

SOUTHWEST HARBOR PROJECT

Phase II Groundwater Confirmation Monitoring Program

Groundwater Quality Monitoring Data Report

Prepared for: Port of Seattle

Project No. 080064-002-01 • December 21, 2009



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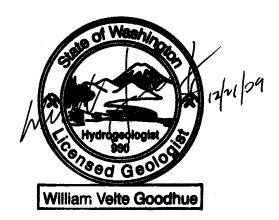
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Aspect Consulting, LLC



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1 Introduction

This interim Groundwater Quality Monitoring Data Report (GQMDR) presents results from the first three semi-annual (twice yearly) groundwater monitoring events for the Phase II Southwest Harbor Project (SWHP) Groundwater Confirmation Monitoring Program (GWCMP). The purpose of the GWCMP is to confirm that the remedial actions for soil conducted under the individual Cleanup Action Plans for the SWHP remediation areas are protective of surface water quality for the Site as a whole. One additional round of groundwater monitoring will be completed before a Groundwater Quality Monitoring Evaluation Report is prepared.

Phase I of the GWCMP, which focused on characterizing the post-remediation groundwater flow system, was completed in 2006. The resulting *Hydrologic Characterization Report* (Aspect, 2007) presented a detailed characterization of the post-remediation groundwater flow system, and concluded that Fill Aquifer flow conditions at the Site had equilibrated sufficiently to proceed with Phase II of the GWCMP.

This report summaries the sampling activities and laboratory results for the first three sampling events, completed in October 2008, March/April 2009, and September 2009. Sampling was performed in accordance the Ecology-approved *Water Quality Monitoring Plan* (Aspect, 2008).

1.1 Background

The SWHP is located along the base of the West Seattle highlands at the confluence of the West Waterway of the Duwamish River (West Waterway) and Elliott Bay. The Site location is shown on Figure 1. The SWHP comprises approximately 185 acres of land generally bordered by Harbor Avenue and non-Port industrial and commercial properties on the west, SW Spokane Street and non-Port commercial properties on the south, Elliot Bay and Florida Street on the north, and the original Terminal 5 area on the east. Most of the SWHP overlies former tideflats that have been filled and used for various industrial purposes, including railroad yards, wood treatment, steel scrap storage, and municipal and wood waste landfilling.

The SWHP was divided into five "Remediation Areas" (RAs). Figure 2 shows the SWHP area and the boundaries of each RA. To facilitate Port plans for redevelopment, the individual RAs were remediated in the mid to late 1990s. RA-1, RA-2, RA-3 and RA-5 were redeveloped under oversight by Ecology, while RA-4 was addressed under agreement with EPA. The locations and histories of the individual RAs and specific remedial actions completed at each RA are summarized below.

The Spokane Street Properties (RA-1)

RA-1 consists of two disconnected land parcels (Figure 2). The narrow northern strip of land in RA-1 is the site of the former Buckley Yard, a rail car staging area that dates from the 1920s. The portion of RA-1 south of the former Buckley Yard, is referred to as the

former Spokane Street Properties, which was historically occupied by an aluminum foundry, a chemical distribution warehouse, automotive repairs areas, a fuel oil distribution facility and retail food stores. Soil contamination associated with the former Spokane Street Properties was remediated between 1994 and 1998. Low-level soil contamination associated with the Buckley Yard was left in place. Asphalt and concrete covers were placed over the Buckley Yard, except in the northern portion of the area east of RA-3, where 24 inches of ballast cover was placed under the railroad tracks. Presently, RA-1 is occupied by Burlington Northern Santa Fe (BNSF) rail spurs, the main access road into the intermodal yard facility, and office buildings.

The Former Salmon Bay Steel Property (RA-2)

RA-2 is the former Salmon Bay Steel property, located north of Spokane Street, and was used for slag and scrap storage associated with the steel mill south of Spokane Street from the early 1900s until the 1970s. The area also included two large warehouses, a scale, and railroad spurs. Beginning in the late 1800s, the tideflats on the property were gradually filled with dredge sediments, slag, and steel mill debris. This fill material is predominantly slag, and reaches depths of 25 feet in places. Between 1996 and 1998, a cleanup measure was implemented that involved covering a quarter of the RA with a gravel ballast cap and the remainder of the RA with an impermeable asphalt pavement cap. Prior to this effort, the contaminated soil from areas where the gravel ballast cover was to be placed was moved to areas where asphaltic cover would be emplaced. Presently, the western portion of RA-2 is occupied by the BNSF Rail Yard, and the eastern portion is occupied by the main entrance and south end of the intermodal yard.

The Former West Seattle Landfill and Purdy Scrap/Former Seattle Steel Inc. property (RA-3)

RA-3 was the location of both the former West Seattle Landfill and the former Seattle Steel Incorporated (SSI) property, a scrap metal processing company. The West Seattle Landfill occupied 30 acres (approximately three-quarters of this remediation area) and was in operation from 1939 to 1966. The former landfill was almost entirely covered with slag, construction debris, steel mill debris, and an un-engineered soil cover. In the spring of 1995, near-surface refuse from the eastern portion of the landfill was relocated to a consolidation landfill area on the western portion of the RA. An interim cover consisting of processed solid landfill material was placed over the property. Since this time, an engineered cover consisting of clean fill and a low-permeability geomembrane has been placed over the former landfill, and an asphalt cover has been placed over the former SSI property south of the landfill. The Port operates a landfill gas collection and treatment system in the former landfill area. Presently, the asphalt-paved area on the consolidated landfill portion of RA-3 is utilized for tenant-lease activities including truck and vehicle parking, container chassis storage, and temporary construction lay down and component assembly for Sound Transit's light rail project.

The Pacific Sound Resources Superfund Site (RA-4)

A former wood treating site referred to as the Pacific Sound Resources Superfund site, RA-4 is being addressed separately under the Superfund process by EPA. Monitoring of groundwater downgradient of RA-4, for the purpose of verifying RA-4 cleanup action

protection, is not included in the scope of the GWCMP. However, the portion of RA-4 south of Florida Street is being considered under this GWCMP in order to evaluate groundwater flow from RA-4 into the adjacent remediation areas.

Until 1994, when remediation activity began, the north portion of RA-4 (north of the former Florida Street alignment) was occupied by wood treating operations, and the south portion was the location of a kiln building, laboratory area, saw mill, office building and storage areas for treated and untreated stock (Retec, 1994). Remediation involved limited removal of contaminated soils and the placement of a specially-designed low-permeability asphaltic concrete cap over the entire RA. Wood waste from an area at the west side of the RA was recycled off-site and the resulting excavation pit was backfilled with fill. A geotextile identifier layer was installed throughout the RA between clean import fill and underlying contaminated soils. In addition, a groundwater containment slurry wall was built in the northern portion of the property to reduce tidal influence on groundwater in the RA interior and limit migration of contaminants into Puget Sound. RA-4 is presently occupied by the northern end of the Terminal 5 intermodal yard, the BNSF Storage Track Yard, and the Jack Block Public Shoreline Access and Park area.

The Former Lockheed Shipyard 2 (RA-5)

RA-5 was originally a tideflat zone that has since been filled with dredge sediment, slag, and construction debris. The western portion of the remediation area, filled prior to 1936, was the site of Nettleton Lumber until the late 1960s. The eastern portion of the RA was filled in the late 1950s, becoming the location of Lockheed Shipyard #2, which operated from 1956 to 1987 as a ship maintenance and refitting yard. In 1994, the area used for shipbuilding operations underwent excavation and treatment of contaminated soils. Pursuant to this cleanup effort, the shipyard-era storm drain system was removed or abandoned, and the associated contaminated storm drain sediments were disposed. In addition, an asphaltic concrete cap was placed over the entire RA and a new stormwater drainage system was installed. RA-5 is vacant presently.

1.2 Site Hydrogeology

This section provides a brief summary of Site hydrogeology under both pre- and post-redevelopment conditions. A complete assessment of historic and current groundwater flow conditions is provided in the *Hydrologic Characterization Report* (Aspect, 2007).

The local groundwater regime beneath the SWHP includes a Fill Aquifer and a deeper Estuarine Aquifer. The Fill Aquifer consists of groundwater occurring in various fill materials between depths of 20 and 40 feet below ground surface (bgs). A sandy silt to silty fine sand tideflat deposit, typically 1 to 10 feet in thickness, occurs between the Fill and Estuarine Aquifer zones over most of the Site with the exception of the easternmost portion near the West Waterway, and in isolated areas near the former axis of Longfellow Creek along the eastern edge of RA-3. Where present, this low-permeability unit results in locally confined conditions in the Estuarine Aquifer zone. The Estuarine Aquifer is underlain by a lower permeability unit that occurs at depths ranging from 30 to 50 feet bgs. The Fill Aquifer/Estuarine Aquifer system is bounded to the north by Elliott Bay and to the east by the West Waterway. The aquifers thin to the south and west and terminate

to the west against the West Seattle bluff, encountering deposits of the low-permeability Lawton Clay unit.

Redevelopment of the SWHP included tightlining of the former equalization basins along the Longfellow Overflow Line (LFOL). These former equalizations basins strongly influenced groundwater flow in the Fill Aquifer. Pre-redevelopment flow in the Fill Aquifer was laterally toward the LFOL equalization basins within much of RA-2 and RA-3, the southern portion of RA-4, and the western portion of the original Terminal 5 area. Much of the historic Fill Aquifer groundwater discharge from these areas occurred through the LFOL via the former equalization basins, with lesser discharge through documented pre-redevelopment leaks in the LFOL.

Tightlining of the former LFOL equalization basins has had a significant effect on Fill Aquifer flow conditions. Inland tidal influence in the area of the former equalization basins has been eliminated, and the LFOL currently appears to have little or no effect on the Fill Aquifer flow regime. Fill Aquifer groundwater no longer discharges to the LFOL through the former equalization basins, but instead flows north and east across the Site along much longer flow paths, eventually discharging along the West Waterway and Elliot Bay.

1.3 Monitoring Locations

The study area addressed in the GWCMP encompasses most of the SWHP Site, including the former Buckley Yard and Spokane Street Properties (RA-1), former Salmon Bay Steel Property (RA-2), former West Seattle Landfill and SSI property (RA-3), and the former Lockheed Shipyard 2 (RA-5). Phase II of the GWCMP involves sampling of Fill and Estuarine Aquifer monitoring wells within and/or downgradient of these RAs.

Figure 1 presents the locations of 11 Fill Aquifer and 3 Estuarine Aquifer monitoring wells that are currently sampled as part of the Phase II monitoring network. These wells are used to monitor groundwater quality within and/or downgradient of the target RAs, as follows:

- Wells CMP-17 and MW-125 monitor Fill Aquifer groundwater quality downgradient of the former Spokane Street Properties (RA-1).
- Well CMP-3 monitors Fill Aquifer groundwater quality downgradient of RA-2 and the extreme southern portion of the former Buckley Yard (RA-1).
- Well CMP-4, located within the former Buckley Yard (RA-1), monitors Fill Aquifer groundwater quality within this RA, and immediately downgradient of the central portion of RA-3.
- Well MW-308N monitors Fill Aquifer groundwater quality downgradient of the northern portions of the former Buckley Yard (RA-1) and RA-3.
- Well MW-308S monitors Estuarine Aquifer groundwater quality downgradient of the northern portions of the former Buckley Yard (RA-1) and RA-3.
- Well CMP-15 monitors Fill Aquifer groundwater quality on flow paths that transect the central and/or northern portions of the former Buckley Yard (RA-1) and RA-3, the southern portion of RA-4, and the western portion of RA-5.

- Well MW-36 monitors Estuarine Aquifer groundwater quality on flow paths that transect the central and/or northern portions of the former Buckley Yard (RA-1) and RA-3, the southern portion of RA-4, and the western portion of RA-5.
- Well MW-26R monitors Fill Aquifer groundwater quality on flow paths that transect the central portions of the former Buckley Yard (RA-1) and RA-3, the southern portion of RA-4, and the eastern portion of RA-5.
- Well MW-44 monitors Estuarine Aquifer groundwater quality on flow paths that transect the central portions of the former Buckley Yard (RA-1) and RA-3, the southern portion of RA-4, and the eastern portion of RA-5.

Four Phase II GWCMP wells were sampled to monitor background water quality upgradient of the target RAs, as follows:

- Background wells FM-105 and CMP-1 are located on the southern borders of RA-1 and RA-2, respectively. These wells monitor the quality of groundwater that flows beneath the Nucor Steel facility and SW Spokane Street, and enters the SWHP from the south.
- Background well CMP-2 monitors groundwater quality entering the SWHP from commercial/industrial areas located immediately southwest of RA-2.
- Background well CMP-5, located immediately upgradient of RA-3, monitors groundwater quality along the flow path of recharge from the adjacent West Seattle highlands.

The Phase II GWCMP monitoring network is comprised of monitoring wells sited for the Phase I groundwater flow characterization. It is possible that one or more of the wells may not prove to be optimal for Phase II water quality monitoring. After completion of the first four rounds of groundwater monitoring during the Phase II GCWMP, the Port plans to evaluate the initial findings on post-redevelopment groundwater quality, and at that time may propose to Ecology the replacement or addition of wells to better meet the goals of the Phase II program.

1.4 Program Analytes

The Phase II groundwater samples were analyzed in accordance with the analytical schedule included in Section 2.3 of the Ecology-approved *Water Quality Monitoring Plan* (Aspect, 2008).

Field parameters measured and laboratory analyses conducted during the October 2008, March/April 2009, and September 2009 events included:

- All Phase II Wells
 - Field Parameters:
 - temperature, pH, conductivity, dissolved oxygen, and turbidity.
 - Inorganics:
 - total arsenic and total lead by EPA Method 200.8.
 - Organics:
 - total petroleum hydrocarbons diesel-range and oil-range by Method NWTPH-Dx with silica gel cleanup,

- carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270D-SIM,
- bis(2-ethyl hexyl) phthalate (BEHP) by EPA Method 8270D, and
- polychlorinated biphenyls (PCBs) by EPA Method 8082.
- RA-1 wells FM-105, MW-125, and CMP-17 (former Spokane Street Properties)
 - Additional Organics:
 - chlorinated ethanes and ethenes (CEEs) by EPA Method 8260B.
- RA-5 wells CMP-15, MW-36, MW-26R, and MW-44 (former Lockheed Shipyard 2)
 - Additional Inorganics:
 - total antimony, total chromium, total copper and total nickel by EPA Method 200.8.

1.5 Monitoring Schedule

In accordance with the *Groundwater Conceptual Letter*, Phase II groundwater sampling is being performed semi-annually (twice yearly) (Port of Seattle, 1999). Two low groundwater sampling events have been completed, one in October 2008 and one in September 2009. One high groundwater sampling event has been completed in March/April 2009. One additional high groundwater sampling event is due before the initial Phase II evaluation and recommendations are made.

2 Sampling Procedures

The following sections detail the field protocol and procedures used to collect the Phase II groundwater samples. A more detailed discussion of field procedures is provided in the *Water Quality Monitoring Plan* (Aspect, 2008).

2.1 Well Redevelopment

Prior to initiation of sampling in October 2008, each well was redeveloped to remove any fine-grained material and algae growth that may have accumulated inside the well casing and screen, and to ensure good hydraulic communication between the well screen and the surrounding aquifer formation. Well redevelopment was performed with a peristaltic pump and dedicated tubing for each monitoring well. All development water generated during well redevelopment was transferred to and stored in a dedicated, 1,100-gallon polyethylene tank, located within the Pier 2-East area, for later characterization and disposal.

Volumes ranging from 3 to 13 gallons were purged for each well during well redevelopment in an effort to achieve the turbidity goal of 20 NTU. Only well MW-44 did not achieve the turbidity goal during redevelopment. However, subsequent low-flow sampling techniques provided discharge water quality of less than 10 NTU from well MW-44. Well development forms are included in Appendix A.

All wells, with the exception of FM-105, MW-125, and CMP-17, were sampled using a portable peristaltic pump with dedicated LDPE well tubing and silicon pump tubing. Samples from wells FM-105, MW-125, and CMP-17 were collected using dedicated bladder pumps and tubing in order to ensure collection of representative samples for analyses of CEEs.

Groundwater samples were collected using low-flow techniques in accordance with procedures detailed in the *Water Quality Monitoring Plan* (Aspect, 2008). Depth to groundwater was measured before and during sampling using a water level indicator. Water quality field parameters were monitored during well purging. Once field parameters stabilized, as defined by less than a 10 percent difference between 5-minute readings, samples were discharged directly from the dedicated tubing into laboratory-supplied bottles. All non-dedicated downhole equipment was decontaminated between wells using an alconox wash, and distilled water rinse.

Samples were placed in iced coolers and delivered to the Analytical Resources, Inc laboratory at the end of the day. All samples were managed in accordance with the chain-of-custody procedures detailed in the *Water Quality Monitoring Plan* (Aspect, 2008). Groundwater sampling forms are included in Appendix B.

3 Laboratory Data Validation and Management Procedures

The laboratory, Analytical Resources, Inc., provided hard copy reports and data validation package, and an electronic data deliverable (EDD) in standard POS Environmental Management Information System (EMIS) format. The pre-validated EDD, including copies of chain-of-custody forms, were forwarded to the Port for their database. The pre-validated EDD and the hard copy data validation package were also delivered to Pyron Environmental for data validation purposes. Pyron Environmental completed a Level 3 data validation, consistent with Port protocol and provided a validated EDDs which were loaded into the Aspect database and submitted to the Port database. Pyron Environmental also provided a written data validation report. Two minor data quality issues were noted in the data packages validated by Pyron Environmental, and the data flagged accordingly. The complete laboratory reports from Analytical Resources, Inc. are provided in Appendix C, and the validation reports by Pyron Environmental are provided in Appendix D.

4 Confirmation Monitoring Results

Tables 1 through 4 present the tabulated field monitoring and analytical results for the RA-1 and RA-3, RA-2, and RA-5, respectively, for the October 2008, March/April 2009, and September 2009 sampling events. Data are presented with the wells in columns organized by RA, background/confirmation monitoring location, aquifer designation, and sampling date. Data are presented with the results in rows organized by groundwater level monitoring, field parameters, TPHs, metals, cPAHs, BEHP, PCBs, and VOCs.

5 Closing

As noted in the *Water Quality Monitoring Plan* (Aspect, 2008), the remediation activities completed at each of the RAs are believed to be protective of groundwater quality whose highest beneficial use is discharge to surface water. As such, the Phase II GWCMP is not expected to continue indefinitely. One additional high water sampling event is to be conducted before preparation of the Groundwater Quality Monitoring Evaluation Report. Groundwater monitoring will then continue for one additional year (one high water and one low water event). Monitoring may be continued after that time in select wells for select analytes, if Ecology and the Port are in mutual agreement that additional monitoring is warranted to meet the program's objectives. Once the goal of demonstrating that surface water protection is met, groundwater monitoring will be discontinued.

6 References

- Aspect Consulting, LLC, 2007, Southwest Harbor Project, Phase I Groundwater Confirmation Monitoring Program, hydrologic characterization report, Bainbridge Island, Washington. Unpublished Work.
- Aspect Consulting, LLC, 2008, Southwest Harbor Project, Phase II Groundwater Confirmation Monitoring Program, Water Quality Monitoring Plan, Bainbridge Island, Washington. Unpublished Work.
- Port of Seattle, 1999, Groundwater Conceptual Letter, submitted by the Port of Seattle to the Washington State Department of Ecology, dated March 1999.
- Retec, 1994, Current Conditions Report, Pacific Sound Resources Superfund Site, Remediation Area 4, Southwest Harbor Cleanup and Redevelopment Project. Seattle, Washington. Unpublished Work.

Limitations

Work for this project was performed and this report prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of Port of Seattle for specific application to the referenced property. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

Table 1 - RA-1 Groundwater Monitoring and Analytical Results

POS Terminal 5 Southwest Harbor Phase II GWCMP SWHP

	Remediation Area 1 (former Spokane Street Properties)											
			Backg			,			Confirmation	Monitorina		
			Baokg	- Touria		Fill Ad	nuifor		Johnmanon	i wontoning		
Sample Name	FM105-	FM105-	FM105-	FM105-	FM105-	FM105-	MW125-	MW125-	MW125-	CMP17-	CMP17-	CMP17-
Cample Name	081013	081013D	090331	090331D	090902	090902D	081013	090331	090902	081013	090331	090902
Sampling Date	10/13/08	10/13/08	3/31/09	3/31/09	9/2/09	9/2/09	10/13/08	3/31/09	9/2/09	10/13/08	3/31/09	9/2/09
Groundwater Level Measurements				-			-	-				
Reference Elevation in feet MLLW	20.	.80	20.	80	20.80		15.90	15.90	15.90	18.43	18.43	18.43
Depth To Water in feet	11.	.20	10.	76	11.	.36	6.88	6.40	7.01	9.47	9.05	9.50
Water Level Elevation in feet MLLW	9.6	60	10.	04	9.4	44	9.02	9.50	8.89	8.96	9.38	8.93
Water Quality Field Parameters						•			•			
Temperature in degrees Celsius	14	l.8	11	.5	14	.5	18.6	11.4	19.3	17.6	12.3	17.5
pH	7.0	03	6.2	26	5.9	95	6.61	6.18	5.94	6.61	6.05	5.83
Conductivity in mS/cm	44	40	47	'6	51	18	412	589	475	569	678	597
Dissolved Oxygen in mg/L	0.3	37	0.9	0.96		58	0.52	1.74	0.83	0.1	0.39	0.32
Turbidity in NTUs	2.	.1				64	0.9	0.74	2.34	1.74	2	4.87
Total Petroleum Hydrocarbons by Method	NWTPH-Dx	-		-			-	-	•	-		
Diesel Range in μg/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U		250 U
Motor Oil Range in μg/L	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U
Total Metals by EPA Method 200.8												
Total arsenic, inorganic in µg/L	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.6	2.6	2.6	2.9
Total lead in µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carcinogenic Polycyclic Aromatic Hydrod	carbons (cPAF	ls) by Method	8270D-SIM	•		•		-			-	
Benz(a)anthracene in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.097	0.010 U	0.010 U	0.010 U
Benzo(a)pyrene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.140	0.010 U	0.010 U	0.010 U
Benzo(b)fluoranthene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.100	0.010 U	0.010 U	0.010 U
Benzo(k)fluoranthene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.120	0.010 U	0.010 U	0.010 U
Chrysene in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.084	0.010 U	0.010 U	0.010 U
Dibenzo(a,h)anthracene in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.028	0.010 U	0.010 U	0.010 U
Indeno(1,2,3-cd)pyrene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.051	0.010 U	0.010 U	0.010 U
Semi-Volatile Organics by EPA Method 82	270D											
bis(2-ethylhexyl) phthalate in μg/L	1.0 U		1.0 UJ	5.8 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Polychlorinated Biphenyls (PCBs) by EPA	A Method 8082											
Aroclor 1016 in μg/L	0.010 U			0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U
Aroclor 1221 in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U
Aroclor 1232 in μg/L	0.010 U	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U
Aroclor 1242 in μg/L	0.010 U			0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U
Aroclor 1248 in μg/L	0.010 U	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U
Aroclor 1254 in μg/L	0.010 U	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U
Aroclor 1260 in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Volatile Organic Compounds by EPA Met												
tetrachloroethane;1,1,1,2- in μg/L	0.2 U	-		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U
tetrachloroethane;1,1,2,2- in μg/L	0.2 U			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U
trichloroethane;1,1,1- in μg/L	0.2 U			0.2 U		0.2 U	0.2	0.2 U	0.2 U	0.2 U		0.2 U
trichloroethane;1,1,2- in μg/L	0.2 U			0.2 U			0.2 U	0.2 U	0.2 U	0.2 U		0.2 U
dichloroethane;1,1- in μg/L	0.2 U			0.2 U		0.2 U	0.4	0.2	0.3	0.2 U		0.2 U
dichloroethane;1,2- in μg/L	0.2 U			0.2 U	0.2 U		0.2 U	0.2 U	0.2 U	0.2 U		0.2 U
ethyl chloride in µg/L	0.2 U			0.2 U			0.2 U	0.2 U	0.2 U	0.2 U		0.2 U
tetrachloroethylene in μg/L	6.1	6.2	3.4	3.7	5.2	5.0	6.7	4.1	5.1	0.3	0.2	0.3
trichloroethylene in µg/L	0.9	0.9	0.6	0.6	0.6	0.5	2.8	1.0	1.8	0.2 U		0.2 U
dichloroethylene;1,1- in μg/L	0.2 U			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U
dichloroethylene;1,2-,cis in μg/L	0.7	0.7	0.4	0.5	0.2	0.2	2.1	0.4	1.0	0.2 U		0.2 U
dichloroethylene;1,2-,trans in μg/L	0.2 U			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U		0.2 U
vinyl chloride in μg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Notes

U - Analyte was not detected at or above the reported result.

J - The analyte was detected above the reported quantitation limit, and the reported concentrations was an estimated value.

Table 2 - RA-2 Groundwater Monitoring and Analytical Results

POS Terminal 5 Southwest Harbor Phase II GWCMP SWHP

	Remediation Area 2 (former Salmon Bay Steel Property)										
			Backg	round			Confirm	nation Monit	oring		
					Fill Aquifer	•					
Sample Name	CMP1-	CMP1-	CMP1-	CMP2-	CMP2-	CMP2-	CMP3-	CMP3-	CMP3-		
·	081013	090331	090904	081013	090331	090902	081014	090401	090903		
Sampling Date	10/13/08	3/31/09	9/4/09	10/13/08	3/31/09	9/2/09	10/14/08	4/1/09	9/3/09		
Groundwater Level Measurements											
Reference Elevation in feet MLLW	22.71	22.71	22.71	22.67	22.67	22.67	17.40	17.40	17.40		
Depth To Water in feet	12.92	12.21	13.10	12.92	12.92	13.60	8.40	7.90	8.45		
Water Level Elevation in feet MLLW	9.79	10.50	9.61	9.75	9.75	9.07	9.00	9.50	8.95		
Water Quality Field Parameters											
Temperature in degrees Celsius	14.4	12.7	13.1	16.9	14.96	16.2	19.5	12.9	19.8		
рН	6.9	6.23	6.36	9.38	9.08	8.42	10.96	8.68	10.01		
Conductivity in mS/cm	563	506	511	1272	1402	1669	613	726	703		
Dissolved Oxygen in mg/L	0.3	0.19	0.55	0.09	0.26	0.24	0.19	0.26	0.4		
Turbidity in NTUs	1.76	1.17	0.78	0.86	1.58	1.31	1.09	1.8	5.3		
Total Petroleum Hydrocarbons											
Diesel Range in μg/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U		
Motor Oil Range in μg/L	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U		
Total Metals by EPA Method 200.8											
Total arsenic, inorganic in µg/L	2.8	2.7	3.1	22.7	23.2	20.8	11.6	6.6	8.3		
Total lead in μg/L	1 U		. •	15	1	1 U	1 U	4	1 U		
Carcinogenic Polycyclic Aromatic Hydroc	arbons (cPAF	ls) by Method	8270D-SIM								
Benz(a)anthracene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U	0.010	0.010 U	0.010 U		
Benzo(a)pyrene in μg/L	0.010 U		0.010 U	0.010 U		0.010 U	0.010 U	0.011	0.010 U		
Benzo(b)fluoranthene in μg/L	0.010 U			0.010 U		0.010 U	0.010 U	0.019	0.010 U		
Benzo(k)fluoranthene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011	0.010 U		
Chrysene in µg/L	0.010 U			0.010 U		0.010 U	0.013	0.015	0.010		
Dibenzo(a,h)anthracene in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		
Indeno(1,2,3-cd)pyrene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		
Semi-Volatile Organics by EPA Method 82	270D										
bis(2-ethylhexyl) phthalate in µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
Polychlorinated Biphenyls (PCBs) by EPA	Method 8082										
Aroclor 1016 in μg/L	0.010 U			0.010 U		0.010 U	0.010 U	0.010 U	0.100 U		
Aroclor 1221 in μg/L	0.010 U			0.010 U		0.010 U	0.010 U	0.010 U	0.100 U		
Aroclor 1232 in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.015 Y	0.010 U	0.010 U	0.010 U	0.100 U		
Aroclor 1242 in μg/L	0.010 U	0.010 U	0.010 U	0.012 Y	0.010 U	0.010 U	0.200 Y	0.400 Y	0.100 U		
Aroclor 1248 in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.015	0.010 U	0.010 U	1.200 PJ		
Aroclor 1254 in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.016	0.150 Y	0.400 Y	1.000 Y		
Aroclor 1260 in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.015 Y	0.010 U	0.100 U		

Notes

U - Analyte was not detected at or above the reported result.

Y - The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

P - The analyte was detected on both chromatographic columns but the quantified values differ by >=40% RPD with no obvious chromatographic interference

J - The analyte was detected above the reported quantitation limit, and the reported concentrations was an estimated value.

Table 3 - RA-3 and RA-1 Groundwater Monitoring and Analytical ResultsPOS Terminal 5 Southwest Harbor

Phase II GWCMP SWHP

	Remediation Area 3 (former West Seattle Landfill and SSI Property), Remediation Area 1 (Former Buckley Yard)											
		Background					Confir	mation Moni	toring	-		
		-			Fill Aquifer					Es	tuarine Aqui	fer
Sample Name	CMP5-	CMP5-	CMP5-	CMP4-	CMP4-	CMP4-	MW308N-	MW308N-	MW308N-	MW308S-	MW308S-	MW308S-
·	081013	090401	090902	081014	090402	090903	081013	090402	090904	081013	090401	090904
Sampling Date	10/13/08	4/1/09	9/2/09	10/14/08	4/2/09	9/3/09	10/13/08	4/2/09	9/4/09	10/13/08	4/1/09	9/4/09
Groundwater Level Measurements												
Reference Elevation in feet MLLW	23.80	23.80	23.80	19.92	19.92	19.92	14.86	14.86	14.86	14.42	14.42	14.42
Depth To Water in feet	10.09	8.48	10.12	11.04	10.34	11.01	6.53	5.86	6.50	6.30	5.74	6.17
Water Level Elevation in feet MLLW	13.71	15.32	13.68	8.88	9.58	8.91	8.33	9.00	8.36	8.12	8.68	8.25
Water Quality Field Parameters												
Temperature in degrees Celsius	16	11.2	16.8	17.1	12.6	17	16.8	12.3	16.3	15	12.9	14.5
pН	6.73	6.05	6.05	7.7	6.14	8.13	7.59	6.45	6.55	8.11	7.13	7.08
Conductivity in mS/cm	358	480	509	440	619	771	1586	1712	2509	15230	1565	1541
Dissolved Oxygen in mg/L	0.07	0.32	0.44	0.25	0.74	0.19	0.02	0.05	0.23	0.03	0.08	0.11
Turbidity in NTUs	0.81	4.11	6.98	0.98	0.83	2.75	12.7	8.62	11.2	2.13	1.1	1.51
Total Petroleum Hydrocarbons							-					
Diesel Range in μg/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Motor Oil Range in μg/L	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U
Total Metals by EPA Method 200.8			-							-		
Total arsenic, inorganic in µg/L	14.2	1.9	12.9	2.8	1.1	3.8	25.4	16.8	15.3	8	3	3
Total lead in μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Carcinogenic Polycyclic Aromatic Hydroc	arbons (cPAF	ls) by Method 8	3270D-SIM									
Benz(a)anthracene in µg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U					
Benzo(a)pyrene in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U				0.010 U	
Benzo(b)fluoranthene in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		
Benzo(k)fluoranthene in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Chrysene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Dibenzo(a,h)anthracene in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U					
Indeno(1,2,3-cd)pyrene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Semi-Volatile Organics by EPA Method 82												
bis(2-ethylhexyl) phthalate in µg/L	1.0 U	23	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	1.5	5.0	1.0 U
Polychlorinated Biphenyls (PCBs) by EPA	Method 8082											
Aroclor 1016 in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U				
Aroclor 1221 in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U					
Aroclor 1232 in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.015 Y	0.010 U	0.010 U	0.010 U	0.010 U
Aroclor 1242 in μg/L	0.010 U		0.010 U	0.013	0.010 U	0.010 U	0.010 U	0.010 U	0.010	0.010 U	0.010 U	0.010 U
Aroclor 1248 in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.017	0.014	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Aroclor 1254 in μg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U				
Aroclor 1260 in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

U - Analyte was not detected at or above the reported result.

Y - The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

Table 4 - RA-5 Groundwater Monitoring and Analytical Results

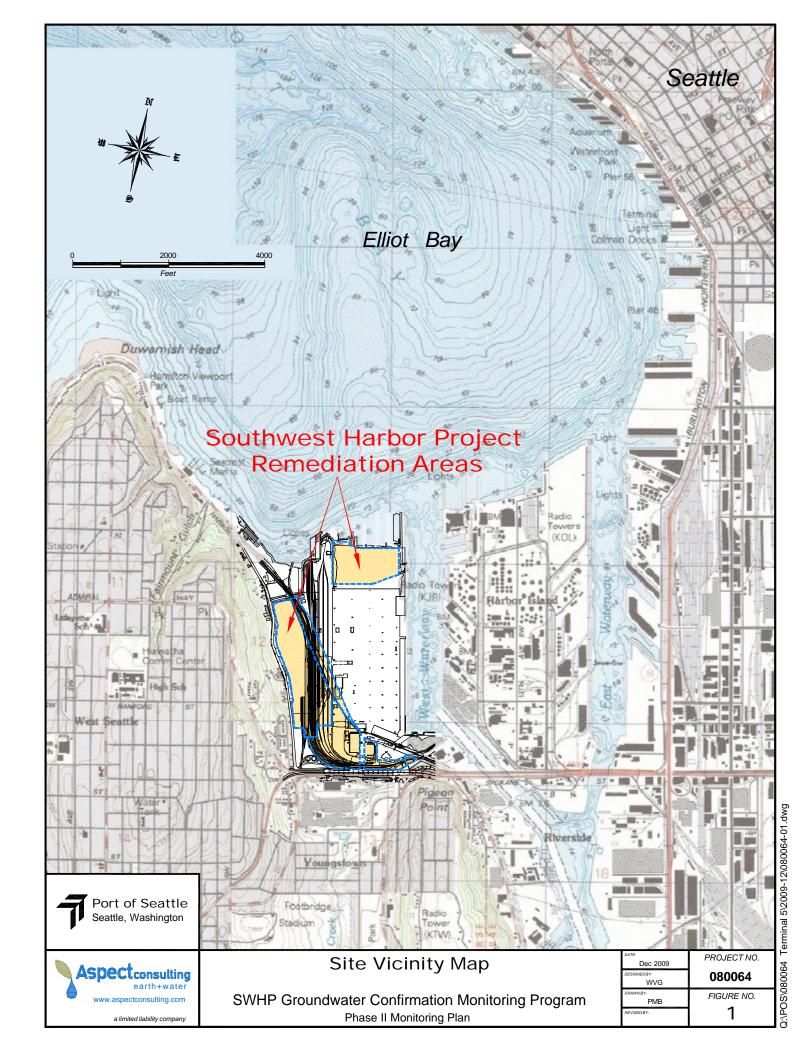
POS Terminal 5 Southwest Harbor Phase II GWCMP SWHP

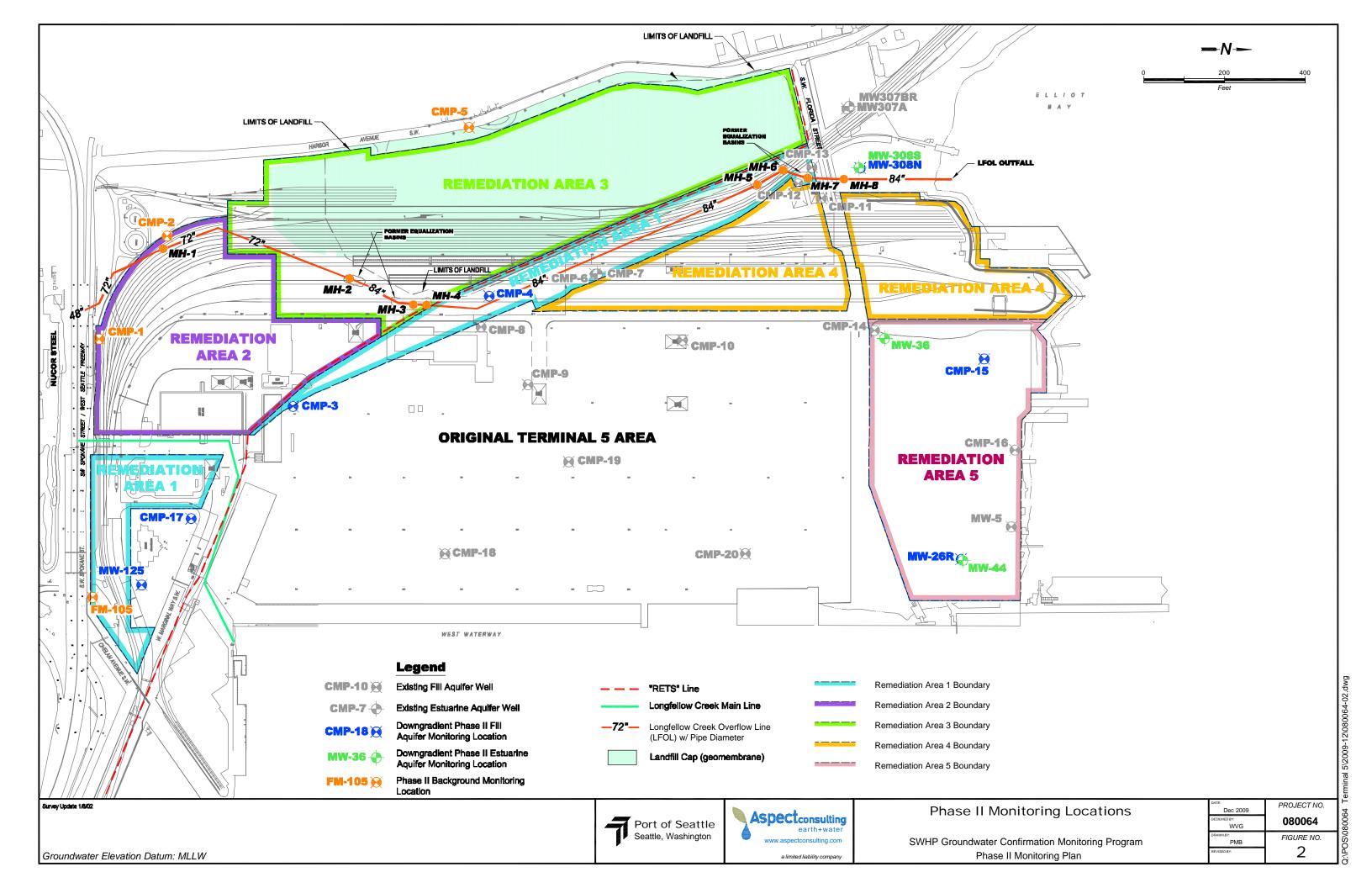
		Remediation Area 5 (former Lockheed Shipyard 2)																
		Background								Confir	mation Monit	toring						
						Fill A	quifer						Estuarine Aquifer					
Sample Nar		CMP5-	CMP5-	CMP15-	CMP15-	CMP15-	MW26R-	MW26R-	MW26R-	MW26R-	MW26R-	MW26R-	MW36-	MW36-	MW36-	MW44-	MW44-	MW44-
Sampling D	081013	090401	090902	081014	090402	090903	081014	081014D	090401	090401D	090903	090903D	081014	090402	090903	081014	090401	090903
	10/13/08	4/1/09	9/2/09	10/14/08	4/2/09	9/3/09	10/14/08	10/14/08	4/1/09	4/1/09	9/3/09	9/3/09	10/14/08	4/2/09	9/3/09	10/14/08	4/1/09	9/3/09
Groundwater Level Measurements				40.40														
Reference Elevation in feet MLLW	23.80	23.80	23.80	18.42	18.42	18.42	18			3.27	18.2		17.60	17.60	17.60	18.38	18.38	18.38
Depth To Water in feet	10.09	8.48	10.12	10.38	9.91	10.14	9.			.66	9.6		10.00	9.06	9.72	10.90	8.94	11.46
Water Level Elevation in feet MLLW	13.71	15.32	13.68	8.04	8.51	8.28	8.	36	8.	.61	8.5	8	7.60	8.54	7.88	7.48	9.44	6.92
Water Quality Field Parameters							I					. 1						
Temperature in degrees Celsius	16	11.2	16.8	17.7	13.2	15.9		3.9		2.3	15.		14.6	12.4	13.9	15.3	11.5	14
pH	6.73	6.05	6.05	6.88	6.69	6.39	7.			.43	7.1		7.47	6.48	8.78	7.23	6.42	5.84
Conductivity in mS/cm	358	480	509	2336	7059	3547		190		198	104		36200	3734	3812	41	46	37
Dissolved Oxygen in mg/L	0.07	0.32	0.44	0.008	0.1	0.36	0.			.22	0.1		0.06	0.11	0.13	1.59	7.25	3.84
Turbidity in NTUs	0.81	4.11	6.98	1.12	0.73	1.78	0.	94	0.	.93	1.9	1	1.02	0.84	1.83	3.21	7.33	3.26
Total Petroleum Hydrocarbons	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	050 11	252 11
Diesel Range in µg/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U		250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Motor Oil Range in μg/L	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U
Total Metals by EPA Method 200.8	44.0		40.0	0.0.11	0.5.11	2.0.11	0.0.11	0.0.11	4 11		4 11				9 11	2 2 11	0.0	
Total antimony in µg/L	14.2	1.9	12.9	0.2 U	0.5 U	0.2 U	0.2 U				1 U	1 U	5 U		2 U	0.2 U	0.6	0.3
Total arsenic, inorganic in µg/L				1	1 1	0.9	2 U		2 U	 	2 U	2 U	6	7	6	0.5	0.8	0.3
Total chromium (total) in µg/L				1 U	1 U	2 U	2 U		3	3	3	3	10 U	5 U	5 U	1 U	11	3.4
Total copper in µg/L	4 11		4 11	0.8	1 U	0.5 U	2 U				3	3	10 U	5 U	5 U	7	18	6.4
Total lead in µg/L	1 U	1 U	1 0	1 U	2 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	20 U		10 U	4	33	4
Total nickel soluble salts in µg/L		la bu Mathad	0070D CIM	1 :	4	2	6	/	ь	/ :	/	6	10 U	9	12	2	4.3	1.4
Carcinogenic Polycyclic Aromatic Hyd	1			0.010 U	0.010 U	0.010 U	0.025	0.024	0.010 U	0.010 11	0.040 11	0.040 11	0.010 11	0.010 U	0.010 U	0.010 U	0.059	0.010 U
Benz(a)anthracene in µg/L	0.010 U	0.010 U	0.010 U	=======================================						0.010 U	0.010 U	0.010 U	0.010 U	:			:	
Benzo(a)pyrene in µg/L	0.010 U	0.010 U 0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U 0.010 U	0.110 0.270	0.010 U
Benzo(b)fluoranthene in µg/L	0.010 U 0.010 U	: 	0.010 U	0.010 U 0.010 U	0.010 U 0.010 U	0.010 U	0.010 U 0.010 U		0.010 U	0.018	0.010 U	0.010 U	0.010 U 0.010 U	0.010 U	0.010 U 0.010 U	0.010 U	0.270	0.010 0.010 U
Benzo(k)fluoranthene in μg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 0	0.010 U 0.026	0.010 U 0.011	0.016 0.022	0.010 U 0.013	0.010 U 0.013	0.010 U	 	0.010 U	0.010 U	0.140	0.010 U
Chrysene in µg/L	0.010 U	0.010 U	0.010 U 0.010 U			0.010 U				1	-	0.013 0.010 U			0.010 U	0.010 U	0.190	
Dibenzo(a,h)anthracene in µg/L	0.010 U	0.010 U	0.010 U	0.010 U 0.010 U	0.010 U	0.010 U	0.010 U		0.010 U	0.010 U 0.010 U	0.010 U 0.010 U	0.010 U	0.010 U	0.010 U		0.010 U	•	0.010 U
Indeno(1,2,3-cd)pyrene in μg/L Semi-Volatile Organics by EPA Method		0.010 0	0.010 0	0.010 0	0.010 U	0.010 0	0.010 U	0.010 U	0.010 U	0.010 0	0.010 0	0.010 0	0.010 U	0.010 0	0.010 U	0.010 0	0.110	0.010 U
		23	4.0.11	1.0 U	1 U	1.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0	2.2	10.11
bis(2-ethylhexyl) phthalate in μg/L Polychlorinated Biphenyls (PCBs) by I	1.0 U	<u> </u>	1.0 U	1.0 0	1 0	1.0	1.0 0	1.0 0	1.0 0	1.0 0	1.0 0	1.0 0	1.0 0	1.0 0	1.0 0	1.0	2.2	1.0 U
Aroclor 1016 in µg/L		0.010 U	0.010 U	0.010 11	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 11	0.010 U	0.010 11	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 11
Aroclor 1016 in µg/L Aroclor 1221 in µg/L	0.010 U 0.010 U	 	0.010 U	0.010 U 0.010 U	0.010 U	0.010 U	0.010 U		0.010 U	0.010 U 0.010 U	0.010 U	0.010 U 0.010 U	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U 0.010 U
Aroclor 1221 in µg/L Aroclor 1232 in µg/L	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U		0.010 U	0.010 U	0.010 U	0.010 U
		0.010 U	0.010 U			0.010 U	0.010 U			0.010 U	0.010 U	0.010 U	0.010 U		0.010 U		0.015 Y	
Arcelor 1242 in µg/L	0.010 U		0.010 U	0.010 U	0.010 U				0.010 U	-	0.010 U				0.010 U	0.010 U		0.010 U
Aroclor 1248 in µg/L	0.010 U			0.010 U	0.010 U	0.010 U	0.010 U	_	0.010 U	0.010 U		0.010 U	0.010 U		-	0.010 U	0.010 U	0.010 U
Aroclor 1254 in µg/L Aroclor 1260 in µg/L	0.010 U 0.010 U		0.010 U 0.010 U	0.018 Y 0.010 U	0.010 U 0.010 U	0.010 U 0.010 U	0.010 U 0.010 U			0.010 U 0.010 U	0.010 U 0.010 U	0.010 U 0.010 U	0.010 U 0.010 U		0.010 U 0.010 U	0.010 U 0.010 U	0.010 U 0.010 U	0.010 U 0.010 U
Aludioi 1200 III µg/L	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0	0.010 0

Notes

U - Analyte was not detected at or above the reported result.

Y - The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.





APPENDIX A

Well Development Forms



WELL D	EVELOPM	ENT REC	ORD		WELL NUMBER: CMP-1 Page: of							
Project Na	ame: TCV	mino	15		Project Number: Date: Date:							
Observo							ET, D					
Screened	Interval (ft. BG	S)										
							flus	\wedge				
				[D (in)			TOC): \\Z	294'				
Screen Siz	ze (in):	Mtl & Scd		[D (in)	Starting Tot	tal Depth (ft	TOC):	2.86				
Screen Ty	/pe:				Starting Total Depth (ft TOC): 16.85 Casing Volume (ft water) x (gpf) = (gal)							
,					Casing Volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf							
DEVELO	OPMENT M	FASUREN	IENTS									
Time	1	Purge Rate (gpm)		Specific Conductance (umhos/cm)	pН	Turbidity	Imhoff Cone (ml/L)	Development Techniques				
072							V tolked					
1022						50.5						
1025			14,5	601	6.96	3,65						
1030	+		14.4	586	6.99							
1034						.69						
	<u> </u>											
	-											
					-							
			•									
							ļ					
						1						
Total Call	lons Removed	3		<u> </u>	Englis - Vil	oton Love L	TOC':	2.92'				
	sing Volumes F				l	ater Level (fi tal Depth (ft	11	0.85'				
METHO	DS							THE PROPERTY OF THE PROPERTY O				
	nent Equipmer											
1	of Discharged	***************************************										
I				particul.	cintes pumped from sump							
				<u> </u>								





401 Second Avenue S, Suite 201 Seattle, Washington 98104 (206) 328-7443

The Mr. Co.

WELL D	EVELOPM	ENT RECO	RD		WELL NUMBER: CMP-Z Page: / of /							
Project Na	me: 10V	mina	15		Project Number: Date:							
Observoi							ET, DER					
Filter Pack	: Interval (ft. B	GS)			Casing Stick	кир (ft):	flush	<u> </u>				
Casing Siz	:e (in):	Mtl & Scd		D (in)	Starting Wa	ter Level (ft	тос):12	.58'				
Screen Siz	:e (in):	Mtl & Scd		D (in)	Starting Total Depth (ft TOC):							
Screen Ty	pe:				Casing Volume 4.42 (ft water) x 0.16 (gpf) = $.7072$ (gal)							
					Casing Volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf							
DEVELO	PMENT M	EASUREN	IENTS									
Time	Cumul. Vol. (gallons)	Purge Rate	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	Development Techniques				
830	/	~O,B				263		peristaltic pump				
847						220						
852				. 2 . 4	0.011	61.8		APPRINCE STREET				
100 AC			17.2		8.24	4.81						
0905			17.2	1358	837							
<u> 0010</u>	,		17.7	1347	8.50							
0930	,		17.2	1355	8.60							
0940	1		177	1367	8.64	3,63						
(sp , 1 -			17.0	1241	10.41	J						
		<u> </u>										
							7					
Total Gallo	ons Removed:	~13	,		Ending Ws	ter Level (ff	тос): 12) 87 <u>-</u>				
					1							
Total Casi	ing Volumes R	:emovea:			Enaing 101	al Depth (ft	тос): <u>17</u>	·,)				
METHO	DS		-									
Cleaning E	Equipment: _											
Developm	ent Equipmen	ıt:										
	of Discharged											
Observatio	ons/Comment	s: <u>darl</u>	c gre	y five	silt	removed	from	b. Homon				



WELL DE	EVELOPMI	ENT RECC	RD		WELL NUMBER: (MV - 3 Page: (of)									
Project Nar	ne:	mina	15		Project Number: MP - 3 Date: 10/7/03									
Observor	•				Developed b	ру:	ER, AE	The state of the s						
Screened I	nterval (ft. BG	iS)		*	Measuring F	oint on We	ll:							
Filter Pack	Interval (ft. B	GS)			Casing Stick	kup (ft):	flush)						
Casing Size	e (in):	Mtl & Scd		D (in)	Starting Wa	ter Level (ft	TOC):	33'						
Screen Siz	e (in):	Mtl & Scd		D (in)	Starting Tot	al Depth (ft	тос):).84(17VM)						
	oe:				Casing Volu	Casing Volume (ft water) x (gpf) = (gal)								
	•				Casing Volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf									
DEVELO	PMENT M	EASUREN	IENTS	,										
Time	Cumul. Vol. (gallons)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	Development Techniques						
1212						163								
1222			20.1	1.20	0.50	1.93								
1721	<u>r</u>	1	70.1	638	9.08									
1722			2,0,11	UJA	1 2 2 1	1.18								
<u> </u>														
								·						
						-								
* (1 (A 1 ()						
				,										
	ļ													
	<u> </u>					-								
· · · · · · · · · · · · · · · · · · ·														
		0116					×	.30						
Total Gallo	ons Removed	:			"	ater Level (f	100%	5.15.84						
Total Casi	ng Volumes F	Removed: _			Ending To	tal Depth (fl	(TOC): 400	9,17,971						
METHO	DS													
Cleaning I	Equipment:													
Developm	ent Equipmer	nt:												
Disposal o	of Discharged	Water:		<u> </u>										
Observatio	ons/Commen	ts:												
					-									



WELL D	EVELOPM	ENT RECO)RD		WELL NUMBER: (AP-4) Page:of								
Project Na	me: <u>+PV</u>	MINO	U 5		Project Number: Date:								
Observoi	r:				Developed b	oy:							
Screened I	Interval (ft. BG	is)			Measuring F				Û				
Filter Pack	: Interval (ft. B	GS)			Casing Stick	kup (ft): _			· · · · · · · · · · · · · · · · · · ·				
Casing Siz	e (in):	Mtl & Scd		[D (in)	Starting Wa	ter Level (ft	TOC):	1.90					
Screen Siz	:e (in):	Mtl & Scd		[D (in)	Starting Total Depth (ft TOC): 10.95								
					Casing Volume (ft water) x (gpf) = (gal)								
					Casing Volu	ımes: 2" =	0.16 gpf 4'	' = 0.65 g	pf 6" = 1.47 gpf				
DEVELO	PMENT M	EASUREN	IENTS										
Time	Cumul. Vol. (gallons)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	D	Development Techniques				
*110) poss			5			· • • · · ·				
\$12C			1.[]	462	W.97	11.5							
44			17.2	-460	7.09	4.20	ļ.		V-4-				
				<u> </u>									
				 									
									unicoloris — C. ·				
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	 	<u> </u>							****				
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				-									
			 										
			-				,	<u> </u>					
Total Gaild	ons Removed:	· _ ~ 3	Ś		Ending Wa	ater Level (f	TOC):	1.0	2				
	ing Volumes R				1	tal Depth (ft		7.0	0				
METHO	DS						Maria Caraca Car						
	Equipment: _								MANAGE CONTRACTOR OF THE CONTR				
1	ent Equipmen												
ł													
	ons/Comment			-									
2230, vali	s.is sommen	- ·						-					



WELL D	EVELOPM	ENT RECO	DRD		WELL NUMBER: CMP-5 Page: 1 of 1						
Project Na	me: <u>tev</u>	mina	15		Project Number: Date: 10 7 / 08						
Observor	r:				Developed b	oy: AE	T, DE	2			
Screened I	interval (ft. BG	iS)			Measuring F	Point on We	:				
Filter Pack	Interval (ft. B	GS)		·	Casing Stick	kup (ft): _					
Casing Siz	e (in):	Mtl & Scd		D (in)	Starting Wa	ter Level (ft	TOC): 10	.01			
Screen Siz	:e (in):	Mtl & Scd		D (in)	Starting Tot	al Depth (ft	тос):	100 firm			
Screen Typ	pė:				Casing Volu	ıme #1.0	n (ft water) x	0.16 (gpf) = 0.798 (gal)			
								" = 0.65 gpf 6" = 1.47 gpf			
DEVELO	PMENT M	EASUREN	IENTS					· · · · · · · · · · · · · · · · · · ·			
Time	Cumul. Vol. (gallons)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	pН	Turbidity	Imhoff Cone (ml/L)	Development Techniques			
0840								very turbid			
0847						54.4		, ,			
0850			15.5	3860	6.89	<u> </u>		the state of the s			
08633			1 200 001	2000	ده ه	24.0					
08/3	-		15.2	38%	7.00	0 43					
0875			15.4	407	7.03	9.92					
	-										
					<u> </u>						
	-				<u> </u>						
							,				
	<u> </u>	1									
											
Total Gallo	ons Removed	. ~3	<u> </u>		Ending Wa	ater Level (f	t TOC):	0.39			
Total Casi	ing Volumes F	Removed: _	-10.1		Ending To	tal Depth (ft	:TOC):	5.10			
METHO	DS										
Cleaning I	Equipment: _										
	ent Equipmer										
ı	of Discharged			1							
Observation	ons/Comment	s:									
							<u> </u>				



WELL DI	EVELOPM	ENT RECO	ORD		WELL NUMBER: CMP-15 Page: of							
Project Na	me: <u>tev</u>	mina	15		Project Num			_ Date:10/7-108				
Observor	:				Developed l	oy: DF	P, NE	,				
Screened I	nterval (ft. BG	SS)			Measuring F	oint on We	dl:	MARIN AND ROBERT AND THE STATE OF THE STATE				
Casing Siz	e (in):	Mtl & Scd		D (in)	Starting Wa	ter Level (ft	TOC): 10.	07'				
Screen Siz	e (in):	Mtl & Scd		D (in)	Starting Tot	al Depth (ft	тос): 11.1	0 to				
					Casing Volu	ıme	(ft water) x	(gpf) = (gal)				
			NP W		Casing Volu	ımes: 2" =	0.16 gpf 4	" = 0.65 gpf 6" = 1.47 gpf				
DEVELO	PMENT M	EASUREN	IENTS									
Time	Cumul. Vol. (gallons)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	Development Techniques				
1216						(47						
1320			17.5	9.458	7.70	1.97						
13 25			175	9569	7.48	0.80	1					
			1 (7 2	1041	, (3	100						
-												
								and the state of t				
					<u> </u>							
		,										
		ļ				-						
								· · · · · · · · · · · · · · · · · · ·				
	-		-				,					
Total Gallo	ons Removed	: 4	7		Ending Ws	ter Level (f	tTOC): 1.4	0.03				
	ng Volumes F		<u></u>			tal Depth (ft	, ~	7.05				
, olai oasi	ng volumes r	.c.noved			Lituring 10	· · · · · · · · · · · · · · · · · · ·	. 100 <i>)</i>					
METHO	DS											
Cleaning E	Equipment: _			ř								
Developm	ent Equipmer	nt:										
Disposal o	of Discharged	Water:	, \ / -		2-specific conductivity code not							
Observation	ons/Comment	is:	+ X2	1 #120	-speci	tic (c	naucti	vity code not				
MON	ring.	Value	<u>3 re</u>	<u>corded</u>	ed not varia							
	<i>J</i>											
1												



WELL DI	EVELOPMI	ENT RECO)RD		WELL NUMBER: CMP-17 Page: of							
Project Nar	me: Tel	rmin	ale	Ċ	Project Number: Date: 10 7 08							
Observor							PINE					
Screened I	nterval (ft. BG	3S)										
							1 /A . 1	\				
				[D (in)				9.41				
Screen Siz	e (in):	Mtl & Scd		ID (in)	Starting Tot	al Depth (ft	TOC):	5.01				
Screen Typ	oe:				Casing Volu	_{ıme} 5. ((ft water) x	(gpf) =(gal)				
								" = 0.65 gpf 6" = 1.47 gpf				
DEVELO	PMENT M	EASUREN	IENTS		·							
Time	1	Purge Rate (gpm)		Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	Development Techniques				
1100												
1607						50.6						
1115			174	641	692	505						
1151		<u> </u>	17.5	636	6.84	11.5						

								, , , , , , , , , , , , , , , , , , , ,				
							· · ·					
		_	<u> </u>									
		<u> </u>	 	<u> </u>								
							-					
	ons Removed		.5		_	ater Level (f		7.43				
Total Casi	ing Volumes F	Removed:			Ending To	tal Depth (ft	:TOC): <u> [</u>	162				
METHO	DS											
Cleaning E	Equipment:											
Developm	ent Equipmer											
Disposal o	of Discharged	Water:										
Observatio	ons/Commen	ts: Ive A	-pre	cipitate	part	riculat	es in	first gallon				
								-				



CWB-12 WM-125

WELL DI	EVELOPMI	ENT RECO	ORD		WELL NUMBER: FM-105 Page: of 1						
Project Nar	me: Ter	mino	u 5		Project Number: Date:						
Observor					Developed by: AET, DFR						
Screened I	nterval (ft. BG	iS)					,				
				· · · · · · · · · · · · · · · · · · ·							
								1			
Screen Siz	e (in):	Mtl & Scd		D (in)	Starting Total	al Depth (ft	TOC):	8'			
Screen Typ	oe:				Casing Volu	_{ime} <u>6.8</u>	<u> </u>	O.10 (gpf) = 1.09 (gal)			
								" = 0.65 gpf 6" = 1.47 gpf			
DEVELO	PMENT M	EASUREN	IENTS		,						
Time	Cumul. Vol. (gallons)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	Development Techniques			
1025		0,8	/			/	trace				
1033						35.2					
1040			148	471	5.44						
1045			14.8	445	6.83						
1050			14.6	1942	686	.87		WARRY CO.			
				<u> </u>							
							·				
<u> </u>				1	-						
		<u> </u>									
Total Gallo	ons Removed	:5			Ending Water Level (ft TOC):						
Total Casi	ng Volumes F	Removed:			Ending Total Depth (ft TOC):						
METHO	DS										
Cleaning E	Equipment: _										
Developm	ent Equipmer	nt:									
Disposal o	of Discharged	Water:									
Observation	ons/Comment	s:		·							
								•			



WELL DI	EVELOPMI	ENT RECC	RD		WELL NUMBER: MW ZOR Page: 1 of 1						
Project Na	me: <u>Aev</u>	mino	U 5		Project Number: Date: 10 (0						
Observor					Developed by:						
Screened I	interval (ft. BG	iS)			Measuring Point on Well:						
Filter Pack	Interval (ft. B	GS)			Casing Stic	kup (ft):	<u> </u>	73			
Casing Siz	e (in):	Mtl & Scd	!	D (in)	Starting Wa	ater Level (ft	TOC): 4.9	58			
Screen Siz	ze (in):	Mtl & Scd		D (in)	Starting Tot	tal Depth (ft	TOC):	1.03 (fw)			
Screen Typ	pe:				Casing Vol	ıme	(ft water) x	(gpf) = (gal)			
					Casing Vol	ımes: 2" =	0.16 gpf 4	" = 0.65 gpf 6" = 1.47 gpf			
DEVELO	PMENT M	EASUREN	ENTS								
Time	(galions)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	Development Techniques			
336		0.9				12/2					
335			1100	1171	~ ~	12.0					
340 343			16.8	1131	7.3	8,. 5,74					
193			162.0	10	1113	2,,1		- Allendaria de la companya della companya della companya de la companya della co			
								7.3.1.4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1			
				•							
								4			
					<u> </u>	 					
							·				
							,				
						-		And the control of th			
				<u> </u>	-			2 27			
Total Gall	ons Removed	: <u>~ 3</u>			Ending Water Level (ft TOC): 9.83						
Total Cas	ing Volumes I	Removed: _		 	Ending Total Depth (ft TOC): 17.05 (firm)						
метно	DS				.1	,·					
Cleaning	Equipment:										
ł				-							
Disposal	of Discharged	Water:									
Observati	ions/Commen	ts:									

				4				****			



WELL DI	EVELOPMI	ENT RECO	ORD		WELL NUMBER: MW-36 Page: 1 of						
Project Nar	me: Tev	mina	U5		Project Number: 080064 Date: 10 7 108						
Observor					Developed by: AET, DFR						
Screened I	nterval (ft. BG	S)			Measuring Point on Well:						
Filter Pack	Interval (ft. B	GS)			Casing Stick	kup (ft):					
Casing Size	e (in):	Mtl & Scd		D (in)	Starting Wa	ter Level (ft	TOC): 9.(08'			
Screen Siz	e (in):	Mtl & Scd		D (in)	Starting Water Level (ft TOC): 9.68 Starting Total Depth (ft TOC): 13.0						
								(gpf) = (gal)			
					Casing Volu	ımes: 2" =	0.16 gpf 4	" = 0.65 gpf 6" = 1.47 gpf			
DEVELO	PMENT M	EASUREN	IENTS								
Time	Cumul. Vol. (gallons)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	Imhoff Cone (ml/L)	Development Techniques			
1456											
458						31,4					
<u>1503</u>			15.1	38,52	7.30			1.101.70107974			
150+			14.8	4076	7.29	Q.0Q					
1518			14.6	4075	7.15	0.00					
1522	-	<u> </u>	<u> </u>			2.95		100,000			
	· ·				-						
								, 1 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			
								A AND THE STATE OF			
								·.			
				11.00							
			ļ								
								2.11			
Total Gallo	ons Removed	: _5_			Ending Water Level (ft TOC): 9,741						
Total Casi	ng Volumes F	Removed:			Ending Total Depth (ft TOC); 73.0						
метно	DS										
Cleaning E	Equipment: _										
Developm	ent Equipmer	nt:									
Disposal c	of Discharged										
Observation	ons/Comment	is: <u>\\S</u> 1 :	# 12	o lou	batt,	speci	ific cor	nductunce			
	obe no	y fu	ndi	oning	y vecorded values not valid						
l —				- 10				· · ·			



WELL DEVELOPMENT RECORD)	WELL NUMBER: MW・니니 Page: / of /						
Project Name: <u>+Cyminal C</u>	<u>) </u>	Project Number: Date: 0 6 0 6						
Observor:	. 1	Developed by:						
Screened Interval (ft. BGS)		Measuring Point on Well:						
Filter Pack Interval (ft. BGS)	(- Lash						
Casing Size (in):Mtl & Scd	ID (in) :	Starting Total Depth (ff TOC):						
		Starting Total Depth (ft TOC):						
Screen Type:		Casing Volume (ft water) x _ • \ (gpf) = (gal)						
	1	Casing Volu	mes: 2" =	0.16 gpf 4"	= 0.65 gpf 6" = 1.47 gpf			
DEVELOPMENT MEASUREMEN	ITS							
Time Cumul. Vol. Purge Rate (gallons) (gpm)	Specific mp. Conductance (umhos/cm)	pН	Turbidity	Imhoff Cone (ml/L)	Development Techniques			
1416								
1430		5 0 5/	192					
		5.28						
			181					
	03 67	6.02	167					
1907	0.5	e.ce	163					
	.2 64	6.41	129					
1924			108					
	·							
					·			
		-20.00		,				
		,						
Total Gallons Removed: 12		Ending Water Level (ft TOC):						
Total Casing Volumes Removed:		Ending Tot	al Depth (ft	тос): <u>73</u>	3.9			
METHODS								
Cleaning Equipment:								
Development Equipment:								
Disposal of Discharged Water:					40			
Observations/Comments: Very vaina parking lot runoff Leaking into hole in top 9" of casing								



WELL DEVELOPMENT RECORD	WELL NUMBER: MW-125 Page: of								
Project Name: 12 minal 5	Project Number: Date:								
Observor:	Project Number: Date: Developed by: ALT, DFR								
Screened Interval (ft. BGS)									
Filter Pack Interval (ft. BGS)									
Casing Size (in):Mtl & ScdID (in)	_ Starting Wa	ter Level (ft	TOC):	0.87					
Screen Size (in):Mtl & ScdID (in)	_ Starting Tota	al Depth (ft	TOC):	5.52					
Screen Type:	_ Casing Volu	me (<u>) , C</u>	(ft water) x	$ \underline{-914} (gpf) = \underline{1.04} (gal) $					
	Casing Volu	mes: 2" =	0.16 gpf 4	" = 0.65 gpf 6" = 1.47 gpf					
DEVELOPMENT MEASUREMENTS		1							
Time Cumul. Vol. Purge Rate (gpm) Temp. Specific Conductanc (umhos/cm		Turbidity	Imhoff Cone (ml/L)	Development Techniques					
0430									
(026)	1. 62.	13.6							
0925 801475	69	328	· ·						
6946 187410	6.86	3.12							
10:4 494	10.00	3.12							
·									
	1								
Total Gallons Removed:	Ending Water Level (ft TOC):								
Total Casing Volumes Removed:		Ending Total Depth (ft TOC): 13, \$5							
Total Casing Volumes Removed.	Enaing to	iai Deptii (it	100).	'')'					
METHODS									
Cleaning Equipment:									
Development Equipment:									
Disposal of Discharged Water:		1. 10.1.10.10	,						
Observations/Comments: black particulats pumped from 8 ump									



WELL DI	EVELOPM	ENT RECC	RD		WELL NUMBER: MW - 308 N Page: 1 of 1						
Project Nar	ne: Terv	ninal	5		Project Number: Date:						
Observor					Developed by: AET DER						
Screened I	nterval (ft. BG	S)			Measuring Point on Well:						
					Casing Stickup (ft):						
Casina Cia	a (lm):	MH Q Cod		D (in)	Ctarting Mia	tor Lovel (ff	TOCK (C	,19,			
Screen Siz	e (in):	Mtl & Scd		D (in)	Starting Total	al Depth (ft	TOC):	7.9 Soft			
Screen Typ	oe:				Casing Volu	ıme	(ft water) x	(gpf) = (gal)			
,								" = 0.65 gpf 6" = 1.47 gpf			
DEVELO	PMENT M	EASUREN	IENTS								
Time	Cumul. Vol. (gallons)	Purge Rate (gpm)	Temp.	Specific Conductance (umhos/cm)	pН	Turbidity	Development Techniques				
1206								very turbid.			
1212						396		V			
1216			169	4030	7.39	2					
1222			17.4	3042	7.28						
1230			11.3	2521	7.31	44.1					
1435			17.2	2312	7.32	23.5					
125+	-		17.0	2017	7 22	43.5					
1240			17.2	2207	7.33	16.2					
1272						10.2					
			,								
<u> </u>											
	ons Removed]			ater Level (f	. 100)	9.78'			
	ing Volumes F				Ending Total Depth (ft TOC):						
METHO	DS							- April - Apri			
Cleaning	Equipment: _			V							
Developm	nent Equipmer	nt:									
Disposal	of Discharged				· · · · · · · · · · · · · · · · · · ·						
Observati	asını	ts: <u>(ec</u> ahove	pa	p of	te bu water	colu	presen	t in well			
	J										



					2005						
WELL DE	EVELOPME	ENT RECC			WELL NUMBER: <u>MW-3</u> 08 5 Page: <u>/</u> of <u>/</u>						
Project Nar	ne: te	rmina	<u>u 5</u>)	Project Number:						
Observor	:										
Screened in	nterval (ft. BG	S)			Measuring F	oint on We	ll:				
ilter Pack	interval (ft. Bo	3S)			Casing Stick	kup (ft): _	flush				
Dasing Size	e (in):	Mtl & Scd		D (in)	Starting Wa	ter Level (ft	TOC):6	, 03			
Screen Siz	e (in):	Mtl & Scd		D (in)	Starting Total	al Depth (ft	тос): <u>3</u>	9.5 (soft)			
Screen Typ	oe:							0.16 (gpf) =(gal)			
					Casing Volu	ımes: 2" =	0.16 gpf 4	" = 0.65 gpf 6" = 1.47 gpf			
DEVELO	PMENT M			016-							
Time	Cumul. Vol. (gallons)	Purge Rate	Temp.	Specific Conductance (umhos/cm)	рН	Turbidity	lmhoff Cone (ml/L)	Development Techniques			
1140		26				20.0					
1143					<u> </u>	390					
1145			14.7	1627	7.87	14.4					
1155			14.7		786	10.6					
<u> </u>				1004	1 0 +						
					ļ						
					 	ļ					
		-				<u> </u>					
						<u> </u>					
			ļ		-						
					-		-				
		1	-			-	-				
T-1-10 "			1	.L		donlessel"	# TOC): (d	,.03			
	ons Removed					ater Level (1		10.6 firm			
Total Cas	ing Volumes I	Removed:			Ending To	tal Depth (f	t TOC):	io ide ilient			
метно	DS										
Cleaning	Equipment:			7							
Developm	nent Equipme	nt:									
Disposal	of Discharged	Water:									
	ions/Commen										
				,				•			

APPENDIX B

Groundwater Sampling Forms



CMP-1081013

GROUNDWATER SAMPLING RECORD								WELL NUMBER: CMP-1 Page: 1 of '					
	me: SOUTHV	VEST HARB	OR PROJI	ECT - F	Phase II GC	WMP	Project Numb	1					
Date: Lo	13/08						Starting Water Level (ft TOC): 12.92						
	by: DFR/AT	TO 0					Casing Stickup (ft): -0.29						
	Point of Well						Total Depth (ft TOC): 16.85 Casing Diameter (inches 2						
	nterval (ft. To Interval (ft. T					-	Casing Diam	eter (iliches					
	,				0 - 1 > ()	On 4 (2 11/6						
	ume <u> </u>					(a) = (3.6) = (3.6)	. 5 (L)(gai)			Sample Inte	aka Danti	n (ft TOC): ~12 ft	
Casing void		7.16 gpf 7.62 Lpf				= 1.47 gpt = 5.56 Lpf				Campic into	and Dopti	1 (100). 12 10	
PURGIN	G MEASU			10 Lp1		0.00 Lp1							
Time	Cumul. Vol.			ıter T	Temp.	Specific	Dissolved	рН	Eh	Turbidity	Γ	Comments	
	(gal o	(gpm or k p		el (ft)	(C or F)	Conductance	1		ORP	(NTU)			
						(µS/cm)	(mg/L)		(mv)		_		
830	/	0.4					/				clear	discharge	
835	2		12.	94	14.3	597	0.76	6.77	316.7	13.0	turbo	after YSI	
840	4		12.	92	14.3	576	0.50	6.85	209.3				
845	6				14.4	567	0.41	6.86	188.5	/			
850	8		12.		14,4	564	0.36	6.87	188.3				
								ì	1	1		/	
855	10			1	14.4	565	0.31	6.88	178.6			· / Ye .	
900	12	<u> </u>	12.	96	14.4	563	0.30	6.90	181.7	1.76	turbo	d w/o YS1	
				-							1		
			-										
	l.						ļ-						
								l		<u> </u>	l		
Total Galic	ons Purged:	3,	l				Total Casing	Volumes F	Removed:	4.9			
			- ar										
Ending Wa	ater Level (ft	TOC):	(2, 10)	-		Ending Total	Depth (ft i	OC): 16.85	****			
SAMPLE	E INVENTO	PRY				1			···	1			
Time	Volume	Bottle Ty	ре		Quantity	Filtration	Preservation		arance		I	Remarks	
			1					Color	Turbidity & Sediment				
900	41	LIDDE					LINO2	clear	none	Total Mota	lo As D	h	
	1L	HPDE				none	HNO3	1	1	Total Meta	115 - A5, P	D .	
900	500mL	Amber glas	S			none	none			cPAHs		15120	
9,00	1L	Amber glas	s		2	none	none	 		PCBs			
900	500mL	Amber glas	s		2	none	none	<u> </u>	$\perp \perp$	TPH- DX			
900	500mL	Amber glas	s		2	none	none	↓	1	Bis(2-ethy	l hexyl) pi	nthalate	
l													
метно	DS	1				1		1					
1		nd IDs:	Perie	taltic P	ump and V	SI 556# ! 4	7						
						C. 000 # • •		inmont:	Alconor	Victillad VV/at	or		
" "	quipment:	•			ted tubing				Alconox, D	nsuneu vvat	. c ı		
Disposal o	of Discharged	Water:	Store	ed in 1,0	000 gallon t	emporary onsi	te storage tan	K					
Observation	ons/Commen	its:											



CMP-2-081013

GROUNE	WATER S	AMPLING R	ECORD			WELL NUME	BER: CMF	P-2			Page: 1 of 1
		VEST HARBOR	PROJECT -	Phase II GC	WMP	Project Numb					
Date:	10/13/	80				Starting Water			92		
	by: DFR/AT					Casing Stick					
	Point of Well		70 17 0			Total Depth (
			7.0-17.0 5.0-19.0			Casing Diam					
	,			4 6 14	<u> </u>	3.0 (1.1/)					
		8 (ft Water) 0.16 gpf 4	1" = 0.65 gpf		p)) = = 1.47 gpf	70 (L)(gai)			Sample Int	aka Danth	(ft TOC): ~12 ft
Casing void			+ = 0.83 gpr 4" = 2.46 Lpf		= 5.56 Lpf		·		Oample int	ake Deptil	(11 100). 12 10
PURGIN	G MEASU	REMENTS									
Time	Cumul. Vol. (gal o	Purge Rate (gpm or Logn)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)		Comments
<i>a</i> >		0.4			(долоні)	(9/2)				clear	discharge
930	2	0.1							2 2 2		
935	2		12.94	16.7	1197	0.16	7.98			+uvb.d	after YSI
940	4		12.93	16.8	1269	0.11	8.85	131.0	-	 	
945	. 6		12.95	16.9	1276	0.11	4.18	131.8			
950	8		12.95	16.9	1273	0.10	9.36	137.6	1.20		
955	10		12.95	16.9	1273	0.09	9.36	135.3	0.92		,
1000	17	1	12.95	16.9	1272	6.09	9.38		0.86	turbid	w/0 YS1
1000	12	V	16.63	1,6,1		0,0,	1		·	1	-/0
										-	
-			ļ ·								
			-								
								····			
. "											
-	<u> </u>		J							J	
Total Gallo	ns Purged:	3.1			_	Total Casing	y Volumes	Removed:	4.4		
Ending Wa	ater Level (ft ⁻	TOC): 12.4	15	-		Ending Tota	l Depth (ft	TOC): 17.3			
SAMPLE	INVENTO	DRY									
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	1 Арр	earance		R	emarks
						,	Color	Turbidity & Sediment	1		
		<u> </u>	<u> </u>					Sediment			
1000	1L	HPDE		1	none	HNO3	clear	none	Total Meta	als - As, Pb	
1000	500mL	Amber glass		2	none	none		11_	cPAHs		
1000	1L	Amber glass		2	none	none			PCBs		2
1000	500mL	Amber glass		2	none	none			TPH- DX		
1000	500mL	Amber glass		1	none	none		11/		l hexyl) pht	halate
1000	JOOGITIL	, ander glass	<u> </u>	 	1.01.0	110110	Ť		J.C.L. City	· ············	
	1		-	<u> </u>			1		-		- Make a
METUO	De De				1		<u></u>		<u> </u>		
METHO											
Sampling	Equipment a	nd IDs:	Peristaltic I	oump and Y							
Purging E	quipment:	Peristaltic Pu	ımp w/ dedic	ated tubing		_ Decon Equ	uipment: _	Alconox, [Distilled Wat	ter	
Disposal c	of Discharged	l Water:	Stored in 1	,000 gallon t	emporary onsi	te storage tan	k				
Obaciii.		4									
Observation	ons/Commen	ıts:							·		
I											



CMP3-081014

GROUNI	DWATER S	SAMPLING R	ECORD			WELL NUME	BER: CMP	-3		P	age: 1 of 1	
		VEST HARBOR	PROJECT -	Phase II G0	CWMP	Project Numl						-
	0/14/08					Starting Water						
	by: DFR/AT					Casing Stick						
1		TOC	0.100			Total Depth (
Filter Pack	intervai (π. το Interval (ft. Τ	OC)	4 0-17 5			Casing Diam	eter (inches					
						3						
		4 4 (ft Water) 0.16 gpf 4				(L)(gal)			Canania Inte	alsa Damble /ff	TOC): ~11 ft	l
Casing von		0.16 gpt 2 0.62 Lpf 4					· ·		Sample ma	ake Deptii (it	100). ~1111	
PURGIN	G MEASUI	REMENTS										
Time	Cumul. Vol. (gal or(L))	Purge Rate (gpm or Lom)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)		Comments	
815	/	0.4	8.40	/	1	/	1	/	1	clear	licharus	
820	2	(8.45	19.2	572	0.47			5,82	الماسلا	discharge after YSI)
825	4		9.42	19.6	588					TOVAIN	THE ! SI	,
	<u> </u>					0.30	10.73					
830	6		8.42	19.7	593	0.24	10.83					
835	3		8.42	19.7	600	0.21	10.82	134.7	1.09	1		
840	10		8.42	19-6	608	0.19		143.8				
845	12	1	8.42	19.5	613	0.19	10.96	142.7	1.07	torbid	-/0 YSI	
									•		ľ	
						 					·	
						1					DANSIERW WASHINGTON	
				<u> </u>								
						<u> </u>						
	}					<u></u>						
Total Gallo	ons Purged:	3.15				Total Casing	Volumes R	temoved:	2.65			
		g	ďγ		_							
Ending Wa	ater Level (ft	гос):	10			Ending Tota	Depth (ft T	OC): 15.84				
SAMPLE	INVENTO	RY										
Time	Volume	Bottle Type		Quantity	Filtration	Preservation		arance		Rem	arks	
							Color	Turbidity &				
0,,,	4.	LIDDE				LINIOS		Gedinent	Tetallitie	I- A- D!		
845	1L	HPDE			none	HNO3	Claur	none	Total Meta	IS - AS, Pb		
845	500mL	Amber glass		2	none	none	 		cPAHs			
845	1L	Amber glass		2	none	none		 	PCBs			
845	500mL	Amber glass		2	none	none			TPH- DX (w/silica gel cl	eanup)	
845	500mL	Amber glass		2	none	none	. •	Y	Bis(2-ethyl	hexyl) phtha	late	
метно	DS	•				•	1					
Sampling	Equipment ar	nd IDs:	Peristaltic F	Pump and Y	SI 556# !	2						
Purging E						•	inment:	Alconov C	hietilled Met	ar .		
						- '	• —	AICUITOX, L	nothicu vvalt	5 1		
Uisposal d	וו טischarged טוני	Water:	Stored in 1	uuu galion t	emporary onsi	te storage tan	K			*		
Observation	ons/Commen	ts:								•		
	- 10 10					•						



CMP4-081014

GROUNE	JWATER 8	SAMPLING RI	ECORD			WELL NUMI	BER: CN	√P-4			Page: 1 of 1
		WEST HARBOR		- Phase II G(OWMP	Project Num					
		8	. ,			Starting Wat	er Level ((ft TO	C): <i>[1</i>		
	by: DFR/AT					Casing Stick	up (ft):		-0.32		<u> </u>
		TOC DC)	70170			Total Depth Casing Diam					
			5.0-17.5			Casing Dian	16161 (11101	.16:			
		16 (ft Water)	•			(log)					
	umes: 2"=0		4" = 0.65 gpf		эрі) = = 1.47 gpf	<u>▶ ₩</u> (∟/(yaı/				Sample Into	ake Depth (ft TOC); ~12 ft
		- ·	4" = 2.46 Lpf		= 5.56 Lpf						
PURGING	G MEASUR										
Time	Cumul. Vol.		Water	Temp.	Specific	Dissolved	pН	\Box	Eh	Turbidity	Comments
,	(gal o(L))	(gpm or Lpm)	Level (ft)	(C or F)	Conductance (µS/cm)	Oxygen (mg/L)			ORP (mv)	(NTU)	
915		0,4	11.04	/	(μδ/cm)		 	, 🕇	(IIIV)		
	t	1		16.8	613	0.40	9.10		72.4	4.62	clear discharge tuibil after \$51
920	2		11.08				1				torbid after \$51
925	4		11.08	16.9	497	0.33	8,77		12.0	2.79	
0930	6		11.08	16.9	449	0.26					
0935	8		11.08	17.0	439	0.23	4			1.67	
0940	10		11.08	17.0	438	0.24				1.55	
0945	12	V	11.08	17.1	440	0.25	7.7	01	89.6	0.98	turbed before YSI
*****								\neg			
				-				\top			
				+		+					
							-	+			
						1 ,					
				<u> </u>			 	_			
	<u> </u>		<u> </u>	<u> </u>		<u> </u>	<u> </u>				
		<u> </u>	<u> </u>	<u> </u>				<u></u>			
Total Gallo	ons Purged:	3,15			_	Total Casing	y Volumes	s Rem	noved:	3.32	·
Ending Ma	ater Level (ft 1	TOC):	18			Ending Tota	· Donth (f	። ፐብር	*\- 47 N		
						Ending Tota	i Deptii (i	1100	7). 17.0		
	E INVENTO	,		Quantity	Filtration	Proponyation	J 45	nooro			Remarks
Time	Volume	Bottle Type		Quantity	Filtration	Preservation		peara	ruce Turbidity &		Remarks
					ļ	<u> </u>	Color		Sediment		
0945	1L	HPDE		1	none	ниоз	clear		none	Total Meta	ls - As, Pb
	500mL	Amber glass		2	none	none				cPAHs	
	1L.	Amber glass		2	none	none	\Box			PCBs	
	500mL	Amber glass			none	none				TPH- DX (w/silica gel cleanup)
	500mL	Amber glass		į	none	none	V		1	1	hexyl) phthalate
	SOUTH	Altiber glass		-	Hone	lione	 	+		Dia(Z-Guiy)	nexy) philialate
	 		+	+		+	 	-		ł	
METHO						<u> </u>				1	
1			- · · · - ia: - ·			~					
_		nd IDs:									
Purging Ed		Peristaltic Pu						AI	conox, D	istilled Wate	er
Disposal o	f Discharged	l Water:	Stored in 1	<u>,000 gailon t</u>	emporary onsit	te storage tan	.k				
Observation	ons/Comment	its:									



CMP6-08101第3

GROUNI	DWATER S	SAMPLING R	ECORD			WELL NUM	BER: CMP	P-5			Page: 1 of 1	
Date: 10		VEST HARBOR	PROJECT -	Phase II G0	CWMP	Project Num Starting Wat Casing Stick	er Level (ft	TOC): 2		.09		
	Point of Well	TOC				Total Depth						
Screened I	nterval (ft. To	DC)	5.5-15.5			Casing Diam	eter (inche	٤2				
	Interval (ft. T		3.0-19.0								I	
Casing Vol	lume <u>5.0</u>	(ft Water	x 0.16	(Lpfv)((B) = <u>0.80</u>	(L)(@)						
Casing vol	umes: 2" = (2" = (4" = 0.65 gpf 4" = 2.46 Lpf		= 1.47 gpf = 5.56 Lpf				Sample Int	ake Depth	(ft TOC): ~10.5 ft	
PURGIN		REMENTS						-			***	
Time	Cumul. Vol. (gal or ()	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)		Comments	OFR
930	<u> </u>	0.4				 				clear	discharge	wrong
1450	1	0.4	/		,,,,,,	1	صر		/	clear	discharge	vell
1455	2	4	10.25	16.4	359	0,08	6.73	183.4	4.32		UNI DE VILOU - y	
1500	4	0.3	10.50	16.2	343	0.08	6.46	180.3	2.08	discha	rge reduced,	too wuch DD
1505	5.5	•	10.48	16.0	346	0.07	6.68	154.8	1.22			
1510	7.0		10.46	16.0	352	0.08	6.56	137.4	1.35			
1515	8.5	↓	10.46	16.0	358	0.07	6.73	111.3	0.78			
1520	10.0	0,3	16.46	16.0	358	0.07	6.73	112.6	0.81	turbid	m/o 451	
	7											
	7							<u> </u>	<u> </u>	<u> </u>		
	ons Purged:	2.63			_	Total Casing			3.28	}		
	E INVENTO	гос): <u>10.4</u>	6	-		Ending Total	Depth (ft I	100): 15.1				
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appe	earance			Remarks	
1	Voicinio	Dome Type		Quartity	- madion	, rossivation	Color	Turbidity & Sediment	-	•	tomarko	
1520	1L	HPDE		1	none	HNO3	clear	none	Total Meta	ıls - As, Pt)	
	500mL	Amber glass			none	none	1	1	cPAHs			
	1L	Amber glass			none	none			PCBs			
	500mL	Amber glass		2	none	none			TPH- DX (w/silica ge	el cleanup)	
	500mL	Amber glass		2	none	none			Bis(2-ethy	l hexyl) ph	thalate	
							V					
NAPT. 16											MERCE	
METHO												
		nd IDs:										
Purging E								Alconox, E	Distilled Wat	er		
Disposal c	of Discharged	Water:	Stored in 1	,000 gallon t	emporary onsit	te storage tan	k					
Observation	ons/Commen	ts:										



CMP15-081014

GROUNL	WATER 5	AWPLING RI	ECORD			WELL NUME	SER: CIVIP	-15			rage: 1 of 1
-		/EST HARBOR	PROJECT -	Phase II GC	WMP	Project Numb	ber: 08006	4			
	10/14/08					Starting Water			.38		
	by: DFR/AT					Casing Stick					
	Point of Well					Total Depth (
		C)				Casing Diam	eter (inches	2			
		OC)									
		(ft Water)			pf) = 1.06	(L)(gal)					
Casing volu		.16 gpf 4			= 1.47 gpf				Sample Into	ake Depth (ft TOC): ~12 ft
		0.62 Lpf 4	1" = 2.46 Lpf	6"	= 5.56 Lpf						-
PURGING	G MEASUF	REMENTS									
Time	Cumul. Vol.	Purge Rate	Water	Temp.	Specific	Dissolved	pН	Eh	Turbidity		Comments
	(gal or L)	(gpm or Lpm)	Level (ft)	(Cor F)	Conductance (µS/cm)	Oxygen (mg/L)		ORP	(NTU)		
		0.4	10.20		(µO/CIII)	(IIIg/L)		(mv)	_	-1	1
1155	/	0.9	10,38				1 72	0.11.0		Clear	discharge
1200	2		10,50	17.7	1861	0.31	6.73	 	2.26	turb id	after YSI
1205	4		1049	17-8	2014	0.22	6.82	188.2	1.14		
1210	6		10.49	17.9	2190	0.12	6.87	92.1	1.26		
1215			10.49	17.7	2258	0.08	6.88	48.7	1.26		
						1		1			
1220	10		10,44	17.7	2334	0.08	6.89	44.4	1.26		166 / 16
1225	12	V	10.49	17.7	2336	0.008	6.88	48.1	1.12	tubed	extrulo YSI
							-				
<u></u>	· · · · · · · · · · · · · · · · · · ·										
	<u>L.</u>		3,15						2 6 5		
Total Gallo	ns Purged:		21,2		_	Total Casing	Volumes F	Removed:	2.97	· · · · · · · · · · · · · · · · · · ·	
Ending Wa	ater Level (ft 7	-00): 10	.44			Ending Total	l Donth (ft T	OC) 17.05			
	•		7.04			Ending Total	Depth (it i	00). 17.03			
SAMPLE	INVENTO	RY	1	·		T					
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appe	arance		Re	marks
							Color	Turbidity &			
	15.00							Sediment			
1225	11500 mL	HPDE		21	none	HNO3	clear	noul	Total Meta	is - As, Pb,	Sb, Cr, Cu, Ni
	500mL	Amber glass	ļ	2	none	none			cPAHs		
	1L	Amber glass		2	none	none			PCBs		
	500mL	Amber glass			none	none			TPH- DX (w/silica gel	cleanup)
							V	T 🖖		•	
	500mL	Amber glass		1 2	none	none	V	-	; bis(∠-etnyl	hexyl) phth	aidle
						ļ		ļ			
METHO	DS ·										
Sampling i	Equipment ar	nd IDs:	Peristaltic I	oump and Y	SI 556# 14	7					
Purging Ed		Peristaltic Pu					inment:	Alconov F	Distilled Wat	er	
• •	• •					•		, NOOTION, L	ZIOTINOG VVAL	<u>~</u> 1	
Disposal o	of Discharged	Water:	Stored in 1	,ບບບ gallon t	emporary onsit	e storage tan	К				
Observation	ons/Commen	ts:	total	both	25						
						<u> </u>					
i											



CMP17-081013

GROUND	WATER S	AMPI	_ING RI	ECORD			WELL NUME	BER:	CMP-	-17				Page: 1 of 1	ŀ
	ne: SOUTHV	VEST H	IARBOR	PROJECT -	Phase II GO	WMP -	Project Num								
	/13/08_						Starting Water					47			
	by: <u>DFR/AT</u>						Casing Stick				-0.17				
Measuring	Point of Well		TOC	0.0.40.0			Total Depth				16.21				
Filter Pack	nterval (ft. TC Interval (ft. T	OC)		6.0-16.0 4.0-16.5			Casing Diam	ieter (inches						
					/1 =£.\/.		(1)(67)								
	ume <u>6.1</u> umes: 2"=0					(D) =	(L)(gai))	*				Sample Inte	aka Danth	(ft TOC): 14 ft	
Casing voic				4" = 0.65 gpr 4" = 2.46 Lpf		= 5.56 Lpf						Jampie inte	аке Беріп	(11 100). 14 11	
PURGIN	G MEASUR												*		
Time	Cumul, Vol.			Water	Temp.	Specific	Dissolved	r	Н	E	- 1	Turbidity		Comments	
	(gal o(<u></u>)	(gpm	or (100)	Level (ft)	(C or F)	Conductance				OF		(NTU)			
176.		0.		4 417	/	(μS/cm)	(mg/L)	 		(m	IV)		-1 20 -	1 , ,	
1350		0.2	-10	9,47		/ U.S.A		†					Clear	discharge after YSI	
1355	~ 1	لـــــا	 '	9.50	17.8	459	1.86		63		1.8		+U161d	after YSI	
1400	~2	<u> </u>	<u> </u>	9.50	17.6	55 5	0.48		53	194	- 1	2.67	ļ		\longrightarrow
1405	~ 3	<u> </u>	<u> </u>	9.50	17.6	564	0.27	6.0	65	191	.8	2.00			
1410	~ 4		 '	9,50	17.6	572	0.18	6.	62	189	.4	2.02			
1415	~5			9.50	17.6	573	0,15			188		3.64			
1420	~6		V	9.50	17.6	569	0.10		61	185		-	4.14 h.1	l w/o Y51	
17 20				1100	1110			 -	<u> </u>	1		V 1 7	******	(10/0 1-1	
		 		 			 	+-		 		 	<u> </u>		
				 				 		├	\dashv	 		10.4.10000	
		<u> </u>		ļ			<u> </u>	↓				<u> </u>	<u> </u>	****	
								<u> </u>					ļ		
		·		<u> </u>											
								\Box							
								1							
		\vdash						\vdash		 					
	L					<u> </u>	~	<u> </u>					J	<u> </u>	
Total Gallo	ns Purged:		1.	57		_	Total Casing	y Volu	mes K	temove	∋d:	1.4			
Ending Wa	ater Level (ft 1	TOC):	9	1.50			Ending Tota	al Depi	th (ft T	OC): 1	16.21				
	INVENTO								· ,	<u> </u>					
Time	Volume		le Type		Quantity	Filtration	Preservation	_	Apper	arance			R	emarks	
			0.,,						olor			1			
	ļ	 		 	 	 			OlOi	Sedi	ment				
1420	1L	HPDE	<u></u>		1	none	HNO3	cle	41	no	ne	Total Meta	ls - As, Pb)	
1420	500mL	Amber	r glass		. 2	none	none		<u> </u>	$oxed{oxed}$		cPAHs			
1420	1L	Amber	r glass		2	none	none				¦	PCBs			
1420	500mL	Amber	r glass .	*	2	none	none	T. !		T	_	TPH- DX (w/silica ge	el cleanup)	_
1420	500mL	1	rglass			none	none					Bis(2-ethyl			
1420	40mL			†			HCI	1		1				and Ethenes (CEEs	٠١
17.00	140IIIL	VOA v	lai	 		none	Inci	+		 		Ciliornates	u Elliancs	and Enleties (OLL	,
METHO	DS.			<u>.</u>		<u> </u>		ــــــــــــــــــــــــــــــــــــــ				<u> </u>			
				Dadiastad	OED Well V	E Dladdau	Duman and VC	OLEE0	ш 1	, –,					
	Equipment ar					Vizard Bladder I			-	•					_
Purging Ed	quipment:	<u>Dedi</u>	icated Qt	ED Well Wiza	ard Bladder	Pump	_ Decon Equ	uipme	nt:	Alcor	iox, D	Distilled Water	er		
Disposal o	f Discharged	Water:	·	Stored in 1	,000 gallon f	temporary onsit	ie storage tan	ık							
Observation	ons/Commen	ıts:													



FM105-081013

	OWATER S						WELL NUM	BER: FM	l-105				Page: 1 of 1
Project Nar	ne; SOUTHV	VEST HAF	RBOR	PROJECT -	Phase II GO	WMP	Project Num			f ı	20	1	
	0 13 0 9 by: DFR/AT	D			•		Starting Wate		ft TOC)	-0.2	20		
•	Point of Well	Т(DC				Casing Stick Total Depth			18			
_	nterval (ft. TC			7.0-17.0			Casing Diam	` —					
	Interval (ft. T			6.0-17.5	•								
	umes: 2" = 0		4	x <u>0, l</u> " = 0.65 gpf I" = 2.46 Lpf	6"	(pf) = = 1.47 gpf = 5.56 Lpf	(L)(gal)				Sample Inta	ake Depth (f	t TOC): 15 ft
PURGIN	G MEASU			I									
Time	Cumul. Vol. (gal or ()	Purge f		Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	рН	(Eh DRP mv)	Turbidity (NTU)		Comments
1045	0,210	0.21	10	11.20							/	clear	dischange
1050	~ 1	١		11.20	14.8	715	1.31	8.65	25	PB. Z	38.5	turbed	after VSI
1055	~ 2			11,20	14.8	600	1.17	8.35		7.3	32,4		
	~ 3			•	14.7	479	0.77	7.77	1	,5	14.4		
1105	 			11.20	14.7	448	0.53	7.41	_	7.5	6.54		
	~4	-		****		*							
1110	5.5			11.20	14.8	442	0.44	7.21		4.3	11.8		***
1115	~6.5			11.20	14.8	441	0.34	7.09		3,7	1.99		
420	~7.5	1		11.20	14.8	440	0,37	7.06	18	1.6	1.25		
1125	8.8	V		11.20	14.8	440	6,37	7.03	lβ	1.9	2.1	torbid	w/c YS1
						,							
	<u> </u>			i									
					1		<u> </u>	<u> </u>	-				
	ons Purged: ater Level (ft ⁻		. 2	20			Total Casing Ending Tota				2_		
SAMPLE	E INVENTO	DRY											
Time	Volume	Bottle ²	Туре		Quantity	Filtration	Preservation	Ар	pearan	се	-d	Rei	marks
								Color		bidity &			
1125	1L ·	HPDE			2	none	ниоз	Cleur		, Ne	Total Meta	Is - As Ph	- 1400 -
1	500mL	Amber gl	lace			none	none	Liens	T.	1	cPAHs	,	
 					1			-		1			
- - - - - - - - - - 	11L	Amber gl				none	none			1	PCBs		
 	500mL	Amber g	lass		4	none	none		-	+	TPH- DX (w/silica gel o	cleanup)
	500mL	Amber g	lass _.	ļ.,	4	none	none			1,	Bis(2-ethyl	hexyl) phtha	alate
<u> </u>	40mL	VOA vial	<u> </u>		6	none	HCI			<u>V</u>	Chlorinate	d Ethanes a	nd Ethenes (CEEs)
MACTUO	DC:	<u> </u>						.,,,,					
METHO													
Sampling	Equipment ar	nd IDs:		Dedicated	QED Well W	/izard Bladder	Pump and YS	1 556 #	177				
Purging E	quipment:	<u>Dedica</u>	ted QE	ED Well Wiz	ard Bladder	Pump	_ Decon Equ	uipment:	Alc	onox, [Distilled Wat	er	
Disposal c	of Discharged	l Water: _		Stored in 1	,000 gallon t	emporary onsi	te storage tan	ık					
Observation	ons/Commen	ts:	lled	Samo	ie ba	itles u	ntil 1	230					
	Cocond cot	of hottles	aallaaf	•					D ri	Her	10	1130	on CoC
	Second Set	OI DOLLIES	CUITECT	ea ioi aupiia	ate sample	1 /1102	, 001	U. J.	, .,		- CV.	, , , ,	



MWZGR-081014 / MWZGR-081014D

GROUNI	OWATER S	SAMPLING	RECORD			WELL NUM	BER: MV	V-26R		Page: 1 of 1
Project Nar	ne: SOUTHV	VEST HARB	OR PROJECT -	Phase II GO	CWMP	Project Num				
Date:	10/14	108						ft TOC): 9.		
Developed	by: DFR/AT	TOO				Casing Stick				
	Point of Well nterval (ft. TC					Casing Diam		17.05 nes 2		
	Interval (ft. T					Casing Dian	leter (IIIci	163		· · · · · · · · · · · · · · · · · · ·
			ater) x 0.16	(l. pf.)/c	unf) - 1 11	U (L)(aal)				
	umes: 2" = 0		4" = 0.65 gpf		pi) = i. = 1.47 gpf	(L)(gai)			Sample Int	ake Depth (ft TOC): ~ 11.5 ft
Odding von			4" = 2.46 Lpf		= 5.56 Lpf				oumple inc	and Bopin (in 100).
PURGIN	G MEASUI									
Time	Cumul. Vol.			Temp.	Specific	Dissolved	рН	Eh	Turbidity	Comments
	(gal or	(gpm or L	ঠী) Level (ft)	(C or F)	Conductance	Oxygen		ORP .	(NTU)	
			<i>G</i> a .		(µS/cm)	(mg/L)	_	(mv)		
1015		0.4	9.91		- 20-	/		<u>/</u>	5 115	dear ducharge
1020	2		9.91	16.2	12290	0.35	7.03			tuibid after YSI
1025	4		9.93	16.5	11600	0.23	7.15	195.3	1.39	
1030	6		9.95	16.6	9,930	0.15	7.30	187.9	1.16	
1035	શ		9.95	16.9	9.735	0.13	7.30		0.70	
1040	lo		9.95	i .	10,130	0.11	7.30	l .		
		1		16.9		1	1			1.4 / 26.1
1045	12		9,95	16.9	10,190	6.11	7.29	194.5	0.17	torbid w/o YSI
										·
-				-						
****									1	
Total Gallo	ns Purged:		.15		_	Total Casing	y Volumes	s Removed:	2.76	
Ending Ma	ater Level (ft 7	TOC):	9.95			Ending Tota	I Donth /f	t TOC): 17.05		
		,,,				Enuling Fota	i Debui (i	1100). 17,00		
	INVENTO	1		0	F:144:	In			T	Remarks
Time	Volume	Bottle Typ	De	Quantity	Filtration	Preservation	Api	pearance Turbidity &	-	Remarks
							Color	Sediment		
1045	1L	HPDE		2	none	ниоз	clear	rnone	Total Meta	ıls - As, Pb, Sb, Cr, Cu, Ni
1	500mL	Amber glas	s		none	none	1	1	cPAHs	
	1L	Amber glas			none	none			PCBs	
										iv/cilion gol alcony
 	500mL	Amber glas		ĺ .	none	none	1	+ 1		w/silica gel cleanup)
 	500mL	Amber glas	S	4	none	none	-		Bis(2-ethy	l hexyl) phthalate
$\vdash \downarrow -$		<u> </u>								- WA
	1				<u></u>			<u> </u>		
METHO	DS									
Sampling	Equipment ar	nd IDs:	Peristaltic F	oump and Y	SI 556# 143	-				
Purging E			Pump w/ dedic				upment:	Alconox, [<u>Distilled W</u> at	er
Disposal o	of Discharged	Water:	Stored in 1	.000 gallon t	emporary onsit	e storage tan	k			
-	_		2.2,04 1	, generi						
Observation	ons/Commen	•							INFR	
	Second set	of bottles co	llected for duplic	ate sample	- MW ZE	P-081	014 D	af	1050	
I										



MW36-081014

GROUN	IDWATER S	AMPLING R	ECORD			WELL NUM	BER: MW-3	36		Page: 1 of 1
		VEST HARBOR	PROJECT -	Phase II Go	CWMP	Project Num				
	0/14/68		-			Starting Wat			0.0 @	
	d by: <u>DFR/AT</u>					Casing Stick				
	g Point of Well				<u>-</u>	Total Depth				
)C)	58.0-73.0			Casing Diam	eter (inches	2		 .
Filter Pac	k Interval (ft. T	OC)	55.0-71.0							
Casing V	olume <u>63</u>	(ft Water)x 0.16	(Lpfv)(g	gpf) = <u>lo.o</u>	8(L)(43))				
Casing v	olumes: 2" = 0).16 gpf	4" = 0.65 gpf	6"	= 1.47 gpf				Sample Into	ake Depth (ft TOC): ~ 65.5 ft
	2" = (0.62 Lpf	4" = 2.46 Lpt	6"	= 5.56 Lpf					
PURGI	NG MEASUI	REMENTS								
Time	Cumul. Vol.		Water	Temp.	Specific	Dissolved	pН	Eh	Turbidity	Comments
	(gal or ₄()	(gpm or Lpn)	Level (ft)	(C or F)	Conductance	, , ,		ORP	(NTU)	
					(µS/cm)	(mg/L)		(mv)	1	
1250		0.4	10.00			/	/			Clear discharge
1255	2		10.04	14,7	36,900	0.11	7.15	-30.8	1.55	turbidity after YSI
1300	4	1 1 .	10.04	14.6	36,766	0.07	7.27	-50,0	1.03	
1305	6		10.04	14.7	36,480	0.07	7,34	-65.7	1.40	
	3		10.04	14.6	1		7.39	-70.5	1.23	
1310					36,380	0.06			1	1
1315	10		10.04	14.6-	36,220	0.05	7.44	-78.9	1.17	
1320	12		10.04	14.6	36,190	0.05	7.46	-79.6		
1325	- 14		10.04	14.6	36,200	0.06	1.47	-74.3	1.02	toobed w/o YSI
										,,
							1			
					1	ļ	-			
									ļ	
							ì			
			<u> </u>							
-		2 1 6	<u> </u>	<u> </u>		1				,
Total Ga	llons Purged:	3.68			<u> </u>	Total Casing	g Volumes F	Removed:	0.36	
Ending \	Notor Lovel (ft	TOC):	n 4			Ending Tota	al Denth (ft T	OC): 73		
						Littling Foto	ii Deptii (it i	00). 10		
SAMPI	E INVENTO		F	- 			Т		1	
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	n Appe	arance		Remarks
							Color	Turbidity & Sediment		
1328	16500mL	LIDDE	1	7	none	HNO3	clear	none	Total Mate	als - As, Pb, Sb, Cr, Cu, Ni
1320							Clear	ribud		ais - As, 1 b, Ob, O1, Ou, 141
$\vdash \vdash$	500mL	Amber glass	1	 	2 none	none	+		cPAHs	
	1L	Amber glass		1	2 none	none	1 1		PCBs	- Anna -
	500mL	Amber glass	<u></u>	<u> </u>	2 none	none			TPH- DX	(w/silica gel cleanup)
V	500mL	Amber glass			2 none	none	V	1	Bis(2-ethv	l hexyl) phthalate
├	Joseph	, who glass	1					<u> </u>		
								 	+	
	000			1				<u> </u>		
METH						_				
Samplin	g Equipment a	nd IDs:	Peristaltic	Pump and Y	'SI 556# '4	}				
Purging	Equipment:	Peristaltic P	ump w/ dedic	ated tubing		_ Decon Eq	uipment:	Alconox, i	Distilled Wa	ter
1 "		l Water:				_ `				
· ·	•					otorago tal				
Observa	ations/Commen	nts: <u> [6</u>	to tal	Dottle	\$					
1										



MW44-091014

GROU	NDWATER S	SAMPLING R	ECORD			WELL NUM	BER: MW-	44		P	age: 1 of 1	
		VEST HARBOR	PROJECT -	Phase II GO	WMP	Project Num						
	10/14/09		_			Starting Wat			90			
	ed by: <u>DFR/AT</u>					Casing Stick						
	ng Point of Well d Interval (ft. T0		n/a			Total Depth Casing Diam						
	ck Interval (it. T		n/a			Oading Dian						
Cooling	/olumo f 7	(ft Water	0.16	(1 nfv)(c	inf) = 14 A	(Lan)()						
	olumes: 2" = 0		4" = 0.65 gpf		= 1.47 gpf	(L)(gai)			Sample Inta	ake Depth (ft	TOC): ~ 68 ft	
			4" = 2.46 Lpt	6"	= 5.56 Lpf							
	ING MEASU		1	T ====		l n:		T ==1.	Total Californ	1	Cammanta	
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pΗ	Eh ORP (mv)	Turbidity (NTU)		Comments	
1045	. /	0,4	10.90		(рогонт)	(Higi-1)	/	//		dear	dish	
1050	1	,	11.00	15.8	2,020	2.31	8.01	161.2	6.35		after	YsI
1055			11.00	15.5	193	2.68	8.23	170.9				
1100	6		11.00	15.5	090	2.36	7.82	181.2	5.79			
1105	1		11.00	15.4	061	1.96	7.41	188.6	5.36			
1110	10		11.00	15.4	052	1.90	7.38	197.8	5,21			
1115	12		11.00	15.4	046	1.64	7.21	196.7	6.32			
1120	14		[1,00	15.4	043	1.60	7.20	198.1	4.32			
1125		V	11.00	15.3	041	1.59	7,23	199,7	3.21	turbid	w/0 451	
											,	
Total G	allons Purged:	4.21				Total Casing	g Volumes F	Removed:	0.41			
Ending	Water Level (ft	тос):	00			Ending Tota	al Depth (ft]	ГОС): 73.9				
SAMF	LE INVENTO	DRY										
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	n Appe	earance		Ren	narks	
							Color	Turbidity & Sediment				
1129	5 /L 500 ml	HPDE		21	none	ниоз	clear	none	Total Meta	ls - As, Pb, S	Sb, Cr, Cu, Ni	
	500mL	Amber glass			none	none	1		cPAHs			
	1L	Amber glass		2	none	none			PCBs		····	
	500mL	Amber glass		2	none	none			TPH- DX (w/silica gel c	eleanup)	
1	500mL	Amber glass		2	none	none	1	V	Bis(2-ethy	l hexyl) phtha	alate	
										····		
METH						•						
Sampli	ng Equipment a	nd IDs:			SI 556# \4							
	g Equipment:	<u>, </u>	ump w/ dedic				uipment: _	Alconox, [Distilled Wat	er		
Dispos	al of Discharged	d Water:	Stored in 1		temporary onsi	te storage tar	nk					
Observ	ations/Commer	nts: 10	bottles	total								
1												



MW125-08/013

GROUND	WATER S	SAMPL	ING R	ECORD		ļ	WELL NUME	3ER: MW-	125		F	Page: 1 of 1
Project Nan	ne: SOUTHV	V <u>E</u> ST H	ARBOR	PROJECT -	Phase II GC	WMP .	Project Numb			-		
Date:	011310	8					Starting Wate				<u> </u>	
	by: DFR/AT						Casing Stick					
	Point of Well		TOC	5.0-15.0	·		Total Depth (Casing Diam			2		
Screened ir Filter Pack	nterval (ft. TC Interval (ft. T	.UC)	-	3.0-15.0			Casing Diam					
					(I E A)		(1.)/1)					
		-) × <u> </u>		gpf) = l.0 = 1.47 gpf	(L)(gal)			Sample In	taka Denth (f	t TOC): 13 ft
Jasing void	umes: 2" = 0 2" = 0	o. 16 gpi 0.62 Lpf		+ = 0.65 gpr 4" = 2.46 Lpf		= 5.56 Lpf				oampie im	.anc Dopin (i	1 100). <u>10 k</u>
PURGINO	G MEASU			<u> </u>		0.00 Lps						
	Cumul. Vol.		e Rate	Water	Temp.	Specific	Dissolved	рН	Eh	Turbidity		Comments
	(gal or L)		or ŁOM)	Level (ft)	(C or F)	Conductance			ORP	(NTU)		
OCE						(µS/cm)	(mg/L)		(mv)	 	 	
1255	/	. 2	10	6.88	/	/						discharge
1300	~1	<u> </u>		6.88	18.1	429	1.37	6.72			turbid	after YSI
1365	~2		<u> </u>	6.98	18,5	428	0.90	6.66	197.	1.25		
1310	~ 3		1	6.98	18.5	423	0.73	6.63	1 .			
1315	~ 4			7,00	18.6	420	0.66	6.67				
	~5		\vdash	7.01	18.6	415	0.56			1000	,	
1320			 	7.01	18.6	412	0.52	6.61	196.		NASIO	YSI
1325	~ 6	├─ `	<u>V</u>	<u> </u>		- 11 6	0.72	V.W.	1 10		1010	177
1808	M	<u> </u>		THE .			-				-	
		<u> </u>				<u> </u>						
			ļ									
											T	
		+-						 				
	 	-			· · ·		+	-	1	+	+	
			- 10			<u></u>		<u> </u>				
Total Galio	ons Purged:		1.65				Total Casing	ا Volumes و	Removed	1.69	>	
Ending Wa	ater Level (ft ⁻	TOC):	7	ı. ol			Ending Tota	al Depth (ft	TOC): 13.	35		
								1				
	E INVENTO		le Type	T .	Quantity	Filtration	Preservation	Δηη	earance	7	Re	marks
Time	Volume	Dom	е гур о		Quantity	FIII(auon	FIESEIVALIO			, <u>R</u>	1101	Haire
		<u> </u>						Color	Sedime			
1325	1L	HPDE			1	none	HNO3	Clear	non	Total Met	als - As, Pb	
	500mL	Amber	r glass		2	none	none	<u> </u>	<u></u> _	cPAHs		
	1L	Amber				none	none		\top	PCBs		
		Amber	_			2 none	none		1		(w/silica gel	cleanun)
	500mL							+	1 1			
$\vdash \downarrow$	500mL	Amber	•			none	none	1	1 1		yl hexyl) phth	
	40mL	VOA v	ial		3	3 none	HCI	 	+	Chlorinate	ed Ethanes a	and Ethenes (CEEs)
1	<u></u>			<u> </u>		<u> </u>						
METHO									- 4 🖱			
Sampling I	Equipment ar	nd IDs:		Dedicated /	QED Well W	Vizard Bladder	Pump and YS	31 556 # L	4+			•
Purging Ed	quipment:	Ded	icated Qf	ED Well Wize	ard Bladder	Pump	_ Decon Equ	uipment: _	Alcono	<u>ς Distilled Wa</u>	iter	
Disposal o	of Discharged	d Water:		Stored in 1	,000 gallon	temporary onsi	ite storage tar	ık				
Ot - 2m - 44	- 10		-	_								
Observanc	ons/Commen	its:										-,
.												
1											and the second second	



MW308N-081013

GROUND	WATER S	AMPLING	RECORD			WELL NUMB	BER: MW-3	308N			Page: 1 of 1	
Project Nan	ne: SOUTHV	VEST HARBO	R PROJECT -	Phase II GC	CWMP	Project Numb						
Date:	10/13/09	<u> </u>				Starting Wate	r Level (ft	TOC): <u>6</u> .	53			
Developed	by: DFR/AT					Casing Sticku	ıp (ft):	-0.29				
Measuring I	Point of Well	TOC				Total Depth (ft TOC):	17.95				
		DC)	12.5-17.5			Casing Diame	eter (inches	2				
Filter Pack	Interval (ft. T	OC)	10.0-21.5									
Cooing \/oli	11.	07. (#1\N/at	only Mile	1. 16 (Lpfu)/a	ipf) = [.76	(L)(nal)						
						(L)(gai)			Sample into	aka Danth (1	ft TOC): ~15 ft	
asing voil		16 gpf			= 1.47 gpf				Sample into	ake Deptii (i	(100). <u>101(</u>	
			4" = 2.46 Lpf	r 6"	= 5.56 Lpf							
PURGING	G MEASU	REMENTS										
Time	Cumul. Vol.			Temp.	Specific	Dissolved	pН	Eh	Turbidity		Comments	
	(gal or L)	(gpm or Lpm	n) Level (ft)	(C or F)	Conductance			ORP	(NTU)			
					(µS/cm)	(mg/L)		(mv)				
1645	/	0.4	6.53	/	/				/	clear	discharge	
1650	2	ı	6.70	16.7	1.850	0.03	8.10	-83.7	29.3	tuched	discharge after YS	,
		 	-						23.8	1 - 1 - 1		
1655	4	<u> </u>	6.71	16.7	1,595	0.02	7.82	-36.4				
1700	6		6.71	16.7	1,585	0.02	7.68	- 86.5	22.2			
1705	93		6.72	16.7	1.586	0.03	7.61	-85.2	17.9	Lurbid	w/o YSI	
			· · · · ·			i I					•	
1710	10		6.73	16. 7	1,586	0.02	7.60	-87.3			~/o Y51	
1715	12	🗸	6.75	16.8	1,586	0.02	7.59	-80.9	12.7	tulbed	w/0 YS1	
						1					14,400,00	
		:										
					-							
	L											
		 						 		-		
					-							
Total Calla	ns Purged:	3.15	1			Total Casing	Volumes F	Removed:	-3-15	- 1.79	ን	
Total Gallo	nis Fuigeu.					Total Gasing	VOIGITIOS I			<u> </u>	*	
Ending Ws	ater Level (ft	TOC):	6.75			Ending Total	Depth (ft 1	TOC): 17.95				
Eliding vva	Tel Level (II	100)				Littling Total	- Deptil (it i	100). 17.00				
SAMPLE	EINVENTO	DRY										
Time	Volume	Bottle Type	е	Quantity	Filtration	Preservation	Appe	earance		Re	marks	
	1	1					Color	Turbidity &	1			
							Color	Sediment				
1715	1L	HPDE		1	none	ниоз	Slighty	nove	Total Meta	ıls - As, Pb		
171)					1		yellow	/ 1		7.0,1.2		
	500mL	Amber glass		2	none	none	- - - - - - - - - - 	 	cPAHs			
1	1L	Amber glass		2	none	none			PCBs ·			
		1							TOU DV	w/silica gel	oloopup)	
	500mL	Amber glass			none	none	V					
<u> </u>	500mL	Amber glass		2	none	none	V	V	Bis(2-ethy	I hexyl) phth	nalate	
<u>-</u>												
					1		T			10-1		
		1			1		<u> </u>					
METHO	DS											
Sampling	Equipment a	nd IDs:	Peristaltic	Pump and Y	SI 556 # 14	7						
					•		inmont:	Alconov	Distilled Mar	tor		
	quipment:								Jiaunieu vva	101		
Disposal c	of Discharged	Water:	Stored in 1	1,000 gailon	temporary ons	ite storage tan	k					
l												
Observation	ons/Commer	nts:										
-												



MW3085-081013

GROUND	OWATER S	AMPLING R	ECORD			WELL NUM	BER:	MW-30	088		Page: 1 of 1
Project Nar	me: SOUTHV	VEST HARBOR	PROJECT -	Phase II G0	CWMP	Project Num	ber: 0	80064			
Date:		·				Starting Wat	er Lev	el (ft T	OC): 6.	30	
	by: DFR/AT					Casing Stick			-0.61		
		TOC	05.0.40.0			Total Depth			40.5		
	•		35.0-40.0 31.0-40.0			Casing Diam	ieter (i	ncnes	2		
						7					
		(ft Water)				<u> </u>				0	-lia Danti (# TOO) 27 5 #
Casing volu	umes: 2" = 0 2" = 0		1" = 0.65 gpf 4" = 2.46 Lpf		= 1.47 gpf = 5.56 Lpf					Sample Into	ake Depth (ft TOC): ~ 37.5 ft
PURGIN	G MEASUI	REMENTS									
Time	Cumul. Vol. (gal or ()	Purge Rate (gpm or Lpfn)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	р	Н	Eh ORP (mv)	Turbidity (NTU)	Comments
1600		0.4	6.30	/			<u> </u>	/	/		clear discharge
	2	→		1.1 61	16 200	0.04	7.		3.0	3.7	1 11 th to the
1605			7,00		15,290						disch reduced too much
1610	4	0.3	6.80	14.9	15,260	0.03	7,9		- 20.6	0.81	disch reduced too much
1615	65.5	<u> </u>	6.97	15.0	15,250	0.03	8.0		-43.0	1.81	
1620	47	0.25	6.95	15.0	15,250	0.03	8.0	8	-57.9	1.79	disch reduced, too much !
1625	8		6.10	15.0	15,230	0.03	8.1	0	-55.9	1.46	•
1630	9	V	6.60	15.0	15,230	0.03	8.	11	- 56.8	2.13	turbed w/o YSI
	,							İ			,
	ļ										
							ł				
							<u> </u>				
Total Gallo	ons Purged:	2.36				Total Casing	ı Volu	mes R	emoved:	0.4	3
			7.		_		-				
	ater Level (ft					Ending Tota	i Dept	n (π ι	UC): 40.5		
	E INVENTO	T		Quantity	Filtration	Preservation	J	Apper	ranco	1	Remarks
Time	Volume	Bottle Type		Quantity	Filliation	Freservation	-	Appea	Turbidity &		Kellarks
							C	olor	Sediment		
1636	1L	HPDE		1	none	HNO3	>(1)	ellow	none	Total Meta	ıls - As, Pb
1	500mL	Amber glass		2	none	none	1 1	!	1	cPAHs	•
	1L	Amber glass			none	none				PCBs	
						1					(w/silica gel cleanup)
 	500mL	Amber glass			none	none	+ -				
V	500mL	Amber glass		2	none	none	 	-		Bis(2-ethy	l hexyl) phthalate
						<u> </u>	-				
METUC	<u> </u>						1			1	
METHO						^					
Sampling	Equipment ar	nd IDs:	Peristaltic I	Pump and Y	SI 556 # 14	†					
Purging E	quipment:	Peristaltic Pu	mp w/ dedic	ated tubing		_ Decon Equ	uipme	nt:	Alconox, E	Distilled Wat	er
Disposal c	of Discharged	Water:	Stored in 1	,000 gallon i	temporary onsit	te storage tan	ık				
Obnesie	oon/Co	to:									
Onservatio	ons/Commen	ιο.		****							

ARI Assigned Number:	Turn-around Requested:	Requested:			Page:	jo	اللوي			6	Analytica	Analytical Resources, Incorporated
	0 - <					ANNA .	estable is				Analytical	Analytical Chemists and Consultants
уошо	S.	Phone:		(Date:	0 2	lce Present?				4611 Sour	4611 South 134th Place, Suite 100
ころとのことのことのことのことのことのことのことのことのことのことのことのことのこと	Ser Survey		7	36	NO.	1000			,		JUNNIIA, V	77 201 00
Client Contact:					No. of Coolers:	くこ Coc Ten	Cooler /5, -</td <td>-10,</td> <td>^</td> <td></td> <td>206-695-6</td> <td>206-695-6200 206-695-6201 (tax)</td>	-10,	^		206-695-6	206-695-6200 206-695-6201 (tax)
Name:		ı				, v.	Analysis	Analysis Requested				Notes/Comments
Southwest Hurbor Project	ŧ	アプログ	4 えいろの	<u>^</u>	S1 02 51		W	atso				
Client Project #: C おらっ ら イ	Samplers: DA UÉ	DW6H/	AMA	716	(9, (9,	5 i 7'49 709/		グ フゥ	つく			
Sample ID	Date	Time	Matrix	No. Containers	M +ot 8 0103 9 ,28) M +ot	'9a'sy '80109	2H A9 2F S 8	9 TWU 152510 51114 W	14 년 8 14 년 8	808 87d		
CMP-1-081013	10/13/08	200	7203	Q.,,	X		X	×	×	X		
S10180-74W3	g engarite	000	Silvenia.	Green	×		×	X	, ×	X		
00 5 7		S 2 = 2	Some side was beside	C.	×	×	×	×	X	×		
TM105-081013D	, vergooneroonio	200		<i>7</i>	×	<u>×</u>	X	×	×	×		
MW125-081013	Paradonales condice	5721		12	×	×	\times	X	X	X		
CMP17-081012	quintininaranenga	<u> </u>		and the same	×	×	×	\times	×	X		
S10180-54W7	William St. Wallet	1520	gingstiller vir exclus	2	. ×		×	×	X	X		
, 4	and the second s	201	dintroviduos, q	15-	×		X	X	×	X		
NW 308N - 081013	1	514	sered.	li	\times		×	\times	×	X		
		1	<									
l to	Relinquished by: (Signature)		S	Received by: (Signature)			Relinquished by: (Signature)	d by:			Received by: (Signature)	
Supplemental Color	Printed Name:	3	まられる	Printed Name:	Mean	7.	Printed Name:	::			Printed Name:	
V-18695	Company			Company:			Company:				Сотрапу:	
	Date & Time:		8	Date & Time: / / / / / / / / / / / / / / / / / / /	2	(2021)	Date & Time:				Date & Time:	
										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		

meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program signed agreement between ARI and the Client. Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

18/9/11

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ARI Assigned Number:	Turn-around	Turn-around Requested:			Page:	ಚ	of					Analytical Resources, Incorporated	þ
	STD					smodule.	No.					Analytical Chemists and Consultants	nts
ARI Client Company:	777	Phone:	-081-902	9330	Date:		Ice Present?					4611 South 134th Place, Suite 100 Tukwila, WA 98168	0
1		i i		1	No. of Coolers:		Cooler Temps:					206-695-6200 206-695-6201 (fax)	~ l
t Na						.W	An	Analysis Requested	lested			Notes/Comments	П
laybor	Project -	Phase 2	2 GWC/	CMP		07			30 r				
	Šamplers: りA∨≀り	2 COEH	7 10 14	11cE	190	1779	શ	15/5		20.	78		
Sample ID	Date		Matrix	No. Containers	N +6T (80108 1,2A)	s'4d'sV) 80109	547 8260 (EE	0F18 19TWN	1438 m/silica 125210	F 18	'08		1
7-0180-8AW2	10/m/1/18	5.73	water	Luis.	X			×	X	X	X		
J	ro enclosed	3	de Santonia de la constanta de	1	×					×	X		
10000 - 80 CMS		Y Z		5		X		> <	×		X		
\$ 10.80 - 49 CRE	p retricted topic	2 2		. 0		X		<u>\</u>	×	X	X	,	
			i in the season discovering the	0		×		×	×	X	X		
		KO		<u> </u>		· ×		×	X	X	- - - - - -	ž.	
	<u> </u>	225	<u> </u>	2		.Х		· ` `	. X	X	7		I
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Comments/Special Instructions	Relinquished by.	- K		Received by:			Re	Relinquished by:			<u> </u>	Received by:	Ī
((Signature)	K	くくご	(Signature)	1	and the same of th	(S)	(Signature)			<u>ټ</u>	(Signature)	T
Joppiemental Cook	Printed Name:	ľ	がなった。	Printed Name:			5	Printed Name:			<u></u>	Printed Name:	
S_LB_695	Company:	4400 44000		Company:) ×	in the second second	8	Company:				Сотрапу:	
	Date & Time:		5	Date & Time:	<i>š</i> 5	430	Da	Date & Time:				Date & Time:	
	2 2 2	۱											1

meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program signed agreement between ARI and the Client. Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



CMP1-090331

GROUN	DWATER :	SAMPLING R	ECORD			WELL NUN	IBER: CM	P #		Page: 1 of 1
		WEST HARBOR	RPROJECT	- Phase II (GCWMP	Project Nun				
	3/3//2		-			Starting Wa			1.21	
	by: <u>DFR/AT</u>					Casing Stick				
	Point of Wel		7.0-17.0			Total Depth Casing Diar			-	·
		гос)	5.0-19.0			Casing Diar	meter (more	B:2	<u> </u>	
	-	69(ft Water		/Lofv	(αpf) = Δ, Δ,	(L)(ga	n			
	umes: 2" =	0.16 gpf	4" = 0.65 gp	f 6	" = 1.47 gpf	(L)(ya	1)		Sample Int	ake Depth (ft TOC): ~12 ft
BUBCIN		0.62 Lpf REMENTS	4" = 2.46 Lp	f 6	" = 5.56 Lpf					
Time	Cumul. Vol.		Water	Temp.	Specific	Diagolard	-11	T (**).	T	
i iiile	(gal or L)	(gpm or Long)	Level (ft)	(C or F)	Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)	Comments
915	/	0.4	/	/	/	7	/	/	/	cleur discharge
920	2	1	12.26	12.7	566	0.48	6.63	1495	4.65	tuibed after YSI
925	4	12,27	12041	12.7	537	0.37	6.53	239.5	4.80	
930	6		12,27		521	6.32	6.26	278.4	1.70	
435	8	1	12.27		513	0.27	1	266,5		
940	10		12.25		511	0.22	1	244.6	1 1	
945	12	\downarrow	17,25	12. 7	506	0.19	1	233,6		turbul before YSI
1 1 4				-1. L' 1	300	<u> </u>		<i>W</i> 1131.0		THE PARCY E 1 ST
								 -		
-					-					
						<u> </u>		-	<u> </u>	
							<u> </u>		_	
								 		
						:				
	·	<u> </u>	محمي					L		
Total Gallo	ns Purged:	<u>ر خ</u>	15		_	Total Casing	y Volumes F	Removed:	<u> 3.ිරිපි</u>	
Ending Wa	ter Level (ft	roc): 12,	25			Ending Total	Depth (ft T	TOC): 45%	16,85	
SAMPLE	INVENTO	RY	_							
Time	Volume	Bottle Type		Quantity	Filtration	Preservation		arance		Remarks
							Color	Turbidity & Sediment		
445	1L	HPDE		1	none	HNO3	clens	1	Total Metals	e _ Δe . Ph
i		Amber glass				none	1	1	cPAHs	· 1011 D
	1L	Amber glass			none	none			PCBs	
1	500mL	Amber glass		<u>-</u> -		none	1	 	TPH- DX	
	500mL	Amber glass			_					bood white elet-
	JOOITIL	Arribei glass	-		none	none		_	Bis(z-etnyt i	hexyl) phthalate
METHO		,					.		· · · -	
Sampling E	Equipment an	d lDs:	Peristaltic P	ump and YS	61 556 # 14 7	}-				
Purging Eq	uipment:	Peristaltic Pun	np w/ dedica	ted tubing		Decon Equi	pment:	Alconox, Di	istilled Wate	r
Disposal of	Discharged	Water:	Stored in 1,0	000 gallon te	emporary onsite	e storage tanl	k			
Observatio	ns/Comment	s:								
2230,7400	commone									
										



GROUNI	DWATER :	SAMPLING I	RECORD	•	,54164	WELL NUM	BER: CMF	*2		Pa	ge: 1 of 1
Project Na	me: SOUTH	WEST HARBO	R PROJEĆŤ	- Phase II C	CWMP	Project Num	ber: 08006	i4			
	<u> 3/3//</u>		-			Starting Wa	ter Level (ft	TOC):	12.92		
	by: DFR/AT					Casing Stick		-0.29	~ 1		
_	Point of Wel	•				Total Depth		19 85	-	3	
	Interval (ft. T		7.0-17.0			Casing Dian	neter (inche	:2			
	interval (ft. 1		5.0-19.0			1 A					
	•	(ft Wate				L)(gal	l)				
Casing vol	umes: 2" = -		4" = 0.65 gp		' = 1.47 gpf				Sample Inta	ake Depth (ft 1	TOC): ~12 ft
		0.62 Lpf	4" = 2.46 Lp	f 6	" = 5.56 Lpf						
		REMENTS	<u> </u>								
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pΗ	Eh ORP (mv)	Turbidity (NTU)	C	Comments
815	/	0.4		/	/	/	/		/	clear	dischara
820	2	i.	12,95	14.3	1650	0.52	9.20	148.5	4.09	turbid	discharge after Ysi
325	4		12.96	14,4	1550	0,40	4.29	132.7	1.96		
830	6		12,96	14.5	1482	0.36	9.31	156.2	1.90		
835	3		12,96	1 5 4	1447	0.32		138.7	1.82		
0840	10		12.96		1415	0.29	1	134.4	1,22		
845	12	3.7	12.96		1402		9.08	139.4			10 %
8-13	12-	V	16.76	17(16	1706	0.26	1,00	157.9	1.58	7016, U	befor 151
		· · · · · · · · · · · · · · · · · · ·									
			<u> </u>				,				
	• *										
		٠									
Total Gallo	ns Purged:	3=1	5		_	Total Casing	Volumes F	Removed:	4,5		
\	411 (64 -	roov 17	91.			Fadina Tatak	D4- (6) T	'CO'. 40-08	کی ا ب	2	
		гос): <u>12 с</u>	119			Ending Total	Depth (tt 1	OC): 1685	1/2 =	<u> </u>	
SAMPLE	INVENTO		1				•				
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	arance		Remai	rks
				:			Color	Turbidity & Sediment			
845	1L	HPDE	,	1	none	HNO3	clear	howe	Total Metals	s - As, Pb	
-	500mL.	Amber glass		2	none	none	ļ		cPAHs		
	1L	Amber glass	ļ	2	none	none			PCBs		
1	500mL	Amber glass		2	none	none			TPH- DX		_
-\-	500mL	Amber glass		2	none	none	<u> </u>	- ✓	Bis(2-ethyl	hexyl) phthala	te
METHOD	<u> </u>										
METHOD		1.10	n		N 550 # 147	1					
		d IDs:					-	A1 . =:			<u></u>
Purging Eq	•	Peristaltic Pu				Decon Equi		Alconox, Di	stilled Wate	<u> </u>	
Disposal of	Discharged	Water:	Stored in 1,	000 gallon to	emporary onsite	e storage tan	k				
Observatio	ns/Comment	s:									



CMP3-090401

GROUN	DWATER :	SAMPLING F	RECORD			WELL NUM	IBER: CM	- -3		Page: 1 of 1			
		WEST HARBOR	RPROJECT	- Phase II (GCWMP	Project Num							
	4/3/4		-			Starting Wa							
	by: <u>DFR/AT</u>	TOC				Casing Stic! Total Depth							
		OC)	6.0-16.0			Casing Diar							
		roc)	4.0-17.5			Occurig Dian	110111						
Casing Vo	lume 7, 9	<u>イ</u> (ft Wate	r) x 0 . i (6 (Lpfv)	$\log f = 1.2$	7_ (L)(ga	1)						
	lumes: 2" =	0.16 gpf		of 6	" = 1.47 gpf " = 5.56 Lpf		,		Sample Int	ake Depth (ft TOC): ~11 ft			
PURGIN	IG MEASU	REMENTS							-				
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lom)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	рH	Eh ORP (mv)	Turbidity (NTU)	Comments			
840	/	0,5	/						/	char discharge			
845	2.5	1	7.90	13.3	718	0,38	10.13	181,5	6.80	turbed after YSI			
850	5,0		7,90	13.1		0.32	9,75	185.8	4,79	1			
885	7,5			13.1	715	0.28	9.33						
900	16.0		790	13.1	719	0.25		194.7					
905	12.5		7.90		723	0.24		211.0	1.78				
910	15,0	1	7,90	12.9	126	0,26		2013		tooled w/o YSI			
	1 1	· · · · · · · · · · · · · · · · · · ·		,,,,	1.00	0120	Dion	F 011 2	11-50	10 1810 W/0 431			
													
		,											
		-			. <u>.</u>					<u> </u>			
				,		_							
		···· <u> </u>								<u> </u>			
T (0	<u> </u>	2 411							'3				
	ns Purged:	3.44			_	Total Casing	Volumes F	Removed:	3.10				
Ending Wa	iter Level (ft	гос):	2.9			Ending Total	Depth (ft T	OC): 15.84					
	SAMPLE INVENTORY												
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	rance		Remarks			
						'	Color	Turbidity & Sediment	·				
910	1L	HPDE				LINO2			~				
1					none	HNO3	elear	1	Total Metals	S - AS, PD			
1		Amber glass			none	none			cPAHs				
<u> </u>	1L	Amber glass	- - -		none	none		_	PCBs	<u> </u>			
-√		Amber glass			none	none		-		/silica gel cleanup)			
	500mL	Amber glass		2	none	none	_	*	Bis(2-ethyl l	nexyl) phthalate			
						<u>. </u>							
METHOL													
		d IDa	Doriet-W- D		21 550 #								
	•	d IDs:	····										
Purging Eq	•	<u>Peristaltic Pur</u>				Decon Equi		Alconox, Di	stilled Wate	<u>r </u>			
Disposal of	Discharged	Water:	Stored in 1,0	UUU gallon te	emporary onsite	e storage tank	<u> </u>		 -				
Observatio	ns/Comment	s:											
	· _												
													



CMP4-090402

GROUN	DWATER :	SAMPL	ING R	ECORD			WELL NUM	BER:	CMP	-4		P	age: 1 of 1
Project Na	me: SOUTH	WEST H	ARBOR	RPROJECT	- Phase II G	SCWMP	Project Num	ber: 0	80064	4			
	64/62/						Starting Wai	ter Lev	el (ft	TOC): /	0.34		
Developed	l by: <u>DFR/AT</u>						Casing Stick	cup (ft)	:	-0.32			
	Point of Wel		roc				Total Depth	(ft TO	C <u>):</u>	17			
	Interval (ft. T	_		7.0-17.0			Casing Dian	neter (i	nche:	2			·
Filter Pack	Interval (ft. 1	гос)		5.0-17.5									
Casing Vol	lume <u>6.6</u>	6 (f	t Water)x_0.16	(Lpfv)	(gpf) = 1,06	> (L)(gal	}					İ
	umes: 2" =	0.16 gpf		4" = 0.65 gp	f 6'	' = 1.47 gpf					Sample Into	ake Depth (ft	TOC): ~12 ft
PURGIN	G MEASU	0.62 Lpf REMEN		4" = 2.46 Lp	1 0	<u>= 5.56 Lpf</u>					a		-
Time	Cumul. Vol.	Purge	Rate	Water	Temp.	Specific	Dissolved	pl	1 1	Eh	Turbidity	!	Comments
	(gal or L)	(gpm or	Lpm)	Level (ft)	(C or F)	Conductance (µS/cm)	Oxygen (mg/L)	'		ORP (mv)	(NTU)		
825	/	U	5		/	/			- 1		/	cleur	dischurge
830	215			10.41	12,6	617	0.45	6.8	33	117,2	1.52	luvbid	active YSI
835	5,0			10.42	12.7	618	0,93	6.6		151.7	1.18	1	2010 21
840	7.5			10,43	12.7	618	1.07	6.4		136.2	0,86		
845	1010			10.43	12,6		0.83	6.2		121-1	6.77		
250	12.5			(6:43	12.6	617	0.75	6,2		137.2	0.86	V	
855	15,0	V		10.43	12.6	619	0,74	601		192.3	0,83	torbid .	J. YS)
	,			1-3-2		-12/	<u> </u>	0 1		<u> </u>		101010	
									7				
									1				
									_				
				<u> </u>					\dashv				
		 ;	<u> </u>						!		ر د م	<u> </u>	
Total Gallo	ns Purged:		3.9	4		_	Total Casing	Volum	nes R	emoved:	3.71		
Ending Wa	iter Level (ft 1	ГОС):	10.	43			Ending Total	Depth	(ft TC	OC): 17.0			
SAMPLE	INVENTO	RY											
Time	Volume	Туре		Quantity	Filtration	Preservation	A	ppea	rance		Rema	arks	
				-				Col	or	Turbidity &			
৪ 55	1L	HPDE					HNO3	cle		Sediment	T-4-1 M-4-1	- A - Dh	
1	500mL					none		<u></u>	ay.	1	Total Metals	5 - AS, FD	· -
		Amber gl				none	none		\dashv		cPAHs		
<u> </u>	1L	Amber gl				none	none	-+			PCBs		
	500mL	Amber gl				none	none	$-\downarrow$	_			v/silica gel cle	· / ·
$-\Psi$	500mL	Amber gl	ass		2	none	none			4	Bis(2-ethyl I	hexyl) phthala	ate.
									_				
METHOE													<u>-</u>
METHOE		JUD.		D. 24 10 5		N 550 #							
	quipment an												
Purging Eq						11	•	-	:	Atconox, Di	stilled Wate	<u> </u>	
uisposal of	Discharged	vvater:	-	Stored in 1,0	JUU gallon te	emporary onsite	e storage tan	K			. <u></u>	-	
Observation	ns/Comment	s:										<u></u>	



GROUNI	DWATER S	SAMPLING R	ECORD			WELL NUM	BER: CMI	P-5		P	age: 1 of 1	
		WEST HARBOR	PROJECT	- Phase II G	SCWMP	Project Num						
	4/1/2					Starting Wa	ter Level (ft		148			
	by: <u>DFR/AT</u>					Casing Stick		-0.27				
	Point of Wel		5.5-15.5			Total Depth Casing Dian		15.1 2 2				
	Interval (ft. 1		3.0-19.0			Casing Dian	neter (morte					
		2 (ft Water		12.16 nfw	$(anf) = \vec{l} \cdot \vec{l}$	< (LVan	1)					
	umes: 2"=1		4" = 0.65 gp		(9p1) =(' = 1.47 gpf	(L/(gai	1,7		Sample Inta	ake Denth (ft	TOC): ~10.5	ft
			4" = 2.46 Lp		' = 5.56 Lpf				Cumpic in.	ano Bopai (it	100). 10.0	'`
PURGIN	G MEASU	REMENTS										
Time	Cumul. Vol.		Water	Temp.	Specific	Dissolved	ρН	Eh	Turbidity	· -	Comments	
	(gal or £)	(gpm or Lpm)	Level (ft)	(C or F)	Conductance (μS/cm)	(mg/L)		ORP (mv)	(NTU)			
1245		015	8,48							ilear	dischar	rye
1250	7.5	\downarrow	8.73	11,00	467	0.41	6.22	230.1	12.3	torted	ufter Ys	1
1255	5,0	0.4	4.76	11.2	480	0,31	6.22	231,8	11.4		, ,	
1300	7, 0	014	8.75	11, 1	482	0.42	6,22	254.3	8.91			
1305	9.0		8,75	11.2	482	0.47	5,96	272,9	8,85			
1310	1110_		8,75	11.2	180	0,33	6.12	258,3	4,77	1/		
1315	-13,0			1112	480	0.32	6105	257.6	4,11	torby	w/o YS1	
, 1, 1	110		875	[[] [_	יסטו	0174	6102	1221.0	/11/	TUVVIA	W/0 121	
							<u> </u>					
								<u> </u>				
					 							
						:						
_												
Total Gallo	ns Purged:	3,4	2		_	Total Casing	Volumes F	Removed:	3,25			
Ending Wa	ter Level (ft 1	roc): 8.7	·		_	Ending Total						
	INVENTO			•			. – орил (п. т			_		
Time	Volume	Bottle Type	1	Quantity	Filtration	Preservation	Appe	arance		Rema	arke	
111110	VOIGITIC	Doute Type		Quantity	·	i iosorvation	7,ррсі	Turbidity &		Nome	aino	
_							Color	Sediment	_			
1315	1L.	HPDE		1	none	HNO3	clear	none	Total Metals	s - As, Pb		
	500mL	Amber glass		2	none	попе			cPAHs			
	1L	Amber glass		2	none	none			PCBs			
	500mL	Amber glass		2	none	none			TPH- DX (v	v/silica gel cle	eanup)	1
1	500mL	Amber glass		2	попе	none	1	1	Bis(2-ethvl)	hexyl) phthala	ate	
			<u></u>	_					, , , , , ,			
				-								
METHOE	os											
Sampling E	quipment an	d IDs:	Peristaltic P	ump and YS	81 556 #							
Purging Eq	uipment:	Peristaltic Pur	np w/ dedica	ted tubing		Decon Equi	ipment:	Alconox, D	stilled Wate	r		
Disposal of	Discharged	Water:	Stored in 1,0	000 gallon te	emporary onsite	e storage tan	k					
Ohsanzation	ns/Comment	e.										
ODSGI VALIUI		·			•							
									-			



CMP 15 - 090402

GROUNI	DWATER :	SAMPLING	RECORD			WELL NUM	IBER: CM	P-15		Page: 1 of 1
Project Na	me: SOUTH	WEST HARE	OR PROJECT	- Phase II (GCWMP	Project Nun				
	リ <u> 2 2</u> by: <u>DFR/AT</u>					Starting Wa Casing Stick		TOC <u>): 4</u> 0.29-		
	Point of Wel					Total Depth		17.05		
	•	OC <u>)</u>				Casing Diar				
	•	ГОС)				l <u></u>				
					(gpf) =	<u>니</u> (L)(ga	1)			
Casing vol	umes: 2" = -		4" = 0.65 gp		" = 1.47 gpf				Sample Int	ake Depth (ft TOC): ~12 ft
PURGIN		0.62 Lpf REMENTS	4" = 2.46 L _I	<u>or 0</u>	" = 5.56 Lpf		<u>-</u>			
Time	Cumul. Vol.	Purge Rat	e Water	Temp.	Specific	Dissolved	рH	Eh	Turbidity	Comments
	(gal or L)	(gpm or Lp)	m) Level (ft)	(C or F)	Conductance (µS/cm)	Oxygen (mg/L)		ORP (mv)	(NTU)	
1645		015					/	/		clear discharge
1050	21.5	1_	10.02	13.3	7340	0.14	682	2079	0.97	tuibed after Y 81
1055	5:0		10.03	13.5	7044	0.15	6.56	210.0	1.19	<u> </u>
1100	7.5		10.03	13.4	7295	0.15	6,31	206.6	0.46	
1105	LO, D		10.09	13.4	7196	0,12	6,20	207.7	0.99	
1116	145		10.04	13,3	7070	0.11	6.12	203.5	1,04	
1115	15,0	W	10.04	13, 2	7059	0.10	6.69	198.2	0.73	turbed ets YSI
						V-1-1-1-1-1			,	7
					·			·		
-					_					
							-			
			<u> </u>				<u> </u>			-
			 							
										
Total Gallo	ns Puraed:	3,6	 [4]			Total Casing	Volumes F	Removed:	3,45	
	ter Level (ft 1		04		_				<u> </u>	
	<u> </u>	. 00/.	<u></u> -			Ending Total	Depth (it i	00): 17.05		
Time	INVENTO Volume		. T	Ougatitu	Filtration	Description	Anna		_	
11016	volune	Bottle Type	;	Quantity	Filtration	Preservation	<u> </u>	Turbidity &		Remarks
							Color	Sediment		
1115	1L	HPDE		1	none	HNO3	cleur	none	Total Metals	s - As, Pb, Sb, Cr, Cu, Ni
	500mL	Amber glass		2	none	none			cPAHs _	
	1L	Amber glass		2	попе	none			PCBs	
	500mL	Amber glass		2	попе	none			TPH- DX (w	v/silica gel cleanup)
√	500mL	Amber glass		2	лопе_	none)	→	Bis(2-ethyl l	hexyl) phthalate
									<u>-</u>	
METHOD	S				······································					
Sampling E	quipment an	d IDs:	Peristaltic P	ump and Y	31 556 #					
Purging Eq	uipment:	Peristaltic I	oump w/ dedica	ited tubing		Decon Equi	ipment:	Alconox, Di	stilled Wate	·
Disposal of	Discharged	Water:	Stored in 1,	000 gallon t	emporary onsite					
										
CD3CI ValiUI	no comment	J				···			-	
			· · · · · · · · · · · · · · · · · · ·			· <u> </u>				<u></u>



CMP17-090331

GROUN	DWATER S	SAMPLING F	RECORD			WELL NUMI	BER: CMP	P-17		Page: 1 of 1
Project Na	me: SOUTH	WEST HARBO	ROJECT	- Phase II C	3CWMP	Project Numl			71	
	3]31[09		-			Starting Wate	-		9,05	
	by: <u>DFR/AT</u> Point of Wel				 .	Casing Stick Total Depth (
		OC)	6.0-16.0		······································	Casing Diam				·
		roc)	4.0-16.5				``			
Casing Vo	lume	し(ft Wate	r) x <u>. 1.6</u>	(Lpfv)	نارا = (gpf) =	(L)(gal))			
	umes: 2"=	0.16 gpf	4" = 0.65 gp 4" = 2.46 Lp	f 6	" = 1.47 gpf " = 5.56 Lpf				Sample Inte	ake Depth (ft TOC): 14 ft
PURGIN		REMENTS								
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lom)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)	Comments
1415	/	0,35		/		1	/		/	clear dischumi
1426	1.75	1	9,08	12,4	663	0,80	6.03	287.6	33	clear dischung
1425	-		9.08	12.4	680	0,60	6.04	284.1	16	turbed after YSI
1430	5.25		9.08	12,3	679	0.47	6,03	281.6		i
	7.00		4.08	12.3	681	0,44	6,05	280.8	3.11	
1435			9,08	12,3	678			279,5	6:08	
14.46	8.75		1.08		1 '	0,39	6,04			
1445	1015			12.3	679	0.41	6.04	279,1	6,04	
1450	12.25	**	9.08	12.3	678	0139	605	278,3	2,00	forbid w/o YSI
										·
		•								
Total Gallo	ns Purged:	3.2	-2		_	Total Casing	Volumes F	Removed:	2.8	2
	_		3 m D		_					
		ГОС):	1.00			Ending Total	Depth (ft T	OC): 16.21		
	INVENTO				I					
Time Volume Bottle Type Quantity Filtration Preservation Appearance Remarks Color Turbidity & Sediment										
							Color	Sediment		.
1450	1L	HPDE		1	none	HNO3			Total Metal	s - As, Pb
[500mL	Amber glass		2	none	none			cPAHs	
	1L	Amber glass			none	none			PCBs	
	500mL	Amber glass			none	none				v/silica gel cleanup)
,	500mL	Amber glass			none	none				hexyl) phthalate
$\vdash \forall \vdash$	40mL	VOA vial			none	HCI				Ethanes and Ethenes (CEEs)
	TOULE	YOR VIGI	,	3	TIONG	.10			ornormated	Lateries and Eulenes (GELs)
METHO	DS	<u> </u>	1		l			I	_	
		d IDs:	Dedicated 0	QED Well W	/izard Bladder I	oump and YS	I 556 #			
Purging Eq					Pump	Decon Equi	•	Alconox D	istilled Wate	
0.0		Water:				•		. accitor, D	Sunga Prate	
Piohosai 0	- PiscialGed	vva.ci	owieu III I,	ooo gail0t1 l	στηροιατ <u>ή υπο</u> ιι	o stor <u>age talli</u>	`			· · · · · · · · · · · · · · · · · · ·
Observatio	ns/Comment	s:			 					
							**			



ROUNI	DWATER :	SAMPLING F			31 and	WELL NUM						Page: 1 of 1
	me: SOUTH	WEST HARBO	RPROJECT	- Phase II C	SCWMP	Project Num						
ate:	h DED/AT		_			Starting Wat						
	by: DFR/AT	TOC				Casing Stick Total Depth			-0.2 18			
		OC)	7.0-17.0			Casing Dian						
lter Pack	Interval (ft.	ГОС)	6.0-17.5									
asing Vol	ume <u>7.</u>	고니 (ft Wate	r) x 0 , i	16(Lpfv)	(gpf) = <u>[</u>	(L)(gal)					
asing vol		Ģ.	4" = 0.65 gpt		" = 1.47 gpf					Sample Int	ake Depth (1	ft TOC): 15 ft
			4" = 2.46 Lp	f 6	" = 5.56 Lpf				 			<u>-</u>
		REMENTS	T						1		1	
Time	Cumul. Vol. (gal or L)		Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pł	Ħ	Eh ORP (mv)	Turbidity (NTU)		Comments
105		0.35	/								clear	discharge
110	1.75		16,80	11,7	519	1.90	6.	31	73.8	2.69	tulbed	efter YSI
115	3,50		10.80	11.7	513	1.34	6:	32	65.0	1.34	1	.,,
120	5,25		10,00		901	1.20	6.		44.1	1.02		
125	7 00			11.6	441	1,08	6.		31.7	0.74		
130	8.75		10.80	. ,	486	1,03	6.2		43.2			
35	10:55		10.81		480	0,99	6,7		75,4	0,60	1	
140	12,25		10.81	11,5	476	0.96	6.2		74.3	0,53	1 1	before YS
170	1-101	- V	to.ot	1(12	110	0,10	.O.Z	رعار	1717	V13 /	TOTALL	WELLANE 12
otal Gallo	ns Purged:	3.27	2	•	_	Total Casing	y Volun	nes R	Removed:	<u> 2,80</u>		
odina Ma	ter Level (ft '	гос): <u>10.</u>	0.1			Ending Total	l Danth	ı /ft T	OC\- 18			
			<u></u>			Litting rota	Depu	1 (11. 1			· · · · · · · · · · · · · · · · · · ·	-
	INVENTO			O	Filtration	Drasanistian	,	<u> </u>		1	Don	
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	<u> </u>		arance Turbidity &	-	Ren	narks
	-	FM105-	040331				Col	lor	Sediment			
145	1L Get 6	APOE		2	none	HNO3	cleu	√	nove	Total Metal	s - As, Pb	
	500mL	Amber glass		4	none	none	1			cPAHs		
	1L	Amber glass		4	none	none				PCBs		
	500mL	Amber glass		4	none	none				TPH- DX (\	w/silica gel c	eleanup)
	500mL	Amber glass		4	none	none]		Bis(2-ethyl	hexyl) phtha	alate
⋖	40mL	VOA vial		6	none	HCI	$ \Psi $		4	Chlorinated	l Ethanes ar	nd Ethenes (CEEs)
ETHO	os		<u> </u>		•		•					
ampling E	quipment ar	ıd IDs:	Dedicated G	ED Well W	/izard Bladder	Pump and YS	SI <u>55</u> 6 ;	#				
	uipment:				Pump				Alconox, D	istilled Wate	er	
	•	Water:		•	_	•	•					
										_		·



MW26R-090401 and WELL NUMBER: MW-26R GROUNDWATER SAMPLING RECORD Page: 1 of 1 Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP Project Number: 080064 Date: 4/1/2009 Starting Water Level (ft TOC): Developed by: DFR/AT Casing Stickup (ft): -0.32 TOC Measuring Point of Wel Total Depth (ft TOC): 17.05 Screened Interval (ft. TOC) 6.5-16.5 Casing Diameter (inche-Filter Pack Interval (ft. TOC) 4.0-17.0 Casing Volume 7,39 (ft Water) x 0,16 $(Lpfv)(gpf) = 1 \cdot 12 \quad (L)(gal)$ Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf6" = 1.47 apfSample Intake Depth (ft TOC): ~ 11.5 ft 4" = 2.46 Lpf 6" = 5.56 Lpf2" = 0.62 Lpf**PURGING MEASUREMENTS** Cumul, Voi. Purge Rate Water Temp. Specific Dissolved ьHа Eh Turbidity Comments (gal or L) (gpm or Lpm) Level (ft) (C or F) Conductance Oxygen ORP (NTU) (µS/cm) (mg/L) (mv) 0,5 clear dischary. 950 6,59 242.3 2,5 9.66 1556 0.42 2,70 tookid 5,0 1394 6.56 233,2 1600 715 12.4 1304 0.26 6.47 235,8 6,92 9.66 1005 1258 6.42 2296 1,24 14, 4 0.25 1010 10.0 12,4 1212 6.41 227.3 9,66 0,22 1015 12.5 12,3 1198 torbid 1.66 0,22 15.0 1020 3,34 3,44 Total Gallons Purged: Total Casing Volumes Removed: 9.66 Ending Water Level (ft TOC): Ending Total Depth (ft TOC): 17.05 SAMPLE INVENTORY Bottle Type Quantity Filtration Preservation Appearance Remarks Volume Time Turbidity & Color Sediment 1620 HPDE 2 none HNO3 Moul Total Metals - As, Pb, Sb, Cr, Cu, Ni 4 none cPAHs 500mL none Amber glass PCBs Amber glass 4 none none TPH- DX (w/silica gel cleanup) 500mL Amber glass 4 none none Bis(2-ethyl hexyl) phthalate 500mL Amber glass 4 none none duplicate 1025 MW76R- 0904010 METHODS Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # Decon Equipment: Alconox, Distilled Water Peristaltic Pump w/ dedicated tubing Purging Equipment: Disposal of Discharged Water: Stored in 1,000 gallon temporary onsite storage tank Observations/Comments: Second set of bottles collected for duplicate sample 1025



MW36-09040Z

GROUN	DWATER S	SAMPLING R	ECORD			WELL NUM	BER:	MW-	36,			Page: 1 of 1
		WEST HARBOR	RPROJECT	- Phase II C	GCWMP	Project Num						
	4/2/2 by: DFR/AT		•			Starting Wa		•		1,06		
	Point of Wel					Casing Stick Total Depth			-0.23 73	···		
	Interval (ft. Te		58.0-73.0			Casing Dian	-			· · · · · · · · · · · · · · · · · · ·		
	Interval (ft. 1		55.0-71.0									
Casing Vol	lume 63.	94(ft Water	a ode	(Lpfv)	$(apf) = lO_1 \hat{Z}$	23 (L)(gal	n					
	umes: 2" =	0.16 gpf	4" = 0.65 gp 4" = 2.46 Lp	f 6'	" = 1.47 gpf " = 5.56 Lpf		,			Sample Inte	ake Depth (f	ft TOC): ~ 65.5 ft
PURGIN		REMENTS	1 2.13 28	<u> </u>	0.00 _p.				 			
Time	Cumul. Vol.		Water	Temp.	Specific	Dissolved	ρŀ	1	Eh	Turbidity		Comments
	(gal of t)	(gpm or zpm)	Level (ft)	(C or F)	Conductance (µS/cm)	Oxygen (mg/L)			ORP (mv)	(NTU)	_	
945		015	/	/							cleur	discharge
950	215		9.11	1215	3657	0.24	6,		211,6	0,98	forbid	after YSIO
955	5,0			12.6	3689	0,18	6.5		212.3	1.63)	
1000	715		9.13	12:5	3727	0.12	65	۵	220,2	0.92		
1605	16.6		9,13	12,5	3733	6,12	6,48	B	204,3	0195		
1016	12,5		9,13	12.4	3737	0.12	6.4	8	210,3	0.97	,	V
1017	W\$.()	4	9,13	12.4	3734	0.11	6,4	8	219,9	0.84	turbid	w/o YSI
										-		
		· -										
							İ					
•••												
Total Galio	ns Purged:	3.46	 1			Total Casing	. Volum	ses R	emoved:	013	<u>_</u>	
					_					0,,0	<u></u>	
Ending Wa	ter Level (ft 7	гос): <u>9.13</u>				Ending Total	l Depth	(ft T	OC): 73			
SAMPLE	INVENTO	RY										
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	A	ppea	arance		Rem	narks
							Cal	or	Turbidity & Sediment			
1015	1L	HPDE		1	none	HNO3	clea	<u>, </u>		Total Metal:	s - As, Pb. S	Sb, Cr, Cu, Ni
	500mL	Amber glass			none	none	P			cPAHs	-,, -	
	1L	Amber glass			none	none				PCBs		
	500mL	Amber glass			none	none					//silica gel cl	leanup)
110	500mL	Amber glass			поле	none	- √		W		hexyl) phtha	<u> </u>
							_				prioriu	
METHOD	s				·	_	•		l	•		
Sampling E	quipment an	d IDs:	Peristaltic P	ump and Y	SI 556#							
Purging Eq	uipment:	Peristaltic Pur	np w/ dedica	ted tubing		Decon Equ	ipment		Alconox, Di	stilled Wate	r	
Disposal of	Discharged	Water:	Stored in 1.0	000 gallon te	emporary onsite	•						·-
					***				<u>-</u> -			
oservatioi	ns/Comment	s:				·						
						··· · · · · · · · · · · · · · · · · ·						



MW125-090331

GROUN	DWATER :	SAMP	LING R	ECORD			WELL NUM	IBER: MW	-125		Page: 1 of 1	
Project Na	me: SOUTH	WEST	HARBOF	RPROJECT	- Phase II C	CWMP	Project Num			-	···	
	3/3//2			-			Starting Wa					
	by: <u>DFR/AT</u> Point of Wel		TOC				Casing Stick Total Depth					
	Interval (ft. T			5.0-15.0			Casing Dian					
	Interval (ft. 7			3.0-15.0								
Casing Vo	lume <u>6 1</u>	14	(ft Water) x Ocl6	(Lpfv)	(gpf) = <u>[] [</u> [(L)(gal	I)				
Casing vol	umes: 2" =	0.16 gp 0.62 Lp	f	4" = 0.65 gp 4" = 2.46 Lp	f 6'	" = 1.47 gpf " = 5.56 Lpf				Sample Into	ake Depth (ft TOC): 13 ft	
PURGIN	G MEASU			· · · · ·								
Time	Cumul. Vol. (gal or L)		je Rate or (ஹ்)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)	Comments	
1310		0,	35	/	/		/	/		/	clear discharge	
1315	1.75			6,56	11.4	608	2.65	6.26	131.5	1,75	turbed after YSI	
1320	3,50			6,56	11.4	609	2,44		118.7	1.27	1	
1325	5,25			6,56	11.4	604	2.27		155.8	1.02		
1330	7,00			6.56	11.4	593	2,05		1643	1.01		
1335	8,75			6.56	11.3	586	1.84		162.9			
1340	10.5			6,58	14	586	1,77	6.19			V	
1345	12,25		V	6.58	11.4	589	1174	6.18	150,1		torked w/s YSI	
											/	
Total Gallo	ns Purged:	•	3,22				Total Casing	ı Volumee E	Pomoved:	7 4 6	(a)	
	iter Level (ft 1	 				_	Ending Total				<u> </u>	
	INVENTO							i Deptii (it i	00). 10.00			
Time	Volume		е Туре		Quantity	Filtration	Preservation	Anne	arance	· · · · · ·	Remarks	
Titilo	Volume	Dotte	c type		Quantity	THEADIL	i reservation		Turbidity &		Nemary	
								Color	Sediment			
1345	1L	HPDE			1	none	HNO3	clew	none	Total Metal:	s - As, Pb	
1	500mL	Amber	glass		2	none	none	1		cPAHs		
	1L	Amber	glass	· - · ·	2	none	none			PCBs		
	500mL	Amber	glass		2	none	none			TPH- DX (v	w/silica gel cleanup)	
	500mL	Amber	glass		2	поле	none	1		Bis(2-ethyl	hexyl) phthalate	
	40mL	VOA vi	al .		3	попе	HCI	4	4	Chlorinated	Ethanes and Ethenes (CEEs)	
METHOE	os											
Sampling E	quipment an	d IDs:		Dedicated C	ED Well W	izard Bladder F	Pump and YS	1 556# /	<i>04</i>	<u> </u>	·	
Purging Eq	uipment:	Dedic	cated QE	D Well Wiza	rd Bladder	Pump	Decon Equi	ipment:	Alconox, D	istilled Wate	er	
Disposal of	Discharged	Water:		Stored in 1,0	000 gallon te	emporary onsite	e storage tani	k				
Observatio	ns/Comment	s:										
						. –						
											·	



MW44 - 090401

GROUN	DWATER S	SAMPLING R	ECORD			WELL NUM	IBER: MV	V-44		Page: 1 of 1			
		WEST HARBOR	RPROJECT	- Phase II (3CWMP	Project Num							
	<u>4/01/</u>	2009	i			Starting Wa			8.94				
	by: DFR/AT	700				Casing Stick		-0.18		,			
	Point of Wel	TOC DC)	n/a			Total Depth Casing Dian							
	Interval (ft. 1		n/a			Casing Dian	neter (inch	e	2				
		.96_(ft Water		f (1 mfr)	(ant) = 16 3	5 /1 Van	13						
	umes: 2"=1		1 × <u>0 ° 1</u> 4" = 0.65 gp	<u>Б</u> (LDIV)	(gpi) = <u>/b i 3</u> " = 1.47 gpf	(L)(ga	')		Samala Int	ake Depth (ft TOC): ~ 68 ft			
Casing voi			4" = 2.46 Lp		" = 5.56 Lpf				Sample int	ake Bepair (it 100). 00 it			
PURGIN		REMENTS											
Time	Cumul. Vol.		Water	Temp.	Specific	Dissolved	рН	Eh	Turbidity	Comments			
	(gal or L)	(gpm or Lipph)	Level (ft)	(C or F)	Conductance (µS/cm)	Oxygen (mg/L)		ORP (mv)	(NTU)				
(070	/	015								clear duch			
1035	2.5	t	8.45	12.)	106	7.07	7.25	13873	10.32	turbed w/ YSI			
1040	5.0		8.96	11.9	67	6.94	7.13	120.6	9157	1			
1045	7.5		8.97	12.3	48	6.97	6.89	164,4	9.47				
					-				1				
1050	10.0	 	8.98	12.4	43	7.18	6.74	1620	9.31				
102 z	12.5			12,4	49	7.06	6.60	179,9	9,39	V			
11 00	15.0	- A	9.101	11.5	46	+ 25	642	194.8	7,33	turbed w/o YSI			
Tatal Callana Rumandi. 3, 44													
Total Gallons Purged: 3.99 Total Casing Volumes Removed: 0.38													
Total Gallons Purged: 3.99 Total Casing Volumes Removed: 0,38 Ending Water Level (ft TOC): 9.01 Ending Total Depth (ft TOC): 73.9													
SAMPLE	INVENTO	RY											
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Арре	earance		Remarks			
		•					Color	Turbidity &	1				
1 (80%			•					Sediment					
1(00	1L	HPDE		1	none	HNO3	Clear	hone	Total Metal	s - As, Pb, Sb, Cr, Cu, Ni			
1 -	500mL	Amber glass		2	none	none		 	cPAHs				
	1L	Amber glass		2	none	none		1	PCBs				
	500mL	Amber glass		2	none	none			TPH- DX (v	v/silica gel cleanup)			
	500mL	Amber glass		2	none	none	1		Bis(2-ethyl	hexyl) phthalate			
		* .						7					
						_							
METHO	os '				1				•				
Sampling E	quipment an	d IDs:	Peristaltic P	ump and Y	SI 556 #								
Purging Eq	, ,	Peristaltic Pur				Decan Fau	ipment:	Alconox. I	Distilled Water	er			
	•	Water:				•	_						
Pishosai Oi	- Provinci Gen	· · ator ·	·	ooo gailtii l	omporary 011810	c storage (all	IX.						
Observatio	ns/Comment	s:			,					·			
Ī													



MW308N-09040Z

GROUN	DWATER:	SAMPLING R	ECORD			WELL NUM	BER: MW	-308N			Page: 1	of 1
		WEST HARBOR	RPROJECT	- Phase II (CWMP	Project Num						
	1/2/20		•			Starting Wa						
	by: <u>DFR/AT</u>	TOC				Casing Stick Total Depth		-0.29 17.95				
			12.5-17.5			Casing Dian						
			10.0-21.5				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
		0억 (ft Water				<u>3(L)(gal</u>)			4		
Casing vol	umes: 2" = 2" =		4" = 0.65 gp 4" = 2.46 Lp		" = 1.47 gpf " = 5.56 Lpf				Sample Int	ake Depth	(ft TOC): <u>~</u>	15 ft
PURGIN	G MEASU	REMENTS										
Time	Cumul, Vol. (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	рH	Eh ORP (mv)	Turbidity (NTU)		Commer	nts
1240		0,5	/			/		/			·	
1245_	2.5	0.3	7.06	12.0	2400	0.35	6.74	180,1	24.0	alanu	nactul.	s present
1250	\$10	0.25	1,20	12.3	1801	0.07	10.6D			-10 la	JA 1	atter YSI
1255	5.5	0.2	8,00	12.2	1766	0.06	6.50	181.5		1210	401010	ATRO ISI
1700	7.0	U: L	8,00	12.2	17-48		6.45	176,2				
						0.06						
2011	8,5		8.30	12,2	1734	0.06	6.43	182,4				
1310	10,0		8,32	12.3	1714	0.06	6.43	190.9	8.92			
1315	12.5	\forall	8,34	12.3	1712	0.05	6.45	188,3	8.62	tuibid	₩/0 Y	SL
											<u> </u>	
	-				:							
									-			
					_				- · · · -			
Total Galla	ne Durand:	3.28	· · · · · · · · · · · · · · · · · · ·			Total Casina	Volumon E	l	1.3	-04		
	ns Purged:		,		_	Total Casing	volumes F	Removed:		<u>07</u>		
Ending Wa	iter Level (ft	TOC):	34			Ending Total	Depth (ft T	OC): 17.95				
	INVENTO						-	· · ·				
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	arance		Rei	marks	
					•		Color	Turbidity & Sediment				1
1710					. <u>-</u>			Sediment				
1315	1L	HPDE				HNO3			Total Metal	s - As, Pb		
	500mL	Amber glass			none	none	<u></u>		cPAHs			
	1L	Amber glass		2	none	none			PCBs			
	500mL	Amber glass		2	none	none			TPH- DX (v	v/silica gel	cleanup)	
	500mL	Amber glass	,	. 2	none	none			Bis(2-ethyl	hexyl) phth	alate	
4						<u> </u>					· —	
,					· · · · · · · · · · · · · · · · · ·							
METHO	os				<u> </u>		,	·				
Sampling E	Equipment an	d IDs:	Peristaltic P	ump and Y	SI 556 #							
Purging Eq		Peristaltic Pun				Decon Equi	pment:	Alconox, D	istilled Wate	er — —		
	•	Water:										
•	_	*						"				
Observation	ns/Comment	s:				•		· · ·				
	· .										•	



ROUN	IDWATER	SAMPLING R	FCORD			WELL NUM	BER. MW	-3085		P	age: 1 of 1
				Db U.	2014/40	<u> </u>					aye: For I
roject IV	ame: SOUTH	WEST HARBOF	RPROJECT	- Phase II (3CWMP	Project Num Starting Wa			5,74		
	d by: DFR/AT		•			Casing Stick					
-	g Point of We		·			Total Depth					
	Interval (ft. T		35.0-40.0			Casing Dian	-				
		TOC)	31.0-40.0			Juding Blan	notor (mone	" <u>-</u>			
	•	i 7ら (ft Wate		1 11-63	/	7 ///					
						(L)(gai	1)		0		TOO: 07.5.0
asing v	olumes: 2" =		4" = 0.65 gp		" = 1.47 gpf				Sample Int	аке Deptn (т	TOC): ~ 37.5 ft
11501			4" = 2.46 Lp	1 0	" = 5.56 Lpf					-	
		REMENTS									
Time	Cumul. Vol.	-	Water	Temp.	Specific	Dissolved	pН	Eh	Turbidity		Comments
	(gal or L)	(gpm or Lpm)	Level (ft)	(CorF)	Conductance (µS/cm)	Oxygen (mg/L)		ORP (mv)	(NTU)		
1100	1	0.5	674	/ /	(µO/OIII)	(3119/2)		(11(V)		- 1	1 .
400		+	5:74	100	1.			- 10: -		Clear	w/ YS/
405		0.3	6.48	13.1	1558	0.12		238.2	1.29	turbul	u/ Y5/
110	4,0	0.3	6.37	13.0	1567	0.09	7.26	239.0	1.01	,	•
115	9.5	0157	6.25	12.9	1567	0,08	7.16	232,6	0.96	1	
)				_	•				
420	1.6	\vdash	6,25	12.9	1567	0.09	7.15	205.5		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
425	9.5		6,25	12.9	1565	0,00	7,13	2123	1,43	A	
430	(0,0	4	6.23	12.9	1565	0,08	7.13	208,9	1.61	toubid	w/o 751
1 ,,-			<u> </u>		, J J ,,	10,00	/1//	20017	1 10 .	, - 7.00	
		· · · · ·				 					
					<u> </u>						
	-										
	<u> </u>										<u> </u>
tal Gall	ons Purged:	2,63	•			Total Casing	Volumes F	emoved:	0,47	<u> </u>	
tei Caii	ons raigea.				_	Total Gashig	Volumes	terrioved.	0177	<u></u>	
ding W	ater Level (ft	тос): <u>6, 2</u>	-3			Ending Total	Depth (ft T	OC): 40.5			
						•					
	E INVENTO					<u> </u>	······				
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	arance		Rema	arks
							Color	Turbidity & Sediment			
(1) 0	41	HPDE				111100	-: -	· · · · · · · · · · · · · · · · · · ·	T.1-184.4.1	. 4 (2)	
430	1L	HPDE			none	HNO3	Cluv	nove	Total Metal:	s - As, Pb	-
1	500mL	Amber glass	, ASS.	2	none	none			cPAHs		
	1L	Amber glass			none	none			PCBs		
T	500mL	Amber glass			none	попе				v/silica gel cle	anun) ·
\overline{V}	- I	Ť	* -		· · · · ·			 ,[
<u>v</u>	500mL	Amber glass		2	попе	попе	_	<u> </u>	Bis(2-ethyl	hexyl) phthala	ate <u>. </u>
	ļ			·							
						'					
	DS	-	l l						· <u>-</u>	•,	
ETHO									1		
		ıd IDe	Peristaltic D	umn and V	SI 556 #				1		
npling	Equipment ar	nd IDs: Peristaltic Pur	Peristaltic P		SI 556 #	Decon Equi			istilled Wate		

Observations/Comments:

Date & Time:		1e:	Date & Time:	1550		31/09	Date & Time:/	1250		Date & Time: 1	
Company:			Company:			つだし	Company:	J	4 4	Company:	
Printed Name:		me:	Printed Name:	3	blaardsen	_	Printed Name:	アルサ		Printed Name:	
(Signature)			(Signature)				(Signature)	15	と一支	(Signature)	
Received by:		ed by:	Relinquished by:			(,	Received by:		チラ	Relinquished by	Comments/Special Instructions
	×	\times	×	×	×	×	72	«	2	F	FM105 - 090231 D
	×	×.	×	×	×	×	12	~	35	konce	CMP17-090331
	\times	×	×	×	×	×	7	E TO STATE OF	1345	T MATERIAL PR	MW125-090331
	×	×	×	×.	×	×	2	k Property day, when	20	II Maldourtscamilles	FM105-690331
	×	×,	×	×		×	mas)	Horizon	245	i egyppiddile**	CMPT 040331
	X	×	×	×		×	و	٤	845	3/3/109	CMP2-090331
	PC B 80 8	BEH 827	NWTP+ Preset W/silice	(PAH 8770	CE6 824		No. Containers	Matrix	Time	Date	Sample ID
	s 3 Z	POC	1-PX	5	'S	letert	TILE	\$	£v6#	Samplers:	department of the second
Notes/Comments		्रRequested श	Analy	M	,	s	GWCMP	2 60	Phase	- + C+ -	Southwest Harbor Pra
206-695-6200 206-695-6201 (fax)		3. 2.00	がた Signal	Cooler Temps:	7	No. of Coolers:					Chip Goodhive
4611 South 134th Place, Suite 100 Tukwila, WA 98168	4	,	resent?	₽6	31/2009	Date: 3/3/	70	780 9370	Phone: 206 7	110	ARI Client Company: Aspect Consulting Li
Analytical Resources, Incorporated Analytical Chemists and Consultants	•	ogray ,		o t	16takeur	Page:			Requested:	Turn-around Requested: らて う	ARI Assigned Number:

signed agreement between ARI and the Client. said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or comeets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Time:	Date & Time:	and the second		Date & Time:	>	1000	R	Date & Time:	0	1540	Date & Time:		
ny:	Company:			Company:		<u></u>	ļ · \	Company:) C	-	TSOC+		
Name:	Printed Name:		<u>.</u>	Printed Name		5	=	Printeginame:	j6H	AVID RU	DA V		
ed dy: ure)	(Signature)	i	l oy.	(Signature)		(m)	\$ \$		2	2	(Signature)	Comments obecast instructions	
	7							DOCON AND AND AND AND AND AND AND AND AND AN			Relinquished by:	ommonts/Conocial Instructions	3
	-		, j									(4)	<u> </u>
									į				
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/		X	X	<	×		\times		Ź	05 H	\leftarrow	MW3085-09040)	785,
Metals-Astb and		+	X	X.	X	S S S S S S S S S S S S S S S S S S S	×	2	×	1315		CMP 5-090401	(
		X	X	X	×	×		_0	٤	1100	7	10401-11WM	7
		\times	×	×	×	×			Ź	1025		MW26R-090401D	3
		\times	X	×	×	×		_4	٤	1020		MW26R-096401	>
	÷	\times	X	X	×		×	-4	Š	910	4/1/2009	CMP3-090101	
		會 PC BO	BE H1 827	NWTP Diesel	62700	Tot N 6010B Ms.Pb.	Tot A 6010B	No. Containers	Matrix	Time	Date	Sample ID	
		B5 82	> o c	TID + Oct • Elegr	45	letuli /602 Sb,Cr	Netal /602 . Pb)	TICE	1/AMY	D RUGH	Samplers:		<u>0</u>
Notes/Comments			Analysis Requested	Analysis		٥	5	P	GWC MP		Project - Phress 2	Southwest Harbar Place	LΛΩ
206-695-6200 206-695-6201 (fax)	206		5.2,7.4	Cooler (q.\q, 5.2, 7.4		(3 Ni)	No. of Coolers:				=	Chip Goodhive	Ω
4611 South 134th Place, Suite 100 Tukwila, WA 98168	461 Tuk	4	<i>S</i>	Ice Present? \-2\		12.009	Date: 4/ 1	9770	780	Phone: 206	רר	ARI Client Company:	≥
Analytical Resources, Incorporated Analytical Chemists and Consultants	Ana			~	<u>라</u>	_	Page:			Requested:	Turn-around Requested:	ARI Assigned Number:	≥

signed agreement between ARI and the Client. said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or comeets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

ARI Assigned Number:	Turn-around	Requested:		\	Рапе:	Ī	<u>ဍ</u> ,			\	,	
	STD	_				braria	•				Anal	Analytical Kesources, Incorporated Analytical Chemists and Consultants
ARI Client Company: Aspect Consulting LLC	てて	Phone:	780 9370	76	Date: 니고)	12602	lce Present?	ţ?		4	4611 Tuky	4611 South 134th Place, Suite 100 Tukwila. WA 98168
Client Contact: 5 ood hue					No. of Coolers:	N:)	Cooler Temps:				206-	206-695-6200 206-695-6201 (fax)
			WORD	J		U	1	Analysis Requested	equested	-		Notes/Comments
est Harbor	· I	7598	N D W	1	= 15 Z O	~ {] 2411				
Client Project #: 08006 4	Samplers:	RUGH/	AMY T	TICE	Met. 1602 Pb)	Met. 1602. Sb,C) C	s 2 —		
Sample ID	Date	Time	Matrix	No. Containers	Total 6010B, (As,	Total COLOB, (AS, Pb,	CPAH 8Z70	NWTPH Diesel Vsilic	BEHP 8270	PCB 808		
CMPY- ON O10402	4/2/09	528	Wati	70	X		\times	\times	\times	\times		
MW36-090402	est menter	1015	rangement 1, gain	_7		X	×	×	×	×		
CMP15-090402	Pil-thogherprepin	7	e ggap a s e colore tra	٦		×	\times	×	X	X		
MW30AN-090402	<	135	<	A	×		X	X	X	X		
				:						,		
				k.					_			
							<u> </u>					
					•							
Comments/Special Instructions	Relinquished by (Signature)	DE DI)	• • •	Library			Relinquished by: (Signature)	y:		Received by: (Signature)	d by: re)
	DAV 10	D Rugh	-	Printed Name:	Wa Mulumbo	olub		Printed Name:			Printed Name:	Name:
	PSQ+	7-1-	C	×	グー			Company:			Company:	W:
	Date & Time: 4/2/2001		1400 1400	Date & Time:	11/212000 14(NO	JOH 1		Date & Time:			Date & Time:	Time:

1.1.1449

signed agreement between ARI and the Client. said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or comeets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program

4/2/2001

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless afternate retention schedules have been established by work-order or contract.



CMP1. Ogcary

GROUN	DWATER	SAMPLING F	RECORD			WELL NUN	BER	t: CM	P-1		Page: 1 of 1	
Project Na	ame: SOUTH	WEST HARBO	R PROJECT	- Phase II	GCWMP	Project Nun						
	<u>9 /4/09</u>		_			Starting Wa						
	d by: DFR/A					Casing Stic			-0.29			
	g Point of We Interval (ft. 1		7.0-17.0			Total Depth			16.85			
Filter Paci	k Interval (ft. 1	TOC)	5.0-19.0			Casing Diar	neter	(inche	= 2			
Casinalia	2	75_ (ft Wate		9 // mari	·/~~~ ? .:	22	-15					
	lumes: 2" =		4" = 0.65 gr		(gpr) = <u></u> " = 1.47 gpf	<u>55 (L)(g</u> a	11)			Cample Int	ake Depth (ft TOC): ~12 ft	
Casing VO		0.62 Lpf	4" = 2.46 Lg		= 1.47 gpt = 5.56 Lpf					Sample int	ake Deptil (II 100). ~12 II	
PURGIN		JREMENTS	. 2.10 2	<u> </u>	0.00 Epi							
Time	Cumul. Vol.		Water Level (ft)	Temp. (C or F)	Specific Conductance	, , ,		pН	Eh ORP	Turbidity (NTU)	Comments	
0619	0	350	13.10	-	(μS/cm)	(mg/L)			(mv)	25.0	Arrigation that	
-7		330		111			 	e) -1			NID thro Ast	
0827	1(51)			13.01	53(p	1.06		<u>32</u>	37.4	16.1	exist tast	
0825	7100		13.1	12.08	52.11	0.49	(0:	<u>21</u>	10.2	2.54	reading	
0276	3100		13.11	13.05		0.22	_	35	9. W	1,42		
୦୯୫୮	4200	<u> </u>	13.11	13.00	51	0.55	10	55 L	2.0	SEO	•	
					-						•	
						· · · · ·	 					
						<u> </u>						
						.,		• • • • • • • • • • • • • • • • • • • •				
Total Gallons Purged:												
	otal Gallons Purged:											
	INVENTO					Litaria rota	ьср	ui (it i	00). 10.00	<u> </u>		
			• • • • •	Overstite	Filippiina	Danasastia		A			Damada	
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	<u> </u>	Appea	Turbidity &		Remarks	
								olor	Sediment			
0835	1L	HPDE		1	none	HNO3	do	ar	evene.	Total Metals	s - As, Pb	
	500mL	Amber glass		2	none	none	1			cPAHs		
· [1L	Amber glass				none			-	PCBs		
	500mL	Amber glass				none			-	TPH- DX		
1/	•							,	V		la a a a la la la la la la la la la la l	
V	500mL	Amber glass			none	none	<u> </u>		. 4	Dis(∠-etnyl l	hexyl) phthalate	
			· ·									
METLIAS	<u>. </u>											
METHO					11/	`						
Sampling E	Equipment ar	nd IDs:			SI 556# 16	 						
Purging Eq	uipment:	Peristaltic Pun	np w/ dedica	ted tubing		Decon Equi	ipmer	nt:	Alconox, D	istilled Wate	er	
Disposal of	Discharged	Water:	Stored in 1,0	000 gallon te	emporary onsite	e storage tanl	k					
Ohservatio	ns/Common	ts:										
Judia VallO		<u>.</u>										



CMP2-090902

GROUN	IDWATER	SAMPLING F	RECORD			WELL NUM	IBER: CM	P-2		Page: 1 of 1				
Project Na	ame: SOUTH	IWEST HARBOI	R PROJECT	- Phase II	GCWMP	Project Num								
Date: _	12109					Starting Wa								
Develope	d by: DFR/AT	<u> </u>				Casing Stick		-0.29						
	g Point of We Interval (ft. 1		7.0-17.0			Total Depth Casing Dian		17.3 e 2						
	k Interval (ft. 1		5.0-17.0			Casing Dian	neter (incite		<u>. </u>					
Casina V	Jumo 7.	7 (ft Wate	0 × D (0	7 (1 nfc)	Vant = 2.2	<u></u> (L)(ga	JN.							
Casing vo	lumes: 2" =	0 16 opf	4" = 0.65 gr	of G	(gpi) – <u>** ; *</u> " = 1.47 gpf	<u> </u>	ll)		Sample Inf	ake Depth (ft TOC): ~12 ft				
Cuomy 10			4" = 2.46 L		" = 5.56 Lpf				oumple in	and Depth (It 100)12 It				
PURGIN		IREMENTS		-										
Time	Cumul, Vol.		Water	Temp.	Specific	Dissolved	pН	Eh	Turbidity	Comments				
	(galor(C)	(gpm or Lpm)	Level (ft)	(Or F)	Conductance			ORP	(NTU)					
०४८३	0	m60m	13.60		(µS/cm)	(mg/L)		(mv)						
	 			11 D.C	11.00	J	0 Us		ļ. —	NTU Thru ysi				
0856	1,44	480		16.28	1685	,35	8.40		0.87	evood lad reading				
0850	2.28	480		16.23	1662	,27	843	159.8		J				
0902	4.32	480	13.59	16.19	1669	.24	8.42	1489	1.31					
			•			_								
				,										
	- -													
•														
-														
Fotal Gallons Purged:^U_5 Li'crs Total Casing Volumes Removed:														
TOTAL CLIK														
Ending Wa	inding Water Level (ft TOC): 13.69 Ending Total Depth (ft TOC): 17.3													
SAMPLE	INVENTO	ORY												
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	arance		Remarks				
							Color	Turbidity &						
0905								Sediment						
ケルン		HPDE				HNO3	Clear	nonc	Total Metals	s - As, Pb				
	500mL	Amber glass		2	none	none	1		cPAHs					
	1L	Amber glass		2	none	none		ļ	PCBs					
	500mL	Amber glass		2	none	none			TPH- DX					
4	500mL	Amber glass		2	none	none	Ŀ	4	Bis(2-ethyl l	hexyl) phthalate				
		ľ												
														
METHO	os				I									
Sampling E	Equipment ar	nd IDs:	Peristaltic P	ump and YS	1556# 12	r)								
Purging Ed	•	Peristaltic Purr					pment:	Alconox D	istilled Wate	er				
	•	Water:								···				
						- storage tall								
Observatio	ns/Comment	s:					-			·				



CMP3-090903

GROUN	DWATER	SAMPLING F	RECORD			WELL NUM	BER: CM	P-3		Page: 1 of 1			
Project Na	me: SOUTH	IWEST HARBO	R PROJECT	- Phase II (GCWMP -	Project Nun				····			
	1/3/09 d by: <u>DFR/A</u> 1		-			Starting Wa Casing Stick			8.45				
	Point of We					Total Depth		-0.37 15.84					
		OC)	6.0-16.0			Casing Diar	•						
	k Interval (ft.		4.0-17.5										
Casing Vo	lume <u>7 ,</u>	39(ff Wate	r) x <u> </u>	<u>2</u> (Lpfv)	(gpf) =	<u>58</u> (L)(ga	l)						
Casing vo	lumes: 2" =		4" = 0.65 gp 4" = 2.46 Lp		" = 1.47 gpf " = 5.56 Lpf				Sample Into	ake Depth (ft TOC): ~11 ft			
PURGIN		REMENTS	4 - 2.40 LL	л О	- 5.50 Epi		<u> </u>						
Time	Cumul. Vol.		Water	Temp.	Specific	Dissolved	рH	Eh	Turbidity	Comments			
	(gal or L) ≫₁ ((gpm or Lpm)	Level (ft)	(C or F)	Conductance (µS/cm)	Oxygen (mg/L)		ORP (mv)	(NTU)				
૦૮૫૬	Ô	400mi	8.45		_	,	,			MTU Thin 451			
27.13	1500	400mL	8.415	18.76	685	0.62	9.97	169	19.8	evient last			
0851	24,60	400	\$1.00 to	19.58	597	0.63	10.03	199.9	11.0				
0801	3600	400	જ.4૪	19.77	703	0.40	10.01	1211-8	5.3				
		-			·								
	<u></u>												
						-							
										~ 			
	-1-2-						-						
-,-													
Fotal Gallons Purged: Total Casing Volumes Removed: 0.87													
		тос): <u>8</u>		•	-	Ending Total			•				
	INVENTO		-			Ending Total	Deptil (it i						
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	rance		Remarks			
						, , , , , , , , , , , , , , , , , , , ,	Color	Turbidity &		. tomano			
0900								Sediment					
		HPDE				HNO3	P1011	c Ceo s	Total Metals	s - As, Pb			
i		Amber glass			none	none	-		cPAHs				
 1		Amber glass				none	i	1	PCBs				
W	500mL	Amber glass		2	none	none	 ;	1	TPH- DX (w	//silica gel cleanup)			
	500mL	Amber glass		2	none	none	V		Bis(2-ethyl l	nexyl) phthalate			
						- 							
METHOD)S								<u></u>				
		id IDo:	Dorlatallia D	imp and VC	SI 556#) 원(`							
	• •	-			SI 556 # した					_			
Purging Eq	•	Peristaltic Pun				•		Alconox, D	istilled Wate	<u>т</u>			
Disposal of	Discharged	Water:	Stored in 1,0	iuu gallon te	mporary onsite	storage tanl	(
Observatio	ns/Comment	s:											
								_					



CMDIT OdOJOH

GROUN	IDWATER	SAMPLING I	RECORD			WELL NUM	IBER: CM	P-4		Page: 1 of 1		
Project Na	ame: SOUTH	IWEST HARBO	R PROJECT	- Phase II	GCWMP	Project Nun						
	7/3/09		-			Starting Wa						
	d by: <u>DFR/AT</u> g Point of We					Casing Stick		-0.32 17				
		гос)	7.0-17.0			Total Depth Casing Dian			2			
		TOC)	5.0-17.5			Casing Dian	neter (mone		<u> </u>			
] 9(ft Wate	nx () . (0	2 (1 ptv	3/(aph = 3)	구	ıΒ					
	lumes: 2" =		4" = 0.65 gr		7.567 5" = 1.47 gpf	(=/(80	,		Sample Inta	ake Depth (ft TOC): ~12 ft		
	2" =	0.62 Lpf	4" = 2.46 L		6" = 5.56 Lpf				····			
PURGIN	IG MEASU	JREMENTS			. 		_ _					
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	рĤ	Eh ORP (mv)	Turbidity (NTU)	Comments		
0934	0	400	10.01	***	A CHARLES AND A SHARLES AND A		*6	10.1	# entropy .	MUthin 42!		
0937	1200	400	11.06	16.81	789	0.25	8.73	38.8	6.96			
0940	2400	400	11.05	16.97		0.21	8.70		2.63			
0943	7600	400	11.05	17,05	777	0.19	8.13	22.1	2.75			
	2/00/2	10/30		14(1/2	1 7 7 1	0.1	0 2	0011	2.73			
					<u> </u>				 			
								ļ				
							ļ		<u> </u>			
					ļ							
						-			_	-		
							_	_	!			
-	•								<u> </u>			
		-		1								
			(1) [[e)						1 50	7		
Total Gallo	ns Purged:	-	-1 CUIC	' ン	_	Total Casing	Volumes F	Removed:	1.07	<u> </u>		
Ending Wa	Total Gallons Purged: ~ CLIEVS Total Casing Volumes Removed: 1.08 Ending Water Level (ft TOC):											
	INVENTO		_							· · · · · · · · · · · · · · · · · · ·		
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	ranco		Remarks		
Time	volunio	Bottle Type		Quantity	I littation	r iesei valioi i		Turbidity &		Remarks		
							Color	Sediment				
0945	1L	HPDE		1	поле	HNO3_	nov.(2 1884 g	Total Metals	s - As, Pb		
ļ į	500mL	Amber glass		2	none	none			cPAHs			
	1L	Amber glass		2	none	none		-	PCBs			
	500mL	Amber glass			none	none		-		//silica gel cleanup)		
		Amber glass	Ì		none	none	J,	·V		hexyl) phthalate		
1		J							_ic_ caryer	oxyy printionato		
							-					
METHO	l)S				<u> </u>				<u> </u>			
		nd IDs:	Parietaltia D	umn and Vi	21 558 # 17 C)						
	•				31 330 # \ L. \-		 	• • • •				
Purging Eq		Peristaltic Pun				Decon Equi		Alconox, D	istilled Wate	er		
Disposal of	Discharged	Water:	Stored in 1,0	000 gallon t	emporary onsite	e storage tank	ζ	- · · ·				
Observation	ns/Comment	s:										
-							_					



CMP5-090902

GROU	NDWATER	SAMPLING F	RECORD			WELL NUN	MBER: CM	P-5		Page: 1 of 1
Project i	lame: SOUTH	IWEST HARBO	R PROJECT	- Phase II	GCWMP	Project Nun				
	ed by: <u>DFR/A</u>		-			Starting Wa	•			
		TOC				Casing Stice Total Depth		-0.27 15.1		
		roc)	5.5-15.5			Casing Diar				
		TOC)	3.0-19.0			Duoing Dian				
		019 (ft Wate	r) x 0 · 6	2 (Lpfv	Vant) = 3	09 (1)(02	al)			
	olumes: 2" =		4" = 0.65 gp		5" = 1.47 gpf	<u>:1</u> (=/(8°	•••		Sample Int	take Depth (ft TOC); ~10.5 ft
			4" = 2.46 Lp		6" = 5.56 Lpf					
PURGI	NG MEASL	JREMENTS								· · - · -
Time	Cumul. Vol		Water	Temp.	Specific	Dissolved	рH	Eh	Turbidity	Comments
	(gal or L) ゕし	migra	Level (ft)	(C or F)	Conductance (µS/cm)	Oxygen (mg/L)		ORP (mv)	(NTU)	
1220		450	10.12			p	<i>t</i> ->		poesse.	NTU INNU YSI
1737	1300	400	10.39	1774	509	0.78	6.05	-65.9	20.0	
1236	2900	375		1737	+	0.53	6.09	-831	5.7	
1238		375	10.70	16.84	509	0.44	6.05	-94.2	6.98	
						-				
					_		ļ			
	<u> </u>									
				·						
										,
		_								
'										
Total Gal	lons Purged:	n L	(Cta	5	_	Total Casing	Volumes F	Removed:	1.29	
Cualina 14	fatau Laval /61	TOOL	10,70			F . P . T	1 Page 11 10 Page 1	.00. 45.4		<u>.</u>
	/ater Level (ft	100)	1			Ending Total	Depth (ft 1	OC): 15.1		
	E INVENTO		1			- ·	·			
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	rance	1	Remarks
			784				Color	Turbidity & Sediment		
1240	1L	HPDE		1	none	HNO3	<u> (1901)</u>	HOMO	Total Metals	s - As, Pb
_	500mL	Amber glass		2	none	none		-	cPAHs	
	1L	Amber glass		2	none	none			PCBs _	
	500mL	Amber glass		2	попе	none		į	TPH- DX (w	//silica gel cleanup)
<u> </u>	500mL	Amber glass		2	none	none	×17	<u> </u>	Bis(2-ethyl l	hexyl) phthalate
_										
METUÁ	De l									
METHÓ			.		10 0					
		nd IDs:								
-	quipment:	Peristaltic Pun				Decon Equi	-	Alconox, D	istilled Wate	er
Disposal (of Discharged	Water:	Stored in 1,0	100 gallon te	emporary onsite	storage tan	k			· · · · · · · · · · · · · · · · · · ·
Observati	ons/Commen	ts:								
										_



CMD15-090903

		SAMPLING F				WELL NUN	IBER: CMI	P-15		Page: 1 of 1
Project Na	ame: SOUTH	IWĒST HARBOI Ì	R PROJECT	- Phase II	GCWMP	Project Num				
			-			Starting Wa		- 1 -		
	by: <u>DFR/A</u>					Casing Stick		-0.29		
		TOC)	7.0-17.0			Total Depth Casing Diar				
		TOC)	4.0-17.4			Casing Diai	neter (inche	·		
	olume <u> </u>	91 /410/242	کما <u>() برد</u>	/)(gpf) =	19 avan	.1\			
	lumes: 2"=		4" = 0.65 gp)(gpr) = <u> </u>	C C (L)(ga	11)		Cample Int	ake Depth (ft TOC): ~12 ft
Casing vo			4'' = 2.46 Lp		5" = 5.56 Lpf				oample in	ake Deptil (it 100). ~12 it
PURGIN		JREMENTS	. 2.10 2		<u> </u>					
Time	Cumul. Vol. (gal or L)		Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)	Comments
W13	D	350	10.14	-	, ,	(171 3 ; -)		-	ψ.	NTO ton MEI
1116	1050	350	10.22	15.95	3911	0.32	7:10	- 114.7	1.92	NTU mw 451
1110	2100							-114.7		occopitos
		350	10.24	15.96	3706	0.34			1.50	Freeder S
1122	3100	350	1074	15.97	3543	0.36	6.20	3.5	1.78	
										•
				·						
-	L									
					<u> </u>					
					ļ					•
otal Gallo	ns Purged:	0, 41	(((c)	S		Total Casing	Volumes F	Removed:	0.93	3
	_	,								
Ending Wa	ater Level (ft	TOC):	0.24			Ending Total	Depth (ft T	OC): 17.05	5	
SAMPLE	INVENTO	DRY	,						·	
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	arance		Remarks
							Color	Turbidity &		
1.70		 						Sediment		
1125	1L ·	HPDE		1	rione	HNO3	cles y	1.6213	Total Metal:	s - As, Pb, Sb, Cr, Cu, Ni
	500mL	Amber glass		2	none	none			cPAHs	
	1L	Amber glass		2	none	none		1	PCBs	
	500mL	Amber glass		2	none	none			TPH- DX (w	/silica gel cleanup)
114	500mL	Amber glass		2	none	none	1/	1		hexyl) phthalate
					-					
/ETHO	os								L <u>.</u>	
		nd IDs:	Parietaltia D	umn and V	SI 556# 12 G)				
					51 330 # 1 · ×			=		
urging Eq		Peristaltic Pun				Decon Equi		Alconox, D	istilled Wate	<u> </u>
isposal of	f Discharged	Water:	Stored in 1,0	000 gallon t	emporary onsite	e storage tani	<u>k</u>			
bservatio	ns/Comment	ts:								

CMP17.090907.

GROUN	IDWATER	SAMPLING F	RECORD			WELL NUM	BER: CM	P-17		1	Page: 1 of 1	
Project Na	ame: SOUTH	IWEST HARBO	R PROJECT	- Phase II	GCWMP	Project Nun						
	9/2/09		-			Starting Wa						
	d by: <u>DFR/AT</u> g Point of We					Casing Stick Total Depth		-0.1 16.2	·			
	Interval (ft. T		6.0-16.0			Casing Diar			2			
Filter Pack	k Interval (ft.	TOC)	4.0-16.5			L			_			
Casing Vo	olume (g.:	(ft Wate	J. O x (re	2 (Lpfv	l	16 (L)(ga	al)					
	lumes: 2" =		4" = 0.65 gp		" = 1.47 gpf		•		Sample Int	ake Depth (ft TOC): 14 ft	
	2" =	0.62 Lpf	4" = 2.46 Lp	of 6	5" = 5.56 Lpf_							
		REMENTS	·									
Time	Cumul. Vol. (gal or L)	(gpm or Lpm) M Lp M	, ,	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)		Comments	
1025	○	500	9.50			٠٠٠ س				NTU.	12mm 45!	
102%	1500	500	9.58	17.53	599	0.57	5.85	124.3	86.3	Label of V	thrus 451	
1031	3000	500	9.60	17.48	093	0.25	5.73	120.	15.2	3		÷
1034	4500	500	9.58	17.46	597	0.32	5.83	115.4	41.52			
,	·				_	-						_
												_
							 					
	 											_
									 			
								<u></u>	<u></u>			_
									-			
						,						
		# 3 ×3	<u> </u>				L					
Total Gallo	ons Purged:		o mil		_	Total Casing	J Volumes F	Removed:	1.08	<u> </u>		
Ending Wa	ater Level (ft 1	TOC):	.52			Ending Total	l Dooth /ft T	TOC): 16.2	1			
	 .	100)				Chaing Total	r Deptir (it i	100). 10.2	1			_
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Annor	ornnac	1	Por	narks	\dashv
THIE	Volume	Bottle Type		Quantity	Tillation	r ieservauon	- ''	Turbidity &	1	Kell	idi No	
							Color	Sediment				_
1040	1L	HPDE		1	none	HNO3	CLEC 4	none	Total Metal	s - As, Pb		
	500mL	Amber glass		2	none	none	1		cPAHs			
	1L	Amber glass		2	none	none			PCBs			
	500mL	Amber glass		2	none	none	1	<u> </u>	TPH- DX (v	v/silica gel c	leanup)	
1	500mL	Amber glass		2	лопе	none			Bis(2-ethyl	hexyl) phtha	late	
. /	40mL	VOA vial		3	попе	HCI	7	→	Chlorinated	l Ethanes an	nd Ethenes (CEEs)	
METHO	วร											
Sampling E	Equipment an	ıd IDs:	Dedicated C	ED Well W	izard Bladder F	omp and YS	SI 556# 1	0				
Purging Eq	quipment:	Dedicated QE	D Well Wiza	ard Bladder	Pump	Decon Equi	ipment:	Alconox, [Distilled Water	er		
Disposal of	f Discharged	Water:	Stored in 1,0	000 gallon te	emporary onsite	e storage tan	k					
•	_								<u> </u>			
observatio	ns/Comment	S										



TM109-090902 + 1 10009-0909022

GR	NUC	IDWATER	SAMPLING F	RECORD			WELL NUM	BER: FM-	105		Page: 1 of 1
Proje	ect Na	me: SOUTH	WEST HARBOI	ROJECT	- Phase II	GCWMP	Project Num				
		9/2/0		_			Starting Wat				
		d by: <u>ĎFŘ/A</u> Point of We		_	·		Casing Stick		-0.2		
		nterval (ft. 1		7.0-17.0			Total Depth Casing Dian		18]
			TOC)	6.0-17.5			Odding Didn	TOTAL (IIIOTA	·		
			<u>(∳</u> (ft Wate		7- (Lpfv)	Vant) = U	12 (1)(00	I)			
		lumes: 2" =		4" = 0.65 gr		% = 1.47 gpf	(L)(90	",		Sample Inta	ake Depth (ft TOC): 15 ft
	•			4" = 2.46 Lp		6" = 5.56 Lpf					
PUF	RGIN	IG MEASL	REMENTS						, , , , , ,		
Ti	ne	Cumul. Vol. (gal or L)	(gpm or Lpm)	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen	pН	Eh ORP (mv)	Turbidity (NTU)	Comments
11-7	7	0	500	11,360		(µ5/cm)	(mg/L)		(1117)		CETE Edia waldel
110		1500	500 500	11.48	1447	520	<u> </u>	11 119 1	102.2	1 2°C1	PITU IMMUSSI
			 				0.8!		108.3		
100		3000	500	11.40	•	517	0.69		109.8		
111	<u> </u>	4500	500	11.39	1945	518	0.50	5.25	40.7	3.64	
				,			,	·			
			i								
						<u> </u>	•				
Total	Gallo	ons Purged:	75	LHers	,	_	Total Casing	Volumes F	Removed:	1.21	
Endin	g Wa	ater Level (ft	тос):{	1.39			Ending Total	Depth (ft T	OC): 18		
		INVENTO									
JAN Tir		Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	irance		Remarks
1 11	110	Volunte	Dottie Type		Quantity	1 III audi	1 16361 VALIDII		Turbidity &		Remarks
	_							Color	Sediment		
111	5_	1L	HPDE		2	none	HNO3	dau	2000	Total Metals	s - As, Pb
		500mL	Amber glass		. 4	none	none	1	ì	cPAHs	
		1L	Amber glass		4	none	none			PCBs	
7		500mL	Amber glass		4	попе	none			TPH- DX (w	v/silica gel cleanup)
		500mL	Amber glass			none	none				hexyl) phthalate
./		40mL	VOA vial				HCI	J	1/		Ethanes and Ethenes (CEEs)
1/2	\overline{C}	€ dupti									
MET			1 1 3					_			
			nd IDs:	Dedicated C	ED Well W	/izard Bladder F	OV bae amil	1556# 17	0		
	-									intillad Mart	
•	-	juipment:	Dedicated QE				Decon Equi		AICOROX, D	isanied vvate	4
Dispo	sal o	r Discharged	Water:	Stored in 1,0	JUU gallon t	emporary onsite	e storage tank	K			
Obse	vatio	ns/Commen	ls:								
		Second set	of bottles collecte	ed for duplica	ate sample						



MW262-090903 1 WW262-090903 D

		SAMPLING F				WELL NUM	IBER:	MW-	-26R		Page: 1	of 1
Project Na	me:,SOUTH	WEST HARBOI	RPROJECT	- Phase II (GCWMP	Project Nun						
			-			Starting Wa						
	by: <u>DFR/A1</u> Point of We					Casing Stick			-0.32 17.05			
	interval (ft. T		6.5-16.5			Total Depth Casing Diar						
		TOC)	4.0-17.0			Cubing Bian		1110110				
		36_(ft Wate		2_ (Lpfv)	(apt) = U	56 (L)(ga	ıN					
	lumes: 2" =		4" = 0.65 gr		" = 1.47 gpf	<u> </u>	,			Sample Int	ake Depth (ft TOC):	~ 11.5 ft
			4" = 2.46 Lp		" = 5.56 Lpf							
PURGIN	G MEASU	REMENTS						•				
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lpm) m.(pm	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	p	Н	Eh ORP (mv)	Turbidity (NTU)	Comme	ents
1335	0	400	9.69	d		(///g//4)					NOTTON	7/51
1338	1200	4100	9.18	15.14	11 65	0.20	93	7	-70.7	5.47	NO Inn	ا د ت
1341	3 (100)	400	9.78	15.79	1117	0.17	77		7.10.	2.10	V Y - D - D -	:
	3660	400		15 42	1043	0.5	7		-30.5	1.91		
1275	2.80.0		9.78	10117	1042	()- 5	ν(, (· j	-3073	11.5(1		
·						ļ	ļ				•	
										<u> </u>		
												<u>-</u> .
			···········		l							
										<u> </u>		
		n L	11101				<u> </u>	. 1		n 00)	
Total Gallo	ns Purged:			رـــ	_	Total Casing	y Volur	nes R	Removed:	0.88	<u> </u>	
Ending Wa	iter Level (ft	TOC):	18			Ending Total	l Denti	ı (ff T	OC): 17.05	5		
	INVENTO							. (,		<u> </u>		
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	,	nnaa	ranga	<u> </u>	Remarks	
Time	volunie	Bottle Type		Quantity	Filliagion	Preservation	├		rance Turbidity &		Remarks	
							Col	lor .	Sediment			
1390	1L	HPDE		2	none	ниоз	dec	<u>~</u>	none	Total Metal	s - As, Pb, Sb, Cr, Co	u, Ni
1	500mL	Amber glass		4	none	none			1	cPAHs		
	1L	Amber glass		4	none	none				PCBs		
	500mL	Amber glass		4	лопе	none	1		1	TPH- DX (v	//silica gel cleanup)	
1-		Amber glass			none	none	<u> </u>	-	7/		hexyl) phthalate	
		7 HI JOS GAGO		 -		THO THE				Bio(E bai)i	nongry primarato	
1399	dupti	000						\dashv				
METHOD		140		l		l	L					
		nd IDs:	Darietalija D	ump and Ve	N 556 # 19 0	,						ļ
	• •			•	112 -		in r 1	٠.	Alesasia	Satile - 134-1		
ourging Eq	•	Peristaltic Pun	•			Decon Equ			AICONOX, D	usunea Wate	n	
Disposal of	Discharged	Water:	Stored in 1,0	J00 gallon te	emporary onsite	e storage tan	k					
Observatio	ns/Comment	s:										
	Second set r	of bottles collecte	ed for dunlice	ate samnle								
		zzado odnosti	ur uupnu	comple				• •				



mw36.090903

GROUN	DWATER	SAMPLING F	RECORD			WELL NUM	BER: MV	V-36		Page: 1 of 1
Project Na	me SOUTH	WEST HARBO	R PROJECT	- Phase II (GCWMP	Project Num				
	9/30		•			Starting Wa				<u>. </u>
	d by: <u>DFR/AT</u>					Casing Stick		-0.23		
_	Point of We					Total Depth				
		OC <u>)</u> TOC)	58.0-73.0 55.0-71.0			Casing Dian	neter (inch	e2		
				2	a	12				
		3,28 (ft Wate				<u> とら</u> (L)(ga	ıl)			
Casing vo	lumes: 2" = 2" =		4" = 0.65 gp 4" = 2.46 Lp		" = 1.47 gpf " = 5.56 Lpf				Sample Int	ake Depth (ft TOC): ~ 65.5 ft
PURGIN	G MEASU	REMENTS								
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lpm) m Upm	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)	Comments
1035	D	3 50	9.42		(12.5.1.5)	, , , , , <u>s, -</u>	£	(,,,,,	6	NTO Inscuah 1973
1037	1050	350	9.74	14.11	3810	0.19	8.89	.93.9	1.84	except (aside
lo'ti	2 h0	350	9,72	13.96		0.15	9.01	-105.7		
10 121	3:50	360	9.74	13.87	3812	0.12	2.78			reactive
10 12	-11 W	300	1.79	12.54	2016	10	6.70	-119.6	1.83	
									-	
		•					ļ	ļ		
						l	<u> </u>			
								1		
		**9	(, , , ,							
Total Gallo	ns Purged:	<u>× 5</u>	5 like	1 °,	_	Total Casing	Volumes	Removed:	0.00	
Ending Wa	ater Level (ft	TOC):	1.74			Ending Total	Depth (ft	TOC): 73		
SAMPLE	INVENTO	RY				·				
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Арре	arance	•	Remarks
		···					Color	Turbidity & Sediment		
1050	1L	HPDE		1	none	HNO3	clear	nore	Total Metal	s - As, Pb, Sb, Cr, Cu, Ni
	500mL	Amber glass		2	none	none			cPAHs	
	1L	Amber glass			none	none			PCBs	
		Amber glass			none	none				v/silica gel cleanup)
1 1		Amber glass			none	none	1,	1		hexyl) phthalate
1/	0001112	, unbot glado			1101.0	110110			Diote Cary	Howyry principates
METHO								*		
Sampling E	Equipment an	nd IDs:	Peristaltic P	ump and YS	31 556 # 120					
Purging Eq		Peristattic Pun				Decon Equi	ipment:	Alconox. D	istilled Wate	er
	•	Water:			emporary onsite	•	•			· · · · · · · · · · · · · · · · · · ·
							. %			
Observatio	ns/Comment	s:								



mw41-090903

GROUN	IDWATER	SAMPLING F	RECORD			WELL NUM	IBER: MW	I-44		Page: 1 of 1
		IWEST HARBOR	R PROJECT	- Phase II	GCWMP	Project Num				
	1.3.09					Starting Wa			11.46	
	d by: <u>DFR/A1</u> g Point of We					Casing Stick		-0.18 73.9		
		OC)	n/a			Total Depth Casing Dian				
		TOC)	n/a			Ousing Dian	neter (men			
		.니니 (ft Wate	nx 0.6	2 antic	Vant = 38	71 a Van	ın.			
	dumes: 2" =		4" = 0.65 gr		/(9РГ) = <u></u>	· (L)(9a	ш		Sample Int	ake Depth (ft TOC): ~ 68 ft
			4" = 2.46 Lp		5" = 5.56 Lpf					
PURGIN	IG MEASU	REMENTS								
Time	Cumul. Vol. (gal or L)	Purge Rate (gpm or Lpm) mUp m	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)	Comments
1411	0	400	11.46	•				-	,	PTU TO TO YS!
1414	1200	400	1151	14.40	207	4.18	698	7.7	14.3	eyect Loss
14/3	26100	400	11.50	14.22		4.10	6.73	13.8	9,29	reading
1420	3600	400	1150	14.12	38	396	6.31	210	5.50	0
1423	4800	400	1.50	14.06		3.85	5.86	15.4	4.63	* Sp. coric yourinble
11/20	6000	1100	11.50	1407	27	3.84	584	80.1	3.26	between 55 and
() ()	10000		4(-)()	1-16-7	5 1	2.0"1)·6~3	6.7	3.63	-3
								<u> </u>		ن ت
								!		
										·
·		·								
Total Gallo	ons Purged:	~ (0	Liles	5	A	Total Casing	ı Volumes	Removed [,]	0.15	
TOTAL SUIT	ano i aigou.				_	Total Octome	, 10/4/100	· como rou.		
Ending Wa	ater Level (ft	TOC):	1.60			Ending Total	Depth (ft	TOC): 73.9		
SAMPLE	E INVENTO	DRY								
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appe	arance		Remarks
			Type Quantity Filtration Preservation Appearance Rem Color Turbidity & Sediment							
1430	41	HPDE		-1	nano	HNO3	clocia		Total Matal	s - As, Pb, Sb, Cr, Cu, Ni
1 120	500mL				none		1	1 16 POM	i	s-ms, r v, ov, or, ou, IVI
		Amber glass			none	none	+	 	cPAHs	
		Amber glass	1		none	none		1 1	PCBs	
		Amber glass			none	none				v/silica gel cleanup)
7	500mL	Amber glass		2	none	none	1	₩	Bis(2-ethyl	hexyl) phthalate
	<u> </u>	<u></u>								
METHO	D\$				_					
Sampling I	Equipment ar	nd IDs:	Peristaltic P	ump and Y	SI 556 #\7 O					
Purging Ed	quipment:	Peristaltic Pun	np w/ dedica	ted tubing		Decon Equi	ipment:	Alconox, D	istilled Wate	er
Disposal o	f Discharged	Water:	Stored in 1,0	000 gallon t	emporary onsite	e storage tan	k			
Obsessatio	ne/Common	ls:								_
Obset Vallu	marcommen									



MW125-090902

GROUN	DWATER	SAMPLING F	RECORD			WELL NUN	IBER: MW	-125		Page: 1 of 1
		IWEST HARBO	RPROJECT	- Phase II	GCWMP	Project Nun				
	7/2/09					Starting Wa				
	d by: <u>DFR/A1</u> Point of We					Casing Stick Total Depth		-1.11 13.35		
	Interval (ft. 1		5.0-15.0			Casing Diar				
Filter Paci	k Interval (ft.	TOC)	3.0-15.0							
Casing Vo	olume <u>(</u>	34 (ft Wate	r) x <u>0 · 6</u> 4" = 0.65 gp	<u>Z</u> (l 6 1))(gpf) = <u>3 · 1</u> " = 1.47 gpf	1 <u>3</u> (L)(ga	ti)		Sample Int	take Depth (ft TOC): 13 ft
Cuomig 10			4" = 2.46 Lp		" = 5.56 Lpf					
PURGIN	IG MEASL	IREMENTS								3
Time	Cumul. Vol. (gal or L)		Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pН	Eh ORP (mv)	Turbidity (NTU)	Comments
0951	0	500	7.01	a.com	\$err-	*** ***		v ··		NW Thro yst
0954	1500	500	7.23	1924	542	1.04	5.94	129.11	7.42	except last
0952	3000	500	7.21	19.33	496	0.94	5.94	129.4	1.65	reading
1000	4500	500	7.19	19.33	486	0.85	5.23	130.3	1.64	0
1002,	6000	500	7.20	1931	U75	0.83	500	130.3	234	
ر ۱۰۰۰			(- (2)	(1.)	: 1 -/	0 0	,,,	1 3 2 1 2	-	
	1									
							 			
	<u>.</u>			· · · · · · · · · · · · · · · · · · ·						
		· .						,		
		•								
		7.44								
Total Gallo	ons Purged:	3	o Lile	r 5		Total Casing	Volumes F	Removed:	1.53	3
	ater Level (ft	<u> </u>			_	Ending Total				
	INVENTO									
Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appea	rance		Remarks
				,			Color	Turbidity &		
1								Sediment		
1005	1L	HPDE				HNO3	POW.P	t	Total Metal	s - As, Pb
	500mL	Amber glass		2	none	none		All de la constant de	cPAHs	
	1L	Amber glass		2	none	none		-	PCBs	
	500mL	Amber glass		2	none	поле		المرداد	TPH- DX (v	v/silica gel cleanup)
	500mL	Amber glass		2	none	none			Bis(2-ethyl	hexyl) phthalate
1	40mL	VOA vial		3	none	HCI	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	4	Chlorinated	Ethanes and Ethenes (CEEs)
METHO	os									
Sampling E	Equipment ar	nd IDs:	Dedicated C	ED Well W	izard Bladder F	oump and YS	1556#	Z6		<u></u>
Purging Eq	uipment:	Dedicated QE	D Well Wiza	rd Bladder	Pump	Decon Equi	ipment:	Alconox, D	istilled Wate	er_
Disposal of	f Discharged	Water:	Stored in 1,0	000 gallon te	emporary onsite	e storage tan	k			
•										
observatio	ns/Comment	s:								
, ,										



MW308N-090904

1			SAMPLING F				WELL NUM	IBER: MV	/-308N		Page: 1 of 1
		ame: SOUTH	WEST HARBO	R PROJECT	- Phase II	GCWMP	Project Nun			0.0	
Date	_	9/4/0°		-			Starting Wa				
1	-	d by: <u>DFR/A</u> g Point of We					Casing Stick Total Depth		-0.29 17.95		
•		Interval (ft. 1		12.5-17.5			Casing Diar				
		k Interval (ft.		10.0-21.5			Owning 2 in		<u> </u>		
Casi	na Vo	olume 17	<u>れら</u> (ft Wate	enx D.de	2 (Lpfv	Napr) = 14	(L)(ga	al)			
		lumes: 2" =		4" = 0.65 gp	of (5" = 1,47 gpf				Sample Int	take Depth (ft TOC):_~15 ft
<u> </u>		2" =	0.62 Lpf	4" = 2.46 Lp	of (3" = 5.56 Lpf					
PU	RGIN	IG MEASU	JREMENTS								
Ti	me	Cumul. Vol (gal or L)	Purge Rate (gpm or Lpm) Mしかい	Water Level (ft)	Temp. (C or F)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	рН	Eh ORP (mv)	Turbidity (NTU)	Comments
09	09	0	400	6.50		,	e-	-	,		NTO INVA YS!
00		1200	150	8.00	15.49	2723	0.73	10.110	1116	6.79	97/18:11 (00)+
<u>09</u>		SU					100000000000000000000000000000000000000	A STATE OF THE STA	3 3 3 3 4	1 . , ,	reaction
	F	7,	TE CI					 	The second second second second	•	suged and purged
2/3	- A	71100	100	<i>t</i> 3 (n			-			7	
09	20	†	150	9,60	110 415				15112	15.0	ic afficulation
		2850	 	850			0.51	1	-1244		riean seveen
	100			8.62	16.31	2007	0.34	6.41	-124.5	10.7	
· · · ·	201	3250	<i>\\</i>	8.70	16.38		2.23	6.52	-127.1	9.24	bucieria appurh
09	<u>32</u>	4700	1	8.77	16.34	2509	0.73	6.55	-12:1.9	11.2:	inside coling
											•===
Total	Gallo	ons Purged:	~ 4/20	90 mc			Total Casing	ı Volumes	Removed:	0.50	1
			0			_		,			'
Endir	ıg Wa	ater Level (ft	тос): <u>У</u>	.72		·	Ending Tota	Depth (ft	TOC): 17.95	i	•
SAN	PLE	INVENT	DRY								
Tìr	ne	Volume	Bottle Type		Quantity	Filtration	Preservation	Арре			Remarks
				Type Quantity Filtration Preservation Appearance Remark Color Turbidity & Sediment							
09	35	1L	HPDE		1	none	НИОЗ	dear		Total Metal	ls - As. Pb
<u> </u>	J	500mL	Amber glass			none	none	1	1	cPAHs	.,
		1L	Amber glass		•	none	none	<u> </u>		PCBs	
I		500mL					~				v/cilies gol clospus)
-	,	~	Amber glass			none	none	1	J		w/silica gel cleanup)
		500mL	Amber glass		2	none	none	<u> </u>		Bis(2-ethyl	hexyl) phthalate
											And the state of t
MET	HOI))S					L	l			
			! ID	Desira W. E		CLECO# 17 /	`				
-	-					SI 556 # \ 7 (*	· · · · · · · · · · · · · · · · · · ·
-	-	quipment:	Peristaltic Pur	····			Decon Equ		Alconox, D	istilled Wate	er
Dispo	sal o	f Discharged	Water:	Stored in 1,0	000 gallon t	emporary onsit	e storage tan	k			
Obse	rvatic	ns/Commen	ts:								<u> </u>
_											



mw3085-090904

Project Name: SOUTH-IWEST HARBOR PROJECT - Phase II GCWMP Date: 9 4 0 0	
Developed by: DFR/AT Casing Stickup (ft): -0.61 Total Depth (ft TOC): 40.5 Screened Interval (ft. TOC) 35.0-40.0 Casing Diameter (inche 2	
Measuring Point of We	
Screened Interval (ft. TOC) 35.0-40.0 Casing Diameter (inche 2 2 2 3 2	
Filter Pack Interval (ft. TOC)	
Casing Volume 3 4 33 (ft Water) x 0.02 (Lpfv)(gpf) = 21.29 (L)(gal) Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf PURGING MEASUREMENTS Time Cumul. Vol. Purge Rate (gpm or Lpm) (G or F) Conductance (μS/cm) (mg/L) (mv) 1027 0 250 (6.14	
Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf PURGING MEASUREMENTS Time Cumul. Vol. Purge Rate (gpm or Lpm) (C or F) (C or F) (C or Goductance (pm) (mg/L) (mv) 1027 0 250 (6.17	
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SAMPLE INVENTORY	
Time Volume Bottle Type Quantity Filtration Preservation Appearance Remarks	
Color Turbidity & Sediment	
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1L Amber glass 2 none none PCBs	\neg
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METHODS	Ì
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Purging Equipment: Peristaltic Pump w/ dedicated tubing Decon Equipment: Alconox, Distilled Water	
Disposal of Discharged Water: Stored in 1,000 gallon temporary onsite storage tank	_ l
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Observations/Comments:	I

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meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alemate retention schedules have been established by work-order or contract.

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meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alemate retention schedules have been established by work-order or contract.

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meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program signed agreement between ARI and the Client.

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APPENDIX C

Data Validation Reports

Data Validation Report

Port of Seattle, Southwest Harbor Phase II Groundwater Quality Confirmation Monitoring October 2008 Sampling

Laboratory SDG Numbers:

NU12 & NU25

Prepared for:

Aspect Consulting, Inc.

179 Madrone Lane N Bainbridge Island, WA 98110

Prepared by:

Pyron Environmental, Inc.

3530 32nd Way NW Olympia, WA 98502

December 22, 2008

ACRONYMS

%D percent difference

 $^{\mathsf{ND}_f}$ percent drift

%R percent recovery

%RSD percent relative standard deviation

AMU atomic mass unit

ARI Analytical Resources, Inc.

BFB bromofluorobenzene

CCB continuing calibration blank

CCV continuing calibration verification

CF calibration factor

CLP U.S. EPA Contract Laboratory Program

COC chain-of-custody

DFTPP decafluorotriphenylphosphine

ECD electron capture detector

EPA U.S. Environmental Protection Agency

FID flame ionization detector

GC/MS gas chromatograph/mass spectrometer

ICAL initial calibration

ICB initial calibration blank

ICP/MS inductively coupled plasma/ mass spectrometer

ICS ICP interference check sampleICV initial calibration verificationLCS laboratory control sample

LCSD laboratory control sample duplicate

μg/L microgram per literMDL method detection limit

MS matrix spike

MSD matrix spike duplicate

NFGs CLP National Functional Guidelines for Data Review (EPA 2008 – Organics, EPA

2004 - Inorganics)

PCB polychlorinated biphenyl

QAPP quality assurance project planQA/QC quality assurance/quality control

RF response factor

RPD relative percent difference

SDG sample delivery groupSIM selective ion monitoring

SVOCs semi-volatile organic compounds

TPH total petroleum hydrocarbonVOCs volatile organic compounds

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for samples collected during October 2008 for the referenced project. The laboratory reports validated herein were submitted by Analytical Resources, Inc. (ARI), assigned sample delivery group (SDG) numbers NU12 and NU25.

A level III data validation was performed on the laboratory reports. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2004 and 2008) with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plan ([QAPP], Aspect 2008) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report. Field duplicate results and evaluation is presented in **Appendix A**.

Samples and the associated analyses validated herein are summarized as follows:

						А	nalysis			
Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	VOCs	SVOCs	PAH	PCBs	As Pb	Metals	ТРН
CMP1-081013	NU12A	10/13/08	GW		Х	Х	Х	Х		Х
CMP2-081013	NU12B	10/13/08	GW		Х	Х	Х	Х		Х
FM105-081013	NU12C	10/13/08	GW	Х	Х	Х	Х	Х		Х
FM105-081013D	NU12D	10/13/08	FD	Х	Х	Х	Х	Х		Х
MW 125-081013	NU12E	10/13/08	GW	Х	Х	Х	Х	Х		Х
CMP17-081013	NU12F	10/13/08	GW	Х	Х	Х	Х	Х		Х
CMP5-081013	NU12G	10/13/08	GW		Х	Х	Х	Х		Х
MW308S-081013	NU12H	10/13/08	GW		Х	Х	Х	Х		Х
MW308N-081013	NU12I	10/13/08	GW		Х	Х	Х	Х		Х
Trip Blank	NU12J	10/13/08	ТВ	Х						
CMP3-081014	NU25A	10/14/08	GW		Х	Х	Х	Х		Х
CMP4-081014	NU25B	10/14/08	GW		Х	Х	Х	Х		Х
MW26R-081014	NU25C	10/14/08	GW		Х	Х	Х		Х	Х
MW26R-081014D	NU25D	10/14/08	FD		Х	Х	Х		Х	Х
MW 44-081014	NU25E	10/14/08	GW		Х	Х	Х		Х	Х
CMP15-081014	NU25F	10/14/08	GW		Х	Х	Х		Х	Х
MW36-081014	NU25G	10/14/08	GW		Х	Х	Х		Х	Х

Notes:

X - The analysis was requested and performed on the sample VOCs – Volatile organic compounds, chlorinated ethanes and ethenes only SVOCs – Semi-volatile organic compound, bis(2-ethylhexyl)phthalate only PAHs – Polycyclic aromatic hydrocarbons, carcinogenics only PCBs – Polychlorinated biphenyl Aroclors As – Arsenic Pb - Lead Metals – Antimony, arsenic, chromium, copper, lead, and nickel TPH – Diesel and motor oil range total petroleum hydrocarbon GW – Groundwater sample FD – Field duplicate TB – Trip blank

Analytical methods in respect to analytical parameters validated herein and the laboratory performing the analyses are summarized below:

Parameter	Analytical Method	Laboratory
VOCs	SW846 Method 8260B	
SVOCs	SW846 Method 8270C – Full Scan	
PAHs	SW846 Method 8270C-SIM	Analytical Resources, Inc. (ARI)
PCB Aroclors	SW846 Method 8082	Tukwila, WA
Metals (Sb, As, Cr, Cu, Pb, & Ni)	EPA Method 200.8	
TPH-Diesel and Motor Oil	NWTPH-Dx	

Notes:

- SW 846 Methods USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, December 1996.
- EPA Method 200.8 USEPA Methods for Chemical Analysis of Water and Wastes, EPA –600/4-79-020, March 1983 Revision.
- 3. NWTPH Analytical Methods for Petroleum Hydrocarbons, ECY 97-602, Washington State Department of Ecology, June
- 4. SIM Selective ion monitoring

DATA VALIDATION FINDINGS

1. VOCs by GC/MS (EPA Method SW8260B)

1.1 Sample Management and Holding Time

Samples were received in the laboratory intact and in consistence with the accompanying chain-of-custody (COC) documentation. The cooler temperature was measured at 10.5°C and 15°C upon the receipt at the laboratory. All samples were hand-delivered to the laboratory the same of day of collection. The higher cooler temperature had no significant effects on data quality. No other anomalies were identified in relation to sample preservation, handling, and transport.

Water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding time.

1.2 GC/MS Instrument Performance Check

Bromofluorobenzene (BFB) tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

1.3 Initial Calibration

The National Functional Guidelines (NFGs) require that the percent relative standard deviation (%RSD) be <30% and the average response factor (RF) be > 0.01 for poor response compounds and >0.05 for all other compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. Initial calibration met the criteria for all target compounds.

1.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the percent difference (%D) be within $\pm 20\%$, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds.

Calibration verification analyses met the method requirements.

1.5 Blanks

Method Blank: Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the method detection limits (MDLs) in method blanks.

Trip Blank: One trip blank was submitted with samples for VOCs analyses. No target compounds were detected at or above the RLs in the trip blank.

1.6 Laboratory Control Sample (LCS)

LCS and LCS duplicate (LCSD) were prepared and analyzed as required by the method. All percent recovery (%R) and relative percent difference (RPD) values met the laboratory control criteria.

1.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

1.8 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

1.9 Internal Standard

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Field Duplicates

Samples FM105-081013 and FM105-081013D were field duplicates. The duplicate sample RPD or concentration difference values for detected compounds and data qualification are presented in Appendix A of this report.

1.11 Reporting Limits

The sample-specific RLs met the QAPP requirements and were supported with adequate initial calibration concentrations.

1.12 Overall Assessment of VOCs Data Usability

VOCs data are of known quality and acceptable for use.

2. bis(2-Ethylhexyl)phthalate by GC/MS (EPA Method SW8270C)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

2.3 Initial Calibration

The NFGs criteria require that the percent %RSD be <30% and the average RF be > 0.01 for poor response compounds and >0.05 for all other compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The initial calibration met the criteria.

2.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D be within ±20%, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds. Calibration verifications met the criteria.

2.5 Method Blank

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

2.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. %R values for one of the four surrogate spikes, nitrobenzene-d4, were below the lower control limits in selected samples. %R values for all other surrogates were within the laboratory control limits. No data were qualified on this basis.

2.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

2.8 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the laboratory control limits.

2.9 Internal Standards

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

2.10 Field Duplicates

Two pairs of field duplicates - samples FM105-081013 and FM105-081013D; and samples MW26R-081014 and MW26R-081014D, were submitted for *bis*(2-ethylhexyl)phthalate analyses. *bis*(2-Ethylhexyl)phthalate was not detected at or above the RL in these samples. The field precision met the project criterion.

2.11 Reporting Limits

The sample-specific RLs met the project requirements and were supported with adequate initial calibration concentrations.

2.12 Overall Assessment of bis(2-Ethylhexyl)phthalate Data Usability

bis(2-Ethylhexyl)phthalate data are of known quality and acceptable for use.

3. PAHs by GC/MS - SIM (EPA Method SW8270C)

3.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

3.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

3.3 Initial Calibration

The NFGs criteria require that the %RSD be <30% and the average RRF be >0.05 for all target compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995,

and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The initial calibration met the criteria.

3.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D be within $\pm 20\%$, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds. Calibration verification analyses met the criteria.

3.5 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

3.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate %R values were within the laboratory control limits.

3.7 Matrix Spike (MS) and MS Duplicate (MS/MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

3.8 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed with each analytical batch. All %R and RPD values were within the project control limits.

3.9 Internal Standards

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

3.10 Field Duplicates

Two pairs of field duplicates - samples FM105-081013 and FM105-081013D; and samples MW26R-081014 and MW26R-081014D, were submitted for PAHs analyses. The duplicate RPD or concentration difference values for detected compounds and data qualification are presented in Appendix A of this report.

3.11 Reporting Limits

The sample-specific RLs met the project requirements and were supported with adequate initial calibration concentrations.

3.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use.

4. PCB Aroclors by GC/ECD (EPA Method SW8082)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

4.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the relative standard deviation (%RSD) values of Aroclor 1016 and 1260 CFs must be \leq 20%, and (5) if dual column analysis is chosen, both columns should meet the requirements.

The laboratory chose the internal-standard linear calibration for the Aroclor quantitation. The average RF %RSD values met the linearity criterion (20%). All RFs were >0.01, as recommended by SW846 Method 8000. The initial calibrations met the method requirements and were acceptable.

4.3 Calibration Verification

The method requires that (1) the initial calibration be verified prior to any analysis for each 12-hour analysis sequence, and (2) the percent drift ($\%D_f$) be within ±15% to demonstrate the linearity of the initial calibration. Calibration verifications were performed at the required frequency. All $\%D_f$ values either met the method criterion or at levels that had no effects on sample results (*e.g.*, biased high recovery where target analytes were not detected in associated samples).

4.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the RLs in the method blanks.

4.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

4.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

4.7 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed with each analytical batch. All %R and RPD values were within the project control limits.

4.8 Internal Standards

The laboratory chose the internal-standard calibration approach for analyte quantitation. The SW-846, Method 8000 requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within $\pm 50\%$ to $\pm 100\%$ of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

4.9 Field Duplicates

Two pairs of field duplicates - samples FM105-081013 and FM105-081013D; and samples MW26R-081014 and MW26R-081014D, were submitted for PCB Aroclors analyses. PCB Aroclors were not detected at or above the RL in these samples. The field precision met the project criterion.

4.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs met the QAPP requirements. RLs in selected samples were raised due to non-target chemical interference or response peaks that did not meet the Aroclor identification criteria (e.g., peak ratios, chromatographic patterns).

4.11 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use.

5. Total Metals by ICP/MS (EPA Method 200.8)

5.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be analyzed within 180 days. Samples were analyzed within the required holding time.

5.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

5.3 Initial Calibration

The ICP methods requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

A check standard containing target analytes at the reporting limit levels was analyzed at the beginning of each analytical run. The results were within the NFGs criteria of 70-130%.

5.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) were analyzed at the required frequency. The %R values met the control criteria (90 – 110%).

5.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were analyzed at required frequency. Target analytes were not detected in ICBs/CCBs at or above the method detection limits (MDLs).

Method Blanks: Method blanks were prepared and analyzed as required. Target analytes were not detected at or above the RLs.

5.6 ICP Interference Check Sample (ICS)

The method requires that (1) an inter-element interference check sample be analyzed at the beginning of each analytical run, and (2) the results should be within \pm 20% of the true value. ICP interference check sample analyses met the requirements.

5.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values met the control limits (80 – 120%).

5.8 Duplicate Sample Analysis

Duplicate sample analyses were not performed on project samples in these SDGs, and therefore not reported. The analytical precision was evaluated based on the field duplicate results.

5.9 Matrix Spike (MS)

Matrix spike analyses were not performed on project samples in these SDGs, and therefore not reported. The analytical accuracy was evaluated based on the LCS results.

5.10 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (30 - 120% of those for the associated calibration blank).

5.11 ICP Serial Dilution

Serial dilution analysis were not performed on project samples in these SDGs, and therefore not reported.

5.12 Field Duplicates

Two pairs of field duplicates - samples FM105-081013 and FM105-081013D; and samples MW26R-081014 and MW26R-081014D, were submitted for metals analyses. The duplicate RPD or concentration difference values for detected analytes and data qualification are presented in Appendix A of this report.

5.13 Analyte Quantitation and Reporting Limits

RLs for selected analytes in a number of samples were raised due to the required dilution to overcome matrix interference associated with the samples. The QAPP requirements for quantitation limits were achieved.

5.14 Overall Assessment of Metals Data Usability

Metals data are of known quality and acceptable for use.

6. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

6.1 Holding Time

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. The extraction and analysis of samples met the requirements.

6.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using individual petroleum product reference standards to ensure the proper identification and quantitation of petroleum hydrocarbons in samples, (2) the calibration curve includes a sufficiently low standard to provide the necessary reporting limits, and (3) the linear working range of the instrument be defined.

The ICAL met the method requirements. The linearity of the ICAL curve was verified with %RSD of RFs (%RSD ≤ 20%, according to EPA SW 846 Method 8000), and was acceptable for both diesel and motor oil range total petroleum hydrocarbon (TPH).

6.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift value be within ±15% of the true value. The calibration verification analyses met the requirements.

6.4 Method Blanks

Method blanks were prepared and analyzed as required. TPH-Diesel and TPH-Motor Oil were not detected at or above the RLs in the method blanks.

6.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

6.6 Duplicate Analysis

Duplicate analyses were not performed on project samples in these SDGs, and therefore were not reported. Analytical precision was evaluated based on the LCS/LCSD analyses.

6.7 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the laboratory control limits.

6.8 Field Duplicates

Two pairs of field duplicates - samples FM105-081013 and FM105-081013D; and samples MW26R-081014 and MW26R-081014D, were submitted. TPH-Diesel & Motor Oil were not detected at or above the RL in these samples. The field precision met the project criterion.

6.9 Reporting Limits

The reported RLs were supported with adequate ICAL concentrations. Sample-specific RLs met the QAPP requirements.

6.10 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and Motor Oil data are of known quality and acceptable for use.

SUMMARY

	I.	Data	qualification	are	summarized	as follows
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Qualifier	Reason	Section
No data were qualit	fied in these SDGs.	

II. Data affected by associated blanks are qualified and results adjusted as follows:

Sample ID	Analyte	Original Result	Adjusted Result	Unit	Report Section			
No data were qualified in relation to detections in blanks in these SDGs.								

III. Data Qualifiers are defined as follows:

Data Qualifier	Definition
J	The analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.
NJ	The analyte was not definitively identified and the reported concentration was an estimated value.
R	The result was rejected and could not be used.
U	The analyte was analyzed for, but was considered not detected at the reporting limit or reported value.
υJ	The analyte was analyzed for, and the associated quantitation limit was an estimated value.

Approved By:		Date	:
	Mingta Lin		

REFERENCES

- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2007, EPA-540-R-08-01.
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, October 2004, EPA 540/R-04/004.
- USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, December 1996.
- State of Washington, Analytical Methods for Petroleum Hydrocarbons, ECY 97-602, Washington State Department of Ecology, June 1997
- Port of Seattle, Southwest Harbor Project, Phase II Groundwater Confirmation Monitoring Program, Water Quality Monitoring Plan, Aspect Consulting, Inc., October 2008.

APPENDIX A

The precision criterion (\leq 50%) was applied to evaluating the relative percent difference (RPD) values of field duplicate results greater than five times the MRL (5xRL). For results less than 5xRL, an advisory criterion of 2xRL was applied to evaluating the concentration differences.

The RPD and concentration difference values for detected analytes and data qualification are presented as follows:

	, DI		nple ID & tration (µg/L)	555	Conc.	Data
Detected Target Analyte	RL (µg/L)	FM105-081013	FM105-081013D	RPD (%)	Difference (µg/L)	Data Qualification
Arsenic	0.2	0.40	0.40	-	0	No action
cis-1,2-Dichloroethene	0.2	0.70	0.70	-	0	No action
Tetrachloroethene (PCE)	0.2	6.10	6.20	1.6%	-	No action
Trichloroethene (TCE)	0.2	0.90	0.90	-	0	No action
	RL	San Concen	RPD	Conc.	Data	
Detected Target Analyte	(µg/L)	MW26R-081014	MW26R-081014D	(%)	(µg/L)	Qualification
Benz(a)anthracene	0.01	0.025	0.024	-	0.001	No action
Chrysene	0.01	0.027	0.026	-	0.001	No action
Arsenic	2	ND	3	-	3	No action
Chromium III	2	ND	3	-	3	No action
Nickel	2	6	7	-	1	No action

Note:

RL - Reporting limit

ND - Not detected at or above the RL

RPD - Relative percent difference

Conc. Difference - Concentration difference between the parent sample and the field duplicate sample

Data Validation Report

Port of Seattle, Southwest Harbor Phase II Groundwater Quality Confirmation Monitoring April 2009 Sampling

Laboratory SDG Numbers:

OT19, OT38, & OT68

Prepared for:

Aspect Consulting, Inc.

179 Madrone Lane N Bainbridge Island, WA 98110

Prepared by:

Pyron Environmental, Inc.

3530 32nd Way NW Olympia, WA 98502

ACRONYMS

%D percent difference

%D_f percent drift

%R percent recovery

%RSD percent relative standard deviation

AMU atomic mass unit

ARI Analytical Resources, Inc.

BFB Bromofluorobenzene

CCB continuing calibration blank

CCV continuing calibration verification

CF calibration factor

CLP U.S. EPA Contract Laboratory Program

COC chain-of-custody

DFTPP Decafluorotriphenylphosphine

ECD electron capture detector

EPA U.S. Environmental Protection Agency

FID flame ionization detector

GC/MS gas chromatograph/mass spectrometer

ICAL initial calibration

ICB initial calibration blank

ICP/MS inductively coupled plasma/ mass spectrometer

ICS ICP interference check sampleICV initial calibration verificationLCS laboratory control sample

LCSD laboratory control sample duplicate

μg/L microgram per literMDL method detection limit

MS matrix spike

MSD matrix spike duplicate

NFGs CLP National Functional Guidelines for Data Review (EPA 2008 – Organics, EPA

2004 - Inorganics)

PAHs polycyclic aromatic hydrocarbons

PCB polychlorinated biphenyl

QAPP quality assurance project plan

QA/QC quality assurance/quality control

RF response factor
RL reporting limit

RPD relative percent differenceSDG sample delivery group

SIM selective ion monitoring

SVOCs semi-volatile organic compounds

TPH total petroleum hydrocarbonVOCs volatile organic compounds

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for samples collected during April 2009 for the referenced project. The laboratory reports validated herein were submitted by Analytical Resources, Inc. (ARI), assigned sample delivery group (SDG) numbers OT19, OT38, and OT68.

A level III data validation was performed on the laboratory reports. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2004 and 2008) with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plan ([QAPP], Aspect 2008) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report. Field duplicate results and evaluation is presented in **Appendix A**.

Samples and the associated analyses validated herein are summarized as follows:

						Aı	nalysis			
Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	VOCs	SVOCs	PAHs	PCBs	As Pb	Metals	TPH
CMP2-090331	OT19A	03/31/.09	GW		X	Х	Χ	Х		Х
CMP1-090331	OT19B	03/31/.09	GW		Х	Х	Х	Х		Х
FM105-090331	OT19C	03/31/.09	GW	Х	Х	Х	Х	Х		Х
MW125-090331	OT19D	03/31/.09	GW	Х	Х	Х	Х	Х		Х
CMP17-090331	OT19E	03/31/.09	GW	Х	Х	Х	Х	Х		Х
FM105-090331D	OT19F	03/31/.09	FD	Χ	Х	Х	Χ	Х		Х
Trip Blank	OT19F	03/31/.09	ТВ	Х						
CMP3-090401	OT38A	04/01/09	GW		Х	Х	Χ	Х		Х
MW26R-090401	OT38B	04/01/09	GW		Х	Х	Х		Х	Х
MW26R-090401D	OT38C	04/01/09	FD		Х	Х	Х		Х	Х
MW44-090401	OT38D	04/01/09	GW		Х	Х	Х		Х	Х
CMP5-090401	OT38E	04/01/09	GW		Х	Х	Х	Х		Х
MW308S-090401	OT38F	04/01/09	GW		Х	Х	Χ	Х		Х
CMP4-090402	OT68A	04/02/09	GW		Х	Х	Х	Х		Х
MW36-090402	OT68B	04/02/09	GW		Х	Х	Х		Х	Х
CMP15-090402	OT68C	04/02/09	GW		Х	Х	Х		Х	Х
MW308N-090402	OT68D	04/02/09	GW		Х	Х	Х	Х		Х

Notes:

X - The analysis was requested and performed on the sample

VOCs - Volatile organic compounds, chlorinated ethanes and ethenes only

SVOCs - Semi-volatile organic compound, bis(2-ethylhexyl)phthalate only

PAHs - Polycyclic aromatic hydrocarbons, carcinogenics only

PCBs - Polychlorinated biphenyl Aroclors

As – Arsenic

Pb - Lead

Metals - Antimony, arsenic, chromium, copper, lead, and nickel

TPH - Diesel and motor oil range total petroleum hydrocarbon

GW - Groundwater sample

FD - Field duplicate

TB - Trip blank

Analytical methods in respect to analytical parameters validated herein and the laboratory performing the analyses are summarized below:

Parameter	Analytical Method	Laboratory
VOCs	SW846 Method 8260B	
SVOCs	SW846 Method 8270C - Full Scan	
PAHs	SW846 Method 8270C-SIM	Analytical Resources, Inc. (ARI)
PCB Aroclors	SW846 Method 8082	Tukwila, WA
Metals (Sb, As, Cr, Cu, Pb, & Ni)	EPA Method 200.8	
TPH-Diesel and Motor Oil	NWTPH-Dx	

Notes:

SW846 Methods - USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, December 1996.

EPA Method 200.8 - USEPA Methods for Chemical Analysis of Water and Wastes, EPA –600/4-79-020, March 1983 Revision. NWTPH - Analytical Methods for Petroleum Hydrocarbons, ECY 97-602, Washington State Department of Ecology, June 1997. SIM – Selective ion monitoring

DATA VALIDATION FINDINGS

1. VOCs by GC/MS (EPA Method SW8260B)

1.1 Sample Management and Holding Time

Samples were received in the laboratory intact and in consistence with the accompanying chain-of-custody (COC) documentation. The temperature for three of the coolers (7.2 $^{\circ}$ C, 6.6 $^{\circ}$ C, and 7.4 $^{\circ}$ C) was outside the upper limit of 4±2 $^{\circ}$ C upon the receipt at the laboratory. All samples were hand-delivered to the laboratory the same day of collection. The higher cooler temperature had no significant effects on data quality. No other anomalies were identified in relation to sample preservation, handling, and transport.

Water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding time.

1.2 GC/MS Instrument Performance Check

Bromofluorobenzene (BFB) tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

1.3 Initial Calibration

The National Functional Guidelines (NFGs) require that the percent relative standard deviation (%RSD) be <30% and the average response factor (RF) be > 0.01 for poor response compounds and >0.05 for all other compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. Initial calibration met the criteria for all target compounds.

1.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the percent difference (%D) be within $\pm 20\%$, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds.

Calibration verification analyses met the method requirements.

1.5 Blanks

Method Blank: Method blanks were prepared and analyzed as required. Target compounds were not detected at or above the method detection limits (MDLs) in method blanks.

Trip Blank: One trip blank was submitted with samples for VOCs analyses. No target compounds were detected at or above the RLs in the trip blank.

1.6 Laboratory Control Sample (LCS)

LCS and LCS duplicate (LCSD) were prepared and analyzed as required by the method. All percent recovery (%R) and relative percent difference (RPD) values met the laboratory control criteria.

1.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

1.8 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

1.9 Internal Standard

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Field Duplicates

Samples FM105-090331 and FM105-090331D were field duplicates. The duplicate sample RPD or concentration difference values for detected compounds and data qualification are presented in Appendix A of this report.

1.11 Reporting Limits

The sample-specific RLs met the QAPP requirements and were supported with adequate initial calibration concentrations.

1.12 Overall Assessment of VOCs Data Usability

VOCs data are of known quality and acceptable for use.

2. bis(2-Ethylhexyl)phthalate by GC/MS (EPA Method SW8270C)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

2.3 Initial Calibration

The NFGs criteria require that the percent %RSD be <30% and the average RF be > 0.01 for poor response compounds and >0.05 for all other compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The initial calibration met the criteria.

2.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D be within ±20%, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds. Calibration verifications met the criteria.

2.5 Method Blank

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

2.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

2.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

2.8 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the laboratory control limits.

2.9 Internal Standards

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

2.10 Field Duplicates

Two pairs of field duplicates - samples FM105-090331 and FM105-090331D; and samples MW26R-090401 and MW26R-090401D, were submitted for *bis*(2-ethylhexyl)phthalate analyses. *bis*(2-Ethylhexyl)phthalate was not detected at or above the RL in these samples. The field precision met the project criterion.

2.11 Reporting Limits

The sample-specific RLs met the project requirements and were supported with adequate initial calibration concentrations.

2.12 Overall Assessment of bis(2-Ethylhexyl)phthalate Data Usability

bis(2-Ethylhexyl)phthalate data are of known quality and acceptable for use.

3. PAHs by GC/MS - SIM (EPA Method SW8270C)

3.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

3.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

3.3 Initial Calibration

The NFGs criteria require that the %RSD be <30% and the average RRF be >0.05 for all target compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995,

and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The initial calibration met the criteria.

3.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D be within $\pm 20\%$, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds. Calibration verification analyses met the criteria or the %D values were at levels that had no effects on sample results (*e.g.*, biased-high %D values and the target analytes were not detected in associated samples).

3.5 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the RLs in the method blanks.

3.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate %R values were within the laboratory control limits.

3.7 Matrix Spike (MS) and MS Duplicate (MS/MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

3.8 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed with each analytical batch. All %R and RPD values were within the project control limits.

3.9 Internal Standards

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

3.10 Field Duplicates

Two pairs of field duplicates - samples FM105-090331 and FM105-090331D; and samples MW26R-090401 and MW26R-090401D, were submitted for PAHs analyses. The duplicate RPD or concentration difference values for detected compounds and data qualification are presented in Appendix A of this report.

3.11 Reporting Limits

The sample-specific RLs met the project requirements and were supported with adequate initial calibration concentrations.

3.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use.

4. PCB Aroclors by GC/ECD (EPA Method SW8082)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

4.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the relative standard deviation (%RSD) values of Aroclor 1016 and 1260 CFs must be \leq 20%, and (5) if dual column analysis is chosen, both columns should meet the requirements.

The laboratory chose the internal-standard linear calibration for the Aroclor quantitation. The average RF %RSD values met the linearity criterion (20%). All RFs were >0.01, as recommended by SW846 Method 8000. The initial calibrations met the method requirements and were acceptable.

4.3 Calibration Verification

The method requires that (1) the initial calibration be verified prior to any analysis for each 12-hour analysis sequence, and (2) the percent drift $(\%D_f)$ be within $\pm 15\%$ to demonstrate the linearity of the initial calibration. Calibration verifications were performed at the required frequency. All $\%D_f$ values either met the method criterion or at levels that had no effects on sample results (*e.g.*, biased-high $\%D_f$ values where target analytes were not detected in associated samples).

4.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the RLs in the method blanks.

4.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

4.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

4.7 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed with each analytical batch. All %R and RPD values were within the project control limits.

4.8 Internal Standards

The laboratory chose the internal-standard calibration approach for analyte quantitation. The SW-846, Method 8000 requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to $\pm 100\%$ of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

4.9 Field Duplicates

Two pairs of field duplicates - samples FM105-090331 and FM105-090331D; and samples MW26R-090401 and MW26R-090401D, were submitted for PCB Aroclors analyses. PCB Aroclors were not detected at or above the RL in these samples. The field precision met the project criterion.

4.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs met the QAPP requirements. RLs in selected samples were raised due to non-target chemical interference or response peaks that did not meet the Aroclor identification criteria (*e.g.*, peak ratios, chromatographic patterns).

4.11 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use.

5. Total Metals by ICP/MS (EPA Method 200.8)

5.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be analyzed within 180 days. Samples were analyzed within the required holding time.

5.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

5.3 Initial Calibration

The ICP methods requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

A check standard containing target analytes at the reporting limit levels was analyzed at the beginning of each analytical run. The results were within the NFGs criteria of 70-130%.

5.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) were analyzed at the required frequency. The %R values met the control criteria (90 – 110%).

5.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were analyzed at required frequency. Target analytes were not detected in ICBs/CCBs at or above the method detection limits (MDLs).

Method Blanks: Method blanks were prepared and analyzed as required. Target analytes were not detected at or above the RLs.

5.6 ICP Interference Check Sample (ICS)

The method requires that (1) an inter-element interference check sample be analyzed at the beginning of each analytical run, and (2) the results should be within \pm 20% of the true value. ICP interference check sample analyses met the requirements.

5.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values met the control limits (80 - 120%).

5.8 Duplicate Sample Analysis

Duplicate sample analyses were not performed on project samples in these SDGs, and therefore not reported. The analytical precision was evaluated based on the field duplicate results.

5.9 Matrix Spike (MS)

Matrix spike analyses were not performed on project samples in these SDGs, and therefore not reported. The analytical accuracy was evaluated based on the LCS results.

5.10 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (30 - 120% of those for the associated calibration blank).

5.11 ICP Serial Dilution

Serial dilution analysis were not performed on project samples in these SDGs, and therefore not reported.

5.12 Field Duplicates

Two pairs of field duplicates - samples FM105-090331 and FM105-090331D; and samples MW26R-090401 and MW26R-090401D, were submitted for metals analyses. The duplicate RPD or concentration difference values for detected analytes and data qualification are presented in Appendix A of this report.

5.13 Analyte Quantitation and Reporting Limits

RLs for selected analytes in a number of samples were raised due to the required dilution to overcome matrix interference associated with the samples. The QAPP requirements for quantitation limits were achieved.

5.14 Overall Assessment of Metals Data Usability

Metals data are of known quality and acceptable for use.

6. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

6.1 Holding Time

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. The extraction and analysis of samples met the requirements.

6.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using individual petroleum product reference standards to ensure the proper identification and quantitation of petroleum hydrocarbons in samples, (2) the calibration curve includes a sufficiently low standard to provide the necessary reporting limits, and (3) the linear working range of the instrument be defined.

The ICAL met the method requirements. The linearity of the ICAL curve was verified with %RSD of RFs (%RSD ≤ 20%, according to EPA SW 846 Method 8000), and was acceptable for both diesel and motor oil range total petroleum hydrocarbon (TPH).

6.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift value be within $\pm 15\%$ of the true value. The calibration verification analyses met the requirements.

6.4 Method Blanks

Method blanks were prepared and analyzed as required. TPH-Diesel and TPH-Motor Oil were not detected at or above the RLs in the method blanks.

6.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

6.6 Duplicate Analysis

Duplicate analyses were not performed on project samples in these SDGs, and therefore were not reported. Analytical precision was evaluated based on the LCS/LCSD analyses.

6.7 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the laboratory control limits.

6.8 Field Duplicates

Two pairs of field duplicates - samples FM105-090331 and FM105-090331D; and samples MW26R-090401 and MW26R-090401D, were submitted for TPH-Diesel & Motor Oil analyses. The target compounds were not detected at or above the RL in these samples. The field precision met the project criterion.

6.9 Reporting Limits

The reported RLs were supported with adequate ICAL concentrations. Sample-specific RLs met the QAPP requirements.

6.10 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and Motor Oil data are of known quality and acceptable for use.

SUMMARY

I. Data qualification are summarized as follows:

Sample ID	Analyte	Data Qualifier	Reason	Report Section
FM105-090331 FM105-090331D	bis(2-Ethylhexyl)phthalate	Ŋ IJ	The field duplicate result did not meet the project control limits.	Appendix A

II. Data affected by associated blanks are qualified and results adjusted as follows:

Sample ID	Analyte	Original Result	Adjusted Result	Unit	Report Section	
No data were qualified in relation to detections in blanks in these SDGs.						

III. Data Qualifiers are defined as follows:

Data Qualifier	Definition
J	The analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.
NJ	The analyte was not definitively identified and the reported concentration was an estimated value.
R	The result was rejected and could not be used.
U	The analyte was analyzed for, but was considered not detected at the reporting limit or reported value.
UJ	The analyte was analyzed for, and the associated quantitation limit was an estimated value.

Approved By:		Date:	
	Mingta Lin		

REFERENCES

- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2007, EPA-540-R-08-01.
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, October 2004, EPA 540/R-04/004.
- USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, December 1996.
- State of Washington, Analytical Methods for Petroleum Hydrocarbons, ECY 97-602, Washington State Department of Ecology, June 1997
- Port of Seattle, Southwest Harbor Project, Phase II Groundwater Confirmation Monitoring Program, Water Quality Monitoring Plan, Aspect Consulting, Inc., October 2008.

APPENDIX A

The precision criterion (\leq 50%) was applied to evaluating the relative percent difference (RPD) values of field duplicate results greater than five times the MRL (5xRL). For results less than 5xRL, an advisory criterion of 2xRL was applied to evaluating the concentration differences.

The RPD and concentration difference values for detected analytes and data qualification are presented as follows:

		Sample ID & Concentration (µg/L)			Conc.	
Detected Target Analyte	RL (µg/L)	FM105-090331	FM105-090331D	RPD (%)	Difference (µg/L)	Data Qualification
Arsenic	0.2	0.50	0.50	-	0	No action
cis-1,2-Dichloroethene	0.2	0.40	0.50	-	0.01	No action
Tetrachloroethene (PCE)	0.2	3.4	3.7	8.5%	-	No action
Trichloroethene (TCE)	0.2	0.60	0.60	-	0	No action
bis(2-Ethylhexyl)phthalate	1.0	ND	5.8	-	5.8	UJ/J
			ple ID & ration (μg/L)		Conc.	
Detected Target Analyte	RL (µg/L)	MW26R-090401	MW26R-090401D	RPD (%)	Difference (µg/L)	Data Qualification
Benz(a)anthracene	0.01	ND	0.011	-	0.011	No action
Benzo(b)fluoranthene	0.01	ND	0.018	-	0.018	No action
Benzo(k)fluoranthene	0.01	ND	0.016	-	0.016	No action
Chrysene	0.01	0.011	0.022	-	0.011	No action
Chromium	2	3	3	-	0	No action
Nickel	2	6	7	-	1	No action

Notes:

RL - Reporting limit

ND - Not detected at or above the RL

RPD – Relative percent difference

Conc. Difference – Concentration difference between the parent sample and the field duplicate sample

Data Validation Report

Port of Seattle, Southwest Harbor Phase II Groundwater Quality Confirmation Monitoring September 2009 Sampling

Laboratory SDG Numbers:

PM70, PN04, & PN16

Prepared for:

Aspect Consulting, Inc.

179 Madrone Lane North Bainbridge Island, WA 98110

Prepared by:

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October 20, 2009

ACRONYMS

%D percent difference

%D_f percent drift

%R percent recovery

%RSD percent relative standard deviation

AMU atomic mass unit

ARI Analytical Resources, Inc.

BFB Bromofluorobenzene

CCB continuing calibration blank

CCV continuing calibration verification

CF calibration factor

CLP U.S. EPA Contract Laboratory Program

COC chain-of-custody

DFTPP Decafluorotriphenylphosphine

ECD electron capture detector

EPA U.S. Environmental Protection Agency

FID flame ionization detector

GC/MS gas chromatograph/mass spectrometer

ICAL initial calibration

ICB initial calibration blank

ICP/MS inductively coupled plasma/ mass spectrometer

ICS ICP interference check sampleICV initial calibration verificationLCS laboratory control sample

LCSD laboratory control sample duplicate

μg/L microgram per literMDL method detection limit

MS matrix spike

MSD matrix spike duplicate

NFGs CLP National Functional Guidelines for Data Review (EPA 2007 – Organics, EPA

2004 - Inorganics)

PAHs polycyclic aromatic hydrocarbons

PCBs polychlorinated biphenyls

QAPP quality assurance project plan

QA/QC quality assurance/quality control

RF response factor
RL reporting limit

RPD relative percent difference
SDG sample delivery group

SIM selective ion monitoring

SVOCs semi-volatile organic compounds

TPH total petroleum hydrocarbonVOCs volatile organic compounds

INTRODUCTION

This report presents and discusses findings of the data validation performed on analytical data for samples collected during September 2009 for the referenced project. The laboratory reports validated herein were submitted by Analytical Resources, Inc. (ARI), assigned sample delivery group (SDG) numbers PM70, PN04, and PN16.

A level III data validation was performed on the laboratory reports. The validation followed the procedures specified in USEPA CLP Functional Guidelines ([NFGs], EPA 2004 and 2007) with modifications to accommodate project and analytical method requirements. The numerical quality assurance/quality control (QA/QC) criteria applied to the validation were in accordance with those specified in the quality assurance project plan ([QAPP], Aspect 2008) and the current performance-based control limits established by the laboratory (laboratory control limits). Instrument calibration, frequency of QC analyses, and analytical sequence requirements were evaluated against the respective analytical methods.

Validation findings are discussed in each section pertinent to the QC parameter for each type of analysis. Qualified data with applied data qualifiers are summarized in the **Summary** section at the end of this report. Field duplicate results and evaluation is presented in **Appendix A**.

Samples and the associated analyses validated herein are summarized as follows:

				Analysis						
Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	VOCs	SVOCs	PAHs	PCBs	As Pb	Metals	ТРН
CMP2-090902	PM70A	09/02/09	GW		X	Х	Х	Х		Х
MW125-090902	PM70B	09/02/09	GW	Х	Х	Х	Х	Х		Х
CMP17-090902	PM70C	09/02/09	GW	Х	Х	Х	Х	Х		Х
FM105-090902	PM70D	09/02/09	GW	Х	Х	Х	Х	Х		Х
FM105-090902D	PM70E	09/02/09	FD	Х	Х	Х	Х	Х		Х
CMP5-090902	PM70F	09/02/09	GW		Х	Х	Х	Х		Х
CMP3-090903	PN04A	09/03/09	GW		Х	Х	Х	Х		Х
CMP4-090903	PN04B	09/03/09	GW		Х	Х	Х	Х		Х
CMP15-090903	PN04C	09/03/09	GW		Х	Х	Х		Х	Х
MW26R-090903	PN04D	09/03/09	GW		Х	Х	Х		Х	Х
MW26R-090903D	PN04E	09/03/09	FD		Х	Х	Х		Х	Х
MW44-090903	PN04F	09/03/09	GW		Х	Х	Х		Х	Х
MW36-090903	PN04G	09/03/09	GW		Х	Х	Х		Х	Х

Notes:

X - The analysis was requested and performed on the sample

VOCs - Volatile organic compounds, chlorinated ethanes and ethenes only

SVOCs - Semi-volatile organic compound, bis(2-ethylhexyl)phthalate only

PAHs - Polycyclic aromatic hydrocarbons, carcinogenics only

PCBs - Polychlorinated biphenyl Aroclors

As – Arsenic

Pb - Lead

Metals – Antimony, arsenic, chromium, copper, lead, and nickel TPH – Diesel and motor oil range total petroleum hydrocarbon GW – Groundwater sample FD – Field duplicate

Analytical methods in respect to analytical parameters validated herein and the laboratory performing the analyses are summarized below:

Parameter	Analytical Method	Laboratory
VOCs	SW846 Method 8260B	
SVOCs	SW846 Method 8270C-Full Scan	
PAHs	SW846 Method 8270C-SIM	Analytical Resources, Inc. (ARI)
PCB Aroclors	SW846 Method 8082	Tukwila, WA
Metals (Sb, As, Cr, Cu, Pb, & Ni)	EPA Method 200.8	
TPH-Diesel and Motor Oil	NWTPH-Dx	

Notes:

- SW846 Methods USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, December 1996.
- 2. EPA Method 200.8 USEPA Methods for Chemical Analysis of Water and Wastes, EPA -600/4-79-020, March 1983 Revision
- 3. NWTPH Analytical Methods for Petroleum Hydrocarbons, ECY 97-602, Washington State Department of Ecology, June 1997.
- 4. SIM Selective ion monitoring

DATA VALIDATION FINDINGS

1. VOCs by GC/MS (EPA Method SW8260B)

1.1 Sample Management and Holding Time

Samples were received in the laboratory intact and in consistence with the accompanying chain-of-custody (COC) documentation. The temperature for coolers was outside the upper limit of 4±2°C upon the receipt at the laboratory. All samples were hand-delivered to the laboratory the same day of collection. The higher cooler temperature had no significant effects on data quality. No other anomalies were identified in relation to sample preservation, handling, and transport.

Water samples should be analyzed within 14 days of collection. All samples were analyzed within the required holding time.

1.2 GC/MS Instrument Performance Check

Bromofluorobenzene (BFB) tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

1.3 Initial Calibration

The National Functional Guidelines (NFGs) require that the percent relative standard deviation (%RSD) be <30% and the average response factor (RF) be >0.01 for poor response compounds and >0.05 for all other compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. Initial calibration met the criteria for all target compounds.

1.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the percent difference (%D) be within $\pm 20\%$, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds.

Calibration verification analyses met the method requirements.

1.5 Method Blank

A method blank was prepared and analyzed as required. Target compounds were not detected at or above the method detection limits (MDLs) in the method blank.

1.6 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD were prepared and analyzed as required by the method. All percent recovery (%R) and relative percent difference (RPD) values met the laboratory control criteria.

1.7 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

1.8 Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

1.9 Internal Standard

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

1.10 Field Duplicates

Samples FM105-090902 and FM105-090902D were field duplicates. The duplicate sample RPD or concentration difference values for detected compounds and data qualification are presented in Appendix A of this report.

1.11 Reporting Limits (RLs)

The sample-specific RLs met the QAPP requirements and were supported with adequate initial calibration concentrations.

1.12 Overall Assessment of VOCs Data Usability

VOCs data are of known quality and acceptable for use.

2. bis(2-Ethylhexyl)phthalate by GC/MS (EPA Method SW8270C)

2.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

2.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

2.3 Initial Calibration

The NFGs criteria require that the percent %RSD be <30% and the average RF be > 0.01 for poor response compounds and >0.05 for all other compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995, and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The initial calibration met the criteria.

2.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D be within $\pm 20\%$, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds. Calibration verifications met the criteria.

2.5 Method Blank

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the MDL in the method blanks.

2.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits, except that the %R value for one of the surrogates, *p*-terphenyl-d₁₄, exceeded the upper control limit in sample CMP1-090904. *bis*(2-Ethylhexyl)phthalate was not detected at or above the RL in this samples. The higher surrogate recovery had no effect on data quality; no data were qualified on this basis.

2.7 Matrix Spike (MS) and MS Duplicate (MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

2.8 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the laboratory control limits.

2.9 Internal Standards

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

2.10 Field Duplicates

Two pairs of field duplicates - samples FM105-090902 and FM105-090902D; and samples MW26R-090903 and MW26R-090903D, were submitted for *bis*(2-ethylhexyl)phthalate analyses. *bis*(2-Ethylhexyl)phthalate was not detected at or above the RL in these samples. The field precision met the project criterion.

2.11 Reporting Limits

The sample-specific RLs met the project requirements and were supported with adequate initial calibration concentrations.

2.12 Overall Assessment of bis(2-Ethylhexyl)phthalate Data Usability

bis(2-Ethylhexyl)phthalate data are of known quality and acceptable for use.

3. PAHs by GC/MS - SIM (EPA Method SW8270C)

3.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

3.2 GC/MS Instrument Performance Check

DFTPP tuning was performed within each 12-hour interval. All required ion abundance ratios met the method requirements.

3.3 Initial Calibration

The NFGs criteria require that the %RSD be <30% and the average RRF be >0.05 for all target compounds.

The method linearity criteria require that (1) if linear average RFs is chosen as the quantitation option, the %RSD of RFs be < 15% for the analyte, (2) if least-square linear regression is chosen for quantitation, the correlation coefficient (r) be >0.995,

and (3) if six-point non-linear (quadratic) curve is chosen for quantitation, the coefficient of determination (r^2) be >0.99. The initial calibration met the criteria.

3.4 Calibration Verification

The analytical method and NFGs criteria require that (1) continuing calibrations be analyzed at the beginning of each 12-hour analysis period prior to the analysis of method blank and samples, (2) the %D be within $\pm 20\%$, and (3) the RF be > 0.01 for poor response compounds and >0.05 for all other compounds. Calibration verification analyses met the criteria or the %D values were at levels that had no effects on sample results (*e.g.*, biased-high %D values and the target analytes were not detected in associated samples).

3.5 Method Blanks

Method blanks were prepared and analyzed as required. No target compounds were detected at or above the MDLs in the method blanks.

3.6 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate %R values were within the laboratory control limits, except that the %R value (30.9%) for one of the surrogates, 2-methylnaphthalene-d₁₀, was less than the lower control limit in sample CMP2-090902. The sample was diluted and re-analyzed. The %R values for both surrogates were within the control limits in the re-analysis, indicating that the lower surrogate recovery in the initial analysis was a result of matrix interference rather than extraction deficiency. Data were not qualified on this basis.

3.7 Matrix Spike (MS) and MS Duplicate (MS/MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

3.8 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed with each analytical batch. All %R and RPD values were within the project control limits.

3.9 Internal Standards

The method requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within -50% to +100% of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

3.10 Field Duplicates

Two pairs of field duplicates - samples FM105-090902 and FM105-090902D; and samples MW26R-090903 and MW26R-090903D, were submitted for PAHs analyses.

The duplicate RPD or concentration difference values for detected compounds and data qualification are presented in Appendix A of this report.

3.11 Reporting Limits

The sample-specific RLs met the project requirements and were supported with adequate initial calibration concentrations.

3.12 Overall Assessment of PAHs Data Usability

PAHs data are of known quality and acceptable for use.

4. PCB Aroclors by GC/ECD (EPA Method SW8082)

4.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. All samples were extracted and analyzed within the required holding times.

4.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using the mixture of Aroclor 1016 and 1260, (2) a single-point calibration be performed for the other five Aroclors to establish calibration factors (CFs) and for Aroclor pattern recognition, (3) at least 3 peaks (preferably 5 peaks) must be chosen for each Aroclor for characterization, (4) the relative standard deviation (%RSD) values of Aroclor 1016 and 1260 CFs must be \leq 20%, and (5) if dual column analysis is chosen, both columns should meet the requirements.

The laboratory chose the internal-standard linear calibration for the Aroclor quantitation. The average RF %RSD values met the linearity criterion (20%). All RFs were >0.01, as recommended by SW846 Method 8000. The initial calibrations met the method requirements and were acceptable.

4.3 Calibration Verification

The method requires that (1) the initial calibration be verified prior to any analysis for each 12-hour analysis sequence, and (2) the percent drift ($\%D_f$) be within $\pm 15\%$ to demonstrate the linearity of the initial calibration. Calibration verifications were performed at the required frequency. All $\%D_f$ values either met the method criterion or at levels that had no effects on sample results (*e.g.*, biased-high $\%D_f$ values where target analytes were not detected in associated samples).

4.4 Method Blanks

Method blanks were prepared and analyzed as required. PCB Aroclors were not detected at or above the MDLs in the method blanks.

4.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

4.6 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were not performed on project samples in these SDGs, and therefore not reported.

4.7 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed with each analytical batch. All %R and RPD values were within the project control limits.

4.8 Internal Standards

The laboratory chose the internal-standard calibration approach for analyte quantitation. The SW-846, Method 8000 requires that (1) internal standard retention time be within ± 30 seconds from that of the associated 12-hour calibration standard, and (2) the area counts of all internal standards be within $\pm 50\%$ to $\pm 100\%$ of the associated 12-hour calibration standard. All internal standards in the sample and associated QC analyses met the criteria.

4.9 Field Duplicates

Two pairs of field duplicates - samples FM105-090902 and FM105-090902D; and samples MW26R-090903 and MW26R-090903D, were submitted for PCB Aroclors analyses. PCB Aroclors were not detected at or above the RLs in these samples. The field precision met the project criterion.

4.10 Reporting Limits and Target Compound Quantitation

Sample-specific RLs met the QAPP requirements. RLs in selected samples were raised due to non-target chemical interference or response peaks that did not meet the Aroclor identification criteria (*e.g.*, peak ratios, chromatographic patterns).

The dual column RPD value for Aroclor 1248 in sample CMP3-090903 was greater than 40%. The Aroclor 1248 result in this sample was qualified (J) as estimated.

4.11 Overall Assessment of PCB Aroclors Data Usability

PCB Aroclor data are of known quality and acceptable for use as qualified.

5. Total Metals by ICP/MS (EPA Method 200.8)

5.1 Sample Management and Holding Times

No anomalies were identified in relation to sample preservation, handling, and transport, as discussed in Section 1.1.

Water samples should be analyzed within 180 days. Samples were analyzed within the required holding time.

5.2 ICP/MS Tuning

Instrument tuning was performed at the required frequency. The stability check (%RSD <5%), mass calibration (mass difference <0.1 AMU), and resolution check (peak width <1.0 AMU at 5% peak height) met the NFG and method criteria.

5.3 Initial Calibration

The ICP methods requires that (1) a blank and one calibration standard be used in establishing the analytical curve, and (2) the average of replicate exposures be reported for all standards, QC, and sample analyses.

A check standard containing target analytes at the reporting limit levels was analyzed at the beginning of each analytical run. The results were within the NFGs criteria of 70-130%.

5.4 Calibration Verification (ICV and CCV)

Initial calibration verifications (ICVs) and continuing calibration verifications (CCVs) were analyzed at the required frequency. The %R values met the control criteria (90 – 110%).

5.5 Blanks

Calibration Blanks: Initial calibration blanks (ICBs) and continuing calibration blanks (CCBs) were analyzed at required frequency. Target analytes were not detected at or above the MDLs in ICBs/CCBs.

Method Blanks: Method blanks were prepared and analyzed as required. Target analytes were not detected at or above the MDLs in the method blanks.

5.6 ICP Interference Check Sample (ICS)

The method requires that (1) an inter-element interference check sample be analyzed at the beginning of each analytical run, and (2) the results should be within \pm 20% of the true value. ICP interference check sample analyses met the requirements.

5.7 Laboratory Control Sample (LCS)

LCS analyses were performed as required by the method. All %R values met the control limits (80 – 120%).

5.8 Duplicate Sample Analysis

Duplicate sample analyses were not performed on project samples in these SDGs, and therefore not reported. The analytical precision was evaluated based on the field duplicate results.

5.9 Matrix Spike (MS)

Matrix spike analyses were not performed on project samples in these SDGs, and therefore not reported. The analytical accuracy was evaluated based on the LCS results.

5.10 Internal Standards

At least three internal standards were added to all field and QC samples for ICP/MS analyses. All percent relative intensity values were within the method criteria (30 - 120% of those for the associated calibration blank).

5.11 ICP Serial Dilution

Serial dilution analysis were not performed on project samples in these SDGs, and therefore not reported.

5.12 Field Duplicates

Two pairs of field duplicates - samples FM105-090902 and FM105-090902D; and samples MW26R-090903 and MW26R-090903D, were submitted for metals analyses. The duplicate RPD or concentration difference values for detected analytes and data qualification are presented in Appendix A of this report.

5.13 Analyte Quantitation and Reporting Limits

RLs for selected analytes in a number of samples were raised due to the required dilution to overcome matrix interference associated with the samples. The QAPP requirements for quantitation limits were achieved.

5.14 Overall Assessment of Metals Data Usability

Metals data are of known quality and acceptable for use.

6. TPH-Diesel & Motor Oil by GC/FID (Method NWTPH-Dx)

6.1 Holding Time

Water samples should be extracted within seven days of collection. Extracts should be analyzed within 40 days of extraction. The extraction and analysis of samples met the requirements.

6.2 Initial Calibration

The method requires that (1) a minimum of 5-point calibration be performed using individual petroleum product reference standards to ensure the proper identification and quantitation of petroleum hydrocarbons in samples, (2) the calibration curve includes a sufficiently low standard to provide the necessary reporting limits, and (3) the linear working range of the instrument be defined.

The ICAL met the method requirements. The linearity of the ICAL curve was verified with %RSD of RFs (%RSD ≤ 20%, according to EPA SW 846 Method 8000), and was acceptable for both diesel and motor oil range total petroleum hydrocarbon (TPH).

6.3 Calibration Verification

The method requires that (1) a mid-range check standard be analyzed prior to and after each analytical batch, and (2) the percent drift value be within ±15% of the true value. The calibration verification analyses met the requirements.

6.4 Method Blanks

Method blanks were prepared and analyzed as required. TPH-Diesel and TPH-Motor Oil were not detected at or above the MDLs in the method blanks.

6.5 Surrogate Spikes

Surrogate spikes were added to all samples as required by the method. All surrogate spike %R values were within the laboratory control limits.

6.6 Duplicate Analysis

Duplicate analyses were not performed on project samples in these SDGs, and therefore were not reported. Analytical precision was evaluated based on the LCS/LCSD analyses.

6.7 Laboratory Control Sample (LCS) and LCS Duplicate (LCSD)

LCS and LCSD analyses were performed as required by the method. All %R and RPD values were within the laboratory control limits.

6.8 Field Duplicates

Two pairs of field duplicates - samples FM105-090902 and FM105-090902D; and samples MW26R-090903 and MW26R-090903D, were submitted for TPH-Diesel & Motor Oil analyses. The target compounds were not detected at or above the RLs in these samples. The field precision met the project criterion.

6.9 Reporting Limits

The reported RLs were supported with adequate ICAL concentrations. Sample-specific RLs met the QAPP requirements.

6.10 Overall Assessment of TPH-Diesel and Motor Oil Data Usability

TPH-Diesel and Motor Oil data are of known quality and acceptable for use.

SUMMARY

I. Data qualification are summarized as follows:

Sample ID	Analyte	Data Qualifier	Reason	Report Section
CMP3-090903	Aroclor 1248	J	The dual column RPD value was greater than 40%.	4.10

II. Data affected by associated blanks are qualified and results adjusted as follows:

Sample ID	Analyte	Original Result	Adjusted Result	Unit	Report Section	
No data were qualified in relation to detections in blanks in these SDGs.						

III. Data Qualifiers are defined as follows:

Data Qualifier	Definition
J	The analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.
NJ	The analyte was not definitively identified and the reported concentration was an estimated value.
R	The result was rejected and could not be used.
U	The analyte was analyzed for, but was considered not detected at the reporting limit or reported value.
UJ	The analyte was analyzed for, and the associated quantitation limit was an estimated value.

Approved By:		Date:	
	Mingta Lin		

REFERENCES

- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency, June 2007, EPA-540-R-08-01.
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, October 2004, EPA 540/R-04/004.
- USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, December 1996.
- State of Washington, Analytical Methods for Petroleum Hydrocarbons, ECY 97-602, Washington State Department of Ecology, June 1997
- Port of Seattle, Southwest Harbor Project, Phase II Groundwater Confirmation Monitoring Program, Water Quality Monitoring Plan, Aspect Consulting, Inc., October 2008.

APPENDIX A

The precision criterion (\leq 50%) was applied to evaluating the relative percent difference (RPD) values of field duplicate results greater than five times the MRL (5xRL). For results less than 5xRL, an advisory criterion of 2xRL was applied to evaluating the concentration differences.

The RPD and concentration difference values for detected analytes and data qualification are presented as follows:

			ple ID & ration (µg/L)		Conc.			
Detected Target Analyte	RL (µg/L)	FM105-090902	FM105-090902D	RPD (%)	Difference (µg/L)	Data Qualification		
Arsenic	0.2	0.50	0.50	-	0	No action		
cis-1,2-Dichloroethene	0.2	0.20	0.20	-	0	No action		
Tetrachloroethene (PCE)	0.2	5.2	5.0	4%	-	No action		
Trichloroethene (TCE)	0.2	0.60	0.50	-	0.10	No action		
			ple ID & ration (µg/L)		Conc.			
Detected Target Analyte	RL (µg/L)	MW26R-090903	MW26R-090903D	RPD (%)	Difference (µg/L)	Data Qualification		
Chrysene	0.01	0.013	0.013	-	0	No action		
Chromium	2	3	3	-	0	No action		
Copper	2	3	3	-	0	No action		
Nickel	2	7	6	-	1	No action		

Notes:

RL - Reporting limit

ND - Not detected at or above the RL

RPD - Relative percent difference

Conc. Difference - Concentration difference between the parent sample and the field duplicate sample

APPENDIX D

Laboratory Reports



5 November 2008

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110

RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Job: NU12

Dear Chip:

Please find enclosed the original chain of custody (COC) record and the final results for samples from the project referenced above. Analytical Resources, Inc. accepted nine water samples and one trip blank in good condition on October 13, 2008. The samples were analyzed for VOAs, BEHP, PAHs, PCBs, NWTPH-Dx and total metals as requested.

These analyses proceeded without incident of note.

Copies of these reports and all raw data will be kept on file at ARI. If you have questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File NU12

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request

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meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or cosigned agreement between ARI and the Client. Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

ARI Data Reporting Qualifiers

Effective 11/22/04

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but ≥ the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- NR Spiked compound recovery is not reported due to chromatographic interference
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte reporting limit is raised due to a positive chromatographic interference. The compound is not detected above the raised limit but may be present at or below the limit
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference



Page 1 of 1

Sample ID: MB-101508 METHOD BLANK

Lab Sample ID: MB-101508

LIMS ID: 08-27618

Matrix: Water

Data Release Authorized:

Reported: 10/17/08 Instrument/Analyst: NT5/JZ

Date Analyzed: 10/15/08 12:35

QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: NA Date Received: NA

Sample Amount: 20.0 mL Purge Volume: 20.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	Ũ
75-35-4	1.1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
107-06-2	1.2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in μ g/L (ppb)

d4-1,2-Dichloroethane	113%
d8-Toluene	102%
Bromofluorobenzene	96.2%
d4-1,2-Dichlorobenzene	103%



Page 1 of 1

Sample ID: FM105-081013

SAMPLE

Lab Sample ID: NU12C

LIMS ID: 08-27618

Matrix: Water

Data Release Authorized: Reported: 10/17/08

Instrument/Analyst: NT5/JZ Date Analyzed: 10/15/08 17:53 QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 20.0 mL Purge Volume: 20.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	0.7	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	Ü
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	0.9	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	6.1	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in μ g/L (ppb)

d4-1,2-Dichloroethane	132%
d8-Toluene	100%
Bromofluorobenzene	87.8%
d4-1,2-Dichlorobenzene	108%



Page 1 of 1

Lab Sample ID: NU12D

LIMS ID: 08-27619 Matrix: Water

Data Release Authorized: Reported: 10/17/08

Instrument/Analyst: NT5/JZ
Date Analyzed: 10/15/08 18:21

Sample ID: FM105-081013D

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Sample Amount: 20.0 mL Purge Volume: 20.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	υ
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1.1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	0.7	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	0.9	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	6.2	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in μ g/L (ppb)

d4-1,2-Dichloroethane	125%
d8-Toluene	102%
Bromofluorobenzene	89.8%
d4-1,2-Dichlorobenzene	108%



Page 1 of 1

Lab Sample ID: NU12E

LIMS ID: 08-27620 Matrix: Water

Data Release Authorized: Reported: 10/17/08

Instrument/Analyst: NT5/JZ Date Analyzed: 10/15/08 18:48 Sample ID: MW125-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Sample Amount: 20.0 mL Purge Volume: 20.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1.1-Dichloroethane	0.2	0.4	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	2.1	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	0.2	
79-01-6	Trichloroethene	0.2	2.8	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	6.7	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	Ŭ
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in $\mu g/L$ (ppb)

d4-1,2-Dichloroethane	130%
d8-Toluene	102%
Bromofluorobenzene	86.2%
d4-1,2-Dichlorobenzene	104%



Page 1 of 1

Lab Sample ID: NU12F

LIMS ID: 08-27621 Matrix: Water

Data Release Authorized: Reported: 10/17/08

Instrument/Analyst: NT5/JZ
Date Analyzed: 10/15/08 19:15

Sample ID: CMP17-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 20.0 mL Purge Volume: 20.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	0.3	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in $\mu g/L$ (ppb)

d4-1,2-Dichloroethane	128%
d8-Toluene	104%
Bromofluorobenzene	90.0%
d4-1.2-Dichlorobenzene	109%



ORGANICS ANALYSIS DATA SHEET Volatiles by Purge & Trap GC/MS-Method SW8260B Sample ID: TRIP BLANK Page 1 of 1

SAMPLE

Lab Sample ID: NU12J LIMS ID: 08-27625

Matrix: Water

Data Release Authorized: Reported: 10/17/08

Instrument/Analyst: NT5/JZ

Date Analyzed: 10/15/08 17:26

QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 20.0 mL Purge Volume: 20.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	Ü
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	Ü
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	Ü
79-01-6	Trichloroethene	0.2	< 0.2	Ü
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in μ g/L (ppb)

d4-1,2-Dichloroethane	122%
d8-Toluene	103%
Bromofluorobenzene	87.8%
d4-1.2-Dichlorobenzene	106%



ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Page 1 of 1

Sample ID: LCS-101508

LAB CONTROL SAMPLE

Lab Sample ID: LCS-101508

LIMS ID: 08-27618 Matrix: Water

Data Release Authorized: Reported: 10/17/08

Instrument/Analyst LCS: NT5/JZ

LCSD: NT5/JZ

Date Analyzed LCS: 10/15/08 11:40

LCSD: 10/15/08 12:08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: NA Date Received: NA

Sample Amount LCS: 20.0 mL

LCSD: 20.0 mL

Purge Volume LCS: 20.0 mL

LCSD: 20.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Vinyl Chloride	3.8	4.0	95.0%	3.7	4.0	92.5%	2.7%
Chloroethane	4.1	4.0	102%	4.0	4.0	100%	2.5%
1,1-Dichloroethene	3.7	4.0	92.5%	3.6	4.0	90.0%	2.7%
1,1-Dichloroethane	3.8	4.0	95.0%	3.8	4.0	95.0%	0.0%
trans-1,2-Dichloroethene	3.7	4.0	92.5%	3.7	4.0	92.5%	0.0%
cis-1,2-Dichloroethene	3.7	4.0	92.5%	3.7	4.0	92.5%	0.0%
1,2-Dichloroethane	3.7	4.0	92.5%	3.6	4.0	90.0%	2.7%
1,1,1-Trichloroethane	3.8	4.0	95.0%	3.7	4.0	92.5%	2.7%
Trichloroethene	3.7	4.0	92.5%	3.6	4.0	90.0%	2.7%
1,1,2-Trichloroethane	3.5	4.0	87.5%	3.4	4.0	85.0%	2.9%
Tetrachloroethene	3.5	4.0	87.5%	3.4	4.0	85.0%	2.9%
1,1,2,2-Tetrachloroethane	3.5	4.0	87.5%	3.5	4.0	87.5%	0.0%
1,1,1,2-Tetrachloroethane	3.7	4.0	92.5%	3.6	4.0	90.0%	2.7%

Reported in $\mu g/L$ (ppb)

RPD calculated using sample concentrations per SW846.

	LCS	LCSD
d4-1,2-Dichloroethane	109%	107%
d8-Toluene	100%	100%
Bromofluorobenzene	100%	100%
d4-1,2-Dichlorobenzene	99.2%	99.2%



Page 1 of 1 Sample ID: MB-101608 METHOD BLANK

Lab Sample ID: MB-101608

Date Extracted: 10/16/08

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: \\W

Reported: 10/24/08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

NA

Date Sampled: NA

Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

Date Analyzed: 10/23/08 12:35 Instrument/Analyst: NT4/PK

> CAS Number Analyte RLResult 117-81-7 bis(2-Ethylhexyl)phthalate 1.0 < 1.0 U

> > Reported in $\mu g/L$ (ppb)

d5-Nitrobenzene	41.6%
2-Fluorobiphenyl	49.6%
d14-p-Terphenyl	76.0%
d4-1,2-Dichlorobenzene	38.6%



Sample ID: CMP1-081013 SAMPLE

Lab Sample ID: NU12A LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: WW

Reported: 10/24/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 14:16
Instrument/Analyst: NT4/PK

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

NΑ

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

d5-Nitrobenzene	40.4%
2-Fluorobiphenyl	54.4%
d14-p-Terphenyl	72.0%
d4-1,2-Dichlorobenzene	39.9%



1 of 1 Page

Lab Sample ID: NU12B LIMS ID: 08-27617

Matrix: Water Data Release Authorized: WW

Reported: 10/24/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 14:50 Instrument/Analyst: NT4/PK

Sample ID: CMP2-081013 SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

d5-Nitrobenzene	36.0%
2-Fluorobiphenyl	56.8%
d14-p-Terphenyl	70.8%
d4-1,2-Dichlorobenzene	31.0%



Sample ID: FM105-081013 SAMPLE

Lab Sample ID: NU12C LIMS ID: 08-27618

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 15:24 Instrument/Analyst: NT4/PK

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

d5-Nitrobenzene	40.8%
2-Fluorobiphenyl	55.2%
d14-p-Terphenyl	70.4%
d4-1,2-Dichlorobenzene	43.2%



Page 1 of 1

Lab Sample ID: NU12D LIMS ID: 08-27619

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 15:58
Instrument/Analyst: NT4/PK

Sample ID: FM105-081013D SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

d5-Nitrobenzene	42.8%
2-Fluorobiphenyl	57.2%
d14-p-Terphenyl	77.2%
d4-1,2-Dichlorobenzene	38.8%



Sample ID: MW125-081013
SAMPLE

Lab Sample ID: NU12E LIMS ID: 08-27620

Matrix: Water

Data Release Authorized: \WW

Reported: 10/24/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 16:32
Instrument/Analyst: NT4/PK

QC Report No: NU12-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT PHASE 2

NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

	•
d5-Nitrobenzene	37.6%
2-Fluorobiphenyl	52.4%
d14-p-Terphenyl	68.4%
d4-1.2-Dichlorobenzene	37.4%



Sample ID: CMP17-081013 SAMPLE

Lab Sample ID: NU12F LIMS ID: 08-27621

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 17:06
Instrument/Analyst: NT4/PK

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

d5-Nitrobenzene	50.4%
2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	72.8%
d4-1,2-Dichlorobenzene	45.2%



Sample ID: CMP5-081013 SAMPLE

Project: SOUTHWEST HARBOR PROJECT PHASE 2

QC Report No: NU12-Aspect Consulting LLC

Lab Sample ID: NU12G LIMS ID: 08-27622

Matrix: Water

Data Release Authorized: WW Reported: 10/24/08

Date Sampled: 10/13/08 Date Received: 10/13/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 17:40 Instrument/Analyst: NT4/PK

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

d5-Nitrobenzene	44.8%
2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	78.4%
d4-1.2-Dichlorobenzene	43.2%



Page 1 of 1 Sample ID: MW308S-081013 SAMPLE

Lab Sample ID: NU12H LIMS ID: 08-27623

Matrix: Water

Data Release Authorized:

Date Analyzed: 10/23/08 18:14

Instrument/Analyst: NT4/PK

Date Extracted: 10/16/08

Reported: 10/24/08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	1.5

Reported in $\mu g/L$ (ppb)

d5-Nitrobenzene	44.4%
2-Fluorobiphenyl	58.8%
d14-p-Terphenyl	68.8%
d4-1,2-Dichlorobenzene	37.8%



Sample ID: MW308N-081013 SAMPLE

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Lab Sample ID: NU12I LIMS ID: 08-27624

Matrix: Water

Data Release Authorized: WW

Reported: 10/24/08

NA Date Sampled: 10/13/08

Date Sampled: 10/13/08
Date Received: 10/13/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 18:48
Instrument/Analyst: NT4/PK

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

QC Report No: NU12-Aspect Consulting LLC

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

d5-Nitrobenzene	48.0%
2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	65.2%
d4-1,2-Dichlorobenzene	46.8%



Sample ID: LCS-101608 LCS/LCSD

Lab Sample ID: LCS-101608

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: WW

Date Extracted LCS/LCSD: 10/16/08

Instrument/Analyst LCS: NT4/PK

Reported: 10/24/08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 10/23/08 13:09 Final Extract Volume LCS: 0.50 mL LCSD: 10/23/08 13:42

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

GPC Cleanup: NO

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD	
bis(2-Ethylhexyl)phthalate	20.3	25.0	81.2%	19.4	25.0	77.6%	4.5%	

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	50.4%	
2-Fluorobiphenyl	64.0%	61.6%
d14-p-Terphenyl	76.4%	73.6%
d4-1,2-Dichlorobenzene	48.4%	40.8%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

LCSD: NT4/PK



Sample ID: MB-101708 METHOD BLANK

Lab Sample ID: MB-101708

LIMS ID: 08-27616

Matrix: Water Data Release Authorized: Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 10/24/08 16:08 Instrument/Analyst: NT1/YZ

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo (a) anthracene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene Indeno (1,2,3-cd) pyrene Dibenz (a,h) anthracene	0.010	< 0.010 U
218-01-9		0.010	< 0.010 U
205-99-2		0.010	< 0.010 U
207-08-9		0.010	< 0.010 U
50-32-8		0.010	< 0.010 U
193-39-5		0.010	< 0.010 U
53-70-3		0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 70.3%



Page 1 of 1

Lab Sample ID: NU12A LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: CMP1-081013 SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U	
218-01-9	Chrysene	0.010	< 0.010 U	
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U	
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U	
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U	
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U	
53-70-3	Dibenz (a, h) anthracene	0.010	< 0.010 U	

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 96.0%



Sample ID: CMP2-081013 SAMPLE

Lab Sample ID: NU12B LIMS ID: 08-27617

Matrix: Water

Data Release Authorized: Reported: 10/27/08

ed:

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: / QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U	
218-01-9	Chrysene	0.010	< 0.010 U	
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U	
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U	
50-32-8	Benzo (a) pyrene	0.010	< 0.010 U	
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U	
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U	

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 92.3%



Page 1 of 1

Lab Sample ID: NU12C LIMS ID: 08-27618

Matrix: Water

Data Release Authorized: Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: FM105-081013 SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U	
218-01-9	Chrysene	0.010	< 0.010 U	
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U	
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U	
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U	
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U	
53-70-3	Dibenz (a, h) anthracene	0.010	< 0.010 U	

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 93.0%



Sample ID: FM105-081013D SAMPLE

Lab Sample ID: NU12D LIMS ID: 08-27619

Matrix: Water

Data Release Authorized: Reported: 10/27/08

QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U	
218-01-9	Chrysene	0.010	< 0.010 U	
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U	
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U	
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U	
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U	
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U	

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 93.7%



Sample ID: MW125-081013 SAMPLE

Lab Sample ID: NU12E LIMS ID: 08-27620

Matrix: Water

Data Release Authorized:

Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U	
218-01-9	Chrysene	0.010	< 0.010 U	
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U	
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U	
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U	
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U	
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U	

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 88.0%



Page 1 of 1

Lab Sample ID: NU12F LIMS ID: 08-27621

Matrix: Water

Data Release Authorized: Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: / Sample ID: CMP17-081013 SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U	
218-01-9	Chrysene	0.010	< 0.010 U	
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U	
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U	
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U	
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U	
53-70-3	Dibenz (a, h) anthracene	0.010	< 0.010 U	

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 88.0%



Sample ID: CMP5-081013 SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Lab Sample ID: NU12G LIMS ID: 08-27622

Data Release Authorized:

Date Analyzed: 00000

Instrument/Analyst: /

Matrix: Water

Reported: 10/27/08 Date Extracted: 10/17/08

Project: SOUTHWEST HARBOR PROJECT PHASE 2 Event: NA Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U	
218-01-9	Chrysene	0.010	< 0.010 U	
205-99-2	Benzo (b) fluoranthene	0.010	< 0.010 U	
205-99-2	Benzo(k) fluoranthene	0.010	< 0.010 U	
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U	
	Indeno (1,2,3-cd) pyrene	0.010	< 0.010 U	
193-39-5 53-70-3	Dibenz (a.h) anthracene	0.010	< 0.010 U	

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 94.0%



Sample ID: MW308S-081013 SAMPLE

Project: SOUTHWEST HARBOR PROJECT PHASE 2

QC Report No: NU12-Aspect Consulting LLC

Lab Sample ID: NU12H LIMS ID: 08-27623

Matrix: Water

Data Release Authorized:

Reported: 10/27/08

Date Sampled: 10/13/08 Date Received: 10/13/08

Event: NA

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo (b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo (a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz (a, h) anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 80.0%



Sample ID: LCS-101708

LAB CONTROL SAMPLE

Lab Sample ID: LCS-101708

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: Reported: 10/27/08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: NA Date Received: NA

Sample Amount LCS: 500 mL Date Extracted LCS/LCSD: 10/17/08

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL Date Analyzed LCS: 10/24/08 16:29

LCSD: 0.50 mL

LCSD: 10/24/08 16:51 Dilution Factor LCS: 1.00 Instrument/Analyst LCS: NT1/YZ

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a) anthracene	0.310	0.300	103%	0.271	0.300	90.3%	13.4%
Chrysene	0.313	0.300	104%	0.279	0.300	93.0%	11.5%
Benzo(b) fluoranthene	0.307	0.300	102%	0.282	0.300	94.0%	8.5%
	0.290	0.300	96.7%	0.257	0.300	85.7%	12.1%
Benzo(k) fluoranthene	0.249	0.300	83.0%	0.150	0.300	50.0%	49.6%
Benzo(a) pyrene	0.250	0.300	83.3%	0.233	0.300	77.7%	7.0%
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	0.254	0.300	84.7%	0.236	0.300	78.7%	7.3%

Reported in μ g/L (ppb)

RPD calculated using sample concentrations per SW846.

LCSD: NT1/YZ

SIM Semivolatile Surrogate Recovery

LCS LCSD d14-Dibenzo(a,h)anthracene 103% 91.7%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082
Page 1 of 1

Lab Sample ID: MB-101508

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

Date Extracted: 10/15/08 Date Analyzed: 10/25/08 20:20 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MB-101508
METHOD BLANK

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: NA Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

Decachlorobiphenyl	65.0%
Tetrachlorometaxylene	62.0%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP1-081013 SAMPLE

Lab Sample ID: NU12A LIMS ID: 08-27616

Sulfur Cleanup: Yes

LIMS ID: 08-27616 Matrix: Water

Data Release Authorized: Reported: 10/31/08 QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Date Extracted: 10/15/08
Date Analyzed: 10/25/08 21:11

Date Analyzed: 10/25/08 21:13 Instrument/Analyst: ECD5/JGR GPC Cleanup: No Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: No

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U
11104-28-2 11141-16-5	Aroclor 1221 Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

Decachlorobiphenyl	70.0%
Tetrachlorometaxylene	55.0%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP2-081013 SAMPLE

Lab Sample ID: NU12B LIMS ID: 08-27617

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27617 Matrix: Water Project: SOUTHWEST HARBOR PROJECT PHASE 2

Data Release Authorized: // Reported: 10/31/08 Date Sampled: 10/13/08 Date Received: 10/13/08

Date Extracted: 10/15/08
Date Analyzed: 10/25/08 21:29
Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.012	< 0.012 Y
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

Decachlorobiphenyl	57.2%
Tetrachlorometaxylene	61.5%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: NU12C LIMS ID: 08-27618

Matrix: Water

Data Release Authorized: Reported: 10/31/08

Date Extracted: 10/15/08
Date Analyzed: 10/25/08 21:46
Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: FM105-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010	0.010 U 0.010 U 0.010 U 0.010 U 0.010 U 0.010 U 0.010 U

Reported in $\mu g/L$ (ppb)

Decachlorobiphenyl	56.5%
Tetrachlorometaxylene	55.5%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: FM105-081013D

SAMPLE

Lab Sample ID: NU12D LIMS ID: 08-27619

QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

Date Sampled: 10/13/08 Date Received: 10/13/08

Data Release Authorized: Reported: 10/31/08

> Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Date Extracted: 10/15/08 Date Analyzed: 10/25/08 22:03 Instrument/Analyst: ECD5/JGR

Silica Gel: No Acid Cleanup: Yes

GPC Cleanup: No Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in μ g/L (ppb)

Decachlorobiphenyl	69.8%
Tetrachlorometaxylene	59.0%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: MW125-081013

SAMPLE

Lab Sample ID: NU12E LIMS ID: 08-27620

QC Report No: NU12-Aspect Consulting LLC

Matrix: Water

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Data Release Authorized: Reported: 10/31/08

Date Sampled: 10/13/08 Date Received: 10/13/08

Date Extracted: 10/15/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Date Analyzed: 10/25/08 22:20 Instrument/Analyst: ECD5/JGR

Dilution Factor: 1.00 Silica Gel: No

GPC Cleanup: No Sulfur Cleanup: Yes Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

Decachlorobiphenyl	60.5%
Tetrachlorometaxylene	57.5%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP17-081013

SAMPLE

Lab Sample ID: NU12F LIMS ID: 08-27621

QC Report No: NU12-Aspect Consulting LLC

Matrix: Water

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Data Release Authorized: Reported: 10/31/08

Date Sampled: 10/13/08 Date Received: 10/13/08

Date Extracted: 10/15/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Date Analyzed: 10/25/08 22:37 Instrument/Analyst: ECD5/JGR

Dilution Factor: 1.00 Silica Gel: No

GPC Cleanup: No Sulfur Cleanup: Yes Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U
		- · · ·	

Reported in μ g/L (ppb)

Decachlorobiphenyl	59.0%
Tetrachlorometaxylene	59.0%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP5-081013 SAMPLE

Lab Sample ID: NU12G LIMS ID: 08-27622 QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

LIMS ID: 08-27622 Matrix: Water

Date Sampled: 10/13/08 Date Received: 10/13/08

Data Release Authorized: Reported: 10/31/08

Date Extracted: 10/15/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Date Analyzed: 10/25/08 22:55 Instrument/Analyst: ECD5/JGR

Silica Gel: No
Acid Cleanup: Yes

GPC Cleanup: No Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	70.2%
	50.2%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: NU12H LIMS ID: 08-27623

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

Date Extracted: 10/15/08 Date Analyzed: 10/25/08 23:12 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW308S-081013 SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.2%
	58.5%
Tetrachlorometaxylene	20.20



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: MW308N-081013 SAMPLE

Lab Sample ID: NU12I LIMS ID: 08-27624

QC Report No: NU12-Aspect Consulting LLC

Matrix: Water

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Data Release Authorized:// Reported: 10/31/08

Date Sampled: 10/13/08 Date Received: 10/13/08

Date Extracted: 10/15/08 Date Analyzed: 10/25/08 23:29 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	0.014
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	59.0%
Tetrachlorometaxylene	56.5%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: LCS-101508

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

Date Extracted LCS/LCSD: 10/15/08

Date Analyzed LCS: 10/25/08 20:37

LCSD: 10/25/08 20:54

Instrument/Analyst LCS: ECD5/JGR LCSD: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

Sample ID: LCS-101508 LCS/LCSD

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: NA Date Received: NA

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Silica Gel: No

Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.047	0.050	94.0%	0.044	0.050	88.0%	6.6%
Aroclor 1260		0.050	76.0%	0.041	0.050	82.0%	7.6%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	58.2%	64.5%
Tetrachlorometaxylene	57.8%	57.2%

Results reported in μ g/L RPD calculated using sample concentrations per SW846.



QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE

ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1 Matrix: Water

Data Release Authorized: WW

Reported: 10/29/08

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-101608 08-27616	Method Blank HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 74.7%
NU12A 08-27616	CMP1-081013 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 80.2%
NU12B 08-27617	CMP2-081013 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 77.3%
NU12C 08-27618	FM105-081013 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 76.2%
NU12D 08-27619	FM105-081013D HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 72.4%
NU12E 08-27620	MW125-081013 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 73.8%
NU12F 08-27621	CMP17-081013 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 80.0%
NU12G 08-27622	CMP5-081013 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 78.7%
NU12H 08-27623	MW308S-081013 HC ID:	10/13/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 73.8%
NU12I 08-27624	MW308N-081013 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 71.6%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.



ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Sample ID: LCS-101608

LCS/LCSD

Lab Sample ID: LCS-101608

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: WW

Date Extracted LCS/LCSD: 10/16/08

Instrument/Analyst LCS: FID/PKC

LCSD: 10/28/08 06:39

LCSD: FID/PKC

Reported: 10/29/08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 10/28/08 06:24 Final Extract Volume LCS: 1.0 mL

LCSD: 1.0 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Spike LCSD Spike LCS LCSD Added-LCSD Recovery RPD LCS Added-LCS Recovery Range 60.7% 6.8% 56.7% 1.82 3.00 1.70 3.00 Diesel

TPHD Surrogate Recovery

LCS LCSD

o-Terphenyl

68.4% 79.8%

Results reported in mg/L RPD calculated using sample concentrations per SW846.

Analytical Resources Inc. TPH Quantitation Report

FID: 3A RESULTS

Data file: /chem3/fid3a.i/20081027b.b/1027a082.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

C38

C40

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU12LCSW1 Client ID: NU12LCSW1

Injection: 28-OCT-2008 06:24

Dilution Factor: 1

Compound	RT	Shift	Height	Area		ange	Total Area	Conc
Toluene	1.933	-0.003	42343	26831	GAS	(Tol-C12)	3166664	124
C8	2.046	-0.002	31207	24727	DIESEL	(C12-C24)	16680363	851
C10	2.592	-0.001	298165	118957	M.OIL	(C24-C38)	674329	50
C12	3.071	0.001	532550	223017	AK-102	(C10-C25)	19141280	789
C14	3.492	0.001	785848	362984	AK-103	(C25-C36)	552048	78
C16	3.885	0.003	761681	511456	OR.DIES	(C10-C28)	19473601	1228
C18	4.327	0.002	564450	397888	OR.MOIL	(C28-C40)	350961	37
C20	4.743	0.000	390262	304159	JET-A	(C10-C18)	14078932	948
C22	5.095	0.000	159706	119620	MIN.OIL	(C24-C38)	674329	53
C24	5.394	0.000	70439	55565	MSPIRIT	(Tol-C12)	3166664	200
C25	5.528	-0.001	40616	42532	İ			
C26	5.654	0.000	24752	34422	į			
C28	5.892	0.000	8768	15327	İ			
C32	6.439	0.000	5167	8767				
C34	6.797	-0.003	3067	1826	Ì			
Filter Peak	8.504	0.001	2058	817	JP-4	(Tol-C14)	6853565	603
C36	7.262	-0.003	2660	1473	CREOSOT	(C8-C22)	19125593	3068
					1			

2319

AZDIESEL (C10-C22) 18180381 1132 AZMOIL (C22-C32) 1082276 168

7.881 0.000

8.329 0.000 2115

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

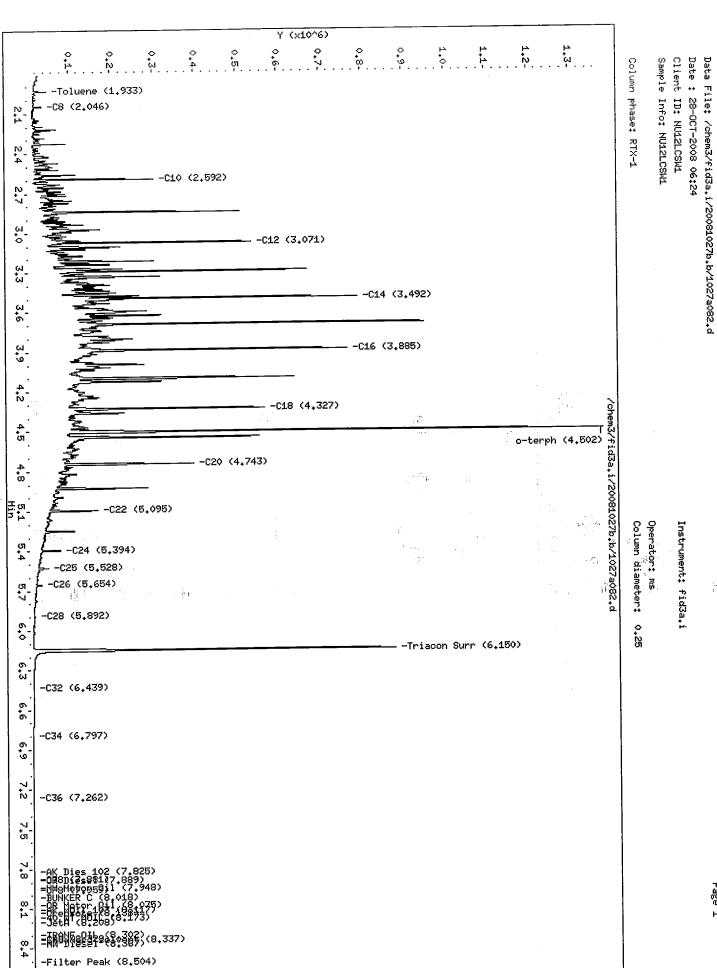
1201

1135 BUNKERC (C10-C38)

Surrogate	Area	Amount	%Rec
o-Terphenyl Triacontane	655242	30.8	68.5
	600210	36.6	81.2

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005 22-SEP-2008 08-AUG-2008
Creosote	6234.4	00 A00 2000

4, 2



PC Waglos

Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a083.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms
Report Date: 10/29/2008
Macro: FID:3A102708

ARI ID: NU12LCSDW1
Client ID: NU12LCSDW1

Injection: 28-OCT-2008 06:39

Dilution Factor: 1

	FID	:3A	RESULTS	
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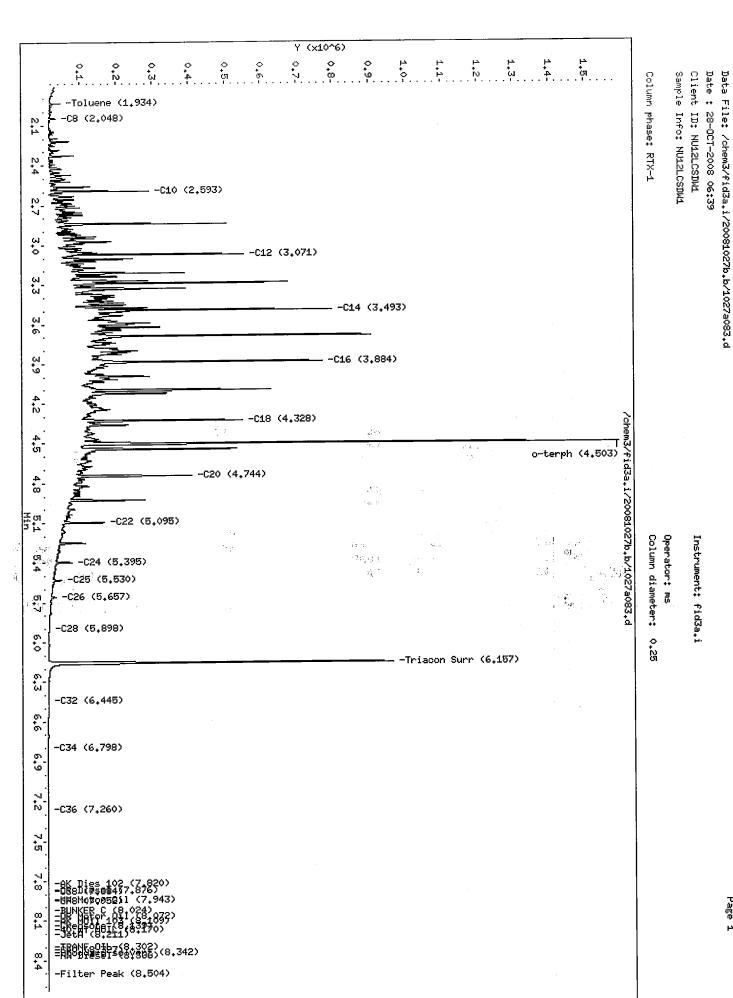
Compound	RT	Shift	Height	Area	Rā	inge	Total Area	Conc	
========= Toluene	 1.934	-0.002	41245	28970	======= GAS	(Tol-C12)	3216772	126	
C8	2.048	-0.001	29167	23378	DIESEL	(C12-C24)	17842920	911	
C10	2.593	-0.001	286922	112836	M.OIL	(C24-C38)	658707	49	
C12	3.071	0.001	551232	227720	AK-102	(C10-C25)	20381985	840	
C14	3.493	0.002	794869	365497	AK-103	(C25-C36)	544896	77	
C16	3.884	0.002	768088	548517	OR.DIES	(C10-C28)	20692893	1305	
C18	4.328	0.003	544703	407786	OR.MOIL	(C28-C40)	355521	38	
C20	4.744	0.001	404271	312610	JET-A	(C10-C18)	15135915	1020	
C22	5.095	0.000	162091	127473	MIN.OIL	(C24-C38)	658707	51	
C24	5.395	0.002	70961	49288	MSPIRIT	(Tol-C12)	3216772	203	
C25	5.530	0.001	41404	39935	ĺ				
C26	5.657	0.003	24500	35768	ĺ				
C28	5.898	0.006	8411	11830					
C32	6.445	0.007	4871	6114	1		227		
C34	6.798	-0.003	2766	880			2.1		ingly .
Filter Peak	8.504	0.001	1921	1371	JP-4	(Tol-C14)	7208136	624	77 J.
C36	7.260	-0.005	2418	1302	CREOSOT	(C8-C22)	20338391	3262	
C38	7.884	0.003	2073	824				3 4	
C40	8.327	-:01.002	1967	1138	BUNKERC	(C10-C38)	21000767	2550	n (). Eus
=======================================	=======	104	======= 27790 12	======= 210	=======	=======	#==========	=====	
	10-C22)			169			A1918		
AZMOIL (C	22-C32)	10	02002 1	.0 <i>9</i> 				====== ====	<u>.</u>
=======================================	======					400\ 3777.34	017/5 444 7	0211 55	.Te.)

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931) AK102 (2.543 - 5.479) AK103 (5.479 - 7.315) Jet A(2.543 - 4.375)

11.56 1 B) 6 1

Surrogate	Area	Amount	%Rec
o-Terphenyl	763242	35.9	79.7
	672853	41.0	91.1

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005
Bunker C Creosote	8936.8 6234.4	22-SEP-2008 08-AUG-2008



 $\left(\frac{g^2}{2\pi^2}\right)^2 = \left(\frac{g}{2\pi}\right)^2 =$

Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a084.d Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU12MBW1 Client ID: NU12MBW1

Injection: 28-OCT-2008 06:55

Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Ra	inge	Total Area	Conc
Toluene	1.934	-0.002	16149	18958	GAS	(Tol-C12)	513265	20
C8	2.045	-0.003	10082	5717	DIESEL	(C12-C24)	364230	19
C10	2.589	-0.004	12980	11281	M.OIL	(C24-C38)	305553	23
C12	3.070	0.000	5208	6507	AK-102	(C10-C25)	539884	22
C14	3.492	0.000	4728	3422	AK-103	(C25-C36)	237680	34
C16	3.881	-0.001	4276	4995	OR.DIES	(C10-C28)	605986	38
C18	4.322	-0.003	3585	4946	OR.MOIL	(C28-C40)	278468	30
C20	4.739	-0.005	3083	4421	JET-A	(C10-C18)	396702	27
C22	5.110	0.015	2279	635	MIN.OIL	(C24-C38)	305553	24
C24	5.410	0.016	2259	1649	MSPIRIT	(Tol-C12)	513265	32
C25	5.536	0.007	2305	914				
C26	5.675	0.020	2217	970				
C28	5.916	0.023	2400	476	1			
C32	6.453	0.014	3587	6831				
C34	6.831	0.031	2331	1434	14.			
Filter Peak	8.498	-0.005	1800	1221	JP-4		600441	53
C36	7.306	0.041	2116	502	CREOSOT	(C8-C22)	758178	122
C38	7.931	0.050	1842	844	-			
C40	8.317	-0.012	1793	357	BUNKERC	(C10-C38)	841572 	94
AZDIESEL (C1	====== LO-C22)	4!	====== 58265	29	=======			
	22-C32)		80136 	28			 	=====

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	713941	33.6	74.6
Triacontane	613863	37.4	83.1

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005
Creosote	6234.4	08-AUG-2008

						Y (x	(10^6)						-		7			
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27 44	-Toluend	e (1.934) 045)													Column phase: RTX-1	oembre ranot	5 A	a File: // e : 28-00
10 4															# RTX-	1011 O+ 13042110MH	ID: NU12MBW1	chem3/. T-2008
2,7	-010 (2	,589)														ŀ	ž Ž Fz	ile: /chem3/fid3a.i/2 28-0CT-2008 06:55
3.0	-C12 (3,	,070)																0081027b
3,3 3,6	-014 (3.	.492)																File: /chem3/fid3a.i/20081027b.b/1027a084.d : 28-DCT-2008 06:55
3,9	-C16 (3.	.881)																4 Ω
4.2	-C18 (4.	.322)						63				•			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
4 (10	[_ -	<u> </u>		. 9°		. 4		o-te	rph (1 4,499)	# Z Z			
4.8	-C20 (4.	,739)							•	•				•	1/20 1/20			
Min T+B	-C22 (5.	110)						**							0081027	٥	Ħ	
51 4	-C24 (5.	536)											vn al		Column diameter:	Operator: Ms	Instrument: fid3a.i	
5.7	-C26 (5.	.675)		5 4								1	, ¹ d ,		meter:	MS	÷ fid	
o. o.	-C28 (5.	.916>							—— -Tri	.acon Su	urr (6.1	L5¢)			. 0,25		3 ₀ , i	
8,3	-032 (6,	.453)																
6,6 6,9	-C34 (6.	,831)																
7.2	-C36 (7.	,306)																
7.5																		
7,8	=0% 11es =848M6%	81027∫898 889¥1 77.	371) (940)															70
8 4	-BUNKER -BReHets -38th (8	61027(398 630)1 (7. C (8.024) E1031(681 9011(817	1 1981) 1983) 3) (p. 301	5)														Page 1
4		011-70-286 14-30-286 1-8-376 Peak (8-4		,,														

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PC 10/2/08

Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a085.d Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12A

Client ID: CMP1-081013

Injection: 28-OCT-2008 07:10

Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Ra	inge	Tota	al Area	Conc
=== ==== Toluene	1.933	-0.003	15772	17868	GAS	(Tol-C12)		508735	20
C8	2.045	-0.003	10168	5184	DIESEL	(C12-C24)		355457	18
C10	2.590	-0.003	8462	10376	M.OIL	(C24-C38)		319717	24
C12	3.071	0.000	5001	5273	AK-102	(C10-C25)		529976	22
C14	3.493	0.001	4257	3228	AK-103	(C25-C36)		248746	35
C16	3.881	-0.001	3756	4566	OR.DIES	(C10-C28)		594162	37
C18	4.323	-0.002	3094	4338	OR.MOIL	(C28-C40)		292937	31
C20	4.756	0.012	2337	2945	JET-A	(C10-C18)		391246	26
C22	5.092	-0.003	2453	3733	MIN.OIL	(C24-C38)		319717	25
C24	5.393	-0.001	2267	2016	MSPIRIT	(Tol-C12)		508735	32
C25	5.538	0.009	2270	1172	İ				
C26	5.673	0.018	2185	650					
C28	5.916	0.024	2341	1165					
C32	6.461	0.022	4207	6563				10 to 10 to	
C34	6.835	0.034	2326	1386					
Filter Peak	8.502	-0.002	1793	392	JP-4	(Tol-C14)		598550	53
C36	7.302	0.036	2062	1067	CREOSOT	(C8-C22)	18	746235	120
C38	7.927	0.046	1853	996	है-इ-				
C40	8.313	-0.016	1798	499	BUNKERC	(C10-C38)		844308	94
AZDIESEL (CI	====== L0-C22)	4!	====== 50876	28	=======	=======			
	22-C32)	1.	91893	30				A.	1.

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	767561	36.1	80.2
Triacontane	657252	40.0	89.0

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005
OR Diesel OR M.Oil Bunker C Creosote	15856.1 9368.4 8936.8 6234.4	22-SEP-2008 08-AUG-2008

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		4.0	0 	့	٥ • 4	i	> ภ	0.6-	0.7-		 ٠ 	°			μ Ν Ν	Ψ.		1.4-	8	တ္ဆ	Date Clier
2-1		luene (2,04	(1,933)																Column phase: RTX-1	Sample Info: NU12A	₹ ++
2,4 2,7	-C10	(2,5	90>																RTX-1	NU12A	28-0CT-2008 07:10 ID: CMP1-081013
	-C12	(3,0	71)																		
3,3 3,6	-C14	(3,4	93)																		
3.9	-C16	(3,8	31)															,			
4.2	-C18	(4,3	23)									₹ 4 s					ÇĦ	/che			
ֆ. Մ.[;—	-		A.				 ,				9.55	*		o-tei	-ph	(4,49	丁克 (9) 分	· -	÷	
4.0	-C20	(4,7									č 4	e Mga Talah						id3a.i/2			
5-	-C22	(5,0	92)						į						•			00810			
	-C24	(5,3 (5,5	93).	e Sa				:				emi 1854 31 s	- 5. 8	± . €	- !	:		/chem3/fid3a.i/20081027b.b/1027a085 ြ စ္လ	Column diameter:	Operator: ms	Instrument: fi
5.7		(5,6			ŝ.		•	e* 										?7a085₊d	iameter	ms	nt: fida
e	-C28	(5,9	16>									-Triac	on Suri	r (6.	.157)			_	0.25		id3a₊i
6.3	-032	(6.4	61)																		
6,6 6,9	-C34	(6,8	35)																		
9 7,2																					
7.5	-C36	(7,3	02)																		
7,8	<u>=</u> Ĥ€o	Aig≅s	1027(88 68)1*(7	968) 1942)																	
4	-885 -804	Metes Seten	5931 (, (8,020 108:128 11258-1	1989>																	
8.4	轀	Adece NESOT	ziz) 13(8.29 13(8.3) eak (8.	(8*33	5)																

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Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a086.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12B

Client ID: CMP2-081013

Injection: 28-OCT-2008 07:25

Dilution Factor: 1

DID	. 27	RESUL'	TC
H' 1 L 1	• 4A	RESUL	

Compound	RT	Shift	Height	Area	Rā	inge 	Total Area	Conc
=======================================	======		======= 15792	17929	======= GAS	(Tol-C12)	516177	20
Toluene	1.934	-0.002	10131	5739	DIESEL	(C12-C24)	433248	22
C8	2.046	-0.002	7128	7400	M.OIL	(C24-C38)	342371	25
C10	2.591	-0.003	5210	4897	AK-102	(C10-C25)	617089	25
C12	3.071	0.001		3149	AK-102	(C25-C36)	265913	38
C14	3.492	0.000	5116	4534	OR.DIES	(C10-C28)	693879	44
C16	3.881	-0.001	4632	5605	OR.MOIL	(C28-C40)	301107	32
C18	4.322	-0.003	3705	4636	JET-A	(C10-C18)	438048	30
C20	4.739	-0.004	3467	4636 640	MIN.OIL	(C24-C38)	342371	27
C22	5.107	0.012	2921	2847	MSPIRIT	(Tol-C12)	516177	33
C24	5.412	0.019	3062		MSPIKII	(101-012)	520277	
C25	5.528	-0.001	3032	2666	}			
C26	5.668	0.013	2799	836				
C28	5.916	0.024	2734	435	1			
C32	6.459	0.021	3601	5454	!			
C34	6.835	0.035	2399	1341		/m=1 (14)	620668	55
Filter Peak	8.500	-0.003	1789	1246	1	(Tol-C14)	819633	
C36	7.306	0.041	2136	468	CREOSOT	(C8-C22)	019033	131
C38	7.929	0.049	1898	984		(410 420)	951382	106
C40	8.319	-0.010	1848	367 🗈	BUNKERC	(C10-C38)	951382	106
=======================================	=======	:======	=======	=========	=======	=========	===========	======
AZDIESEL (C	10-C22)	5	19951	32				
AZMOIL (C	22-C32)	2	17819	34			· ·	
=======================================	======	=======	=======	:=====================================		-======== 120\ NW N	#========= M Oil(5:4444 -	7.931)

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.4444 - 7.931)
AK102 (2.543 - 5.479) AK103 (5.479 - 7.315) Jet A(2.543 - 4.375)

 Surrogate
 Area
 Amount
 %Rec

 o-Terphenyl
 741359
 34.9
 77.4

 Triacontane
 623589
 38.0
 84.4

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005 22-SEP-2008 08-AUG-2008
Creosote	6234.4	00 A03 2000

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22	-Tol:		(1,934) 6)														Column phase: RTX-1	Sample Info: NU12B	
2-																	RTX	NU12B	ID: CMP2-081013
2,7	-C10	(2,5	91>																1013
3.0	-C12	(3.07	71)																
3,3 3,6	-C14	(3,49	92)																
و	-C16	(3,8	81)																
4.2	-C18	(4,3	22)		9 m				1.16.							<u>.</u> <u>.</u>			
₽. 51 }.	 (· · · · · · · · · · · · · · · · · · ·									o-ter	ph ⁽ (4,499)	id i		
4	-C20	(4.7	39>						- (5) - (5)	%						9 0 + 1	7 /2		
ا. ق ا خ	-022	(5,1	07)										e Se e	· .		, , ,	0 .	8	Ħ
57 4	F :	(5,5	28)		• •				en Burgo	100 a					1	4.499)	Column diameter:	Operator: ms	Instrument: fid3a.i
5.7	-C26 -C28														`a.{		eter:	Ω	fid3a
٠ • •	-020									— −Triac	on Sur	r (6.1)	56)	·			0.25		‡ .
6-3	-032	(6.4	59)											i.					
6,6 6,9	-C34	(6,8	35)																
₹2	-C36	(7,3	(806																
٦ نام																			
7,8	-08 -08 -848	Diese Mégge KER C	1027(98 1 50) 1 (7	87 7) •939)															
8,1 8,4	=88e =38t =888	Heter HT (HC NE CH	(8.022 1001 140 142 142 19 19 19 19 19 19 19 19 19 19 19 19 19	1984) 84) (2) (4) (8.	.335)														

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Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a090.d Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12C

Client ID: FM105-081013

Injection: 28-OCT-2008 08:25

Dilution Factor: 1

DITD.	27	DECLIT TO
H') •	3 A	RESULTS

Compound	RT	Shift	Height	Area	Ra	ange	To	tal Area	Conc
=========	1 024	-0.002	16406	======================================	======== GAS	(Tol-C12)	====:	518435	20
Toluene	1.934	-0.002	10205	5985	DIESEL	(C12-C24)		422264	22
C8	2.046		7159	7898	M.OIL	(C24-C38)		934884	70
C10	2.591	-0.003	4825	8602	AK-102	(C10-C25)		612748	25
C12	3.071	0.001		4736	AK-102	(C25-C36)		766682	109
C14	3.493	0.002	3937			(C10-C28)		821669	52
C16	3.881	-0.001	3609	4630	OR.DIES	• • • •			86
C18	4.323	-0.002	3115	3671	OR.MOIL	(C28-C40)		801656	
C20	4.740	-0.004	3145	5677	JET-A	•		390244	26
C22	5.094	-0.001	3908	2869	MIN.OIL	(C24-C38)		934884	73
C24	5.395	0.002	6003	2950	MSPIRIT	(Tol-C12)		518435	33
C25	5.534	0.006	7108	2387					
C26	5.654	-0.001	7310	3518					
C28	5.891	-0.001	8155	3857	1				
C32	6.450	0.011	9191	9234					
C34	6.802	0.001	6114	2733					
Filter Peak	8,511	0.008	3009	2068	JP-4	(Tol-C14)		603136	53
C36	7.262	-0.003	4857	1254	CREOSOT	(C8-C22)		773311	124
C38	7.880	-0.001	3877	2359	j	+5			
C40	8.325	-0.004	3235	2156	BUNKERC	(C10-C38)		1534988	172
		J.001	=======	==========		=======	====	=======	=====
AZDIESEL (C	10-C22)	4	73460	29					
	22¬C32)		85867	91			2		
AZINOTE (C	22 (002)								=====

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oib(5.444 - 7.931)

AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	730457	34.3	76.3
Triacontane	612919	37.3	83.0

Analyte	RF	Curve Date
o-Terph Surr	21272.0	25-OCT-2008
Triacon Surr	16418.1	25-OCT-2008
Gas	25535.6	27-OCT-2008
Diesel	19596.8	25-OCT-2008
Motor Oil	13427.8	25-OCT-2008
AK102	24271.2	25-OCT-2008
AK103	7036.1	26-JULY-2008
JP4	11362.0	05-FEB-2007
JetA	14845.5	11-JUL-2008
Min Oil	12823.0	27-JUN-2008
Min Spirit	15825.3	15-APR-2005
OR Diesel	15856.1	
OR M.Oil	9368.4	
Bunker C	8936.8	22-SEP-2008
Creosote	6234.4	08-AUG-2008

									(10^6)													
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2. 1	-Tolu	iene (1. 2.046)																	Column phase: RTX-1		* **	- Д
2,4																			* RTX-1	Info: NU12C	ID: FM105-081013	chem3/f
2.7	-C10	(2,591)																	·		1013	id3a.i/ï ^^~SE
3,0	-C12 ((3,071)																				0081027
3,3																						b.b/102
3+6	-C14 ·	(3,493)																				27a090₊c
3.9	-C16 1	(3,881)																				
4 2	-C18	(4,323)								·								∕ch				
4. (5)							<u>.—</u> _	_		, 348 			adka Najara		o-t	érph	(4.4					
4.8		···· (4,740)								설 1 1 2학		13						/chem3/fid3a,i/20081027b,b/1027a090 				
Σ. Σ. Σ.		(5,094)				ä.				Ent								9081027	8 8)	4	
51 4	-C24 -C25	(5,395) (5,534)				1 22 %				ra ()) 7 (4)		1 12. 1 11. 118				<u> </u>	1 -417	b.b/102	Operator: ms Column diameter:	-	Instrument: fid3a.i	
5,7	-C26	(5,654)														1	- }	7a090.d	ameter:	·	t: fid3	
6.	}	(5,891) <u>con_Sur</u>		<u>131)</u>	_														0,25		т. Ф	
۳. و٠.	-032	(6,450))																			
e. e.	1	/4 0A2																				
6,	-634	(6,802)	•																			
7.2	-036	(7,262)	ı																			
7.5																						
7.8	-AK I -0881 -0481 -BINK)ies 102)[@se80) opop50) (ER C (8	(7.8 17.884 11 (7.	942)																		- 0 0
44	-3etA	ÉR C (8 1950 10 160 161 160 161 160 161 160 161	1.68 1.69 1.69 1.69	975) 65																		ì
8-4-	1	Fest Feat			3>																	

Analytical Resources Inc. TPH Quantitation Report

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Data file: /chem3/fid3a.i/20081027b.b/1027a091.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU12D

Client ID: FM105-081013D

Injection: 28-OCT-2008 08:40

Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Ra	nge	Total Area	Conc
========= Toluene	1.931	 -0.005	15880	======== 14054	GAS	(Tol-C12)	515721	20
C8	2.042	-0.005	10111	5732		(C12-C24)	312949	16
C10	2.588	-0.006	22841	15518	M.OIL	(C24-C38)	343477	26
C10 C12	3.070	0.000	4612	4027	AK-102	(C10-C25)	492468	20
C12 C14	3.494	0.002	3650	4781	AK-103	(C25-C36)	262983	37
C14 C16	3.882	0.000	3143	4307	OR.DIES	(C10-C28)	564015	36
C18	4.324	-0.001	2622	3849	OR.MOIL	(C28-C40)	312834	33
C20	4.741	-0.003	2401	3055	JET-A	(C10-C18)	368292	25
C22	5.093	-0.002	2296	3221		(C24-C38)	343477	27
C24	5.406	0.012	2178	605	MSPIRIT	(Tol-C12)	515721	33
C25	5.540	0.011	2424	815				
C26	5.670	0.015	2565	712	1			
C28	5.914	0.022	2679	1426			•	*
C32	6.476	0.037	3080	2648				74
C34	6.834	0.034	2702	1758	ľ			
"Filter Peal	k 8.495	-0.008	1822	901	· !	(101 011)	596889	. 53
	7.307	0.042	2313	1325	CREOSOT	(C8-C22)	716209	115
C38	7.926	0.046	2012	1517		**		0.0
C40	8.320	-0.009	1878	672	BUNKERC	(C10-C38)	830189	93
=========	========	===	=======	=========	.========	===========	==========	=====
AZDIESEL	(C10-C22)	4	05944	25			3 7	
AZMOIL	(C22-C32)	. 1	91508	30	••			
: =========	========	=======	=======	:======================================		120\ NW M		931)

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	692695	32.6	72.4
Triacontane	622178	37.9	84.2

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005
OR M.Oil Bunker C Creosote	8936.8 6234.4	22-SEP-2008 08-AUG-2008

				<u></u>			Y (x10^6	5)										
		\$ 4 	Ņ	္ မ	• • •	့ မှာ .	· · · · · · · · · · · · · · · · · · ·	0,7	ο 	 . .		<u>፦</u> ት ት			ō	တ္	O F	و و
	-Tol	. 1 Luene (1.								 					olumr	Sample	Client	; ; ; ; ; ; ; ; ; ; ;
22,1		(2,042)													Column phase: RTX-1		, ID; F)	11et /
22 4.															* RTX-	Info: NU12D	ID: FM105-081013D	chem3/1
2.7	C1	0 (2,588	i)												F		31013D	Data File: /chem3/fid3a.i/20081027b.b/1027a091.d Data
3,0	-C12	(3,070)																200810271
3,3																		0.b/1
3,6	-C14	(3,494)																027a091.
3,9	-C16	(3,882)																Ω.
4-2-	-C18	(4,324)												\d				
4.		-:-								-			(4 500)	Tem3/				
4.8	-C2¢	(4,741)					i V Line view		7		0	-terpr	(4 ₊ 500)	/chem3/fid3a.i/20081027b.b/1027a091				
전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전 전	-c22	(5,093)					feing.	r.						2008102	0.0			
த 4	-C24	(5,406)		2175.2			erana Tarangan	nara Jagania Ma		Trans	4 44,1			76.673	Operator: ms Column diameter:		Instrument: f	
្រ		(5 ₊ 540) (5 ₊ 670)					经 第二人			•			,	L027a	91.45 07.45		ment:	
5,7										.*		√, ,		091.d	ieter:		fid	
6-0	-C28 	(5,914)								 -Triaco	ın Sur	m (6.1	159)		÷ 0.25		id3a₊i	
6.4 8.4			-	-			 -			11 1400		, (04.	2037		<u>.</u>			
6,6	-032	(6,476)																
6,9	-C34	(6,834)																
7.2	-036	(7,307)																
7.5																		
7,8		iese102 67#958)	7588876 1 (7,94) 2)														ם.
8 4	-BUNK -OR M =Bket -Jeta	ER C (8, eter (); eter (); f (801, f (80211)	0222) 1481198 181178)	ş>														Page 1
ω 4		FeOibo(8 Geseleck er Peak																
	F-116	er reak	704430	,														

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Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a092.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12E

Client ID: MW125-081013

Injection: 28-OCT-2008 08:55

Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Ar	rea	Ra	inge	Tota	al Area	Conc
===========	======	=======	======	=====	=====	=======	:========	======	=== ===	======
Toluene	1.933	-0.003	16299	1	9041	GAS	(Tol-C12)		542121	21
C8	2.044	-0.004	10244		6007	DIESEL	(C12-C24)		334762	17
C10	2.589	-0.005	22219	1	8482	M.OIL	(C24-C38)		303773	23
C12	3.071	0.001	5019		4553	AK-102	(C10-C25)		526635	22
C14	3.493	0.002	3935		4759	AK-103	(C25-C36)		239431	34
C16	3.882	0.000	3314		4577	OR.DIES	(C10-C28)		589361	37
C18	4.325	0.000	2703		4176	OR.MOIL	(C28-C40)		278549	30
C20	4.752	0.008	2182		1894	JET-A	(C10-C18)		400791	27
C22	5.093	-0.002	2220		3213	MIN.OIL	(C24-C38)		303773	24
C24	5.403	0.009	2003		359	MSPIRIT	(Tol-C12)		542121	34
C25	5.538	0.009	2118		589	1				
C26	5.678	0.023	2078		1200	1				
C28	5.917	0.025	2318		369	1				
C32	6.485	0.046	2891		1652					
C34	6.834	0.034	2343		1071					
Filter Peak	8.501	-0.002	1720	311,	581	JP-4	(Tol-C14)		630694	56
C36	7.309	0.044	2083		620	CREOSOT	(C8-C22)	**	761355	122
C38	7.933	0.052	1868		1152					
C40	8.317	-0.011	1743		830	BUNKERC	(C10-C38)		824957	92
=======================================	=======	=======		=====	====	=	=========	======		======
AZDIESEL (C	10-C22)	4	12973	28						
AZMOIL (C	22-C32)	<u> </u>	79151	28			T.			
;=====================================	======	===,4=====	=======	:=====	=====	=======	=======	======================================		=====

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931)

AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	705795	33.2	73.7
Triacontane	612325		82.9

Analyte	RF	Curve Date
o-Terph Surr	21272.0	25-OCT-2008
Triacon Surr Gas	16418.1 25535.6	25-OCT-2008 27-OCT-2008
Diesel	19596.8	25-OCT-2008
Motor Oil	13427.8	25-OCT-2008
AK102	24271.2	25-OCT-2008
AK103	7036.1	26-JULY-2008
JP4	11362.0	05-FEB-2007
JetA	14845.5	11-JUL-2008
Min Oil	12823.0	27-JUN-2008
Min Spirit	15825.3	15-APR-2005
OR Diesel	15856.1	
OR M.Oil	9368.4	
Bunker C	8936.8	22-SEP-2008
Creosote	6234.4	08-AUG-2008

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22 4 4		luene (1 (2.044)	L,933)													Column phase: RTX-1	Sample Info: NU12E	++ 77	
24																: RTX-1	Info: NU12E	ile: /chem3/fid3a. 28-OCT-2008 08:55	
2.7	C1	.O (2.58	9)														i de	id3a.i/2 08:55	
3.0	-C12	. (3,071	>															0081027k	
3,3		42 402																₀.b/1027	
3,6	-014	(3,493	,															'a092₊d	
3.9	-C16	(3,882	>																
4.	-C18	(4,325	>						# ## # # * #	•					∠cher				
4. 51	 				_	A.C.					44		o-terpl	h (4.8	전 500) 출				
4. 00	-020	(4.752	>			रण् स्थ									/chem3/fid3a,i/20081027b,b/1027a092.d				
를 55 2 1 2 1	-022	(5,093	>			•									XX 101 101				
	1	<u>.</u>					as IN		į						276.6	Colum	Openator: ms	Instr	
57 4	1	(5,403 (5,538				1	10 17 17				entri (in)				/102	n di	÷	Úmen.	
5,7	.1	(5,6 78								1 5 1	ing tagent of the second of t	, i	1.A -	ज <u>ी</u>	7a092•d	Column diameter:	Å	Instrument: fid3a.i	
6.0	-C28	3 (5,917	>							7	Triacon	Surr (6,156)			0.25		ù + 	
6,3	-{																		
6.6] -03	2 (6,485	5>																
6.9	-034	4 (6.834	Þ																
7,2	-C3(6 (7 ,3 09))																
7. 51																			
7,8	-	Diese19 8Mete098 NKER C	27589 11 (7.	76) 946)														7 0 89 0	ם ע
4	- =0R =38	₽₩₽₽₽₽₽ ₽₩₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽	31 .1921 5538,18	583 583														70 10	;
8 4		Singsei Singsei		(8,335 (01))														



Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a093.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12F

Client ID: CMP17-081013

Injection: 28-OCT-2008 09:11

Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Ra	ange	Tota	l Area	Conc
Toluene	1.933	-0.003	18451	18952	GAS	(Tol-C12)		525559	21
C8	2.045	-0.003	10302	6819	DIESEL	(C12-C24)		316102	16
C10	2.592	-0.001	8162	9054	M.OIL	(C24-C38)		292449	22
C12	3.072	0.002	4919	8329	AK-102	(C10-C25)		497760	21
C14	3.494	0.002	3651	5027	AK-103	(C25-C36)		221569	31
C16	3.883	0.001	3034	3344	OR.DIES	(C10-C28)		555252	35
C18	4.324	-0.001	2606	4058	OR.MOIL	(C28-C40)		269983	29
C20	4.751	0.008	2171	4228	JET-A	(C10-C18)		376345	25
C22	5.094	-0.001	2236	3060	MIN.OIL	(C24-C38)		292449	23
C24	5.394	0.001	2143	2169	MSPIRIT	(Tol-C12)		525559	33
C25	5.542	0.013	2158	558					
C26	5.670	0.015	2064	410					
C28	5.897	0.005	2744	3899	1				
C32	6.458	0.019	3930	2882			3.2		
C34	6.835	0.035	2290	1456					
Filter Peak	8.504	0.001	1684	803	Ŭ₽-4	(Tol-C14)		610956	54
C36	7.310	0.045	2021	280	CREOSOT	(C8-C22)		725605	116
C38	7.934	0.053	1793	571					
C40	8.315	-0.014	1713	1228	BUNKERC	(C10-C38)		785620	88
=======================================	=======	=======	=======	========	========	========	======	:======	======
· · ·	10-C22)		20775	26					
AZMOIL (C	22-C32)	T	70615	27				· ·	
	======	======	=======	=======	=======	:======	.=====		.=====

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931)
AK102 (2.543 - 5.479) AK103 (5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	766358	36.0	80.1
Triacontane	658423	40.1	89.1

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005
Creosote	6234.4	08-AUG-2008

2,1 -C1 -C1 -C1 -C1 -C1 -C1 -C1 -C1 -C1 -C	oluene (1,933) (2,045) (2,592)	0,4 0,3	Φ ¢ σι δ 	Y (x10^6)	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.0-	₽ • • • • • • • • • • • • • • • • • • •	μ ω . · · ·	4 4	Column phase: RTX-1		Date : 28-0CT-2008 09:11 Client ID: CMP17-081013	Data File: /che
2.7 -C1 2.7 -C1										RTX-	NU12F	HP17-	. <u>다</u>
ω -C1	2 (3,072)									4	••	081013	m3/fid3a.i
iω.													File: /chem3/fid3a,i/20081027b,b/1027a093,d
3-6	4 (3.494)												/1027a093.d
9 4-	6 (3.883) 8 (4.324)		140						6				
4			**************************************		7.3 12.7			<u>: </u>					
) (4 ₊ 751)				nter	40 11 - \$1	; o-	terph '	(4.499) \fig3 103 1/20		•		
5C2	4 (5,394)		egist Viter		1875 1875 1875	े क क्रुप्तिक्ष्य		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	/chem3/f1d3a,1/2008102/b,b/1/02/a023	Column diamet	•	Instrum	
o1 −c2	5 (5,542) 6 (5,670) B (5,897)	Section 1997	数 5						%	- 3		Instrument: fid3a.i	1.4°C,
6-						-Triacon Surr	(6,157)			0.25		-	
6.4 6.4	2 (6,458)												
€ -C3	4 (6.835)												
1 .	6 (7.310)												
7.5													
ω -80 12 - 36 13 - 36	######################################	1994> 32>											Page 1

-Filter Peak (8.504)

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Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a094.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12G

Client ID: CMP5-081013

Injection: 28-OCT-2008 09:26

Dilution Factor: 1

12 T T	1.71	PESULTS

Compound	RT	Shift	Height	Area	Ra	inge	Total Area	Conc
Toluene	1.932	-0.003	16043	17946	====== GAS	(Tol-C12)	513760	20
C8	2.044	-0.004	10188	6378	DIESEL	(C12-C24)	301423	15
C10	2.591	-0.002	7064	11120	M.OIL	(C24-C38)	275255	20
C12	3.070	0.000	4697	8532	AK-102	(C10-C25)	478269	20
C14	3.493	0.002	3753	5140	AK-103	(C25-C36)	209391	30
C16	3.881	-0.001	3125	4682	OR.DIES	(C10-C28)	534768	34
C18	4.323	-0.002	2512	3634	OR.MOIL	(C28-C40)	252286	27
C20	4.741	-0.003	2200	2798	JET-A	(C10-C18)	366665	25
C22	5.093	-0.002	2049	3138	MIN.OIL	(C24-C38)	275255	21
C24	5.409	0.016	1806	502	MSPIRIT	(Tol-C12)	513760	32
C25	5.555	0.026	4389	4457	1			
C26	5.668	0.013	1895	641	1			
C28	5.899	0.007	2543	3413]			44
C32	6.448	0.010	3787	6310 _{//}	ļ			43
C34	6.829	0.029	2161	1243	1	1		
Filter Peak	8.498	-0.005	1611	864	JP-4	(Tol-C14)	596612	53
C36	7.308	0.043	1900	378	CREOSOT	(C8-C22)	705800	113
C38	7.928	0.047	1723	582				
C40	8.310	-0.019	1636	781	BUNKERC	(C10-C38)	748701	84
, =========	======	=======	=======	========	=======	=========	:=========	:=====
AZDIESEL (C	(10-C22)		7434	25				
AZMOIL (C	(22-C32)	. 15	0459	23		e al	* *	
==========	======	=======	=======	=======================================	========		:======================================	021\

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5:444 - 7.931)
AK102 (2.543 - 5.479) AK103 (5.479 - 7.315) Jet A(2.543 - 4.375)

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			131
Surrogate	Area	Amount	%Rec
o-Terphenyl	751912	35.3	78.5
Triacontane	644976	39.3	87.3

Analyte	RF	Curve Date
o-Terph Surr	21272.0	25-OCT-2008
Triacon Surr	16418.1	25-OCT-2008
Gas	25535.6	27-OCT-2008
Diesel	19596.8	25-OCT-2008
Motor Oil	13427.8	25-OCT-2008
AK102	24271.2	25-OCT-2008
AK103	7036.1	26-JULY-2008
JP4	11362.0	05-FEB-2007
JetA	14845.5	11-JUL-2008
Min Oil	12823.0	27-JUN-2008
Min Spirit	15825.3	15-APR-2005
OR Diesel	15856.1	
OR M.Oil	9368.4	
Bunker C	8936.8	22-SEP-2008
Creosote	6234.4	08-AUG-2008

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22 • 4 • 4		luene (2,0	(1,932) 44))																Column phase: RTX-1	Sample Info: NU12G	ત ∙	+
2,4 2,7	- C1 0	(2.5	591)																	RTX-1	NU12G	ID: CMP5-081013	28-0CT-2008 09:26
3.0	-C12	(3.6	70)																				
3,3 3,6	-C14	(3₊4	193)																	ı			
3.9	-C16	(3,8	381)																				
4.2 4.5	-C18	(4,3	323)										_	<u>.</u>					/chem3	*			
5 4.8	-C20	(4.7	741)				1							-		o-tei	rph	(4,50	Vfid3a.i/ ⊗				
5	-C22	(5.4)9 3) [†]			- ·		-		•		100							/chem3/fid3a.i/20081027b.b/1027a094 	Colu	0505	Inst	
5,4 5,7	-C25	(5.4 (5.4 (5.4	555) 668)						. *							i. i		ļ ļ	o/1027a09;	Column diameter:	v+ 	Instrument: fid3a.i	
8.0	-c28	(5.	399)									T		n Sur	n (6 :	1501			ů.	er: 0,25		id3a₊i	
6,3	-032	: (6.	<u> </u>									 ,	r.140t	ii Jai	101	1007							
6,6	-034	(6.	B 29)																				
6,9 7	,	•																					
7,2 7,5	-C36	(7,	308)																				
5 7.8		5 0.7	100 15	.0771																			
8.	-814 -814 -814 -814 -814 -814 -814 -814	Higs Moto KER	1027589 56911 (7 0 (8 022 1031(8 0269)8	99//2 7.944) 2) 3.097)																			
8 +4	=566 =666 -666	HICE NESO PIES PIES	υ269)8+2 #4968+28 #1968+3	.557 957 957 957	36)																		

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Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a095.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12H

Client ID: MW308S-081013 Injection: 28-OCT-2008 09:41

Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range		Total Area	Conc
Toluene	1.934	-0.002	======= 17387	19689	GAS	(Tol-C12)	524571	====== 21
C8	2.046	-0.003	10631	6605	DIESEL	(C12-C24)	321668	16
C10	2.591	-0.002	7449	8482	M.OIL	(C24-C38)	319473	24
C12	3.070	0.000	4813	6869	AK-102	(C10-C25)	505280	21
C14	3.492	0.001	3840	2962	AK-103	(C25-C36)	250870	36
C16	3.881	-0.001	3243	4503	OR.DIES	(C10-C28)	575273	36
C18	4.323	-0.002	2665	3680	OR.MOIL	(C28-C40)	283959	30
C20	4.753	0.010	2152	2185	JET-A	(C10-C18)	388344	26
C22	5.094	-0.001	2237	3865	MIN.OIL	(C24-C38)	319473	25
C24	5.395	0.001	2118	2385	MSPIRIT	(Tol-C12)	524571	33
C25	5.554	0.026	9226	8089	1			
C26	5.675	0.020	2015	480				
C28	5.910	0.018	3828	2721				
C32	6.451	0.012	5519	8516				, t ₁
C34	6.834	0.034	2491	1640	<u>'</u>			14
Filter Peak	8.498	-0.005	1750	521	JP-4	(Tol-C14)	610628	54
C36	7.304	0.039	2130	1143	CREOSOT	(C8-C22)	728666	117
C38	7.929	0.049	1850	995	ļ			
C40	8.314	-0.014	1762	559	BUNKERC	(C10-C38)	820462	92
AZDIESEL (C	====== L0-C22)	4	======= 29074	27			========	
•	22-C32)		81233	28	•	,		. 12

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931)

AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1413621	66.5	147.7
Triacontane	1207269	73.5	163.4

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005
Bunker C Creosote	8936.8 6234.4	22-SEP-2008 08-AUG-2008

						Y (x10	`6)								7		
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22 14	-Toluene (-C8 (2.046														Column phase: RTX-1		₹ ++
!> 4															* RTX-	Info: NU12H	28-0CT-2008 09:41 ID: MW308S-081013
2.7	-C10 (2.59:	D															09:41)81013
a. •••	-C12 (3.07	>>															
3,3	<u> </u> 																
. 3,6	-C14 (3,49)	2)															
3,9	-C16 (3,88	D															
4-2	-C18 (4.32)	3)								(25 s				ò			
4 51	L		#*************************************			2-			65.7	-	-	o-te	rich (4.502)			
4 *8	-C20 (4.75)	3>												CONTRIBUTE 1004-17 CVVOLVE/D-B7-1VE/4V99			
Min T•th	-C22 (5.09	1)				• • • •								7000			
57 + 4	-C24 (5.39	5)	1 (1) 31, 1 (1)				Ü							770+07H	Column	Operator: ms	Instrum
5,7	-C25 (5.55 -C26 (5.67)		2						• .		13		.	00 / d/30	Column diameter:	 	Instrument: fid3a.i
6.0	-028 (5.91	>>									26 4	. 48		Ġ	r: 0,25		d3a.i
6.3									— -iri	acon Su	rr (6,1	947			"		
6,6	-C32 (6.45	1>															
6.9	-C34 (6.83	4)															
7,2	-036 (7.30	4)															,
7 5																	
7,8	=85 Diese1	27 (3 8 8)	72) 938)														
#- - 8	= ### ################################	(8,020) 81,6949 13,8-178)84) 3)														

-Filter Peak (8,498)

700

7-1

11.3

Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a096.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU12I

Client ID: MW308N-081013 Injection: 28-OCT-2008 09:56

Dilution Factor: 1

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Ra	ange	Total Area	Conc
Toluene	1.935	-0.001	17491	18356	GAS	(Tol-C12)	534446	21
C8	2.046	-0.002	10513	6140	DIESEL	(C12-C24)	341055	17
C10	2.591	-0.003	7654	7817	M.OIL	(C24-C38)	327272	24
C12	3.070	0.000	4798	5841	AK-102	(C10-C25)	526247	22
C14	3.493	0.002	3770	4172	AK-103	(C25-C36)	257557	37
C16	3.882	0.000	3191	4333	OR.DIES	(C10-C28)	599244	38
C18	4.324	-0.001	2739	3828	OR.MOIL	(C28-C40)	292438	31
C20	4.752	0.009	2278	1849	JET-A	(C10-C18)	379550	26
C22	5.095	0.000	2972	3610	MIN.OIL	(C24-C38)	327272	26
C24	5.412	0.019	2642	4340	MSPIRIT	(Tol-C12)	534446	34
C25	5.540	0.012	2445	535				
C26	5.672	0.018	2236	713				
C28	5.896	0.004	3406	4856				
C32	6.445	0.006	4272	6779				
C34	6.835	0.035	.9/2419	2107				
Filter Peak	8.503	0.000	1702	405	JP-4		618455	54
C36	7.308	0.043	2084	: 290	CREOSOT	(C8°-C22)	744201	119
C38	7.933	0.052	1796	895				
C40	8.312	-0.017	1719	855	BUNKERC	(C10-C38)	846947	95
•	0-C22) 2-C32)		33357 11808	27 33				·

_______ Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931)

AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	685631	32.2	71.6
Triacontane	594741	36.2	80 5

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3	25-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005
OR Diesel OR M.Oil Bunker C Creosote	15856.1 9368.4 8936.8 6234.4	22-SEP-2008 08-AUG-2008

Γ			Y (x	:10^6)				·]		
2,1	-Toluene (1,935) -C8 (2,046)	o ₊ 4	· · · · · · · · · · · · · · · · · · ·	0,7-	. ₩	ф Р • • • • • • • • • • • • • • • • • • •	4 4 8 4 9	ä	Column ph	Date : 28 Client II Sample Ir	Ţ
L 2,4 2,7	-C10 (2,591)								Column phase: RTX-1	Date : 28-OCT-2008 09:56 Client ID: MW308N-081013 Sample Info: NU12I	:: /chem3/fid
3,0	-C12 (3,070)									156 213	3a,i/20081027F
3,3 3,6	-C14 (3,493)										/chem3/fid3a,1/20081027b,b/1027a096,d
3,9 4,2	-C16 (3,882) -C18 (4,324)							<u>ò</u>			-
4.5 4.8	-C20 (4 . 752)		29 . 28 f		- 202 \$ 1.5		o-terph (/chem3/fid3a.i/20081027b.b/1027a096	:		
5,1 5,4 Min	-C22 (5,095) -C24 (5,412) -C25 (5,540)		**** *********************************	erroria Erroria Erroria		5		200810276.6/10	Operator: ms Column diame	Instrument: fi	
5,7 6,0	-C26 (5,672) -C28 (5,896)				•	i.		27a096.d	Operator: ms Column diameter: 0,25	ent: fid3a.i	
6.3	-C32 (6,445)					Triacon Surr (6	.156)		ថ		
6,9 7,2	-034 (6,835)										
7,5 7,8	-C36 (7,308)										_
8-1 8-4	=06 Diese1027(30867) =8781444986001 (7.945) -8UNKER C (8.023) =878-88549814891487) =48447(8046581981489) =4847(804658188) =8847(804658188) -87847(804658188) -87847(804658188)									0	Page 1
	*** ver										



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12MB LIMS ID: 08-27616

Matrix: Water

Data Release Authorized

Reported: 11/04/08

Sample ID: METHOD BLANK

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: NA Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	20, 20, 00		Arsenic	0.2	0.2	U
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12A

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized (Reported: 11/04/08

Sample ID: CMP1-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	<u>Q</u>
200.8	10/16/08	200.8	10/23/08	7440-38-2	Arsenic	0.2	2.8	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12B

LIMS ID: 08-27617

Matrix: Water Data Release Authorized

Reported: 11/04/08

Sample ID: CMP2-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10, 21, 11	7440-38-2 7439-92-1	Arsenic Lead	0.2	22.7 15	



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12C LIMS ID: 08-27618

Matrix: Water

Data Release Authorized:

Reported: 11/04/08

Sample ID: FM105-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/23/08	7440-38-2	Arsenic	0.2	0.4	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12D LIMS ID: 08-27619

Matrix: Water

Data Release Authorized Reported: 11/04/08

Sample ID: FM105-081013D

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/23/08	7440-38-2	Arsenic	0.2	0.4	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12E

LIMS ID: 08-27620

Matrix: Water

Data Release Authorized:

Reported: 11/04/08

Sample ID: MW125-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/23/08	7440-38-2	Arsenic	0.2	0.4	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12F LIMS ID: 08-27621

Matrix: Water

Data Release Authorized:

Reported: 11/04/08

Sample ID: CMP17-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/23/08	7440-38-2	Arsenic	0.2	2.6	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12G

LIMS ID: 08-27622

Matrix: Water

Data Release Authorized Reported: 11/04/08

Sample ID: CMP5-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08 Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/23/08	7440-38-2	Arsenic	0.2	14.2	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12H LIMS ID: 08-27623

Matrix: Water

Data Release Authorized

Reported: 11/04/08

Sample ID: MW308S-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/28/08	7440-38-2	Arsenic	2	8	
200.8	10/16/08	200.8	10/28/08	7439-92-1	Lead	5	5	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

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Page 1 of 1

Lab Sample ID: NU12I LIMS ID: 08-27624

Matrix: Water

Data Release Authorized

Reported: 11/04/08

Sample ID: MW308N-081013

SAMPLE

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08
Date Received: 10/13/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	11/03/08	7440-38-2	Arsenic	0.5	25.4	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU12LCS LIMS ID: 08-27616

Matrix: Water

Data Release Authorized Reported: 11/04/08

Sample ID: LAB CONTROL

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

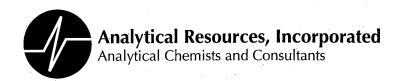
Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	24.5	25.0	98.0%	
Lead	200.8	24	25	96.0%	

Reported in µg/L

N-Control limit not met Control Limits: 80-120%



5 November 2008

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110

RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Job: NU25

Dear Chip:

Please find enclosed the original chain of custody (COC) record and the final results for samples from the project referenced above. Analytical Resources, Inc. accepted nine water samples and one trip blank in good condition on October 13, 2008. The samples were analyzed for BEHP, PAHs, PCBs, NWTPH-Dx and total metals as requested.

These analyses proceeded without incident of note.

Copies of these reports and all raw data will be kept on file at ARI. If you have questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File NU25

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated Analytical Chemists and Consultants	4611 South 134th Place, Suite 100 Tukwila, WA 98168	206-695-6200 206-695-6201 (fax)	Notes/Comments													Received by: (Signature)	Printed Name:	Company:	Date & Time:
				5	શ	78 7d 78	×		Ϋ́	×	XXX	 X >	X			4 8	а.		
		,	Analysis Requested		11	BEF	×	×	×	X	X	X	X	,		l by:	:0		
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quested:	Phone: 206 · 780 · 43	: :		Phase 2 (Ti	Time Ma	845 Nate	145	1645	1050	1125	1225	1325		V	NU F	Ruch		Date & Time: 16/14/68 1436
Turn-around Requested: S ← D	Ph LLC			Project - Samplers:	11	Date	_{विभि} वि	-	34 7				<u>-</u>			Relinquished by: (Signature)	Printed Name: #	Aspert LLC	Date & Time:
ARI Assigned Number:	ARI Client Company: Aspect Consulting	,	ie:	Southwest Harbor Pro Client Project #:		Sample ID	CMP3-081014	CM P4-081014	MW26R-081014	MWZER-081014D	MW 44-081014	CMP15-08 1014	MW 36- 081014			Comments/Special Instructions	000	S-L81695	

meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

ARI Data Reporting Qualifiers

Effective 11/22/04

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but ≥ the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- NR Spiked compound recovery is not reported due to chromatographic interference
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte reporting limit is raised due to a positive chromatographic interference. The compound is not detected above the raised limit but may be present at or below the limit
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: NU25A LIMS ID: 08-27634

Matrix: Water Data Release Authorized: MY

Reported: 10/24/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 19:22 Instrument/Analyst: NT4/PK

CAS Number

117-81-7

Analyte

Sample ID: CMP3-081014 SAMPLE

< 1.0 U

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

RLResult

1.0

Reported in $\mu g/L$ (ppb)

bis(2-Ethylhexyl)phthalate

d5-Nitrobenzene	44.0%
2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	69.2%
d4-1,2-Dichlorobenzene	39.3%



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: NU25B LIMS ID: 08-27635

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 19:56
Instrument/Analyst: NT4/PK

Sample ID: CMP4-081014 SAMPLE

A1411 711

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

d5-Nitrobenzene	51.2%
2-Fluorobiphenyl	62.4%
d14-p-Terphenyl	80.8%
d4-1,2-Dichlorobenzene	48.4%



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: NU25C LIMS ID: 08-27636

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 20:30 Instrument/Analyst: NT4/PK

Sample ID: MW26R-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

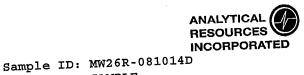
Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

d5-Nitrobenzene	46.0%
2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	68.0%
d4-1,2-Dichlorobenzene	42.0%



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS 1 of 1

Page

Lab Sample ID: NU25D LIMS ID: 08-27637

Matrix: Water

Data Release Authorized: W

Reported: 10/24/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 21:04 Instrument/Analyst: NT4/PK

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2 080064

SAMPLE

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

iic/Piiaz/	·	RL	Result
CAS Number	Analyte		
	lherryl\nhthalate	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate		

Reported in μ g/L (ppb)

B	
d5-Nitrobenzene	47.2%
d5-NICIODCHIZO	61.6%
2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	-
d4-1,2-Dichlorobenzene	48.4%
u4-1,2 D10	



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: NU25E LIMS ID: 08-27638

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 21:37 Instrument/Analyst: NT4/PK

Sample ID: MW44-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Result RLAnalyte CAS Number 1.0 bis(2-Ethylhexyl)phthalate 1.0 117-81-7

Reported in μ g/L (ppb)



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Sample ID: CMP15-081014

SAMPLE

Lab Sample ID: NU25F LIMS ID: 08-27639

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08

Date Analyzed: 10/23/08 22:11

Instrument/Analyst: NT4/PK

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

d5-Nitrobenzene	46.0%
2-Fluorobiphenyl	58.8%
d14-p-Terphenyl	59.2%
d4-1,2-Dichlorobenzene	46.8%



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: NU25G LIMS ID: 08-27640

Matrix: Water

Data Release Authorized:

Reported: 10/24/08

Date Extracted: 10/16/08 Date Analyzed: 10/23/08 22:45

Instrument/Analyst: NT4/PK

Sample ID: MW36-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
			. 1 O II
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

d5-Nitrobenzene 2-Fluorobiphenyl	49.6%
d14-p-Terphenyl	62.48
d4-1,2-Dichlorobenzene	49.6%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: MB-101708

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized:

Reported: 10/27/08

Date Extracted: 10/17/08

Date Analyzed: 10/24/08 16:08 Instrument/Analyst: NT1/YZ

Sample ID: MB-101708 METHOD BLANK

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

IIC/ MIGITIES	·	RL	Result
CAS Number	Analyte		
56-55-3 218-01-9 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Benzo(a) anthracene Chrysene Benzo(b) fluoranthene Benzo(k) fluoranthene Benzo(a) pyrene Indeno(1,2,3-cd) pyrene Dibenz(a,h) anthracene	0.010 0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 70.3%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: NU25A LIMS ID: 08-27634

Matrix: Water

Data Release Authorized:

Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: CMP3-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

IIL/Allarybe.		RL	${\tt Result}$
CAS Number	Analyte		
56-55-3 218-01-9 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Benzo (a) anthracene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene Indeno (1,2,3-cd) pyrene Dibenz (a,h) anthracene	0.010 0.010 0.010 0.010 0.010 0.010 0.010	0.010 0.013 < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 87.3%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Lab Sample ID: NU25B LIMS ID: 08-27635

Matrix: Water

Data Release Authorized:

Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: CMP4-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 10/14/08

Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

nt/Analyst: /		RL	Result
CAS Number	Analyte Benzo(a) anthracene	0.010	< 0.010 U < 0.010 U
56-55-3 218-01-9 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Chrysene Benzo(b) fluoranthene Benzo(k) fluoranthene Benzo(a) pyrene Indeno(1,2,3-cd) pyrene Dibenz(a,h) anthracene	0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 96.3%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Lab Sample ID: NU25C LIMS ID: 08-27636

Matrix: Water Data Release Authorized:

Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: MW26R-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3 218-01-9 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Benzo(a) anthracene Chrysene Benzo(b) fluoranthene Benzo(k) fluoranthene Benzo(a) pyrene Indeno(1,2,3-cd) pyrene Dibenz(a,h) anthracene	0.010 0.010 0.010 0.010 0.010 0.010 0.010	0.025 0.027 < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 90.0%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: NU25D LIMS ID: 08-27637

Matrix: Water

Data Release Authorized: Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: MW26R-081014D

SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 Event: 080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	0.024
218-01-9	Chrysene	0.010	0.026
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 86.3%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: NU25E LIMS ID: 08-27638

Matrix: Water

Data Release Authorized:

Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000

Instrument/Analyst: /

Sample ID: MW44-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 Event: 080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

110/1111111		RL	Result
CAS Number	Analyte		
56-55-3 218-01-9 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Benzo (a) anthracene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene Indeno (1,2,3-cd) pyrene Dibenz (a,h) anthracene	0.010 0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 84.7%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Lab Sample ID: NU25F LIMS ID: 08-27639

Matrix: Water

Data Release Authorized: Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: CMP15-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

nt/Analyst: /		RL	Result
CAS Number	Analyte	0.010	< 0.010 U
56-55-3 218-01-9 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Benzo(a) anthracene Chrysene Benzo(b) fluoranthene Benzo(k) fluoranthene Benzo(a) pyrene Indeno(1,2,3-cd) pyrene Dibenz(a,h) anthracene	0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 87.3%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: NU25G LIMS ID: 08-27640

Matrix: Water

Data Release Authorized:

Reported: 10/27/08

Date Extracted: 10/17/08 Date Analyzed: 00000 Instrument/Analyst: /

Sample ID: MW36-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

nt/Analyst: /	•	RL	Result
CAS Number	Analyte	0.010	< 0.010 U
56-55-3 218-01-9 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Benzo(a) anthracene Chrysene Benzo(b) fluoranthene Benzo(k) fluoranthene Benzo(a) pyrene Indeno(1,2,3-cd) pyrene Dibenz(a,h) anthracene	0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U
- -		1- \	

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 97.0%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-101708

LAB CONTROL SAMPLE

Lab Sample ID: LCS-101708

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized: Reported: 10/27/08

Date Extracted LCS/LCSD: 10/17/08

Date Analyzed LCS: 10/24/08 16:29

LCSD: 10/24/08 16:51

Instrument/Analyst LCS: NT1/YZ

LCSD: NT1/YZ

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a)anthracene	0.310	0.300	103%	0.271	0.300	90.3%	13.4%
Chrysene	0.313	0.300	104%	0.279	0.300	93.0%	11.5%
Benzo(b) fluoranthene	0.307	0.300	102%	0.282	0.300	94.0%	8.5%
Benzo(k)fluoranthene	0.290	0.300	96.7%	0.257	0.300	85.7%	12.1%
Benzo(a) pyrene	0.249	0.300	83.0%	0.150	0.300	50.0%	49.6%
Indeno(1,2,3-cd)pyrene	0.250	0.300	83.3%	0.233	0.300	77.7%	7.0%
Dibenz(a,h)anthracene	0.254	0.300	84.7%	0.236	0.300	78.7%	7.3%

Reported in μ g/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

LCS LCSD d14-Dibenzo(a,h)anthracene 103% 91.7%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Lab Sample ID: MB-101508

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

Date Extracted: 10/15/08

Date Analyzed: 10/25/08 20:20 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MB-101508 METHOD BLANK

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No

Acid Cleanup: Yes

Result	RL		Teanup: 105
		Analyte	CAS Number
< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U	0.010 0.010 0.010 0.010 0.010 0.010	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5
			TTT4T-10 0

Reported in $\mu g/L$ (ppb)

Decachlorobiphenyl	65.0%
Tetrachlorometaxylene	62.0%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 1 of 1

Page

Lab Sample ID: NU25A LIMS ID: 08-27634

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 00:55 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: CMP3-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00 Silica Gel: No

Acid Cleanup: Yes

leanup: 165		RL	Result
CAS Number	Analyte		
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.20 0.010 0.15 0.015 0.010	< 0.010 U < 0.20 Y < 0.010 U < 0.15 Y < 0.015 Y < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

= -:	
Decachlorobiphenyl	56.2%
Tetrachlorometaxylene	68.2%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Lab Sample ID: NU25B LIMS ID: 08-27635

Matrix: Water

Data Release Authorized: // Reported: 10/31/08

Date Extracted: 10/15/08 Date Analyzed: 10/26/08 01:12 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: CMP4-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00 Silica Gel: No

Acid Cleanup: Yes

Teanup: 162		RL	Result
CAS Number	Analyte	0.010	< 0.010 U
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010	0.013 < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in μ g/L (ppb)

hinhenyl	64.0%
Decachlorobiphenyl	61.8%
Tetrachlorometaxylene	



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Lab Sample ID: NU25C

LIMS ID: 08-27636

Matrix: Water

Data Release Authorized: Reported: 10/31/08

Date Extracted: 10/15/08 Date Analyzed: 10/26/08 01:29 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW26R-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

leanup: Yes		RL	Result
CAS Number	Analyte	0.010	< 0.010 U
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

Decachlorobiphenyl	59.8%
Tetrachlorometaxylene	51.8%
Tetrachioromecan	



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 1 of 1 Page

Lab Sample ID: NU25D LIMS ID: 08-27637

Matrix: Water

Data Release Authorized: Reported: 10/31/08

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 01:46 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW26R-081014D SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00 Silica Gel: No

Acid Cleanup: Yes

Teanup: 165		RL	Result
CAS Number	Analyte		< 0.010 U
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in $\mu g/L$ (ppb)

Decachlorobiphenyl	55.0%
Tetrachlorometaxylene	55.8%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082
Page 1 of 1

Lab Sample ID: NU25E LIMS ID: 08-27638

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

Date Extracted: 10/15/08 Date Analyzed: 10/26/08 02:04 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

Sample ID: MW44-081014

SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No

Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.010 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U < 0.010 U

Reported in μ g/L (ppb)

Decachlorobiphenyl	58.8%
Decaciiioroprinii/ -	C2 28
Tetrachlorometaxylene	63.2%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP15-081014 SAMPLE

Lab Sample ID: NU25F LIMS ID: 08-27639

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

Matrix: Water

080064

Data Release Authorized:

Date Sampled: 10/14/08

Reported: 10/31/08

Date Received: 10/14/08

Date Extracted: 10/15/08 Date Analyzed: 10/26/08 02:21 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2 53469-21-9 12672-29-6 11097-69-1 11096-82-5 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1221 Aroclor 1232	0.010 0.010 0.010 0.018 0.010 0.010	< 0.010 U < 0.010 U < 0.010 U < 0.018 Y < 0.010 U < 0.010 U < 0.010 U

Reported in μ g/L (ppb)

Decachlorobiphenyl	60.0%
Decacinoropibilein	00 50
Tetrachlorometaxylene	80.5%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: NU25G LIMS ID: 08-27640

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

Date Extracted: 10/15/08 Date Analyzed: 10/26/08 02:38 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW36-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL Result			
12674-11-2	Aroclor 1016	0.010	< 0.010 U		
53469-21-9	Aroclor 1242	0.010	< 0.010 U		
12672-29-6	Aroclor 1248	0.010	< 0.010 U		
11097-69-1	Aroclor 1254	0.010	< 0.010 U		
11096-82-5	Aroclor 1260	0.010	< 0.010 U		
11104-28-2	Aroclor 1221	0.010	< 0.010 U		
11141-16-5	Aroclor 1232	0.010	< 0.010 U		

Reported in μ g/L (ppb)

Decachlorobiphenyl	60.8%
Tetrachlorometaxylene	61.5%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Sample ID: LCS-101508

LCS/LCSD

Lab Sample ID: LCS-101508

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized:

Reported: 10/31/08

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Date Extracted LCS/LCSD: 10/15/08

Date Analyzed LCS: 10/25/08 20:37 LCSD: 10/25/08 20:54

Instrument/Analyst LCS: ECD5/JGR

LCSD: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Silica Gel: No Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016 Aroclor 1260	0.047	0.050 0.050	94.0% 76.0%	0.044	0.050 0.050	88.0% 82.0%	6.6% 7.6%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	58.2%	64.5%
Tetrachlorometaxylene	57.8%	57.2%

Results reported in $\mu q/L$ RPD calculated using sample concentrations per SW846.



QC Report No: NU25-Aspect Consulting LLC

080064

Project: SW HARBOR PROJECT-PHASE 2

ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1 Matrix: Water

Data Release Authorized: WW

Reported: 10/29/08

Reported:	10/29/08						
-		Extraction Date	Analysis Date	EFV DL	Range	RL	Result
ARI ID	Sample ID			1.00	Diesel	0.25	< 0.25 U
MB-101608 08-27634	Method Blank HC ID:	10/16/08	10/28/08 FID3A	1.00	Motor Oil o-Terphenyl	0.50	< 0.50 U 74.7%
NU25A 08-27634	CMP3-081014 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 77.6%
NU25B 08-27635	CMP4-081014 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 74.7%
NU25C 08-27636	MW26R-081014 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 79.3%
NU25D 08-27637	MW26R-081014D HC ID:	10/16/08	10/28/08 FID3A	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 74.7%
NU25E 08-27638	MW44-081014 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 82.7%
NU25F 08-27639	CMP15-081014 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 79.6%
NU25G 08-27640	MW36-081014 HC ID:	10/16/08	10/28/08 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 73.1%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.



ORGANICS ANALYSIS DATA SHEET NWTPHD by GC/FID-Silica and Acid Cleaned 1 of 1 Page

Sample ID: LCS-101608 LCS/LCSD

Lab Sample ID: LCS-101608

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

LIMS ID: 08-27634

080064

Matrix: Water Data Release Authorized: Reported: 10/29/08

Date Sampled: 10/14/08 Date Received: 10/14/08

Sample Amount LCS: 500 mL LCSD: 500 mL

Date Extracted LCS/LCSD: 10/16/08

Final Extract Volume LCS: 1.0 mL

Date Analyzed LCS: 10/28/08 06:24 LCSD: 10/28/08 06:39 LCSD: 1.0 mL

Instrument/Analyst LCS: FID/PKC

Dilution Factor LCS: 1.00

LCSD: FID/PKC

LCSD: 1.00

PC2D:	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Range Diesel		3.00			3.00	60.7%	6.8%

TPHD Surrogate Recovery

o-Terphenyl

LCSD LCS 68.4% 79.8%

Results reported in mg/L RPD calculated using sample concentrations per SW846.

PC 10halu8

10

Analytical Resources Inc. TPH Quantitation Report

Data file: /chem3/fid3a.i/20081027b.b/1027a082.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms Report Date: 10/29/2008 Macro: FID:3A102708 ARI ID: NU12LCSW1 Client ID: NU12LCSW1

Injection: 28-OCT-2008 06:24

Dilution Factor: 1

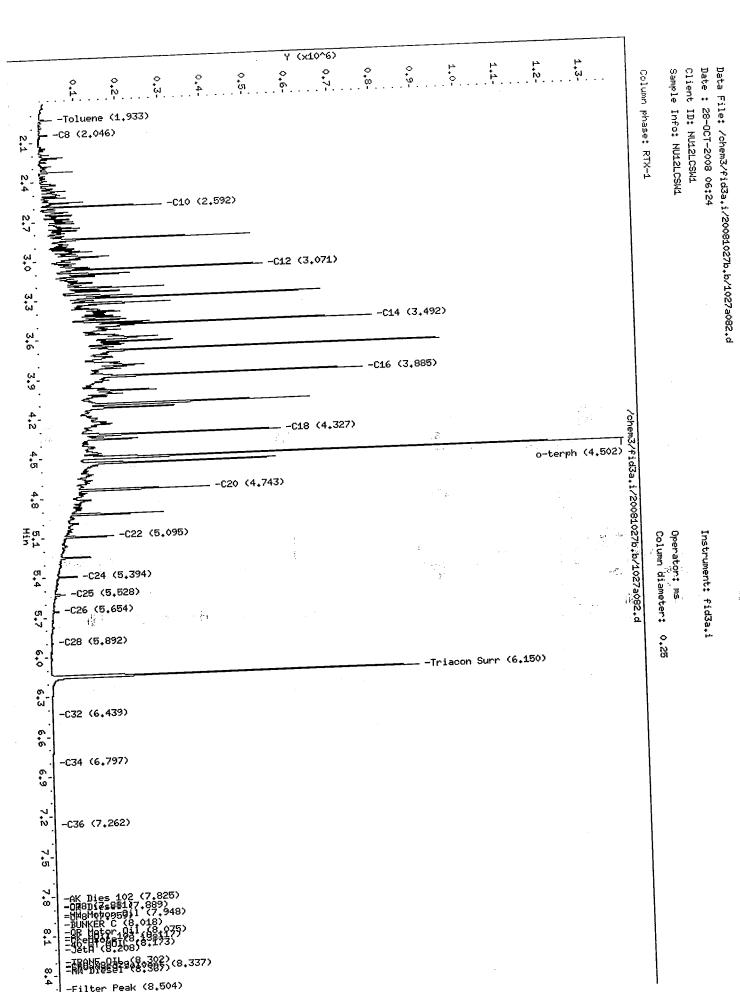
FID:3A RESULTS

Compound	RT	Shift	Height	Area	Ra	ange	Total Area	Conc
Toluene	1.933	-0.003	42343	26831	GAS	(Tol-C12)	3166664	124
C8	2.046	-0.002	31207	24727	DIESEL	(C12-C24)	16680363	851
C10	2.592	-0.001	298165	118957	M.OIL	(C24-C38)	674329	50
C12	3.071	0.001	532550	223017	AK-102	(C10-C25)	19141280	789
C14	3.492	0.001	785848	362984	AK-103	(C25-C36)	552048	78
C16	3.885	0.003	761681	511456	OR.DIES	(C10-C28)	19473601	1228
C18	4.327	0.002	564450	397888	OR.MOIL	(C28-C40)	350961	37
C20	4.743	0.000	390262	304159	JET-A	(C10-C18)	14078932	948
C22	5.095	0.000	159706	119620	MIN.OIL	(C24-C38)	674329	53
C24	5.394	0.000	70439	55565	MSPIRIT	(Tol-C12)	3166664	200
C25	5.528	-0.001	40616	42532	1			
C26	5.654	0.000	24752	34422				
C28	5.892	0.000	8768	15327				
C32	6.439	0.000	5167	8767	Ì			
C34	6.797	-0.003	3067	1826	•			
Filter Peak	8.504	0.001	2058	817	JP-4	(Tol-C14)	6853565	603
C36	7.262	-0.003	2660	1473	CREOSOT	(C8-C22)	19125593	3068
C38	7.881	0.000	2319	1201				
C40	8.329	0.000	2115	1135	BUNKERC	(C10-C38)	19771850	2212
AZDIESEL (C1	.0-C22)	1818	30381 113	:======= 12	=======		=======================================	=====
• •	2-C32)		32276 16					

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931)
AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

		1	
Surrogate	Area	Amount	%Rec
o-Terphenyl	655242	30.8	68.5
Triacontane	600210	36.6	81.2

Analyte	RF	Curve Date
o-Terph Surr	21272.0	25-OCT-2008
Triacon Surr	16418.1	25-OCT-2008
Gas	25535.6	27-OCT-2008
Diesel	19596.8	25-OCT-2008
Motor Oil	13427.8	25-OCT-2008
AK102	24271.2	25-OCT-2008
AK103	7036.1	26-JULY-2008
JP4	11362.0	05-FEB-2007
JetA	14845.5	11-JUL-2008
Min Oil	12823.0	27-JUN-2008
Min Spirit	15825.3	15-APR-2005
OR Diesel	15856.1	
OR M.Oil	9368.4	
Bunker C	8936.8	22-SEP-2008
Creosote	6234.4	08-AUG-2008



Data file: /chem3/fid3a.i/20081027b.b/1027a083.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU12LCSDW1 Client ID: NU12LCSDW1

Injection: 28-OCT-2008 06:39

Dilution Factor: 1

Macio: 11210	-						
				D:3A RESULT Area	'S Range	Total Area	Conc
Compound	RT	Shift	Height	Area		=======================================	106
=======================================	1.934	-====== -0.002	41245	28970	GAS (Tol-C12)	3216772 17842920	126 911
Toluene C8	2.048	-0.001	29167	23378	DIESEL (C12-C24) M.OIL (C24-C38)	658707	49
C10	2.593	-0.001	286922	112836	M.OIL (C24-C38) AK-102 (C10-C25)	20381985	840
C12	3.071	0.001	551232	227720 365497	AK-102 (C10 C25)	544896	77
C14	3.493	0.002	794869 768088	548517	OR.DIES (C10-C28)	20692893	1305
C16	3.884	0.002 0.003	544703	407786	OR.MOIL (C28-C40)	355521	38 1020
C18	4.328 4.744	0.003	404271	312610	JET-A (C10-C18)	15135915 658707	51
C20	5.095	0.000	162091	127473	MIN.OIL (C24-C38) MSPIRIT (TO1-C12)	3216772	203
C22 C24	5.395	0.002	70961	49288	MSPIRIT (Tol-C12)	322077	
C25	5.530	0.001	41404	39935 35768	1		
C26	5.657	0.003	24500 8411	11830			
C28	5.898	0.006 0.007	4871	6114		24 ·	
C32	6.445 6.798	-0.007	2766	880		7208136	634
C34 Filter Peak	8.504	0.001	1921	1371	JP-4 (Tol-C14) CREOSOT (C8-C22)	20338391	3262 -
C36	7.260	-0.005	2418	1302	CREOSOT (C8-C22)	2033032	34
C38	7.884	0.003	2073	824 1138	BUNKERC (C10-C38)	21000767	2350
C40	8.327	-0.002	1967	T130	DOMABLE	****	=====
**************************************	======= 10 C22)	======= 194	27790 1	.210		,**A.	

19427790 AZDIESEL (C10-C22) AZMOIL (C22-C32) 1085663 169

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931)

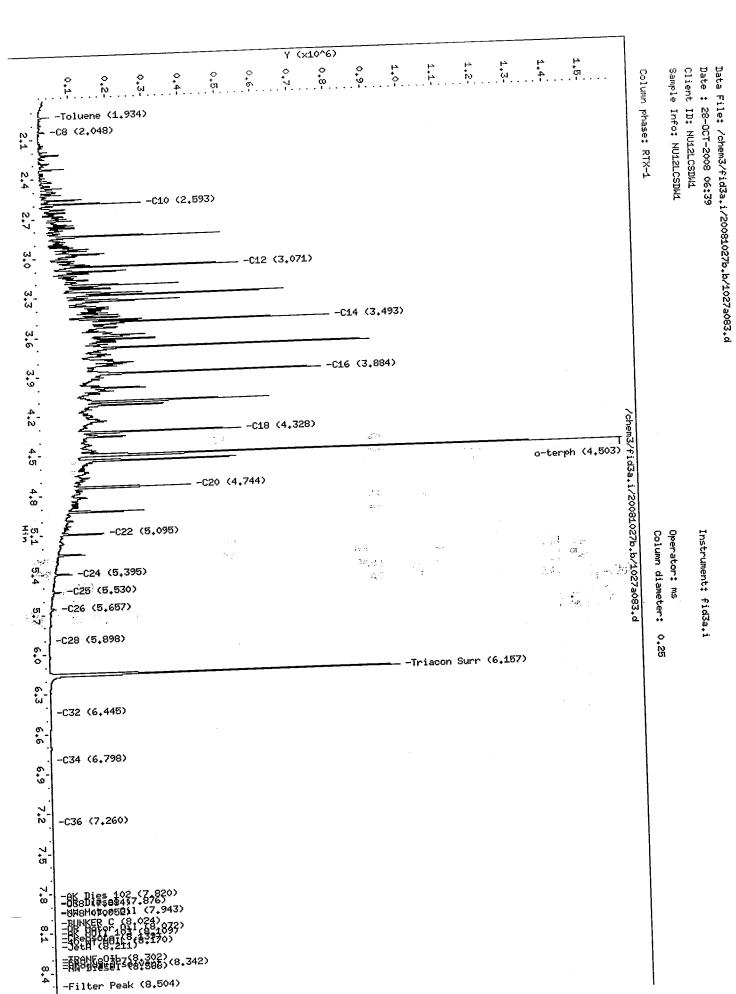
AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

84. F

Surrogate	Area	Amount	%Rec
o-Terphenyl Triacontane	763242 672853	35.9 41.0	79.7 91.1
Analyte	RF	Curve	Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C Creosote	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.9 12823.0 15825.1 15856.9 9368.8 8936.6	25-OCT 27-OCT 25-OCT 25-OCT 25-OCT 26-JUL 05-FEE 11-JUL 027-JUN 15-APF 14	-2008 -2008 -2008 -2008 -2008 -2007 -2008 -2008 -2005 -2008

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 $A_{N^*(\overline{Q})}$ X



Data file: /chem3/fid3a.i/20081027b.b/1027a084.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU12MBW1 Client ID: NU12MBW1

Injection: 28-OCT-2008 06:55

Dilution Factor: 1

Macro: Fib:3	M102700				me		
				D:3A RESUI Area	Range	Total Area	Conc
Compound	RT	Shift	Height		:======================================	:======== r12065	20
Toluene C8 C10 C12 C14 C16 C18 C20 C22 C24 C25 C26	1.934 2.045 2.589 3.070 3.492 3.881 4.322 4.739 5.110 5.410 5.536 5.675	-0.002 -0.003 -0.004 0.000 0.000 -0.001 -0.003 -0.005 0.015 0.016 0.007	16149 10082 12980 5208 4728 4276 3585 3083 2279 2259 2305 2217 2400	18958 5717 11281 6507 3422 4995 4946 4421 635 1649 914 970		513265 364230 305553 539884 237680 605986 278468 396702 305553 513265	19 23 22 34 38 30 27 24 32
C28 C32 C34 Filter Peak C36 C38 C40	5.916 6.453 6.831 8.498 7.306 7.931 8.317	0.023 0.014 0.031 -0.005 0.041 0.050 -0.012	3587 2331 1800 2116 1842 1793	6831 1434 1221 502 844 353	JP-4 (Tol-C14) CREOSOT (C8-C22)	600441 758178 841572	53 122 94
AZMOIL (C	====== 10-C22) 22-C32)	1	58265 80136	29 28 	======================================	======================================	===== 7 931)

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	æ Area	Amount	%Rec
o-Terphenyl	713941	33.6	74.6
Triacontane	613863	37.4	83.1

Analyte	RF	Curve Date
Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C	272.0 418.1 535.6 596.8 427.8 271.2 036.1 .362.0 .845.5 .823.0 5825.3 5856.1 9368.4 3936.8 6234.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005 22-SEP-2008 08-AUG-2008

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2,1	-Toluene -C8 (2.04	(1,934) 5)													Column phase: RTX-1	Sample Info: NU12MBW1	ht ID: NU12MBW1
2,4 2,7	-C10 (2.5	589)													RTX-1	л 2мвы1	MBM1
3,0	-C12 (3.0	70)															
3,3 3,6	-C14 (3.4	192)															
ع 9	-C16 (3.8	381)															
4. 22. 4.5	-C18 (4.	322)		1.				. 1		<i>A</i> .	*:	o-ter		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
ັຫຸ. - 4 - 0	-C20 (4.	739)								·		o-cer ₁	PII VT	1499) 499) 499)	i - -		
프 프 프	-C22 (5 ₊ :	110>											* ! *		8	- -	Ins
(I) 4	-C24 (5.	536)											()_j		Column diameter:	Operator: ms_	Instrument: fid3a.i
5-7 6-0	-C26 (5.	· i			Kg T								્ય	: C	ter: 0.25		fid3a.i
,0 6,3									Tr	^iacon 9	Surr (6.	150)			្រី		
ω. 6.6	_C32 (6.	,453>											-				
φ •	-074 (6	,831>															
7.2	-C36 (7.	.306)															
55 7																	
7.8		561027 ⁵⁸	9871) 7.940)														
α <u>+</u>		C (8.02 PG10a116 BOLL158. Q1126802 Se1 (8.3		25)													
Ω 4 4		sel (8.3 Peak (8		-											ļ		

Data File: /chem3/fid3a.i/20081027b.b/1027a084.d Date : 28-DCT-2008 06:55

Instrument: fid3a.i

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Data file: /chem3/fid3a.i/20081027b.b/1027a100.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU25A

Client ID: CMP3-081014

Injection: 28-OCT-2008 10:56

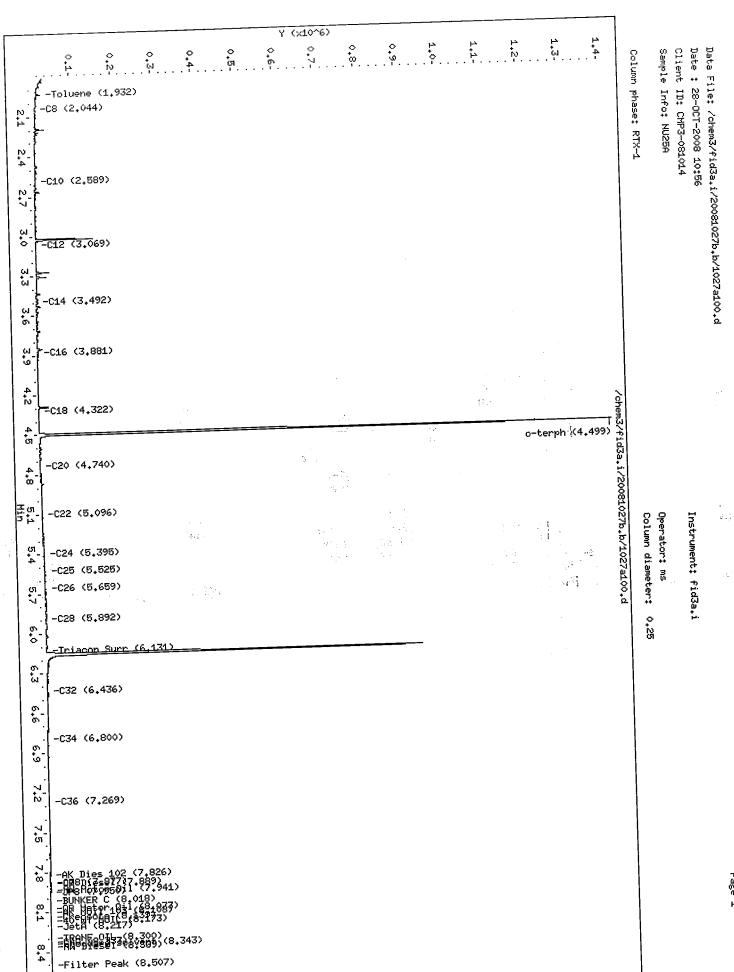
Dilution Factor: 1

Macro: FID:3F	1102700						
		al ! En	FII Height	3A RESULT Area	rS Range	Total Area	Conc
Compound	RT ======	Shift ======	nergne	========	GAS (Tol-	C12) 639480	
Toluene C8 C10 C12 C14 C16 C18 C20 C22 C24 C25 C26 C28	1.932 2.044 2.589 3.069 3.492 3.881 4.322 4.740 5.096 5.395 5.525 5.659 5.892	-0.004 -0.005 -0.004 -0.001 0.001 -0.001 -0.003 -0.004 0.001 0.002 -0.003 0.004	23364 10743 7651 5221 4458 3989 3377 3617 5059 7476 8477 9067 8241 8220	22418 6250 7949 2810 1628 3892 5262 5541 2718 4632 5672 7766 1630 2728	DIESEL (C12- M.OIL (C24- AK-102 (C10- AK-103 (C25- OR.DIES (C10- OR.MOIL (C28- JET-A (C10- MIN.OIL (C24-	C24) 589663 C38) 954392 C25) 863497 C36) 789853 C28) 1091370 C40) 795104 C18) 570453	71 36 312 0 69 4 85 3 38 2 74
C32 C34 Filter Peak C36 C38 C40	6.436 6.800 8.507 7.269 7.877 8.333	-0.003 0.000 0.004 0.004 -0.003 0.004	8220 5874 2864 4945 3761 3073	1856 2710 4518		-C14) 77539 -C22) 103239 -C38) 180054	7 166
AZDIESEL (C	======= 10-C22) 22-C32)		590508 535383 =======	43 99 =======	======================================	 NW M.Oil(5.444	====== - 7.931)

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375) y4 4 & 41

Surrogate	Area	Amount	%Rec
o-Terphenyl Triacontane	742937 602504	34.9 36.7	77.6 81.6
Analyte	RF	Curve	Date

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C Creosote	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8 6234.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005 22-SEP-2008 08-AUG-2008



Data file: /chem3/fid3a.i/20081027b.b/1027a101.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU25B

Client ID: CMP4-081014

Injection: 28-OCT-2008 11:11

841697

94

1 7 5. 30

Dilution Factor: 1

1100-			FTD:	3A RESULI	'S	m +-1 7x02	Conc
_	RT	Shift	Height	Area	Range	Total Area	:=====
Compound ====================================	1.933 2.046 2.591 3.070 3.493 3.882 4.326 4.742 5.094 5.396 5.539 5.654 5.899 6.432	-0.003 -0.003 -0.003 -0.003 0.000 0.001 0.000 -0.002 -0.001 0.002 0.010 -0.001 0.006 -0.007	17382 10571 7179 4733 3755 3043 2509 2336 2276 2280 2410 2491 3206 3392	20143 6384 11021 6915 2668 4399 3798 2789 2128 1805 622 1561 4708 1080 1898	GAS (Tol-C12) DIESEL (C12-C24) M.OIL (C24-C38) AK-102 (C10-C25) AK-103 (C25-C36) OR.DIES (C10-C28) OR.MOIL (C28-C40) JET-A (C10-C18) MIN.OIL (C24-C38) MSPIRIT (Tol-C12)	531627 328343 339439 508864 264201 578777 309842 379420 339439 531627	21 17 25 21 38 37 33 26 26 34
C34 Filter Peak C36	6.800 8.506 7.264	-0.001 0.003 -0.001	2180	662	JP-4 (Tol-C14) CREOSOT (C8-C22)	616061 740452	54 119
			1001	70/	1	0.44.007	u /i

AZDIESEL (C10-C22) 429107 27

1991

987

1011 | BUNKERC (C10-C38)

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

点 Surrogate	Area	Amount	%Rec
o-Terphenyl	715215	33.6	74.7
Triacontane	620412	37.8	84.0

7.880 -0.001

O-Terph Surr 21272.0 25-OCT-2008 Triacon Surr 16418.1 25-OCT-2008 Gas 25535.6 27-OCT-2008	Analyte	RF	Curve Date
Diesel 13427.8 25-OCT-2008 Motor Oil 24271.2 25-OCT-2008	Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C	16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8	25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005

					y (x10^6	·)								
	٠,٠	, , , , , , , , , , , , , , , , , , ,	\$ \$ 4	္ 	0.6	, , , , , , , , , , , , , , , , , , ,		1.0	4 N 	P € 61 		Pollump.	유	Data Fi Date :
22 + 1	۔ ا	Toluene (1.933) C8 (2.046)										Column whase: RTX-1	ID: CMP4-081014 Info: NU25B	File: /chem3/fid3a+ ; 28-0CT-2008 11:11
2,4 2,7		C10 (2.591)										<u> </u>	-081014 25B	/chem3/fid3a.i/20081027b.b/1027a101.d JCT-2008 11:11
3.0		C12 (3.070)												027b.b/1
0+0	-	C14 (3.493)	·											,027a101.d
	ы <u>.</u> - С	-C16 (3,882)												
	1	-C18 (4,326)		Tig.		4 3.		· ·	o-t	erph (4.	/chem3/f 500)			
ţ	4.8	-020 (4.742)		en en en en en en en en en en en en en e				뿧			/chem3/fid3a.i/20081027b.b/1027a101			- - -
Min	ا د	-C22 (5.094)	a.	.40			≔ ¥	: - :			810276.4	Colu	Opera	Instr
	4	-C24 (5,396) -C25 (5,539)	100 100	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	188 m. 188 m. 188 m. – 188		₽.			:	71027a1	Column diamete	Operator: ms	Instrument: fid3a.i
2		-C28 (5,654)									01. 01.	1		fid3a.i
ļ	6							-Triacon Su	rr (6.157)			25		
	δ, .	-032 (6,432)												
	6 6 6	-C34 (6,800)												
	6,9 7.													
	7.5	-036 (7,264)												
	5 7.8]	(7,822) (884)											
-	8,1	=HH8Metop58)1	(7,946))21) (81974) 111 0)											
	8.4	. ≡ <u>eropiaskata</u> si	(8,340)											
	_	177001 1000	-											

Page 1

generally Tally and the

Data file: /chem3/fid3a.i/20081027b.b/1027a102.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU25C

Client ID: MW26R-081014

Injection: 28-OCT-2008 11:26

Dilution Factor: 1

Macro: Fib:3	AIUZio			_				
				D:3A RESUL	rs Ra	nge	Total Area	Conc
Compound	RT	Shift	Height	Area ======	=======	=========	=======================================	21
Toluene C8 C10 C12 C14 C16 C18 C20 C22 C24 C25	1.933 2.045 2.591 3.070 3.492 3.881 4.323 4.738 5.091 5.391 5.525	-0.003 -0.003 -0.002 0.000 0.000 -0.002 -0.002 -0.006 -0.004 -0.003 -0.004 -0.002	19095 10701 7807 5017 4017 3329 2921 2722 2693 2751 2644 2587	15790 6258 7674 6581 3077 3317 3341 2320 2533 2248 2762 3849	GAS DIESEL M.OIL AK-102 AK-103 OR.DIES OR.MOIL JET-A MIN.OIL MSPIRIT	(To1-C12) (C12-C24) (C24-C38) (C10-C25) (C25-C36) (C10-C28) (C28-C40) (C10-C18) (C24-C38) (To1-C12)	548018 379998 320136 574165 249113 646146 284724 417246 320136 548018	19 24 24 35 41 30 28 25 35
C26 C28	5.653 5.893	0.000	2996	3613 5206	· (1)			34 3
C32 C34 Filter Peak	ु6.442 6.796 8.499 7.264	0.003 -0.004 -0.004 -0.001	4082 2331 1679 2032 1788	1477 499 686 919	JP-4 CREOSOT	(C8-C22)	641047 807127	56 129
C38	7.884	0.003 -0.006	1711	1188		(C10-C38)	887840	=====
C40	8.323	=======	=======	=======	=======	==========	=======	
	====== C10-C22) C22+C32)	-	186095 197515	30 31		:=======	=======================================	=======
=======================================	====== • NW Di	======== esel(3.1	======= 20 - 5.444) NW Gas	1.886 - 3	3.120) NW M	.Oil(5.444 - 5	7.931)

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	759397	35.7	79.3
Triacontane	639551	39.0	86.6

Analyte RF	Curve Date
O-Terph Surr 16418.1 2 Triacon Surr 16418.1 2 Gas 25535.6 2 Diesel 19596.8 2 Motor Oil 13427.8 2 AK102 7036.1 2 AK103 7036.1 2 JP4 11362.0 3 JP4 14845.5 3 Min Oil 12823.0 3 Min Spirit 15825.3 3 OR Diesel 9368.4 8936.8	5-OCT-2008 5-OCT-2008 7-OCT-2008 5-OCT-2008 5-OCT-2008 25-OCT-2008 26-JULY-2008 25-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005 22-SEP-2008 08-AUG-2008

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-T	oluene 3 (2.04	(1,933) 5)																Column phase: RTX-1	e Info: NU25C	: 28-0CT-2008 11:26
-C1	10 (2.5	591)																<u>7</u> ×.	SC .	* 28-0CT-2008 11:26
	12 (3.0)70)																		
3C:	14 (3.4	492)																		
3-1-C 9-1	:16 (3,	881>																		
\	C18 (4.	.323)			<u> </u>					14.							/chem3/			
4.8	020 (4.	,738)		÷	.94) .24)		-	20					w.	0	-terpr	n (4.49	/chem3/fid3a.i/20081027b.b/1027a102.c 	į		
		15 m² 4			-63		7 - 7 1 1 - 1 13 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	•		<u>م</u>		₹. 8/3					81027b.b/:	Column	Operator: ms	Instrument: f
- + + - -	C24 (5 C25 (5 C26 (5	. 525>			<u>, </u>					ý					į	1 (1027a102.	Column diameter:	or+ ms	ment: fid
7 6.0	-C28 (5	5 . 893)									-Tri:	acon	Surr '	(6.152	2)		Ω	0,25		id3a.i
6+3		 6.442)																		
6.	-034 (
9.	· ·																			
7,2 7,5	-C36 (7,264)																		
7.5	-85 8Bi	027 0508457	(Z ₇ 82 ⁹⁾																	
80 -	BUNKE BUNKE BUNKE BUNKE - Teta	okoeseji ER C (8.4 ater₁0±1 todeik8;i (8.207)	012) (684838) 64987)																	
8 - 4	三朝创	NgOābaka Neselaka er Peak	*39 <u>7</u> }(8.	.342)																

Page 1

No. 194

ranana Ngjara Mgara

Data file: /chem3/fid3a.i/20081027b.b/1027a103.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU25D

Client ID: MW26R-081014D Injection: 28-OCT-2008 11:42

Dilution Factor: 1

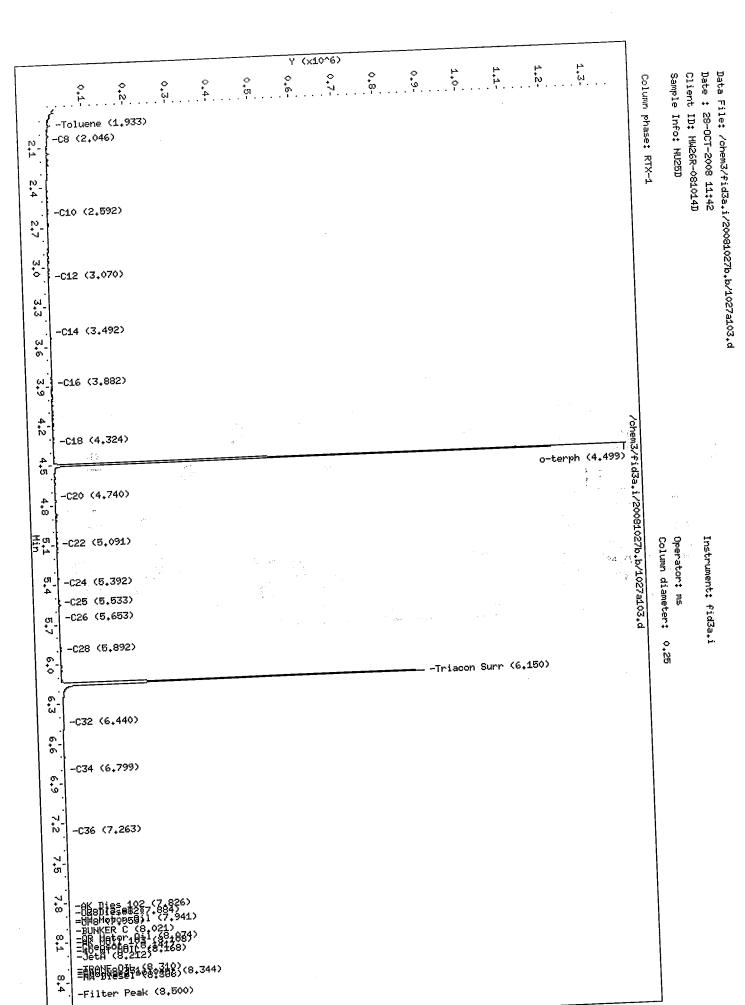
SULTS

			FI	D:3A	RESULT	'S		Total Area	Conc
	RT	Shift	Height	Ar	ea	Rar	nge	10001 11200	======
Compound	======	======	=======	====	======	:=======	======================================	553054	22
Toluene 1	.933	-0.002	19166	2	1996	GAS DIESEL	(C12-C24)	361835	18
10140110	.046	-0.003	10562		6369		(C24-C38)	301295	22
C10 2	.592	-0.002	8500		7526	AK-102	(C10-C25)	559846	23
C12 3	.070	0.000	5106		4682 3847		(C25-C36)	236251	34
C14 3	.492	0.001	3764		3216	OR DIES	(C10-C28)	627018	40
C16 3	.882	0.000	3138 2811		4231	OR.MOIL	(C28-C40)	265904	28 28
C18 4	.324	-0.001	2632		2491	JET-A	(C10-C18)	411538	23
LZU -	1.740	-0.004	2602		2391	MIN.OIL	(C24-C38)	301295 553054	35
	5.091	-0.004 -0.002	2645		2198	MSPIRIT	(Tol-C12)	223034	33
C2 -	5.392	0.002	2458		1311	ĺ			
C23	5.533	-0.001	2520		3648	1			
C20	5.892	0.000	2904		4733	Ţ			
C20	6.440	0.002	3876		5181			ran Paga	
C34	6.799	-0.001	2207		1528) JP-4	(Tol-C14)	639758	56
C34	8.500	-0.003	1603	2.	477 1542	CREOSOT	(C8-C22)	791272	127
	7.263	-0.002	1953		608	CKBOBOI	,		~~
C38	7.882	0.001	1698		922	BUNKERC	(C10-C38)	854858	96
	8.331	0.003	1604		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	========	========	==========	=====
===========	=====	======= /\	:======= :72590	29					1. 3
	-C22)		.92023	30					======

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	714377	33.6	74.6
Triacontane	606237	36.9	82.1

O-Terph Sull 25-OCT-2008 Triacon Surr 16418.1 25-OCT-2008 Gas 25535.6 27-OCT-2008 Diesel 19596.8 25-OCT-2008	Analyte	RF	Curve Date
Motor Oll 24271.2 25-OCT-2008 AK102 7036.1 26-JULY-2008 11362.0 05-FEB-2007 JetA 14845.5 11-JUL-2008 Min Oil 12823.0 27-JUN-2008 Min Spirit 15825.3 15-APR-2005 OR Diesel 9368.4 Purker C 8936.8 22-SEP-2008	Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C	16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8	27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008



Data file: /chem3/fid3a.i/20081027b.b/1027a104.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU25E

Client ID: MW44-081014

Injection: 28-OCT-2008 11:57

Dilution Factor: 1

Macro: F1D:3	A102/00						
,	RT	Shift	FII Height	D:3A RESULT Area	range	Total Area	Conc =====
Compound ====================================	1.934 2.046 2.590 3.070 3.492 3.880 4.324 4.739 5.092 5.390 5.524 5.651	-0.002 -0.003 -0.003 0.000 0.001 -0.002 -0.001 -0.004 -0.003 -0.004 -0.004	17705 10581 7287 4763 3732 3142 2871 2916 3783 4591 5326 5291	20020 5978 7721 5202 4563 4105 4090 2394 4262 4197 4981 4852 10013	GAS (Tol-C1 DIESEL (C12-C2 M.OIL (C24-C3 AK-102 (C10-C2 AK-103 (C25-C3 OR.DIES (C10-C2 OR.MOIL (C28-C4 JET-A (C10-C1 MIN.OIL (C24-C3 MSPIRIT (Tol-C1	369079 48) 480125 35) 556299 36) 397079 28) 690722 40) 388068 18) 380928 38) 480125	21 19 36 23 56 44 41 26 37 34
C28 C32 C34 Filter Peak C36 C38	5.889 6.435 6.794 8.507 7.274 7.880 8.329	0.009	6541 5808 3380 1840 2555 2159 1894	10013 8362 3554 879 1521 684 602	JP-4 (Tol-C CREOSOT (C8-C BUNKERC (C10-C	(22) 758025	======
	====== C10-C22) C22-C32)		141997 336935	28 52	=======================================	======================================	় : ======= ত : ` ৭২ী\)

Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931)

AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	792205	37.2	82.8
Triacontane	697235	42.5	94.4

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C Creosote	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8 6234.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005

	Y (x10^6) Y (x10^6) 1	Column	Date : Client Sample
-To	oluene (1,934) (2,046)	Column phase: RTX-1	28-OCT-2008 11:57 ID: MW44-081014 Info: NU25E
-C1	¢ (2.590)	7.	: 28-0CT-2008 11:57 nt ID: MW44-081014 le Info: NU25E
	(3,070)		
a. −c.	14 (3,492)		
o- ل ب ف	16 (3,880)		
4.2	18 (4.324) Till (4.499) file (i ja	
1	교 (4,739) (20 (4,739)		
1	18 (4,324) o-terph (4,499) i20 (4,739) C22 (5,092) C24 (5,390) C25 (5,524) C26 (5,651)	COTO	Instrument: fid3 Operator: ms Column diameter:
·}-	C25 (5.524) C26 (5.651)		t: fid3a.i ms
6.	-C28 (5.889) -C28 (5.889)	}	Ç 1. 28
6.3	-C32 (6,435)		
6	-c34 (6.794)		
<u>-</u> -[-C36 (7.274)		
7. 55			
7,8 8,	-0K Dies 102 (7,823) -088013598077.8705 -088014598077.8705 -084040905031 (7,939) -8UNKER C (8,018) -8UNKER C (8,018) -9UNKER C (8,018)		
1 8 4	트딩[6] 다 1 [1] [1] [1] [1] [1] [1] [1] [1] [1] [

Data file: /chem3/fid3a.i/20081027b.b/1027a105.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU25F

Client ID: CMP15-081014

Injection: 28-OCT-2008 12:12

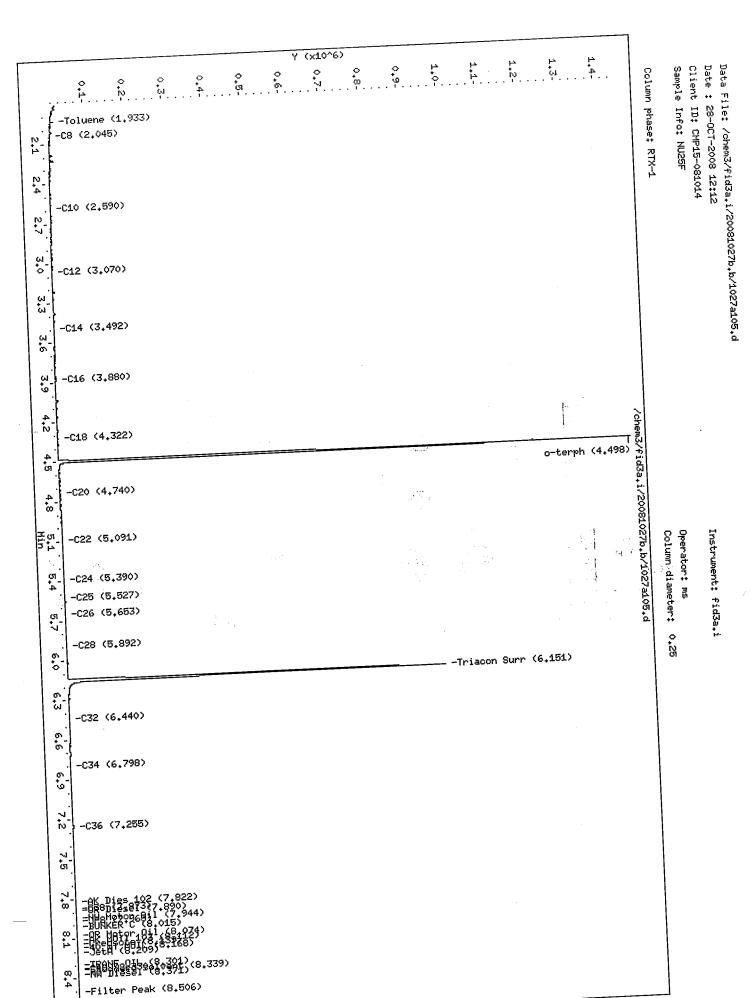
Dilution Factor: 1

Macro: FID:3	A102708							
		-1.150		3A RESULT Area	.'S Ra:	nge	Total Area	Conc
Compound ====================================	RT 1.933 2.045 2.590 3.070 3.492 3.880 4.322 4.740 5.091 5.390	shift0.003 -0.004 -0.003 0.000 0.000 -0.002 -0.003 -0.004 -0.004	Height ====================================	20313 5960 5186 2420 4825 3027 3580 3279 4760 4030 3293	=======	(Tol-C12) (C12-C24) (C24-C38) (C10-C25) (C25-C36) (C10-C28) (C28-C40) (C10-C18) (C24-C38) (Tol-C12)	567082 424456 398560 623509 319605 720753 341885 432442 398560 567082	22 22 30 26 45 45 36 29 31
C25 C26 C28 C32 C34 Filter Peak C36 C38	5.527 5.653 5.892 6.440 6.798 8.506 7.255 7.873 8.330	-0.002 -0.001 0.000 0.002 -0.002 0.003 -0.010 -0.008 0.001	3984 3952 4229 4738 2758 1821 3767 1999 1840	6468 6615 5206 2828 1581 10358	CREOSOT		667327 839389 1016559	59 135 114 ======
AZDIESEL ((====== C10-C22) C22-C32)		508107 268521 =======	32 42 ========	=======================================	======================================	======================================	====== 7.931)
=========		7/2 1	20 - 5 444) NW Gas (1.886 - 3	5.14U/ IM I	T42 4 375)	

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931) NW DIESEL (3.120 - 3.41) AK103 (5.479 - 7.315) Jet A(2.543 - 4.375) AK102 (2.543 - 5.479) AK103 (5.479 - 7.315) $A = \frac{1}{2} \left(\frac{1}{2} \left(\frac{1}{2} \right)^{2} \right)$

Surrogate		Amount	%Rec
o-Terphenyl	761999	35.8	79.6
Triacontane	658440	40.1	89.1

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C Creosote	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8 6234.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005 22-SEP-2008 08-AUG-2008
010010		



Data file: /chem3/fid3a.i/20081027b.b/1027a106.d

Method: /chem3/fid3a.i/20081027b.b/ftphfid3a.m

Instrument: fid3a.i

Operator: ms

Report Date: 10/29/2008 Macro: FID:3A102708

ARI ID: NU25G

Client ID: MW36-081014

Injection: 28-OCT-2008 12:27

Dilution Factor: 1

Macro: F1D:3A	7.M	Shift	FID Height	:3A RESULT Area	S Range		Total Area	Conc
Compound ====================================	RT 1.930 2.053 2.589 3.070 3.492 3.880 4.322 4.738 5.092 5.390 5.511	-0.005 0.005 -0.004 0.000 0.001 -0.002 -0.003 -0.005 -0.003 -0.003 -0.003	16243 10325 6832 4556 3556 3003 2485 2238 2106 1941 2521	18309 7457 5406 7784 5332 3292 3654 2724 2805 1988 5184	DIESEL (C12 M.OIL (C24 AK-102 (C10 AK-103 (C25 OR.DIES (C10 OR.MOIL (C28 JET-A (C10 MIN.OIL (C24	-C12) -C24) -C38) -C25) -C36) -C28) -C40) -C18) -C38)	504336 295647 285868 467182 223978 526173 261512 356309 285868 504336	20 15 21 19 32 33 28 24 22 32
C25 C26 C28 C32 C34 Filter Peak C36° C38 C40	5.651 5.888 6.433 6.800 8.500 7.267 7.877 8.326	-0.004 -0.005 -0.006 0.000 -0.003 0.002 -0.004 -0.003	2078 2595 3759 2200 1611 1964 1722 1628	3497 3823 6258 700 639 1436 1497 970		1-C14) 8-C22) 0-C38)	582245 689656 747730	51 111 84
AZDIESEL (C	10-C22) 22-C32)	1	L68738 ======== 20 - 5.444	26 =======	======================================	:=====)) NW M	. • • • • • • •	====== 7.931)

Range Times: NW Diesel (3.120 - 5.444) NW Gas (1.886 - 3.120) NW M.Oil (5.444 - 7.931) AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl Triacontane	699846 600625	32.9 36.6	73.1 81.3
Analyte	RF	Curve	Date

Analyte	RF	Curve Date
o-Terph Surr Triacon Surr Gas Diesel Motor Oil AK102 AK103 JP4 JetA Min Oil Min Spirit OR Diesel OR M.Oil Bunker C Creosote	21272.0 16418.1 25535.6 19596.8 13427.8 24271.2 7036.1 11362.0 14845.5 12823.0 15825.3 15856.1 9368.4 8936.8 6234.4	25-OCT-2008 25-OCT-2008 27-OCT-2008 25-OCT-2008 25-OCT-2008 25-OCT-2008 26-JULY-2008 05-FEB-2007 11-JUL-2008 27-JUN-2008 15-APR-2005 22-SEP-2008 08-AUG-2008

	-Toluene (1,930)	Y	(×10^6)		1. P. P. P. P. P. P. P. P. P. P. P. P. P.	4 # 4 %	F • •		Column phase: RTX-1		Data File: // Date : 28-OC Client ID: M
2,4 2,7	-C10 (2,589)								RTX-1	NU25G	Data File: /chem3/fid3a.i/20081027b.b/1027a106.d Date : 28-OCT-2008 12:27 Client ID: MW36-081014
3.0	-C12 (3.070)										20081027k
3,3 3,6	-C14 (3,492)										0.b/1027a106.
3,9	-C16 (3,880)										<u>σ</u>
4,2	-C18 (4,322)		:								
4,5 4,8	-C20 (4,738)		1.1 2.1		Line By Line Control	o-t	erph (/chem3/fid3a,i/20081027b,b/1027a106.d			
5,1 Min	-022 (5,092)	9 % 	ವಾದಿ. ಜಿ.ಆರ್	1.35		7 18 8 8 8	* pr/*	20081027	8 4	₹	\
5,4 5,	-C24 (5,390) -C25 (5,511) -C26 (5,651)	: - FT	5 . 3 . 3 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5 . 5	7		1.33 g 727 	2/20 	b.b/1027a10	Column diameter:		Instrument:
7 6,0	-C28 (5,888)			Tuis	0 //	4445	1	96.	ter: 0,25		fid3a₊i
6,3	-032 (6,433)			¡rlac	on Surr (6	,1447			ហ		
. 6,6	-C34 (6,800)										
6,9 7,2											
,2 7,5	-C36 (7,267)										
5 7,8	_8%_Dies_102_(7:825)										
8.1	-6K Dies 102 (7.825) =08901218727.825) -08864264811 (7.944) -8UNKER C (81018.869) -1018 (8118.869) -1018 (8118.869)										Page 1
8.4	= R60 (8,208) = R60 (8,208) -Filter Peak (8,500)	>									



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25MB LIMS ID: 08-27636

Matrix: Water Data Release Authorized

Reported: 10/29/08

Sample ID: METHOD BLANK

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

2	·							_
Prep	Prep		Analysis Date	CAS Number	Analyte	RL	μg/L	<u>Q</u>
Meth	Date	Method			Antimony	0.2	0.2	U U
200.8	10/16/08	200.0	10/23/08 10/24/08		Arsenic	0.2 0.5	0.2 0.5	Ü
200.8 200.8	10/16/08 10/16/08	2000	10/24/08	7440-47-3	Chromium Copper	0.5	0.5	U U
200.8	10/16/08	200.8	10/24/08 10/23/08	7439-92-1	Lead	1 0.5	0.5	Ü
200.8 200.8	10/16/08 10/16/08		10/24/08		Nickel			

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25A

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized

Reported: 10/29/08

Sample ID: CMP3-081014

SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08 10/16/08	200.8	10/28/08 10/23/08	7440-38-2 7439-92-1	Arsenic Lead	0.2	11.6 1	U

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25B

LIMS ID: 08-27635

Matrix: Water

Data Release Authorized:

Reported: 10/29/08

Sample ID: CMP4-081014

SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08
Date Received: 10/14/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/24/08	7440-38-2	Arsenic	0.2	2.8	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25C LIMS ID: 08-27636

Matrix: Water

Data Release Authorized

Reported: 10/29/08

Sample ID: MW26R-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Prep		Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
Meth	Date 10/16/08	200.8	10/23/08	7440-36-0	Antimony Arsenic	0.2	0.2	U U
200.8 200.8 200.8	10/16/08 10/16/08	200.8 200.8	10/28/08 10/28/08 10/24/08	7440-47-3	Chromium Copper	2 2 1	2 2 1	บ บ บ
200.8 200.8 200.8	10/16/08 10/16/08 10/16/08	5/08 200.8	10/23/08 10/24/08	7439-92-1	Lead Nickel	2	6	

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25D LIMS ID: 08-27637

Matrix: Water

Data Release Authorized Reported: 10/29/08

Sample ID: MW26R-081014D

SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08
Date Received: 10/14/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/23/08	7440-36-0	Antimony	0.2	0.2	U
200.8	10/16/08	200.8	10/28/08	7440-38-2	Arsenic	2	3	
200.8	10/16/08	200.8	10/28/08	7440-47-3	Chromium	2	3	
200.8	10/16/08	200.8	10/24/08	7440-50-8	Copper	2	2	U
200.8	10/16/08	200.8	10/24/08	7439-92-1	Lead	5	5	U
200.8	10/16/08	200.8	10/24/08	7440-02-0	Nickel	2	7	

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25E LIMS ID: 08-27638

Matrix: Water

Data Release Authorized:

Reported: 10/29/08

Sample ID: MW44-081014

SAMPLE

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08
Date Received: 10/14/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	10/16/08	200.8	10/23/08	7440-36-0	Antimony	0.2	0.2	U
200.8	10/16/08	200.8	10/24/08	7440-38-2	Arsenic	0.5	0.5	
200.8	10/16/08	200.8	10/24/08	7440-47-3	Chromium	1	1	U
200.8	10/16/08	200.8	10/24/08	7440-50-8	Copper	1	7	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	4	
200.8	10/16/08	200.8	10/24/08	7440-02-0	Nickel	1	2	

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25F

LIMS ID: 08-27639

Matrix: Water

Data Release Authorized

Reported: 10/29/08

Sample ID: CMP15-081014

SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	10/16/08	200.8	10/22/00	7440 26 0				
200.8		-	10/23/08	7440-36-0	Antimony	0.2	0.2	U
	10/16/08	200.8	10/28/08	7440-38-2	Arsenic	0.5	1.0	
200.8	10/16/08	200.8	10/28/08	7440-47-3	Chromium	1	1	IJ
200.8	10/16/08	200.8	10/24/08	7440-50-8	Copper	Ο L T	т	U
200.8	10/16/08	200.8	10/23/08	7439-92-1		0.5	0.8	
200.8	10/16/08		,		Lead	1	1	Ū
200.0	10/10/08	200.8	10/28/08	7440-02-0	Nickel	0.5	1.0	

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25G LIMS ID: 08-27640

Matrix: Water

Data Release Authorized:

Reported: 10/29/08

Sample ID: MW36-081014 SAMPLE

QC Report No: NU25-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08 Date Received: 10/14/08

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8 200.8 200.8 200.8 200.8 200.8	10/16/08 10/16/08 10/16/08 10/16/08 10/16/08 10/16/08	200.8 200.8 200.8 200.8 200.8 200.8	10/24/08 10/24/08 10/24/08 10/24/08 10/24/08 10/24/08	7440-36-0 7440-38-2 7440-47-3 7440-50-8 7439-92-1 7440-02-0	Antimony Arsenic Chromium Copper Lead Nickel	5 5 10 10 20 10	5 6 10 10 20 10	ט ט ט

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: NU25LCS

LIMS ID: 08-27636

Matrix: Water

Data Release Authorized; Reported: 10/29/08

Sample ID: LAB CONTROL

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064 Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

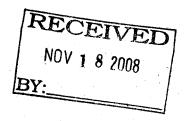
Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony Arsenic Chromium Copper Lead Nickel Reported in µg/L	200.8 200.8 200.8 200.8 200.8 200.8	24.9 23.9 25.7 24.2 25 23.5	25.0 25.0 25.0 25.0 25.25.0	99.6% 95.6% 103% 96.8% 100% 94.0%	×

N-Control limit not met Control Limits: 80-120%



14 November 2008

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110



RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Job: NU12

Dear Chip:

Please find enclosed a report for one sample from the project referenced above.

This PAH report was inadvertently omitted from the original report mailed last week.

A copy of this report and all raw data will be kept on file at ARI. If you have questions regarding this submission, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File NU12

MDH/mdh



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Matrix: Water

Lab Sample ID: NU12I

LIMS ID: 08-27624

Reported: 11/14/08

Sample ID: MW308N-081013 SAMPLE

C Report No: NU12-Asi

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Event: NA

Date Sampled: 10/13/08
Date Received: 10/13/08

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

Date	Extracted: 10/17/08
Date	Analyzed: 10/24/08 20:05
Inst	rument/Analyst: NT1/YZ

Data Release Authorized:

CAS Number	Analyte	RL.	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5 53-70-3	Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	0.010 0.010	< 0.010 U < 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 85.0%

......



10 April 2009

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110

RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Job: OT19

Dear Chip:

Please find enclosed the original chain of custody (COC) record and the final data package for samples from the project referenced above. Analytical Resources, Inc. accepted six water samples and one trip blank in good condition on March 31, 2009. The samples were analyzed for BEHP, PAHs, PCBs, NWTPH-Dx and total metals as requested.

Problems associated with these analyses are discussed in the case narrative.

A copy of this package will be kept on file at ARI. If you have questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File OT19

MDH/mdh

Chain of Custody Documentation

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT19

prepared by

Analytical Resources, Inc.

LABBA: ELTO

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated Analytical Chemists and Consultants	4611 South 134th Place, Suite 100 Tukwila, WA 98168	206-695-6200 206-695-6201 (fax)	Notes/Comments											Received by:	Printed Name:	Сомралу:	Date & Time:	1 :- 12 - 1 1 - 11 AD
		5,4,3,8 7,9,5,8	Analysis Requested	S C Common	18 18 8 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	$ \times \times \times $	XXX	$ \dot{x} \dot{x} \dot{x} $	$X \mid X \mid X$	$\times \times \times$	XXX			Relinquished by:	Printed Name:	Company:	Date & Time:	A cott been combessed antitorion of
Page: 1 of	Date: 3/31/2.004 Present?	No. of KY Gooler Coolers: YY Temps:	ll	90° \$,2 (9d	(80108 1 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	X	X	$\times \times \times $	XXX	XXX	×				No Markey		69 1550	
	9370			z Z	Containers	5	6	12	12	1 2	71			Received by:	Printed Vame:	Company:	Date & Time: $(3/3)$	
	780 93	1	c	7 ×		3				\rightarrow	^ -	·			Zv6H	77	1550	
Turn-around Requested:	Phone: 2.66			- Phase	II 1	9 845	945	0411	1345	0211	1145			1+ C	Name:	ن ا	104	
Turn-arou	りん		<u>.</u>	Samplers:	Date	3/31/09				\rightarrow	→			Relinquished by	Printed Name:	Company:	Date & Time	
ARI Assigned Number:	ARI Client Company:	Client Contact:	Client Project Name:	Client Project #: Samplers: Samplers: OBOO64	Sample ID	CMP2-090331	CMP-040331	FM 105 - 64033 1	MW125-690331	CMP17-090331	FM105 - 040331 D			Comments/Special Instructions	Leading to the control of the contro	18-18-18-18-18-18-18-18-18-18-18-18-18-1	3 : 0	

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance in accordance with appropriate methodology following ARI standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or considered agreement between ARI and the Client.

retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client:	<u> (1401)</u>
Assigned ARI Job No:	\mathcal{L}
Were intact, properly signed and dated custody seals attached to the outside of to cooler? Were custody papers included with the cooler? Were custody papers properly filled out (ink, signed, etc.) Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	
Were custody papers included with the cooler? Were custody papers properly filled out (ink, signed, etc.) Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	_
Were custody papers properly filled out (ink, signed, etc.)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	NO
If cooler temperature is out of compliance fill out form 00070F Cooler Accepted by: Date: 3/3/09 Time: 1550	
Cooler Accepted by: Date: 3/31/09 Time: 1550	286
Complete custody forms and attach all shipping documents Log-In Phase: Was a temperature blank included in the cooler? What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: Was sufficient ice used (if appropriate)? Were all bottles sealed in individual plastic bags? Did all bottles arrive in good condition (unbroken)? Were all bottle labels complete and legible? Did the number of containers listed on COC match with the number of containers received? Were all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	<i></i>
Was a temperature blank included in the cooler? What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: Was sufficient ice used (if appropriate)? Were all bottles sealed in individual plastic bags? Did all bottles arrive in good condition (unbroken)? Were all bottle labels complete and legible? Did the number of containers listed on COC match with the number of containers received? Were all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	-
Was a temperature blank included in the cooler? What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: Was sufficient ice used (if appropriate)? Were all bottles sealed in individual plastic bags? Did all bottles arrive in good condition (unbroken)? Were all bottle labels complete and legible? Did the number of containers listed on COC match with the number of containers received? Did all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	
What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: Was sufficient ice used (if appropriate)? NA YES Were all bottles sealed in individual plastic bags? YES Did all bottles arrive in good condition (unbroken)? YES Were all bottle labels complete and legible? YES Did the number of containers listed on COC match with the number of containers received? YES Did all bottle labels and tags agree with custody papers? YES Were all bottles used correct for the requested analyses? YES	
Was sufficient ice used (if appropriate)? Were all bottles sealed in individual plastic bags? Did all bottles arrive in good condition (unbroken)? Were all bottle labels complete and legible? Did the number of containers listed on COC match with the number of containers received? Did all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	he
Were all bottles sealed in individual plastic bags? Did all bottles arrive in good condition (unbroken)? Were all bottle labels complete and legible? Did the number of containers listed on COC match with the number of containers received? Did all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	
Did all bottles arrive in good condition (unbroken)? Were all bottle labels complete and legible? Did the number of containers listed on COC match with the number of containers received? Did all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	NO
Were all bottle labels complete and legible? Did the number of containers listed on COC match with the number of containers received? Did all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	M
Did the number of containers listed on COC match with the number of containers received? Did all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses?	NO
Did all bottle labels and tags agree with custody papers? Were all bottles used correct for the requested analyses? VES	NO
Were all bottles used correct for the requested analyses?	NO
	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA	NO
· · · · · · · · · · · · · · · · · · ·	NO
Were all VOC vials free of air bubbles?	NG)
Was sufficient amount of sample sent in each bottle?	NO
Samples Logged by: Date: 4/1/2009 Time: 402	
** Notify Project Manager of discrepancies or concerns **	
Sample ID on Bottle Sample ID on COC Sample ID on Bottle Sample ID on CO	C
Additional Notes, Discrepancies, & Resolutions:	
4 trip blanks found in cooler not included on col. 4 of a wals of the	1
trip blanks had pb	
By: W Date: 4-1-2009	
Small Air Bubbles Peabubbles LARGE Air Bubbles Small → "sm"	لـــــــــــــــــــــــــــــــــــــ
- 2πm 2-4 mm 2-4 mm Peabubbles → "pb"	
Large \Rightarrow "lg"	

0016F 3/12/09 Cooler Receipt Form

Headspace → "hs"

Revision 012

OT19: @@@@3



Cooler Temperature Compliance Form

Cooler#: Tempe	erature(°C):	1、2
Sample ID	Bottle Count	Bottle Type
MW125 - 09 033 1	1	3202 HPPE
11	6	500 ml Ag
11		
1	2	
CMP17 -090331	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	3202 HDPE
	6	Sooml Ag
	1	1000 MI AG
Cooler#: Tempe	erature(°C):	
Sample ID	Bottle Count	Bottle Type
Cooler#: Tempe	rature(°C):	D.W. T
Sample ID	Bottle Count	Bottle Type
·		
Cooler#: Temper	(°C):	
Sample ID	rature(°C): Bottle Count	Bottle Type
		3000 1750
· · · · · · · · · · · · · · · · · · ·	:	
Completed by:	Date	: 4-1-2009 Time: 906

OT19: BBBBY

PRESERVATION VERIFICATION 04/01/09

1 of 1 Page Inquiry Number: NONE

Analysis Requested: 03/31/09 Contact: Goodhue, Chip

Client: Aspect Consulting LLC Logged by: MM

Sample Set Used: Yes-481

Validatable Package: No

Deliverables:

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: OT19

PC: Mark VTSR: 03/31/09

Project #: 080064

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Sample Site:

SDG No:

Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	F0G	MET F	PHEN P	PHOS T	TKN NC	NO23 T	TOC 8	\$2 >9	AK102 DMET DOC <2 FLT FLT	PARAMETER	ADJUSTED TO) LOT NUMBER	AMOUNT ADDED	DATE/BY
09-7851 0T19A	CMP2-090331						TOT												
09-7852 OT19B	CMP1-090331						[A												
09-7853 OT19C	FM105-090331						[(A)												
09-7854 oT19D	MW125-090331						\$\frac{1}{2}\delta_2\d												
09-7855 OT19E	CMP17-090331		CONTRACTOR STATE OF THE STATE O			-,	E S												
09-7856 0T19F	FM105-090331D																		

Checked By

OT19: @@@@5

Case Narrative

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT19

prepared by

Analytical Resources, Inc.

Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: OT19

Date: April 10, 2009

Volatile Organics Analysis

These analyses proceeded without incident of note.

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

Data Summary Package

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT19

prepared by

Analytical Resources, Inc.



Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: OT19

Date: April 10, 2009

Volatile Organics Analysis

These analyses proceeded without incident of note.

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

VOLATILE ANALYSIS



Page 1 of 1

Sample ID: FM105-090331

SAMPLE

Lab Sample ID: OT19C LIMS ID: 09-7853

Matrix: Water

Data Release Authorized: Reported: 04/03/09

Instrument/Analyst: NT10/JZ

Date Analyzed: 04/01/09 19:22

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	Ū
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	Ū
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	Ū
156-59-2	cis-1,2-Dichloroethene	0.2	0.4	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	0.6	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	3.4	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	IJ
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	Ū

Reported in μ g/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	101%
Bromofluorobenzene	99.8%
d4-1,2-Dichlorobenzene	105%

FORM I



ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Page 1 of 1

Matrix: Water

Reported: 04/03/09

Data Release Authorized:

Instrument/Analyst: NT10/JZ
Date Analyzed: 04/01/09 19:46

Sample ID: MW125-090331

SAMPLE

Lab Sample ID: OT19D QC Report No: OT19-Aspect Consulting LLC LIMS ID: 09-7854

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	0.2	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	0.4	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	Ŭ
79-01-6	Trichloroethene	0.2	1.0	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	4.1	
79-34 - 5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in μ g/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	111%
d8-Toluene	100%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	105%

FORM I

0719:00012



Sample ID: CMP17-090331 SAMPLE

Lab Sample ID: OT19E LIMS ID: 09-7855

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water

080064

Data Release Authorized: Reported: 04/03/09

Date Sampled: 03/31/09 Date Received: 03/31/09

Instrument/Analyst: NT10/JZ Date Analyzed: 04/01/09 20:11 Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number Analyte		RL	Result		
75-01-4	Vinyl Chloride	0.2	< 0.2	บ	
75-00-3	Chloroethane	0.2	< 0.2	U	
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U	
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U	
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U	
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U	
79-01-6	Trichloroethene	0.2	< 0.2	U	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U	
127-18-4	Tetrachloroethene	0.2	0.2		
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U	
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U	

Reported in μ g/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	98.9%
Bromofluorobenzene	106%
d4-1,2-Dichlorobenzene	105%



Sample ID: FM105-090331D SAMPLE

Lab Sample ID: OT19F

LIMS ID: 09-7856 Matrix: Water

Data Release Authorized: Reported: 04/03/09

Instrument/Analyst: NT10/JZ

Date Analyzed: 04/01/09 20:35

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	Ū
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	0.5	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	0.6	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	3.7	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in $\mu g/L$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	98.4%
Bromofluorobenzene	106%
d4-1,2-Dichlorobenzene	108%

OT19: GGG14



Sample ID: TRIP BLANKS SAMPLE

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

QC Report No: OT19-Aspect Consulting LLC

Lab Sample ID: OT19G

LIMS ID: 09-7857 Matrix: Water

Data Release Authorized: Reported: 04/03/09

Instrument/Analyst: NT10/JZ Date Analyzed: 04/01/09 16:37

080064 Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL Result			
75-01-4	Vinyl Chloride	0.2	< 0.2	U	
75-00-3	Chloroethane	0.2	< 0.2	U	
75-35-4	1,1-Dichloroethene	0.2	< 0.2	Ų	
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U	
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U	
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U	
79-01-6	Trichloroethene	0.2	< 0.2	U	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U	
127-18-4	Tetrachloroethene	0.2	< 0.2	U	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U	
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U	

Reported in μ g/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	98.9%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	102%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

(DCB) = d4-1,2-Dichlorobenzene

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

70-130

080064

0
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0

Prep Method: SW5030B

70-130

Log Number Range: 09-7853 to 09-7857



ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Page 1 of 1

Sample ID: LCS-040109

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040109

LIMS ID: 09-7853 Matrix: Water

Data Release Authorized:

Reported: 04/03/09

Instrument/Analyst LCS: NT10/JZ

LCSD: NT10/JZ

Date Analyzed LCS: 04/01/09 15:07

LCSD: 04/01/09 15:37

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

		Spike	LCS		Spike	LCSD	
Analyte	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD
Vinyl Chloride	9.4	10.0	94.0%	9.0	10.0	90.0%	4.3%
Chloroethane	9.1	10.0	91.0%	9.4	10.0	94.0%	3.2%
1,1-Dichloroethene	8.9	10.0	89.0%	9.4	10.0	94.0%	5.5%
1,1-Dichloroethane	9.1	10.0	91.0%	9.6	10.0	96.0%	5.3%
trans-1,2-Dichloroethene	8.9	10.0	89.0%	9.4	10.0	94.0%	5.5%
cis-1,2-Dichloroethene	9.1	10.0	91.0%	9.4	10.0	94.0%	3.2%
1,2-Dichloroethane	8.9	10.0	89.0%	9.4	10.0	94.0%	5.5%
1,1,1-Trichloroethane	9.3	10.0	93.0%	9.5	10.0	95.0%	2.1%
Trichloroethene	10.1	10.0	101%	9.7	10.0	97.0%	4.0%
1.1.2-Trichloroethane	9.0	10.0	90.0%	9.4	10.0	94.0%	4.3%
Tetrachloroethene	9.0	10.0	90.0%	9.6	10.0	96.0%	6.5%
1,1,2,2-Tetrachloroethane	9.1	10.0	91.0%	9.2	10.0	92.0%	1.1%
1,1,1,2-Tetrachloroethane	9.3	10.0	93.0%	9.6	10.0	96.0%	3.2%

Reported in $\mu g/L$ (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	98.0%	105%
d8-Toluene	98.6%	99.3%
Bromofluorobenzene	102%	102%
d4-1,2-Dichlorobenzene	100%	98.8%

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB0401

Lab Name: ANALYTICAL RESOURCES, INC Contract: ASPECT CONSULTING LLC

Lab File ID: 04010930

Lab Sample ID: MB0401A

Date Analyzed: 04/01/09

Time Analyzed: 1607

GC Column: RTX502.2 ID: 0.18 (mm)

Heated Purge: (Y/N) N

Instrument ID: NT10

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
		=========	1106 10	ANADIZED
01	LCS0401A	LCS0401A	04010928	1507
02	LCSD0401A	LCSD0401A	04010929	1537
03	TRIP BLANKS	OT19G	04010931	1637
04	FM105-090331	OT19C	04010937	1922
05	MW125-090331	OT19D	04010938	1946
06	CMP17-090331	OT19E	04010939	2011
07	FM105-090331	OT19F	04010940	2035
08				
09				
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COMMENTS:			
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page 1 of 1

FORM IV VOA

OLM3.2M

OT19: @@@18



Sample ID: MB-040109 METHOD BLANK

Lab Sample ID: MB-040109

LIMS ID: 09-7853 Matrix: Water

Data Release Authorized: Reported: 04/03/09

Instrument/Analyst: NT10/JZ

Date Analyzed: 04/01/09 16:07

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1.1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
107-06-2	1.2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in $\mu g/L$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.5%
d8-Toluene	98.7%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	105%

0T19:00019

SEMIVOLATILE ANALYSIS



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

smivolatiles by SW8270D GC/MS Sample ID: CMP2-090331

sqe 1 of 1 SAMPLE

Lab Sample ID: OT19A LIMS ID: 09-7851 Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09
Date Analyzed: 04/03/09 15:52
Instrument/Analyst: NT4/LJR

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%
2-Fluorobiphenyl	74.0%
d14-p-Terphenyl	58.8%
d4-1,2-Dichlorobenzene	65.2%

FORM I

ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1



Sample ID: CMP1-090331 SAMPLE

Lab Sample ID: OT19B LIMS ID: 09-7852

Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09 Date Analyzed: 04/03/09 16:26

Instrument/Analyst: NT4/LJR

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte		
117-81-7		RL	Result
117 01-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 II

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

	_
d5-Nitrobenzene 2-Fluorobiphenyl d14-p-Terphenyl d4-1,2-Dichlorobenzene	68.0% 76.8% 79.2%
	69 68

ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

ANALYTICAL RESOURCES ' INCORPORATED

Sample ID: FM105-090331

SAMPLE

Lab Sample ID: OT19C LIMS ID: 09-7853

Matrix: Water

Data Release Authorized:

Date Extracted: 04/01/09 Date Analyzed: 04/03/09 17:00

Instrument/Analyst: NT4/LJR

Reported: 04/06/09

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte		
117-81-7		RL	Result
==	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

	4
d5-Nitrobenzene	66.8%
2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	82.8%
d4-1,2-Dichlorobenzene	69.6%

CT19: 22223



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: OT19D

LIMS ID: 09-7854 Matrix: Water

Data Release Authorized: Reported: 04/06/09

Date Extracted: 04/01/09 Date Analyzed: 04/03/09 17:34 Instrument/Analyst: NT4/LJR

Sample ID: MW125-090331 SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%
2-Fluorobiphenyl	78.8%
d14-p-Terphenyl	80.4%
d4-1,2-Dichlorobenzene	70.0%



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Sample ID: CMP17-090331 SAMPLE

Lab Sample ID: OT19E

LIMS ID: 09-7855 Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09 Date Analyzed: 04/03/09 18:08 Instrument/Analyst: NT4/LJR

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 50.0 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%
2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	79.2%
d4-1,2-Dichlorobenzene	67.2%



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: OT19F

LIMS ID: 09-7856

Matrix: Water

Data Release Authorized: Reported: 04/06/09

Date Extracted: 04/01/09
Date Analyzed: 04/03/09 18:43
Instrument/Analyst: NT4/LJR

Sample ID: FM105-090331D SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	5.8

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.6%
2-Fluorobiphenyl	74.0%
d14-p-Terphenyl	77.2%
d4-1,2-Dichlorobenzene	65.2%



SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	NBZ	FBP	TPH	DCB TO	TUO TC
MB-040109	68.0%	74.8%	83.6%	62.8%	0
LCS-040109	67.2%	76.0%	82.4%	63.6%	0
LCSD-040109	72.4%	81.2%	82.8%	69.6%	0
CMP2-090331	67.2%	74.0%	58.8%	65.2%	0
CMP1-090331	68.0%	76.8%	79.2%	69.6%	0
FM105-090331	66.8%	76.8%	82.8%	69.6%	0
MW125-090331	69.6%	78.8%	80.4%	70.0%	0
CMP17-090331	66.4%	77.6%	79.2%	67.2%	0
FM105-090331D	65.6%	74.0%	77.2%	65.2%	0

			LCS/MB LIMITS	QC LIMITS
(NBZ)	=	d5-Nitrobenzene	(54-102)	(40-103)
(FBP)	=	2-Fluorobiphenyl	(47-99)	(35-98)
(TPH)	=	d14-p-Terphenyl	(50-119)	(21-122)
(DCB)	=	d4-1,2-Dichlorobenzene	(39-86)	(28-85)

Prep Method: SW3520C

Log Number Range: 09-7851 to 09-7856



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Sample ID: LCS-040109

LCS/LCSD

Lab Sample ID: LCS-040109

LIMS ID: 09-7851

Matrix: Water

Data Release Authorized:/

Date Extracted LCS/LCSD: 04/01/09

Date Analyzed LCS: 04/03/09 14:44

Reported: 04/06/09

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Instrument/Analyst LCS: NT4/LJR

LCSD: NT4/LJR

LCSD: 04/03/09 15:17

GPC Cleanup: NO

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD	
bis(2-Ethylhexyl)phthalate	21.9	25.0	87.6%	22.1	25.0	88.4%	0.9%	

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	67.2%	72.4%
2-Fluorobiphenyl	76.0%	81.2%
d14-p-Terphenyl	82.4%	82.8%
d4-1,2-Dichlorobenzene	63.6%	69.6%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

FORM III

4B SEMIVOLATILE METHOD BLANK SUMMARY

OT19MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT CONSULTING

ARI Job No: OT19

Project: SOUTHWEST HARBOR PRO

Lab File ID: OT19MB

Date Extracted: 04/01/09

Instrument ID: NT4

Date Analyzed: 04/03/09

Matrix: LIQUID

Time Analyzed: 1410

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
0.1		======================================	=========	=======
01 02	OT19LCSW1 OT19LCSDW1	OT19LCSW1 OT19LCSDW1	OT19SB OT19SBD	04/03/09 04/03/09
03	CMP2-090331	OT19LCSDW1	OT1936D	04/03/09
04	CMP1-090331	OT19B	OT19B	04/03/09
05	FM105-090331	OT19C	OT19C	04/03/09
06	MW125-090331	OT19D	OT19D	04/03/09
07	CMP17-090331	OT19E	OT19E	04/03/09
08 09	FM105-090331D	OT19F	OT19F	04/03/09
10		-		
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COMMENTS:		
	 	

page 1 of 1

COMMENTED .

FORM IV SV



ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Lab Sample ID: MB-040109 LIMS ID: 09-7851 Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09
Date Analyzed: 04/03/09 14:10
Instrument/Analyst: NT4/LJR

Sample ID: MB-040109
METHOD BLANK

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.0%
2-Fluorobiphenyl	74.8%
d14-p-Terphenyl	83.6%
d4-1,2-Dichlorobenzene	62.8%

FORM I

SIM SEMIVOLATILE ANALYSIS



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT19A

LIMS ID: 09-7851

Matrix: Water Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09 Date Analyzed: 04/03/09 17:08 Instrument/Analyst: NT8/VTS

Sample ID: CMP2-090331 SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result		
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U		
218-01-9	Chrysene	0.010	< 0.010 U		
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U		
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U		
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U		
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U		
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U		

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	59.3%
d14-Dibenzo(a,h)anthracene	61.3%



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

3.

Lab Sample ID: OT19B LIMS ID: 09-7852 Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 17:29 Instrument/Analyst: NT8/VTS

Sample ID: CMP1-090331 SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number Analyte		RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 67.0% d14-Dibenzo(a,h)anthracene 62.0%

FORM I



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT19C

LIMS ID: 09-7853

Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09

Instrument/Analyst: NT8/VTS

Date Analyzed: 04/03/09 17:50

Sample ID: FM105-090331 SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result		
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U		
218-01-9	Chrysene	0.010	< 0.010 U		
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U		
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U		
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U		
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U		
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U		

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 69.3% d14-Dibenzo(a,h)anthracene 64.7%

FORM I



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: MW125-090331 SAMPLE

Lab Sample ID: OT19D

LIMS ID: 09-7854 Matrix: Water

Data Release Authorized:

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 18:11

Instrument/Analyst: NT8/VTS

Reported: 04/06/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result		
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U		
218-01-9	Chrysene	0.010	< 0.010 U		
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U		
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U		
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U		
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U		
53-70-3	Dibenz (a, h) anthracene	0.010	< 0.010 U		

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.7%
d14-Dibenzo(a h)anthracene	

FORM I



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT19E

LIMS ID: 09-7855 Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09 Date Analyzed: 04/03/09 18:31 Instrument/Analyst: NT8/VTS

Sample ID: CMP17-090331 SAMPLE

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result		
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U		
218-01-9	Chrysene	0.010	< 0.010 U		
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U		
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U		
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U		
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U		
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U		

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 67.0%

OT19: MARGE



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT19F

LIMS ID: 09-7856 Matrix: Water

Data Release Authorized:

Reported: 04/06/09

Date Extracted: 04/01/09 Date Analyzed: 04/03/09 18:52 Instrument/Analyst: NT8/VTS

Sample ID: FM105-090331D SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result		
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U		
218-01-9	Chrysene	0.010	< 0.010 U		
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U		
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U		
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U		
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U		
53-70-3	Dibenz (a.h) anthracene	0.010	< 0.010 U		

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 55.3%

FORM I



SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	MNP	DBA	TOT OUT
MB-040109	78.7%	55.7%	0
LCS-040109	74.7%	69.3%	0
LCSD-040109	82.3%	67.7%	0
CMP2-090331	59.3%	61.3%	0
CMP1-090331	67.0%	62.0%	0
FM105-090331	69.3%	64.7%	0
MW125-090331	73.7%	62.0%	0
CMP17-090331	64.7%	67.0%	0
FM105-090331D	50.0%	55.3%	0

,		LCS/MB LIMITS	QC LIMITS
	d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene	(48-101) (52-108)	(40-114) (17-122)

Prep Method: SW3510C Log Number Range: 09-7851 to 09-7856



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: LCS-040109 LAB CONTROL SAMPLE

Lab Sample ID: LCS-040109

LIMS ID: 09-7851

Reported: 04/06/09

Matrix: Water Data Release Authorized:

Date Extracted LCS/LCSD: 04/01/09

Date Analyzed LCS: 04/03/09 16:26

LCSD: 04/03/09 16:47

Instrument/Analyst LCS: NT8/VTS

LCSD: NT8/VTS

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a)anthracene	0.240	0.300	80.0%	0.252	0.300	84.0%	4.9%
Chrysene	0.251	0.300	83.7%	0.263	0.300	87.7%	4.7%
Benzo(b)fluoranthene	0.221	0.300	73.7%	0.234	0.300	78.0%	5.7%
Benzo(k)fluoranthene	0.233	0.300	77.7%	0.249	0.300	83.0%	6.6%
Benzo(a)pyrene	0.228	0.300	76.0%	0.244	0.300	81.3%	6.8%
Indeno(1,2,3-cd)pyrene	0.178	0.300	59.3%	0.186	0.300	62.0%	4.4%
Dibenz(a,h)anthracene	0.193	0.300	64.3%	0.198	0.300	66.0%	2.6%

Reported in $\mu g/L$ (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	74.7%	82.3%
d14-Dibenzo(a,h)anthracene	69.3%	67.7%

4B SEMIVOLATILE METHOD BLANK SUMMARY

OT19MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT

ARI Job No: OT19

Project: SOUTHWEST HARBOR

Lab File ID: OT19MB

Date Extracted: 04/01/09

Instrument ID: NT8

Date Analyzed: 04/03/09

Matrix: LIQUID

Time Analyzed: 1605

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================	=========	=========	========
01	OT19LCSW1	OT19LCSW1	OT19SB	04/03/09
02	OT19LCSDW1	OT19LCSDW1	OT19SBD	04/03/09
03	CMP2-090331	OT19A	OT19A	04/03/09 04/03/09
04	CMP1-090331	OT19B	OT19B	04/03/09
05	FM105-090331	OT19C	OT19C	04/03/09
06	MW125-090331	OT19D	OT19D	04/03/09 04/03/09
07	CMP17-090331	OT19E	OT19E	04/03/09
08 09	FM105-090331D	OT19F	OT19F	04/03/09
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COMMENTS:		
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FORM IV SV

OT19: @@@4@



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: MB-040109 METHOD BLANK

Lab Sample ID: MB-040109

LIMS ID: 09-7851

Matrix: Water
Data Release Authorized:

Reported: 04/06/09

se Authorized:

Date Extracted: 04/01/09
Date Analyzed: 04/03/09 16:05

Instrument/Analyst: NT8/VTS

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 78.7% d14-Dibenzo(a,h)anthracene 55.7%

FORM I

PCB ANALYSIS



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: OT19A

LIMS ID: 09-7851 Matrix: Water

Data Release Authorized:

Reported: 04/07/09

Date Extracted: 04/02/09 Date Analyzed: 04/04/09 16:36 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: CMP2-090331 SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.015	< 0.015 Y

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	57.0%
Tetrachlorometaxylene	51.0%

FORM I



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Matrix: Water

Sample ID: CMP1-090331 SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

Data	Relea	se	Aut	hori	zed:	M
Repor	ted:	04,	07/	09	/	

Date Extracted: 04/02/09

Date Analyzed: 04/04/09 16:53 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes

Lab Sample ID: OT19B

LIMS ID: 09-7852

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	59.0%
Tetrachlorometaxylene	55.8%

FORM I

OT19: GBGUU



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: FM105-090331 SAMPLE

Lab Sample ID: OT19C LIMS ID: 09-7853

OT19C QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-P

Project: SOUTHWEST HARBOR PROJECT-PHASE 2 080064

Matrix: Water

Date Sampled: 03/31/09

Data Release Authorized: Reported: 04/07/09

Date Received: 03/31/09

Date Extracted: 04/02/09
Date Analyzed: 04/04/09 17:10
Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.8%
Tetrachlorometaxylene	54.8%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: MW125-090331 SAMPLE

Lab Sample ID: OT19D LIMS ID: 09-7854

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water

080064

Data Release Authorized:

Date Sampled: 03/31/09

Reported: 04/07/09

Date Received: 03/31/09

Date Extracted: 04/02/09 Date Analyzed: 04/04/09 17:28 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	65.2%
Tetrachlorometaxylene	59.5%

OT19: GGG46



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP17-090331 SAMPLE

Lab Sample ID: OT19E LIMS ID: 09-7855

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water

080064

Data Release Authorized: Reported: 04/07/09

Date Sampled: 03/31/09

Date Received: 03/31/09

Date Extracted: 04/02/09 Date Analyzed: 04/04/09 17:45 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	68.5%
Tetrachlorometaxvlene	59.2%

OT19: GGGY7



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: OT19F LIMS ID: 09-7856

Matrix: Water

Data Release Authorized: Reported: 04/07/09

Date Extracted: 04/02/09
Date Analyzed: 04/04/09 18:02
Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes

Sample ID: FM105-090331D SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.2%
Tetrachlorometaxylene	57.2%



SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
				24.02	•
MB-040209	69.8%	36-102	66.2%	34-93	0
LCS-040209	65.2%	36-102	59.0%	34-93	0
LCSD-040209	63.5%	36-102	61.0%	34-93	0
CMP2-090331	57.0%	19-121	51.0%	30-98	0
CMP1-090331	59.0%	19-121	55.8%	30-98	0
FM105-090331	67.8%	19-121	54.8%	30-98	0
MW125-090331	65.2%	19-121	59.5%	30-98	0
CMP17-090331	68.5%	19-121	59.2%	30-98	0
FM105-090331D	64.2%	19-121	57.2%	30-98	0

Prep Method: SW3510C

Log Number Range: 09-7851 to 09-7856



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Lab Sample ID: LCS-040209 LIMS ID: 09-7851

Matrix: Water

Data Release Authorized:

Reported: 04/07/09

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Sample ID: LCS-040209

080064

Date Sampled: NA Date Received: NA

Date Extracted LCS/LCSD: 04/02/09 Sample Amount LCS: 1000 mL

LCSD: 1000 mL

LCS/LCSD

Final Extract Volume LCS: 0.50 mL Date Analyzed LCS: 04/04/09 16:02

LCSD: 0.50 mL

Instrument/Analyst LCS: ECD5/JGR Dilution Factor LCS: 1.00 LCSD: ECD5/JGR

LCSD: 1.00

Silica Gel: No Acid Cleanup: Yes

GPC Cleanup: No

Sulfur Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.043	0.050	86.0%	0.043	0.050	86.0%	0.0%
Aroclor 1260	0.048	0.050	96.0%	0.053	0.050	106%	9.9%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	65.2%	63.5%
Tetrachlorometaxylene	59.0%	61.0%

Results reported in μ g/L RPD calculated using sample concentrations per SW846.

LCSD: 04/04/09 16:19

FORM III

PCB METHOD BLANK SUMMARY

BLANK NO.

OT19MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: UNSPECIFIED

ARI Job No.: OT19

Project: SOUTHWEST HARBOR PRO

Lab Sample ID: OT19MBW1

Lab File ID: 0404B014

Date Extracted: 04/02/09

Matrix: LIQUID

Date Analyzed: 04/04/09

Instrument ID: ECD5

Time Analyzed: 1544

GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
OT19LCSW1 OT19LCSDW1 CMP2-090331 CMP1-090331 FM105-090331 CMP17-090331 FM105-090331	OT19LCSW1 OT19LCSDW1 OT19A OT19B OT19C OT19D OT19E OT19F	04/04/09 04/04/09 04/04/09 04/04/09 04/04/09 04/04/09 04/04/09 04/04/09
ATT DINIC ADD DIAT COLL	TA 60.7	

ALL RUNS ARE DUAL COLUMN

page 1 of 1

FORM IV PCB

OT19: AGGT



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: MB-040209 METHOD BLANK

Lab Sample ID: MB-040209

LIMS ID: 09-7851

Matrix: Water Data Release Authorized:

Date Extracted: 04/02/09

Date Analyzed: 04/04/09 15:44

Reported: 04/07/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA

Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte
Sulfur Cleanup: Yes	
GPC Cleanup: No	
Instrument/Analyst: ECD5/	JGR

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	69.8%
Tetrachlorometaxylene	66.2%

TPHD ANALYSIS



ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Matrix: Water

Page 1 of 1

080064

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE

Data Release Authorized: Reported: 04/06/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-040109 09-7851	Method Blank HC ID:	04/01/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25	< 0.25 U < 0.50 U 84.4%
OT19A 09-7851	CMP2-090331 HC ID:	04/01/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 69.6%
OT19B 09-7852	CMP1-090331 HC ID:	04/01/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 87.3%
OT19C 09-7853	FM105-090331 HC ID:	04/01/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 87.3%
OT19D 09-7854	MW125-090331 HC ID:	04/01/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 86.4%
OT19E 09-7855	CMP17-090331 HC ID:	04/01/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 86.4%
OT19F 09-7856	FM105-090331D HC ID:	04/01/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 66.2%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

FORM I



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT19-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	OTER	TOT OUT
MB-040109	84.4%	0
LCS-040109	91.8%	0
LCSD-040109	95.1%	0
CMP2-090331	69.6%	0
CMP1-090331	87.3%	0
FM105-090331	87.3%	0
MW125-090331	86.4%	0
CMP17-090331	86.4%	0
FM105-090331D	66.2%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(49-118)

(45-112)

Prep Method: SW3510C

Log Number Range: 09-7851 to 09-7856



ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Sample ID: LCS-040109

LCS/LCSD

Lab Sample ID: LCS-040109

LIMS ID: 09-7851

Matrix: Water

Data Release Authorized

Reported: 04/06/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Date Extracted LCS/LCSD: 04/01/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/04/09 13:17 LCSD: 04/04/09 13:36 Final Extract Volume LCS: 1.0 mL LCSD: 1.0 mL

Instrument/Analyst LCS: FID/PKC

Dilution Factor LCS: 1.00

LCSD: FID/PKC

LCSD: 1.00

1000. 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD	_
Diesel	2.52	3.00	84.0%	2.56	3.00	85.3%	1.6%	

TPHD Surrogate Recovery

LCS LCSD

o-Terphenyl

91.8% 95.1%

Results reported in mg/L RPD calculated using sample concentrations per SW846.

0719:00056



TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: OT19

Matrix: Water Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Date Received: 03/31/09 080064

ARI ID	Client ID	Samp Amt_	Final Vol	Prep Date
				/ /
09-7851-040109MB1	Method Blank	500 mL	1.00 mL	04/01/09
09-7851-040109LCS1	Lab Control	500 mL	1.00 mL	04/01/09
09-7851-040109LCSD1	Lab Control Dup	500 mL	1.00 mL	04/01/09
09-7851-OT19A	CMP2-090331	500 mL	1.00 mL	04/01/09
09-7852-OT19B	CMP1-090331	500 mL	1.00 mL	04/01/09
09-7853-OT19C	FM105-090331	500 mL	1.00 mL	04/01/09
09-7854-OT19D	MW125-090331	500 mL	1.00 mL	04/01/09
09-7855-OT19E	CMP17-090331	500 mL	1.00 mL	04/01/09
09-7856-OT19F	FM105-090331D	500 mL	$1.00~\mathrm{mL}$	04/01/09

OS95MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT CONSULTING LLC

SDG No.: OT19

Project No.: SOUTHWEST HARBOR PROJECT

Date Extracted: 04/01/09

Matrix: LIQUID

Date Analyzed: 04/04/09

Instrument ID : FID3A

Time Analyzed: 1258

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01 02 03 04 05 06 07 08		OT19E	======================================
09 10 11 12			
140 15 16 17	- Carlo (1972)		
19 20 21 22 23			
24 25 26 27 28			
29 30			

page 1 of 1

FORM IV TPH

METALS ANALYSIS



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT19A

LIMS ID: 09-7851

Matrix: Water

Data Release Authorized

Reported: 04/07/09

Sample ID: CMP2-090331

SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
04/02/09	200.8	04/06/09	7440-38-2	Arsenic	0.2	23.2	
04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	
	Date 04/02/09	Date Method 04/02/09 200.8	Date Method Date 04/02/09 200.8 04/06/09	Date Method Date CAS Number 04/02/09 200.8 04/06/09 7440-38-2	Date Method Date CAS Number Analyte 04/02/09 200.8 04/06/09 7440-38-2 Arsenic	Date Method Date CAS Number Analyte RL 04/02/09 200.8 04/06/09 7440-38-2 Arsenic 0.2	Date Method Date CAS Number Analyte RL μg/L 04/02/09 200.8 04/06/09 7440-38-2 Arsenic 0.2 23.2

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT19B

LIMS ID: 09-7852

Matrix: Water
Data Release Authorized

Reported: 04/07/09

Sample ID: CMP1-090331

SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/02/09	200.8	04/06/09	7440-38-2	Arsenic	0.2	2.7	
200.8	04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit

OT19: @@@G1



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT19C

LIMS ID: 09-7853

Matrix: Water

Data Release Authorized

Reported: 04/07/09

Sample ID: FM105-090331

SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/02/09	200.8	04/06/09	7440-38-2	Arsenic	0.2	0.5	
200.8	04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT19D

LIMS ID: 09-7854 Matrix: Water

Data Release Authorized:

Reported: 04/07/09

Sample ID: MW125-090331

SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/02/09	200.8	04/06/09	7440-38-2	Arsenic	0.2	0.4	
200.8	04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Sample ID: CMP17-090331

SAMPLE

Lab Sample ID: OT19E

LIMS ID: 09-7855

Matrix: Water

Data Release Authorized

Reported: 04/07/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/02/09	200.8	04/06/09	7440-38-2	Arsenic	0.2	2.6	
200.8	04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit

OT19: BOBG4



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT19F

LIMS ID: 09-7856

Matrix: Water

Data Release Authorized

Reported: 04/07/09

Sample ID: FM105-090331D

SAMPLE

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09 Date Received: 03/31/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/02/09	200.8	04/06/09	7440-38-2	Arsenic	0.2	0.5	
200.8	04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT19MB

LIMS ID: 09-7851

Matrix: Water

Data Release Authorized

Reported: 04/07/09

Sample ID: METHOD BLANK

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/02/09	200.8	04/06/09	7440-38-2	Arsenic	0.2	0.2	Ū
200.8	04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	Ü

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT19LCS

LIMS ID: 09-7851 Matrix: Water

Data Release Authorized

Reported: 04/07/09

Sample ID: LAB CONTROL

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	g Recovery	Q
Arsenic Lead	200.8	27.2 27	25.0 25	109% 108%	

Reported in µg/L

N-Control limit not met Control Limits: 80-120%

0719:00067



15 April 2009

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110

RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Jobs: OT38, OT68

Dear Chip:

Please find enclosed the original chain of custody (COC) records and the final data package for samples from the project referenced above. Analytical Resources, Inc. accepted six water samples in good condition on April 1, 2009. Four additional water samples were received in good condition on April 2, 2009. The samples were analyzed for BEHP, PAHs, PCBs, NWTPH-Dx and total metals as requested.

Problems associated with these analyses are discussed in the case narrative.

A copy of this package will be kept on file at ARI. If you have questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: Files OT38, OT68

MDH/mdh

Chain of Custody Documentation

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT38, OT68

prepared by

Analytical Resources, Inc.

QT68:00001

Chain of Custody Record & Laboratory Analysis Request

And Comments Special Institutions Comments Special Institutions Comments Special Institution Comments Special Institution Comments Special Institution Comments Special Institution Comments Special Institution Comments Special Institution	Phone Phon	ARI Assigned Number:	Turn-around Requested:	Requested:			Page:		Jo	_			An	Analytical Resources, Incorporated Analytical Chemists and Consultants	rporated
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Camperis Special Instructions Comments Special Instructions Camperis Special Instruction	Cinent Project Name: Southwest Harber Placet - Place 2 GwCMP Cinent Project #: O 80064 Sample ID Date Time Matrix No. CMP 3 - 04 04 01 MW 26R - 04 04 01 MW 26R - 04 04 01 MW 3085 - 04 04 01 MW 3085 - 04 04 01 CMP 5 - 04 04 01 MW 3085 - 04 04 01 MW 3085 - 04 04 01 MW 3085 - 04 04 01 CMP 7	Client Contact:).		No. of Coolers:	M	Cooler Temps	2 N 8	Z,7.4		200	-695-6200 206-695-6	201 (fax)
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Comments/Special Instructions Relinquished by: Signature) Signature) Printed Name: Commany: Commany: Date & Time: Date & Time: Date & Time: The commany: A 1/64 1540 Relinquished by:	Comments/Special Instructions Relinquished by: (Signature) (Signatur				,	(
Printed Name: Printed Name: Printed Name: Printed Name: Printed Name: Printed Name: Company: Associate Company: Date & Time: The state of the state	Timits of Liability: ARI will perform all requested services in accordance with appropriate standards for the industry. The total liability of ARI, its officers, agents, employed a contract of the industry. The total liability of ARI, its officers, agents, employed and accordance with appropriate the industry. The total liability of ARI, its officers, agents, employed and accordance with appropriate the industry.	Comments/Special Instructions	Relinquished by	ノナリ	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	Received by:	. T	9		Relinquished (Signature)	by:		Recei	/ed by:	
Company: Company: Aspect LLC After Date & Time: Date & Time: A/1/64 1540 A/1/05 1540	Limits of Liability: ARI will perform all requested services in accordance with appropriate standards for the industry. The total liability of ARI, its officers, agents, employed and accordance with appropriate standards for the industry. The total liability of ARI, its officers, agents, employed and accordance with appropriate accordance with appropriate accordance with appropriate accordance with appropriate accordance with appropriate accordance with appropriate accordance and accordance		Printed Name:	2 (2)		Printed Name:	<u>ا</u> ا			Printed Name			Printe	Name:	
1502ct LLC 12 Date & Time: Date & Time: 1/1/64 1540 2/1/05 1540 Date & Time:	Limits of Liability: ARI will perform all requested services in accordance with appropriate standards for the industry. The total liability of ARI, its officers, agents, employ		\	11/	00 H	\mathcal{J} l g	3	20		Company:			Comp	any:	
Date & Time: $ \sqrt{1/6}4 $	Limits of Liability: ARI will perform all requested services in accordance with apprometes standards for the industry. The total liability of ARI, its officers, agents, employ		458	eut L	ノし	さの日		- -		` -					
	Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for		<u></u>	_	0)	Date & Time:	×	hSI		Date & Time:			Date	. Time:	
sand some of the contract of t															

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

PRESERVATION VERIFICATION 04/01/09

1 of 1 Page

Inquiry Number: NONE
Analysis Requested: 04/01/09
Contact: Goodhue, Chip
Client: Aspect Consulting LLC

Logged by: JH Sample Set Used: Yes-481

Validatable Package: No

Deliverables:

ANALYTICAL (C)
RESOURCES
INCORPORATED

ARI Job No: 0T38

PC: Mark VTSR: 04/01/09

Project #: 080064

Project: SOUTHWEST HARBOR PROJECT-PHASE 2 Sample Site:

SDG No:

Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	F0G 1	MET PHEN	PHOS TI	TKN NO23	23 I	TOC 8	S2 AI	AK102 DMET DOC <2 FLT FLT	T DOC	PARAMETER	ADJUSTED LOT TO NUMBER	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-7965 ot38a	CMP3-090401						TOT Ž	 								2007 1007 17 17 17 17 17 17 17 17 17 17 17 17 17			
09-7966 or38b	MW26R-090401					-	TOT			announced to all the state of t									
09-7967 or38c	MW26R-090401D					-	TOT												
09-7968 or38D	MW44-090401				and the second second second		LCT										5		
09-7969 отзве	CMP5-090401						TCL							And a second sec	; 				
09-7970 OT38F	MW308S-090401						र्वे												

Date 4/1/09 韦 Checked By

OTS8:00003



Cooler Temperature Compliance Form

Cooler#:	Temper	rature(°C):(. (0
Sample ID		Bottle Count	Bottle Type
CMP3-090401		le	13002 HDPE, Le 500ml ALG
mw262-090401		1	3DEOZ HDPE
MW210 R-0904011)		(
MW44-090401		l	3ROZ HDPE
CMP5-090401		(e	1 3202 HDPE, 6 500ml AG
MW308S-090401		3	1 3000 HDPE, 2 1 Litre AL
			all HDPE buttles are 3202 *
			accorde somes are say it
Cooler#: 3	Temper	ature(°C):	7,4
Sample ID		Bottle Count	Bottle Type
CmP3-090401		2	Liter Amber glass
MWZCeR-090401		2	
MW26R-090401D		7	
MW44-090401		2	
CMP5-090401		2	Liter Amber glass
			1
Cooler#:	Tempera	ature(°C):	
Sample ID		Bottle Count	Bottle Type
		<u>- </u>	
·			
		^	
Cooler#:	Tempera		
Sample ID		Bottle Count	Bottle Type
·			
_ ,			
Completed by:		Date	:Time:

00070F

Cooler Temperature Compliance Form

Version 000

OT68: 2222 ¥3/09



Cooler Receipt Form

ARI Client: Aspect		Project Name Swhlwer	Harbor Proj.	et-t-Phase					
COC No(s):	(NA)	Delivered by: Fed-Ex UPS Courie (Hand Delivered Other:							
Assigned ARI Job No:	736	Tracking No:							
Preliminary Examination Phase	;								
Were intact, properly signed and	dated custody seals attached to	the outside of to cooler?	YES	(NO)					
Were custody papers included w	vith the cooler?	•••••	YES	NO					
Were custody papers properly fil	led out (ink, signed, etc.)		(YES)	NO					
Temperature of Cooler(s) (°C) (r	ecommended 2.0-6.0 °C for chen	nistry) 6.6 5.2	7.4						
If cooler temperature is out of co			Temp Gun ID#:	MEELS					
Cooler Assented by	\iL	Date: 4/1/29 Time	1547						
Cooler Accepted by: Date: 4/1/29 Time: 1547 Time: Tomplete custody forms and attach all shipping documents									
Log-In Phase:			 						
Was a temperature blank include	ed in the cooler?		YES	(NO)					
What kind of packing material wa	as used? Bubble Wrap We	et Ice Gel Packs Baggies Foam Blo	ock Paper Other:						
Was sufficient ice used (if approp	oriate)?		NA YES	MO					
Were all bottles sealed in individu	ual plastic bags?		YES	NO					
Did all bottles arrive in good condition (unbroken)?									
Were all bottle labels complete and legible?									
Did the number of containers listed on COC match with the number of containers received?									
Did all bottle labels and tags agree with custody papers?									
Were all bottles used correct for t	the requested analyses?		(YES)	NO					
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA XES NO									
Were all VOC vials free of air but			(NA) YES	NO					
Was sufficient amount of sample	sent in each bottle?		YES	, NO					
Samples Logged by:		<u>4/1/09</u> Time: _	1658	_					
	** Notify Project Manager	of discrepancies or concerns **		·					
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID or	1 COC					
·									
 									
Additional Notes, Discrepancie	e & Posolutions	1							
Additional Notes, Discrepancie	s, a Resolutions.								
]					
By: Da	te:								
Small Air Bubbles Peabub	ples' LARGE Air Bubbles	Small → "sm"							
- 2mm 2-4 m	nm > 4 mm	Peabubbles → "pb"							
•	. 0 0 0	Large → "lg"							
<u></u>		Headspace → "hs"							

Revision 012 OT68: 00005

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated Analytical Chemists and Consultants	4611 South 134th Place, Suite 100 Tukwila, WA 98168	206-695-6200 206-695-6201 (fax)	Notes/Comments											Received by:	(Signature)	Printed Name:	Сотралу:	Date & Time:	I inits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program
1	Present? (16) packs	Cooler 3 . 4 , 3 . 6	Analysi § Requested	who (フィ	308 808 808	$\times \times \times$	×	×	$X \times X$			3 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Relinquished by:	(Signature)	Printed Name:	Company:	Date & Time:	rd Onerating Procedures and the 481
Page: of	Date: Ice Prese	No. of Coolers: Z Temps	ا م	الار الار الار	5 7° 5, 2°9/ 1~W	,80103 ,2A) ,2A) ,80103 ,80103 ,49,2A) HA93	X X	, X X	×	X = X					777	My Holomba	RI	4 1/2004 1400	ebadology following ABI Standa
	780 9376			CALIM	AMY TICE	Matrix No. Containers	Water 9	6	5	4 9		:		Received by:	(Signature)			Date 8	n otoiraoraaa dtim eoach
Irn-around Requested: ろTD	Phone: 206			ct - Phase 6	MAVIP RUCH/AMY	Date Time	1/09 855	1015	5111	V 1315				Relinquished Pro	(Signature)	DAVID RUCK		Date & Time: 4 2 / 2001 14	according to be a second
ARI Assigned Number: Turn-around Requested:	ARI Client Company: Aspect Consulting UC	Chip Good hve	am	Southwest Harbon Prope	Samplers: Samplers: OB0064	Sample ID	CMP4-09900 090402 4/2/09	204060-98MW	204060-519MJ	204060 - N808MW				Comments/Special Instructions Re	s)	<u> </u>	<u> </u> ŏ	٠ <u> </u>	of the marchael than 100 that the march

Linits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for the acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-Disigned agreement between ARI and the Client. Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless atternate retention schedules have been established by work-order or contract.

PRESERVATION VERIFICATION 04/03/09

1 of 1 Page

Inquiry Number: NONE
Analysis Requested: 04/02/09
Contact: Goodhue, Chip
Client: Aspect Consulting LLC

Logged by: MM Sample Set Used: Yes-481

Validatable Package: No

Deliverables:

ANALYTICAL (S)
RESOURCES
INCORPORATED

ARI Job No: 0168

PC: Mark VTSR: 04/02/09

Project #: 080064

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Sample Site:

SDG No:

Analytical Protocol: In-house

OATE/BY					
AMOUNT ADDED D		[
					7.7000
LOJ					
ADJUSTED LOT TO NUMBER				,	
PARAMETER					-
r DOC FLT					
AK102 DMET DOC <2 FLT FLT	-				
					-
\$2 8 \					
TOC <2					
N023					
TKN <2					
PHOS <2					
PHEN <2					
MET <2		\$ P	50	12 3 13 3	
F0G <2					
COD					
NH3					
WAD >12					
CN >12					
CLIENT ID	CMP4-090402	MW36-090402	CMP15-090402	MW308N-090402	
LOGNUM ARI ID	09-8182. ОТ68A	09-8183 or68B	09-8184 or68c	09-8185 OT68D	

Checked By

OTES: MOMM?

Analytical Resources, Incorporated Analytical Chemists and Consultants	Cooler Receipt Form								
ARI Client: ASpect CONSULTING	Project Name: 50 Uth West tarbor								
	Delivered by: Fed-Ex UPS Courier Hand Delivered Other:								
COC No(s): Assigned ARI Joh No: 0.16 8									
Assigned ARI Job No:	Tracking No:								
Preliminary Examination Phase:									
Were intact, properly signed and dated custody seals attached to the	he outside of to cooler? YES NO								
Were custody papers included with the cooler?									
Were custody papers properly filled out (ink, signed, etc.)									
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)									
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#: 101886								
117 412/1000 - 1400									
Cooler Accepted by: Date: C C C C C C C C									
Log-In Phase:									
Was a temperature blank included in the cooler?	YES 6								
What kind of packing material was used? Bubble Wrap Wet	Ice Gel Packs Baggies Foam Block Paper Other:								
Was sufficient ice used (if appropriate)?									
Were all bottles sealed in individual plastic bags?	YES 60								
Did all bottles arrive in good condition (unbroken)?									
Were all bottle labels complete and legible?									
Did the number of containers listed on COC match with the number	\mathcal{L}_{λ}								
Did all bottle labels and tags agree with custody papers? NO Were all bottles used correct for the requested analyses? NO									
Were all bottles used correct for the requested analyses?									
Do any of the analyses (bottles) require preservation? (attach prese									
Were all VOC vials free of air bubbles?									
Was sufficient amount of sample sent in each bottle?									
Samples Logged by:Date:									
** Notify Project Manager of discrepancies or concerns **									
Sample ID on Bottle Sample ID on COC	Sample ID on Bottle Sample ID on COC								
Additional Notes, Discrepancies, & Resolutions:									
Date:									
By: Date: Small Air Bubbles Peabubbles LARGE Air Bubbles S									
- 2mm 3.4 mm 3.4 mm	Peabubbles → "pb"								
	Large → "ig"								

Cooler Receipt Form

Headspace → "hs"

Revision 012 OTE8 : 00008

Case Narrative

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT38, OT68

prepared by

Analytical Resources, Inc.

OT68: 00009



Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Numbers: OT38, OT68

Date: April 15, 2009

Volatile Organics Analysis

These analyses proceeded without incident of note.

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

A small portion of the extract for the LCS associated with SDG OT68 was lost prior to analysis. Since the percent recoveries for the spiked compounds and both surrogates were within acceptable QC limits, no corrective actions were taken.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

Data Summary Package

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT38, OT68

prepared by

Analytical Resources, Inc.

OT58:00011

Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Numbers: OT38, OT68

Date: April 15, 2009

Volatile Organics Analysis

These analyses proceeded without incident of note.

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

A small portion of the extract for the LCS associated with SDG OT68 was lost prior to analysis. Since the percent recoveries for the spiked compounds and both surrogates were within acceptable QC limits, no corrective actions were taken.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

SEMIVOLATILE ANALYSIS

OT68:00013



Lab Sample ID: OT38A

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 15:57
Instrument/Analyst: NT4/LJR

Sample ID: CMP3-090401 SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%
2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	65.2%
d4-1,2-Dichlorobenzene	58.0%
d4-1,2-Dichlorobenzene	58.0%

OTES: BOB14



Sample ID: MW26R-090401 SAMPLE

Lab Sample ID: OT38B LIMS ID: 09-7966

Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09 Date Analyzed: 04/07/09 16:32 Instrument/Analyst: NT4/LJR

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%
2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	72.0%
d4-1,2-Dichlorobenzene	66.8%

1 8 1 1 2 2

OTS8:00015



Lab Sample ID: OT38C LIMS ID: 09-7967

Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 17:07
Instrument/Analyst: NT4/LJR

Sample ID: MW26R-090401D SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.0%
2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	67.6%
d4-1,2-Dichlorobenzene	70.8%

FORM I

OTES: BOO15



Lab Sample ID: OT38D LIMS ID: 09-7968

Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09 Date Analyzed: 04/07/09 17:41 Instrument/Analyst: NT4/LJR Sample ID: MW44-090401 SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	2.2

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.4%
2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	64.0%
d4-1.2-Dichlorobenzene	53.6%

OTS8: 20017



Sample ID: CMP5-090401 SAMPLE

Lab Sample ID: OT38E LIMS ID: 09-7969

Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09 Date Analyzed: 04/07/09 18:16 Instrument/Analyst: NT4/LJR

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	23

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	38.2%
2-Fluorobiphenyl	56.4%
d14-p-Terphenyl	77.2%
d4-1,2-Dichlorobenzene	35.2%

FORM I

OTGE: 00018



Sample ID: MW308S-090401 SAMPLE

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Lab Sample ID: OT38F LIMS ID: 09-7970

Matrix: Water

Data Release Authorized:

Reported: 04/08/09

080064 Date Sampled: 04/01/09 Date Received: 04/01/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 18:51
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

QC Report No: OT38-Aspect Consulting LLC

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	5.0

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%
2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	65.2%
d4-1 2-Dichlorobenzene	63.28

FORM I QT58:00019



SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT38-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	NBZ_	FBP	TPH	DCB T	OT OUT
	_				
MB-040309	62.0%	68.8%	66.8%	61.6%	0
LCS-040309	64.4%	78.4%	75.6%	66.4%	0
LCSD-040309	65.2%	76.4%	73.6%	62.4%	0
CMP3-090401	56.8%	70.0%	65.2%	58.0%	0
MW26R-090401	68.8%	76.8%	72.0%	66.8%	0
MW26R-090401D	66.0%	73.2%	67.6%	70.8%	0
MW44-090401	54.4%	66.8%	64.0%	53.6%	0
CMP5-090401	38.2%*	56.4%	77.2%	35.2%	1
MW308S-090401	62.8%	71.6%	65.2%	63.2%	0

			LCS/MB LIMITS	QC LIMITS
(NBZ)	=	d5-Nitrobenzene	(54-102)	(40-103)
(FBP)	=	2-Fluorobiphenyl	(47-99)	(35-98)
(TPH)	=	d14-p-Terphenyl	(50-119)	(21-122)
(DCB)	=	d4-1,2-Dichlorobenzene	(39-86)	(28-85)

Prep Method: SW3520C Log Number Range: 09-7965 to 09-7970



Lab Sample ID: OT68A LIMS ID: 09-8182

Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 19:26
Instrument/Analyst: NT4/LJR

Sample ID: CMP4-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%
2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	75.2%
d4-1.2-Dichlorobenzene	60.8%

OTES:00021



Lab Sample ID: OT68B LIMS ID: 09-8183

Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09 Date Analyzed: 04/07/09 20:01 Instrument/Analyst: NT4/LJR Sample ID: MW36-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

080064

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%
2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	61.6%
d4-1 2-Dichlorohenzene	64 0%

FORM I

OTE8:00022



Page 1 of 1

Lab Sample ID: OT68C LIMS ID: 09-8184

Matrix: Water

Data Release Authorized:/

Reported: 04/08/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 20:36
Instrument/Analyst: NT4/LJR

Sample ID: CMP15-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	44.4%
2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	65.2%
d4-1.2-Dichlorobenzene	34.9%

OTSS: @@@23



Page 1 of 1

Lab Sample ID: OT68D LIMS ID: 09-8185 Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09 Date Analyzed: 04/07/09 21:11 Instrument/Analyst: NT4/LJR

Sample ID: MW308N-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	1.1

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.0%
2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	52.4%
d4-1,2-Dichlorobenzene	52.8%

OTES: BBB24



SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT68-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	NBZ	FBP	TPH	DCB T	OT OUT
MB-040309	62.0%	68.8%	66.8%	61.6%	0
LCS-040309	64.4%	78.4%	75.6%	66.4%	0
LCSD-040309	65.2%	76.4%	73.6%	62.4%	0
CMP4-090402	62.0%	72.4%	75.2%	60.8%	0
MW36-090402	65.2%	71.6%	61.6%	64.0%	0
CMP15-090402	44.4%	67.2%	65.2%	34.9%	0
MW308N-090402	52.0%	61.6%	52.4%	52.8%	0

		LCS/MB LIMITS	QC LIMITS
(NBZ) :	= d5-Nitrobenzene	(54-102)	(40-103)
(FBP)	= 2-Fluorobiphenyl	(47-99)	(35-98)
(TPH) =	d14-p-Terphenyl	(50-119)	(21-122)
(DCB)	d4-1,2-Dichlorobenzene	(39-86)	(28-85)

Prep Method: SW3520C

Log Number Range: 09-8182 to 09-8185



Date Extracted LCS/LCSD: 04/03/09

Date Analyzed LCS: 04/07/09 13:37

Instrument/Analyst LCS: NT4/LJR

bis(2-Ethylhexyl)phthalate 20.6

Lab Sample ID: LCS-040309

Data Release Authorized:

Page 1 of 1

LIMS ID: 09-7965 Matrix: Water

Reported: 04/08/09

Sample ID: LCS-040309 LCS/LCSD

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09

Date Received: 04/01/09

20.6

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

82.4%

0.0%

Dilution Factor LCS: 1.00

25.0

LCSD: 1.00

GPC Cleanup: NO

LCSD: NT4/LJR

LCSD: 04/07/09 14:12

Spike LCS Spike LCSD LCSD Added-LCSD Recovery RPD Analyte LCS Added-LCS Recovery

25.0

Semivolatile Surrogate Recovery

82.4%

	LCS	LCSD
d5-Nitrobenzene	64.4%	65.2%
2-Fluorobiphenyl	78.4%	76.4%
d14-p-Terphenyl	75.6%	73.68
d4-1,2-Dichlorobenzene	66.4%	62.4%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

FORM III

OTSB: DDDZE

4B SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

OT38MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT CONSULTING

ARI Job No: OT38

Project: SOUTHWEST HARBOR PRO

Lab File ID: OT38MB

Date Extracted: 04/03/09

Instrument ID: NT4

Date Analyzed: 04/07/09

Matrix: LIQUID

Time Analyzed: 1303

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
				ANALIZED
01	OT38LCSW1	OT38LCSW1	OT38SB	04/07/09
02	OT38LCSDW1	OT38LCSDW1	OT38SBD	04/07/09
03	CMP3-090401	OT38A	OT38A	04/07/09
04	MW26R-090401	OT38B	OT38B	04/07/09
05	MW26R-090401D	OT38C	OT38C	04/07/09
06	MW44-090401	OT38D	OT38D	04/07/09
07	CMP5-090401	OT38E	OT38E	04/07/09
08	MW308S-090401	OT38F	OT38F	
09	CMP4-090402	OT68A	OT68A	04/07/09
10	MW36-090402	OT68B	OT68B	04/07/09
11	CMP15-090402	OT68C	OT68C	04/07/09
12	MW308N-090402	OT68D	OT68D	04/07/09
13	MW300N-090402	O100D	01000	04/07/09
14				
15				
16				
17				
18	-			
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30				

COMMENTS:				
		= : ::	 	

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FORM IV SV

OTES: 20027



Lab Sample ID: MB-040309

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 13:03
Instrument/Analyst: NT4/LJR

Sample ID: MB-040309 METHOD BLANK

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%
2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	66.8%
d4-1,2-Dichlorobenzene	61.6%

OTG8: ØØØ28

SIM SEMIVOLATILE ANALYSIS

OT68:00029



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT38A

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/06/09 Date Analyzed: 04/07/09 13:46 Instrument/Analyst: NT2/PK

Sample ID: CMP3-090401 SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	0.015
205-99-2	Benzo (b) fluoranthene	0.010	0.019
207-08-9	Benzo(k) fluoranthene	0.010	0.011
50-32-8	Benzo(a)pyrene	0.010	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 56.0% d14-Dibenzo(a,h)anthracene 70.7%

OTEA: MOMBA



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: MW26R-090401 SAMPLE

Lab Sample ID: OT38B

LIMS ID: 09-7966 Matrix: Water

Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/06/09 Date Analyzed: 04/07/09 14:13 Instrument/Analyst: NT2/PK

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	0.011
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 66.0% d14-Dibenzo(a,h)anthracene 72.0%

OTSB: 00031



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: MW26R-090401D SAMPLE

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

QC Report No: OT38-Aspect Consulting LLC

Lab Sample ID: OT38C

LIMS ID: 09-7967

Matrix: Water
Data Release Authorized:
Reported: 04/08/09

: **K**

Event: 080064
Date Sampled: 04/01/09
Date Received: 04/01/09

Date Extracted: 04/06/09
Date Analyzed: 04/07/09 14:39
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	0.022
205-99-2	Benzo(b) fluoranthene	0.010	0.018
207-08-9	Benzo(k) fluoranthene	0.010	0.016
50-32-8	Benzo(a)pyrene	0.010	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 69.0% d14-Dibenzo(a,h)anthracene 73.3%

OTGS: 00032



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT38D

LIMS ID: 09-7968 Matrix: Water

Data Release Authorized: Reported: 04/08/09

Date Extracted: 04/06/09 Date Analyzed: 04/07/09 15:06 Instrument/Analyst: NT2/PK

Sample ID: MW44-090401 SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	0.059
218-01-9	Chrysene	0.010	0.19
205-99-2	Benzo(b) fluoranthene	0.010	0.27
207-08-9	Benzo(k) fluoranthene	0.010	0.14
50-32-8	Benzo(a)pyrene	0.010	0.11
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	0.11
53-70-3	Dibenz (a, h) anthracene	0.010	0.035

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 78.7%

OT68: 00023



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: CMP5-090401 SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Lab Sample ID: OT38E

LIMS ID: 09-7969 Matrix: Water

Data Release Authorized:

Date Extracted: 04/06/09

Date Analyzed: 04/07/09 15:33

Instrument/Analyst: NT2/PK

Reported: 04/08/09

Project: SOUTHWEST HARBOR PROJECT-PHASE 2 Event: 080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 60.3% d14-Dibenzo(a,h)anthracene 70.3%

OTEB: BBB34



ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: MW308S-090401

SAMPLE

Lab Sample ID: OT38F

LIMS ID: 09-7970

Matrix: Water
Data Release Authorized:

Reported: 04/08/09

Date Extracted: 04/06/09

Instrument/Analyst: NT2/PK

Date Analyzed: 04/07/09 15:59

ed:

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064
Date Sampled: 04/01/09

Date Received: 04/01/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 64.3% d14-Dibenzo(a,h)anthracene 74.0%

OTES: BOTO



SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT38-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	MNP	DBA	TOT OUT
MB-040609	71.3%	59.7%	0
LCS-040609	65.3%	67.0%	0
LCSD-040609	74.3%	65.0%	0
CMP3-090401	56.0%	70.7%	0
MW26R-090401	66.0%	72.0%	0
MW26R-090401D	69.0%	73.3%	0 .
MW44-090401	64.3%	78.7%	0
CMP5-090401	60.3%	70.3%	0
MW308S-090401	64.3%	74.0%	0

	LCS/MB LIMITS	QC LIMITS
<pre>= d10-2-Methylnaphthalene</pre>	(48-101)	(40-114)
= d14-Dibenzo(a,h)anthracene	(52-108)	(17-122)

Prep Method: SW3510C

Log Number Range: 09-7965 to 09-7970

FORM-II SIM SW8270

Page 1 for OT38

OTSB: GOOBE



ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-040609

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040609

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized:

Reported: 04/08/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Date Extracted LCS/LCSD: 04/06/09

Date Analyzed LCS: 04/07/09 12:53

LCSD: 04/07/09 13:20

Instrument/Analyst LCS: NT2/PK

LCSD: NT2/PK

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a)anthracene	0.252	0.300	84.0%	0.246	0.300	82.0%	2.4%
Chrysene	0.201	0.300	67.0%	0.200	0.300	66.7%	0.5%
Benzo(b)fluoranthene	0.276	0.300	92.0%	0.239	0.300	79.7%	14.4%
Benzo(k)fluoranthene	0.221	0.300	73.7%	0.245	0.300	81.7%	10.3%
Benzo(a)pyrene	0.249	0.300	83.0%	0.243	0.300	81.0%	2.4%
Indeno(1,2,3-cd)pyrene	0.174	0.300	58.0%	0.170	0.300	56.7%	2.3%
Dibenz (a, h) anthracene	0.190	0.300	63.3%	0.179	0.300	59.7%	6.0%

Reported in $\mu g/L$ (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	65.3%	74.3%
d14-Dibenzo(a, h) anthracene	67.0%	65.0%

OTSB: 00037

FORM III

4B SEMIVOLATILE METHOD BLANK SUMMARY

OT38MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT

ARI Job No: OT38

Project: SW HARBOR PROJECT

Lab File ID: 040701

Date Extracted: 04/06/09

Instrument ID: NT2

Date Analyzed: 04/07/09

Matrix: LIQUID

Time Analyzed: 1226

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

COMMENTS:	

page 1 of 1

FORM IV SV

OTSS: 00038



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: MB-040609 METHOD BLANK

QC Report No: OT38-Aspect Consulting LLC

Lab Sample ID: MB-040609

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized:

Date Extracted: 04/06/09

Date Analyzed: 04/07/09 12:26

Instrument/Analyst: NT2/PK

Reported: 04/08/09

Project: SOUTHWEST HARBOR PROJECT-PHASE 2 Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 71.3% d14-Dibenzo(a,h)anthracene 59.7%

OTSB: GOO39



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT68A

LIMS ID: 09-8182

Matrix: Water Data Release Authorized:

Reported: 04/14/09

Date Extracted: 04/07/09

Date Analyzed: 04/13/09 18:59 Instrument/Analyst: NT2/VTS

Sample ID: CMP4-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 72.0% d14-Dibenzo(a,h)anthracene 66.7%

OTES: OOG40



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT68B

LIMS ID: 09-8183 Matrix: Water

Data Release Authorized;

Reported: 04/14/09

Date Extracted: 04/07/09

Date Analyzed: 04/13/09 19:26

Instrument/Analyst: NT2/VTS

Sample ID: MW36-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 63.3% d14-Dibenzo(a,h)anthracene 63.3%

OTEB: MARUI



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: CMP15-090402

SAMPLE

Lab Sample ID: OT68C

LIMS ID: 09-8184

Matrix: Water Data Release Authorized:

Date Extracted: 04/07/09 Date Analyzed: 04/13/09 19:52

Instrument/Analyst: NT2/VTS

Reported: 04/14/09

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 63.0%
d14-Dibenzo(a,h)anthracene 60.7%

OTGS: BBBUZ



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: OT68D

LIMS ID: 09-8185 Matrix: Water

Data Release Authorized:

Reported: 04/14/09

Date Extracted: 04/07/09 Date Analyzed: 04/13/09 20:18

Instrument/Analyst: NT2/VTS

Sample ID: MW308N-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 61.7% d14-Dibenzo(a,h)anthracene 64.3%

OTSB: ADDIE



SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT68-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	MNP	DBA	TOT OUT
MB-040709	64.7%	71.0%	0
LCS-040709	63.3%	71.3%	0
LCSD-040709	65.0%	70.7%	0
CMP4-090402	72.0%	66.7%	0
MW36-090402	63.3%	63.3%	0
CMP15-090402	63.0%	60.7%	0
MW308N-090402	61.7%	64.3%	0

			LCS/MB LIMITS	QC LIMITS	
(MNP)	=	d10-2-Methylnaphthalene	(48-101)	(40-114)	
(DBA)	=	d14-Dibenzo(a,h)anthracene	(52-108)	(17-122)	

Prep Method: SW3510C Log Number Range: 09-8182 to 09-8185



ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-040709

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040709

LIMS ID: 09-8182 Matrix: Water

Data Release Authorized:

Reported: 04/14/09

1/3

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 04/07/09

Date Analyzed LCS: 04/13/09 14:09 LCSD: 04/13/09 14:35

Instrument/Analyst LCS: NT2/VTS

LCSD: NT2/VTS

Sample Amount LCS: 500 mL

LCSD: 500 mL Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00 LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a) anthracene	0.244	0.300	81.3%	0.243	0.300	81.0%	0.4%
Chrysene	0.210	0.300	70.0%	0.213	0.300	71.0%	1.4%
Benzo(b)fluoranthene	0.258	0.300	86.0%	0.250	0.300	83.3%	3.1%
Benzo(k)fluoranthene	0.276	0.300	92.0%	0.267	0.300	89.0%	3.3%
Benzo(a)pyrene	0.250	0.300	83.3%	0.238	0.300	79.3%	4.9%
Indeno(1,2,3-cd)pyrene	0.204	0.300	68.0%	0.197	0.300	65.7%	3.5%
Dibenz(a,h)anthracene	0.206	0.300	68.7%	0.206	0.300	68.7%	0.0%

Reported in $\mu g/L$ (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	63.3%	65.0%
d14-Dibenzo(a,h)anthracene	71.3%	70.7%

OTES: @@@45

FORM III

4B SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

OT63MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: ASPECT

Lab File ID: 041301

ARI Job No: OT68

Instrument ID: NT2

Matrix: LIQUID

Project: SOUTHWEST HARBOR PROJECT

Date Extracted: 04/07/09

Date Analyzed: 04/13/09

Time Analyzed: 1342

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01 02 03 04 05 06 07	OT63LCSW1 OT63LCSDW1 CMP4-090402 MW36-090402 CMP15-090402 MW308N-090402	OT63LCSW1 OT63LCSDW1 OT68A OT68B OT68C OT68D	041302 041303 041313 041314 041315 041316	04/13/09 04/13/09 04/13/09 04/13/09 04/13/09 04/13/09
08 09 10 11 12				
13 14 15 16 17				
18 19 20 21 22				
23 24 25 26 27				
28 29 30				

COMMENTS:			

page 1 of 1

FORM IV SV

OTS8: 20245



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Lab Sample ID: MB-040709

LIMS ID: 09-8182 Matrix: Water

Data Release Authorized:

Reported: 04/14/09

Date Extracted: 04/07/09

Date Analyzed: 04/13/09 13:42 Instrument/Analyst: NT2/VTS

Sample ID: MB-040709

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

METHOD BLANK

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz (a, h) anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.7%
d14-Dibenzo(a,h)anthracene	71.0%

OTGS: ØØ947

PCB ANALYSIS

OT68: 00048



Sample ID: CMP3-090401 SAMPLE

Lab Sample ID: OT38A LIMS ID: 09-7965

Matrix: Water

Data Release Authorized: Reported: 04/10/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

Date Extracted: 04/04/09			
Date Analyzed: 04/07/09 15:06			
<pre>Instrument/Analyst: ECD5/JGR</pre>			

GPC Cleanup: No Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.40	< 0.40 Y
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.40	< 0.40 Y
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	56.0%
Tetrachlorometaxylene	68.0%

OTEB: 00049



Sample ID: MW26R-090401 SAMPLE

Lab Sample ID: OT38B LIMS ID: 09-7966

Matrix: Water

Data Release Authorized Reported: 04/10/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09

Date Received: 04/01/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

Date Extracted: 04/04/09	
Date Analyzed: 04/07/09 15:2	3
<pre>Instrument/Analyst: ECD5/JGR</pre>	
GPC Cleanup: No	

Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	46.8%
Tetrachlorometaxvlene	57.2%

OTEB: COOSE



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Sample ID: MW26R-090401D SAMPLE

Lab Sample ID: OT38C LIMS ID: 09-7967

Matrix: Water

Data Release Authorized: Reported: 04/10/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09
Date Received: 04/01/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

Date Extracted: 04/04/09
Date Analyzed: 04/07/09 15:40
Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.8%
Tetrachlorometaxvlene	62.2%

OTSS: MARS1



Lab Sample ID: OT38D LIMS ID: 09-7968

Matrix: Water

Data Release Authorized:

Reported: 04/10/09

Date Extracted: 04/04/09 Date Analyzed: 04/07/09 15:58 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes

Sample ID: MW44-090401 SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.015	< 0.015 Y

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.2%
Tetrachlorometaxylene	57.5%

OTES: MMG52



Sample ID: CMP5-090401 SAMPLE

Lab Sample ID: OT38E LIMS ID: 09-7969

Matrix: Water

Data Release Authorized: Reported: 04/10/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00 Silica Gel: No

Acid Cleanup: Yes

Date	Extracte	ed:	04/	04/09	9
Date	Analyzed	1:	04/0	7/09	16:15
Inst	rument/Ar	ıal	yst:	ECD5	JGR
GPC (Cleanup:	No)		

Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	52.5%
Tetrachlorometaxylene	58.2%

OTAS: PODE



Sample ID: MW308S-090401 SAMPLE

Lab Sample ID: OT38F LIMS ID: 09-7970

Matrix: Water

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Data Release Authorized:

080064

Reported: 04/10/09

Date Sampled: 04/01/09 Date Received: 04/01/09

Date Extracted: 04/04/09 Date Analyzed: 04/07/09 16:32 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	54.0%
Tetrachlorometaxylene	56.2%

OTES: COCE!



SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

QC Report No: OT38-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2 Matrix: Water

080064

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB - 040409	E4 00	26 100	F3 F0	24 02	
	54.8%	36-102	51.5%	34-93	0
LCS-040409	62.5%	36-102	57.5%	34-93	0
LCSD-040409	60.0%	36-102	59.0%	34-93	0
CMP3-090401	56.0%	19-121	68.0%	30-98	0
MW26R-090401	46.8%	19-121	57.2%	30-98	0
MW26R-090401D	60.8%	19-121	62.2%	30-98	0
MW44-090401	62.2%	19-121	57.5%	30-98	0
CMP5-090401	52.5%	19-121	58.2%	30-98	0
MW308S-090401	54.0%	19-121	56.2%	30-98	0

Prep Method: SW3510C

Log Number Range: 09-7965 to 09-7970

FORM-II SW8082

Page 1 for OT38

OTGB: @@@55



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

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Sample ID: LCS-040409 LCS/LCSD

Lab Sample ID: LCS-040409

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized:

Reported: 04/10/09

Date Extracted LCS/LCSD: 04/04/09

Date Analyzed LCS: 04/07/09 14:32 LCSD: 04/07/09 14:49

Instrument/Analyst LCS: ECD5/JGR

LCSD: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00 Silica Gel: No

Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.041	0.050	82.0%	0.042	0.050	84.0%	2.4%
Aroclor 1260	0.044	0.050	88.0%	0.042	0.050	84.0%	4.7%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	62.5%	60.0%
Tetrachlorometaxylene	57.5%	59.0%

Results reported in μ g/L RPD calculated using sample concentrations per SW846.

FORM III

OTES: PPRE

PCB METHOD BLANK SUMMARY

BLANK NO.

OT38MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: UNSPECIFIED

ARI Job No.: OT38

Project: SOUTHWEST HARBOR PRO

Lab Sample ID: OT38MBW1

Lab File ID: 0407B025

Date Extracted: 04/04/09

Matrix: LIQUID

Date Analyzed: 04/07/09

Instrument ID: ECD5

Time Analyzed: 1415

GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
	=======================================	=======	========
01	OT38LCSW1	OT38LCSW1	04/07/09
02	0130100011	OT38LCSDW1	04/07/09
03	CMP3-090401	OT38A	04/07/09
04	MW26R-090401	OT38B	04/07/09
05	MW26R-090401D	OT38C	04/07/09
06	MW44-090401	OT38D	04/07/09
07	CMP5-090401	OT38E	04/07/09
08	MW308S-090401	OT38F	04/07/09

ALL RUNS ARE DUAL COLUMN

page 1 of 1

FORM IV PCB

OTEB: QQQE7



METHOD BLANK

Lab Sample ID: MB-040409

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized:

Reported: 04/10/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Sample ID: MB-040409

080064

Date Sampled: NA Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

Date Extracted: 04/04/09
Date Analyzed: 04/07/09 14:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	54.8%
Tetrachlorometaxvlene	51.5%

OTES: 00058



Sample ID: CMP4-090402 SAMPLE

Lab Sample ID: OT68A LIMS ID: 09-8182

Matrix: Water

Data Release Authorized: Reported: 04/13/09

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 1000 mL

Final Extract Volume: 0.50 mL Dilution Factor: 1.00 Silica Gel: No

Silica Gel: No Acid Cleanup: Yes

Date Extracted: 04/07/09
Date Analyzed: 04/09/09 18:15
Instrument/Analyst: ECD5/PK

GPC Cleanup: No Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	55.8%
Tetrachlorometaxylene	49.2%

OTSE: 00059



Sample ID: MW36-090402 SAMPLE

Lab Sample ID: OT68B LIMS ID: 09-8183

QC Report No: OT68-Aspect Consulting LLC

Matrix: Water

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Data Release Authorized: Reported: 04/13/09

Date Sampled: 04/02/09 Date Received: 04/02/09

Date Extracted: 04/07/09 Date Analyzed: 04/09/09 18:32 Instrument/Analyst: ECD5/PK

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	53.2%
Tetrachlorometaxylene	43.5%

OTSA: 00050



Sample ID: CMP15-090402 SAMPLE

Lab Sample ID: OT68C LIMS ID: 09-8184

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water Data Release Authorized: Reported: 04/13/09

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Date Extracted: 04/07/09 Date Analyzed: 04/09/09 18:50 Instrument/Analyst: ECD5/PK

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	45.0%
Tetrachlorometaxylene	50.5%

OTES: WWGG1



Sample ID: MW308N-090402

SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Lab Sample ID: OT68D LIMS ID: 09-8185

Matrix: Water

Data Release Authorized:

Reported: 04/13/09

Project: SOUTHWEST HARBOR PROJECT-PHASE 2 080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

> Silica Gel: No Acid Cleanup: Yes

Date Extracted: 04/07/09
Date Analyzed: 04/09/09 19:07
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.015	< 0.015 Y

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	56.5%
Tetrachlorometaxylene	48.8%

OTG8: MAMS2



SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT68-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-040709	67.0%	36-102	63.0%	34-93	0
LCS-040709	65.5%	36-102	58.5%	34-93	Ö
LCSD-040709	73.2%	36-102	65.2%	34-93	0
CMP4-090402	55.8%	19-121	49.2%	30-98	0
MW36-090402	53.2%	19-121	43.5%	30-98	0
CMP15-090402	45.0%	19-121	50.5%	30-98	0
MW308N-090402	56.5%	19-121	48.8%	30-98	0

Prep Method: SW3510C

Log Number Range: 09-8182 to 09-8185

FORM-II SW8082

Page 1 for OT68

OTSS: MOSS



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: LCS-040709

LIMS ID: 09-8182

Matrix: Water

Data Release Authorized:

Reported: 04/13/09

Date Extracted LCS/LCSD: 04/07/09

Date Analyzed LCS: 04/09/09 15:06

LCSD: 04/09/09 15:23

Instrument/Analyst LCS: ECD5/PK

LCSD: ECD5/PK

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: LCS-040709 LCS/LCSD

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Silica Gel: No Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.040	0.050	80.0%	0.047	0.050	94.0%	16.1%
Aroclor 1260		0.050	90.0%	0.051	0.050	102%	12.5%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	65.5%	73.2%
Tetrachlorometaxylene	58.5%	65.2%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

FORM III

OTG8: @@@G4

PCB METHOD BLANK SUMMARY

BLANK NO.

OT68MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: UNSPECIFIED

ARI Job No.: OT68

Project: SOUTHWEST HARBOR PRO

Lab Sample ID: OT68MBW1

Lab File ID: 0409B010

Date Extracted: 04/07/09

Matrix: LIQUID

Date Analyzed: 04/09/09

Instrument ID: ECD5

Time Analyzed: 1449

GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
	=======================================	========	========
01	OT68LCSW1	OT68LCSW1	04/09/09
02	OT68LCSDW1	OT68LCSDW1	04/09/09
03	CMP4-090402	OT68A	04/09/09
04	MW36-090402	OT68B	04/09/09
05	CMP15-090402	OT68C	04/09/09
06	MW308N-090402	OT68D	04/09/09
		ľ	, ,

ALL RUNS ARE DUAL COLUMN

page 1 of 1

FORM IV PCB

OTG8: MMMES



Lab Sample ID: MB-040709

Data Release Authorized:

Matrix: Water

LIMS ID: 09-8182

Reported: 04/13/09

Sample ID: MB-040709 METHOD BLANK

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

> Silica Gel: No Acid Cleanup: Yes

Date Extracted: 04/07/09 Date Analyzed: 04/09/09 14:49 Instrument/Analyst: ECD5/PK

GPC Cleanup: No Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010 <	0.010 U
53469-21-9	Aroclor 1242	0.010 <	0.010 U
12672-29-6	Aroclor 1248	0.010 <	0.010 U
11097-69-1	Aroclor 1254	0.010 <	0.010 U
11096-82-5	Aroclor 1260	0.010 <	0.010 U
11104-28-2	Aroclor 1221	0.010 <	0.010 U
11141-16-5	Aroclor 1232	0.010 <	0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.0%
Tetrachlorometaxylene	63.0%

OTEE: COREE

TPHD ANALYSIS

OT68:00067



ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1 Matrix: Water

Data Release Authorized Reported: 04/07/09

QC Report No: OT38-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE

080064

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-040309 09-7965	Method Blank HC ID:	04/03/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 69.8%
OT38A 09-7965	CMP3-090401 HC ID:	04/03/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 79.8%
OT38B 09-7966	MW26R-090401 HC ID:	04/03/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 85.8%
OT38C 09-7967	MW26R-090401D HC ID:	04/03/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 80.4%
OT38D 09-7968	MW44-090401 HC ID:	04/03/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 78.0%
OT38E 09-7969	CMP5-090401 HC ID:	04/03/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 82.2%
OT38F 09-7970	MW308S-090401 HC ID:	04/03/09	04/04/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 82.2%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

OTES: 00058



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	OTER	TOT OUT
		
MB-040309	69.8%	0
LCS-040309	94.7%	0
LCSD-040309	93.1%	0
CMP3-090401	79.8%	0
MW26R-090401	85.8%	0
MW26R-090401D	80.4%	0
MW44-090401	78.0%	0
CMP5-090401	82.2%	0
MW308S-090401	82.2%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(49-118)

(45-112)

Prep Method: SW3510C

Log Number Range: 09-7965 to 09-7970

FORM-II TPHD

Page 1 for OT38

OTGE: MOMES



ORGANICS ANALYSIS DATA SHEET NWTPHD by GC/FID-Silica and Acid Cleaned Page 1 of 1

Sample ID: LCS-040309

LCS/LCSD

Lab Sample ID: LCS-040309

LIMS ID: 09-7965

Matrix: Water

Data Release Authorized: /

Instrument/Analyst LCS: FID/PKC

Reported: 04/07/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09

Date Received: 04/01/09

Sample Amount LCS: 500 mL Date Extracted LCS/LCSD: 04/03/09

LCSD: 500 mL

Final Extract Volume LCS: 1.0 mL Date Analyzed LCS: 04/04/09 17:58 LCSD: 04/04/09 18:17

LCSD: 1.0 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.47	3.00	82.3%	2.44	3.00	81.3%	1.2%

TPHD Surrogate Recovery

LCS LCSD

94.7% 93.1% o-Terphenyl

Results reported in mg/L RPD calculated using sample concentrations per SW846.

LCSD: FID/PKC

FORM III

OTES: BBB7B

OT38MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT CONSULTING

SDG No.: OT38

Project No.: SOUTHWEST HARBOR

Date Extracted: 04/03/09

Matrix: LIQUID

Date Analyzed: 04/04/09

Instrument ID : FID3A

Time Analyzed: 1739

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED		
01 02 03 04 05 06 07 08 09 10 11 12 13	OT38LCSW1 OT38LCSDW1 CMP3-090401 MW26R-090401 MW26R-090401 MW44-090401 CMP5-090401 MW308S-09040	OT38LCSW1 OT38LCSDW1 OT38A OT38B OT38C OT38D OT38E OT38F	04/04/09 04/04/09 04/04/09 04/04/09 04/04/09 04/04/09 04/04/09		3
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			-23 -23 -23 -23 -23 -23 -23 -23 -23 -23		

page 1 of 1

FORM IV TPH

OTSS: MARTI



ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Matrix: Water

Page 1 of 1

080064

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE

Data Release Authorized:

Reported: 04/10/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-040609 09-8182	Method Blank HC ID:	04/06/09	04/08/09 FID4B	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 89.8%
OT68A 09-8182	CMP4-090402 HC ID:	04/06/09	04/08/09 FID4B	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 82.2%
OT68B 09-8183	MW36-090402 HC ID:	04/06/09	04/08/09 FID4B	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 80.4%
OT68C 09-8184	CMP15-090402 HC ID:	04/06/09	04/08/09 FID4B	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 88.4%
OT68D 09-8185	MW308N-090402 HC ID:	04/06/09	04/08/09 FID4B	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 87.8%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

0168:00072



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT68-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	OTER	TOT OUT
MB-040609	89.8%	0
LCS-040609	93.1%	0
LCSD-040609	97.3%	0
CMP4-090402	82.2%	0
MW36-090402	80.4%	0
CMP15-090402	88.4%	0
MW308N-090402	87.8%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(49-118) (45-112)

Prep Method: SW3510C

Log Number Range: 09-8182 to 09-8185

OTES: 00073



ORGANICS ANALYSIS DATA SHEET NWTPHD by GC/FID-Silica and Acid Cleaned Page 1 of 1

Sample ID: LCS-040609 LCS/LCSD

Lab Sample ID: LCS-040609

LIMS ID: 09-8182

Matrix: Water

Data Release Authorized:

Reported: 04/10/09

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09

Date Received: 04/02/09

Date Extracted LCS/LCSD: 04/06/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 1.0 mL Date Analyzed LCS: 04/08/09 15:35 LCSD: 04/08/09 15:49

LCSD: 1.0 mL

Dilution Factor LCS: 1.00 Instrument/Analyst LCS: FID/JGR LCSD: FID/JGR

LCSD: 1.00

LCS Spike LCSD Spike LCS LCSD Added-LCSD Recovery Range Added-LCS Recovery RPD Diesel 2.41 3.00 80.3% 2.43 3.00 81.0% 0.8%

TPHD Surrogate Recovery

LCS LCSD

o-Terphenyl

93.1% 97.3%

Results reported in mg/L RPD calculated using sample concentrations per SW846.

FORM III

OT68: 20074

BLANK NO.

OT63MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: ASPECT CONSULTING

SDG No.: OT68

Project No.: SOUTHWEST HARBOR PROJECT

Date Extracted: 04/06/09

Matrix: LIQUID

Date Analyzed: 04/08/09

Instrument ID : FID4B

Time Analyzed: 1521

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT	LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
		=====================================	
01	OT63LCSW1	OT63LCSW1	04/08/09
02	OT63LCSDW1	OT63LCSDW1	04/08/09
03	CMP4-090402	OT68A	04/08/09
	MW36-090402	OT68B	04/08/09
	CMP15-090402	OT68C	04/08/09
06	MW308N-09040	OT68D	04/08/09
,		- 12.	

page 1 of 1

FORM IV TPH

OTEB: MONTO

METALS ANALYSIS

QT68:00076



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38A

LIMS ID: 09-7965 Matrix: Water

Data Release Authorized: Reported: 04/10/09

Sample ID: CMP3-090401

SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/06/09	200.8	04/09/09	7440-38-2	Arsenic	0.5	6.6	
200.8	04/06/09	200.8	04/08/09	7439-92-1	Lead	1	4	

U-Analyte undetected at given RL RL-Reporting Limit

OTES: GGG77



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38B LIMS ID: 09-7966

Matrix: Water

Data Release Authorized Reported: 04/10/09

Sample ID: MW26R-090401

SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/06/09	200.8	04/09/09	7440-36-0	Antimony	1	1	U
200.8	04/06/09	200.8	04/09/09	7440-38-2	Arsenic	2	2	U
200.8	04/06/09	200.8	04/09/09	7440-47-3	Chromium	2	3	
200.8	04/06/09	200.8	04/09/09	7440-50-8	Copper	2	2	U
200.8	04/06/09	200.8	04/09/09	7439-92-1	Lead	5	5	U
200.8	04/06/09	200.8	04/09/09	7440-02-0	Nickel	2	6	

U-Analyte undetected at given RL RL-Reporting Limit

OTGS: 00078



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38C

LIMS ID: 09-7967 Matrix: Water

Data Release Authorized: Reported: 04/10/09

Sample ID: MW26R-090401D

SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/06/09	200.8	04/09/09	7440-36-0	Antimony	1	1	Ü
200.8	04/06/09	200.8	04/09/09	7440-38-2	Arsenic	2	2	U
200.8	04/06/09	200.8	04/09/09	7440-47-3	Chromium	2	3	
200.8	04/06/09	200.8	04/09/09	7440-50-8	Copper	2	2	U
200.8	04/06/09	200.8	04/09/09	7439-92-1	Lead	5	5	U
200.8	04/06/09	200.8	04/09/09	7440-02-0	Nickel	2	7	

U-Analyte undetected at given RL RL-Reporting Limit

OTSS:00079



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38D LIMS ID: 09-7968

Matrix: Water

Data Release Authorized: Reported: 04/10/09

Sample ID: MW44-090401

SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L Ç
04/06/09	200.8	04/08/09	7440-36-0	Antimony	0.2	0.6
04/06/09	200.8	04/08/09	7440-38-2	Arsenic	0.2	0.8
04/06/09	200.8	04/08/09	7440-47-3	Chromium	0.5	11.0
04/06/09	200.8	04/08/09	7440-50-8	Copper	0.5	18.0
04/06/09	200.8	04/08/09	7439-92-1	Lead	1	33
04/06/09	200.8	04/08/09	7440-02-0	Nickel	0.5	4.3
	Date 04/06/09 04/06/09 04/06/09 04/06/09	Date Method 04/06/09 200.8 04/06/09 200.8 04/06/09 200.8 04/06/09 200.8 04/06/09 200.8	Date Method Date 04/06/09 200.8 04/08/09 04/06/09 200.8 04/08/09 04/06/09 200.8 04/08/09 04/06/09 200.8 04/08/09 04/06/09 200.8 04/08/09 04/06/09 200.8 04/08/09	Date Method Date CAS Number 04/06/09 200.8 04/08/09 7440-36-0 04/06/09 200.8 04/08/09 7440-38-2 04/06/09 200.8 04/08/09 7440-47-3 04/06/09 200.8 04/08/09 7440-50-8 04/06/09 200.8 04/08/09 7439-92-1	Date Method Date CAS Number Analyte 04/06/09 200.8 04/08/09 7440-36-0 Antimony 04/06/09 200.8 04/08/09 7440-38-2 Arsenic 04/06/09 200.8 04/08/09 7440-47-3 Chromium 04/06/09 200.8 04/08/09 7440-50-8 Copper 04/06/09 200.8 04/08/09 7439-92-1 Lead	Date Method Date CAS Number Analyte RL 04/06/09 200.8 04/08/09 7440-36-0 Antimony 0.2 04/06/09 200.8 04/08/09 7440-38-2 Arsenic 0.2 04/06/09 200.8 04/08/09 7440-47-3 Chromium 0.5 04/06/09 200.8 04/08/09 7440-50-8 Copper 0.5 04/06/09 200.8 04/08/09 7439-92-1 Lead 1

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38E

LIMS ID: 09-7969 Matrix: Water

Data Release Authorized Reported: 04/10/09

Sample ID: CMP5-090401

SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/06/09	200.8	04/08/09	7440-38-2	Arsenic	0.2	1.9	
200.8	04/06/09	200.8	04/08/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit

OTES: MMM81



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38F LIMS ID: 09-7970

Matrix: Water

Data Release Authorized Reported: 04/10/09

Sample ID: MW308S-090401

SAMPLE

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09 Date Received: 04/01/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/06/09	200.8	04/09/09	7440-38-2	Arsenic	2	3	
200.8	04/06/09	200.8	04/09/09	7439-92-1	Lead	5	5	U

U-Analyte undetected at given RL RL-Reporting Limit

OTES: 00082



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38LCS

LIMS ID: 09-7966

Matrix: Water

Data Release Authorized Reported: 04/10/09

Sample ID: LAB CONTROL

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	25.2	25.0	101%	
Arsenic	200.8	28.2	25.0	113%	
Chromium	200.8	27.4	25.0	110%	
Copper	200.8	28.4	25.0	114%	
Lead	200.8	27	25	108%	
Nickel	200.8	27.8	25.0	111%	

Reported in µg/L

N-Control limit not met Control Limits: 80-120%

FORM-VII

OTSA: 00083



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT38MB

LIMS ID: 09-7966 Matrix: Water

Data Release Authorized Reported: 04/10/09

Sample ID: METHOD BLANK

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/06/09	200.8	04/08/09	7440-36-0	Antimony	0.2	0.2	U
200.8	04/06/09	200.8	04/08/09	7440-38-2	Arsenic	0.2	0.2	Ū
200.8	04/06/09	200.8	04/08/09	7440-47-3	Chromium	0.5	0.5	U
200.8	04/06/09	200.8	04/08/09	7440-50-8	Copper	0.5	0.5	U
200.8	04/06/09	200.8	04/08/09	7439-92-1	Lead	1	1	U
200.8	04/06/09	200.8	04/08/09	7440-02-0	Nickel	0.5	0.5	U

U-Analyte undetected at given RL RL-Reporting Limit

OTEE: OEGE!



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: OT68A

LIMS ID: 09-8182

Matrix: Water Data Release Authorized

Reported: 04/10/09

Sample ID: CMP4-090402

SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/07/09	200.8	04/09/09	7440-38-2	Arsenic	0.2	1.1	
200.8	04/07/09	200.8	04/08/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit

OTEB: MARSE



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT68B

LIMS ID: 09-8183 Matrix: Water

Data Release Authorized

Reported: 04/10/09

Sample ID: MW36-090402 SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/07/09	200.8	04/09/09	7440-36-0	Antimony	2	2	U
200.8	04/07/09	200.8	04/09/09	7440-38-2	Arsenic	5	7	
200.8	04/07/09	200.8	04/09/09	7440-47-3	Chromium	5	5	U
200.8	04/07/09	200.8	04/09/09	7440-50-8	Copper	5	5	U
200.8	04/07/09	200.8	04/09/09	7439-92-1	Lead	10	10	U
200.8	04/07/09	200.8	04/09/09	7440-02-0	Nickel	· 5	9	

U-Analyte undetected at given RL RL-Reporting Limit

OTES: MAGSE



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT68C

LIMS ID: 09-8184

Matrix: Water Data Release Authorize

Reported: 04/10/09

Sample ID: CMP15-090402

SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/07/09	200.8	04/09/09	7440-36-0	Antimony	0.5	0.5	U
200.8	04/07/09	200.8	04/09/09	7440-38-2	Arsenic	1	1	
200.8	04/07/09	200.8	04/09/09	7440-47-3	Chromium	1	1	U
200.8	04/07/09	200.8	04/09/09	7440-50-8	Copper	1	1	U
200.8	04/07/09	200.8	04/09/09	7439-92-1	Lead	2	2	U
200.8	04/07/09	200.8	04/09/09	7440-02-0	Nickel	1	4	

 $\begin{tabular}{ll} U-Analyte undetected at given RL \\ RL-Reporting Limit \\ \end{tabular}$

OTEB: BBBB7



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT68D

LIMS ID: 09-8185

Matrix: Water

Data Release Authorized

Reported: 04/10/09

Sample ID: MW308N-090402

SAMPLE

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/02/09 Date Received: 04/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/07/09	200.8	04/09/09	7440-38-2	Arsenic	0.5	16.8	
200.8	04/07/09	200.8	04/08/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit

OTEB: BEGGE



TOTAL METALS

Page 1 of 1

Lab Sample ID: OT68LCS

LIMS ID: 09-8182 Matrix: Water

Data Release Authorized

Reported: 04/10/09

Sample ID: LAB CONTROL

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.5	25.0	98.0%	
Arsenic	200.8	26.1	25.0	104%	
Chromium	200.8	25.5	25.0	102%	
Copper	200.8	26.5	25.0	106%	
Lead	200.8	24	25	96.0%	
Nickel	200.8	25.9	25.0	104%	

Reported in $\mu g/L$

N-Control limit not met Control Limits: 80-120%

OTGA: 00089



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: OT68MB

LIMS ID: 09-8182 Matrix: Water

Data Release Authorized

Reported: 04/10/09

Sample ID: METHOD BLANK

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	04/07/09	200.8	04/08/09	7440-36-0	Antimony	0.2	0.2	U
200.8	04/07/09	200.8	04/09/09	7440-38-2	Arsenic	0.2	0.2	U
200.8	04/07/09	200.8	04/08/09	7440-47-3	Chromium	0.5	0.5	U
200.8	04/07/09	200.8	04/09/09	7440-50-8	Copper	0.5	0.5	U
200.8	04/07/09	200.8	04/08/09	7439-92-1	Lead	1	1	U
200.8	04/07/09	200.8	04/09/09	7440-02-0	Nickel	0.5	0.5	U

U-Analyte undetected at given RL RL-Reporting Limit

OTS8: 00090



16 September 2009

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110

RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Job: PM70

Dear Chip:

Please find enclosed the original chain of custody (COC) record and the final data package for samples from the project referenced above. Analytical Resources, Inc. accepted six water samples in good condition on September 2, 2009. The samples were analyzed for VOAs, BEHP, PAHs, PCBs, NWTPH-Dx and total metals as requested.

Problems associated with these analyses are discussed in the case narrative.

A copy of this package will be kept on file at ARI. If you have questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File PM70

MDH/mdh

Chain of Custody Documentation

prepared for

Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP, 080064

ARI JOB NO: PM70

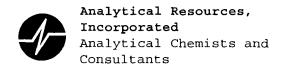
prepared by

Analytical Resources, Inc.

Analytical Resources, Incorporated Analytical Chemists and Consultants	4611 South 134th Place, Suite 100 Tukwila WA 98168	206-695-6200 206-695-6201 (fax)	Notes/Comments											Received by: (Signature)	Printed Name:	Company:	Date & Time:
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		16.6,11.4,9.8	Analysis Requested	toil o chan	H=81 135210 125210	XXX	×	X	X	人 ×	メーメ			Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:
9/2/09	of	Cooler Temps: 10	Ana	wis?	1893 1893 1893	X	, X	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	·	人	\ \ \ \ \ \			Relir (Sign			
Date: $9/2$	Page:	No. of Coolers:			978 337 'SV)	>	X	X	* >	×	\ \ \				anydsen		1345
	 	ŭ			Containers	×	1 21	12	(71	(71	X 6			Received by: (Signature)	Printed Name:	pany:	9 2/09
STD	Phone:		; ;	Samplers: Bob Hantord, Annytic	Matrix No.	M					1			Re (Si	E.	Com	Date O
	Phone:		í	rect-Plane	Time	5060	5001	ahal	5111	0711	1240			12/	1 TICP	ect.	9 1345
Turn-around Requested:	ا الا	D	(Samplers: POP HO	Date	6/2/6					个			Relinqushed by: (Signature)	Printed Name:	Company: JSPECT	Date & Time;
ARI Assigned Nerriber:	ARI Client Company: ASPECT CONSULTING LLC	Chip codhue	Client Project Name:	Southwest Havbor Project - Phase LEWing Client Project #: Samplers: Bob Hanford Any Till	Sample ID	CMP2-090902	MW125-090902	CMP17-090902	FM105-090902	PM105-090902D	cmP5-090902			Comments/Special Instructions			

said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or cosigned agreement between ARI and the Client. Linits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program are standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for an arrival and the content in any content in a

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alernate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: AS06	2Ct	Project Name:		
COC No(s):	NA	Delivered by: Fed-Ex UPS (Courie Hand Delivered O	ther:
Assigned ARI Job No:	·	Tracking No:		NA
Preliminary Examination Phase	y:			
Were intact, properly signed and	d dated custody seals attached	to the outside of to cooler?	YES	(NO)
Were custody papers included w	vith the cooler?		ÆS.	NO
Were custody papers properly fi			€ S	NO
	, , ,	emistry) 10.4	98	
If cooler temperature is out of co		<u>, σ.φ</u> <u>π. γ</u>	Temp Gun ID#: 4	9,7405
·			. 1345	211
Cooler Accepted by:		Date: ا كراك ا s and attach all shipping documen		
	Complete custody forms	and attach an sinpping documen	its	
Log-In Phase:				
Mag a tamparatura blank include	ad in the needer?		\/F0	A
Was a temperature blank include		Wet Ice Geracks Baggies Foar	YES Other	
Was sufficient ice used (if approp	_			NO
Were all bottles sealed in individ	•		NA YES YES	NO R
	, ,		(FS)	
_				NO
•	· ·	ber of containers received?		NO
		ber of containers received?	B	NO NO
			NA	NO
	•	eservation sheet, excluding VOCs).		NO
Were all VOC vials free of air but		, ,	NA YES	NO NO
				NO
was sufficient amount of sample	<i>1</i>	<i>(</i> **		NO
Samples Logged by:		e: <u>4-2-00</u> Time	1435	_
	** Notify Project Manage	er of discrepancies or concerns *	•	
-			······	
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on	COC
<u> </u>				
				_
Additional Notes, Discrepancie	s, & Resolutions:			
By: Da	ato:			
By: Da Small Air Bubbles Peabub	The second secon	Small → "sm"		
~2 mm 2-4 m		Peabubbles → "pb"		
		Large → "lg"		
		Headspace → "hs"		

0016F 3/12/09 Cooler Receipt Form

Revision 012



Cooler Temperature Compliance Form

		70
Cooler#:Ten	nperature(°C):	1:0
Sample ID	Bottle Count	Bottle Type
CMP2-090902	9	1500ml HDPE, b souml AG, 2 ILAG
MW125 - 11	9	
		1.
	perature(°C):	1.4
Sample ID	Bottle Count	Bottle Type
+11105 - 090962	1	500miHDPF, SOUMIAG, ILAG 4UMIVU
11 D	12	
0 1 "		10.1
Cooler#: Tem Sample ID	perature(°C): Bottle Count	Bottle Type
	G G	CANA LADOC CANAL LA
(MP17 -040902	1 2	500 W/ HD/E 1500 W/ THU / 12 ACT
(11714 2040406	1	500ml HDPE, 500ml At 1, 12 AG 500ml HBPE, 500ml AG, 11A6, 40m
,		
·		· · · · · · · · · · · · · · · · · · ·
Cooler#: Temi	(%0)	
Sample ID	perature(°C):Bottle Count	Bottle Type
	Bottle Count	Bottle Type
· · · · · · · · · · · · · · · · · · ·		
	<u> </u>	
Completed by:	Date	1 9-2-04 Time: 14 5.
·	Date	

PRESERVATION VERIFICATION 09/02/09

1 of 1 Page Inquiry Number: NONE

Analysis Requested: 09/02/09

Contact: Goodhue, Chip Client: Aspect Consulting LLC Logged by: MM Sample Set Used: Yes-481

Validatable Package: No

Deliverables:

ANALYTICAL (C)
RESOURCES (C)
INCORPORATED

ARI Job No: PM70

PC: Mark VTSR: 09/02/09

Project: SW HARBOR PROJECT-PHASE 2 GW CMP Project #: 080064

Sample Site: SDG No:

Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD FOG <2	F0G .	MET PHEN	HEN P	PHOS T	TKN NO23	123 TOC <2 <2	oc s2 2 >9	AK102 Fe2+ DMET DOC <2 <2 FLT FLT	+ DMET	DOC FLT	PARAMETER	ADJUSTED LOT AMOUNT TO NUMBER ADDED	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-20472 PM70A	CMP2-090902					- (>	SSO.			-										
09-20473 PM70B	MW125-090902						TOT													
09-20474 PM70C	CMP17-090902						TOT													
09-20475 PM70D	FM105-090902					1	TOT													
09-20476 PM70E	FM105-090902D					-	TOT												- 4 W.	
09-20477 PM70F	CMP5-090902					<i></i>	<u></u>													

Checked By $\bigcup_{\text{Date}} \underbrace{q-1-00}_{\text{Date}}$

Case Narrative

prepared for

Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP, 080064

ARI JOB NO: PM70

prepared by

Analytical Resources, Inc.

Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: PM70

Date: September 16, 2009

Volatile Organics Analysis

These analyses proceeded without incident of note.

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

Data Summary Package

prepared for

Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP, 080064

ARI JOB NO: PM70

prepared by

Analytical Resources, Inc.

Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: PM70

Date: September 16, 2009

Volatile Organics Analysis

These analyses proceeded without incident of note.

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

VOLATILE ANALYSIS



Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: MW125-090902

SAMPLE

Lab Sample ID: PM70B

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized: Reported: 09/10/09

Instrument/Analyst: NT10/PAB

Date Analyzed: 09/03/09 16:48

: *[B*]

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	0.3	
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	1.0	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	1.8	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	5.1	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1.1.1.2-Tetrachloroethane	0.2	< 0.2	IJ

Reported in $\mu g/L$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.7%
d8-Toluene	99.2%
Bromofluorobenzene	104%
d4-1.2-Dichlorobenzene	104%

PM70:00012



Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Matrix: Water

LIMS ID: 09-20474

Reported: 09/10/09

Data Release Authorized:

Instrument/Analyst: NT10/PAB

Date Analyzed: 09/03/09 17:17

Lab Sample ID: PM70C QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

SAMPLE

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0,2	< 0.2	U
75-35-4	1,1-Dichloroethene	0,2	< 0.2	U
75-34-3	1,1-Dichloroethane	0,2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	0.3	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in $\mu g/L$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	101%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	106%

PM70:00013



Instrument/Analyst: NT10/PAB

Date Analyzed: 09/03/09 17:47

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: FM105-090902

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

QC Report No: PM70-Aspect Consulting LLC

080064

SAMPLE

Lab Sample ID: PM70D

LIMS ID: 09-20475

Matrix: Water

Data Release Authorized

Reported: 09/10/09

Date Sampled: 09/02/09 Date Received: 09/02/09

Cample Amount, 10 0 ml

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	0.2	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	0.6	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	5.2	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	Ū

Reported in μ g/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	102%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	104%

PM70:00014



Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Lab Sample ID: PM70E LIMS ID: 09-20476

Matrix: Water

Data Release Authorized:

Instrument/Analyst: NT10/PAB

Date Analyzed: 09/03/09 18:17

Reported: 09/10/09

: **/**

5

-

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

SAMPLE

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156~59-2	cis-1,2-Dichloroethene	0.2	0.2	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	0.5	
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	Ū

Reported in $\mu g/L$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	101%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	106%

PM70:00015

ANALYTICAL RESOURCES **INCORPORATED**

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
<u> </u>							
MB-090309	Method Blank	10	102%	101%	101%	103%	0
LCS-090309	Lab Control	10	106%	100%	103%	96.1%	0
LCSD-090309	Lab Control Dup	10	105%	102%	101%	94.8%	0
PM70B	MW125-090902	10	99.7%	99.2%	104%	104%	0
PM70C	CMP17-090902	10	104%	101%	102%	106%	0
PM70D	FM105-090902	10	104%	102%	100%	104%	0
PM70E	FM105-090902D	10	106%	101%	102%	106%	0
		LCS	/MB LIM	ITS		QC LIMIT	rs
SW8260C							
$(DCE) \approx d4-1$,2-Dichloroethane		70-132			80-143	3
$(TOL) \approx d8-Tc$	oluene		80-120			80-120)
\ = - '	ofluorobenzene		80-120			80-120)
	,2-Dichlorobenzene		80-120			80-120)

Prep Method: SW5030B

Log Number Range: 09-20473 to 09-20476



ORGANICS ANALYSIS DATA SHEET Volatiles by Purge & Trap GC/MS-Method SW8260C Page 1 of 1

Sample ID: LCS-090309

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090309

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized;

Reported: 09/10/09

Instrument/Analyst LCS: NT10/PAB

LCSD: NT10/PAB

Date Analyzed LCS: 09/03/09 10:08

LCSD: 09/03/09 10:38

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

		Spike	LCS		Spike	LCSD	222
Analyte	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD
Vinyl Chloride	7.7	10.0	77.0%	8.2	10.0	82.0%	6.3%
Chloroethane	7.4	10.0	74.0%	8.0	10.0	80.0%	7.8%
1,1-Dichloroethene	8.8	10.0	88.0%	8.5	10.0	85.0%	3.5%
1,1-Dichloroethane	8.8	10.0	88.0%	8.8	10.0	88.0%	0.0%
trans-1,2-Dichloroethene	8.8	10.0	88.0%	8.7	10.0	87.0%	1.1%
cis-1,2-Dichloroethene	8.9	10.0	89.0%	8.9	10.0	89.0%	0.0%
1.2-Dichloroethane	10.0	10.0	100%	10.4	10.0	104%	3.9%
1,1,1-Trichloroethane	9.4	10.0	94.0%	9.5	10.0	95.0%	1.1%
Trichloroethene	10.3	10.0	103%	10.4	10.0	104%	1.0%
1.1.2-Trichloroethane	10.0	10.0	100%	10.4	10.0	1048	3.9%
Tetrachloroethene	10.0	10.0	100%	10.1	10.0	101%	1.0%
1,1,2,2-Tetrachloroethane	9.5	10.0	95.0%	9.8	10.0	98.0%	3.1%
1,1,1,2-Tetrachloroethane	10.1	10.0	101%	10.3	10.0	103%	2.0%

Reported in μ g/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	106%	105%
d8-Toluene	100%	102%
Bromofluorobenzene	103%	101%
d4-1,2-Dichlorobenzene	96.1%	94.8%

4A VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

Lab Name: ANALYTICAL RESOURCES, INC

ARI Job No: PM70

Lab File ID: MB0903

Date Analyzed: 09/03/09

Instrument ID: NT10

Client: ASPECT CONSULTING

Project: SW HARBOR PROJECT

Lab Sample ID: MB0903

Time Analyzed: 1108

Heated Purge: (Y/N) N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
01	LCS0903	LCS0903	LCS0903	1008
02	LCS0903	LCS0903	LCS0903A	1038
03	MW125-090902	PM70B	PM70B	1648
04	CMP17-090902	PM70C	PM70C	1717
05	FM105-090902 FM105-090902	PM70D PM70E	PM70D PM70E	1747 1817
06 07	FM105-090902	PM/UE	PM/UE	101/
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COMMENTS:		
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page 1 of 1

FORM IV VOA

OLM3.2M



ORGANICS ANALYSIS DATA SHEET Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: MB-090309 METHOD BLANK

Lab Sample ID: MB-090309

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Instrument/Analyst: NT10/PAB Date Analyzed: 09/03/09 11:08 QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: NA Date Received: NA

Sample Amount: 10.0 mL Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00 - 3	Chloroethane	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in $\mu g/L$ (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	101%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	103%

PM70:00019

SEMIVOLATILE ANALYSIS



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: PM70A LIMS ID: 09-20472

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

Date Extracted: 09/03/09
Date Analyzed: 09/04/09 16:37
Instrument/Analyst: NT4/JZ

Sample ID: CMP2-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09
Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

FORM I

d14-p-Terphenyl 9

90.8%



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PM70B LIMS ID: 09-20473

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

Date Extracted: 09/03/09 Date Analyzed: 09/04/09 17:13

Instrument/Analyst: NT4/JZ

Sample ID: MW125-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl 92.0%

PM70:00022



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PM70C

LIMS ID: 09-20474

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

Date Extracted: 09/03/09

Date Analyzed: 09/04/09 17:48

Instrument/Analyst: NT4/JZ

Sample ID: CMP17-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl

88.0%

PM70:00023



ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

- --**_** -

Lab Sample ID: PM70D LIMS ID: 09-20475

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

Date Extracted: 09/03/09 Date Analyzed: 09/04/09 18:24

Instrument/Analyst: NT4/JZ

Sample ID: FM105-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL

Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number Analyte RL Result

117-81-7 bis(2-Ethylhexyl)phthalate 1.0 < 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl

98.0%

PM70:00024



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PM70E LIMS ID: 09-20476

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

Date Extracted: 09/03/09 Date Analyzed: 09/04/09 18:59

Instrument/Analyst: NT4/JZ

Sample ID: FM105-090902D

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

SAMPLE

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117 01 7	his/2 Diberthamily which alone	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 0

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

89.6% d14-p-Terphenyl

PM70:00025



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: PM70F LIMS ID: 09-20477

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

Date Extracted: 09/03/09 Date Analyzed: 09/04/09 19:35 Instrument/Analyst: NT4/JZ

Sample ID: CMP5-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

73.6% d14-p-Terphenyl

PM70:00026



SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Client ID	TPH TO	T OUT
MB-090309	97.6%	0
LCS-090309	76.8%	0
LCSD-090309	86.0%	0
CMP2-090902	90.8%	0
MW125-090902	92.0%	0
CMP17-090902	88.0%	0
FM105-090902	98.0%	0
FM105-090902D	89.6%	0
CMP5-090902	73.6%	0

(TPH) = d14-p-Terphenyl

LCS/MB LIMITS QC LIMITS

(53-119)

(26-114)

Prep Method: SW3520C

Log Number Range: 09-20472 to 09-20477

PM70:00027

FORM-II SW8270



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: LCS-090309

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized;

Reported: 09/09/09

Date Extracted LCS/LCSD: 09/03/09

Date Analyzed LCS: 09/04/09 15:25

LCSD: 09/04/09 16:01

Instrument/Analyst LCS: NT4/JZ

LCSD: NT4/JZ

GPC Cleanup: NO

Sample ID: LCS-090309

LCS/LCSD

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD	
bis(2-Ethylhexyl)phthalate	17.2	25.0	68.8%	19.5	25.0	78.0%	12.5%	

Semivolatile Surrogate Recovery

LCS LCSD

d14-p-Terphenyl

76.8% 86.0%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

FORM III

PM70MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: UNSPECIFIED

ARI Job No: PM70

Project: SW HARBOR PROJECT-PH

Lab File ID: 09040902

Date Extracted: 09/03/09

Instrument ID: NT4

Date Analyzed: 09/04/09

Matrix: LIQUID

Time Analyzed: 1450

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
		=========		
01	PM70LCSW1	PM70LCSW1	09040903	09/04/09
02	PM70LCSDW1	PM70LCSDW1	09040904	09/04/09
03	CMP2-090902	PM70A	09040905	09/04/09
04	MW125-090902	PM70B	09040906	09/04/09
05	CMP17-090902	PM70C	09040907	09/04/09
06	FM105-090902	PM70D	09040908	09/04/09
07	FM105-090902D	PM70E	09040909	09/04/09
08	CMP5-090902	PM70F	09040910	09/04/09
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COMMENTS:				

page 1 of 1

FORM IV SV



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: MB-090309

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized

Reported: 09/09/09

Date Extracted: 09/03/09 Date Analyzed: 09/04/09 14:50

Instrument/Analyst: NT4/JZ

Date Sampled: NA Date Received: NA

> Sample Amount: 500 mL Final Extract Volume: 0.50 mL

080064

Dilution Factor: 1.00

Sample ID: MB-090309

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

QC Report No: PM70-Aspect Consulting LLC

METHOD BLANK

CAS Number Analyte RL Result

117-81-7 bis(2-Ethylhexyl)phthalate 1.0 < 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

dl4-p-Terphenyl 97.6%

PM70:00030

SIM SEMIVOLATILE ANALYSIS



Page 1 of 1

Lab Sample ID: PM70A

LIMS ID: 09-20472 Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/09/09 12:57 Instrument/Analyst: NT2/PK

Sample ID: CMP2-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Event: 080064 Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 30.9% d14-Dibenzo(a,h)anthracene 86.3%



Page 1 of 1

Lab Sample ID: PM70A LIMS ID: 09-20472

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 19:25 Instrument/Analyst: NT2/PK

Sample ID: CMP2-090902 DILUTION

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Event: 080064 Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 5.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.050	< 0.050 U
218-01-9	Chrysene	0.050	< 0.050 U
205-99-2	Benzo(b) fluoranthene	0.050	< 0.050 U
207-08-9	Benzo(k) fluoranthene	0.050	< 0.050 U
50-32-8	Benzo(a)pyrene	0.050	< 0.050 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.050	< 0.050 U
53-70-3	Dibenz(a,h)anthracene	0.050	< 0.050 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 74.2%

PM70:00033



Sample ID: MW125-090902 SAMPLE

Lab Sample ID: PM70B

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

ı: **B**

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 13:21 Instrument/Analyst: NT2/PK QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Event: 080064

Date Sampled: 09/02/09

Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	0.051
218-01-9	Chrysene	0.010	0.12
205-99-2	Benzo(b) fluoranthene	0.010	0.14
207-08-9	Benzo(k) fluoranthene	0.010	0.10
50-32-8	Benzo(a)pyrene	0.010	0.084
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	0.097
53-70-3	Dibenz(a,h)anthracene	0.010	0.028

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 71.0% d14-Dibenzo(a,h)anthracene 97.7%



Sample ID: CMP17-090902 SAMPLE

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

QC Report No: PM70-Aspect Consulting LLC

Lab Sample ID: PM70C

LIMS ID: 09-20474

Matrix: Water Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/09/09 13:45

Instrument/Analyst: NT2/PK

Event: 080064 Date Sampled: 09/02/09 Date Received: 09/02/09

> Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

70.3% d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 88.7%

PM70:00035



Sample ID: FM105-090902 SAMPLE

Lab Sample ID: PM70D

LIMS ID: 09-20475

QC Report No: PM70-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Matrix: Water

Event: 080064 Date Sampled: 09/02/09 Date Received: 09/02/09

Data Release Authorized: Reported: 09/10/09

Sample Amount: 500 mL

Date Extracted: 09/03/09 Date Analyzed: 09/09/09 14:09

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT2/PK

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

71.0% d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 82.7%

PM70:00036



Sample ID: FM105-090902D SAMPLE

Lab Sample ID: PM70E LIMS ID: 09-20476

Matrix: Water Data Release Authorized://

Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/09/09 14:34 Instrument/Analyst: NT2/PK

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Event: 080064 Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 70.3% d14-Dibenzo(a,h)anthracene 82.0%

PM70:00037



Sample ID: CMP5-090902 SAMPLE

Lab Sample ID: PM70F

LIMS ID: 09-20477

QC Report No: PM70-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Matrix: Water

Reported: 09/10/09

Event: 080064

Data Release Authorized: //

Date Sampled: 09/02/09 Date Received: 09/02/09

Date Extracted: 09/03/09 Date Analyzed: 09/09/09 14:58 Instrument/Analyst: NT2/PK

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 70.7% d14-Dibenzo(a,h)anthracene 84.3%

PM70:00038



SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Client ID	MNP	DBA	TOT OUT
MB-090309	76.3%	90.7%	0
LCS-090309	73.3%	97.7%	0
LCSD-090309	73.7%	95.0%	0
CMP2-090902	30.9%*	86.3%	1
CMP2-090902 DL	56.3%	74.2%	0
MW125-090902	71.0%	97.7%	0
CMP17-090902	70.3%	88.7%	0
FM105-090902	71.0%	82.7%	0
FM105-090902D	70.3%	82.0%	0
CMP5-090902	70.7%	84.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(42-100)	(31-109)
(DBA) = d14-Dibenzo(a,h)anthracene	(40-125)	(10-133)

Prep Method: SW3510C

Log Number Range: 09-20472 to 09-20477

FORM-II SIM SW8270



Sample ID: LCS-090309

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090309

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Event: 080064

Date Sampled: NA

Date Received: NA

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Date Extracted LCS/LCSD: 09/03/09

Date Analyzed LCS: 09/09/09 12:09

LCSD: 09/09/09 12:33

Instrument/Analyst LCS: NT2/PK

LCSD: NT2/PK

		Spike	LCS		Spike	LCSD	
Analyte	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD
Benzo(a) anthracene	0.246	0.300	82.0%	0.237	0.300	79.0%	3.7%
Chrysene	0.249	0.300	83.0%	0.242	0.300	80.7%	2.9%
Benzo(b) fluoranthene	0.211	0.300	70.3%	0.213	0.300	71.0%	0.9%
Benzo(k) fluoranthene	0.238	0.300	79.3%	0.226	0.300	75.3%	5.2%
Benzo (a) pyrene	0.227	0.300	75.7%	0.221	0.300	73.7%	2.7%
Indeno(1,2,3-cd)pyrene	0.252	0.300	84.0%	0.244	0.300	81.3%	3.2%
Dibenz(a,h)anthracene	0.263	0.300	87.7%	0.259	0.300	86.3%	1.5%

Reported in $\mu g/L$ (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 73.3% 73.7% d14-Dibenzo(a,h)anthracene 97.7% 95.0%

PM70:00040

FORM III

4B SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

PM70MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT CONSULTING

ARI Job No: PM70

Project: SW HARBOR PROJECT-PH

Lab File ID: 090901

Date Extracted: 09/03/09

Instrument ID: NT2

Date Analyzed: 09/09/09

Matrix: LIQUID

Time Analyzed: 1145

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================	DMGOL GOVI	=======================================	09/09/09
01	PM70LCSW1 PM70LCSDW1	PM70LCSW1 PM70LCSDW1	090902 090903	09/09/09
03	CMP2-090902	PM70A	090904	09/09/09
04	MW125-090902	PM70B	090905	09/09/09
05	CMP17-090902	PM70C	090906	09/09/09
06	FM105-090902	PM70D	090907	09/09/09
07 08	FM105-090902D CMP5-090902	PM70E PM70F	090908 090909	09/09/09 09/09/09
09	CMP2-090902	PM70A	090920	09/09/09
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COMMENTS:		

page 1 of 1

FORM IV SV



Sample ID: MB-090309 METHOD BLANK

Lab Sample ID: MB-090309

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized: Reported: 09/10/09

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 11:45

Instrument/Analyst: NT2/PK

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

76.3% d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 90.7%

PM70:00042

PCB ANALYSIS



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP2-090902 SAMPLE

Lab Sample ID: PM70A LIMS ID: 09-20472

Matrix: Water

Data Release Authorized: Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/08/09 04:13 Instrument/Analyst: ECD6/JGR

GPC Cleanup: No Sulfur Cleanup: Yes QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00 Silica Gel: No

Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	0.015
11097-69-1	Aroclor 1254	0.010	0.016
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	41.5%
Tetrachlorometaxylene	46.5%



Page 1 of 1

Lab Sample ID: PM70B LIMS ID: 09-20473

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/08/09 04:36 Instrument/Analyst: ECD6/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW125-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP 080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

The state of the s	
Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	55.5%



Page 1 of 1

Lab Sample ID: PM70C LIMS ID: 09-20474

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/08/09 04:59 Instrument/Analyst: ECD6/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: CMP17-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00 Silica Gel: No

Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	53.0%



Page 1 of 1

Sample ID: FM105-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09

Date Received: 09/02/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

Matrix: Water
Data Release Authorized: Reported: 09/10/09
Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/08/09 05:22 Instrument/Analyst: ECD6/JGR

GPC Cleanup: No Sulfur Cleanup: Yes

Lab Sample ID: PM70D

LIMS ID: 09-20475

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	66.8%
Tetrachlorometaxylene	61.0%



Page 1 of 1

Sample ID: FM105-090902D SAMPLE

Lab Sample ID: PM70E LIMS ID: 09-20476

Matrix: Water

GPC Cleanup: No

Sulfur Cleanup: Yes

Data Release Authorized:

Date Extracted: 09/03/09

Date Analyzed: 09/08/09 05:45

Instrument/Analyst: ECD6/JGR

Reported: 09/10/09

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	59.5%



Page 1 of 1

Matrix: Water

Sample ID: CMP5-090902 SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09

Date Received: 09/02/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

Date H	Extracted: 09/03/09
Date A	Analyzed: 09/08/09 06:08
Instru	ument/Analyst: ECD6/JGR

GPC Cleanup: No Sulfur Cleanup: Yes

Lab Sample ID: PM70F

Data Release Authorized:

LIMS ID: 09-20477

Reported: 09/10/09

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	50.2%
Tetrachlorometaxylene	46.0%



SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-090309	64.0%	32-108	60.0%	31-100	0
LCS-090309	67.0%	32-108	57.5%	31-100	0
LCSD-090309	69.5%	32-108	58.2%	31-100	0
CMP2-090902	41.5%	19-111	46.5%	21-100	0
MW125-090902	64.0%	19-111	55.5%	21-100	0
CMP17-090902	64.0%	19-111	53.0%	21-100	0
FM105-090902	66.8%	19-111	61.0%	21-100	0
FM105-090902D	71.0%	19-111	59.5%	21-100	0
CMP5-090902	50.2%	19-111	46.0%	21-100	0

Prep Method: SW3510C

Log Number Range: 09-20472 to 09-20477



Page 1 of 1

Lab Sample ID: LCS-090309

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted LCS/LCSD: 09/03/09

Date Analyzed LCS: 09/08/09 02:18

LCSD: 09/08/09 02:41

Instrument/Analyst LCS: ECD6/JGR

LCSD: ECD6/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

Sample ID: LCS-090309

LCS/LCSD

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Silica Gel: No

Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD	
Aroclor 1016 Aroclor 1260	0.041	0.050 0.050	82.0% 96.0%	0.040	0.050 0.050	80.0% 98.0%	2.5% 2.1%	

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	67.0%	69.5%
Tetrachlorometaxylene	57.5%	58.2%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

PCB METHOD BLANK SUMMARY

PM48MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: THE BOEING COMPANY

ARI Job No.: PM70

Project: PLANT 2 2-31 AREA DA

Lab Sample ID: PM48MBW1

Lab File ID: 0907A034

Date Extracted: 09/03/09

Matrix: LIQUID

Date Analyzed: 09/08/09

Instrument ID: ECD6

Time Analyzed: 0155

GC Columns: CLP1/CLP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
	=======================================	=======	=======
01	PM48LCSW1	PM48LCSW1	09/08/09
02	PM48LCSDW1	PM48LCSDW1	09/08/09
03	CMP2-090902	PM70A	09/08/09
04	MW125-090902	PM70B	09/08/09
05	CMP17-090902	PM70C	09/08/09
06	FM105-090902	PM70D	09/08/09
07	FM105-090902D	PM70E	09/08/09
80	CMP5-090902	PM70F	09/08/09

ALL RUNS ARE DUAL COLUMN

page 1 of 1

FORM IV PCB



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: MB-090309 METHOD BLANK

Lab Sample ID: MB-090309

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/03/09 Date Analyzed: 09/08/09 01:55 Instrument/Analyst: ECD6/JGR

GPC Cleanup: No Sulfur Cleanup: Yes QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: NA Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	60.0%

TPHD ANALYSIS



ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1 Matrix: Water QC Report No: PM70-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2 GW CM

080064

Data Release Authorized:

Reported: 09/07/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-090309 09-20472	Method Blank HC ID:	09/03/09	09/03/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 80.4%
PM70A 09-20472	CMP2-090902 HC ID:	09/03/09	09/03/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25	< 0.25 U < 0.50 U 65.3%
PM70B 09-20473	MW125-090902 HC ID:	09/03/09	09/03/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 82.0%
PM70C 09-20474	CMP17-090902 HC ID:	09/03/09	09/03/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 76.5%
PM70D 09-20475	FM105-090902 HC ID:	09/03/09	09/03/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25	< 0.25 U < 0.50 U 77.7%
PM70E 09-20476	FM105-090902D HC ID:	09/03/09	09/03/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 75.9%
PM70F 09-20477	CMP5-090902 HC ID:	09/03/09	09/03/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 71.7%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

PM70:00055

T MGAG



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Client ID	OTER	TOT OUT
MB-090309	80.4%	0
LCS-090309	81.4%	0
LCSD-090309	79.2%	0
CMP2-090902	65.3%	0
MW125-090902	82.0%	0
CMP17-090902	76.5%	0
FM105-090902	77.7%	0
FM105-090902D	75.9%	0
CMP5-090902	71.7%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(51-120)

(41-121)

Prep Method: SW3510C

Log Number Range: 09-20472 to 09-20477

PM70:00056

FORM-II TPHD



ORGANICS ANALYSIS DATA SHEET NWTPHD by GC/FID-Silica and Acid Cleaned Page 1 of 1

Sample ID: LCS-090309 LCS/LCSD

Lab Sample ID: LCS-090309

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized:

Reported: 09/07/09

Project: SW HARBOR PROJECT-PHASE 2 GW CMP 080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Date Extracted LCS/LCSD: 09/03/09

Date Analyzed LCS: 09/03/09 18:55

LCSD: 09/03/09 19:14

Instrument/Analyst LCS: FID/AAR

LCSD: FID/AAR

Sample Amount LCS: 500 mL

OC Report No: PM70-Aspect Consulting LLC

LCSD: 500 mL

Final Extract Volume LCS: 1.0 mL

LCSD: 1.0 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	1.98	3.00	66.0%	1.89	3.00	63.0%	4.7%

TPHD Surrogate Recovery

o-Terphenyl

LCS LCSD 81.4% 79.2%

Results reported in mg/L RPD calculated using sample concentrations per SW846.

FORM III



TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: PM70

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Date Received: 09/02/09 080064

Matrix: Water

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
09-20472-090309MB1 09-20472-090309LCS1 09-20472-090309LCSD1 09-20472-PM70A 09-20473-PM70B 09-20474-PM70C 09-20475-PM70D 09-20476-PM70E 09-20477-PM70F	Method Blank Lab Control Lab Control Dup CMP2-090902 MW125-090902 CMP17-090902 FM105-090902 CMP5-090902	500 mL 500 mL 500 mL 500 mL 500 mL 500 mL 500 mL 500 mL	1.00 mL 1.00 mL 1.00 mL 1.00 mL 1.00 mL 1.00 mL 1.00 mL 1.00 mL	09/03/09 09/03/09 09/03/09 09/03/09 09/03/09 09/03/09 09/03/09 09/03/09

PM70:00058

Diegol Evtraction Deport

TPH METHOD BLANK SUMMARY

BLANK NO.

PM70MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: ASPECT CONSULTING LLC

SDG No.: PM70

Project No.: SW HARBOR PROJECT-PHASE 2

Date Extracted: 09/03/09

Matrix: LIQUID

Date Analyzed: 09/03/09

Instrument ID : FID3A

Time Analyzed: 1837

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

page 1 of 1

FORM IV TPH

METALS ANALYSIS



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PM70A

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: CMP2-090902

SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/03/09	200.8	09/10/09	7440-38-2	Arsenic	0.5	20.8	
200.8	09/03/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Lab Sample ID: PM70B

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized Reported: 09/15/09

Sample ID: MW125-090902

SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/03/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	0.6	
200.8	09/03/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PM70C

LIMS ID: 09-20474

Matrix: Water Data Release Authorized

Reported: 09/15/09

Sample ID: CMP17-090902

SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/03/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	2.9	
200.8	09/03/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

 $\begin{array}{c} \textbf{U-Analyte undetected at given RL} \\ \textbf{RL-Reporting Limit} \end{array}$



Page 1 of 1

Lab Sample ID: PM70D

LIMS ID: 09-20475

Matrix: Water Data Release Authorized

Reported: 09/15/09

Sample ID: FM105-090902

SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/03/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	0.5	
200.8	09/03/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



Page 1 of 1

Lab Sample ID: PM70E

LIMS ID: 09-20476

Matrix: Water Data Release Authorized

Reported: 09/15/09

Sample ID: FM105-090902D

SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/03/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	0.5	
200.8	09/03/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



Page 1 of 1

Lab Sample ID: PM70F

LIMS ID: 09-20477

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: CMP5-090902

SAMPLE

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: 09/02/09 Date Received: 09/02/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/03/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	12.9	
200.8	09/03/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



Page 1 of 1

Lab Sample ID: PM70MB

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: METHOD BLANK

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: NA Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/03/09	200.8	09/08/09	7440-38-2	Arsenic	0.2	0.2	U
200.8	09/03/09	200.8	09/08/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Lab Sample ID: PM70LCS

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized: Reported: 09/15/09

Sample ID: LAB CONTROL

QC Report No: PM70-Aspect Consulting LLC Project: SW HARBOR PROJECT-PHASE 2 GW CMP

080064

Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	25.5	25.0	102%	
Lead	200.8	25	25	100%	

Reported in µg/L

N-Control limit not met Control Limits: 80-120%



16 September 2009

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110

RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Job: PN04

Dear Chip:

Please find enclosed the original chain of custody (COC) record and the final data package for samples from the project referenced above. Analytical Resources, Inc. accepted seven water samples in good condition on September 3, 2009. The samples were analyzed for BEHP, PAHs, PCBs, NWTPH-Dx and total metals as requested.

Problems associated with these analyses are discussed in the case narrative.

A copy of this package will be kept on file at ARI. If you have questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210

markh@arilabs.com

Enclosures

cc: File PN04

MDH/mdh

Page 1 of <u>403</u>

Chain of Custody Documentation

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN04

prepared by

Analytical Resources, Inc.

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Analytical Resources, Incorporated Analytical Chemists and Consultants	4611 South 134th Place, Suite 100 Tukwila WA 98168	206-695-6200 206-695-6201 (fax)	Notes/Comments												Received by: (Signature)	Printed Name:	Company:	Date & Time:
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	-		Analysis Requested	ار ا	PRSSELL DIBINI BEH	X	× - ×	×	<u> </u>	×	×	×			Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:
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ARI Assigned Iverliber;	ARI Client Company: AS DECT (DNSW HING	Client Confact: Good hwe	Client Project Name:	Southwest Havbor Project - Phase 2 GW CMP Client Project #: Samplers: AET PSB	Sample ID	CMP3-090903	CMP4-090903	cmp15-090903	MW26R-090903	Muzerz-090903D	m W44-090903	MW36-090903			Comments/Special Instructions			

Linits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or contract.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alernate retention schedules have been established by work-order or contract.

PRESERVATION VERIFICATION 09/04/09

Page

Inquiry Number: NONE Analysis Requested: 09/03/09 Contact: Goodhue, Chip Client: Aspect Consulting LLC

Logged by: MM Sample Set Used: Yes-481

Validatable Package: No Deliverables:

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: PN04 PC: Mark

VTSR: 09/03/09

Project #: 080064 Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Sample Site:

Analytical Protocol: In-house SDG No:

\d.	DA15/ B1						1108100 2.5m 9-4.09 DW	
AMOUNT							2.5%L 0	
ADJUSTED LOT							ool8ail	
ADJUSTEI TO							77	
PARAMETER								
OMET DOC								
AK102 Fe2+ DMET DOC <2 <2 FLT FLT				-				
						-		
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23 TC			-					
TKN NO23								
PHOS T								
PHEN P								
MET P	1530 1530	ESS.	TOT	IOT S	TOL		TOT	
F0G <2		ox	O	-0	0			Ā
COD <2								
NH3 <2								
WAD >12								
CN >12								
CLIENT ID	CMP3-090903	CMP4-090903	CMP15-090903	MW26R-090903	MW26R-090903D	MW44-090903	MW36-090903	
LOGNUM ARI ID	09-20695 PN04A	09-20696 PN04B	09-20697 PN04C	09-20698 PN04D	09-20699 PN04E	09-20700 PN04F	09-20701 PN04G	

Checked By

PNO4:00004

	Analytical	Resources,
	Incorporate	ed
	Analytical	Chemists and
	Consultants	5 ₀
API Client:	Aspect	Consultin

Cooler Receipt Form

ARICLIENT: ASpect CONSULTING	Project Name: SOUT NW (est Harbor Project
COC No(s):		rier Hand Derivered Other:
Assigned ARI Job No:	Tracking No:	
Preliminary Examination Phase:		
Were intact, properly signed and dated custody seals attached to the	e outside of to cooler?	YES 🔊
Were custody papers included with the cooler?		Y €3 NO
Were custody papers properly filled out (ink, signed, etc.)		NO NO
Were custody papers properly filled out (ink, signed, etc.)	try) - \	17-6
If cooler temperature is out of compliance fill out form 00070F		Temp Gun ID#:
Cooler Accepted by:	Date: 9-3-09 Time	. 1517
	l attach all shipping documents	
Log-In Phase:		
Was a temperature blank included in the cooler?		YES NO
What kind of packing material was used? Bubble Wrap Wet lo	ce Gel Packs Baggies Foam Blo	ck Paper Other:
Was sufficient ice used (if appropriate)?		NA 🕳 NO
Were all bottles sealed in individual plastic bags?		YES NO
Did all bottles arrive in good condition (unbroken)?		€ NO
Were all bottle labels complete and legible?		VES NO
Did the number of containers listed on COC match with the number of	of containers received?	VES NO
Did all bottle labels and tags agree with custody papers?		€ s NO
Were all bottles used correct for the requested analyses?		MES NO
Do any of the analyses (bottles) require preservation? (attach preservation)	vation sheet, excluding VOCs)	NA 😥 NO
Were all VOC vials free of air bubbles?		YES NO
Was sufficient amount of sample sent in each bottle?		NO NO
Samples Logged by: Date:	9-4-09 Time:	B49.
•	discrepancies or concerns **	
Sample ID on Bottle Sample ID on COC	Sample ID on Bottle	Sample ID on COC
Cample 15 of Bottle Cample 15 of Coc	Sample 15 on Source	Sample 15 on CCC
Additional Notes, Discrepancies, & Resolutions:		
By: Date:		
2-4 mm 3-4 mm	nall → "sm"	
Per Per	abubbles → "pb"	
La We was the La	rge → "lg"	

0016F 3/12/09 Cooler Receipt Form

Revision 012



Cooler Temperature Compliance Form

	·		150
Cooler#:	Tempe	erature(°C):	12.6
Sample ID	Ac . 0 . 2	Bottle Count	Bottle Type
CMP3 -	090903	9	6500 ml AG, 21LAG, 1500 ml HDPE
L CM74-	11	1 9	1)
1 MW44-	, \	1	ILAG
		-	
			
<u> </u>		<u> </u>	
Cooler#:	Tempe	rature(°C):	(.0
Sample ID	090903	Bottle Count	Bottle Type
		9	6 SOOMLAG 211AG 1500WIHDPC
MW36	1)	1)	2 (0)
MWYY		6	3500 ml A17, 216A15
	-		
			
Cooler#:	Temper	ature(°C):	117
Sample ID	Temper	Bottle Count	Bottle Type
MWZGR	-0909030	9	6 SOUMI AG 21LAG, 150UM HOPE
1 (- 96403	a	b sproof met eterret 1 1 300 poil 11016
	= 1000		\
· · · · · · · · · · · · · · · · · · ·			
Cooler#:	Temper	ature(°C):	
Sample ID		Bottle Count	Bottle Type
			
 			
Completed by:		Date	Timo

Case Narrative

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN04

prepared by

Analytical Resources, Inc.

Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: PN04

Date: September 16, 2009

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

Data Summary Package

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN04

prepared by

Analytical Resources, Inc.

Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: PN04

Date: September 16, 2009

BEHP Analysis

These analyses proceeded without incident of note.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

SEMIVOLATILE ANALYSIS



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: PN04A LIMS ID: 09-20695 Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 15:20 Instrument/Analyst: NT4/JZ

Sample ID: CMP3-090903

SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

RL Result CAS Number Analyte < 1.0 U 1.0 117-81-7 bis(2-Ethylhexyl)phthalate

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

76.4% d14-p-Terphenyl

PNOU:00012



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: PN04B LIMS ID: 09-20696

Matrix: Water

Data Release Authorized: /

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 15:55 Instrument/Analyst: NT4/JZ

Date Sampled: 09/03/09 Date Received: 09/03/09 Sample Amount: 500 mL

Final Extract Volume: 0.50 mL Dilution Factor: 1.00

080064

Sample ID: CMP4-090903

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

QC Report No: PN04-Aspect Consulting LLC

SAMPLE

CAS Number Analyte RLResult 117-81-7 bis(2-Ethylhexyl)phthalate 1.0 < 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

76.0% d14-p-Terphenyl

FORM I



SAMPLE

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

QC Report No: PN04-Aspect Consulting LLC

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PN04C

LIMS ID: 09-20697

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 16:31 Instrument/Analyst: NT4/JZ

R

07/09 Sample Amount: 500 mL 9/09 16:31 Final Extract Volume: 0.50 mL NT4/JZ Dilution Factor: 1.00

CAS Number Analyte RL Result

117-81-7 bis(2-Ethylhexyl)phthalate 1.0 1.6

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl 65.6%

FORM I

PNØ4:00014



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PN04D LIMS ID: 09-20698

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 17:06

Instrument/Analyst: NT4/JZ

Sample ID: MW26R-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl

PN04:00015



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PN04E LIMS ID: 09-20699

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 17:42 Instrument/Analyst: NT4/JZ

Sample ID: MW26R-090903D SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl 80.0%

PNØ4:00016



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: PN04F LIMS ID: 09-20700

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 18:17

Instrument/Analyst: NT4/JZ

Sample ID: MW44-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
	1' (0 51 71 71 71 71 71	1 0	1 0 11
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in $\mu g/L$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl

72.0%

PNO4:00017



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PN04G LIMS ID: 09-20701

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 18:53

Instrument/Analyst: NT4/JZ

Sample ID: MW36-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl 73.6%

PNG4: 22018



SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN04-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	TPH TO	T OUT
-		
MB-090709	84.0%	0
LCS-090709	73.6%	0
LCSD-090709	74.4%	0
CMP3-090903	76.4%	0
CMP4-090903	76.0%	0
CMP15-090903	65.6%	0
MW26R-090903	73.2%	0
MW26R-090903D	80.0%	0
MW44-090903	72.0%	0
MW36-090903	73.6%	0

(TPH) = d14-p-Terphenyl

LCS/MB LIMITS QC LIMITS

(53-119) (26-114)

Prep Method: SW3520C

Log Number Range: 09-20695 to 09-20701

PN24:00019

FORM-II SW8270



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: LCS-090709

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted LCS/LCSD: 09/07/09

Date Analyzed LCS: 09/09/09 14:09

LCSD: 09/09/09 14:44

Instrument/Analyst LCS: NT4/JZ

LCSD: NT4/JZ

GPC Cleanup: NO

Sample ID: LCS-090709

LCS/LCSD

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

		Spike	LCS		Spike	LCSD	
Analyte	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD
bis(2-Ethylhexyl)phthalate	17.3	25.0	69.2%	18.2	25.0	72.8%	5.1%

Semivolatile Surrogate Recovery

LCS LCSD d14-p-Terphenyl 73.6% 74.4%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

FORM III

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: UNSPECIFIĖD

ARI Job No: PN04

Project: SOUTHWEST HARBOR PRO

Lab File ID: 09090902

Date Extracted: 09/07/09

Instrument ID: NT4

Date Analyzed: 09/09/09

Matrix: LIQUID

Time Analyzed: 1333

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	SAMPLE NO.	SAMPLE ID	LIPE ID	ANALYZED
0.1	DNO 41 GGH1		=========	========
01	PN04LCSW1	PN04LCSW1	09090903	09/09/09
02	PN04LCSDW1	PN04LCSDW1	09090904	09/09/09
03	CMP3-090903	PN04A	09090905	09/09/09
04	CMP4-090903	PN04B	09090906	09/09/09
05	CMP15-090903	PN04C	09090907	09/09/09
06	MW26R-090903	PN04D	09090908	09/09/09
07	MW26R-090903D	PN04E	09090909	09/09/09
08	MW44-090903	PN04F	09090910	09/09/09
09	MW36-090903	PN04G	09090911	09/09/09
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COMMENTS:			
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page 1 of 1

FORM IV SV



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: MB-090709

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 13:33

Instrument/Analyst: NT4/JZ

Sample ID: MB-090709 METHOD BLANK

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL

Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl

84.0%

PN04:00022

SIM SEMIVOLATILE ANALYSIS



Sample ID: CMP3-090903 SAMPLE

Lab Sample ID: PN04A LIMS ID: 09-20695

Matrix: Water

Data Release Authorized: Reported: 09/10/09

Date Extracted: 09/07/09

Instrument/Analyst: NT2/PK

Date Analyzed: 09/09/09 16:35

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	0.010
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 40.7% d14-Dibenzo(a, h) anthracene 76.7%

PNOU: 00024



Page 1 of 1

Lab Sample ID: PN04B

LIMS ID: 09-20696

Matrix: Water Data Release Authorized: Reported: 09/10/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 16:59 Instrument/Analyst: NT2/PK

Sample ID: CMP4-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 57.7% d14-Dibenzo(a,h)anthracene 75.0%

PN04:00025



Page 1 of 1

Lab Sample ID: PN04C LIMS ID: 09-20697

Matrix: Water

Data Release Authorized: Reported: 09/10/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 17:23 Instrument/Analyst: NT2/PK

Sample ID: CMP15-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 46.0% d14-Dibenzo(a,h)anthracene 82.3%

FORM I

PNØ4:00026



Page 1 of 1

Lab Sample ID: PN04D LIMS ID: 09-20698

Matrix: Water

Data Release Authorized: /

Reported: 09/10/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 17:48 Instrument/Analyst: NT2/PK

Sample ID: MW26R-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	0.013
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70 - 3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 66.0% d14-Dibenzo(a,h)anthracene 82.0%

PN04:00027



Page 1 of 1

Lab Sample ID: PN04E LIMS ID: 09-20699

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 18:12 Instrument/Analyst: NT2/PK

Sample ID: MW26R-090903D SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	0.013
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 63.3% d14-Dibenzo(a,h)anthracene 79.7%

PN04:00028



Page 1 of 1

Lab Sample ID: PN04F LIMS ID: 09-20700

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 18:36 Instrument/Analyst: NT2/PK

Sample ID: MW44-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	0.010
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 44.7% d14-Dibenzo(a, h) anthracene 80.0%

PNØ4:00029



Page 1 of 1

Lab Sample ID: PN04G

LIMS ID: 09-20701 Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 19:01 Instrument/Analyst: NT2/PK

Sample ID: MW36-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064 Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 53.7% d14-Dibenzo(a,h)anthracene 78.7%

PN04:00030



SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

Page 1 for PN04

QC Report No: PN04-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	MNP	DBA	TOT OUT
MB-090709	70.7%	77.3%	0
LCS-090709	67.7%	86.3%	0
LCSD-090709	55.7%	81.3%	0
CMP3-090903	40.7%	76.7%	0
CMP4-090903	57.7%	75.0%	0
CMP15-090903	46.0%	82.3%	0
MW26R-090903	66.0%	82.0%	0
MW26R-090903D	63.3%	79.7%	0
MW44-090903	44.7%	80.0%	0
MW36-090903	53.7%	78.7%	0

	LCS/MB LIMITS	QC LIMITS
 <pre>= d10-2-Methylnaphthalene</pre>	(42-100)	(31-109)
= d14-Dibenzo(a,h)anthracene	(40-125)	(10-133)

Prep Method: SW3510C

Log Number Range: 09-20695 to 09-20701

PNG4:00031



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-090709

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090709

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 500 mL Date Extracted LCS/LCSD: 09/07/09

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL Date Analyzed LCS: 09/09/09 15:46 LCSD: 09/09/09 16:11

LCSD: 0.50 mL

Instrument/Analyst LCS: NT2/PK Dilution Factor LCS: 1.00

LCSD: NT2/PK LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a) anthracene	0.248	0.300	82.7%	0.235	0.300	78.3%	5.4%
Chrysene	0.244	0.300	81.3%	0.228	0.300	76.0%	6.8%
Benzo(b) fluoranthene	0.255	0.300	85.0%	0.234	0.300	78.0%	8.6%
Benzo(k) fluoranthene	0.210	0.300	70.0%	0.205	0.300	68.3%	2.4%
Benzo(a)pyrene	0.216	0.300	72.0%	0.210	0.300	70.0%	2.8%
Indeno(1,2,3-cd)pyrene	0.235	0.300	78.3%	0.221	0.300	73.7%	6.1%
Dibenz(a,h)anthracene	0.251	0.300	83.7%	0.235	0.300	78.3%	6.6%

Reported in μ g/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	67.7%	55.7%
d14-Dibenzo(a,h)anthracene	86.3%	81.3%

PNOU: 20032

FORM III

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: ASPECT CONSULTING

ARI Job No: PN04 Project: SOUTHWEST HARBOR PRO

Lab File ID: 090910 Date Extracted: 09/07/09

Instrument ID: NT2 Date Analyzed: 09/09/09

Matrix: LIQUID Time Analyzed: 1522

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	ı 			5300
	CLIENT	LAB	LAB	DATE
ì	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
			==========	=======
01	PN04LCSW1	PN04LCSW1	090911	09/09/09
02	PN04LCSDW1	PN04LCSDW1	090912	09/09/09
-		PN04LCSDW1	090913	09/09/09
03	CMP3-090903			09/09/09
04	CMP4-090903	PN04B	090914	09/09/09
05	CMP15-090903	PN04C	090915	09/09/09
06	MW26R-090903	PN04D	090916	09/09/09
07	MW26R-090903D	PN04E	090917	09/09/09
08	MW44-090903	PN04F	090918	09/09/09
09	MW36-090903	PN04G	090919	09/09/09
10	CMP1-090904	PN16A	090921	09/09/09
$\overline{11}$	MW308N-090904	PN16B	090922	09/09/09
12	MW308S-090904	PN16C	090923	09/09/09
	MW3065-090904	PNIC	090923	05/05/05
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COMMENTS:		

page 1 of 1

FORM IV SV



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: MB-090709

LIMS ID: 09-20695 Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 15:22

Instrument/Analyst: NT2/PK

Sample ID: MB-090709 METHOD BLANK

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a) pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

70.7% d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene 77.3%

PNØ4: BØØ34

FORM I

PCB ANALYSIS



Page 1 of 1

Matrix: Water

Sample ID: CMP3-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 10.0

Silica Gel: No Acid Cleanup: Yes

Date	Extracted: 09/08/09			
Date	Analyzed: 09/14/09 11:09			
Instrument/Analyst: ECD5/JGR				
CDC C	Tleanun. No			

Data Release Authorized:

GPC Cleanup: No Sulfur Cleanup: Yes

Lab Sample ID: PN04A

LIMS ID: 09-20695

Reported: 09/14/09

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.10	< 0.10 U
53469-21-9	Aroclor 1242	0.10	< 0.10 U
12672-29-6	Aroclor 1248	0.10	1.2 P
11097-69-1	Aroclor 1254	1.0	< 1.0 Y
11096-82-5	Aroclor 1260	0.10	< 0.10 U
11104-28-2	Aroclor 1221	0.10	< 0.10 U
11141-16-5	Aroclor 1232	0.10	< 0.10 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.5%
Tetrachlorometaxylene	57.8%

FORM I

PNO4:00036



Page 1 of 1

Lab Sample ID: PN04B LIMS ID: 09-20696

Matrix: Water

Data Release Authorized:

Reported: 09/14/09

Date Extracted: 09/08/09 Date Analyzed: 09/11/09 17:45 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: CMP4-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	0.017
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	58.2%
Tetrachlorometaxylene	50.2%

FORM I

PNG4:00037



Page 1 of 1

Lab Sample ID: PN04C LIMS ID: 09-20697

Matrix: Water

Data Release Authorized;

Reported: 09/14/09

Date Extracted: 09/08/09 Date Analyzed: 09/11/09 18:08 Instrument/Analyst: ECD5/JGR

11104-28-2 Aroclor 1221

11141-16-5 Aroclor 1232

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: CMP15-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

< 0.010 U

< 0.010 U

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

0.010

0.010

CAS Number Analyte RLResult 0.010 < 0.010 U 12674-11-2 Aroclor 1016 53469-21-9 Aroclor 1242 0.010 < 0.010 U 12672-29-6 Aroclor 1248 0.010 < 0.010 U 11097-69-1 Aroclor 1254 0.010 < 0.010 U 11096-82-5 Aroclor 1260 0.010 < 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	55.5%
Tetrachlorometaxylene	59.2%

FORM I

PNØ4:00038



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: MW26R-090903 SAMPLE

Lab Sample ID: PN04D LIMS ID: 09-20698

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water

080064

Data Release Authorized: Reported: 09/14/09

Date Sampled: 09/03/09 Date Received: 09/03/09

Date Extracted: 09/08/09 Date Analyzed: 09/11/09 18:31 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	61.5%
Tetrachlorometaxylene	48.0%

PNØ4:00039



Page 1 of 1

Lab Sample ID: PN04E LIMS ID: 09-20699

Matrix: Water

Data Release Authorized: Reported: 09/14/09

Date Extracted: 09/08/09
Date Analyzed: 09/11/09 18:54
Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW26R-090903D SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82 - 5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	63.8%
Tetrachlorometaxylene	56.8%



Page 1 of 1

Lab Sample ID: PN04F LIMS ID: 09-20700

Matrix: Water

Data Release Authorized: Reported: 09/14/09

Date Extracted: 09/08/09

Date Analyzed: 09/11/09 19:17 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW44-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.0%
Tetrachlorometaxylene	54.5%

FORM I

PNOU: OOO41



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: MW36-090903 SAMPLE

Lab Sample ID: PN04G LIMS ID: 09-20701

QC Report No: PN04-Aspect Consulting LLC

Reported: 09/14/09

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water Data Release Authorized: 080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Date Extracted: 09/08/09 Date Analyzed: 09/11/09 19:40 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No

Silica Gel: No Acid Cleanup: Yes

Sulfur Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	56.0%
Tetrachlorometaxylene	52.8%



SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
	<u> </u>				
MB-090809	67.2%	32-108	40.2%	31-100	0
LCS-090809	73.2%	32-108	47.5%	31-100	0
LCSD-090809	74.0%	32-108	41.5%	31-100	0
CMP3-090903	85.5%	19-111	57.8%	21-100	0
CMP4-090903	58.2%	19-111	50.2%	21-100	0
CMP15-090903	55.5%	19-111	59.2%	21-100	0
MW26R-090903	61.5%	19-111	48.0%	21-100	0
MW26R-090903D	63.8%	19-111	56.8%	21-100	0
MW44-090903	62.0%	19-111	54.5%	21-100	0
MW36-090903	56.0%	19-111	52.8%	21-100	0

Prep Method: SW3510C

Log Number Range: 09-20695 to 09-20701

PNG4: GGG43

FORM-II SW8082



Page 1 of 1

Lab Sample ID: LCS-090809

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized:

Reported: 09/14/09

Date Extracted LCS/LCSD: 09/08/09

Date Analyzed LCS: 09/11/09 14:20

LCSD: 09/11/09 14:42

Instrument/Analyst LCS: ECD5/JGR

LCSD: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

Sample ID: LCS-090809 LCS/LCSD

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Silica Gel: No Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.036	0.050	72.0%	0.034	0.050	68.0%	5.7%
Aroclor 1260	0.045	0.050	90.0%		0.050	80.0%	11.8%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	73.2%	74.0%
Tetrachlorometaxylene	47.5%	41.5%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

FORM III

PNOU: 000UU

PCB METHOD BLANK SUMMARY

BLANK NO.

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: UNSPECIFIED

ARI Job No.: PN04

Project: SOUTHWEST HARBOR PRO

Lab Sample ID: PN04MBW1

Lab File ID: 0911B016

Date Extracted: 09/08/09

Matrix: LIQUID

Date Analyzed: 09/11/09

Instrument ID: ECD5

Time Analyzed: 1357

GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
	_======================================	=======	========
01	PN04LCSW1	PN04LCSW1	09/11/09
02	PN04LCSDW1	PN04LCSDW1	09/11/09
03	CMP4-090903	PN04B	09/11/09
04	CMP15-090903	PN04C	09/11/09
05	MW26R-090903	PN04D	09/11/09
06	MW26R-090903D	PN04E	09/11/09
07	MW44-090903	PN04F	09/11/09
08	MW36-090903	PN04G	09/11/09
09	CMP3-090903	PN04A	09/14/09

ALL RUNS ARE DUAL COLUMN

page 1 of 1

FORM IV PCB

PNØ4:00045



Page 1 of 1

Lab Sample ID: MB-090809

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized:

Reported: 09/14/09

Date Extracted: 09/08/09 Date Analyzed: 09/11/09 13:57

Instrument/Analyst: ECD5/JGR GPC Cleanup: No

Sulfur Cleanup: Yes

Sample ID: MB-090809 METHOD BLANK

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL

Dilution Factor: 1.00 Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.2%
Tetrachlorometaxylene	40.2%

TPHD ANALYSIS



ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1 Matrix: Water

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE

080064

Data Release Authorized:

Reported: 09/09/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-090709 09-20695	Method Blank HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 93.2%
PN04A 09-20695	CMP3-090903 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 92.6%
PN04B 09-20696	CMP4-090903 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 90.8%
PN04C 09-20697	CMP15-090903 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25	< 0.25 U < 0.50 U 95.3%
PN04D 09-20698	MW26R-090903 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 96.2%
PN04E 09-20699	MW26R-090903D HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25	< 0.25 U < 0.50 U 91.4%
PN04F 09-20700	MW44-090903 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 87.0%
PN04G 09-20701	MW36-090903 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 86.5%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

PNØ4:00048



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN04-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

OTER	TOT OUT
93.2%	0
94.5%	0
88.7%	0
92.6%	0
90.8%	0
95.3%	0
96.2%	0
91.4%	0
87.0%	0
86.5%	0
	93.2% 94.5% 88.7% 92.6% 90.8% 95.3% 96.2% 91.4% 87.0%

LCS/MB LIMITS

QC LIMITS

(OTER) = o-Terphenyl

(51-120)

(41-121)

Prep Method: SW3510C

Log Number Range: 09-20695 to 09-20701

PN04: 20049

FORM-II TPHD



ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Sample ID: LCS-090709

LCS/LCSD

Lab Sample ID: LCS-090709

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 1.0 mL

LCSD: 1.0 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Date Analyzed LCS: 09/07/09 18:10 LCSD: 09/07/09 18:29 Instrument/Analyst LCS: FID/MS

Date Extracted LCS/LCSD: 09/07/09

LCSD: FID/MS

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.51	3.00	83.7%	2.46	3.00	82.0%	2.0%

TPHD Surrogate Recovery

LCS LCSD

o-Terphenyl

94.5% 88.7%

Results reported in mg/L RPD calculated using sample concentrations per SW846.

FORM III

PNG4:00050

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: ASPECT CONSULTING LLC

SDG No.: PN04, PN16

Project No.: SW HARBOR PRJOECT-PHASE 2

Date Extracted: 09/07/09

Matrix: LIQUID

Date Analyzed: 09/07/09

Instrument ID : FID3A

Time Analyzed: 1752

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	• —		
	CLIENT	LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
		==========	========
01	PN04LCSW1	PN04LCSW1	09/07/09
02	PN04LCSDW1	PN04LCSDW1	09/07/09
03	CMP3-090903	PN04A	09/07/09
04	CMP4-090903	PN04B	09/07/09
05	CMP15-090903	PN04C	09/07/09
06	MW26R-090903	PN04D	09/07/09
07	MW26R-090903	PN04E	09/07/09
08	MW44-090903	PN04F	09/07/09
09	MW36-090903	PN04G	09/07/09
10	CMP1-090904	PN16A	09/07/09
11	MW308N-09090	PN16B	09/07/09
12	MW308S-09090	PN16C	09/07/09
,			•

page 1 of 1

FORM IV TPH

METALS ANALYSIS



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PNO4A

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: CMP3-090903

SAMPLE

QC Report No: PNO4-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09 09/07/09	200.8	09/10/09 09/10/09	7440-38-2 7439-92-1	Arsenic Lead	0.2	8.3 1	U

U-Analyte undetected at given RL RL-Reporting Limit



TOTAL METALS

Page 1 of 1

Lab Sample ID: PN04B

LIMS ID: 09-20696

Matrix: Water Data Release Authorized

Reported: 09/15/09

Sample ID: CMP4-090903

SAMPLE

QC Report No: PNO4-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	3.8	
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit

PNGLI: 00054



TOTAL METALS

Page 1 of 1

Lab Sample ID: PNO4C

LIMS ID: 09-20697

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: CMP15-090903

SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-36-0	Antimony	0.2	0.2	U
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	0.5	0.9	
200.8	09/07/09	200.8	09/11/09	7440-47-3	Chromium	2	2	U
200.8	09/07/09	200.8	09/10/09	7440-50-8	Copper	0.5	0.5	U
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	1	1	U
200.8	09/07/09	200.8	09/11/09	7440-02-0	Nickel	0.5	2.0	

U-Analyte undetected at given RL RL-Reporting Limit

PNØ4:00055



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PN04D

LIMS ID: 09-20698

Matrix: Water Data Release Authorized

Reported: 09/15/09

Sample ID: MW26R-090903

SAMPLE

QC Report No: PNO4-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-36-0	Antimony	1	1	U
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	2	2	U
200.8	09/07/09	200.8	09/10/09	7440-47-3	Chromium	2	3	
200.8	09/07/09	200.8	09/10/09	7440-50-8	Copper	2	3	
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	5	5	U
200.8	09/07/09	200.8	09/10/09	7440-02-0	Nickel	2	7	

 $\ensuremath{\mathsf{U}}\xspace ensuremath{\mathsf{-}}\xspace\mathsf{Analyte}$ undetected at given RL RL-Reporting Limit



TOTAL METALS
Page 1 of 1

Lab Sample ID: PN04E

LIMS ID: 09-20699

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: MW26R-090903D

SAMPLE

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-36-0	Antimony	1	1	U
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	2	2	U
200.8	09/07/09	200.8	09/10/09	7440-47-3	Chromium	2	3	
200.8	09/07/09	200.8	09/10/09	7440-50-8	Copper	2	3	
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	5	. 5	U
200.8	09/07/09	200.8	09/10/09	7440-02-0	Nickel	2	6	

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PN04F

LIMS ID: 09-20700

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: MW44-090903

SAMPLE

QC Report No: PN04-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-36-0	Antimony	0.2	0.3	
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	0.3	
200.8	09/07/09	200.8	09/10/09	7440-47-3	Chromium	0.5	3.4	
200.8	09/07/09	200.8	09/10/09	7440-50-8	Copper	0.5	6.4	
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	1	4	
200.8	09/07/09	200.8	09/10/09	7440-02-0	Nickel	0.5	1.4	

U-Analyte undetected at given RL RL-Reporting Limit

PNØ4:00058



TOTAL METALS

Page 1 of 1

Lab Sample ID: PN04G

LIMS ID: 09-20701

Matrix: Water

Data Release Authorized Reported: 09/15/09

Sample ID: MW36-090903 SAMPLE

QC Report No: PN04-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09 Date Received: 09/03/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-36-0	Antimony	2	2	U
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	5	6	
200.8	09/07/09	200.8	09/10/09	7440-47-3	Chromium	5	5	U
200.8	09/07/09	200.8	09/10/09	7440-50-8	Copper	5	5	U
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	10	10	Ü
200.8	09/07/09	200.8	09/10/09	7440-02-0	Nickel	5	12	

U-Analyte undetected at given RL RL-Reporting Limit

PNØ4:00059



TOTAL METALS

Page 1 of 1

Lab Sample ID: PN04LCS

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: LAB CONTROL

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	25.9	25.0	104%	
Arsenic	200.8	26.3	25.0	105%	
Chromium	200.8	25.6	25.0	102%	
Copper	200.8	27.4	25.0	110%	
Lead	200.8	25	25	100%	
Nickel	200.8	26.2	25.0	105%	

Reported in $\mu g/L$

N-Control limit not met Control Limits: 80-120%

PNØ4: ØØØ6Ø



TOTAL METALS

Page 1 of 1

Lab Sample ID: PN04MB

LIMS ID: 09-20695

Matrix: Water Data Release Authorized

Reported: 09/15/09

Sample ID: METHOD BLANK

QC Report No: PNO4-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-36-0	Antimony	0.2	0.2	U
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	0.2	U
200.8	09/07/09	200.8	09/10/09	7440-47-3	Chromium	0.5	0.5	U
200.8	09/07/09	200.8	09/10/09	7440-50-8	Copper	0.5	0.5	U
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	1	1	U
200.8	09/07/09	200.8	09/10/09	7440-02-0	Nickel	0.5	0.5	U

U-Analyte undetected at given RL RL-Reporting Limit

PNG4:00051

Laboratory Data Package

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN04

prepared by

Analytical Resources, Inc.



16 September 2009

Chip Goodhue Aspect Consulting 179 Madrone Lane North Bainbridge Island, WA 98110

RE: Client Project: 080064, Southwest Harbor Project-Phase 2 GWCMP ARI Job: PN16

Dear Chip:

Please find enclosed the original chain of custody (COC) record and the final data package for samples from the project referenced above. Analytical Resources, Inc. accepted three water samples in good condition on September 4, 2009. The samples were analyzed for BEHP, PAHs, PCBs, NWTPH-Dx and total metals as requested.

Problems associated with these analyses are discussed in the case narrative.

A copy of this package will be kept on file at ARI. If you have questions or require additional information, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris Project Manager 206/695-6210 markh@arilabs.com

Enclosures

cc: File PN16

MDH/mdh

Page 1 of <u>838</u>

Chain of Custody Documentation

prepared for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN16

prepared by

Analytical Resources, Inc.

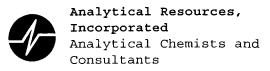
PN16:00002

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Cooler Co	ARI Assigned Number:	Turn-around Requested: STD Phone:	Requested: 7 Phone:				62/17/6	5			Analyt Analyt	Analytical Resources, Incorporated Analytical Chemists and Consultants	
Time Matrix No. containers 17.3, 17.3 17.3	Consulting L	٦	20¢	. 780-	9330	rage:		_		7	4611 S Tukwil	4611 South 134th Place, Suite 100 Tukwila WA 98168	
Project - Prose 2 GW CMP 100 1135 100 1135 100 1135 100 1135 100 1135 100 1135 100 1135 100 1135 100 1	Goodhue					No. of Coolers:	<u> </u>	ooler emps: 14 · 2			206-69	95-6200 206-695-6201 (fax)	
Samples PSB Sample	Name:	,	Ġ	,				Analysis	s Requested			Notes/Comments	
Date Time Matrix No. Containing	# 080004	Samplers:	PSB	2 GW	CMP	(9,	1379 020	mis 2	ر ا الاطان				
1035 Waker 9 X X X X X X X X X	Sample ID	Date	Time	Matrix	No. Containers	1 10101 1 80100 1 80100 1 10101	H V27	19758 19744 192510	BEH 8210	2859 7802			
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Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program of the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alernate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: ASPECT		Project Name: South We	st Harbor Pr	greut-Pl
COC No(s):	(NA)	Delivered by: Fed-Ex UPS Co	urier (Hand Delivered O	ther:
Assigned ARI Job No:		Tracking No:		(NA)
reliminary Examination Phase:				
Were intact, properly signed and dated cu	stody seals attached to t	the outside of to cooler?	YES	(NO)
Were custody papers included with the co-	oler?		(ES)	NO
Were custody papers properly filled out (in	ık, signed, etc.)		(ES)	NO
Temperature of Cooler(s) (°C) (recommen	ded 2.0-6.0 °C for chem	istry) 12-2 2	19.2	
If cooler temperature is out of compliance		<u></u>	Temp Gun ID#: 48	27405
,	Al	Date: 9/4/09 Tim	1125	
ooler Accepted by:	nlete custody forms a	nd attach all shipping documents	···	
	prote outloay forme a			
og-In Phase:				
Was a temperature blank included in the c	ooler?		YES	NO.
What kind of packing material was used?		t Ice Gel Packs Baggies Foam Ble		\mathcal{O}
Was sufficient ice used (if appropriate)?			NA NES	NO
Were all bottles sealed in individual plastic			YES	(No
Did all bottles arrive in good condition (unb			(F)s	NO
Were all bottle labels complete and legible				NO
Did the number of containers listed on CO			(FE)	NO
Did all bottle labels and tags agree with cu	stody papers?	•••••••••••••••••••		NO
Were all bottles used correct for the reques			A S	NO
Do any of the analyses (bottles) require pre	eservation? (attach pres	ervation sheet, excluding VOCs)	NA MES	NO
Were all VOC vials free of air bubbles?			A XES	NO
Was sufficient amount of sample sent in lea	ach bottle?		Ø€s	NO
amples Logged by:	Date:	9 4 0 Time:	1205	
amples Logged by:\ \ \\\\\\		of discrepancies or concerns **	(0)	-
		or dissispanions of contains		
Sample ID on Bottle Sa	ample ID on COC	Sample ID on Bottle	Sample ID on	coc
Additional Notes, Discrepancies, & Res	olutions:	······································		
By: Date:		0 11 2 4 12		
Small Air Bubbles Peabubbles' 2-4 mm	5 4 mm	Small → "sm"		
14	-	Peabubbles → "pb"		
• • • •	A A A	Large → "lg"		

0016F 3/12/09 Cooler Receipt Form

Revision 012



Cooler Temperature Compliance Form

Cooler#:	Temn	erature(°C):	7.2
Sample ID	<u> </u>	Bottle Count	Bottle Type
	10904	q	6 500 ml A G , 2 11 HG , 1
CITI	10 10 4	 	- Journa Land 1
			
Cooler#:	Tomp	erature(°C):	44.7
Sample ID	- Temp	Bottle Count	Bottle Type
MUROSN	- 09094		((
		q	
MW3082))	
	·		
Cooler#:	T	1 (90)	
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Sample ID		Bottle Count	Bottle Type
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Completed by:		Date	5. 7-4-00 Time: 11-0

PN16: 00005 3/3/09

PRESERVATION VERIFICATION 09/04/09 1 of 1

Page

Analysis Requested: 09/04/09 Contact: Goodhue, Chip Inquiry Number: NONE

Client: Aspect Consulting LLC Logged by: MM Sample Set Used: Yes-481

Validatable Package: No Deliverables:

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: PN16

PC: Mark VTSR: 09/04/09

Project #: 080064

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Sample Site:

SDG No:

Analytical Protocol: In-house

AMOUNT ADDED DATE/RY	- 1		42 108.00 2.501 0-4.00 DM
LOT 7			0018
ADJUSTED LOT AMOUNT TO NUMBER ADDED			42 110
PARAMETER			
DMET DOC FLT FLT			
PHOS TKN NO23 TOC S2 AK102 Fe2+ DMET DOC <2 <2 <2 <1 FLT FLT			
\$2 >9			
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NO23			
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CN >12			
CLIENT ID	CMP1-090904	MW308N-090904	MW308S-090904
	09-20753 PN16A	09-20754 PN16B	09-20755 PN16C

Checked By

Case Narrative

prepared for

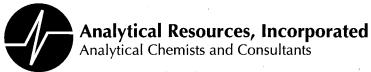
Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN16

prepared by

Analytical Resources, Inc.



Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: PN16

Date: September 16, 2009

BEHP Analysis

The percent recovery for the surrogate, d12-p-terphenyl, was high following the initial analysis of sample CMP1-090904. Since BEHP was not detected in this sample, the high bias does not compromise the RL. No corrective actions were taken.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

Data Summary Package

prepared for

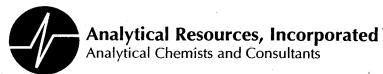
Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN16

prepared by

Analytical Resources, Inc.



Case Narrative

Client: Aspect Consulting

Project: Southwest Harbor-Phase 2 GWCMP

Project Number: 080064

Matrix: Water

ARI Job Number: PN16

Date: September 16, 2009

BEHP Analysis

The percent recovery for the surrogate, d12-p-terphenyl, was high following the initial analysis of sample CMP1-090904. Since BEHP was not detected in this sample, the high bias does not compromise the RL. No corrective actions were taken.

PAHs Analysis

These analyses proceeded without incident of note.

PCBs Analysis

These analyses proceeded without incident of note.

NWTPH-Dx Analysis

These analyses proceeded without incident of note.

Total Metals Analysis

These analyses proceeded without incident of note.

SEMIVOLATILE ANALYSIS



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS Page 1 of 1

Lab Sample ID: PN16A LIMS ID: 09-20753

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/14/09 16:53

Instrument/Analyst: NT4/JZ

Project: SOUTHWEST HARBOR PROJECT-PHASE 2 080064

QC Report No: PN16-Aspect Consulting LLC

Sample ID: CMP1-090904

SAMPLE

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl

135%

PN16:00012



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PN16B LIMS ID: 09-20754

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/14/09 17:28 Instrument/Analyst: NT4/JZ

Sample ID: MW308N-090904 SAMPLE

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2 080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl 76.0%

PN16:00013



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: PN16C LIMS ID: 09-20755

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/14/09 18:03

CAS Number

117-81-7

Instrument/Analyst: NT4/JZ

QC Report No: PN16-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2 080064

> Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount: 500 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

SAMPLE

Result Analyte RL< 1.0 U bis(2-Ethylhexyl)phthalate 1.0

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

109% d14-p-Terphenyl

PN16:00014



SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN16-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	TPH TOT	OUT
MB-090709	84.0%	0
LCS-090709	73.6%	0
LCSD-090709	74.4%	0
CMP1-090904	135%*	1
MW308N-090904	76.0%	0
MW308S-090904	109%	0

(TPH) = d14-p-Terphenyl

LCS/MB LIMITS QC LIMITS (26-114) (53-119)

Prep Method: SW3520C

Log Number Range: 09-20753 to 09-20755



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: LCS-090709

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted LCS/LCSD: 09/07/09

Date Analyzed LCS: 09/09/09 14:09

LCSD: 09/09/09 14:44

Instrument/Analyst LCS: NT4/JZ

LCSD: NT4/JZ

GPC Cleanup: NO

Sample ID: LCS-090709 LCS/LCSD

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
bis(2-Ethylhexyl)phthalate	17.3	25.0	69.2%	18.2	25.0	72.8%	5.1%

Semivolatile Surrogate Recovery

LCS LCSD

d14-p-Terphenyl

73.6% 74.4%

Results reported in $\mu g/L$ RPD calculated using sample concentrations per SW846.

4B SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

PN16MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: UNSPECIFIED

ARI Job No: PN16

Project: SOUTHWEST HARBOR PRO

Lab File ID: 09090902

Date Extracted: 09/07/09

Instrument ID: NT4

Date Analyzed: 09/09/09

Matrix: LIQUID

Time Analyzed: 1333

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================	==========	=========	========
01	PN16LCSW1	PN16LCSW1	09090903	09/09/09
02	PN16LCSDW1	PN16LCSDW1	09090904	09/09/09
03	CMP1-090904	PN16A	09140902	09/14/09
04	MW308N-090904	PN16B	09140903	09/14/09
05	MW308S-090904	PN16C	09140904	09/14/09
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COMMENTS:			
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page 1 of 1

FORM IV SV



ORGANICS ANALYSIS DATA SHEET Semivolatiles by SW8270D GC/MS

Page 1 of 1

Lab Sample ID: MB-090709

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 13:33

Instrument/Analyst: NT4/JZ

Sample ID: MB-090709 METHOD BLANK

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL

Final Extract Volume: 0.50 mL

Dilution Factor: 1.00

CAS Number Analyte RLResult 117-81-7 bis(2-Ethylhexyl)phthalate 1.0 < 1.0 U

Reported in μ g/L (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl

84.0%

PN16:00018

SIM SEMIVOLATILE ANALYSIS



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: CMP1-090904 SAMPLE

Lab Sample ID: PN16A

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized:

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 19:49

Instrument/Analyst: NT2/PK

Reported: 09/10/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a) anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a.h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 62.7% d14-Dibenzo(a,h)anthracene 81.7%

PN16:00020



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Lab Sample ID: PN16B LIMS ID: 09-20754

Matrix: Water

Data Release Authorized: Reported: 09/10/09

Date Extracted: 09/07/09 Date Analyzed: 09/09/09 20:13 Instrument/Analyst: NT2/PK

Sample ID: MW308N-090904 SAMPLE

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	54.0%
d14-Dibenzo(a,h)anthracene	77.3%

PN15:00021



ORGANICS ANALYSIS DATA SHEET PNAs by Low Level SW8270D-SIM GC/MS Page 1 of 1

Sample ID: MW308S-090904 SAMPLE

Lab Sample ID: PN16C LIMS ID: 09-20755

LIMS ID: 09-20755

Matrix: Water
Data Release Authorized:

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064
Date Sampled: 09/04/09
Date Received: 09/04/09

Reported: 09/10/09

Date Received:

Date Extracted: 09/07/09 Sample Amount: 500 mL
Date Analyzed: 09/09/09 20:38 Final Extract Volume: 0.5 mL
Instrument/Analyst: NT2/PK Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 59.3% d14-Dibenzo(a,h)anthracene 79.3%

PN16:00022



SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN16-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	MNP	DBA	TOT OUT
MB-090709	70.7%	77.3%	0
LCS-090709	67.7%	86.3%	0
LCSD-090709	55.7%	81.3%	0
CMP1-090904	62.7%	81.7%	0
MW308N-090904	54.0%	77.3%	0
MW308S-090904	59.3%	79.3%	0

		LCS/MB LIMITS	QC LIMITS
	d10-2-Methylnaphthalene d14-Dibenzo(a,h)anthracene	(42-100) (40-125)	(31-109) (10-133)

Prep Method: SW3510C

Log Number Range: 09-20753 to 09-20755



ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-090709

LAB CONTROL SAMPLE

Lab Sample ID: LCS-090709

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized:

Reported: 09/10/09

Date Extracted LCS/LCSD: 09/07/09

Date Analyzed LCS: 09/09/09 15:46

LCSD: 09/09/09 16:11

Instrument/Analyst LCS: NT2/PK

LCSD: NT2/PK

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a)anthracene	0.248	0.300	82.7%	0.235	0.300	78.3%	5.4%
Chrysene	0.244	0.300	81.3%	0.228	0.300	76.0%	6.8%
Benzo(b) fluoranthene	0.255	0.300	85.0%	0.234	0.300	78.0%	8.6%
Benzo(k) fluoranthene	0.210	0.300	70.0%	0.205	0.300	68.3%	2.4%
Benzo(a) pyrene	0.216	0.300	72.0%	0.210	0.300	70.0%	2.8%
Indeno(1,2,3-cd)pyrene	0.235	0.300	78.3%	0.221	0.300	73.7%	6.1%
Dibenz (a, h) anthracene	0.251	0.300	83.7%	0.235	0.300	78.3%	6.6%

Reported in $\mu g/L$ (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	67.7%	55.7%
d14-Dibenzo(a,h)anthracene	86.3%	81.3%

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: ASPECT CONSULTING

ARI Job No: PN04

Project: SOUTHWEST HARBOR PRO

Lab File ID: 090910

Date Extracted: 09/07/09

Instrument ID: NT2

Date Analyzed: 09/09/09

Matrix: LIQUID

Time Analyzed: 1522

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================			=======
01	PN04LCSW1	PN04LCSW1	090911	09/09/09
02	PN04LCSDW1	PN04LCSDW1	090912	09/09/09
03	CMP3-090903	PN04A	090913	09/09/09
04	CMP4-090903	PN04B	090914	09/09/09
05	CMP15-090903	PN04C	090915	09/09/09
06	MW26R-090903	PN04D	090916	09/09/09
07	MW26R-090903D	PN04E	090917	09/09/09
08	MW44-090903	PN04F	090918	09/09/09
09	MW36-090903	PN04G	090919	09/09/09
10	CMP1-090904	PN16A	090921	09/09/09
11	MW308N-090904	PN16B	090922	09/09/09
12	MW308S-090904	PN16C	090923	09/09/09
13				05/05/05
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COMMENTS:				
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ige 1 of 1

FORM IV SV

PN15:00025



ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Lab Sample ID: MB-090709

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized: // Reported: 09/10/09

Date Extracted: 09/07/09
Date Analyzed: 09/09/09 15:22
Instrument/Analyst: NT2/PK

Sample ID: MB-090709 METHOD BLANK

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA Date Received: NA

Sample Amount: 500 mL Final Extract Volume: 0.5 mL Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
205-99-2	Benzo(b) fluoranthene	0.010	< 0.010 U
207-08-9	Benzo(k) fluoranthene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70 - 3	Dibenz(a,h)anthracene	0.010	< 0.010 U

Reported in μ g/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.7%
d14-Dibenzo(a.h)anthracene	77.3%

PCB ANALYSIS



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082 Page 1 of 1

Sample ID: CMP1-090904 SAMPLE

Lab Sample ID: PN16A LIMS ID: 09-20753

QC Report No: PN16-Aspect Consulting LLC

Matrix: Water

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Data Release Authorized: Reported: 09/15/09

Date Sampled: 09/04/09 Date Received: 09/04/09

Date Extracted: 09/08/09 Date Analyzed: 09/11/09 20:03 Instrument/Analyst: ECD5/JGR

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

GPC Cleanup: No Sulfur Cleanup: Yes

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.5%
Tetrachlorometaxylene	45.0%

PN15:00028



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: PN16B LIMS ID: 09-20754

Matrix: Water

Data Release Authorized: A. Reported: 09/15/09

Date Extracted: 09/08/09

Date Analyzed: 09/11/09 20:26 Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW308N-090904 SAMPLE

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	0.010
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	61.5%
Tetrachlorometaxylene	45.2%



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: PN16C

LIMS ID: 09-20755 Matrix: Water

Data Release Authorized: Reported: 09/15/09

Date Extracted: 09/08/09 Date Analyzed: 09/11/09 20:49

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No Sulfur Cleanup: Yes Sample ID: MW308S-090904 SAMPLE

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in μ g/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	54.5%
Tetrachlorometaxylene	45.2%

FORM I



SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN16-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-090809 LCS-090809 LCSD-090809 CMP1-090904 MW308N-090904 MW308S-090904	67.2% 73.2% 74.0% 60.5% 61.5% 54.5%	32-108 32-108 32-108 19-111 19-111	40.28 47.58 41.58 45.08 45.28	31-100 31-100 31-100 21-100 21-100 21-100	0 0 0 0 0

Prep Method: SW3510C Log Number Range: 09-20753 to 09-20755

PN15:00031



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Page 1 of 1

Lab Sample ID: LCS-090809

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized:

Reported: 09/15/09

Date Extracted LCS/LCSD: 09/08/09

Date Analyzed LCS: 09/11/09 14:20

LCSD: 09/11/09 14:42

Instrument/Analyst LCS: ECD5/JGR

LCSD: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

Sample ID: LCS-090809

LCS/LCSD

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Silica Gel: No Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.036	0.050	72.0%	0.034	0.050	68.0%	5.7%
Aroclor 1260	0.045	0.050	90.0%	0.040	0.050	80.0%	11.8%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	73.2%	74.0%
Tetrachlorometaxylene	47.5%	41.5%

Results reported in $\mu q/L$ RPD calculated using sample concentrations per SW846.

PCB METHOD BLANK SUMMARY

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC Client: ASPECT CONSULTING

ARI Job No.: PN16 Project: SOUTHWEST HARBOR

Lab Sample ID: PN04MBW1 Lab File ID: 0911B016

Date Extracted: 09/08/09 Matrix: LIQUID

Date Analyzed: 09/11/09 Instrument ID: ECD5

Time Analyzed: 1357 GC Columns: ZB5/ZB35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT	LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
	=======================================	========	=======
01	PN04LCSW1	PN04LCSW1	09/11/09
	PN04LCSDW1	PN04LCSDW1	09/11/09
	CMP1-090904	PN16A	09/11/09
	MW308N-090904	PN16B	09/11/09
05	MW308S-090904	PN16C	09/11/09

ALL RUNS ARE DUAL COLUMN

page 1 of 1

FORM IV PCB



ORGANICS ANALYSIS DATA SHEET PCB by GC/ECD Method SW8082

Data Release Authorized: 10

Date Analyzed: 09/11/09 13:57

Instrument/Analyst: ECD5/JGR

Date Extracted: 09/08/09

Page 1 of 1

Matrix: Water

Reported: 09/15/09

GPC Cleanup: No

Sulfur Cleanup: Yes

Sample ID: MB-090809 METHOD BLANK

QC Report No: PN16-Aspect Consulting LLC Lab Sample ID: MB-090809 LIMS ID: 09-20753

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA

Date Received: NA

Sample Amount: 1000 mL Final Extract Volume: 0.50 mL Dilution Factor: 1.00

Silica Gel: No Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U

Reported in $\mu g/L$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.2%
Tetrachlorometaxylene	40.2%

FORM I

TPHD ANALYSIS



ORGANICS ANALYSIS DATA SHEET TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1 Matrix: Water

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE

Data Release Authorized: Reported: 09/09/09

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-090709 09-20753	Method Blank HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 93.2%
PN16A 09-20753	CMP1-090904 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 90.4%
PN16B 09-20754	MW308N-090904 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25	< 0.25 U < 0.50 U 88.9%
PN16C 09-20755	MW308S-090904 HC ID:	09/07/09	09/07/09 FID3A	1.00	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 78.8%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL. DL-Dilution of extract prior to analysis. RL-Reporting limit.

Diesel quantitation on total peaks in the range from ${\tt C12}$ to ${\tt C24}$. Motor Oil quantitation on total peaks in the range from C24 to C38. HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

PN16:00036

DODE T



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN16-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Client ID	OTER	TOT OUT
MB-090709	93.2%	0
LCS-090709	94.5%	0
LCSD-090709	88.7%	0
CMP1-090904	90.4%	0
MW308N-090904	88.9%	0
MW308S-090904	78.8%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(51-120) (41-121)

Prep Method: SW3510C

Log Number Range: 09-20753 to 09-20755

PN16:00037

FORM-II TPHD



ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Lab Sample ID: LCS-090709

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized:

Reported: 09/09/09

Date Extracted LCS/LCSD: 09/07/09

Date Analyzed LCS: 09/07/09 18:10

LCSD: 09/07/09 18:29

Instrument/Analyst LCS: FID/MS

LCSD: FID/MS

Sample ID: LCS-090709

LCS/LCSD

QC Report No: PN16-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Final Extract Volume LCS: 1.0 mL

LCSD: 1.0 mL

Dilution Factor LCS: 1.00

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.51	3.00	83.7%	2.46	3.00	82.0%	2.0%

TPHD Surrogate Recovery

o-Terphenyl 94.5% 88.7%

Results reported in mg/L RPD calculated using sample concentrations per SW846.

FORM III



TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: PN16

Matrix: Water

Date Received: 09/04/09

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
09-20753-090709MB1	Method Blank	500 mL	1.00 mL	09/07/09
09-20753-090709LCS1	Lab Control	500 mL	1.00 mL	09/07/09
09-20753-090709LCSD1	Lab Control Dup	500 mL	1.00 mL	09/07/09
09-20753-PN16A	CMP1-090904	500 mL	1.00 mL	09/07/09
09-20754-PN16B	MW308N-090904	500 mL	1.00 mL	09/07/09
09-20755-PN16C	MW308S-090904	500 mL	1.00 mL	09/07/09

PN16:00039

Discal Extraction Penort

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT CONSULTING LLC

SDG No.: PN04, PN16

Project No.: SW HARBOR PRJOECT-PHASE 2

Date Extracted: 09/07/09

Matrix: LIQUID

Date Analyzed: 09/07/09

Instrument ID: FID3A

Time Analyzed: 1752

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	OT TENTO		
	CLIENT	! LAB	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED
	1========		
01	PN04LCSW1	DNOALGGERA	
-		PN04LCSW1	09/07/09
02	PN04LCSDW1	PN04LCSDW1	09/07/09
03	CMP3-090903	PN04A	09/07/09
04	CMP4-090903	PN04B	09/07/09
05	CMP15-090903	PN04C	09/07/09
06	MW26R-090903	PN04D	09/07/09
07	MW26R-090903	PN04E	09/07/09
08	MW44-090903	PN04F	09/07/09
09	MW36-090903	PN04G	09/07/09
10	CMP1-090904	PN16A	09/07/09
11	MW308N-09090	PN16B	09/07/09
12	MW308S-09090	PN16C	09/07/09
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page 1 of 1

FORM IV TPH

PN15:00040

METALS ANALYSIS



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PN16A

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: CMP1-090904

SAMPLE

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	<u>Q</u>
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	3.1	
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Lab Sample ID: PN16B

LIMS ID: 09-20754

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: MW308N-090904

SAMPLE

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	0.5	15.3	
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Lab Sample ID: PN16C

LIMS ID: 09-20755

Matrix: Water

Data Release Authorized Reported: 09/15/09

Sample ID: MW308S-090904

SAMPLE

QC Report No: PN16-Aspect Consulting LLC Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09 Date Received: 09/04/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	2	3	
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	5	5	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PN16MB

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized Reported: 09/15/09

Sample ID: METHOD BLANK

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	μg/L	Q
200.8	09/07/09	200.8	09/10/09	7440-38-2	Arsenic	0.2	0.2	U
200.8	09/07/09	200.8	09/10/09	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET TOTAL METALS

Page 1 of 1

Lab Sample ID: PN16LCS

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized

Reported: 09/15/09

Sample ID: LAB CONTROL

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: NA Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic Lead	200.8	25.4 24	25.0 25	102% 96.0%	

Reported in $\mu g/L$

N-Control limit not met Control Limits: 80-120%