	**0.12**	**Q J**	**5.0**	**0.023**	**pg/g**
1,2,3,7,8,9-HxCDD	**0.23**	**Q J**	**5.0**	**0.021**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**0.86**	**J**	**5.0**	**0.024**	**pg/g**
OCDD	**5.1**	**Q J**	**10**	**0.020**	**pg/g**
2,3,7,8-TCDF	ND		1.0	0.0065	pg/g
1,2,3,7,8-PeCDF	**0.053**	**Q J**	**5.0**	**0.012**	**pg/g**
2,3,4,7,8-PeCDF	**0.16**	**Q J**	**5.0**	**0.012**	**pg/g**
1,2,3,4,7,8-HxCDF	**0.12**	**J**	**5.0**	**0.012**	**pg/g**
1,2,3,6,7,8-HxCDF	**0.14**	**Q J**	**5.0**	**0.011**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.17**	**Q J**	**5.0**	**0.012**	**pg/g**
1,2,3,7,8,9-HxCDF	**0.19**	**Q J**	**5.0**	**0.016**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**0.42**	**Q J**	**5.0**	**0.011**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**0.34**	**Q J**	**5.0**	**0.016**	**pg/g**
OCDF	**1.5**	**Q J**	**10**	**0.0076**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	67	40 - 135
13C-1,2,3,7,8-PeCDD	59	40 - 135
13C-1,2,3,4,7,8-HxCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	72	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	73	40 - 135
13C-2,3,7,8-TCDF	68	40 - 135
13C-1,2,3,7,8-PeCDF	64	40 - 135
13C-2,3,4,7,8-PeCDF	60	40 - 135
13C-1,2,3,4,7,8-HxCDF	68	40 - 135
13C-1,2,3,6,7,8-HxCDF	68	40 - 135
13C-2,3,4,6,7,8-HxCDF	71	40 - 135
13C-1,2,3,7,8,9-HxCDF	67	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	79	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	74	40 - 135
13C-OCDF	65	40 - 135

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	H4H140000 - 014B	**Work Order #....:**	M4MAM1AA	**Matrix....:**	SOLID
Dilution Factor:	1				
Prep Date....:	08/14/14	**Analysis Date....:**	08/23/14	**Percent Moisture:**	0.0
Prep Batch # ....:	4226014				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Kenneya L. Wilson				

QUALIFIERS

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...: H4H060409 **Work Order # ...:** M4MAM1AC-LCS **Matrix .....:** SOLID
LCS Lot-Sample# : H4H140000 - 014
Prep Date .....: 08/14/14 **Analysis Date ..:** 08/22/14
Prep Batch # ...: 4226014
Dilution Factor : 1
Analyst ID.....: Linda K. McWhirter **Instrument ID..:** D2A **Method.....:** SW846 8290A
Initial Wgt/Vol: 10 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY		RECOVERY LIMITS
2,3,7,8-TCDD	**20.0**	**21.3**	**pg/g**	**107**	**B**	**(79 - 129)**
1,2,3,7,8-PeCDD	**100**	**105**	**pg/g**	**105**		**(79 - 129)**
1,2,3,4,7,8-HxCDD	**100**	**101**	**pg/g**	**101**	**B**	**(73 - 123)**
1,2,3,6,7,8-HxCDD	**100**	**100**	**pg/g**	**100**	**B**	**(74 - 124)**
1,2,3,7,8,9-HxCDD	**100**	**111**	**pg/g**	**111**	**B**	**(70 - 124)**
1,2,3,4,6,7,8-HpCDD	**100**	**101**	**pg/g**	**101**	**B**	**(73 - 123)**
OCDD	**200**	**205**	**pg/g**	**102**	**B**	**(75 - 125)**
2,3,7,8-TCDF	**20.0**	**21.6**	**pg/g**	**108**		**(75 - 125)**
1,2,3,7,8-PeCDF	**100**	**104**	**pg/g**	**104**	**B**	**(74 - 124)**
2,3,4,7,8-PeCDF	**100**	**106**	**pg/g**	**106**	**B**	**(75 - 125)**
1,2,3,4,7,8-HxCDF	**100**	**99.7**	**pg/g**	**100**	**B**	**(75 - 125)**
1,2,3,6,7,8-HxCDF	**100**	**97.7**	**pg/g**	**98**	**B**	**(76 - 126)**
2,3,4,6,7,8-HxCDF	**100**	**98.0**	**pg/g**	**98**	**B**	**(76 - 126)**
1,2,3,7,8,9-HxCDF	**100**	**94.4**	**pg/g**	**94**	**B**	**(77 - 127)**
1,2,3,4,6,7,8-HpCDF	**100**	**91.3**	**pg/g**	**91**	**B**	**(77 - 127)**
1,2,3,4,7,8,9-HpCDF	**100**	**99.7**	**pg/g**	**100**	**B**	**(73 - 123)**
OCDF	**200**	**192**	**pg/g**	**96**	**B**	**(49 - 128)**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	(40 - 135)
13C-1,2,3,7,8-PeCDD	70	(40 - 135)
13C-1,2,3,4,7,8-HxCDD	76	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	74	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	85	(40 - 135)
13C-OCDD	84	(40 - 135)
13C-2,3,7,8-TCDF	75	(40 - 135)
13C-1,2,3,7,8-PeCDF	69	(40 - 135)
13C-2,3,4,7,8-PeCDF	67	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	73	(40 - 135)
13C-1,2,3,6,7,8-HxCDF	75	(40 - 135)
13C-2,3,4,6,7,8-HxCDF	76	(40 - 135)
13C-1,2,3,7,8,9-HxCDF	70	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	86	(40 - 135)
13C-1,2,3,4,7,8,9-HpCDF	81	(40 - 135)
13C-OCDF	75	(40 - 135)

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

MATRIX/MATRIX SPIKE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	H4H060409	**Work Order # ...:**	M4J4F1AD-MS	**Matrix .....:**	SOLID
OS Lot-Sample# :	H4H060409 - 004		M4J4F1AE-MSD		
Prep Date .....:	08/14/14	**Analysis Date ..:**	08/23/14		
Prep Batch # ...:	4226014				
Dilution Factor :	1				
Analyst ID.....:	Melissa A. Davidson	**Instrument ID..:**	D2A	**Method.....:**	SW846 8290A
Initial Wgt/Vol:	10 g				

PARAMETER	SAMPLE AMOUNT	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
2,3,7,8-TCDD	2.5	22.0	24.4	pg/g	99 B	(79 - 129)		
	2.5	22.0	24.6	pg/g	101 B	(79 - 129)	1.0	(0 - 15)
1,2,3,7,8-PeCDD	4.1	110	130	pg/g	114	(79 - 129)		
	4.1	110	120	pg/g	106	(79 - 129)	7.4	(0 - 15)
1,2,3,4,7,8-HxCDD	2.7	110	113	pg/g	100 B	(73 - 123)		
	2.7	110	119	pg/g	106 B	(73 - 123)	5.3	(0 - 15)
1,2,3,6,7,8-HxCDD	5.4	110	115	pg/g	100 B	(73 - 127)		
	5.4	110	122	pg/g	106 B	(73 - 127)	5.8	(0 - 15)
1,2,3,7,8,9-HxCDD	8.4	110	123	pg/g	104 B	(65 - 141)		
	8.4	110	128	pg/g	109 B	(65 - 141)	4.1	(0 - 15)
1,2,3,4,6,7,8-HpCDD	78	110	157	pg/g	72 B	(54 - 138)		
	78	110	150	pg/g	66 B	(54 - 138)	4.5	(0 - 15)
OCDD	630	220	707	pg/g	35 B	(31 - 154)		
	630	220	656	pg/g	12 a B	(31 - 154)	7.5	(0 - 15)
2,3,7,8-TCDF	1.4	22.0	21.1	pg/g	90 X	(75 - 125)		
	1.4	22.0	19.8	pg/g	84 X	(75 - 125)	6.6	(0 - 15)
1,2,3,7,8-PeCDF	0.65	110	118	pg/g	107 B	(74 - 124)		
	0.65	110	122	pg/g	110 B	(74 - 124)	3.0	(0 - 15)
2,3,4,7,8-PeCDF	0.92	110	126	pg/g	114 B	(75 - 125)		
	0.92	110	120	pg/g	108 B	(75 - 125)	4.9	(0 - 15)
1,2,3,4,7,8-HxCDF	1.8	110	116	pg/g	104 B	(75 - 125)		
	1.8	110	118	pg/g	105 B	(75 - 125)	1.5	(0 - 15)
1,2,3,6,7,8-HxCDF	1.4	110	113	pg/g	102 B	(73 - 131)		
	1.4	110	117	pg/g	105 B	(73 - 131)	3.5	(0 - 15)
2,3,4,6,7,8-HxCDF	0.77	110	116	pg/g	105 B	(76 - 129)		
	0.77	110	117	pg/g	105 B	(76 - 129)	0.50	(0 - 15)
1,2,3,7,8,9-HxCDF	0.19	110	118	pg/g	107 B	(77 - 127)		
	0.19	110	113	pg/g	102 B	(77 - 127)	4.2	(0 - 15)
1,2,3,4,6,7,8-HpCDF	9.2	110	112	pg/g	94 B	(72 - 134)		
	9.2	110	114	pg/g	95 B	(72 - 134)	1.3	(0 - 15)
1,2,3,4,7,8,9-HpCDF	0.92	110	105	pg/g	95 B	(73 - 124)		
	0.92	110	112	pg/g	101 B	(73 - 124)	6.7	(0 - 15)
OCDF	18	220	237	pg/g	99 B	(45 - 135)		
	18	220	246	pg/g	103 B	(45 - 135)	3.7	(0 - 15)

MATRIX/MATRIX SPIKE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	H4H060409	**Work Order # ...:**	M4J4F1AD-MS	**Matrix .....:**	SOLID
OS Lot-Sample# :	H4H060409 - 004		M4J4F1AE-MSD		
Prep Date .....:	08/14/14	**Analysis Date ..:**	08/23/14		
Prep Batch # ...:	4226014				
Dilution Factor :	1				
Analyst ID.....:	Melissa A. Davidson	**Instrument ID..:**	D2A	**Method.....:**	SW846 8290A
Initial Wgt/Vol:	10 g				

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	(40 - 135)
	71	(40 - 135)
13C-1,2,3,7,8-PeCDD	58	(40 - 135)
	57	(40 - 135)
13C-1,2,3,4,7,8-HxCDD	72	(40 - 135)
	68	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	65	(40 - 135)
	65	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	80	(40 - 135)
	80	(40 - 135)
13C-OCDD	69	(40 - 135)
	74	(40 - 135)
13C-2,3,7,8-TCDF	61	(40 - 135)
	64	(40 - 135)
13C-1,2,3,7,8-PeCDF	64	(40 - 135)
	58	(40 - 135)
13C-2,3,4,7,8-PeCDF	60	(40 - 135)
	60	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	72	(40 - 135)
	73	(40 - 135)
13C-1,2,3,6,7,8-HxCDF	67	(40 - 135)
	67	(40 - 135)
13C-2,3,4,6,7,8-HxCDF	70	(40 - 135)
	71	(40 - 135)
13C-1,2,3,7,8,9-HxCDF	69	(40 - 135)
	76	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	74	(40 - 135)
	75	(40 - 135)
13C-1,2,3,4,7,8,9-HpCDF	87	(40 - 135)
	83	(40 - 135)
13C-OCDF	66	(40 - 135)
	68	(40 - 135)

MATRIX/MATRIX SPIKE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	H4H060409	**Work Order # ...:**	M4J4F1AD-MS	**Matrix .....:**	SOLID
OS Lot-Sample# :	H4H060409 - 004		M4J4F1AE-MSD		
Prep Date .....:	08/14/14	**Analysis Date ..:**	08/23/14		
Prep Batch # ...:	4226014				
Dilution Factor :	1				
Analyst ID.....:	Melissa A. Davidson	**Instrument ID..:**	D2A	**Method.....:**	SW846 8290A
Initial Wgt/Vol:	10 g				

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

X See project narrative.

Sample Receipt Documentation

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

~~HHB~~ DKB 8-6-14 HHD060409

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Loeb, Mark J	Carrier Tracking No(s):	COC No: 240-31621.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: mark.loeb@testamericainc.com		Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.				Job #: 240-40177-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 8/19/2014			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: RAAP, HWMU-13 (Open Burning Ground)	Project #: 24006283			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8290A, Dioxins/Furans,)/ 8290A, Dioxins/Furans,	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
PAD-1 (240-40177-1)	7/31/14	08:30 Eastern		Solid			X	1	
PAD-2 (240-40177-2)	7/31/14	09:30 Eastern		Solid			X	1	
PAD-3 (240-40177-3)	7/31/14	09:50 Eastern		Solid			X	1	
PAD-4 (240-40177-4) QC	7/31/14	10:10 Eastern		Solid			X	1	
PAD-5 (240-40177-5)	7/31/14	10:40 Eastern		Solid			X	1	
PAD-6 (240-40177-6)	7/31/14	11:00 Eastern		Solid			X	1	RT CT
PAD-7 (240-40177-7)	7/31/14	11:20 Eastern		Solid			X	1	REC. @ 0.6°C 0.6°
PAD-8 (240-40177-8)	7/31/14	11:50 Eastern		Solid			X	1	CUSTODY STRAPS INTACT
NB-1 (240-40177-12)	7/31/14	12:30 Eastern		Solid			X	1	1 COOLER RH 8-6-14
NB-2 (240-40177-13)	7/31/14	12:10 Eastern		Solid			X	1	FED EX# 593094333943
SB-1 (240-40177-14)	7/31/14	12:50 Eastern		Solid			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Relinquished by:	Date/Time: 8-5-14	Company	Received by: Ryan Henry	Date/Time: 8/6/14 1010	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

1744 060409

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Loeb, Mark J	Carrier Tracking No(s):	COC No: 240-31621.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: mark.loeb@testamericainc.com		Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.				Job #: 240-40177-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 8/19/2014			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: RAAP, HWMU-13 (Open Burning Ground)	Project #: 24006283			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8290A, Dioxins/Furans,)/ 8290A, Dioxins/Furans,	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SB-2 (240-40177-15)	7/31/14	13:10 Eastern		Solid			X	1	
BERM-1 (240-40177-16)	7/31/14	08:50 Eastern		Solid			X	1	
POND-1 (240-40177-17)	7/31/14	09:10 Eastern		Solid			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
RC	8-5-14 1/[illegible]		Ryan Henry	8/6/14 1010	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

H4H 060409

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Loeb, Mark J	Carrier Tracking No(s):	COC No: 240-31440.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: mark.loeb@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 240-40177-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 8/19/2014			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: RAAP	Project #: 24006283			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8290A, Dioxins/Furans,)/ 8290A, Dioxins/Furans,	SUB (160.3 MOD, Moisture, Percent Knoxville)/ 160.3 MOD, Moisture, Percent Knoxville	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
PAD-1 (240-40177-1)	7/31/14	08:30 Eastern		Solid			X		1	
PAD-2 (240-40177-2)	7/31/14	09:30 Eastern		Solid			X		1	
PAD-3 (240-40177-3)	7/31/14	09:50 Eastern		Solid			X		1	
PAD-4 (240-40177-4)	7/31/14	10:10 Eastern		Solid			X		3	
PAD-4 (240-40177-4MS)	7/31/14	10:10 Eastern	MS	Solid			X		1	
PAD-4 (240-40177-4MSD)	7/31/14	10:10 Eastern	MSD	Solid			X		1	RT CT
PAD-5 (240-40177-5)	7/31/14	10:40 Eastern		Solid			X		1	REC. @ 3.4°c 3.4°
PAD-7 (240-40177-7)	7/31/14	11:20 Eastern		Solid			X		1	NO CUSTODY SEAL
PAD-8 (240-40177-8)	7/31/14	11:50 Eastern		Solid			X		1	1 COOLER RH 8-4-14
PAD-XX (240-40177-10) % MOISTURE	7/31/14	08:40 Eastern		Solid			X	X	1	FED EX #

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 8-1-14	Company: Esta	Received by: Ryan Henry	Date/Time: 8/4/14 1030	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

H4170600409

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Loeb, Mark J	Carrier Tracking No(s):	COC No: 240-31447.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: mark.loeb@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 240-40177-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 8/19/2014			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: RAAP	Project #: 24006283			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8290A, Dioxins/Furans,)/ 8290A, Dioxins/Furans,	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
NB-1 (240-40177-12)	7/31/14	12:30 Eastern		Solid			X	1	
NB-2 (240-40177-13)	7/31/14	12:10 Eastern		Solid			X	1	
SB-1 (240-40177-14)	7/31/14	12:50 Eastern		Solid			X	1	
SB-2 (240-40177-15)	7/31/14	13:10 Eastern		Solid			X	1	
BERM-1 (240-40177-16)	7/31/14	08:50 Eastern		Solid			X	1	
POND-1 (240-40177-17)	7/31/14	09:10 Eastern		Solid			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: [signature]	Date/Time: 8/1/14 1800	Company: TAL CANTON	Received by: Ryan Henry	Date/Time: 8/4/14 1030	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

H4H060409

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 5815 Middlebrook Pike, ,
City: Knoxville
State, Zip: TN, 37921
Phone: 865-291-3000(Tel) 865-584-4315(Fax)
Email:
Project Name: RAAP
Site:

Sampler:
Phone:
Due Date Requested: 8/19/2014
TAT Requested (days):
PO #:
WO #:
Project #: 24006283
SSOW#:

Lab PM: Loeb, Mark J
E-Mail: mark.loeb@testamericainc.com
Carrier Tracking No(s):
COC No: 240-31442.1
Page: Page 1 of 1
Job #: 240-40177-1

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8290A, Dioxins/Furans,)/ 8290A, Dioxins/Furans,	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
PAD-4 (240-40177-4MS)	7/31/14	10:10 Eastern	MS	Solid			X	1	
PAD-4 (240-40177-4MSD)	7/31/14	10:10 Eastern	MSD	Solid			X	1	

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
RC	8-1-14	Canton	Ryan Henry	08/04/14 1030	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: 1444060409

Review Items	Yes	No	NA	If No, what was the problem?
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **1a** Do not match COC ☐ **1b** Incomplete information ☐ **1c** Marking smeared ☐ **1d** Label torn ☐ **1e** No label ☐ **1f** COC not received ☐ **1g** Other:
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID: 5C57 Correction factor: 0.0	✓			☐ **2a** Temp Blank = _____ ☐ **2b** Cooler Temp = _____ ☐ **2c** Cooling initiated for recently collected samples, ice present.
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **3a** See box 3A for pH Preservation ☐ **3b** Other:
4. Were custody seals present/intact on cooler and/or containers?	✓			☐ **4a** Not present ☐ **4b** Not intact ☐ **4c** Other:
5. Were all of the samples listed on the COC received?		✓		☑ **5a** Samples received-not on COC ☐ **5b** Samples not received-on COC
6. Were all of the sample containers received intact?	✓			☐ **6a** Leaking ☐ **6b** Broken
7. Were VOA samples received without headspace?			✓	☐ **7a** Headspace (VOA only)
8. Were samples received in appropriate containers?	✓			☐ **8a** Improper container
9. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **9a** Could not be determined due to matrix interference
10. Were samples received within holding time?	✓			☐ **10a** Holding time expired
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____
13. Are the shipping containers intact?	✓			☐ **13a** Leaking ☐ **13b** Other:
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **14a** Not relinquished
15. Are tests/parameters listed for each sample?	✓			☐ **15a** Incomplete information
16. Is the matrix of the samples noted?	✓			☐ **15a** Incomplete information
17. Is the date/time of sample collection noted?	✓			☐ **15a** Incomplete information
18. Is the client and project name/# identified?	✓			☐ **15a** Incomplete information
19. Was the sampler identified on the COC?		✓		☐ **19a** Other

Comments/Actions Taken

REPLACEMENT VOLUME REC. 8-6-14
5a - 'PAD-XX' NOT LISTED ON COC.
WILL USE FROM MONDAY SHIPMENT
'PAD-X' NOT LISTED ON EITHER
SET OF COCs. DO NOT LOG ~~X~~
PAD-X

pH test strip lot number:

	Box 3A: pH Preservation	Box 9A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Quote #: 91315 PM Instructions: NA

Sample Receiving Associate: Ryan Henry Date: 8/6/14

QA026R28.doc, 042414

Shipping and Receiving Documents

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

240-40177 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

3.8

CHAIN OF CUSTODY RECORD

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Mark Loeb, Manager/1-330-966-9387

Due 7/14/2014

Client: Draper Aden Associates **Attn:** **Address:** **Phone:** **Fax:** **Fax:**	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** HWMU-13 (Open Burning Ground) **Event:** July 2014 Annual Soil Monitoring **DAA JN:** B03204-208 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES WAS: **Carrier:** 12.237-301-01-9368-4308 **Tracking Number:** ~~12.237-301-01-9346-9318~~

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (<4 deg C); H None 7/11/14

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles			Hexavalent Chromium 7196A/3060A	TPH-DRO 8015C	RCRA Metals 6010C/7471A	Dioxins/Furans 8290A			RCRA Metals 6010C / 7470A	DRY WEIGHT (aliquot from method container)	
Box 4 - Sample Type							G	G	G	G			G		
Box 3 - Filtered/Unfiltered													U		
Required pH of Sample													<2		
Box 2 - Preservative							G	H	H	H			B		
Box 5 - Sample Container Type							1-4 oz CG	1-4 oz CG	1-4 oz CG	1-4 oz CG AG			1-500 ml P		
PAD-1	7/31	0830	S	4			X	X	X	X				X	
PAD-2		0930	S	3			X		X	X				X	
PAD-3		0950	S	3			X		X	X				X	
PAD-4		1010	S	4			X	X	X	X				X	use for MS / MSD...
PAD-4ms		1010	S	4			X	X	X	X				X	
PAD-4msd		1010	S	4			X	X	X	X				X	
PAD-5		1040	S	3			X		X	X				X	
PAD-6		1100	S	3			X		X	X				X	
PAD-7		1120	S	4			X	X	X	X				X	
PAD-8		1150	S	3			X		X	X				X	
PAD-X		1130	S	3			X	X	X					X	
PAD-XX		0940	S	1						X				X	PAD-XX used for dioxin blind field duplicate only
Equip Blank	7/31		E	1									X		

GENERAL NOTES:

1. Estimated results required.
2. Report results on a DRY WEIGHT BASIS. 3. VELAP required. Dioxin/Furans to TA Knoxville. All other methods TA North Canton
4. report results in mg/kg except for dioxin. JVR 7/11/14
5. VELAP Accreditation required. JVR 7/14/2014

Client Special Instructions: Level 4 with edd.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date: 7/31/14	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Ken Coddington	Date: 7/31/14	#1 Received by (Signature):	Date: 8/1/14	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0600	Company Name: TA Can	Time: 1630	Company Name:	Time:	

JVR 7/11/2014 1/4

CHAIN OF CUSTODY RECORD

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Mark Loeb, Manager/1-800-966-9387

OK JVR 9/14/2014

Client:	Draper Aden Associates	**Consultant:**	Draper Aden Associates	**Sample Site:**	RAAP, Radford, Virginia
Attn:		**Attn:**	Janet C. Frazier	**Location:**	HWMU-13 (Open Burning Ground)
Address:		**Address:**	2206 South Main Street Blacksburg, Virginia 24060	**Event:**	2014 Annual Soil Monitoring
Phone:		**Phone:**	(540) 552-0444	**DAA JN:**	B03204-208
Fax:		**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:					

Project Specific (PS) or Batch (B) QC:
~~Sample Collection for Project Complete?~~ *YES*

Carrier:
Tracking Number:

Box 1: Matrix
SW Surface Water — T Trip Blank
GW Groundwater — E Equipment Blank
L Leachate — P Product
S Soil — O Other

Box 2: Preservative
A HCL — E NaOH
B HNO_3 — F ZnAc
C H_2SO_4 — G Other (<6 deg C)
D $Na_2S_2O_3$ — H None

Box 3: Filtered/Unfiltered
F Filtered
U Unfiltered

Box 4: Sample Type
G Grab
C Composite

Box 5: Sample Container Type
P Plastic — V VOA
AG Amber Glass — CG Clear Glass

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on ice: *YES*

Box 4 - Sample Type								G	G				
Box 3 - Filtered/Unfiltered													
Required pH of Sample													
Box 2 - Preservative								H	H				
Box 5 - Sample Container Type								1-4 oz CG	1-4 oz CG AG				
Sample ID	Date: 2014	Time	Box 1: Matrix	Number of Bottles				RCRA Metals 6010C	Dioxins/Furans 8290A				DRY WEIGHT (aliquot from method container)
NB-1	7/31	1230	S	2				X	X				X
NB-2		1210	S	2				X	X				X
SB-1		1250	S	2				X	X				X
SB-2		1310	S	2				X	X				X
BERM-1		0850	S	2				X	X				X
POND-1	7/31	0910	S	2				X	X				X

GENERAL NOTES:

1. **Estimated results required.**
2. **Report results on a DRY WEIGHT BASIS. 3. VELAP required. Dioxin/Furans to TA Knoxville, All other methods TA North Canton**

4. report results in mg/kg except for dioxins
JVR 7-11-2014

Clients Special Instructions: level 4 with edd.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Tyler Emery	Date: 7/31/14	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0600	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature): Gary Burns	Date: 8/1/14	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name: TA Con	Time: 1030	Company Name:	Time:	

JVR 7/11/14 2/2

ANALYTICAL METHOD: 6010C/7471A/7470A
TYPE METHOD: Inorganics

Analyte List for: All PAD Samples and Equipment Blank

No	Constituent	CASRN	SW-846 Method
1	Arsenic	7440-38-2	6010C
2	Barium	7440-39-3	6010C
3	Cadmium	7440-43-9	6010C
4	Chromium, Total	7740-47-3	6010C
5	Lead	7439-92-1	6010C
6	Silver	7440-22-4	6010C
7	Selenium	7782-49-2	6010C
8	Mercury	7439-97-6	7471A (soil) 7470A (water-Equipment Blank)

Analyte List for: All PAD Samples

Constituent	CASRN	SW-846 Method
Chromium, Hexavalent	18540-29-9	7196A

Analyte List for SB-1, SB-2, NB-1, NB-2, Berm-1 and Pond-1 ONLY

Method SW 846-6010C

No.	ANALYTE	CAS RN
1.	Arsenic ✓	7440-38-2
2.	Barium ✓	7440-39-3
3.	Cadmium ✓	7440-43-9
4.	Chromium ✓	7440-47-3
5.	Lead ✓	7440-92-1
6.	Selenium ✓	7782-49-2

ANALYTICAL METHOD: 8015C/3540C
TYPE METHOD: TPH- DRO

Analyte List for: PAD-1, PAD-4 and PAD-7, PAD-X

Constituent	CASRN	SW-846 Method
Total Petroleum Hydrocarbons - DRO		8015C

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 40114

Client Draper Aden Site Name Radford

Cooler unpacked by: Terry Burns

Cooler Received on 8/1/14 Opened on 8/1/14

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other Multiple

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C
IR GUN# 4	(CF -2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C
IR GUN# 5	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C
IR GUN# 8	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C

☐ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 each Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC412469
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

TestAmerica Multiple Cooler Receipt Form/Narrative Login # :
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA NO#	8	2.4	2.4	ICE
2	2	3.8	3.8	2

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460182
EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC

2425 NEW HOLLAND PIKE
LANCASTER, PA 17601

Owner: EUROFINS SCIENTIFIC
Operator: J. WILSON HERSHEY
Responsible Official: J. WILSON HERSHEY

Having met the requirements of 1 VAC 30-46
and the National Environmental Laboratory Accreditation Conference 2003 Standard

is hereby approved as an

Accredited Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **June 15, 2014**
Expiration Date: **June 14, 2015**
Certificate # 2914

Denise M. Toney, Ph.D.
DGS Deputy Director for Laboratories, Acting

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 2914

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2425 NEW HOLLAND PIKE
LANCASTER, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2014
Expiration Date: June 14, 2015

AIR

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA TO-14A REV 2	1,1,1-TRICHLOROETHANE	LA DEQ	EPA TO-14A REV 2	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-14A REV 2	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	LA DEQ	EPA TO-14A REV 2	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-14A REV 2	1,1-DICHLOROETHANE	LA DEQ	EPA TO-14A REV 2	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-14A REV 2	1,2,4-TRICHLOROBENZENE	LA DEQ	EPA TO-14A REV 2	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A REV 2	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ	EPA TO-14A REV 2	1,2-DICHLOROBENZENE	LA DEQ
EPA TO-14A REV 2	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ	EPA TO-14A REV 2	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-14A REV 2	1,3,5-TRIMETHYLBENZENE	LA DEQ	EPA TO-14A REV 2	1,3-DICHLOROBENZENE	LA DEQ
EPA TO-14A REV 2	1,4-DICHLOROBENZENE	LA DEQ	EPA TO-14A REV 2	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-14A REV 2	BENZENE	LA DEQ	EPA TO-14A REV 2	BROMOFORM	LA DEQ
EPA TO-14A REV 2	CARBON TETRACHLORIDE	LA DEQ	EPA TO-14A REV 2	CHLOROBENZENE	LA DEQ
EPA TO-14A REV 2	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ	EPA TO-14A REV 2	CHLOROFORM	LA DEQ
EPA TO-14A REV 2	CIS-1,2-DICHLOROETHYLENE	LA DEQ	EPA TO-14A REV 2	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A REV 2	ETHYLBENZENE	LA DEQ	EPA TO-14A REV 2	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-14A REV 2	M+P-XYLENE	LA DEQ	EPA TO-14A REV 2	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-14A REV 2	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ	EPA TO-14A REV 2	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-14A REV 2	O-XYLENE	LA DEQ	EPA TO-14A REV 2	STYRENE	LA DEQ
EPA TO-14A REV 2	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ	EPA TO-14A REV 2	TOLUENE	LA DEQ
EPA TO-14A REV 2	TRANS-1,2-DICHLOROETHENE	LA DEQ	EPA TO-14A REV 2	TRANS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A REV 2	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ	EPA TO-14A REV 2	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-14A REV 2	VINYL CHLORIDE	LA DEQ	EPA TO-14A REV 2 - EXTENDED	4-METHYL-2-PENTANONE (MIBK)	LA DEQ
EPA TO-14A REV 2 - EXTENDED	BROMODICHLOROMETHANE	LA DEQ	EPA TO-14A REV 2 - EXTENDED	CARBON DISULFIDE	LA DEQ
EPA TO-14A REV 2 - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ	EPA TO-14A REV 2 - EXTENDED	XYLENE (TOTAL)	LA DEQ
EPA TO-15	1,1,1-TRICHLOROETHANE	LA DEQ	EPA TO-15	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-15	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	LA DEQ	EPA TO-15	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-15	1,1-DICHLOROETHANE	LA DEQ	EPA TO-15	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-15	1,2,4-TRICHLOROBENZENE	LA DEQ	EPA TO-15	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-15	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ	EPA TO-15	1,2-DICHLOROBENZENE	LA DEQ
EPA TO-15	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ	EPA TO-15	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15	1,3,5-TRIMETHYLBENZENE	LA DEQ	EPA TO-15	1,3-BUTADIENE	LA DEQ

Commonwealth of Virginia

Department of General Services
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AIR

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA TO-15	1,3-DICHLOROBENZENE	LA DEQ	EPA TO-15	1,4-DICHLOROBENZENE	LA DEQ
EPA TO-15	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	LA DEQ	EPA TO-15	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15	4-METHYL-2-PENTANONE (MIBK)	LA DEQ	EPA TO-15	ACETONITRILE	LA DEQ
EPA TO-15	ACROLEIN (PROPENAL)	LA DEQ	EPA TO-15	ACRYLONITRILE	LA DEQ
EPA TO-15	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ	EPA TO-15	BENZENE	LA DEQ
EPA TO-15	BROMODICHLOROMETHANE	LA DEQ	EPA TO-15	BROMOFORM	LA DEQ
EPA TO-15	CARBON DISULFIDE	LA DEQ	EPA TO-15	CARBON TETRACHLORIDE	LA DEQ
EPA TO-15	CHLOROBENZENE	LA DEQ	EPA TO-15	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-15	CHLOROFORM	LA DEQ	EPA TO-15	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15	CIS-1,3-DICHLOROPROPENE	LA DEQ	EPA TO-15	CYCLOHEXANE	LA DEQ
EPA TO-15	ETHYL ACRYLATE	LA DEQ	EPA TO-15	ETHYLBENZENE	LA DEQ
EPA TO-15	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ	EPA TO-15	HEXACHLOROETHANE	LA DEQ
EPA TO-15	IODOMETHANE (METHYL IODIDE)	LA DEQ	EPA TO-15	ISOPROPYLBENZENE	LA DEQ
EPA TO-15	M+P-XYLENE	LA DEQ	EPA TO-15	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ	EPA TO-15	METHYL METHACRYLATE	LA DEQ
EPA TO-15	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ	EPA TO-15	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15	O-XYLENE	LA DEQ	EPA TO-15	PROPYLENE	LA DEQ
EPA TO-15	STYRENE	LA DEQ	EPA TO-15	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15	TOLUENE	LA DEQ	EPA TO-15	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15	TRANS-1,3-DICHLOROPROPENE	LA DEQ	EPA TO-15	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ	EPA TO-15	VINYL ACETATE	LA DEQ
EPA TO-15	VINYL CHLORIDE	LA DEQ	EPA TO-15	XYLENE (TOTAL)	LA DEQ
EPA TO-15 - EXTENDED	2-CHLOROTOLUENE	LA DEQ	EPA TO-15 - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 - EXTENDED	4-ETHYLTOLUENE	LA DEQ	EPA TO-15 - EXTENDED	ACETONE	LA DEQ
EPA TO-15 - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ	EPA TO-15 - EXTENDED	NAPHTHALENE	LA DEQ
EPA TO-15 - EXTENDED	TERT-BUTYL ALCOHOL	LA DEQ			

DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 180.1 REV 2	TURBIDITY	PA	EPA 200.7 REV 4.4	ALUMINUM	PA
EPA 200.7 REV 4.4	BARIUM	PA	EPA 200.7 REV 4.4	BERYLLIUM	PA
EPA 200.7 REV 4.4	CADMIUM	PA	EPA 200.7 REV 4.4	CALCIUM	PA

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DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	CHROMIUM	PA	EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	IRON	PA	EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MANGANESE	PA	EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SILVER	PA	EPA 200.7 REV 4.4	SODIUM	PA
EPA 200.7 REV 4.4	ZINC	PA	EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	ARSENIC	PA	EPA 200.8 REV 5.4	BERYLLIUM	PA
EPA 200.8 REV 5.4	CADMIUM	PA	EPA 200.8 REV 5.4	CHROMIUM	PA
EPA 200.8 REV 5.4	COPPER	PA	EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	NICKEL	PA	EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	THALLIUM	PA	EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	CHLORIDE	PA	EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA	EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA	EPA 335.4 REV 1.0	CYANIDE	PA
EPA 353.2 REV 2	NITRATE AS N	PA	EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 353.2 REV 2	NITRITE AS N	PA	EPA 504.1 REV 1.1	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 504.1 REV 1.1	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 507 REV 2.1	ALACHLOR	PA
EPA 507 REV 2.1	ATRAZINE	PA	EPA 507 REV 2.1	SIMAZINE	PA
EPA 508 REV 3.1	AROCLOR-1016 (PCB-1016)	PA	EPA 508 REV 3.1	AROCLOR-1221 (PCB-1221)	PA
EPA 508 REV 3.1	AROCLOR-1232 (PCB-1232)	PA	EPA 508 REV 3.1	AROCLOR-1242 (PCB-1242)	PA
EPA 508 REV 3.1	AROCLOR-1248 (PCB-1248)	PA	EPA 508 REV 3.1	AROCLOR-1254 (PCB-1254)	PA
EPA 508 REV 3.1	AROCLOR-1260 (PCB-1260)	PA	EPA 508 REV 3.1	CHLORDANE (TECH.)	PA
EPA 508 REV 3.1	ENDRIN	PA	EPA 508 REV 3.1	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 508 REV 3.1	HEPTACHLOR	PA	EPA 508 REV 3.1	HEPTACHLOR EPOXIDE	PA
EPA 508 REV 3.1	HEXACHLOROBENZENE	PA	EPA 508 REV 3.1	HEXACHLOROCYCLOPENTADIENE	PA
EPA 508 REV 3.1	METHOXYCHLOR	PA	EPA 508 REV 3.1	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 515.1 REV 4	2,4-D	PA	EPA 515.1 REV 4	DALAPON	PA
EPA 515.1 REV 4	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 515.1 REV 4	PENTACHLOROPHENOL	PA
EPA 515.1 REV 4	PICLORAM	PA	EPA 515.1 REV 4	SILVEX (2,4,5-TP)	PA
EPA 524.2 REV 4.1	1,1,1-TRICHLOROETHANE	PA	EPA 524.2 REV 4.1	1,1,2-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,1-DICHLOROETHYLENE	PA	EPA 524.2 REV 4.1	1,2,4-TRICHLOROBENZENE	PA
EPA 524.2 REV 4.1	1,2-DICHLOROBENZENE	PA	EPA 524.2 REV 4.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 524.2 REV 4.1	1,2-DICHLOROPROPANE	PA	EPA 524.2 REV 4.1	1,4-DICHLOROBENZENE	PA
EPA 524.2 REV 4.1	BENZENE	PA	EPA 524.2 REV 4.1	BROMODICHLOROMETHANE	PA
EPA 524.2 REV 4.1	BROMOFORM	PA	EPA 524.2 REV 4.1	CARBON TETRACHLORIDE	PA

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DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 524.2 REV 4.1	CHLOROBENZENE	PA	EPA 524.2 REV 4.1	CHLORODIBROMOMETHANE	PA
EPA 524.2 REV 4.1	CHLOROFORM	PA	EPA 524.2 REV 4.1	CIS-1,2-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	ETHYLBENZENE	PA	EPA 524.2 REV 4.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 524.2 REV 4.1	STYRENE	PA	EPA 524.2 REV 4.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 524.2 REV 4.1	TOLUENE	PA	EPA 524.2 REV 4.1	TRANS-1,2-DICHLOROETHENE	PA
EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 524.2 REV 4.1	VINYL CHLORIDE	PA
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA	EPA 525.2 REV 2	ALACHLOR	PA
EPA 525.2 REV 2	ATRAZINE	PA	EPA 525.2 REV 2	BENZO(A)PYRENE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 525.2 REV 2	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 525.2 REV 2	ENDRIN	PA	EPA 525.2 REV 2	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 525.2 REV 2	HEPTACHLOR	PA	EPA 525.2 REV 2	HEPTACHLOR EPOXIDE	PA
EPA 525.2 REV 2	HEXACHLOROBENZENE	PA	EPA 525.2 REV 2	HEXACHLOROCYCLOPENTADIENE	PA
EPA 525.2 REV 2	METHOXYCHLOR	PA	EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA
EPA 531.1 REV 3.1	OXAMYL	PA	SM 2320 B-1997	ALKALINITY AS CACO3	PA
SM 2510 B-1997	CONDUCTIVITY	PA	SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-F⁻ C-1997	FLUORIDE	PA	SM 4500-H+ B-2000	PH	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA	SM 5540 C-2000	SURFACTANTS - MBAS	PA
SM 9215 B-1994	HETEROTROPHIC PLATE COUNT	PA	SM 9223 COLILERT P/A	ESCHERICHIA COLI	PA
SM 9223 COLILERT P/A	TOTAL COLIFORMS	PA			

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	PA	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA	EPA 160.4	RESIDUE-VOLATILE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA	EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA	EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA	EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA	EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA	EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO FURAN (1,2,3,7,8,9-HXCDF)	PA	EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO -P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO FURAN (1,2,3,7,8-PECDF)	PA	EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZO FURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZO FURAN	PA	EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOF URAN (2,3,7,8-TCDF)	PA	EPA 1631 E	MERCURY	PA
EPA 1664 A	OIL AND GREASE (AS HEM)	PA	EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	PA
EPA 1666 A	4-METHYL-2-PENTANONE (MIBK)	PA	EPA 1666 A	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ETHYL ACETATE	PA	EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA	EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	METHYL FORMATE	PA	EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA	EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEPTANE	PA	EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL	PA	EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1666 A	XYLENE (TOTAL)	PA	EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBI PHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIP HENYL (BZ-194)	PA	EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIP HENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBI PHENYL (BZ-207)	PA	EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIP HENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPH ENYL (BZ-170)	PA	EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIP HENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPH ENYL (BZ-171)	PA	EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHEN YL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIP HENYL (BZ-177)	PA	EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIP HENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPH ENYL (BZ-175)	PA	EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHEN YL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIP HENYL (BZ-199)	PA	EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBI PHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIP HENYL (BZ-198)	PA	EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPH ENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPH ENYL (BZ-174)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIP HENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPH ENYL (BZ-173)	PA	EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHEN YL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHEN YL (BZ-132)	PA	EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPH ENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHEN YL (BZ-131)	PA	EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHEN YL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIP HENYL (BZ-202)	PA	EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPH ENYL (BZ-178)	PA

Commonwealth of Virginia

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA	EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA	EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA	EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA	EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA	EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA	EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA	EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA	EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA	EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA	EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA	EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA	EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA	EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA	EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA	EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA	EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA	EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA	EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA	EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA

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EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA	EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA	EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA	EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA	EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA	EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA	EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA	EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA	EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA	EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA	EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA	EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA	EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA	EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA	EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA	EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA	EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA	EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA	EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA	EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA	EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA	EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA	EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA	EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA

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EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA	EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA	EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA	EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA	EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA	EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA	EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA	EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA	EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA	EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA	EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA	EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA	EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA	EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA	EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA	EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA	EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA	EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA	EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA	EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA	EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA

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EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA	EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA	EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA	EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA	EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA	EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA	EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA	EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA	EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA	EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA	EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 1671 A	ACETONITRILE	PA	EPA 1671 A	DIETHYLAMINE	PA
EPA 1671 A	DIMETHYL SULFOXIDE	PA	EPA 1671 A	ETHANOL	PA
EPA 1671 A	METHANOL	PA	EPA 1671 A	METHYL CELLOSOLVE	PA
EPA 1671 A	N-PROPANOL (1-PROPANOL)	PA	EPA 1671 A	TRIETHYLAMINE	PA
EPA 180.1 REV 2	TURBIDITY	PA	EPA 200.2 REV 2.8	PREP: SAMPLE PREPARATION PROCEDURE FOR SPECTROCHEMICAL DETERMINATION OF TOTAL RECOVERABLE ELEMENTS	PA
EPA 200.7 REV 4.4	ALUMINUM	PA	EPA 200.7 REV 4.4	ANTIMONY	PA
EPA 200.7 REV 4.4	ARSENIC	PA	EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA	EPA 200.7 REV 4.4	BORON	PA
EPA 200.7 REV 4.4	CADMIUM	PA	EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA	EPA 200.7 REV 4.4	COBALT	PA
EPA 200.7 REV 4.4	COPPER	PA	EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	LEAD	PA	EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MANGANESE	PA	EPA 200.7 REV 4.4	MOLYBDENUM	PA
EPA 200.7 REV 4.4	NICKEL	PA	EPA 200.7 REV 4.4	POTASSIUM	PA

Commonwealth of Virginia

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Scope of Accreditation

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EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2014
Expiration Date: June 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	SELENIUM	PA	EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	SODIUM	PA	EPA 200.7 REV 4.4	THALLIUM	PA
EPA 200.7 REV 4.4	TIN	PA	EPA 200.7 REV 4.4	TITANIUM	PA
EPA 200.7 REV 4.4	VANADIUM	PA	EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ALUMINUM	PA	EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	ARSENIC	PA	EPA 200.8 REV 5.4	BARIUM	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA	EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA	EPA 200.8 REV 5.4	COBALT	PA
EPA 200.8 REV 5.4	COPPER	PA	EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	MANGANESE	PA	EPA 200.8 REV 5.4	MOLYBDENUM	PA
EPA 200.8 REV 5.4	NICKEL	PA	EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	SILVER	PA	EPA 200.8 REV 5.4	THALLIUM	PA
EPA 200.8 REV 5.4	VANADIUM	PA	EPA 200.8 REV 5.4	ZINC	PA
EPA 200.8 REV 5.4 - EXTENDED	BORON	PA	EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	IRON	PA	EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	SODIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TIN	PA	EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	PA
EPA 245.1 REV 3	MERCURY	PA	EPA 300.0 REV 2.1	BROMIDE	PA
EPA 300.0 REV 2.1	CHLORIDE	PA	EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA	EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 300.0 REV 2.1	ORTHOPHOSPHATE AS P	PA	EPA 300.0 REV 2.1	SULFATE	PA
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	PA	EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 3020 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA	EPA 335.4 REV 1.0	CYANIDE	PA
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL	PA	EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	PA
EPA 3511	PREP: ORGANIC EXTRACTION AND SAMPLE PREPARATION	PA	EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	PA
EPA 353.2 REV 2	NITRATE AS N	PA	EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 353.2 REV 2	NITRITE AS N	PA	EPA 3620 C	PREP: FLORISIL CLEANUP	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA	EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA
EPA 365.3	ORTHOPHOSPHATE AS P	PA	EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND	PA
EPA 420.4 REV 1	TOTAL PHENOLICS	PA	EPA 5030	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 B	ALUMINUM	PA	EPA 6010 B	ANTIMONY	PA
EPA 6010 B	ARSENIC	PA	EPA 6010 B	BARIUM	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6010 B	BERYLLIUM	PA	EPA 6010 B	BORON	PA
EPA 6010 B	CADMIUM	PA	EPA 6010 B	CALCIUM	PA
EPA 6010 B	CHROMIUM	PA	EPA 6010 B	COBALT	PA
EPA 6010 B	COPPER	PA	EPA 6010 B	IRON	PA
EPA 6010 B	LEAD	PA	EPA 6010 B	LITHIUM	PA
EPA 6010 B	MAGNESIUM	PA	EPA 6010 B	MANGANESE	PA
EPA 6010 B	MOLYBDENUM	PA	EPA 6010 B	NICKEL	PA
EPA 6010 B	POTASSIUM	PA	EPA 6010 B	SELENIUM	PA
EPA 6010 B	SILVER	PA	EPA 6010 B	SODIUM	PA
EPA 6010 B	STRONTIUM	PA	EPA 6010 B	THALLIUM	PA
EPA 6010 B	TIN	PA	EPA 6010 B	TITANIUM	PA
EPA 6010 B	VANADIUM	PA	EPA 6010 B	ZINC	PA
EPA 6010 C	ALUMINUM	PA	EPA 6010 C	ANTIMONY	PA
EPA 6010 C	ARSENIC	PA	EPA 6010 C	BARIUM	PA
EPA 6010 C	BERYLLIUM	PA	EPA 6010 C	BORON	PA
EPA 6010 C	CADMIUM	PA	EPA 6010 C	CALCIUM	PA
EPA 6010 C	CHROMIUM	PA	EPA 6010 C	COBALT	PA
EPA 6010 C	COPPER	PA	EPA 6010 C	IRON	PA
EPA 6010 C	LEAD	PA	EPA 6010 C	LITHIUM	PA
EPA 6010 C	MAGNESIUM	PA	EPA 6010 C	MANGANESE	PA
EPA 6010 C	MOLYBDENUM	PA	EPA 6010 C	NICKEL	PA
EPA 6010 C	POTASSIUM	PA	EPA 6010 C	SELENIUM	PA
EPA 6010 C	SILVER	PA	EPA 6010 C	SODIUM	PA
EPA 6010 C	STRONTIUM	PA	EPA 6010 C	THALLIUM	PA
EPA 6010 C	TIN	PA	EPA 6010 C	TITANIUM	PA
EPA 6010 C	VANADIUM	PA	EPA 6010 C	ZINC	PA
EPA 602	BENZENE	PA	EPA 602	ETHYLBENZENE	PA
EPA 602	TOLUENE	PA	EPA 602	XYLENE (TOTAL)	PA
EPA 6020 A	ALUMINUM	PA	EPA 6020 A	ANTIMONY	PA
EPA 6020 A	ARSENIC	PA	EPA 6020 A	BARIUM	PA
EPA 6020 A	BERYLLIUM	PA	EPA 6020 A	CADMIUM	PA
EPA 6020 A	CALCIUM	PA	EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COBALT	PA	EPA 6020 A	COPPER	PA
EPA 6020 A	IRON	PA	EPA 6020 A	LEAD	PA
EPA 6020 A	MAGNESIUM	PA	EPA 6020 A	MANGANESE	PA
EPA 6020 A	NICKEL	PA	EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SELENIUM	PA	EPA 6020 A	SILVER	PA
EPA 6020 A	SODIUM	PA	EPA 6020 A	THALLIUM	PA
EPA 6020 A	VANADIUM	PA	EPA 6020 A	ZINC	PA

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EPA 6020 A - EXTENDED	BORON	PA	EPA 6020 A - EXTENDED	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA	EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	TITANIUM	PA	EPA 608	4,4'-DDD	PA
EPA 608	4,4'-DDE	PA	EPA 608	4,4'-DDT	PA
EPA 608	ALDRIN	PA	EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608	AROCLOR-1016 (PCB-1016)	PA	EPA 608	AROCLOR-1221 (PCB-1221)	PA
EPA 608	AROCLOR-1232 (PCB-1232)	PA	EPA 608	AROCLOR-1242 (PCB-1242)	PA
EPA 608	AROCLOR-1248 (PCB-1248)	PA	EPA 608	AROCLOR-1254 (PCB-1254)	PA
EPA 608	AROCLOR-1260 (PCB-1260)	PA	EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608	CHLORDANE (TECH.)	PA	EPA 608	DELTA-BHC	PA
EPA 608	DIELDRIN	PA	EPA 608	ENDOSULFAN I	PA
EPA 608	ENDOSULFAN II	PA	EPA 608	ENDOSULFAN SULFATE	PA
EPA 608	ENDRIN	PA	EPA 608	ENDRIN ALDEHYDE	PA
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 608	HEPTACHLOR	PA
EPA 608	HEPTACHLOR EPOXIDE	PA	EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 610 (HPLC)	ACENAPHTHENE	PA	EPA 610 (HPLC)	ACENAPHTHYLENE	PA
EPA 610 (HPLC)	ANTHRACENE	PA	EPA 610 (HPLC)	BENZO(A)ANTHRACENE	PA
EPA 610 (HPLC)	BENZO(A)PYRENE	PA	EPA 610 (HPLC)	BENZO(G,H,I)PERYLENE	PA
EPA 610 (HPLC)	BENZO(K)FLUORANTHENE	PA	EPA 610 (HPLC)	BENZO[B]FLUORANTHENE	PA
EPA 610 (HPLC)	CHRYSENE	PA	EPA 610 (HPLC)	DIBENZO(A,H) ANTHRACENE	PA
EPA 610 (HPLC)	FLUORANTHENE	PA	EPA 610 (HPLC)	FLUORENE	PA
EPA 610 (HPLC)	INDENO(1,2,3-CD) PYRENE	PA	EPA 610 (HPLC)	NAPHTHALENE	PA
EPA 610 (HPLC)	PHENANTHRENE	PA	EPA 610 (HPLC)	PYRENE	PA
EPA 622	AZINPHOS-METHYL (GUTHION)	PA	EPA 622	BOLSTAR (SULPROFOS)	PA
EPA 622	CHLORPYRIFOS	PA	EPA 622	DEMETON-O	PA
EPA 622	DEMETON-S	PA	EPA 622	DIAZINON	PA
EPA 622	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 622	DISULFOTON	PA
EPA 622	ETHOPROP	PA	EPA 622	FENSULFOTHION	PA
EPA 622	FENTHION	PA	EPA 622	MERPHOS	PA
EPA 622	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 622	MEVINPHOS	PA
EPA 622	NALED	PA	EPA 622	PHORATE	PA
EPA 622	STIROFOS	PA	EPA 624	1,1,1-TRICHLOROETHANE	PA

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 624	1,1,2,2-TETRACHLOROETHANE	PA	EPA 624	1,1,2-TRICHLOROETHANE	PA
EPA 624	1,1-DICHLOROETHANE	PA	EPA 624	1,2-DICHLOROBENZENE	PA
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 624	1,2-DICHLOROPROPANE	PA
EPA 624	1,3-DICHLOROBENZENE	PA	EPA 624	1,4-DICHLOROBENZENE	PA
EPA 624	2-CHLOROETHYL VINYL ETHER	PA	EPA 624	ACROLEIN (PROPENAL)	PA
EPA 624	ACRYLONITRILE	PA	EPA 624	BENZENE	PA
EPA 624	BROMODICHLOROMETHANE	PA	EPA 624	BROMOFORM	PA
EPA 624	CARBON TETRACHLORIDE	PA	EPA 624	CHLOROBENZENE	PA
EPA 624	CHLORODIBROMOMETHANE	PA	EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 624	CHLOROFORM	PA	EPA 624	CIS-1,3-DICHLOROPROPENE	PA
EPA 624	ETHYLBENZENE	PA	EPA 624	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 624	TOLUENE	PA
EPA 624	TRANS-1,2-DICHLOROETHENE	PA	EPA 624	TRANS-1,3-DICHLOROPROPENE	PA
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 624	VINYL CHLORIDE	PA	EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	PA
EPA 625	1,2,4-TRICHLOROBENZENE	PA	EPA 625	2,4,6-TRICHLOROPHENOL	PA
EPA 625	2,4-DICHLOROPHENOL	PA	EPA 625	2,4-DIMETHYLPHENOL	PA
EPA 625	2,4-DINITROPHENOL	PA	EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 625	2-CHLORONAPHTHALENE	PA
EPA 625	2-CHLOROPHENOL	PA	EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 625	2-METHYLPHENOL (O-CRESOL)	PA	EPA 625	2-NITROPHENOL	PA
EPA 625	3,3'-DICHLOROBENZIDINE	PA	EPA 625	4-BROMOPHENYL PHENYL ETHER	PA
EPA 625	4-CHLORO-3-METHYLPHENOL	PA	EPA 625	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625	4-NITROPHENOL	PA	EPA 625	ACENAPHTHENE	PA
EPA 625	ACENAPHTHYLENE	PA	EPA 625	ANTHRACENE	PA
EPA 625	BENZIDINE	PA	EPA 625	BENZO(A)ANTHRACENE	PA
EPA 625	BENZO(A)PYRENE	PA	EPA 625	BENZO(G,H,I)PERYLENE	PA
EPA 625	BENZO(K)FLUORANTHENE	PA	EPA 625	BENZO[B]FLUORANTHENE	PA
EPA 625	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 625	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625	BIS(2-CHLOROISOPROPYL) ETHER	PA	EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 625	BUTYL BENZYL PHTHALATE	PA	EPA 625	CHRYSENE	PA

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 625	DI-N-BUTYL PHTHALATE	PA	EPA 625	DI-N-OCTYL PHTHALATE	PA
EPA 625	DIBENZO(A,H) ANTHRACENE	PA	EPA 625	DIETHYL PHTHALATE	PA
EPA 625	DIMETHYL PHTHALATE	PA	EPA 625	FLUORANTHENE	PA
EPA 625	FLUORENE	PA	EPA 625	HEXACHLOROBENZENE	PA
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 625	HEXACHLOROCYCLOPENTADIENE	PA
EPA 625	HEXACHLOROETHANE	PA	EPA 625	INDENO(1,2,3-CD) PYRENE	PA
EPA 625	ISOPHORONE	PA	EPA 625	N-NITROSODI-N-PROPYLAMINE	PA
EPA 625	N-NITROSODIMETHYLAMINE	PA	EPA 625	N-NITROSODIPHENYLAMINE	PA
EPA 625	NAPHTHALENE	PA	EPA 625	NITROBENZENE	PA
EPA 625	PENTACHLOROPHENOL	PA	EPA 625	PHENANTHRENE	PA
EPA 625	PHENOL	PA	EPA 625	PYRENE	PA
EPA 625 - EXTENDED	1,2-DIPHENYLHYDRAZINE	PA	EPA 625 - EXTENDED	4-METHYLPHENOL (P-CRESOL)	PA
EPA 625 - EXTENDED	ACETOPHENONE	PA	EPA 625 - EXTENDED	ANILINE	PA
EPA 625 - EXTENDED	CARBAZOLE	PA	EPA 625 - EXTENDED	N-DECANE	PA
EPA 625 - EXTENDED	N-OCTADECANE	PA	EPA 625 - EXTENDED	PYRIDINE	PA
EPA 6850	PERCHLORATE	PA	EPA 7196 A	CHROMIUM VI	PA
EPA 7470 A	MERCURY	PA	EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHANOL	PA	EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 B	METHANOL	PA	EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 C	ETHANOL	PA	EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	METHANOL	PA	EPA 8015 D - EXTENDED	FORMIC ACID	PA
EPA 8021 B	BENZENE	PA	EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA	EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	NAPHTHALENE	PA	EPA 8021 B	O-XYLENE	PA
EPA 8021 B	TOLUENE	PA	EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDE	PA	EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALDRIN	PA	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	CHLORDANE (TECH.)	PA	EPA 8081 A	DELTA-BHC	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8081 A	DIELDRIN	PA	EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN II	PA	EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN	PA	EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	ENDRIN KETONE	PA	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA	EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDE	PA	EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALDRIN	PA	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	CHLORDANE (TECH.)	PA	EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	DIELDRIN	PA	EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN II	PA	EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN	PA	EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	ENDRIN KETONE	PA	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA	EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA	EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA	EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA	EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA	EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8141 A	ATRAZINE	PA	EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	CHLORPYRIFOS	PA	EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-O	PA	EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DIAZINON	PA	EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	DISULFOTON	PA	EPA 8141 A	ETHION	PA
EPA 8141 A	ETHOPROP	PA	EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENSULFOTHION	PA	EPA 8141 A	FENTHION	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 2914

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2014
Expiration Date: June 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8141 A	MALATHION	PA	EPA 8141 A	MERPHOS	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	NALED	PA	EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	PHORATE	PA	EPA 8141 A	RONNEL	PA
EPA 8141 A	SIMAZINE	PA	EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA	EPA 8141 B	AZINPHOS-METHYL (GUTHION)	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA	EPA 8141 B	CHLORPYRIFOS	PA
EPA 8141 B	COUMAPHOS	PA	EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA	EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	DISULFOTON	PA	EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 B	ETHION	PA	EPA 8141 B	ETHOPROP	PA
EPA 8141 B	FAMPHUR	PA	EPA 8141 B	FENSULFOTHION	PA
EPA 8141 B	FENTHION	PA	EPA 8141 B	MALATHION	PA
EPA 8141 B	MERPHOS	PA	EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 B	MEVINPHOS	PA	EPA 8141 B	NALED	PA
EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA	EPA 8141 B	PHORATE	PA
EPA 8141 B	RONNEL	PA	EPA 8141 B	SIMAZINE	PA
EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA	EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 B	TRICHLORONATE	PA	EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-D	PA	EPA 8151 A	2,4-DB	PA
EPA 8151 A	DALAPON	PA	EPA 8151 A	DICAMBA	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA	EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPA	PA	EPA 8151 A	MCPP	PA
EPA 8151 A	PENTACHLOROPHENOL	PA	EPA 8151 A	PICLORAM	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA	EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,1-TRICHLOROETHANE	PA	EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,2-TRICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHYLENE	PA	EPA 8260 B	1,1-DICHLOROPROPENE	PA
EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA	EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA	EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 B	1,2-DICHLOROBENZENE	PA	EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA	EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 B	1,3-DICHLOROBENZENE	PA	EPA 8260 B	1,3-DICHLOROPROPANE	PA
EPA 8260 B	1,4-DICHLOROBENZENE	PA	EPA 8260 B	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL)	PA	EPA 8260 B	2,2-DICHLOROPROPANE	PA
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 B	2-CHLOROTOLUENE	PA	EPA 8260 B	2-HEXANONE	PA
EPA 8260 B	2-NITROPROPANE	PA	EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 B	4-METHYL-2-PENTANONE (MIBK)	PA
EPA 8260 B	ACETONE	PA	EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA	EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 B	BENZENE	PA
EPA 8260 B	BENZYL CHLORIDE	PA	EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA	EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA	EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA	EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA	EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROFORM	PA	EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	DIETHYL ETHER	PA	EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 B	ETHANOL	PA	EPA 8260 B	ETHYL ACETATE	PA
EPA 8260 B	ETHYL METHACRYLATE	PA	EPA 8260 B	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B	ETHYLBENZENE	PA	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	M+P-XYLENE	PA	EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA

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2425 NEW HOLLAND PIKE
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	1,3,5-TRICHLOROBENZENE	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DICHLOROBENZENE	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE	PA
EPA 8260 C	1,4-DICHLOROBENZENE	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL)	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 B	N-PROPYLAMINE	PA
EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL CHLORIDE	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	N-HEXANE	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA

Commonwealth of Virginia

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-CHLOROTOLUENE	PA	EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	2-NITROPROPANE	PA	EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 C	4-METHYL-2-PENTANONE (MIBK)	PA
EPA 8260 C	ACETONE	PA	EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA	EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 C	BENZENE	PA
EPA 8260 C	BENZYL CHLORIDE	PA	EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA	EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA	EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA	EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA	EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROFORM	PA	EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	CYCLOHEXANE	PA	EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 8260 C	DIETHYL ETHER	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL ACETATE	PA	EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA	EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8260 C	HEXACHLOROETHANE	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	N-PROPYLBENZENE	PA	EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA	EPA 8260 C	STYRENE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 C	TERT-BUTYL ALCOHOL	PA
EPA 8260 C	TERT-BUTYLBENZENE	PA	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TOLUENE	PA	EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	PA	EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL ACETATE	PA	EPA 8260 C	VINYL CHLORIDE	PA
EPA 8260 C	XYLENE (TOTAL)	PA	EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOR OETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA	EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	DIMETHYL ETHER	PA	EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA	EPA 8260 C - EXTENDED	N-HEPTANE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE	PA	EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8270 C	1,3-DICHLOROBENZENE	PA
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8270 C	1,4-DICHLOROBENZENE	PA
EPA 8270 C	1,4-DINITROBENZENE	PA	EPA 8270 C	1,4-NAPHTHOQUINONE	PA
EPA 8270 C	1,4-PHENYLENEDIAMINE	PA	EPA 8270 C	1-CHLORONAPHTHALENE	PA
EPA 8270 C	1-NAPHTHYLAMINE	PA	EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DICHLOROPHENOL	PA	EPA 8270 C	2,4-DIMETHYLPHENOL	PA
EPA 8270 C	2,4-DINITROPHENOL	PA	EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 C	2,6-DICHLOROPHENOL	PA	EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 C	2-ACETYLAMINOFLUORENE	PA	EPA 8270 C	2-CHLORONAPHTHALENE	PA
EPA 8270 C	2-CHLOROPHENOL	PA	EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 C	2-METHYLNAPHTHALENE	PA	EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 C	2-NAPHTHYLAMINE	PA	EPA 8270 C	2-NITROANILINE	PA
EPA 8270 C	2-NITROPHENOL	PA	EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA	EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	3-NITROANILINE	PA	EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROAN ILINE)	PA
EPA 8270 C	4-AMINOBIPHENYL	PA	EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 C	4-CHLOROANILINE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROPHENOL	PA	EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHENE	PA	EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ACETOPHENONE	PA	EPA 8270 C	ANILINE	PA
EPA 8270 C	ANTHRACENE	PA	EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZIDINE	PA	EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(A)PYRENE	PA	EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA	EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BENZO[B]FLUORANTHENE	PA	EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	PA	EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA	EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	CHRYSENE	PA	EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA	EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIBENZOFURAN	PA	EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHOATE	PA	EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DIPHENYLAMINE	PA	EPA 8270 C	DISULFOTON	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA	EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORANTHENE	PA	EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBENZENE	PA	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIEN E	PA	EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA	EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISODRIN	PA	EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	ISOSAFROLE	PA	EPA 8270 C	KEPONE	PA
EPA 8270 C	METHAPYRILENE	PA	EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA	EPA 8270 C	N-NITROSODIETHYLAMINE	PA
EPA 8270 C	N-NITROSODIMETHYLAMINE	PA	EPA 8270 C	N-NITROSODIPHENYLAMINE	PA
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA	EPA 8270 C	N-NITROSOMORPHOLINE	PA
EPA 8270 C	N-NITROSOPIPERIDINE	PA	EPA 8270 C	N-NITROSOPYRROLIDINE	PA
EPA 8270 C	NAPHTHALENE	PA	EPA 8270 C	NITROBENZENE	PA
EPA 8270 C	NITROQUINOLINE-1-OXIDE	PA	EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
			EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA	EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENACETIN	PA	EPA 8270 C	PHENANTHRENE	PA
EPA 8270 C	PHENOL	PA	EPA 8270 C	PHORATE	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA	EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRENE	PA	EPA 8270 C	PYRIDINE	PA
EPA 8270 C	SAFROLE	PA	EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C	THIOPHENOL (BENZENETHIOL)	PA	EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA	EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA	EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA	EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO[B]FLUORANTHENE	PA	EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	FLUORENE	PA	EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA	EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM	PYRENE	PA	EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE	PA	EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8270 D	1,3-DICHLOROBENZENE	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8270 D	1,4-DICHLOROBENZENE	PA
EPA 8270 D	1,4-DINITROBENZENE	PA	EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA	EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA	EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA	EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA	EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-NITROPHENOL	PA	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA	EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA

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EPA 8270 D	3-NITROANILINE	PA	EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 D	4-AMINOBIPHENYL	PA	EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROPHENOL	PA	EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHENE	PA	EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ACETOPHENONE	PA	EPA 8270 D	ANILINE	PA
EPA 8270 D	ANTHRACENE	PA	EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZIDINE	PA	EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(A)PYRENE	PA	EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA	EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BENZO[B]FLUORANTHENE	PA	EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	PA	EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA	EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	CHRYSENE	PA	EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA	EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIBENZOFURAN	PA	EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHOATE	PA	EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	DISULFOTON	PA	EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FAMPHUR	PA	EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	FLUORENE	PA	EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROETHANE	PA	EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOPHORONE	PA	EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	KEPONE	PA	EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSODIETHYLAMINE	PA	EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA	EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA	EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	NITROBENZENE	PA	EPA 8270 D	NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA	EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENACETIN	PA	EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHENOL	PA	EPA 8270 D	PHORATE	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA	EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	PYRENE	PA	EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA	EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1,1-BIPHENYL	PA	EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA	EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA	EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA	EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA	EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA	EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA	EPA 8270 D SIM	BENZO[B]FLUORANTHENE	PA
EPA 8270 D SIM	CHRYSENE	PA	EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	FLUORENE	PA	EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA	EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM	PYRENE	PA	EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D SIM - EXTENDED	DIBENZO(A, H) PYRENE	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA	EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA	EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA	EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA

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EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO -P-DIOXIN (1,2,3,7,8-PECDD)	PA	EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO FURAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZO FURAN (2,3,4,6,7,8-HXCDF)	PA	EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZO FURAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA	EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOF URAN (2,3,7,8-TCDF)	PA
EPA 8315 A	ACETALDEHYDE	PA	EPA 8315 A	ACROLEIN (PROPENAL)	PA
EPA 8315 A	BENZALDEHYDE	PA	EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	CROTONALDEHYDE	PA	EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA	EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA	EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA	EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA	EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA	EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	3-NITROTOLUENE	PA	EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 A	4-NITROTOLUENE	PA	EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLN ITRAMINE (TETRYL)	PA
EPA 8330 A	NITROBENZENE	PA	EPA 8330 A	NITROGLYCERIN	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO -1,3,5,7-TETRAZOCINE (HMX)	PA	EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3, 5-TRIAZINE)	PA
EPA 9012 A	TOTAL CYANIDE	PA	EPA 9012 B	TOTAL CYANIDE	PA
EPA 9040 C	PH	PA	EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	BROMIDE	PA	EPA 9056 A	CHLORIDE	PA
EPA 9056 A	FLUORIDE	PA	EPA 9056 A	NITRATE AS N	PA
EPA 9056 A	NITRITE	PA	EPA 9056 A	ORTHOPHOSPHATE AS P	PA
EPA 9056 A	SULFATE	PA	EPA 9066	TOTAL PHENOLICS	PA
EPA 9095 B	FREE LIQUID	PA	RSK-175	ETHANE	PA
RSK-175	ETHENE	PA	RSK-175	METHANE	PA
SM 2120 B-2001	COLOR	PA	SM 2310 B-1997	ACIDITY, AS CACO3	PA
SM 2320 B-1997	ALKALINITY AS CACO3	PA	SM 2340 B-1997	TOTAL HARDNESS AS CACO3	PA
SM 2340 C-1997	TOTAL HARDNESS AS CACO3	PA	SM 2510 B-1997	CONDUCTIVITY	PA
SM 2540 B-1997	RESIDUE-TOTAL	PA	SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	PA	SM 2540 F-1997	RESIDUE-SETTLEABLE	PA
SM 3500-CR B-2009	CHROMIUM VI	PA	SM 4500-CN⁻ C-1999	CYANIDE	PA
SM 4500-CN⁻ E-1999	CYANIDE	PA	SM 4500-F⁻ B-1997	FLUORIDE	PA

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SM 4500-F⁻ C-1997	FLUORIDE	PA	SM 4500-NH3 B-1997	AMMONIA AS N	PA
SM 4500-NH3 D-1997	AMMONIA AS N	PA	SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 4500-P F-1999	PHOSPHORUS, TOTAL	PA	SM 4500-S2⁻ D-2000	SULFIDE	PA
SM 4500-SIO2 C-1997	SILICA AS SIO2	PA	SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND	PA
SM 5210 B-2001	CARBONACEOUS BOD, CBOD	PA	SM 5310 C-2000	TOTAL ORGANIC CARBON	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA	SM 9222 D-1997	FECAL COLIFORMS	PA

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	PA	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA	EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA	EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA	EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA	EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA	EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA	EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA	EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA	EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA	EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA	EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA	EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA	EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA	EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA	EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA	EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA	EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA

Commonwealth of Virginia

Department of General Services
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LANCASTER, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2014
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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA	EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA	EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA	EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA	EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA	EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA	EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA	EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA	EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA	EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA	EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA	EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA	EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA	EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA	EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA	EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA	EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA	EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA	EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA	EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA

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EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA	EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA	EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA	EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA	EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA	EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA	EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA	EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA	EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA	EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA	EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA	EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA	EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA	EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA	EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA	EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA	EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA	EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA	EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA	EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA	EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA	EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA	EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA	EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA

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EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA	EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA	EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA	EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA	EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA	EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA	EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA	EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA	EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA	EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA	EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA	EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA	EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA	EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA	EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA	EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA	EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA	EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA

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EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA	EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA	EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA	EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA	EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA	EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA	EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA	EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA	EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA	EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA	EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA	EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA
EPA 3540 C	PREP: SOXHLET EXTRACTION	PA	EPA 3546	PREP: MICROWAVE EXTRACTION	PA
EPA 3550 B	PREP: ULTRASONIC EXTRACTION	PA	EPA 3620 B	PREP: FLORISIL CLEANUP	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA	EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA
EPA 3660 B	PREP: SULFUR CLEANUP	PA	EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	PA
EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA	EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA
EPA 6010 B	ALUMINUM	PA	EPA 6010 B	ANTIMONY	PA
EPA 6010 B	ARSENIC	PA	EPA 6010 B	BARIUM	PA
EPA 6010 B	BERYLLIUM	PA	EPA 6010 B	BORON	PA
EPA 6010 B	CADMIUM	PA	EPA 6010 B	CALCIUM	PA
EPA 6010 B	CHROMIUM	PA	EPA 6010 B	COBALT	PA
EPA 6010 B	COPPER	PA	EPA 6010 B	IRON	PA
EPA 6010 B	LEAD	PA	EPA 6010 B	MAGNESIUM	PA
EPA 6010 B	MANGANESE	PA	EPA 6010 B	MOLYBDENUM	PA
EPA 6010 B	NICKEL	PA	EPA 6010 B	POTASSIUM	PA
EPA 6010 B	SELENIUM	PA	EPA 6010 B	SILVER	PA
EPA 6010 B	SODIUM	PA	EPA 6010 B	STRONTIUM	PA
EPA 6010 B	THALLIUM	PA	EPA 6010 B	TIN	PA

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EPA 6010 B	TITANIUM	PA	EPA 6010 B	VANADIUM	PA
EPA 6010 B	ZINC	PA	EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ANTIMONY	PA	EPA 6010 C	ARSENIC	PA
EPA 6010 C	BARIUM	PA	EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	BORON	PA	EPA 6010 C	CADMIUM	PA
EPA 6010 C	CALCIUM	PA	EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COBALT	PA	EPA 6010 C	COPPER	PA
EPA 6010 C	IRON	PA	EPA 6010 C	LEAD	PA
EPA 6010 C	MAGNESIUM	PA	EPA 6010 C	MANGANESE	PA
EPA 6010 C	MOLYBDENUM	PA	EPA 6010 C	NICKEL	PA
EPA 6010 C	POTASSIUM	PA	EPA 6010 C	SELENIUM	PA
EPA 6010 C	SILVER	PA	EPA 6010 C	SODIUM	PA
EPA 6010 C	STRONTIUM	PA	EPA 6010 C	THALLIUM	PA
EPA 6010 C	TIN	PA	EPA 6010 C	TITANIUM	PA
EPA 6010 C	VANADIUM	PA	EPA 6010 C	ZINC	PA
EPA 6020 A	ALUMINUM	PA	EPA 6020 A	ANTIMONY	PA
EPA 6020 A	ARSENIC	PA	EPA 6020 A	BERYLLIUM	PA
EPA 6020 A	CADMIUM	PA	EPA 6020 A	CALCIUM	PA
EPA 6020 A	CHROMIUM	PA	EPA 6020 A	COBALT	PA
EPA 6020 A	COPPER	PA	EPA 6020 A	IRON	PA
EPA 6020 A	LEAD	PA	EPA 6020 A	MAGNESIUM	PA
EPA 6020 A	MANGANESE	PA	EPA 6020 A	NICKEL	PA
EPA 6020 A	POTASSIUM	PA	EPA 6020 A	SELENIUM	PA
EPA 6020 A	SILVER	PA	EPA 6020 A	SODIUM	PA
EPA 6020 A	THALLIUM	PA	EPA 6020 A	VANADIUM	PA
EPA 6020 A	ZINC	PA	EPA 6020 A - EXTENDED	BORON	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA	EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	TITANIUM	PA	EPA 6850	PERCHLORATE	PA
EPA 7196 A	CHROMIUM VI	PA	EPA 7471 A	MERCURY	PA
EPA 7471 B	MERCURY	PA	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHANOL	PA	EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 B	METHANOL	PA	EPA 8015 B	TERT-BUTYL ALCOHOL	PA
EPA 8015 C	ETHANOL	PA	EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8015 C	METHANOL	PA
EPA 8015 C	TERT-BUTYL ALCOHOL	PA	EPA 8015 D - EXTENDED	FORMIC ACID	PA

Commonwealth of Virginia

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EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2014
Expiration Date: June 14, 2015

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8021 B	BENZENE	PA	EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA	EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	NAPHTHALENE	PA	EPA 8021 B	O-XYLENE	PA
EPA 8021 B	TOLUENE	PA	EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDE	PA	EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALDRIN	PA	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	CHLORDANE (TECH.)	PA	EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	DIELDRIN	PA	EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN II	PA	EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN	PA	EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	ENDRIN KETONE	PA	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA	EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDE	PA	EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALDRIN	PA	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	CHLORDANE (TECH.)	PA	EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	DIELDRIN	PA	EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN II	PA	EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN	PA	EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	ENDRIN KETONE	PA	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA	EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B - EXTENDED	KEPONE	PA

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EPA 8081 B - EXTENDED	MIREX	PA	EPA 8082 - OIL A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 - OIL A	AROCLOR-1221 (PCB-1221)	PA	EPA 8082 - OIL A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 - OIL A	AROCLOR-1242 (PCB-1242)	PA	EPA 8082 - OIL A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 - OIL A	AROCLOR-1254 (PCB-1254)	PA	EPA 8082 - OIL A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA	EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA	EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA	EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA	EPA 8141 A	ATRAZINE	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA	EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	COUMAPHOS	PA	EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DEMETON-S	PA	EPA 8141 A	DIAZINON	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 A	DISULFOTON	PA
EPA 8141 A	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 A	ETHION	PA
EPA 8141 A	ETHOPROP	PA	EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENSULFOTHION	PA	EPA 8141 A	FENTHION	PA
EPA 8141 A	MALATHION	PA	EPA 8141 A	MERPHOS	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	NALED	PA	EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	PHORATE	PA	EPA 8141 A	RONNEL	PA
EPA 8141 A	SIMAZINE	PA	EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA	EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	COUMAPHOS	PA	EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA	EPA 8141 B	DIAZINON	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 B	DISULFOTON	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA	EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA	EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4,5-T	PA	EPA 8151 A	2,4-D	PA
EPA 8151 A	2,4-DB	PA	EPA 8151 A	DALAPON	PA
EPA 8151 A	DICAMBA	PA	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8151 A	MCPA	PA
EPA 8151 A	MCPP	PA	EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	PICLORAM	PA	EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA	EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 B	1,2-DICHLOROBENZENE	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 B	1,3-DICHLOROBENZENE	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA	EPA 8260 B	1,4-DICHLOROBENZENE	PA
EPA 8260 B	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	PA	EPA 8260 B	1-BUTANOL (N-BUTANOL)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-HEXANONE	PA	EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 B	4-METHYL-2-PENTANONE (MIBK)	PA
EPA 8260 B	ACETONE	PA	EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA	EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 B	BENZENE	PA
EPA 8260 B	BENZYL CHLORIDE	PA	EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA	EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA	EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA	EPA 8260 B	CHLOROBENZENE	PA

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EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC
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LANCASTER, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2014
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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	CHLORODIBROMOMETHANE	PA	EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROFORM	PA	EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL ACETATE	PA	EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	ETHYLBENZENE	PA	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	M+P-XYLENE	PA	EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA	EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	O-XYLENE	PA	EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA	EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	STYRENE	PA	EPA 8260 B	TERT-BUTYL ALCOHOL	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA	EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TOLUENE	PA	EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	PA	EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL ACETATE	PA	EPA 8260 B	VINYL CHLORIDE	PA
EPA 8260 B	XYLENE (TOTAL)	PA	EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOR OETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA	EPA 8260 B - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA	EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA	EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA	EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 C	1,2-DICHLOROBENZENE	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 C	1,3-DICHLOROBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA	EPA 8260 C	1,4-DICHLOROBENZENE	PA
EPA 8260 C	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	PA	EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-CHLOROTOLUENE	PA	EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA	EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA
EPA 8260 C	4-METHYL-2-PENTANONE (MIBK)	PA	EPA 8260 C	ACETONE	PA
EPA 8260 C	ACETONITRILE	PA	EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ACRYLONITRILE	PA	EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZENE	PA	EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOBENZENE	PA	EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA	EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON DISULFIDE	PA	EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLOROBENZENE	PA	EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA	EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA	EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA	EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL ACETATE	PA	EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA	EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8260 C	HEXACHLOROETHANE	PA

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SOLID AND CHEMICAL MATERIALS

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EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	N-PROPYLBENZENE	PA	EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA	EPA 8260 C	STYRENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 C	TERT-BUTYL ALCOHOL	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	VINYL CHLORIDE	PA	EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA	EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE	PA	EPA 8270 C	1,2-DINITROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DICHLOROBENZENE	PA	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DICHLOROBENZENE	PA	EPA 8270 C	1,4-DINITROBENZENE	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA	EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA	EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA	EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA	EPA 8270 C	2-CHLOROPHENOL	PA

Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROANILINE	PA	EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	PA	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA	EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	3-NITROANILINE	PA	EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 C	4-AMINOBIPHENYL	PA	EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROPHENOL	PA	EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHENE	PA	EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ACETOPHENONE	PA	EPA 8270 C	ANILINE	PA
EPA 8270 C	ANTHRACENE	PA	EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZIDINE	PA	EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(A)PYRENE	PA	EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA	EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BENZO[B]FLUORANTHENE	PA	EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	PA	EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA	EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	CHRYSENE	PA	EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA	EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIBENZOFURAN	PA	EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHOATE	PA	EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	DISULFOTON	PA	EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FAMPHUR	PA	EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	FLUORENE	PA	EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	HEXACHLOROETHANE	PA	EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOPHORONE	PA	EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	KEPONE	PA	EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA	EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA	EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA	EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA	EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA	EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	NITROBENZENE	PA	EPA 8270 C	NITROQUINOLINE-1-OXIDE	PA
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA	EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENACETIN	PA	EPA 8270 C	PHENANTHRENE	PA
EPA 8270 C	PHENOL	PA	EPA 8270 C	PHORATE	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA	EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRENE	PA	EPA 8270 C	PYRIDINE	PA
EPA 8270 C	SAFROLE	PA	EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA	EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHENE	PA	EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	ANTHRACENE	PA	EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA	EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA	EPA 8270 C SIM	BENZO[B]FLUORANTHENE	PA
EPA 8270 C SIM	CHRYSENE	PA	EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA	EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA	EPA 8270 C SIM	PYRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA	EPA 8270 D	1,2-DICHLOROBENZENE	PA
EPA 8270 D	1,2-DINITROBENZENE	PA	EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8270 D	1,3-DICHLOROBENZENE	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8270 D	1,4-DICHLOROBENZENE	PA
EPA 8270 D	1,4-DINITROBENZENE	PA	EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA	EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA	EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA	EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA	EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-NITROPHENOL	PA	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA	EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA	EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA	EPA 8270 D	4-AMINOBIPHENYL	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	PA	EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROANILINE	PA	EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA	EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 D	4-NITROANILINE	PA	EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACENAPHTHYLENE	PA	EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANILINE	PA	EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	ARAMITE	PA	EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA	EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZOIC ACID	PA	EPA 8270 D	BENZO[B]FLUORANTHENE	PA
EPA 8270 D	BENZYL ALCOHOL	PA	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	PA
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHLOROBENZILATE	PA	EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA	EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIALLATE	PA	EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIETHYL PHTHALATE	PA	EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA			

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EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	DISULFOTON	PA	EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FAMPHUR	PA	EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	FLUORENE	PA	EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROETHANE	PA	EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOPHORONE	PA	EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	KEPONE	PA	EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA	EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA	EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA	EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	NITROBENZENE	PA	EPA 8270 D	NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA	EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENACETIN	PA	EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHENOL	PA	EPA 8270 D	PHORATE	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA	EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	PYRENE	PA	EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA	EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1,1-BIPHENYL	PA	EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA	EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA	EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA	EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA	EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA	EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO[B]FLUORANTHENE	PA	EPA 8270 D SIM	CHRYSENE	PA

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EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	FLUORENE	PA	EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA	EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM	PYRENE	PA	EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA	EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA	EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA	EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA	EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA	EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA	EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA	EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA	EPA 8315 A	2,5-DIMETHYLBENZALDEHYDE	PA
EPA 8315 A	ACETALDEHYDE	PA	EPA 8315 A	ACROLEIN (PROPENAL)	PA
EPA 8315 A	BENZALDEHYDE	PA	EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	CROTONALDEHYDE	PA	EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA	EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA	EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA	EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA	EPA 8330	NITROGLYCERIN	PA
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA	EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA	EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA	EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA	EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA	EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9012 A	CYANIDE	PA	EPA 9040 B	PH	PA
EPA 9045 C	PH	PA			

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 2914

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC
2425 NEW HOLLAND PIKE
LANCASTER, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2014
Expiration Date: June 14, 2015

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 9045 D	PH	PA	EPA 9050 A	CONDUCTIVITY	PA
EPA 9060	TOTAL ORGANIC CARBON	PA	EPA 9066	TOTAL PHENOLICS	PA
EPA 9071 B	OIL AND GREASE (AS HEM)	PA	EPA 9081	CATION EXCHANGE CAPACITY	PA
EPA 9095 B	FREE LIQUID	PA			

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460187
Microbac Laboratories, Inc.

158 Starlite Drive
Marietta, OH 45750

Owner: J. TREVOR BOYCE
Operator: DAVID E. VANDENBERG
Responsible Official: LESLIE BUCINA

Having met the requirements of 1 VAC 30-46
and the National Environmental Laboratory Accreditation Conference 2003 Standard
is hereby approved as an

Accredited Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **September 15, 2014**
Expiration Date: **September 14, 2015**
Certificate # 6338

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	FL
EPA 160.4	RESIDUE-VOLATILE	FL
EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	FL
EPA 200.7 REV 4.4	ALUMINUM	FL
EPA 200.7 REV 4.4	ARSENIC	FL
EPA 200.7 REV 4.4	BERYLLIUM	FL
EPA 200.7 REV 4.4	CADMIUM	FL
EPA 200.7 REV 4.4	CHROMIUM	FL
EPA 200.7 REV 4.4	COPPER	FL
EPA 200.7 REV 4.4	LEAD	FL
EPA 200.7 REV 4.4	MANGANESE	FL
EPA 200.7 REV 4.4	NICKEL	FL
EPA 200.7 REV 4.4	POTASSIUM	FL
EPA 200.7 REV 4.4	SILICA AS SIO2	FL
EPA 200.7 REV 4.4	SODIUM	FL
EPA 200.7 REV 4.4	TIN	FL
EPA 200.7 REV 4.4	TOTAL HARDNESS AS CACO3	FL
EPA 200.7 REV 4.4	ZINC	FL
EPA 200.8 REV 5.4	ARSENIC	FL
EPA 200.8 REV 5.4	CADMIUM	FL
EPA 200.8 REV 5.4	COBALT	FL
EPA 200.8 REV 5.4	LEAD	FL
EPA 200.8 REV 5.4	NICKEL	FL
EPA 200.8 REV 5.4	SILVER	FL
EPA 200.8 REV 5.4	VANADIUM	FL
EPA 245.1 REV 3	MERCURY	FL
EPA 300.0 REV 2.1	CHLORIDE	FL
EPA 300.0 REV 2.1	NITRATE AS N	FL
EPA 300.0 REV 2.1	SULFATE	FL
EPA 350.1 REV 2	AMMONIA AS N	FL
EPA 353.2 REV 2	NITRATE AS N	FL
EPA 365.4	PHOSPHORUS, TOTAL	FL
EPA 6010 B	ALUMINUM	FL
EPA 6010 B	ARSENIC	FL
EPA 6010 B	BERYLLIUM	FL
EPA 6010 B	CADMIUM	FL
EPA 6010 B	CHROMIUM	FL

METHOD	ANALYTE	PRIMARY
EPA 120.1	CONDUCTIVITY	FL
EPA 1664 A	OIL AND GREASE (AS HEM)	FL
EPA 180.1 REV 2	TURBIDITY	FL
EPA 200.7 REV 4.4	ANTIMONY	FL
EPA 200.7 REV 4.4	BARIUM	FL
EPA 200.7 REV 4.4	BORON	FL
EPA 200.7 REV 4.4	CALCIUM	FL
EPA 200.7 REV 4.4	COBALT	FL
EPA 200.7 REV 4.4	IRON	FL
EPA 200.7 REV 4.4	MAGNESIUM	FL
EPA 200.7 REV 4.4	MOLYBDENUM	FL
EPA 200.7 REV 4.4	PHOSPHORUS, TOTAL	FL
EPA 200.7 REV 4.4	SELENIUM	FL
EPA 200.7 REV 4.4	SILVER	FL
EPA 200.7 REV 4.4	THALLIUM	FL
EPA 200.7 REV 4.4	TITANIUM	FL
EPA 200.7 REV 4.4	VANADIUM	FL
EPA 200.8 REV 5.4	ANTIMONY	FL
EPA 200.8 REV 5.4	BARIUM	FL
EPA 200.8 REV 5.4	CHROMIUM	FL
EPA 200.8 REV 5.4	COPPER	FL
EPA 200.8 REV 5.4	MANGANESE	FL
EPA 200.8 REV 5.4	SELENIUM	FL
EPA 200.8 REV 5.4	THALLIUM	FL
EPA 200.8 REV 5.4	ZINC	FL
EPA 300.0 REV 2.1	BROMIDE	FL
EPA 300.0 REV 2.1	FLUORIDE	FL
EPA 300.0 REV 2.1	NITRITE AS N	FL
EPA 310.2	ALKALINITY AS CACO3	FL
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL	FL
EPA 353.2 REV 2	NITRATE/NITRITE	FL
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND	FL
EPA 6010 B	ANTIMONY	FL
EPA 6010 B	BARIUM	FL
EPA 6010 B	BORON	FL
EPA 6010 B	CALCIUM	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6010 B	COBALT	FL
EPA 6010 B	IRON	FL
EPA 6010 B	LITHIUM	FL
EPA 6010 B	MANGANESE	FL
EPA 6010 B	NICKEL	FL
EPA 6010 B	POTASSIUM	FL
EPA 6010 B	SILICA AS SIO2	FL
EPA 6010 B	SODIUM	FL
EPA 6010 B	THALLIUM	FL
EPA 6010 B	TITANIUM	FL
EPA 6010 B	ZINC	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 6010 C	IRON	FL
EPA 6010 C	LITHIUM	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILICA AS SIO2	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6020	ANTIMONY	FL
EPA 6020	BARIUM	FL
EPA 6020	CHROMIUM	FL
EPA 6020	COPPER	FL
EPA 6020	MANGANESE	FL
EPA 6020	SILVER	FL
EPA 6020	ZINC	FL
EPA 6020 A	ARSENIC	FL
EPA 6020 A	CADMIUM	FL
EPA 6020 A	COBALT	FL
EPA 6020 A	LEAD	FL
EPA 6020 A	NICKEL	FL

METHOD	ANALYTE	PRIMARY
EPA 6010 B	COPPER	FL
EPA 6010 B	LEAD	FL
EPA 6010 B	MAGNESIUM	FL
EPA 6010 B	MOLYBDENUM	FL
EPA 6010 B	PHOSPHORUS, TOTAL	FL
EPA 6010 B	SELENIUM	FL
EPA 6010 B	SILVER	FL
EPA 6010 B	STRONTIUM	FL
EPA 6010 B	TIN	FL
EPA 6010 B	VANADIUM	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL
EPA 6010 C	COPPER	FL
EPA 6010 C	LEAD	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	PHOSPHORUS, TOTAL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	STRONTIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6010 C - EXTENDED	SILICON	FL
EPA 6020	ARSENIC	FL
EPA 6020	CADMIUM	FL
EPA 6020	COBALT	FL
EPA 6020	LEAD	FL
EPA 6020	NICKEL	FL
EPA 6020	THALLIUM	FL
EPA 6020 A	ANTIMONY	FL
EPA 6020 A	BARIUM	FL
EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COPPER	FL
EPA 6020 A	MANGANESE	FL
EPA 6020 A	SELENIUM	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6020 A	SILVER	FL
EPA 6020 A	VANADIUM	FL
EPA 6020 A - EXTENDED	URANIUM	FL
EPA 608	4,4'-DDE	FL
EPA 608	ALDRIN	FL
EPA 608	AROCLOR-1016 (PCB-1016)	FL
EPA 608	AROCLOR-1232 (PCB-1232)	FL
EPA 608	AROCLOR-1248 (PCB-1248)	FL
EPA 608	AROCLOR-1260 (PCB-1260)	FL
EPA 608	CHLORDANE (TECH.)	FL
EPA 608	DIELDRIN	FL
EPA 608	ENDOSULFAN II	FL
EPA 608	ENDRIN	FL
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	HEPTACHLOR EPOXIDE	FL
EPA 624	1,1,1-TRICHLOROETHANE	FL
EPA 624	1,1,2-TRICHLOROETHANE	FL
EPA 624	1,2-DICHLOROBENZENE	FL
EPA 624	1,2-DICHLOROPROPANE	FL
EPA 624	1,4-DICHLOROBENZENE	FL
EPA 624	ACROLEIN (PROPENAL)	FL
EPA 624	BENZENE	FL
EPA 624	BROMOFORM	FL
EPA 624	CHLOROBENZENE	FL
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 624	CIS-1,3-DICHLOROPROPENE	FL
EPA 624	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 624	TOLUENE	FL
EPA 624	TRANS-1,3-DICHLOROPROPENE	FL

METHOD	ANALYTE	PRIMARY
EPA 6020 A	THALLIUM	FL
EPA 6020 A	ZINC	FL
EPA 608	4,4'-DDD	FL
EPA 608	4,4'-DDT	FL
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	AROCLOR-1221 (PCB-1221)	FL
EPA 608	AROCLOR-1242 (PCB-1242)	FL
EPA 608	AROCLOR-1254 (PCB-1254)	FL
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	DELTA-BHC	FL
EPA 608	ENDOSULFAN I	FL
EPA 608	ENDOSULFAN SULFATE	FL
EPA 608	ENDRIN ALDEHYDE	FL
EPA 608	HEPTACHLOR	FL
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 624	1,1,2,2-TETRACHLOROETHANE	FL
EPA 624	1,1-DICHLOROETHANE	FL
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 624	1,3-DICHLOROBENZENE	FL
EPA 624	2-CHLOROETHYL VINYL ETHER	FL
EPA 624	ACRYLONITRILE	FL
EPA 624	BROMODICHLOROMETHANE	FL
EPA 624	CARBON TETRACHLORIDE	FL
EPA 624	CHLORODIBROMOMETHANE	FL
EPA 624	CHLOROFORM	FL
EPA 624	ETHYLBENZENE	FL
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 624	TRANS-1,2-DICHLOROETHENE	FL
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL

Commonwealth of Virginia

Department of General Services
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Microbac Laboratories, Inc.
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Marietta, OH 45750

Virginia Laboratory ID: 460187
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	FL
EPA 625	1,2,4-TRICHLOROBENZENE	FL
EPA 625	2,4-DICHLOROPHENOL	FL
EPA 625	2,4-DINITROPHENOL	FL
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 625	2-CHLOROPHENOL	FL
EPA 625	2-NITROPHENOL	FL
EPA 625	4-BROMOPHENYL PHENYL ETHER	FL
EPA 625	4-CHLOROPHENYL PHENYLETHER	FL
EPA 625	ACENAPHTHENE	FL
EPA 625	ANTHRACENE	FL
EPA 625	BENZO(A)ANTHRACENE	FL
EPA 625	BENZO(B)FLUORANTHENE	FL
EPA 625	BENZO(K)FLUORANTHENE	FL
EPA 625	BIS(2-CHLOROETHYL) ETHER	FL
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 625	CHRYSENE	FL
EPA 625	DI-N-OCTYL PHTHALATE	FL
EPA 625	DIETHYL PHTHALATE	FL
EPA 625	FLUORANTHENE	FL
EPA 625	HEXACHLOROBENZENE	FL
EPA 625	HEXACHLOROCYCLOPENTADIENE	FL
EPA 625	INDENO(1,2,3-CD) PYRENE	FL
EPA 625	N-NITROSODI-N-PROPYLAMINE	FL
EPA 625	N-NITROSODIPHENYLAMINE	FL
EPA 625	NITROBENZENE	FL
EPA 625	PHENANTHRENE	FL
EPA 625	PYRENE	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL

METHOD	ANALYTE	PRIMARY
EPA 624	VINYL CHLORIDE	FL
EPA 624 - EXTENDED	XYLENE (TOTAL)	FL
EPA 625	2,4,6-TRICHLOROPHENOL	FL
EPA 625	2,4-DIMETHYLPHENOL	FL
EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 625	2-CHLORONAPHTHALENE	FL
EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 625	3,3'-DICHLOROBENZIDINE	FL
EPA 625	4-CHLORO-3-METHYLPHENOL	FL
EPA 625	4-NITROPHENOL	FL
EPA 625	ACENAPHTHYLENE	FL
EPA 625	BENZIDINE	FL
EPA 625	BENZO(A)PYRENE	FL
EPA 625	BENZO(G,H,I)PERYLENE	FL
EPA 625	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 625	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 625	BUTYL BENZYL PHTHALATE	FL
EPA 625	DI-N-BUTYL PHTHALATE	FL
EPA 625	DIBENZO(A,H) ANTHRACENE	FL
EPA 625	DIMETHYL PHTHALATE	FL
EPA 625	FLUORENE	FL
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 625	HEXACHLOROETHANE	FL
EPA 625	ISOPHORONE	FL
EPA 625	N-NITROSODIMETHYLAMINE	FL
EPA 625	NAPHTHALENE	FL
EPA 625	PENTACHLOROPHENOL	FL
EPA 625	PHENOL	FL
EPA 6850	PERCHLORATE	FL
EPA 7470 A	MERCURY	FL
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8015 B	ETHANOL	FL
EPA 8015 C	ETHANOL	FL
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
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Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8015 C	METHANOL	FL
EPA 8015 D	ETHANOL	FL
EPA 8015 D	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	FL
EPA 8081 A	4,4'-DDD	FL
EPA 8081 A	4,4'-DDT	FL
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	DELTA-BHC	FL
EPA 8081 A	ENDOSULFAN I	FL
EPA 8081 A	ENDOSULFAN SULFATE	FL
EPA 8081 A	ENDRIN ALDEHYDE	FL
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	HEPTACHLOR	FL
EPA 8081 A	METHOXYCHLOR	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082	AROCLOR-1016 (PCB-1016)	FL
EPA 8082	AROCLOR-1232 (PCB-1232)	FL
EPA 8082	AROCLOR-1248 (PCB-1248)	FL
EPA 8082	AROCLOR-1260 (PCB-1260)	FL

METHOD	ANALYTE	PRIMARY
EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8015 D	METHANOL	FL
EPA 8081 A	4,4'-DDE	FL
EPA 8081 A	ALDRIN	FL
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL
EPA 8081 A	CHLORDANE (TECH.)	FL
EPA 8081 A	DIELDRIN	FL
EPA 8081 A	ENDOSULFAN II	FL
EPA 8081 A	ENDRIN	FL
EPA 8081 A	ENDRIN KETONE	FL
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL
EPA 8081 A	HEPTACHLOR EPOXIDE	FL
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL
EPA 8081 B	CHLORDANE (TECH.)	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082	AROCLOR-1221 (PCB-1221)	FL
EPA 8082	AROCLOR-1242 (PCB-1242)	FL
EPA 8082	AROCLOR-1254 (PCB-1254)	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL

Commonwealth of Virginia

Department of General Services
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Scope of Accreditation

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158 Starlite Drive
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Effective Date: September 15, 2014
Expiration Date: September 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-DB	FL
EPA 8151 A	DICAMBA	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	MCPP	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL
EPA 8260 B	1,3-DICHLOROBENZENE	FL
EPA 8260 B	1,4-DICHLOROBENZENE	FL
EPA 8260 B	1-BUTANOL (N-BUTANOL)	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	4-METHYL-2-PENTANONE (MIBK)	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROFORM	FL

METHOD	ANALYTE	PRIMARY
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	DALAPON	FL
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL
EPA 8151 A	MCPA	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	1-CHLOROHEXANE	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	2-NITROPROPANE	FL
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOFLUOROMETHANE	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL ACETATE	FL
EPA 8260 B	ETHYLBENZENE	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 C	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	FL
EPA 8270 C	1,3-DICHLOROBENZENE	FL
EPA 8270 C	1,4-DICHLOROBENZENE	FL
EPA 8270 C	1,4-PHENYLENEDIAMINE	FL
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 C	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 C	2,4-DIMETHYLPHENOL	FL
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 C	2-CHLORONAPHTHALENE	FL
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL

METHOD	ANALYTE	PRIMARY
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	M+P-XYLENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	O-XYLENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYL ALCOHOL	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL CHLORIDE	FL
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 C	1,2-DICHLOROBENZENE	FL
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 C	1,4-NAPHTHOQUINONE	FL
EPA 8270 C	1-NAPHTHYLAMINE	FL
EPA 8270 C	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 C	2,4-DICHLOROPHENOL	FL
EPA 8270 C	2,4-DINITROPHENOL	FL
EPA 8270 C	2,6-DICHLOROPHENOL	FL
EPA 8270 C	2-ACETYLAMINOFLUORENE	FL
EPA 8270 C	2-CHLOROPHENOL	FL
EPA 8270 C	2-METHYLNAPHTHALENE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 C	2-NITROANILINE	FL
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	FL
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	FL
EPA 8270 C	4-AMINOBIPHENYL	FL
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	FL
EPA 8270 C	4-NITROPHENOL	FL
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 C	ACENAPHTHENE	FL
EPA 8270 C	ACETOPHENONE	FL
EPA 8270 C	ANTHRACENE	FL
EPA 8270 C	BENZIDINE	FL
EPA 8270 C	BENZO(A)PYRENE	FL
EPA 8270 C	BENZO(G,H,I)PERYLENE	FL
EPA 8270 C	BENZOIC ACID	FL
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 8270 C	BUTYL BENZYL PHTHALATE	FL
EPA 8270 C	CHRYSENE	FL
EPA 8270 C	DI-N-OCTYL PHTHALATE	FL
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 C	DIETHYL PHTHALATE	FL
EPA 8270 C	DIMETHYL PHTHALATE	FL
EPA 8270 C	DIPHENYLAMINE	FL
EPA 8270 C	ETHYL METHANESULFONATE	FL
EPA 8270 C	FLUORANTHENE	FL
EPA 8270 C	HEXACHLOROBENZENE	FL
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 C	HEXACHLOROPHENE	FL
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 C	ISOPHORONE	FL
EPA 8270 C	KEPONE	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 C	2-NAPHTHYLAMINE	FL
EPA 8270 C	2-NITROPHENOL	FL
EPA 8270 C	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 C	3-METHYLCHOLANTHRENE	FL
EPA 8270 C	3-NITROANILINE	FL
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 C	4-CHLOROANILINE	FL
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 C	4-NITROANILINE	FL
EPA 8270 C	5-NITRO-O-TOLUIDINE	FL
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 C	ACENAPHTHYLENE	FL
EPA 8270 C	ANILINE	FL
EPA 8270 C	ARAMITE	FL
EPA 8270 C	BENZO(A)ANTHRACENE	FL
EPA 8270 C	BENZO(B)FLUORANTHENE	FL
EPA 8270 C	BENZO(K)FLUORANTHENE	FL
EPA 8270 C	BENZYL ALCOHOL	FL
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 C	CHLOROBENZILATE	FL
EPA 8270 C	DI-N-BUTYL PHTHALATE	FL
EPA 8270 C	DIALLATE	FL
EPA 8270 C	DIBENZOFURAN	FL
EPA 8270 C	DIMETHOATE	FL
EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 C	DISULFOTON	FL
EPA 8270 C	FAMPHUR	FL
EPA 8270 C	FLUORENE	FL
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 C	HEXACHLOROETHANE	FL
EPA 8270 C	HEXACHLOROPROPENE	FL
EPA 8270 C	ISODRIN	FL
EPA 8270 C	ISOSAFROLE	FL
EPA 8270 C	MALATHION	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C	METHAPYRILENE	FL
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 C	N-NITROSODIMETHYLAMINE	FL
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 C	N-NITROSOPIPERIDINE	FL
EPA 8270 C	NAPHTHALENE	FL
EPA 8270 C	NITROQUINOLINE-1-OXIDE	FL
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 C	PENTACHLORONITROBENZENE	FL
EPA 8270 C	PHENACETIN	FL
EPA 8270 C	PHENOL	FL
EPA 8270 C	PRONAMIDE (KERB)	FL
EPA 8270 C	PYRIDINE	FL
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 C	TETRAETHYL PYROPHOSPHATE (TEPP)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,2-DICHLOROBENZENE	FL
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	1-NAPHTHYLAMINE	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NAPHTHYLAMINE	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-METHYLCHOLANTHRENE	FL
EPA 8270 D	4-AMINOBIPHENYL	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 C	METHYL METHANESULFONATE	FL
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 C	N-NITROSODIETHYLAMINE	FL
EPA 8270 C	N-NITROSODIPHENYLAMINE	FL
EPA 8270 C	N-NITROSOMORPHOLINE	FL
EPA 8270 C	N-NITROSOPYRROLIDINE	FL
EPA 8270 C	NITROBENZENE	FL
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 C	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 C	PENTACHLOROPHENOL	FL
EPA 8270 C	PHENANTHRENE	FL
EPA 8270 C	PHORATE	FL
EPA 8270 C	PYRENE	FL
EPA 8270 C	SAFROLE	FL
EPA 8270 C	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL
EPA 8270 C	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	FL
EPA 8270 D	1,3-DICHLOROBENZENE	FL
EPA 8270 D	1,4-DICHLOROBENZENE	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 D	4-CHLOROANILINE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	DIPHENYLAMINE	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROPHENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	KEPONE	FL
EPA 8270 D	METHAPYRILENE	FL
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 D	N-NITROSOPIPERIDINE	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANILINE	FL
EPA 8270 D	ARAMITE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHOATE	FL
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 D	DISULFOTON	FL
EPA 8270 D	FAMPHUR	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	MALATHION	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 D	N-NITROSODIETHYLAMINE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	N-NITROSOMORPHOLINE	FL
EPA 8270 D	N-NITROSOPYRROLIDINE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	NITROQUINOLINE-1-OXIDE	FL
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D	PRONAMIDE (KERB)	FL
EPA 8270 D	SAFROLE	FL
EPA 8270 D	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL
EPA 8270 D	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8330 A	2-NITROTOLUENE	FL
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	FL
EPA 8330 A	NITROGLYCERIN	FL
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL
EPA 8330 B	3-NITROTOLUENE	FL
EPA 8330 B	4-NITROTOLUENE	FL
EPA 8330 B	NITROBENZENE	FL
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	FL
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL
EPA 9056	BROMIDE	FL
EPA 9056	FLUORIDE	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 D	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PHORATE	FL
EPA 8270 D	PYRENE	FL
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 D	TETRAETHYL PYROPHOSPHATE (TEPP)	FL
EPA 8270 D - EXTENDED	3+4-METHYL PHENOL (M+P CRESOL)	FL
EPA 8315 A	FORMALDEHYDE	FL
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL
EPA 8330 A	3-NITROTOLUENE	FL
EPA 8330 A	4-NITROTOLUENE	FL
EPA 8330 A	NITROBENZENE	FL
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	FL
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8330 B	2-NITROTOLUENE	FL
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	FL
EPA 8330 B	NITROGLYCERIN	FL
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE	FL
EPA 9014	AMENABLE CYANIDE	FL
EPA 9056	CHLORIDE	FL
EPA 9056	NITRITE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 9056	SULFATE	FL
EPA 9060 A	TOTAL ORGANIC CARBON	FL
OVL HPLC07/HPLC-MS-MS	HEXAMETHYLPHOSPHORAMIDE (HMPA)	FL
OVL HPLC07/HPLC-MS-MS	TETRAMETHYLPHOSPHORAMIDE (TMPA)	FL
RSK-175	ETHANE	FL
RSK-175	METHANE	FL
SM 2310 B-2011	ACIDITY, AS CACO3	FL
SM 2340 C-2011	TOTAL HARDNESS AS CACO3	FL
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	FL
SM 3500-CR B-2011	CHROMIUM VI	FL
SM 4500-CN$^-$ E-2011	CYANIDE	FL
SM 4500-F$^-$ C-2011	FLUORIDE	FL
SM 4500-NO3$^-$ E-2011	NITRATE AS N	FL
SM 4500-S2$^-$ F-2011	SULFIDE	FL
SM 5210 B-2011	CARBONACEOUS BOD, CBOD	FL
SM 5540 C-2011	SURFACTANTS - MBAS	FL

METHOD	ANALYTE	PRIMARY
EPA 9056 A	NITRATE AS N	FL
HACH 8000	CHEMICAL OXYGEN DEMAND	FL
OVL HPLC07/HPLC-MS-MS	PENTAMETHYLPHOSPHORAMIDE (PMPA)	FL
OVL HPLC07/HPLC-MS-MS	TRIMETHYLPHOSPHORAMIDE (TRIMPA)	FL
RSK-175	ETHENE	FL
SM 2120 B-2011	COLOR	FL
SM 2320 B-2011	ALKALINITY AS CACO3	FL
SM 2540 B-2011	RESIDUE-TOTAL	FL
SM 2540 F-2011	RESIDUE-SETTLEABLE	FL
SM 4500-CL$^-$ E-2011	CHLORIDE	FL
SM 4500-CN$^-$ G-2011	AMENABLE CYANIDE	FL
SM 4500-NO2$^-$ B-2011	NITRITE AS N	FL
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	FL
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND	FL
SM 5310 C-2011	TOTAL ORGANIC CARBON	FL

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	FL
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	FL
EPA 6010 B	ANTIMONY	FL
EPA 6010 B	BARIUM	FL
EPA 6010 B	BORON	FL
EPA 6010 B	CALCIUM	FL
EPA 6010 B	COBALT	FL
EPA 6010 B	IRON	FL
EPA 6010 B	LITHIUM	FL
EPA 6010 B	MANGANESE	FL
EPA 6010 B	NICKEL	FL
EPA 6010 B	POTASSIUM	FL
EPA 6010 B	SILVER	FL
EPA 6010 B	STRONTIUM	FL
EPA 6010 B	TIN	FL
EPA 6010 B	VANADIUM	FL
EPA 6010 C	ALUMINUM	FL

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	FL
EPA 6010 B	ALUMINUM	FL
EPA 6010 B	ARSENIC	FL
EPA 6010 B	BERYLLIUM	FL
EPA 6010 B	CADMIUM	FL
EPA 6010 B	CHROMIUM	FL
EPA 6010 B	COPPER	FL
EPA 6010 B	LEAD	FL
EPA 6010 B	MAGNESIUM	FL
EPA 6010 B	MOLYBDENUM	FL
EPA 6010 B	PHOSPHORUS, TOTAL	FL
EPA 6010 B	SELENIUM	FL
EPA 6010 B	SODIUM	FL
EPA 6010 B	THALLIUM	FL
EPA 6010 B	TITANIUM	FL
EPA 6010 B	ZINC	FL
EPA 6010 C	ANTIMONY	FL

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METHOD	ANALYTE	PRIMARY
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL
EPA 6010 C	COPPER	FL
EPA 6010 C	LEAD	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	PHOSPHORUS, TOTAL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6020	ARSENIC	FL
EPA 6020	CADMIUM	FL
EPA 6020	COBALT	FL
EPA 6020	LEAD	FL
EPA 6020	NICKEL	FL
EPA 6020	THALLIUM	FL
EPA 6020 - EXTENDED	URANIUM	FL
EPA 6020 A	ARSENIC	FL
EPA 6020 A	CADMIUM	FL
EPA 6020 A	COBALT	FL
EPA 6020 A	LEAD	FL
EPA 6020 A	NICKEL	FL
EPA 6020 A	SILVER	FL
EPA 6020 A	VANADIUM	FL
EPA 6020 A - EXTENDED	URANIUM	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 7471 B	MERCURY	FL
EPA 8015 B	ETHANOL	FL
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8015 C	ETHANOL	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8015 D	METHANOL	FL
EPA 8081 A	4,4'-DDE	FL

METHOD	ANALYTE	PRIMARY
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 6010 C	IRON	FL
EPA 6010 C	LITHIUM	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	STRONTIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6020	ANTIMONY	FL
EPA 6020	BARIUM	FL
EPA 6020	CHROMIUM	FL
EPA 6020	COPPER	FL
EPA 6020	MANGANESE	FL
EPA 6020	SILVER	FL
EPA 6020	ZINC	FL
EPA 6020 A	ANTIMONY	FL
EPA 6020 A	BARIUM	FL
EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COPPER	FL
EPA 6020 A	MANGANESE	FL
EPA 6020 A	SELENIUM	FL
EPA 6020 A	THALLIUM	FL
EPA 6020 A	ZINC	FL
EPA 6850	PERCHLORATE	FL
EPA 7471 A	MERCURY	FL
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 B	ETHYLENE GLYCOL	FL
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	FL
EPA 8015 C	ETHYLENE GLYCOL	FL
EPA 8015 D	ETHANOL	FL
EPA 8081 A	4,4'-DDD	FL
EPA 8081 A	4,4'-DDT	FL

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EPA 8081 A	ALDRIN	FL
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL
EPA 8081 A	CHLORDANE (TECH.)	FL
EPA 8081 A	DIELDRIN	FL
EPA 8081 A	ENDOSULFAN II	FL
EPA 8081 A	ENDRIN	FL
EPA 8081 A	ENDRIN KETONE	FL
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL
EPA 8081 A	HEPTACHLOR EPOXIDE	FL
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL
EPA 8081 B	CHLORDANE (TECH.)	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082	AROCLOR-1221 (PCB-1221)	FL
EPA 8082	AROCLOR-1242 (PCB-1242)	FL
EPA 8082	AROCLOR-1254 (PCB-1254)	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL

METHOD	ANALYTE	PRIMARY
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	DELTA-BHC	FL
EPA 8081 A	ENDOSULFAN I	FL
EPA 8081 A	ENDOSULFAN SULFATE	FL
EPA 8081 A	ENDRIN ALDEHYDE	FL
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	HEPTACHLOR	FL
EPA 8081 A	METHOXYCHLOR	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082	AROCLOR-1016 (PCB-1016)	FL
EPA 8082	AROCLOR-1232 (PCB-1232)	FL
EPA 8082	AROCLOR-1248 (PCB-1248)	FL
EPA 8082	AROCLOR-1260 (PCB-1260)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL

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METHOD	ANALYTE	PRIMARY
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	DALAPON	FL
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL
EPA 8151 A	MCPA	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	1-CHLOROHEXANE	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	2-NITROPROPANE	FL
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL

METHOD	ANALYTE	PRIMARY
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-DB	FL
EPA 8151 A	DICAMBA	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	MCPP	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL
EPA 8260 B	1,3-DICHLOROBENZENE	FL
EPA 8260 B	1,4-DICHLOROBENZENE	FL
EPA 8260 B	1-BUTANOL (N-BUTANOL)	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	4-METHYL-2-PENTANONE (MIBK)	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOFLUOROMETHANE	FL

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EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYL ALCOHOL	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL CHLORIDE	FL
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 C	1,2-DICHLOROBENZENE	FL
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 C	1,4-NAPHTHOQUINONE	FL
EPA 8270 C	1-NAPHTHYLAMINE	FL
EPA 8270 C	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 C	2,4-DICHLOROPHENOL	FL
EPA 8270 C	2,4-DINITROPHENOL	FL
EPA 8270 C	2,6-DICHLOROPHENOL	FL
EPA 8270 C	2-ACETYLAMINOFLUORENE	FL
EPA 8270 C	2-CHLOROPHENOL	FL
EPA 8270 C	2-METHYLNAPHTHALENE	FL
EPA 8270 C	2-NAPHTHYLAMINE	FL
EPA 8270 C	2-NITROPHENOL	FL

METHOD	ANALYTE	PRIMARY
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL ACETATE	FL
EPA 8260 B	ETHYLBENZENE	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 C	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	FL
EPA 8270 C	1,3-DICHLOROBENZENE	FL
EPA 8270 C	1,4-DICHLOROBENZENE	FL
EPA 8270 C	1,4-PHENYLENEDIAMINE	FL
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 C	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 C	2,4-DIMETHYLPHENOL	FL
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 C	2-CHLORONAPHTHALENE	FL
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 C	2-NITROANILINE	FL
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 C	3-METHYLCHOLANTHRENE	FL
EPA 8270 C	3-NITROANILINE	FL
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 C	4-CHLOROANILINE	FL
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 C	4-NITROANILINE	FL
EPA 8270 C	5-NITRO-O-TOLUIDINE	FL
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 C	ACENAPHTHYLENE	FL
EPA 8270 C	ANILINE	FL
EPA 8270 C	ARAMITE	FL
EPA 8270 C	BENZO(A)ANTHRACENE	FL
EPA 8270 C	BENZO(B)FLUORANTHENE	FL
EPA 8270 C	BENZO(K)FLUORANTHENE	FL
EPA 8270 C	BENZYL ALCOHOL	FL
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 C	CHLOROBENZILATE	FL
EPA 8270 C	DI-N-BUTYL PHTHALATE	FL
EPA 8270 C	DIALLATE	FL
EPA 8270 C	DIBENZOFURAN	FL
EPA 8270 C	DIMETHOATE	FL
EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 C	DISULFOTON	FL
EPA 8270 C	FAMPHUR	FL
EPA 8270 C	FLUORENE	FL
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 C	HEXACHLOROETHANE	FL
EPA 8270 C	HEXACHLOROPROPENE	FL
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 C	ISOPHORONE	FL
EPA 8270 C	KEPONE	FL
EPA 8270 C	METHAPYRILENE	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	FL
EPA 8270 C	4-AMINOBIPHENYL	FL
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	FL
EPA 8270 C	4-NITROPHENOL	FL
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 C	ACENAPHTHENE	FL
EPA 8270 C	ACETOPHENONE	FL
EPA 8270 C	ANTHRACENE	FL
EPA 8270 C	BENZIDINE	FL
EPA 8270 C	BENZO(A)PYRENE	FL
EPA 8270 C	BENZO(G,H,I)PERYLENE	FL
EPA 8270 C	BENZOIC ACID	FL
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 8270 C	BUTYL BENZYL PHTHALATE	FL
EPA 8270 C	CHRYSENE	FL
EPA 8270 C	DI-N-OCTYL PHTHALATE	FL
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 C	DIETHYL PHTHALATE	FL
EPA 8270 C	DIMETHYL PHTHALATE	FL
EPA 8270 C	DIPHENYLAMINE	FL
EPA 8270 C	ETHYL METHANESULFONATE	FL
EPA 8270 C	FLUORANTHENE	FL
EPA 8270 C	HEXACHLOROBENZENE	FL
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 C	HEXACHLOROPHENE	FL
EPA 8270 C	HEXAMETHYLPHOSPHORAMIDE (HMPA)	FL
EPA 8270 C	ISODRIN	FL
EPA 8270 C	ISOSAFROLE	FL
EPA 8270 C	MALATHION	FL
EPA 8270 C	METHYL METHANESULFONATE	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 C	N-NITROSODIMETHYLAMINE	FL
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 C	N-NITROSOPIPERIDINE	FL
EPA 8270 C	NAPHTHALENE	FL
EPA 8270 C	NITROQUINOLINE-1-OXIDE	FL
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 C	PENTACHLOROBENZENE	FL
EPA 8270 C	PENTACHLOROPHENOL	FL
EPA 8270 C	PHENANTHRENE	FL
EPA 8270 C	PHORATE	FL
EPA 8270 C	PYRENE	FL
EPA 8270 C	SAFROLE	FL
EPA 8270 C	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL
EPA 8270 C	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,2-DICHLOROBENZENE	FL
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	1-NAPHTHYLAMINE	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NAPHTHYLAMINE	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-METHYLCHOLANTHRENE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 C	N-NITROSODIETHYLAMINE	FL
EPA 8270 C	N-NITROSODIPHENYLAMINE	FL
EPA 8270 C	N-NITROSOMORPHOLINE	FL
EPA 8270 C	N-NITROSOPYRROLIDINE	FL
EPA 8270 C	NITROBENZENE	FL
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 C	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 C	PENTACHLORONITROBENZENE	FL
EPA 8270 C	PHENACETIN	FL
EPA 8270 C	PHENOL	FL
EPA 8270 C	PRONAMIDE (KERB)	FL
EPA 8270 C	PYRIDINE	FL
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 C	TETRAETHYL PYROPHOSPHATE (TEPP)	FL
EPA 8270 C - EXTENDED	CARBAZOLE	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	FL
EPA 8270 D	1,3-DICHLOROBENZENE	FL
EPA 8270 D	1,4-DICHLOROBENZENE	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	FL
EPA 8270 D	4-AMINOBIPHENYL	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL

Commonwealth of Virginia

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Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
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Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANILINE	FL
EPA 8270 D	ARAMITE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHOATE	FL
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 D	DISULFOTON	FL
EPA 8270 D	FAMPHUR	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	KEPONE	FL
EPA 8270 D	METHAPYRILENE	FL
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	DIPHENYLAMINE	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROPHENE	FL
EPA 8270 D	HEXAMETHYLPHOSPHORAMIDE (HMPA)	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	MALATHION	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 D	N-NITROSODIETHYLAMINE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	N-NITROSOMORPHOLINE	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSOPIPERIDINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	NITROQUINOLINE-1-OXIDE	FL
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 D	PENTACHLOROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PHORATE	FL
EPA 8270 D	PYRENE	FL
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 D	TETRAETHYL PYROPHOSPHATE (TEPP)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 8270 D SIM	DIMETHOATE	FL
EPA 8270 D SIM	FAMPHUR	FL
EPA 8270 D SIM	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8315 A	FORMALDEHYDE	FL
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL
EPA 8330 A	3-NITROTOLUENE	FL
EPA 8330 A	4-NITROTOLUENE	FL
EPA 8330 A	NITROBENZENE	FL
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	FL
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8330 B	2-NITROTOLUENE	FL
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	FL
EPA 8330 B	NITROGLYCERIN	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSOPYRROLIDINE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 D	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D	PRONAMIDE (KERB)	FL
EPA 8270 D	SAFROLE	FL
EPA 8270 D	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	FL
EPA 8270 D	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D SIM	DIALLATE	FL
EPA 8270 D SIM	DISULFOTON	FL
EPA 8270 D SIM	KEPONE	FL
EPA 8270 D SIM	PHORATE	FL
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	FL
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8330 A	2-NITROTOLUENE	FL
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	FL
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	FL
EPA 8330 A	NITROGLYCERIN	FL
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	FL
EPA 8330 B	3-NITROTOLUENE	FL
EPA 8330 B	4-NITROTOLUENE	FL
EPA 8330 B	NITROBENZENE	FL
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6338

Microbac Laboratories, Inc.
158 Starlite Drive
Marietta, OH 45750

Virginia Laboratory ID: 460187
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE	FL
EPA 9010 B	CYANIDE	FL
EPA 9030 B	PREP: SULFIDE	FL
EPA 9040 C	PH	FL
EPA 9056	BROMIDE	FL
EPA 9056	FLUORIDE	FL
EPA 9056	SULFATE	FL
EPA 9056 A	CHLORIDE	FL
EPA 9056 A	NITRATE AS N	FL
EPA 9056 A	SULFATE	FL

METHOD	ANALYTE	PRIMARY
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	FL
EPA 9014	CYANIDE	FL
EPA 9034	TOTAL SULFIDES	FL
EPA 9045 D	PH	FL
EPA 9056	CHLORIDE	FL
EPA 9056	NITRITE	FL
EPA 9056 A	BROMIDE	FL
EPA 9056 A	FLUORIDE	FL
EPA 9056 A	NITRITE	FL
EPA 9095 B	FREE LIQUID	FL

COMMONWEALTH of VIRGINIA

Department of General Services

Division of Consolidated Laboratory Services

600 North 5th Street
Richmond, Virginia 23219-3691
(804) 648-4480
FAX (804) 692-0416

09/11/2014

Daniel Pittman
Testamerica Laboratories, Inc.
4101 Shuffel Street Nw
North Canton OH 44720

sulfide - 9034 - checked 11/3/2014- JCF
COD 410.4 - checked jcf
200.7 copper, iron and zinc -jcf

VELAP ID: 460175

Dear Daniel Pittman:

Testamerica Laboratories, Inc. has been granted secondary accreditation pursuant to the provisions of 1VAC30-46 and the National Environmental Laboratory Accreditation Program (NELAP) by the Division of Consolidated Laboratory Services (DCLS). Enclosed please find Certificate 6440 and the corresponding Scope of Accreditation which are valid until 09/14/2015. The certificate must be conspicuously displayed in the laboratory along with the associated Scope of Accreditation.

Your laboratory is required to notify the DCLS Virginia Environmental Laboratory Accreditation Program (VELAP) in writing of any changes in key accreditation criteria within 30 calendar days of the change per 1VAC30-46-90 A. This requirement includes changes in ownership, location, key personnel, and major instrumentation.

If your laboratory wishes to change its scope of accreditation an application must be submitted in accordance with the provisions of 1VAC30-46-90 B. These changes are subject to fees as outlined in 1VAC30-46-150 F 1.

Additionally, a laboratory holding secondary accreditation with VELAP is responsible for assuring that VELAP has current information regarding the laboratory's primary accreditation. Upon any change in the status of any field of accreditation, a secondary laboratory must notify VELAP of the exact nature of the change and provide a copy of the laboratory's new primary certificate.

Please direct all correspondences and questions regarding accreditation to your laboratory's lead assessor, Christina Lynchesky, at christina.lynchesky@dgs.virginia.gov or (804)648-4480 x304.

Sincerely yours,

Cathy Westerman
Manager, Laboratory Certification Program

Enclosures

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460175
Testamerica Laboratories, Inc.

4101 Shuffel Street Nw
North Canton, OH 44720

Owner: TESTAMERICA HOLDINGS, INC.
Operator: RACHEL BRYDON JANNETTA
Responsible Official: DANIEL PITTMAN

Having met the requirements of 1 VAC 30-46
and the National Environmental Laboratory Accreditation Conference 2003 Standard
is hereby approved as an

Accredited Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **September 15, 2014**
Expiration Date: **September 14, 2015**
Certificate # 6440

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6440

Testamerica Laboratories, Inc.
4101 Shuffel Street Nw
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	FL	EPA 120.1	CONDUCTIVITY	FL
EPA 1631 E	MERCURY	FL	EPA 1664 A	OIL AND GREASE (AS HEM)	FL
EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	FL	EPA 180.1 (AS HACH 8195)	TURBIDITY	FL
EPA 200.7 REV 4.4	ALUMINUM	FL	EPA 200.7 REV 4.4	ANTIMONY	FL
EPA 200.7 REV 4.4	ARSENIC	FL	EPA 200.7 REV 4.4	BARIUM	FL
EPA 200.7 REV 4.4	BERYLLIUM	FL	EPA 200.7 REV 4.4	BORON	FL
EPA 200.7 REV 4.4	CADMIUM	FL	EPA 200.7 REV 4.4	CALCIUM	FL
EPA 200.7 REV 4.4	CHROMIUM	FL	EPA 200.7 REV 4.4	COBALT	FL
EPA 200.7 REV 4.4	COPPER	FL	EPA 200.7 REV 4.4	IRON	FL
EPA 200.7 REV 4.4	LEAD	FL	EPA 200.7 REV 4.4	MAGNESIUM	FL
EPA 200.7 REV 4.4	MANGANESE	FL	EPA 200.7 REV 4.4	MOLYBDENUM	FL
EPA 200.7 REV 4.4	NICKEL	FL	EPA 200.7 REV 4.4	POTASSIUM	FL
EPA 200.7 REV 4.4	SELENIUM	FL	EPA 200.7 REV 4.4	SILVER	FL
EPA 200.7 REV 4.4	SODIUM	FL	EPA 200.7 REV 4.4	THALLIUM	FL
EPA 200.7 REV 4.4	TIN	FL	EPA 200.7 REV 4.4	TITANIUM	FL
EPA 200.7 REV 4.4	VANADIUM	FL	EPA 200.7 REV 4.4	ZINC	FL
EPA 200.8 REV 5.4	ALUMINUM	FL	EPA 200.8 REV 5.4	ANTIMONY	FL
EPA 200.8 REV 5.4	ARSENIC	FL	EPA 200.8 REV 5.4	BARIUM	FL
EPA 200.8 REV 5.4	BERYLLIUM	FL	EPA 200.8 REV 5.4	CADMIUM	FL
EPA 200.8 REV 5.4	CHROMIUM	FL	EPA 200.8 REV 5.4	COBALT	FL
EPA 200.8 REV 5.4	COPPER	FL	EPA 200.8 REV 5.4	LEAD	FL
EPA 200.8 REV 5.4	MANGANESE	FL	EPA 200.8 REV 5.4	MOLYBDENUM	FL
EPA 200.8 REV 5.4	NICKEL	FL	EPA 200.8 REV 5.4	SELENIUM	FL
EPA 200.8 REV 5.4	SILVER	FL	EPA 200.8 REV 5.4	THALLIUM	FL
EPA 200.8 REV 5.4	VANADIUM	FL	EPA 200.8 REV 5.4	ZINC	FL
EPA 200.8 REV 5.4 - EXTENDED	TIN	FL	EPA 245.1 REV 3	MERCURY	FL
EPA 300.0 REV 2.1	BROMIDE	FL	EPA 300.0 REV 2.1	CHLORIDE	FL
EPA 300.0 REV 2.1	FLUORIDE	FL	EPA 300.0 REV 2.1	NITRATE AS N	FL
EPA 300.0 REV 2.1	NITRITE AS N	FL	EPA 300.0 REV 2.1	ORTHOPHOSPHATE AS P	FL
EPA 300.0 REV 2.1	SULFATE	FL	EPA 335.4 REV 1.0	CYANIDE	FL
EPA 365.1 REV 2	ORTHOPHOSPHATE AS P	FL	EPA 365.1 REV 2	PHOSPHORUS, TOTAL	FL
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND	FL	EPA 420.1 (AS HACH 8047)	TOTAL PHENOLICS	FL
EPA 6010 B	ALUMINUM	FL	EPA 6010 B	ANTIMONY	FL
EPA 6010 B	ARSENIC	FL	EPA 6010 B	BARIUM	FL
EPA 6010 B	BERYLLIUM	FL	EPA 6010 B	BORON	FL

Commonwealth of Virginia

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Testamerica Laboratories, Inc.
4101 Shuffel Street Nw
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Virginia Laboratory ID: 460175
Effective Date: September 15, 2014
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6010 B	CADMIUM	FL	EPA 6010 B	CALCIUM	FL
EPA 6010 B	CHROMIUM	FL	EPA 6010 B	COBALT	FL
EPA 6010 B	COPPER	FL	EPA 6010 B	IRON	FL
EPA 6010 B	LEAD	FL	EPA 6010 B	LITHIUM	FL
EPA 6010 B	MAGNESIUM	FL	EPA 6010 B	MANGANESE	FL
EPA 6010 B	MOLYBDENUM	FL	EPA 6010 B	NICKEL	FL
EPA 6010 B	POTASSIUM	FL	EPA 6010 B	SELENIUM	FL
EPA 6010 B	SILVER	FL	EPA 6010 B	SODIUM	FL
EPA 6010 B	THALLIUM	FL	EPA 6010 B	TIN	FL
EPA 6010 B	TITANIUM	FL	EPA 6010 B	VANADIUM	FL
EPA 6010 B	ZINC	FL	EPA 6010 B - EXTENDED	SILICON	FL
EPA 6010 C	ALUMINUM	FL	EPA 6010 C	ANTIMONY	FL
EPA 6010 C	ARSENIC	FL	EPA 6010 C	BARIUM	FL
EPA 6010 C	BERYLLIUM	FL	EPA 6010 C	BORON	FL
EPA 6010 C	CADMIUM	FL	EPA 6010 C	CALCIUM	FL
EPA 6010 C	CHROMIUM	FL	EPA 6010 C	COBALT	FL
EPA 6010 C	COPPER	FL	EPA 6010 C	IRON	FL
EPA 6010 C	LEAD	FL	EPA 6010 C	LITHIUM	FL
EPA 6010 C	MAGNESIUM	FL	EPA 6010 C	MANGANESE	FL
EPA 6010 C	MOLYBDENUM	FL	EPA 6010 C	NICKEL	FL
EPA 6010 C	POTASSIUM	FL	EPA 6010 C	SELENIUM	FL
EPA 6010 C	SILVER	FL	EPA 6010 C	SODIUM	FL
EPA 6010 C	THALLIUM	FL	EPA 6010 C	TIN	FL
EPA 6010 C	TITANIUM	FL	EPA 6010 C	VANADIUM	FL
EPA 6010 C	ZINC	FL	EPA 6010 C - EXTENDED	SILICON	FL
EPA 6020	ALUMINUM	FL	EPA 6020	ANTIMONY	FL
EPA 6020	ARSENIC	FL	EPA 6020	BARIUM	FL
EPA 6020	BERYLLIUM	FL	EPA 6020	CADMIUM	FL
EPA 6020	CHROMIUM	FL	EPA 6020	COBALT	FL
EPA 6020	COPPER	FL	EPA 6020	LEAD	FL
EPA 6020	MANGANESE	FL	EPA 6020	NICKEL	FL
EPA 6020	SILVER	FL	EPA 6020	THALLIUM	FL
EPA 6020	ZINC	FL	EPA 6020 - EXTENDED	BORON	FL
EPA 6020 - EXTENDED	CALCIUM	FL	EPA 6020 - EXTENDED	IRON	FL
EPA 6020 - EXTENDED	MAGNESIUM	FL	EPA 6020 - EXTENDED	MOLYBDENUM	FL
EPA 6020 - EXTENDED	POTASSIUM	FL	EPA 6020 - EXTENDED	SELENIUM	FL
EPA 6020 - EXTENDED	SODIUM	FL	EPA 6020 - EXTENDED	STRONTIUM	FL
EPA 6020 - EXTENDED	TIN	FL	EPA 6020 - EXTENDED	TITANIUM	FL

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6020 - EXTENDED	VANADIUM	FL	EPA 6020 A	ALUMINUM	FL
EPA 6020 A	ANTIMONY	FL	EPA 6020 A	ARSENIC	FL
EPA 6020 A	BARIUM	FL	EPA 6020 A	BERYLLIUM	FL
EPA 6020 A	CADMIUM	FL	EPA 6020 A	CALCIUM	FL
EPA 6020 A	CHROMIUM	FL	EPA 6020 A	COBALT	FL
EPA 6020 A	COPPER	FL	EPA 6020 A	IRON	FL
EPA 6020 A	LEAD	FL	EPA 6020 A	MAGNESIUM	FL
EPA 6020 A	MANGANESE	FL	EPA 6020 A	NICKEL	FL
EPA 6020 A	POTASSIUM	FL	EPA 6020 A	SELENIUM	FL
EPA 6020 A	SILVER	FL	EPA 6020 A	SODIUM	FL
EPA 6020 A	THALLIUM	FL	EPA 6020 A	VANADIUM	FL
EPA 6020 A	ZINC	FL	EPA 6020 A - EXTENDED	BORON	FL
EPA 6020 A - EXTENDED	MOLYBDENUM	FL	EPA 6020 A - EXTENDED	STRONTIUM	FL
EPA 6020 A - EXTENDED	TIN	FL	EPA 6020 A - EXTENDED	TITANIUM	FL
EPA 608	4,4'-DDD	FL	EPA 608	4,4'-DDE	FL
EPA 608	4,4'-DDT	FL	EPA 608	ALDRIN	FL
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL	EPA 608	AROCLOR-1016 (PCB-1016)	FL
EPA 608	AROCLOR-1221 (PCB-1221)	FL	EPA 608	AROCLOR-1232 (PCB-1232)	FL
EPA 608	AROCLOR-1242 (PCB-1242)	FL	EPA 608	AROCLOR-1248 (PCB-1248)	FL
EPA 608	AROCLOR-1254 (PCB-1254)	FL	EPA 608	AROCLOR-1260 (PCB-1260)	FL
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL	EPA 608	CHLORDANE (TECH.)	FL
EPA 608	DELTA-BHC	FL	EPA 608	DIELDRIN	FL
EPA 608	ENDOSULFAN I	FL	EPA 608	ENDOSULFAN II	FL
EPA 608	ENDOSULFAN SULFATE	FL	EPA 608	ENDRIN	FL
EPA 608	ENDRIN ALDEHYDE	FL	EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	HEPTACHLOR	FL	EPA 608	HEPTACHLOR EPOXIDE	FL
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	FL	EPA 624	1,1,1-TRICHLOROETHANE	FL
EPA 624	1,1,2,2-TETRACHLOROETHANE	FL	EPA 624	1,1,2-TRICHLOROETHANE	FL
EPA 624	1,1-DICHLOROETHANE	FL	EPA 624	1,2-DICHLOROBENZENE	FL
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL	EPA 624	1,2-DICHLOROPROPANE	FL
EPA 624	1,3-DICHLOROBENZENE	FL	EPA 624	1,4-DICHLOROBENZENE	FL
EPA 624	2-CHLOROETHYL VINYL ETHER	FL	EPA 624	ACROLEIN (PROPENAL)	FL
EPA 624	ACRYLONITRILE	FL	EPA 624	BENZENE	FL
EPA 624	BROMODICHLOROMETHANE	FL			

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 624	BROMOFORM	FL	EPA 624	CARBON TETRACHLORIDE	FL
EPA 624	CHLOROBENZENE	FL	EPA 624	CHLORODIBROMOMETHANE	FL
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	FL	EPA 624	CHLOROFORM	FL
EPA 624	CIS-1,3-DICHLOROPROPENE	FL	EPA 624	ETHYLBENZENE	FL
EPA 624	METHYL BROMIDE (BROMOMETHANE)	FL	EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL	EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 624	TOLUENE	FL	EPA 624	TRANS-1,2-DICHLOROETHENE	FL
EPA 624	TRANS-1,3-DICHLOROPROPENE	FL	EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL	EPA 624	VINYL CHLORIDE	FL
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	FL	EPA 624 - EXTENDED	XYLENE (TOTAL)	FL
EPA 625	1,2,4-TRICHLOROBENZENE	FL	EPA 625	2,4,6-TRICHLOROPHENOL	FL
EPA 625	2,4-DICHLOROPHENOL	FL	EPA 625	2,4-DIMETHYLPHENOL	FL
EPA 625	2,4-DINITROPHENOL	FL	EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	FL	EPA 625	2-CHLORONAPHTHALENE	FL
EPA 625	2-CHLOROPHENOL	FL	EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 625	2-METHYLPHENOL (O-CRESOL)	FL	EPA 625	2-NITROPHENOL	FL
EPA 625	3,3'-DICHLOROBENZIDINE	FL	EPA 625	4-BROMOPHENYL PHENYL ETHER	FL
EPA 625	4-CHLORO-3-METHYLPHENOL	FL	EPA 625	4-CHLOROPHENYL PHENYLETHER	FL
EPA 625	4-NITROPHENOL	FL	EPA 625	ACENAPHTHENE	FL
EPA 625	ACENAPHTHYLENE	FL	EPA 625	ANTHRACENE	FL
EPA 625	BENZIDINE	FL	EPA 625	BENZO(A)ANTHRACENE	FL
EPA 625	BENZO(A)PYRENE	FL	EPA 625	BENZO(B)FLUORANTHENE	FL
EPA 625	BENZO(G,H,I)PERYLENE	FL	EPA 625	BENZO(K)FLUORANTHENE	FL
EPA 625	BIS(2-CHLOROETHOXY)METHANE	FL	EPA 625	BIS(2-CHLOROETHYL) ETHER	FL
EPA 625	BIS(2-CHLOROISOPROPYL) ETHER	FL	EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 625	BUTYL BENZYL PHTHALATE	FL	EPA 625	CHRYSENE	FL
EPA 625	DI-N-BUTYL PHTHALATE	FL	EPA 625	DI-N-OCTYL PHTHALATE	FL
EPA 625	DIBENZO(A,H) ANTHRACENE	FL	EPA 625	DIETHYL PHTHALATE	FL
EPA 625	DIMETHYL PHTHALATE	FL	EPA 625	FLUORANTHENE	FL
EPA 625	FLUORENE	FL	EPA 625	HEXACHLOROBENZENE	FL
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL	EPA 625	HEXACHLOROCYCLOPENTADIENE	FL
EPA 625	HEXACHLOROETHANE	FL	EPA 625	INDENO(1,2,3-CD) PYRENE	FL
EPA 625	ISOPHORONE	FL	EPA 625	N-NITROSODI-N-PROPYLAMINE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 625	N-NITROSODIMETHYLAMINE	FL	EPA 625	N-NITROSODIPHENYLAMINE	FL
EPA 625	NAPHTHALENE	FL	EPA 625	NITROBENZENE	FL
EPA 625	PENTACHLOROPHENOL	FL	EPA 625	PHENANTHRENE	FL
EPA 625	PHENOL	FL	EPA 625	PYRENE	FL
EPA 625 - EXTENDED	ACETOPHENONE	FL	EPA 625 - EXTENDED	ANILINE	FL
EPA 625 - EXTENDED	CARBAZOLE	FL	EPA 7196 A	CHROMIUM VI	FL
EPA 7470 A	MERCURY	FL	EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	FL	EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL	EPA 8081 A	4,4'-DDD	FL
EPA 8081 A	4,4'-DDE	FL	EPA 8081 A	4,4'-DDT	FL
EPA 8081 A	ALDRIN	FL	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	CHLORDANE (TECH.)	FL	EPA 8081 A	CHLOROBENZILATE	FL
EPA 8081 A	DELTA-BHC	FL	EPA 8081 A	DIALLATE	FL
EPA 8081 A	DIELDRIN	FL	EPA 8081 A	ENDOSULFAN I	FL
EPA 8081 A	ENDOSULFAN II	FL	EPA 8081 A	ENDOSULFAN SULFATE	FL
EPA 8081 A	ENDRIN	FL	EPA 8081 A	ENDRIN ALDEHYDE	FL
EPA 8081 A	ENDRIN KETONE	FL	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL	EPA 8081 A	HEPTACHLOR	FL
EPA 8081 A	HEPTACHLOR EPOXIDE	FL	EPA 8081 A	ISODRIN	FL
EPA 8081 A	METHOXYCHLOR	FL	EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8081 B	4,4'-DDD	FL	EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	4,4'-DDT	FL	EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	CHLORDANE (TECH.)	FL
EPA 8081 B	CHLOROBENZILATE	FL	EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	DIALLATE	FL	EPA 8081 B	DIELDRIN	FL

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EPA 8081 B	ENDOSULFAN I	FL	EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL	EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL	EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL
EPA 8081 B	HEPTACHLOR	FL	EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	ISODRIN	FL	EPA 8081 B	METHOXYCHLOR	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL	EPA 8081 B - EXTENDED	KEPONE	FL
EPA 8082 - EXTENDED	AROCLOR-1262 (PCB-1262)	FL	EPA 8082 - EXTENDED	AROCLOR-1268 (PCB-1268)	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL	EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL	EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL	EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	FL
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	FL	EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-D	FL	EPA 8151 A	2,4-DB	FL
EPA 8151 A	DALAPON	FL	EPA 8151 A	DICAMBA	FL
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL	EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	MCPA	FL	EPA 8151 A	MCPP	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL	EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL	EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL	EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL	EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL	EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL	EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL	EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROBENZENE	FL	EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL	EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROBENZENE	FL	EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DICHLOROBENZENE	FL	EPA 8260 B	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	1-BUTANOL (N-BUTANOL)	FL	EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL	EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-CHLOROTOLUENE	FL	EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	2-NITROPROPANE	FL	EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	FL	EPA 8260 B	4-METHYL-2-PENTANONE (MIBK)	FL

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EPA 8260 B	ACETONE	FL	EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL	EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL	EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOBENZENE	FL	EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL	EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON DISULFIDE	FL	EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLOROBENZENE	FL	EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL	EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL	EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL	EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL	EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYL ACETATE	FL	EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	ETHYLBENZENE	FL	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL	EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL	EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	N-PROPYLBENZENE	FL	EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL	EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	STYRENE	FL	EPA 8260 B	TERT-BUTYL ALCOHOL	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL	EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TOLUENE	FL	EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	FL	EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL	EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL ACETATE	FL	EPA 8260 B	VINYL CHLORIDE	FL
EPA 8260 B	XYLENE (TOTAL)	FL	EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	FL
EPA 8260 B - EXTENDED	CYCLOHEXANE	FL	EPA 8260 B - EXTENDED	CYCLOHEXANONE	FL
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	FL	EPA 8260 B - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	FL
EPA 8260 B - EXTENDED	METHYL ACETATE	FL	EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 6440

Testamerica Laboratories, Inc.
4101 Shuffel Street Nw
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2014
Expiration Date: September 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B - EXTENDED	N-HEPTANE	FL
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	FL
EPA 8260 C	1,1,1-TRICHLOROETHANE	FL
EPA 8260 C	1,1,2-TRICHLOROETHANE	FL
EPA 8260 C	1,1-DICHLOROETHYLENE	FL
EPA 8260 C	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 C	1,3-DICHLOROPROPANE	FL
EPA 8260 C	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8260 C	2,2-DICHLOROPROPANE	FL
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 C	2-HEXANONE	FL
EPA 8260 C	4-CHLOROTOLUENE	FL
EPA 8260 C	4-METHYL-2-PENTANONE (MIBK)	FL
EPA 8260 C	ACETONITRILE	FL
EPA 8260 C	ACRYLONITRILE	FL
EPA 8260 C	BENZENE	FL
EPA 8260 C	BROMOCHLOROMETHANE	FL
EPA 8260 C	BROMOFORM	FL
EPA 8260 C	CARBON TETRACHLORIDE	FL
EPA 8260 C	CHLORODIBROMOMETHANE	FL
EPA 8260 C	CHLOROFORM	FL
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 C	CYCLOHEXANE	FL
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 C	ETHYL ACETATE	FL
EPA 8260 C	ETHYLBENZENE	FL
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B - EXTENDED	N-HEXANE	FL
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 C	1,1-DICHLOROETHANE	FL
EPA 8260 C	1,1-DICHLOROPROPENE	FL
EPA 8260 C	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 C	1,2-DICHLOROBENZENE	FL
EPA 8260 C	1,2-DICHLOROPROPANE	FL
EPA 8260 C	1,3-DICHLOROBENZENE	FL
EPA 8260 C	1,4-DICHLOROBENZENE	FL
EPA 8260 C	1-BUTANOL (N-BUTANOL)	FL
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 C	2-CHLOROTOLUENE	FL
EPA 8260 C	2-NITROPROPANE	FL
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	FL
EPA 8260 C	ACETONE	FL
EPA 8260 C	ACROLEIN (PROPENAL)	FL
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 C	BROMOBENZENE	FL
EPA 8260 C	BROMODICHLOROMETHANE	FL
EPA 8260 C	CARBON DISULFIDE	FL
EPA 8260 C	CHLOROBENZENE	FL
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 C	DIETHYL ETHER	FL
EPA 8260 C	ETHYL METHACRYLATE	FL
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL

Scope of Accreditation

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	ISOPROPYLBENZENE	FL	EPA 8260 C	METHACRYLONITRILE	FL
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	FL	EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 C	METHYL METHACRYLATE	FL	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 C	METHYLCYCLOHEXANE	FL	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 C	N-BUTYLBENZENE	FL	EPA 8260 C	N-PROPYLBENZENE	FL
EPA 8260 C	NAPHTHALENE	FL	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 C	SEC-BUTYLBENZENE	FL	EPA 8260 C	STYRENE	FL
EPA 8260 C	TERT-BUTYL ALCOHOL	FL	EPA 8260 C	TERT-BUTYLBENZENE	FL
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	FL	EPA 8260 C	TOLUENE	FL
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	FL	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	FL
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	FL	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL	EPA 8260 C	VINYL ACETATE	FL
EPA 8260 C	VINYL CHLORIDE	FL	EPA 8260 C	XYLENE (TOTAL)	FL
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	FL	EPA 8260 C - EXTENDED	CYCLOHEXANONE	FL
EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	FL	EPA 8260 C - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	FL
EPA 8260 C - EXTENDED	METHYL ACETATE	FL	EPA 8260 C - EXTENDED	N-HEPTANE	FL
EPA 8260 C - EXTENDED	N-HEXANE	FL	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	FL
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	FL	EPA 8270 C	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 C	1,2-DICHLOROBENZENE	FL	EPA 8270 C	1,2-DINITROBENZENE	FL
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	FL	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 C	1,3-DICHLOROBENZENE	FL	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 C	1,4-DICHLOROBENZENE	FL	EPA 8270 C	1,4-DINITROBENZENE	FL
EPA 8270 C	1,4-NAPHTHOQUINONE	FL	EPA 8270 C	1,4-PHENYLENEDIAMINE	FL
EPA 8270 C	1-NAPHTHYLAMINE	FL	EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 C	2,4,5-TRICHLOROPHENOL	FL	EPA 8270 C	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 C	2,4-DICHLOROPHENOL	FL	EPA 8270 C	2,4-DIMETHYLPHENOL	FL
EPA 8270 C	2,4-DINITROPHENOL	FL	EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 C	2,6-DICHLOROPHENOL	FL	EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 C	2-ACETYLAMINOFLUORENE	FL	EPA 8270 C	2-CHLORONAPHTHALENE	FL
EPA 8270 C	2-CHLOROPHENOL	FL	EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 C	2-METHYLNAPHTHALENE	FL	EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 C	2-NAPHTHYLAMINE	FL	EPA 8270 C	2-NITROANILINE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	2-NITROPHENOL	FL	EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	FL
EPA 8270 C	3,3'-DICHLOROBENZIDINE	FL	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 C	3-METHYLCHOLANTHRENE	FL	EPA 8270 C	3-NITROANILINE	FL
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	FL	EPA 8270 C	4-AMINOBIPHENYL	FL
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	FL	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 C	4-CHLOROANILINE	FL	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	FL	EPA 8270 C	4-NITROANILINE	FL
EPA 8270 C	4-NITROPHENOL	FL	EPA 8270 C	5-NITRO-O-TOLUIDINE	FL
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	FL
EPA 8270 C	ACENAPHTHENE	FL	EPA 8270 C	ACENAPHTHYLENE	FL
EPA 8270 C	ACETOPHENONE	FL	EPA 8270 C	ANILINE	FL
EPA 8270 C	ANTHRACENE	FL	EPA 8270 C	ARAMITE	FL
EPA 8270 C	BENZIDINE	FL	EPA 8270 C	BENZO(A)ANTHRACENE	FL
EPA 8270 C	BENZO(A)PYRENE	FL	EPA 8270 C	BENZO(B)FLUORANTHENE	FL
EPA 8270 C	BENZO(G,H,I)PERYLENE	FL	EPA 8270 C	BENZO(K)FLUORANTHENE	FL
EPA 8270 C	BENZOIC ACID	FL	EPA 8270 C	BENZYL ALCOHOL	FL
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	FL	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	FL	EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 C	BUTYL BENZYL PHTHALATE	FL	EPA 8270 C	CHLOROBENZILATE	FL
EPA 8270 C	CHRYSENE	FL	EPA 8270 C	DI-N-BUTYL PHTHALATE	FL
EPA 8270 C	DI-N-OCTYL PHTHALATE	FL	EPA 8270 C	DIALLATE	FL
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	FL	EPA 8270 C	DIBENZOFURAN	FL
EPA 8270 C	DIETHYL PHTHALATE	FL	EPA 8270 C	DIMETHOATE	FL
EPA 8270 C	DIMETHYL PHTHALATE	FL	EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8270 C	DIPHENYLAMINE	FL	EPA 8270 C	DISULFOTON	FL
EPA 8270 C	ETHYL METHANESULFONATE	FL	EPA 8270 C	FAMPHUR	FL
EPA 8270 C	FLUORANTHENE	FL	EPA 8270 C	FLUORENE	FL
EPA 8270 C	HEXACHLOROBENZENE	FL	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	FL	EPA 8270 C	HEXACHLOROETHANE	FL
EPA 8270 C	HEXACHLOROPROPENE	FL	EPA 8270 C	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 C	ISODRIN	FL	EPA 8270 C	ISOPHORONE	FL
EPA 8270 C	ISOSAFROLE	FL	EPA 8270 C	METHAPYRILENE	FL
EPA 8270 C	METHYL METHANESULFONATE	FL	EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	FL
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	FL	EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	FL

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Expiration Date: September 14, 2015

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	N-NITROSODIETHYLAMINE	FL	EPA 8270 C	N-NITROSODIMETHYLAMINE	FL
EPA 8270 C	N-NITROSODIPHENYLAMINE	FL	EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 C	N-NITROSOMORPHOLINE	FL	EPA 8270 C	N-NITROSOPIPERIDINE	FL
EPA 8270 C	N-NITROSOPYRROLIDINE	FL	EPA 8270 C	NAPHTHALENE	FL
EPA 8270 C	NITROBENZENE	FL	EPA 8270 C	NITROQUINOLINE-1-OXIDE	FL
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL	EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	FL
EPA 8270 C	PARATHION (PARATHION - ETHYL)	FL	EPA 8270 C	PENTACHLOROBENZENE	FL
EPA 8270 C	PENTACHLORONITROBENZENE	FL	EPA 8270 C	PENTACHLOROPHENOL	FL
EPA 8270 C	PHENACETIN	FL	EPA 8270 C	PHENANTHRENE	FL
EPA 8270 C	PHENOL	FL	EPA 8270 C	PHORATE	FL
EPA 8270 C	PRONAMIDE (KERB)	FL	EPA 8270 C	PYRENE	FL
EPA 8270 C	PYRIDINE	FL	EPA 8270 C	SAFROLE	FL
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL	EPA 8270 C	THIONAZIN (ZINOPHOS)	FL
EPA 8270 C - EXTENDED	1,1-BIPHENYL	FL	EPA 8270 C - EXTENDED	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8270 C - EXTENDED	1-METHYLNAPHTHALENE	FL	EPA 8270 C - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	FL
EPA 8270 C - EXTENDED	3+4-METHYL PHENOL (M+P CRESOL)	FL	EPA 8270 C - EXTENDED	ATRAZINE	FL
EPA 8270 C - EXTENDED	BENZALDEHYDE	FL	EPA 8270 C - EXTENDED	CAPROLACTAM	FL
EPA 8270 C - EXTENDED	CARBAZOLE	FL	EPA 8270 C - EXTENDED	INDENE	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL	EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 D	1,2-DICHLOROBENZENE	FL	EPA 8270 D	1,2-DINITROBENZENE	FL
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	FL	EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,3-DICHLOROBENZENE	FL	EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	FL
EPA 8270 D	1,4-DICHLOROBENZENE	FL	EPA 8270 D	1,4-DINITROBENZENE	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL	EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	1-NAPHTHYLAMINE	FL	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL	EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL	EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL	EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NAPHTHYLAMINE	FL	EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	2-NITROPHENOL	FL	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL	EPA 8270 D	3-METHYLCHOLANTHRENE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	3-NITROANILINE	FL	EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	FL
EPA 8270 D	4-AMINOBIPHENYL	FL	EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL	EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL	EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 D	4-NITROANILINE	FL	EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	FL	EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACENAPHTHYLENE	FL	EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANILINE	FL	EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	ARAMITE	FL	EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL	EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL	EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL	EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BENZYL ALCOHOL	FL	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL	EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL	EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHLOROBENZILATE	FL	EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL	EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL	EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIBENZOFURAN	FL	EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	DIMETHOATE	FL	EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL	EPA 8270 D	DIPHENYLAMINE	FL
EPA 8270 D	DISULFOTON	FL	EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FAMPHUR	FL	EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	FLUORENE	FL	EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROETHANE	FL	EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL	EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOPHORONE	FL	EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	METHAPYRILENE	FL	EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	FL	EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL	EPA 8270 D	N-NITROSODIETHYLAMINE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL	EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL	EPA 8270 D	N-NITROSOMORPHOLINE	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSOPIPERIDINE	FL	EPA 8270 D	N-NITROSOPYRROLIDINE	FL
EPA 8270 D	NAPHTHALENE	FL	EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	NITROQUINOLINE-1-OXIDE	FL	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	FL	EPA 8270 D	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 D	PENTACHLOROBENZENE	FL	EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL	EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENANTHRENE	FL	EPA 8270 D	PHENOL	FL
EPA 8270 D	PHORATE	FL	EPA 8270 D	PRONAMIDE (KERB)	FL
EPA 8270 D	PYRENE	FL	EPA 8270 D	SAFROLE	FL
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL	EPA 8270 D	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D - EXTENDED	1,1-BIPHENYL	FL	EPA 8270 D - EXTENDED	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	FL	EPA 8270 D - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	FL
EPA 8270 D - EXTENDED	3+4-METHYL PHENOL (M+P CRESOL)	FL	EPA 8270 D - EXTENDED	ATRAZINE	FL
EPA 8270 D - EXTENDED	BENZALDEHYDE	FL	EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	INDENE	FL	EPA 8270 D - EXTENDED	PYRIDINE	FL
EPA 8315 A	FORMALDEHYDE	FL	EPA 9012 A	AMENABLE CYANIDE	FL
EPA 9012 A	TOTAL CYANIDE	FL	EPA 9030 B	PREP: SULFIDE	FL
EPA 9034	TOTAL SULFIDES	FL	EPA 9040 C	PH	FL
EPA 9050 A	CONDUCTIVITY	FL	EPA 9056 A	BROMIDE	FL
EPA 9056 A	CHLORIDE	FL	EPA 9056 A	FLUORIDE	FL
EPA 9056 A	NITRATE AS N	FL	EPA 9056 A	NITRITE	FL
EPA 9056 A	ORTHOPHOSPHATE AS P	FL	EPA 9056 A	SULFATE	FL
EPA 9060	TOTAL ORGANIC CARBON	FL	EPA 9065	TOTAL PHENOLICS	FL
EPA 9251	CHLORIDE	FL	RSK-175	ETHANE	FL
RSK-175	ETHENE	FL	RSK-175	METHANE	FL
SM 2320 B-1997	ALKALINITY AS CACO3	FL	SM 2340 B-1997	TOTAL HARDNESS AS CACO3	FL
SM 2510 B-1997	CONDUCTIVITY	FL	SM 2540 B-1997	RESIDUE-TOTAL	FL
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	FL	SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	FL
SM 3500-CR B-2009	CHROMIUM VI	FL	SM 4500-CL^- E-1997	CHLORIDE	FL
SM 4500-CN^- E-1999	CYANIDE	FL	SM 4500-CN^- G-1999	AMENABLE CYANIDE	FL
SM 4500-NH3 C-1997	AMMONIA AS N	FL	SM 4500-NH3 C-1997	KJELDAHL NITROGEN - TOTAL	FL
SM 4500-NH3 D-1997	AMMONIA AS N	FL	SM 4500-P E-1999	ORTHOPHOSPHATE AS P	FL
SM 4500-P E-1999	PHOSPHORUS, TOTAL	FL	SM 4500-$S2^-$ F-2000	SULFIDE	FL
SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND	FL	SM 5210 B-2001	CARBONACEOUS BOD, CBOD	FL
SM 5220 D-1997	CHEMICAL OXYGEN DEMAND	FL	SM 5310 C-2000	TOTAL ORGANIC CARBON	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	FL	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	FL
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	FL	EPA 6010 B	ALUMINUM	FL
EPA 6010 B	ANTIMONY	FL	EPA 6010 B	ARSENIC	FL
EPA 6010 B	BARIUM	FL	EPA 6010 B	BERYLLIUM	FL
EPA 6010 B	BORON	FL	EPA 6010 B	CADMIUM	FL
EPA 6010 B	CALCIUM	FL	EPA 6010 B	CHROMIUM	FL
EPA 6010 B	COBALT	FL	EPA 6010 B	COPPER	FL
EPA 6010 B	IRON	FL	EPA 6010 B	LEAD	FL
EPA 6010 B	LITHIUM	FL	EPA 6010 B	MAGNESIUM	FL
EPA 6010 B	MANGANESE	FL	EPA 6010 B	MOLYBDENUM	FL
EPA 6010 B	NICKEL	FL	EPA 6010 B	POTASSIUM	FL
EPA 6010 B	SELENIUM	FL	EPA 6010 B	SILICA AS SIO2	FL
EPA 6010 B	SILVER	FL	EPA 6010 B	SODIUM	FL
EPA 6010 B	STRONTIUM	FL	EPA 6010 B	THALLIUM	FL
EPA 6010 B	TIN	FL	EPA 6010 B	TITANIUM	FL
EPA 6010 B	VANADIUM	FL	EPA 6010 B	ZINC	FL
EPA 6010 C	ALUMINUM	FL	EPA 6010 C	ANTIMONY	FL
EPA 6010 C	ARSENIC	FL	EPA 6010 C	BARIUM	FL
EPA 6010 C	BERYLLIUM	FL	EPA 6010 C	BORON	FL
EPA 6010 C	CADMIUM	FL	EPA 6010 C	CALCIUM	FL
EPA 6010 C	CHROMIUM	FL	EPA 6010 C	COBALT	FL
EPA 6010 C	COPPER	FL	EPA 6010 C	IRON	FL
EPA 6010 C	LEAD	FL	EPA 6010 C	LITHIUM	FL
EPA 6010 C	MAGNESIUM	FL	EPA 6010 C	MANGANESE	FL
EPA 6010 C	MOLYBDENUM	FL	EPA 6010 C	NICKEL	FL
EPA 6010 C	POTASSIUM	FL	EPA 6010 C	SELENIUM	FL
EPA 6010 C	SILICA AS SIO2	FL	EPA 6010 C	SILVER	FL
EPA 6010 C	SODIUM	FL	EPA 6010 C	STRONTIUM	FL
EPA 6010 C	THALLIUM	FL	EPA 6010 C	TIN	FL
EPA 6010 C	TITANIUM	FL	EPA 6010 C	VANADIUM	FL
EPA 6010 C	ZINC	FL	EPA 6020	ALUMINUM	FL
EPA 6020	ANTIMONY	FL	EPA 6020	ARSENIC	FL
EPA 6020	BARIUM	FL	EPA 6020	BERYLLIUM	FL
EPA 6020	CADMIUM	FL	EPA 6020	CHROMIUM	FL
EPA 6020	COBALT	FL	EPA 6020	COPPER	FL
EPA 6020	LEAD	FL	EPA 6020	MANGANESE	FL
EPA 6020	NICKEL	FL	EPA 6020	SILVER	FL

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6020	THALLIUM	FL	EPA 6020	ZINC	FL
EPA 6020 - EXTENDED	BORON	FL	EPA 6020 - EXTENDED	IRON	FL
EPA 6020 - EXTENDED	MAGNESIUM	FL	EPA 6020 - EXTENDED	MOLYBDENUM	FL
EPA 6020 - EXTENDED	POTASSIUM	FL	EPA 6020 - EXTENDED	SELENIUM	FL
EPA 6020 - EXTENDED	SODIUM	FL	EPA 6020 - EXTENDED	STRONTIUM	FL
EPA 6020 - EXTENDED	TIN	FL	EPA 6020 - EXTENDED	TITANIUM	FL
EPA 6020 - EXTENDED	VANADIUM	FL	EPA 6020 A	ALUMINUM	FL
EPA 6020 A	ANTIMONY	FL	EPA 6020 A	ARSENIC	FL
EPA 6020 A	BARIUM	FL	EPA 6020 A	BERYLLIUM	FL
EPA 6020 A	CADMIUM	FL	EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COBALT	FL	EPA 6020 A	COPPER	FL
EPA 6020 A	IRON	FL	EPA 6020 A	LEAD	FL
EPA 6020 A	MAGNESIUM	FL	EPA 6020 A	MANGANESE	FL
EPA 6020 A	NICKEL	FL	EPA 6020 A	POTASSIUM	FL
EPA 6020 A	SELENIUM	FL	EPA 6020 A	SILVER	FL
EPA 6020 A	SODIUM	FL	EPA 6020 A	THALLIUM	FL
EPA 6020 A	VANADIUM	FL	EPA 6020 A	ZINC	FL
EPA 6020 A - EXTENDED	BORON	FL	EPA 6020 A - EXTENDED	MOLYBDENUM	FL
EPA 6020 A - EXTENDED	STRONTIUM	FL	EPA 6020 A - EXTENDED	TIN	FL
EPA 6020 A - EXTENDED	TITANIUM	FL	EPA 7196 A	CHROMIUM VI	FL
EPA 7471 A	MERCURY	FL	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	FL	EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL	EPA 8081 A	4,4'-DDD	FL
EPA 8081 A	4,4'-DDE	FL	EPA 8081 A	4,4'-DDT	FL
EPA 8081 A	ALDRIN	FL	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 A	CHLORDANE (TECH.)	FL	EPA 8081 A	CHLOROBENZILATE	FL
EPA 8081 A	DELTA-BHC	FL	EPA 8081 A	DIALLATE	FL
EPA 8081 A	DIELDRIN	FL	EPA 8081 A	ENDOSULFAN I	FL
EPA 8081 A	ENDOSULFAN II	FL	EPA 8081 A	ENDOSULFAN SULFATE	FL
EPA 8081 A	ENDRIN	FL	EPA 8081 A	ENDRIN ALDEHYDE	FL
EPA 8081 A	ENDRIN KETONE	FL	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL	EPA 8081 A	HEPTACHLOR	FL
EPA 8081 A	HEPTACHLOR EPOXIDE	FL	EPA 8081 A	ISODRIN	FL
EPA 8081 A	METHOXYCHLOR	FL	EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8081 A - EXTENDED	KEPONE	FL	EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDE	FL	EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALDRIN	FL	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	CHLORDANE (TECH.)	FL	EPA 8081 B	CHLOROBENZILATE	FL
EPA 8081 B	DELTA-BHC	FL	EPA 8081 B	DIALLATE	FL
EPA 8081 B	DIELDRIN	FL	EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN II	FL	EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN	FL	EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	ENDRIN KETONE	FL	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL	EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL	EPA 8081 B	ISODRIN	FL
EPA 8081 B	METHOXYCHLOR	FL	EPA 8081 B - EXTENDED	KEPONE	FL
EPA 8082 - EXTENDED	AROCLOR-1262 (PCB-1262)	FL	EPA 8082 - EXTENDED	AROCLOR-1268 (PCB-1268)	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL	EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL	EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL	EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	FL
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	FL	EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-D	FL	EPA 8151 A	2,4-DB	FL
EPA 8151 A	DALAPON	FL	EPA 8151 A	DICAMBA	FL
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL	EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	MCPA	FL	EPA 8151 A	MCPP	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL	EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL	EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL	EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL	EPA 8260 B	1,1-DICHLOROPROPENE	FL

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EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL	EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL	EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL	EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROBENZENE	FL	EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL	EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROBENZENE	FL	EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DICHLOROBENZENE	FL	EPA 8260 B	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	1-BUTANOL (N-BUTANOL)	FL	EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL	EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-CHLOROTOLUENE	FL	EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	2-NITROPROPANE	FL	EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	FL	EPA 8260 B	4-METHYL-2-PENTANONE (MIBK)	FL
EPA 8260 B	ACETONE	FL	EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL	EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL	EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOBENZENE	FL	EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL	EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON DISULFIDE	FL	EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLOROBENZENE	FL	EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL	EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL	EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL	EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL	EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYL ACETATE	FL	EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	ETHYLBENZENE	FL	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL	EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL	EPA 8260 B	N-BUTYLBENZENE	FL

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EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8260 B - EXTENDED	CYCLOHEXANE	FL
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	FL
EPA 8260 B - EXTENDED	METHYL ACETATE	FL
EPA 8260 B - EXTENDED	N-HEPTANE	FL
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	FL
EPA 8260 C	1,1,1-TRICHLOROETHANE	FL
EPA 8260 C	1,1,2-TRICHLOROETHANE	FL
EPA 8260 C	1,1-DICHLOROETHYLENE	FL
EPA 8260 C	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 C	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 C	1,2-DICHLOROBENZENE	FL
EPA 8260 C	1,2-DICHLOROPROPANE	FL
EPA 8260 C	1,3-DICHLOROBENZENE	FL
EPA 8260 C	1,4-DICHLOROBENZENE	FL
EPA 8260 C	1-BUTANOL (N-BUTANOL)	FL
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 C	2-CHLOROTOLUENE	FL
EPA 8260 C	2-NITROPROPANE	FL
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	FL
EPA 8260 C	ACETONE	FL
EPA 8260 C	ACROLEIN (PROPENAL)	FL
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL

METHOD	ANALYTE	PRIMARY
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYL ALCOHOL	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL CHLORIDE	FL
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	FL
EPA 8260 B - EXTENDED	CYCLOHEXANONE	FL
EPA 8260 B - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	FL
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	FL
EPA 8260 B - EXTENDED	N-HEXANE	FL
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 C	1,1-DICHLOROETHANE	FL
EPA 8260 C	1,1-DICHLOROPROPENE	FL
EPA 8260 C	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 C	1,3-DICHLOROPROPANE	FL
EPA 8260 C	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8260 C	2,2-DICHLOROPROPANE	FL
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 C	2-HEXANONE	FL
EPA 8260 C	4-CHLOROTOLUENE	FL
EPA 8260 C	4-METHYL-2-PENTANONE (MIBK)	FL
EPA 8260 C	ACETONITRILE	FL
EPA 8260 C	ACRYLONITRILE	FL
EPA 8260 C	BENZENE	FL

Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	BROMOBENZENE	FL	EPA 8260 C	BROMOCHLOROMETHANE	FL
EPA 8260 C	BROMODICHLOROMETHANE	FL	EPA 8260 C	BROMOFORM	FL
EPA 8260 C	CARBON DISULFIDE	FL	EPA 8260 C	CARBON TETRACHLORIDE	FL
EPA 8260 C	CHLOROBENZENE	FL	EPA 8260 C	CHLORODIBROMOMETHANE	FL
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	FL	EPA 8260 C	CHLOROFORM	FL
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL	EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	FL	EPA 8260 C	CYCLOHEXANE	FL
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	FL	EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 C	DIETHYL ETHER	FL	EPA 8260 C	ETHYL ACETATE	FL
EPA 8260 C	ETHYL METHACRYLATE	FL	EPA 8260 C	ETHYLBENZENE	FL
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL	EPA 8260 C	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL	EPA 8260 C	ISOPROPYLBENZENE	FL
EPA 8260 C	METHACRYLONITRILE	FL	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	FL	EPA 8260 C	METHYL METHACRYLATE	FL
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	FL	EPA 8260 C	METHYLCYCLOHEXANE	FL
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL	EPA 8260 C	N-BUTYLBENZENE	FL
EPA 8260 C	N-PROPYLBENZENE	FL	EPA 8260 C	NAPHTHALENE	FL
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	FL	EPA 8260 C	SEC-BUTYLBENZENE	FL
EPA 8260 C	STYRENE	FL	EPA 8260 C	TERT-BUTYL ALCOHOL	FL
EPA 8260 C	TERT-BUTYLBENZENE	FL	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 C	TOLUENE	FL	EPA 8260 C	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	FL	EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL	EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 C	VINYL ACETATE	FL	EPA 8260 C	VINYL CHLORIDE	FL
EPA 8260 C	XYLENE (TOTAL)	FL	EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	FL
EPA 8260 C - EXTENDED	CYCLOHEXANONE	FL	EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	FL
EPA 8260 C - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	FL	EPA 8260 C - EXTENDED	METHYL ACETATE	FL
EPA 8260 C - EXTENDED	N-HEPTANE	FL	EPA 8260 C - EXTENDED	N-HEXANE	FL
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	FL	EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 C	1,2,4-TRICHLOROBENZENE	FL	EPA 8270 C	1,2-DICHLOROBENZENE	FL

Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	1,2-DINITROBENZENE	FL	EPA 8270 C	1,2-DIPHENYLHYDRAZINE	FL
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL	EPA 8270 C	1,3-DICHLOROBENZENE	FL
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	FL	EPA 8270 C	1,4-DICHLOROBENZENE	FL
EPA 8270 C	1,4-DINITROBENZENE	FL	EPA 8270 C	1,4-NAPHTHOQUINONE	FL
EPA 8270 C	1,4-PHENYLENEDIAMINE	FL	EPA 8270 C	1-NAPHTHYLAMINE	FL
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	FL	EPA 8270 C	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 C	2,4,6-TRICHLOROPHENOL	FL	EPA 8270 C	2,4-DICHLOROPHENOL	FL
EPA 8270 C	2,4-DIMETHYLPHENOL	FL	EPA 8270 C	2,4-DINITROPHENOL	FL
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	FL	EPA 8270 C	2,6-DICHLOROPHENOL	FL
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	FL	EPA 8270 C	2-ACETYLAMINOFLUORENE	FL
EPA 8270 C	2-CHLORONAPHTHALENE	FL	EPA 8270 C	2-CHLOROPHENOL	FL
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL	EPA 8270 C	2-METHYLNAPHTHALENE	FL
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	FL	EPA 8270 C	2-NAPHTHYLAMINE	FL
EPA 8270 C	2-NITROANILINE	FL	EPA 8270 C	2-NITROPHENOL	FL
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	FL	EPA 8270 C	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	FL	EPA 8270 C	3-METHYLCHOLANTHRENE	FL
EPA 8270 C	3-NITROANILINE	FL	EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	FL
EPA 8270 C	4-AMINOBIPHENYL	FL	EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	FL	EPA 8270 C	4-CHLOROANILINE	FL
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	FL	EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 C	4-NITROANILINE	FL	EPA 8270 C	4-NITROPHENOL	FL
EPA 8270 C	5-NITRO-O-TOLUIDINE	FL	EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	FL	EPA 8270 C	ACENAPHTHENE	FL
EPA 8270 C	ACENAPHTHYLENE	FL	EPA 8270 C	ACETOPHENONE	FL
EPA 8270 C	ANILINE	FL	EPA 8270 C	ANTHRACENE	FL
EPA 8270 C	ARAMITE	FL	EPA 8270 C	BENZIDINE	FL
EPA 8270 C	BENZO(A)ANTHRACENE	FL	EPA 8270 C	BENZO(A)PYRENE	FL
EPA 8270 C	BENZO(B)FLUORANTHENE	FL	EPA 8270 C	BENZO(G,H,I)PERYLENE	FL
EPA 8270 C	BENZO(K)FLUORANTHENE	FL	EPA 8270 C	BENZOIC ACID	FL
EPA 8270 C	BENZYL ALCOHOL	FL	EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	FL	EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL	EPA 8270 C	BUTYL BENZYL PHTHALATE	FL
EPA 8270 C	CHLOROBENZILATE	FL	EPA 8270 C	CHRYSENE	FL
EPA 8270 C	DI-N-BUTYL PHTHALATE	FL	EPA 8270 C	DI-N-OCTYL PHTHALATE	FL
EPA 8270 C	DIALLATE	FL	EPA 8270 C	DIBENZO(A,H) ANTHRACENE	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	DIBENZOFURAN	FL	EPA 8270 C	DIETHYL PHTHALATE	FL
EPA 8270 C	DIMETHOATE	FL	EPA 8270 C	DIMETHYL PHTHALATE	FL
EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL	EPA 8270 C	DIPHENYLAMINE	FL
EPA 8270 C	DISULFOTON	FL	EPA 8270 C	ETHYL METHANESULFONATE	FL
EPA 8270 C	FAMPHUR	FL	EPA 8270 C	FLUORANTHENE	FL
EPA 8270 C	FLUORENE	FL	EPA 8270 C	HEXACHLOROBENZENE	FL
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL	EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 C	HEXACHLOROETHANE	FL	EPA 8270 C	HEXACHLOROPROPENE	FL
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	FL	EPA 8270 C	ISODRIN	FL
EPA 8270 C	ISOPHORONE	FL	EPA 8270 C	ISOSAFROLE	FL
EPA 8270 C	METHAPYRILENE	FL	EPA 8270 C	METHYL METHANESULFONATE	FL
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	FL	EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	FL	EPA 8270 C	N-NITROSODIETHYLAMINE	FL
EPA 8270 C	N-NITROSODIMETHYLAMINE	FL	EPA 8270 C	N-NITROSODIPHENYLAMINE	FL
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	FL	EPA 8270 C	N-NITROSOMORPHOLINE	FL
EPA 8270 C	N-NITROSOPIPERIDINE	FL	EPA 8270 C	N-NITROSOPYRROLIDINE	FL
EPA 8270 C	NAPHTHALENE	FL	EPA 8270 C	NITROBENZENE	FL
EPA 8270 C	NITROQUINOLINE-1-OXIDE	FL	EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	FL	EPA 8270 C	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 C	PENTACHLOROBENZENE	FL	EPA 8270 C	PENTACHLORONITROBENZENE	FL
EPA 8270 C	PENTACHLOROPHENOL	FL	EPA 8270 C	PHENACETIN	FL
EPA 8270 C	PHENANTHRENE	FL	EPA 8270 C	PHENOL	FL
EPA 8270 C	PHORATE	FL	EPA 8270 C	PRONAMIDE (KERB)	FL
EPA 8270 C	PYRENE	FL	EPA 8270 C	PYRIDINE	FL
EPA 8270 C	SAFROLE	FL	EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL
EPA 8270 C	THIONAZIN (ZINOPHOS)	FL	EPA 8270 C - EXTENDED	1,1-BIPHENYL	FL
EPA 8270 C - EXTENDED	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL	EPA 8270 C - EXTENDED	1-METHYLNAPHTHALENE	FL
EPA 8270 C - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	FL	EPA 8270 C - EXTENDED	3+4-METHYL PHENOL (M+P CRESOL)	FL
EPA 8270 C - EXTENDED	ATRAZINE	FL	EPA 8270 C - EXTENDED	BENZALDEHYDE	FL
EPA 8270 C - EXTENDED	CAPROLACTAM	FL	EPA 8270 C - EXTENDED	CARBAZOLE	FL
EPA 8270 C - EXTENDED	INDENE	FL	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL	EPA 8270 D	1,2-DICHLOROBENZENE	FL
EPA 8270 D	1,2-DINITROBENZENE	FL	EPA 8270 D	1,2-DIPHENYLHYDRAZINE	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL	EPA 8270 D	1,3-DICHLOROBENZENE	FL
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	FL	EPA 8270 D	1,4-DICHLOROBENZENE	FL
EPA 8270 D	1,4-DINITROBENZENE	FL	EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL	EPA 8270 D	1-NAPHTHYLAMINE	FL
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL	EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL	EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL	EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL	EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL	EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL	EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL	EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL	EPA 8270 D	2-NAPHTHYLAMINE	FL
EPA 8270 D	2-NITROANILINE	FL	EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	FL	EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL	EPA 8270 D	3-METHYLCHOLANTHRENE	FL
EPA 8270 D	3-NITROANILINE	FL	EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	FL
EPA 8270 D	4-AMINOBIPHENYL	FL	EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL	EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL	EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	FL
EPA 8270 D	4-NITROANILINE	FL	EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	FL	EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACENAPHTHYLENE	FL	EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANILINE	FL	EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	ARAMITE	FL	EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL	EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL	EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL	EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BENZYL ALCOHOL	FL	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL	EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE). (DEHP)	FL	EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHLOROBENZILATE	FL	EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL	EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL	EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIBENZOFURAN	FL	EPA 8270 D	DIETHYL PHTHALATE	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	DIMETHOATE	FL	EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL	EPA 8270 D	DIPHENYLAMINE	FL
EPA 8270 D	DISULFOTON	FL	EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FAMPHUR	FL	EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	FLUORENE	FL	EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROETHANE	FL	EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL	EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOPHORONE	FL	EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	METHAPYRILENE	FL	EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	FL	EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL	EPA 8270 D	N-NITROSODIETHYLAMINE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL	EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL	EPA 8270 D	N-NITROSOMORPHOLINE	FL
EPA 8270 D	N-NITROSOPIPERIDINE	FL	EPA 8270 D	N-NITROSOPYRROLIDINE	FL
EPA 8270 D	NAPHTHALENE	FL	EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	NITROQUINOLINE-1-OXIDE	FL	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	FL
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	FL	EPA 8270 D	PARATHION (PARATHION - ETHYL)	FL
EPA 8270 D	PENTACHLOROBENZENE	FL	EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL	EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENANTHRENE	FL	EPA 8270 D	PHENOL	FL
EPA 8270 D	PHORATE	FL	EPA 8270 D	PRONAMIDE (KERB)	FL
EPA 8270 D	PYRENE	FL	EPA 8270 D	SAFROLE	FL
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	FL	EPA 8270 D	THIONAZIN (ZINOPHOS)	FL
EPA 8270 D - EXTENDED	1,1-BIPHENYL	FL	EPA 8270 D - EXTENDED	1,4-DIOXANE (1,4-DIETHYLENEOXIDE)	FL
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	FL	EPA 8270 D - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	FL
EPA 8270 D - EXTENDED	3+4-METHYL PHENOL (M+P CRESOL)	FL	EPA 8270 D - EXTENDED	ATRAZINE	FL
EPA 8270 D - EXTENDED	BENZALDEHYDE	FL	EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL	EPA 8270 D - EXTENDED	INDENE	FL
EPA 8270 D - EXTENDED	PYRIDINE	FL	EPA 8315 A	FORMALDEHYDE	FL
EPA 9012 A	CYANIDE	FL	EPA 9023	EXTRACTABLE ORGANIC HALIDES (EOX)	FL
EPA 9030 A	TOTAL SULFIDES	FL	EPA 9034	TOTAL SULFIDES	FL
EPA 9040 B	PH	FL	EPA 9041 A	PH	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 9045 C	PH	FL	EPA 9056 A	BROMIDE	FL
EPA 9056 A	CHLORIDE	FL	EPA 9056 A	FLUORIDE	FL
EPA 9056 A	NITRATE AS N	FL	EPA 9056 A	NITRITE	FL
EPA 9056 A	ORTHOPHOSPHATE AS P	FL	EPA 9056 A	SULFATE	FL
EPA 9065	TOTAL PHENOLICS	FL	EPA 9095 B	FREE LIQUID	FL

APPENDIX G

CORRESPONDENCE

ORDNANCE SYSTEMS INC.
Radford Army Ammunition Plant
4050 Pepper's Ferry Road
Radford Virginia 24141

November 24, 2014

Mr. Russell McAvoy, P.E.
Hazardous Waste Permitting
Virginia Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219

Subject: Interim Measure Corrective Action Plan
October 22, 2014 - Additional Verification Event Notification
July 31, 2014 - Annual Soil Monitoring Event
Soil Monitoring Program - Open Burning Ground (OBG)
Radford Army Ammunition Plant, Radford, Virginia
EPA ID#: VA1210020730

Dear Mr. McAvoy:

Based on the results of the additional verification monitoring collected on October 22, 2014 (received from the laboratory on November 5, 2014) and as required by the permit, Radford AAP is hereby submitting a proposed interim measure corrective action work plan as required by Sections 7.0 and 8.0 of Permit Attachment II.C.

Background:

On October 22, 2014, Radford Army Ammunition Plant (RAAP) completed additional verification soil sampling as part of the annual soil sampling event at the Open Burning Ground (OBG) located in Radford, Virginia. The additional verification soil sampling was required to assess the horizontal extent of impact for nitroglycerin previously detected above the Action Level (AL) at PAD-3. The analytical results are summarized below. Nitroglycerin was detected above the AL only at the point of original detection, PAD-3.

Location/Analyte	Initial Event Result (July 31, 2014) mg/kg (1)	Verification Event Result (September 18, 2014) mg/kg (1)	Verification Event Result (October 22, 2014) mg/kg (1)	Action Limit mg/kg	Action Limit Basis
Nitroglycerin					
PAD-3	174	123	**210**	62	USEPA Region 3 - RSL Industrial Table-Nov 2013
PAD-3 Dup			266		
PAD-3N (north)			29		
PAD-3S (south)			29.6		
PAD-3E (east)			9.64		
PAD-3W (west)			2.69		

Notes:

(1) Result reported on a dry weight basis

14-0900-153

Hot-Spot Evaluation and Soil Removal:

In order to characterize the nature and extent of the nitroglycerin detected at concentrations above the Action Level, Radford AAP will conduct additional sampling as required by section 8.0 of the Soil Sampling Analysis Plan (Attachment II.C). The permit requires Radford AAP to establish a sampling grid in a five-feet radius of the sample collection point (PAD-3). Four randomly selected sample points will be selected within the diameter of the grid. Each sample point will be sampled to a terminal depth of 24-inches below ground surface. Samples will be collected every six-inches to the terminal depth of 24-inches. The sampling equipment will be decontaminated in accordance with Section 4.3.1 of the Soil Sampling and Analysis Plan between every six-inch interval. The aliquots from each six-inch interval will be composited with the same corresponding interval from each of the four borings. The aliquots will be homogenized in a pre-cleaned stainless steel bowl using a pre-cleaned stainless steel spoon or trowel. The analyses from each six-inch interval will be evaluated by comparing the results to the Action Levels for the constituent.

If the Action Levels are exceeded in any given layer, a soil removal work plan will be prepared. The work plan will define the volume of soils to be removed by designating the horizontal and vertical extent of removal. The work plan will be submitted to the VDEQ for review and approval. Upon approval of the work plan, the soils will be excavated with a mechanical backhoe under the supervision of designated representative of Radford AAP. Soils will be placed in a DOT approved covered roll-off container and transported offsite for disposal at an approved facility for disposal and/or treatment. Upon completion of the excavation confirmatory samples will be collected to confirm complete removal of the contaminated media. Confirmatory samples will include four randomly selected aliquots from the base of the excavation and two from the sidewalls of the excavation to be composited for a single analysis.

Other Remediation Strategies:

Radford AAP reserves the opportunity to submit to the DEQ adequate documentation (pilot test results or bench studies) demonstrating the effectiveness of a remedial technology for the onsite treatment of a specific compound or suite of compounds that have been detected at concentrations that exceed the designated action levels for those compounds. The data submitted will provide a time frame for remediation as well as estimated costs. The remedial endpoint goal will be the designated action level. Radford AAP agrees that the proposed timeframe for remediation must be equivalent to the hot-spot removal option.

If you have any questions or concerns, please contact Mr. Matt Alberts at 540/639-8722 (matt.alberts@baesystems.com).

Sincerely,

Jay Stewart
Environmental Manager
BAE Systems, Ordnance Systems Inc

c: Aziz Farahmand, VDEQ-BRRO
Leslie Romanchik, VDEQ-Central

bc: BAE Administrative File
J. McKenna, ACO Staff
Matt Alberts, BAE Staff
Mike Lawless, Draper Aden Associates
Env. File

Coordination: J. McKenna
J. McKenna

14-0900-153

Concerning the following:

Open Burning Ground (OBG) – Soil Monitoring Program
Radford Army Ammunition Plant, Radford, Virginia
EPA ID#: VA1210020730
Interim Measure Corrective Action Plan

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

SIGNATURE: _____

PRINTED NAME: Luis A. Ortiz
TITLE: Lieutenant Colonel, US Army
Commanding

SIGNATURE: _____

PRINTED NAME: William M. Barnett
TITLE: General Manager
BAE Systems

BAE SYSTEMS

ORDNANCE SYSTEMS INC.
Radford Army Ammunition Plant
P.O. Box 1
Radford, VA 24143
Telephone (540) 639-7631
Fax (540) 639-8588

October 16, 2014

Mr. Russell McAvoy, P.E.
Hazardous Waste Permitting
Virginia Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219

Subject: September 18, 2014 Verification Event Notification, July 31, 2014 - Annual Soil Monitoring Event
Soil Monitoring Program - Open Burning Ground (OBG)
Radford Army Ammunition Plant, Radford, Virginia
EPA ID#: VA1210020730

Dear Mr. McAvoy:

During July 2014, Radford Army Ammunition Plant (RFAAP), located in Radford, Virginia, completed the annual soil sampling event at the Open Burning Ground (OBG). Initial laboratory results indicated the constituents summarized below were detected at concentrations greater than the Permit-specified Action Levels (ALs). A verification event to confirm or refute the initial results was conducted on September 18, 2014.

Except for nitroglycerin detected above the AL at PAD-3, verification event results were less than the ALs, and no additional action is required. Additional verification sampling is required to assess the horizontal extent of nitroglycerin detected above the AL at PAD-3. This additional verification sampling at PAD-3 is scheduled for on or before October 31, 2014.

Location/Analyte	Initial Event Result (July 31, 2014) mg/kg (1)	Verification Event Result (September 18, 2014) mg/kg (1)	Action Limit mg/kg	Action Limit Basis
2,4-Dinitrotoluene				
PAD-1	9.07	<0.0997	5.5	USEPA Region 3 - RSL Industrial Table- Nov 2013
PAD-4	13.4	3.18	5.5	
PAD-5	6.76	0.433	5.5	
Nitroglycerin				
PAD-3	174	**123**	62	USEPA Region 3 - RSL Industrial Table- Nov 2013
PAD-4	118	21.9 (2)	62	

Notes:

(1) Result reported on a dry weight basis
(2) PAD-X – blind field duplicate result

The details (laboratory report, QA/QC, field notes, etc.) of the soil monitoring event will be included in the 2014 Annual Soil Monitoring Program Report.

If you have any questions or concerns, please contact me at 540/639-7785 or (jay.stewart@baesystems.com).

Sincerely,

Jay Stewart
Environmental Manager
BAE Systems, Ordnance Systems Inc.

cc: w/o enclosures
Aziz Farahmand, VDEQ-BRRO

Coordination: J. McKenna
J. McKenna

bc: Administrative File
J. Stewart
J. McKenna, ACO Staff
Matt Alberts
Mike Lawless, Draper Aden Associates
Env. File

Concerning the following:

Open Burning Ground (OBG) – Soil Monitoring Program
Radford Army Ammunition Plant, Radford, Virginia
EPA ID#: VA1210020730
For the July 31, 2014 Soil Monitoring Event

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

SIGNATURE: _____

PRINTED NAME: Luis A. Ortiz
TITLE: Lieutenant Colonel, US Army
Commanding

SIGNATURE: _____

PRINTED NAME: William M. Barnett
TITLE: General Manager
BAE Systems

BAE Systems, Ordnance Systems Inc. is contracted by the Army to conduct annual soil monitoring at the Open Burning Ground (OBG). This letter summarizes the soil monitoring results for the verification monitoring event conducted on September 18, 2014. Nitroglyerin was detected at a concentration greater than the Permit-specified Action Level and additional verification sampling will be conducted on or before October 31, 2014.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax: 804-698-4019 - TDD (804) 698-4021
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

Office of Waste Permitting and Compliance

Land Protection and Remediation Division

June 12, 2014

VIA ELECTRONIC MAIL
Mr. Jay Stewart
Environmental Manager
BAE Systems, Ordnance Systems, Inc.
Radford Army Ammunition Plant
4050 Pepper's Ferry Road
Radford, Virginia 24141

Re: Radford Army Ammunition Plant, Radford, VA
EPA ID No.VA1210020730, Approval of Class 1 Permit Modifications
Hazardous Waste Management Open Burning Ground (OBG) Operating Permit

Dear Mr. Stewart:

Enclosed are the final Class 1 Modifications to the Open Burning Grounds (OBG) Permit for hazardous waste treatment at the Radford Army Ammunition Plant (RAAP), Radford, Virginia, facility. The final Class 1 Modifications to the Permit have been approved.

The Virginia Department of Environmental Quality (DEQ) received the Class 1 Permit modification request addressing the hazardous waste Open Burning Ground (OBG) that was communicated to the DEQ in a letter dated April 15, 2014, from the RAAP, Radford, Virginia, facility.

In the letter dated April 15, 2014, RAAP requested the following changes to the facility's hazardous waste Open Burning Ground Permit:

- (1) Update of the Action Levels listed in Attachment II.C., Soil Monitoring Plan of the

OB Permit to the new Action Levels established in the November 2013 US Environmental Protection Agency Regional Screening Table developed by Oak Ridge Laboratory, as applicable and update of the analytical methods applicable to perchlorate and nitroglycerin, and;

- (2) Update of groundwater analytical methods listed in Attachment VII.C- Corrective Action Program - Annual Groundwater Monitoring List for Radford OBG#13 and Attachment **VII.B -** Semi-Annually Monitored Natural Attenuation Parameters and Analytical Methods. In particular, the only commercial laboratory conducting nitroglycerin analysis by SW-846 Method 8332 (Attachment VII.C) has indicated that they will no longer support the analysis. SW-846 Method 8330 (as updated) is the proposed method for nitroglycerin analysis in groundwater. Action Levels and historical laboratory quantitation and method detection limits will continue to be achieved by Method 8330.

The first set of changes represents a Class 1 modification under 40 CFR § 270.42 Appendix I.B.1.a – *General Facility Standards – Changes to waste sampling or analysis methods to conform to agency guidance or regulations*. In addition, Section 3.3 of the Soil Monitoring Plan – Attachment II.C states, "... RFAAP will re-evaluate the OBG Soil Monitoring Program every three years and at that time may request to modify the monitoring and sampling locations and/or constituent list in accordance with 40 CFR 270.42." The Department last approved these types of permit changes in September, 2011.

The second set of changes represents a Class 1 modification under 40 CFR § 270.42 Appendix I.C.2 – *Changes in groundwater sampling or analysis procedures or monitoring schedule, with prior approval of the Director.*

Based on the above justification, this April 15, 2014, letter requesting changes in the soil monitoring plan and certain groundwater analytical methods; the RAAP has established sufficient documentation for approval of all requested changes. In accordance with the VHWMR, under 40 CFR § 270.42, Appendix I, Sections B.1.a, and C.2 and based upon the accuracy of the information contained in the Permittee's correspondence dated April 15, 2014, the requested Class 1 modifications to the permit are approved.

Enclosed are the final modified pages in electronic format to be inserted into the RAAP's copy of the hazardous waste permit.

All conditions and requirements of the facility Permit shall remain in effect for the duration of the Permit unless the existing Permit is modified, revoked and reissued, or terminated in accordance with 40 CFR § 124.5, and 40 CFR § 270.41 through 270.42, or continued in accordance with 9 VAC 20-60-270.B.5.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of service of this decision to initiate a legal appeal by filing a notice of appeal with:

David K. Paylor, Director
Department of Environmental Quality
629 East Main Street
P.O. Box 1105
Richmond, VA 23218

In the event that this decision is served to you by mail, the date of service will be calculated as three days after the postmark date. Please refer to Part 2A of the Rules of the Supreme Court of Virginia, which describes the required content of the Notice of Appeal, including specifications of the Circuit Court to which the appeal is taken, and additional requirements concerning appeals from decisions of administrative agencies.

This above Class 1 permit modification under 40 CFR § 270.42(a)(1) requires the Permittee to send a notice of the modification to all persons on the facility mailing list (attached) within 90 days after the change is put into effect. In addition, RAAP must provide documentation to this Office regarding compliance with the public notice requirement. Please submit evidence of this mailing (return receipts, copy of the notification letter) when it is available.

If you should have any questions regarding these matters, please contact Russell McAvoy, Jr., PE, Environmental Engineer Senior, at (804) 698-4194 or by e-mail at russell.mcavoy@deq.virginia.gov.

Sincerely,

Leslie A. Romanchik
Hazardous Waste Program Manager
Office of Waste Permitting and Compliance

Enclosures: Facility Mailing List, Modified Permit Pages

cc: Andrea Barbieri – EPA, Region III (3LC50) e/enclosures
Jutta Schneider – DEQ, CO
Kurt Kochan – DEQ, CO
Aziz Farahmand – DEQ, BRRO
Elizabeth Lohman – DEQ, BRRO
Julia King–Collins – DEQ, CO
Central Hazardous Waste Files