



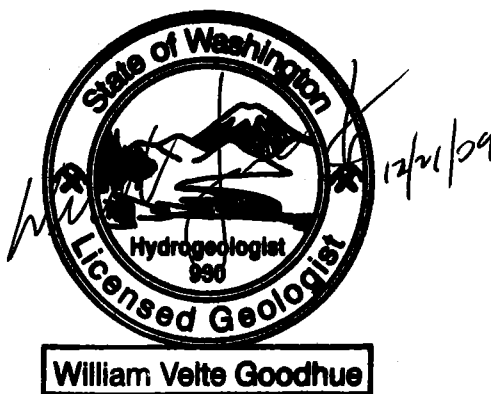
SOUTHWEST HARBOR PROJECT
Phase II Groundwater Confirmation
Monitoring Program
Groundwater Quality Monitoring Data Report
Prepared for: Port of Seattle

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

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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 summarizes 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 equalization 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 analconox 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

Sample Name	Remediation Area 1 (former Spokane Street Properties)											
	Background						Confirmation Monitoring					
	Fill Aquifer											
	FM105-081013	FM105-081013D	FM105-090331	FM105-090331D	FM105-090902	FM105-090902D	MW125-081013	MW125-090331	MW125-090902	CMP17-081013	CMP17-090331	CMP17-090902
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	9.60		10.04		9.44		9.02	9.50	8.89	8.96	9.38	8.93
Water Quality Field Parameters												
Temperature in degrees Celsius	14.8		11.5		14.5		18.6	11.4	19.3	17.6	12.3	17.5
pH	7.03		6.26		5.95		6.61	6.18	5.94	6.61	6.05	5.83
Conductivity in mS/cm	440		476		518		412	589	475	569	678	597
Dissolved Oxygen in mg/L	0.37		0.96		0.58		0.52	1.74	0.83	0.1	0.39	0.32
Turbidity in NTUs	2.1		0.53		3.64		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	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 Hydrocarbons (cPAHs) 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 8270D												
bis(2-ethylhexyl) phthalate in µg/L	1.0 U	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 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	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	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	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	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	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 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 Method 8260B												
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	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	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 U	0.2 U	0.2 U	0.2	0.2 U	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	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	0.2 U	0.2 U	0.2 U	0.4	0.2	0.3	0.2 U	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	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	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	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	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	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	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.
- UJ - The analyte was analyzed for, and the associated quantitation limit was an estimated value.

Aspect Consulting, LLC

12/21/2009

W:\080064 POS Terminal 5 GW Monitoring\Deliverables\Monitoring Reports\Dec 2009\T5 GW Quality Data_Compiled.xls

Table 2 - RA-2 Groundwater Monitoring and Analytical Results

POS Terminal 5 Southwest Harbor
Phase II GWCMP SWHP

Sample Name	Remediation Area 2 (former Salmon Bay Steel Property)								
	Background						Confirmation Monitoring		
	Fill Aquifer								
	CMP1-081013	CMP1-090331	CMP1-090904	CMP2-081013	CMP2-090331	CMP2-090902	CMP3-081014	CMP3-090401	CMP3-090903
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
pH	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	1 U	1 U	15	1	1 U	1 U	4	1 U
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) 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	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	0.011	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	0.019	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	0.010 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 8270D									
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	0.010 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	0.010 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 Results

POS Terminal 5 Southwest Harbor
Phase II GWCMP SWHP

Sample Name	Remediation Area 3 (former West Seattle Landfill and SSI Property), Remediation Area 1 (Former Buckley Yard)											
	Background			Confirmation Monitoring								
	Fill Aquifer									Estuarine Aquifer		
	CMP5-081013	CMP5-090401	CMP5-090902	CMP4-081014	CMP4-090402	CMP4-090903	MW308N-081013	MW308N-090402	MW308N-090904	MW308S-081013	MW308S-090401	MW308S-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
pH	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 Hydrocarbons (cPAHs) 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	0.010 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	0.010 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	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	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	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 8270D												
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	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	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	0.015 Y	0.010 U	0.010 U	0.010 U	0.010 U
Aroclor 1242 in µg/L	0.010 U	0.010 U	0.010 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	0.010 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	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

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.

Table 4 - RA-5 Groundwater Monitoring and Analytical Results

POS Terminal 5 Southwest Harbor
Phase II GWCMP SWHP

Sample Name	Remediation Area 5 (former Lockheed Shipyard 2)																	
	Background			Confirmation Monitoring														
	Fill Aquifer									Estuarine Aquifer								
	CMP5-081013	CMP5-090401	CMP5-090902	CMP15-081014	CMP15-090402	CMP15-090903	MW26R-081014	MW26R-081014D	MW26R-090401	MW26R-090401D	MW26R-090903	MW26R-090903D	MW36-081014	MW36-090402	MW36-090903	MW44-081014	MW44-090401	MW44-090903
Sampling Date	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																		
Reference Elevation in feet MLLW	23.80	23.80	23.80	18.42	18.42	18.42	18.27		18.27		18.27		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	9.91		9.66		9.69		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		8.58		7.60	8.54	7.88	7.48	9.44	6.92
Water Quality Field Parameters																		
Temperature in degrees Celsius	16	11.2	16.8	17.7	13.2	15.9	16.9		12.3		15.4		14.6	12.4	13.9	15.3	11.5	14
pH	6.73	6.05	6.05	6.88	6.69	6.39	7.29		6.43		7.14		7.47	6.48	8.78	7.23	6.42	5.84
Conductivity in mS/cm	358	480	509	2336	7059	3547	10190		1198		1043		36200	3734	3812	41	46	37
Dissolved Oxygen in mg/L	0.07	0.32	0.44	0.008	0.1	0.36	0.11		0.22		0.15		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		1.91		1.02	0.84	1.83	3.21	7.33	3.26
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	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																		
Total antimony in µg/L	14.2	1.9	12.9	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U	1 U	1 U	1 U	1 U	5 U	2 U	2 U	0.2 U	0.6	0.3
Total arsenic, inorganic in µg/L				1	1	0.9	2 U	3	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	3	10 U	5 U	5 U	1 U	11	3.4
Total copper in µg/L				0.8	1 U	0.5 U	2 U	2 U	2 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 U	1 U	2 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	20 U	10 U	10 U	4	33	4
Total nickel soluble salts in µg/L				1	4	2	6	7	6	7	7	6	10 U	9	12	2	4.3	1.4
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) 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	0.025	0.024	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.059	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	0.011	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.110	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	0.018	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.270	0.010
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	0.016	0.010 U	0.010 U	0.010 U	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	0.010 U	0.027	0.026	0.011	0.022	0.013	0.013	0.010 U	0.010 U	0.010 U	0.010 U	0.190	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	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.035	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	0.010 U	0.010 U	0.010 U	0.010 U	0.110	0.010 U
Semi-Volatile Organics by EPA Method 8270D																		
bis(2-ethylhexyl) phthalate in µg/L	1.0 U	23	1.0 U	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	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	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	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 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	0.015 Y	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	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	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	0.018 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
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	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 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.



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Seattle, Washington



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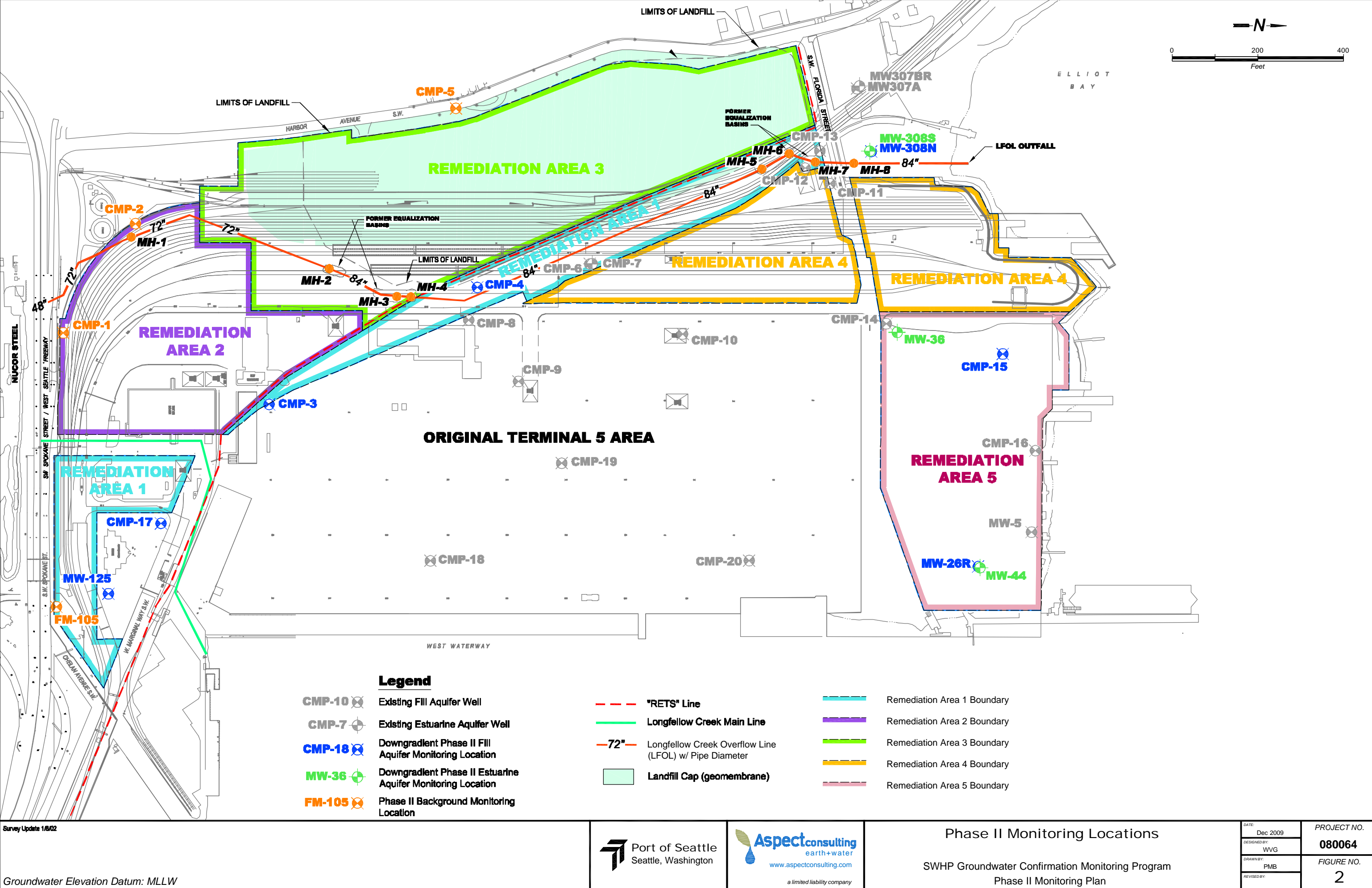
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Site Vicinity Map

SWHP Groundwater Confirmation Monitoring Program
Phase II Monitoring Plan

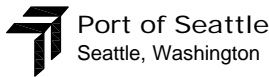
DATE
Dec 2009
DESIGNED BY
WVG
DRAWN BY
PMB
REVISED BY

PROJECT NO.
080064
FIGURE NO.
1



Survey Update: 1/6/02

Groundwater Elevation Datum: MLLW



Port of Seattle
Seattle, Washington



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Phase II Monitoring Locations

SWHP Groundwater Confirmation Monitoring Program
Phase II Monitoring Plan

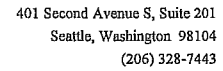
DATE: Dec 2009
DESIGNED BY: WVG
DRAWN BY: PMB
REVISED BY:

PROJECT NO.
080064
FIGURE NO.
2

Q:\POS\080064 Terminal 5\2009-12\080064-02.dwg

APPENDIX A

Well Development Forms



Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: black particulates pumped from sump



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Seattle, Washington 98104
(206) 328-7443

WELL DEVELOPMENT RECORD		WELL NUMBER: <u>CMP-2</u>		Page: <u>1</u> of <u>1</u>	
Project Name: <u>Terminal 5</u>		Project Number: _____		Date: <u>10/6/08</u>	
Observer: _____		Developed by: <u>AET, DFR</u>		_____	
Screened Interval (ft. BGS) _____		Measuring Point on Well: _____		_____	
Filter Pack Interval (ft. BGS) _____		Casing Stickup (ft): <u>flush</u>		_____	
Casing Size (in): <u>Mtl & Scd</u> _____ ID (in) _____		Starting Water Level (ft TOC): <u>12.58'</u>		_____	
Screen Size (in): <u>Mtl & Scd</u> _____ ID (in) _____		Starting Total Depth (ft TOC): <u>17'</u>		_____	
Screen Type: _____		Casing Volume <u>4.42</u> (ft water) x <u>0.116</u> (gpf) = <u>.7072</u> (gal)		_____	
		Casing Volumes: 2" = 0.16 gpf		4" = 0.65 gpf	
				6" = 1.47 gpf	

[illegible]

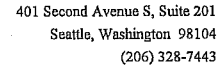
Total Gallons Removed: <u>~13</u>	Ending Water Level (ft TOC): <u>12.82</u>
Total Casing Volumes Removed: _____	Ending Total Depth (ft TOC): <u>17.3</u>

Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: dark grey fine silt removed from bottom



METHODS	
Cleaning Equipment:	
Development Equipment:	
Disposal of Discharged Water:	
Observations/Comments:	

WELL DEVELOPMENT RECORD		WELL NUMBER: <u>CMP-4</u>		Page: <u> </u> of <u> </u>	
Project Name: <u>terminals</u>		Project Number: <u> </u>		Date: <u>10/6/08</u>	
Observer: <u> </u>		Developed by: <u> </u>			
Screened Interval (ft. BGS) <u> </u>		Measuring Point on Well: <u> </u>			
Filter Pack Interval (ft. BGS) <u> </u>		Casing Stickup (ft): <u> </u>			
Casing Size (in): <u> Mtl & Scd </u> ID (in) <u> </u>		Starting Water Level (ft TOC): <u>10.94</u>			
Screen Size (in): <u> Mtl & Scd </u> ID (in) <u> </u>		Starting Total Depth (ft TOC): <u>16.95</u>			
Screen Type: <u> </u>		Casing Volume <u> </u> (ft water) x <u> </u> (gpf) = <u> </u> (gal)			
		Casing Volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf			

DEVELOPMENT MEASUREMENTS

[illegible]

Total Gallons Removed: <u>23</u>	Ending Water Level (ft TOC): <u>11.02</u>
Total Casing Volumes Removed: _____	Ending Total Depth (ft TOC): <u>17.00</u>

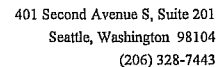
METHODS

Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: _____

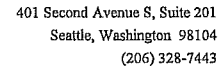


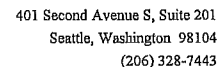
Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: _____

[illegible]



Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: iron precipitate particulates in first gallon

179 Madrone Lane North
Bainbridge Island, Washington 98110
(206) 780-9370

FM-105
MW-125
CMP-17

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

WELL DEVELOPMENT RECORD		WELL NUMBER: <u>FM-105</u>		Page: <u>1</u> of <u>1</u>	
Project Name: <u>Terminal 5</u>		Project Number: _____		Date: <u>10/6/08</u>	
Observer: _____		Developed by: <u>AET, DFR</u>			
Screened Interval (ft. BGS) _____		Measuring Point on Well: _____			
Filter Pack Interval (ft. BGS) _____		Casing Stickup (ft): <u>flush</u>			
Casing Size (in): _____ Mtl & Scd _____ ID (in) _____		Starting Water Level (ft TOC): <u>11.17'</u>			
Screen Size (in): _____ Mtl & Scd _____ ID (in) _____		Starting Total Depth (ft TOC): <u>18'</u>			
Screen Type: _____		Casing Volume <u>6.83</u> (ft water) x <u>0.116</u> (gpf) = <u>1.09</u> (gal)			
Casing Volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf					

DEVELOPMENT MEASUREMENTS

[illegible]

Total Gallons Removed: <u>5</u>	Ending Water Level (ft TOC): <u>11.20'</u>
Total Casing Volumes Removed: _____	Ending Total Depth (ft TOC): <u>18'</u>

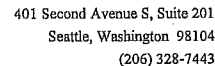
METHODS

Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: _____

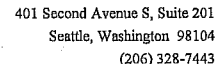


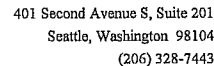
Cleaning Equipment: _____

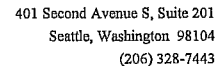
Development Equipment: _____

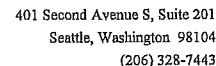
Disposal of Discharged Water: _____

Observations/Comments: _____







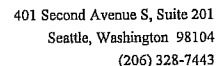


Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: red particulate bacteria present in well casing above top of water column



Cleaning Equipment: _____

Development Equipment: _____

Disposal of Discharged Water: _____

Observations/Comments: _____

APPENDIX B

Groundwater Sampling Forms

GROUNDWATER SAMPLING RECORD

WELL NUMBER: CMP-1

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project-Number: 080064

Date: 10/13/08

Starting Water Level (ft TOC): 12.92

Developed by: DFR/AT

Casing Stickup (ft):	-0.29
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Casing Stickup (ft):	-0.29
----------------------	-------

Screened Interval (ft. TOC)	7.0-17.0
-----------------------------	----------

Total Depth (ft TOC):	16.85
-----------------------	-------

Filter Pack Interval (ft. TOC)	5.0-19.0
--------------------------------	----------

Casing Diameter (inches) 2

Casing Volume 3.93 (ft Water) x 0.16 (Lp/v) (gpi) = 0.63 (L) (gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~12 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.1

Total Casing Volumes Removed: 4.9

Ending Water Level (ft TOC): 12.96

Ending Total Depth (ft TOC): 16.85

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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
-------------------------------	--

Observations/Comments:	
------------------------	--

GROUNDWATER SAMPLING RECORD

WELL NUMBER: CMP-2

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/13/08

Starting Water Level (ft TOC): 12.92

Developed by: DFR/AT

Casing Stickup (ft):	-0.29
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC): 17.3

Screened Interval (ft. TOC)	7.0-17.0
-----------------------------	----------

Casing Diameter (inches) 2

Filter Pack Interval (ft. TOC) 5.0-19.0

Casing Volume 4.38 (ft Water) x 0.16 (Lp/v)(g/g) = 0.70 (L)(gal)

Sample Intake Depth (ft TOC): ~12 ft

Casing volumes: 2" = 0.16 gpf

$$4'' = 0.65 \text{ gpf}$$
$$6'' = 1.47 \text{ gpf}$$
$$2'' = 0.62 \text{ Lpf}$$
$$4'' = 2.46 \text{ Lpf}$$
$$6'' = 5.56 \text{ Lpf}$$

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.1

Total Casing Volumes Removed: 4.4

Ending Water Level (ft TOC): 12.45

Ending Total Depth (ft TOC): 17.3

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments: _____

GROUNDWATER SAMPLING RECORD

WELL NUMBER: CMP-3

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/14/08

Starting Water Level (ft TOC): 8.40

Developed by: DFR/AT

Casing Stickup (ft):	-0.37
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC):	15.84
-----------------------	-------

Screened Interval (ft. TOC)	6.0-16.0
-----------------------------	----------

Casing Diameter (inches)	2
--------------------------	---

Filter Pack Interval (ft. TOC)	4.0-17.5
--------------------------------	----------

Casing Volume 7.44 (ft Water) x 0.16 (Lp/v)(gpf) = 1.19 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~11 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.15

Total Casing Volumes Removed: 2.65

Ending Water Level (ft TOC): 8.92

Ending Total Depth (ft TOC): 15.84

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments: _____

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 11.04

Casing Stickup (ft):	-0.32
----------------------	-------

Total Depth (ft TOC):	17
-----------------------	----

Casing Diameter (inches) 2

Sample Intake Depth (ft TOC): ~12 ft

Sample Intake Depth (ft TOC): ~12 ft

Sample Intake Depth (ft TOC): ~12 ft

Observations/Comments: _____

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): ~~12.92~~ 10.09

Casing Stickup (ft):	-0.27
----------------------	-------

Total Depth (ft TOC):	15.1
-----------------------	------

Casing Diameter (inches)	2
--------------------------	---

Sample Intake Depth (ft TOC): ~10.5 ft

Sample Intake Depth (ft TOC): ~10.5 ft

DFR
wrong
well

discharge reduced, too much DO

Total Casing Volumes Removed: 3.28

Ending Total Depth (ft TOC): 15.1

[illegible]

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments:	
------------------------	--

GROUNDWATER SAMPLING RECORD

WELL NUMBER: CMP-15

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/14/08

Starting Water Level (ft TOC): 10.38

Developed by: DFR/AT

Casing Stickup (ft):	-0.29
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Casing Stickup (ft):	-0.29
----------------------	-------

Screened Interval (ft. TOC)	7.0-17.0
-----------------------------	----------

Total Depth (ft TOC): 17.05

Filter Pack Interval (ft. TOC)	4.0-17.4
--------------------------------	----------

Casing Diameter (inches) 2

Casing Volume 6.67 (ft Water) x 0.16 (Lp/v)(gpf) = 1.06 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~12 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.15

Total Casing Volumes Removed: 2.97

Ending Water Level (ft TOC): 10.44

Ending Total Depth (ft TOC): 17.05

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments: 10 total bottles

CMP17-081013

GROUNDWATER SAMPLING RECORD

WELL NUMBER: CMP-17

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/13/08

Starting Water Level (ft TOC): 9.47

Developed by: DFR/AT

Casing Stickup (ft):	-0.17
----------------------	-------

Measuring Point of Well _____ TOC _____

Total Depth (ft TOC): 16.21

Screened Interval (ft. TOC)	6.0-16.0
-----------------------------	----------

Casing Diameter (inches)	2
--------------------------	---

Filter Pack Interval (ft. TOC)	4.0-16.5
--------------------------------	----------

Casing Volume 6.74 (ft Water) x 0.16 (Lp/v)(~~pp~~) = 1.1 (L)(~~gal~~)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): 14 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 1.57

Total Casing Volumes Removed: 1.4

Ending Water Level (ft TOC): 9.50

Ending Total Depth (ft TOC): 16.21

SAMPLE INVENTORY

Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appearance		Remarks
							Color	Turbidity & Sediment	
1420	1L	HPDE		1	none	HNO3	clear	none	Total Metals - As, Pb
1420	500mL	Amber glass		2	none	none	↓	↓	cPAHs
1420	1L	Amber glass		2	none	none			PCBs
1420	500mL	Amber glass		2	none	none			TPH- DX (w/silica gel cleanup)
1420	500mL	Amber glass		2	none	none			Bis(2-ethyl hexyl) phthalate
1420	40mL	VOA vial		3	none	HCl			Chlorinated Ethanes and Ethenes (CEEs)

METHODS

Sampling Equipment and IDs: Dedicated QED Well Wizard Bladder Pump and YSI 556 # 147

Purging Equipment: Dedicated QED Well Wizard Bladder Pump Decon Equipment: Alconox, Distilled Water

Disposal of Discharged Water:	Stored in 1,000 gallon temporary onsite storage tank
-------------------------------	--

Observations/Comments: _____

GROUNDWATER SAMPLING RECORD

WELL NUMBER: FM-105

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/13/08

Starting Water Level (ft TOC): 11.20Developed by: DFR/AT

Casing Stickup (ft): -0.2

Measuring Point of Well _____ TOC

Total Depth (ft TOC): 18

Screened Interval (ft. TOC) 7.0-17.0

Casing Diameter (inches) 2

Filter Pack Interval (ft. TOC) 6.0-17.5

Casing Volume 6.8 (ft Water) x 0.16 (Lp/v)(gpf) = 1.1 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): 15 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 2.2

Total Casing Volumes Removed: 2

Ending Water Level (ft TOC): 11.20

Ending Total Depth (ft TOC): 18

SAMPLE INVENTORY

Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appearance		Remarks
							Color	Turbidity & Sediment	
1125	1L	HPDE		2	none	HNO3	clear	none	Total Metals - As, Pb
↓	500mL	Amber glass		4	none	none	↓	↓	cPAHs
	1L	Amber glass		4	none	none			PCBs
	500mL	Amber glass		4	none	none			TPH- DX (w/silica gel cleanup)
	500mL	Amber glass		4	none	none			Bis(2-ethyl hexyl) phthalate
	40mL	VOA vial		6	none	HCl			Chlorinated Ethanes and Ethenes (CEEs)

METHODS

Sampling Equipment and IDs: Dedicated QED Well Wizard Bladder Pump and YSI 556 # 147

Purging Equipment: Dedicated QED Well Wizard Bladder Pump Decon Equipment: Alconox, Distilled Water

Disposal of Discharged Water: Stored in 1,000 gallon temporary onsite storage tank

Observations/Comments: Filled sample bottles until 1230

Second set of bottles collected for duplicate sample FM 105-081013D collected @ 1130 on C&C

MWZGR-081014 / MWZGR-081014D

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-26R

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/14/08

Starting Water Level (ft TOC): 9.91

Developed by: DFR/AT

Casing Stickup (ft):	-0.32
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC):	17.05
-----------------------	-------

Screened Interval (ft. TOC)	6.5-16.5
-----------------------------	----------

Casing Diameter (inches)	2
--------------------------	---

Filter Pack Interval (ft. TOC)	4.0-17.0
--------------------------------	----------

Casing Volume 7.14 (ft Water) x 0.16 (Lp/v)(gpf) = 1.14 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~ 11.5 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.15

Total Casing Volumes Removed: 2.76

Ending Water Level (ft TOC): 9.95

Ending Total Depth (ft TOC): 17.05

SAMPLE INVENTORY

Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appearance		Remarks
							Color	Turbidity & Sediment	
1045	1L	HPDE		2	none	HNO3	clear	none	Total Metals - As, Pb, Sb, Cr, Cu, Ni
↓	500mL	Amber glass		4	none	none	↓	↓	cPAHs
	1L	Amber glass		4	none	none			PCBs
	500mL	Amber glass		4	none	none			TPH- DX (w/silica gel cleanup)
	500mL	Amber glass		4	none	none			Bis(2-ethyl hexyl) phthalate

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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
-------------------------------	--

Observations/Comments:	
------------------------	--

Second set of bottles collected for duplicate sample - MW76R-081014D at 1050

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-36

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/14/08

Starting Water Level (ft TOC): 10.00

Developed by: DFR/AT

Casing Stickup (ft):	-0.23
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC): 73

Screened Interval (ft. TOC)	58.0-73.0
-----------------------------	-----------

Casing Diameter (inches) 2

Filter Pack Interval (ft. TOC)	55.0-71.0
--------------------------------	-----------

Casing Volume 63 (ft Water) x 0.16 (Lp/v)(gpf) = 10.08 (L)(gall)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~ 65.5 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.68

Total Casing Volumes Removed: 0.36

Ending Water Level (ft TOC): 10.04

Ending Total Depth (ft TOC): 73

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments: 16 total bottles

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-44

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/14/03

Starting Water Level (ft TOC): 16.96

Developed by: DFR/AT

Casing Stickup (ft):	-0.18
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC): 73.9

Screened Interval (ft. TOC)	n/a
-----------------------------	-----

Casing Diameter (inches) 2

Filter Pack Interval (ft. TOC)	n/a
--------------------------------	-----

Casing Volume 63 (ft Water) x ~~0.16~~ 16.08 (Lp/v)(gpf) = 14.08 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~ 68 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 4.21

Total Casing Volumes Removed: 8.41

Ending Water Level (ft TOC): 11.00

Ending Total Depth (ft TOC): 73.9

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments: 10 bottles to fail

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-125

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/13/08

Starting Water Level (ft TOC): 6.88

Developed by: DFR/AT

Casing Stickup (ft): -1.11

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC): 13.35

Screened Interval (ft. TOC)	5.0-15.0
-----------------------------	----------

Casing Diameter (inches) 2

Filter Pack Interval (ft. TOC) 3.0-15.0

Casing Volume 6.47 (ft Water) x 0.16 (Lp/v)(gpf) = 1.0 (L)(gal)

Sample Intake Depth (ft TOC): 13 ft

Casing volumes: 2" = 0.16 gpf

$$4'' = 0.65 \text{ gpf}$$
$$6'' = 1.47 \text{ gpf}$$
$$2'' = 0.62 \text{ Lpf}$$
$$4'' = 2.46 \text{ Lpf}$$
$$6'' = 5.56 \text{ Lpf}$$

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 1.65

Total Casing Volumes Removed: 1.65

Ending Water Level (ft TOC): 7.01

Ending Total Depth (ft TOC): 13.35

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Dedicated QED Well Wizard Bladder Pump and YSI 556 # 147

Purging Equipment: Dedicated QED Well Wizard Bladder Pump Decon Equipment: Alconox, Distilled Water

Disposal of Discharged Water: Stored in 1,000 gallon temporary onsite storage tank

Observations/Comments:

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-308N

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 10/13/08

Starting Water Level (ft TOC): 6.53

Developed by: DFR/AT

Casing Stickup (ft):	-0.29
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC):	17.95
-----------------------	-------

Screened Interval (ft. TOC)

Casing Diameter (inches)	2
--------------------------	---

Filter Pack Interval (ft. TOC)	10.0-21.5
--------------------------------	-----------

Casing Volume 11.02 (ft Water) x 2760.16 (Lpfv)(gpf) = 1.76 (L)(gal)

Sample Intake Depth (ft TOC): ~15 ft

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.15

Total Casing Volumes Removed: ~~3.15~~ 1.79

Ending Water Level (ft TOC): 6.75

Ending Total Depth (ft TOC): 17.95

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments: _____

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-308S

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: _____

Starting Water Level (ft TOC): 6.30

Developed by: DFR/AT

Casing Stickup (ft):	-0.61
----------------------	-------

Measuring Point of Well	TOC
-------------------------	-----

Total Depth (ft TOC): 40.5

Screened Interval (ft. TOC)	35.0-40.0
-----------------------------	-----------

Total Depth (ft TOC): 40.5

Filter Pack Interval (ft. TOC)	31.0-40.0
--------------------------------	-----------

Casing Diameter (inches) 2

Casing Volume 34.2 (ft Water) x 0.16 (Lpfv)(gpf) = 5.472 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~ 37.5 ft

$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 2.36

Total Casing Volumes Removed: 0.43

Ending Water Level (ft TOC): 6.60

Ending Total Depth (ft TOC): 40.5

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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
-------------------------------	--

Observations/Comments: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Client Project Name: Southwest Harbor Project - Phase 2 GWCMP						Analysis Requested							Notes/Comments						
Client Project #: 080064																			
Samplers: DAVE RUGH/AMY TICE																			
Sample ID	Date	Time	Matrix	No. Containers		Tot Metals (As, Pb)	Tot Metals 6010B/6020 (As, Pb, Sb, Cr, Cu)	Cd	Pb	Mn	Ni	Co	Fe	Zn	Cu	Hg	PCBs		
CMP1-081013	10/13/08	900	Water	9	X														
CMP2-081013	1000			9	X														
FM10S-081013	1125			12	X														
FM10S-081013D	1130			12	X														
MW12S-081013	1325			12	X														
CMP17-081013	1420			12	X														
CMP5-081013	1520			9	X														
MW308S-081013	1630			9	X														
MW308N-081013	1715			9	X														
Relinquished by:					Received by:					Relinquished by:					Received by:				
(Signature)					(Signature)					(Signature)					(Signature)				
Printed Name:					Printed Name:					Printed Name:					Printed Name:				
DAVID RUGER					DAVID RUGER					DAVID RUGER					DAVID RUGER				
Company:					Company:					Company:					Company:				
Aspect LLC					Aspect LLC					Aspect LLC					Aspect LLC				
Date & Time:					Date & Time:					Date & Time:					Date & Time:				
10/13/08 1800					10/13/08 1800					10/13/08 1800					10/13/08 1800				

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Page: 1	of 1	Revised:
Date: 10/4/68	Ice Present?	
No. of Coolers:	Cooler Temps:	

ARI Assigned Number:	Turn-around Requested:
	STD
ARI Client Company:	Phone:
Aspect Consulting LLC	206-780-9370
Client Contact:	
Chip Goodhue	
Client Project Name:	
Southwest Harbor Project - Phase 2	GWCMP
Client Project #:	Samplers:
080064	DAVID RUGH / AMY TICE

[illegible]

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CMP-090331

GROUNDWATER SAMPLING RECORD

WELL NUMBER: CMP-2

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 3/31/2009

Starting Water Level (ft TOC): 12.21

Developed by: DFR/AT

Casing Stickup (ft):	-0.29
----------------------	-------

Measuring Point of Wel	TOC
------------------------	-----

Casing Stickup (ft):	-0.29
----------------------	-------

Screened Interval (ft. TOC)	7.0-17.0
-----------------------------	----------

Total Depth (ft TOC): ~~47.2~~ 16.85

Filter Pack Interval (ft. TOC) 5.0-19.0

Casing Diameter (inches): 2

Casing Volume 5.64 (ft Water) x 0.16 (Lp/v)(gpf) = 0.91 (L)(gal)

Casing volumes: 2" = 0.16 gpf

4" = 0.65 gpf

$$6'' = 1.47 \text{ gpf}$$

Sample Intake Depth (ft TOC): ~12 ft

 $2'' = 0.62 \text{ Lpf}$ $4'' = 2.46 \text{ Lpf}$ $6'' = 5,56 \text{ Lpf}$

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.15

Total Casing Volumes Removed: 3.88

Ending Water Level (ft TOC): 12.25

Ending Total Depth (ft TOC): ~~17.25~~ 16.85

SAMPLE INVENTORY

[illegible]

METHODS

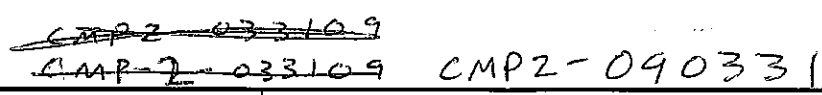
Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments:



Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 12.92

Casing Stickup (ft): -0.29

Total Depth (ft TOC): ~~16.85~~ 17.3

Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): ~12 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

[illegible]

Total Casing Volumes Removed: 4.5

Ending Total Depth (ft TOC): ~~16.85~~ 17.3

[illegible]

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 147

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

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 7.90

Casing Stickup (ft):	-0.37
----------------------	-------

Total Depth (ft TOC): 15.84

Total Depth (ft TOC): 15.84

Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): ~11 ft

Sample Intake Depth (ft TOC): ~11 ft

Sample Intake Depth (ft TOC): ~11 ft

Ending Water Level (ft TOC): 12.9 Ending Total Depth (ft TOC): 15.84

Observations/Comments: _____

[illegible]

WELL NUMBER: CMP-15

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 9.91

Casing Stickup (ft): -0.29

Total Depth (ft TOC): 17.05

Total Depth (ft TOC): 17.05

Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): ~12 ft

Sample Intake Depth (ft TOC): ~12 ft

Sample Intake Depth (ft TOC): ~12 ft

[illegible]

Total Casing Volumes Removed: 3.45

Ending Total Depth (ft TOC): 17.05

[illegible]

Sampling Equipment and IDs: _____ Peristaltic Pump and YSI 556 # _____

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

Observations/Comments: _____

GROUNDWATER SAMPLING RECORD

WELL NUMBER: CMP-17

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 3/31/09

Starting Water Level (ft TOC): 9.05

Developed by: DFR/AT

Casing Stickup (ft):	-0.17
----------------------	-------

Measuring Point of Wel	TOC
------------------------	-----

Total Depth (ft TOC): 16.21

Screened Interval (ft. TOC)	6.0-16.0
-----------------------------	----------

Total Depth (ft TOC): 16.21

Filter Pack Interval (ft. TOC) 4.0-16.5

Casing Diameter (inches) 2

Casing Volume 7.16 (ft Water) x .16 (Lp/v)(gpf) = 1.14 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): 14 ft

$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 3.22

Total Casing Volumes Removed: 2.82

Ending Water Level (ft TOC): 4.08

Ending Total Depth (ft TOC): 16.21

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs:	Dedicated QED Well Wizard Bladder Pump and YSI 556 #
-----------------------------	--

Purging Equipment: Dedicated QED Well Wizard Bladder Pump Decon Equipment: Alconox, Distilled Water

Disposal of Discharged Water: Stored in 1,000 gallon temporary onsite storage tank

Observations/Comments:



Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 10.76

Casing Stickup (ft): -0.2

Total Depth (ft TOC):	18
-----------------------	----

Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): 15 ft

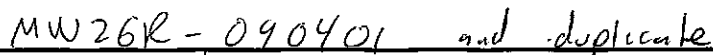
$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$
[illegible]

Total Casing Volumes Removed: 2,80

Ending Total Depth (ft TOC): 18

Time	Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1140 for sample	FM105-040331							
1145	1L for HPLC		2	none	HNO3	clear	none	Total Metals - As, Pb
↓	500mL	Amber glass	4	none	none	↓	↓	cPAHs
	1L	Amber glass	4	none	none			PCBs
	500mL	Amber glass	4	none	none			TPH- DX (w/silica gel cleanup)
	500mL	Amber glass	4	none	none			Bis(2-ethyl hexyl) phthalate
	40mL	VOA vial	6	none	HCl			Chlorinated Ethanes and Ethenes (CEEs)

Second set of bottles collected for duplicate sample dup collected @ ~~1145~~ 1145



Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 9.66

Casing Stickup (ft): -0.32

Total Depth (ft TOC): 17.05

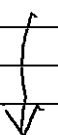

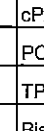
Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): ~ 11.5 ft

$$6'' = 1.47 \text{ gpf}$$
$$6'' = 5.56 \text{ Lpf}$$
[illegible]

Total Casing Volumes Removed: 3,34

Ending Total Depth (ft TOC): 17.05

Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appearance		Remarks
							Color	Turbidity & Sediment	
1620	1L	HPDE		2	none	HNO ₃	clear	None	Total Metals - As, Pb, Sb, Cr, Cu, Ni
	500mL	Amber glass		4	none	none			cPAHs
	1L	Amber glass		4	none	none			PCBs
	500mL	Amber glass		4	none	none			TPH- DX (w/silica gel cleanup)
	500mL	Amber glass		4	none	none			Bis(2-ethyl hexyl) phthalate
1025									duplicate MW ZCR - 0904010

Observations/Comments: Second set of bottles collected for duplicate sample at 1025

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 9.06

Casing Stickup (ft):	-0.23
----------------------	-------

Total Depth (ft TOC): 73

Total Depth (ft TOC): 73

Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): ~ 65.5 ft

$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$

S:\Terminal 5\Phase II GCMP GW Sampling Forms (Blank)

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 6.40

Casing Stickup (ft):	-1.11
----------------------	-------

Total Depth (ft TOC):	13.35
-----------------------	-------

Total Depth (ft TOC):	13.35
-----------------------	-------

Casing Diameter (inches) 2

Sample Intake Depth (ft TOC): 13 ft

Sample Intake Depth (ft TOC): 13 ft

Sample Intake Depth (ft TOC): 13 ft

[illegible]

Total Casing Volumes Removed: 2,90

Ending Total Depth (ft TOC): 13.35

[illegible]

Sampling Equipment and IDs: Dedicated QED Well Wizard Bladder Pump and YSI 556 # 147

Purging Equipment: Dedicated QED Well Wizard Bladder Pump Decon Equipment: Alconox, Distilled Water

Disposal of Discharged Water: Stored in 1,000 gallon temporary onsite storage tank

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 8.94

Casing Stickup (ft):	-0.18
----------------------	-------

Total Depth (ft TOC): 73.9

Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): ~ 68 ft

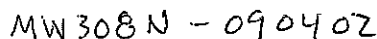
$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$
[illegible]

Total Casing Volumes Removed: 0.38

Ending Total Depth (ft TOC): 73.9

[illegible]

Observations/Comments:



WELL NUMBER: MW-308N

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 5.86

Casing Stickup (ft):	-0.29
----------------------	-------

Total Depth (ft TOC): 17.95

Total Depth (ft TOC): 17.95

Casing Diameter (inches): 2

Sample Intake Depth (ft TOC): ~15 ft

Sample Intake Depth (ft TOC): ~15 ft

Example 1: $\frac{1}{2} \times \frac{3}{4} = \frac{1 \times 3}{2 \times 4} = \frac{3}{8}$

[illegible]

Total Casing Volumes Removed: 1,704

Ending Total Depth (ft TOC): 17.95

[illegible]

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 #

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
-------------------------------	--

Observations/Comments:

~~MW-30~~ MW3085-090401

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-308S

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 4/1/2009

Starting Water Level (ft TOC): 5.74

Developed by: DFR/AT

Casing Stickup (ft): -0.61

Measuring Point of Wel	TOC
------------------------	-----

Casing Stickup (ft): -0.61

Screened Interval (ft. TOC)	35.0-40.0
-----------------------------	-----------

Total Depth (ft TOC): 40.5

Screened Interval (ft. TOC)	35.0-40.0
-----------------------------	-----------

Total Depth (ft TOC): 40.5

Filter Pack Interval (ft. TOC)	31.0-40.0
--------------------------------	-----------

Casing Diameter (inches): 2

Casing Volume 34.76 (ft Water) x 0.16 (Lp/v)(gpf) = 5.56 (L)(gal)

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~ 37.5 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged:	2,63
-----------------------	------

Total Casing Volumes Removed: 0.47

Ending Water Level (ft TOC): 6.23

Ending Total Depth (ft TOC): 40.5

SAMPLE INVENTORY

[illegible]

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 #

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

Observations/Comments: _____

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:		Page: 1 of 1									
ARI Client Company:		STP		Date: 3/31/2009									
Aspect Consulting LLC		Phone: 206 780 9370		Ice Present? Y									
Client Contact:		Chad Goodhue		No. of Coolers: 4									
Client Project Name:		Southwest Harbor Project - Phase 2 GWCMP		Cooler Temps: 5.4, 3.8, 7.2, 5.8									
Client Project #:		080064		Analytical Requested									
Sample ID		Date	Time	Matrix	No. Containers	Tot Metals 6010B/6020 (As, Pb)	CEE's 8260B	CPAH's 8270C sm	NWTPH-DX Diesel + Oil w/silicon cleanup	BEHP 8270C	PCBS 8082	Notes/Comments	
CMP2-090331	3/31/09	845		W	9	X		X	X	X			
CMP1-090331		945			9	X		X	X	X			
FM105-090331		1140			12	X		X	X	X			
MW125-090331		1345			12	X		X	X	X			
CMP17-090331		1450			12	X		X	X	X			
FM105-090331D		1145			12	X		X	X	X			
Comments/Special Instructions													
Relinquished by:		(Signature)		Received by:		(Signature)		Relinquished by:		(Signature)		Received by:	
Printed Name:		DAVID RUGH		Printed Name:		A. Volhardsen		Printed Name:		Printed Name:		Printed Name:	
Company:		ASQD LLC		Company:		PCFE		Company:		Company:		Company:	
Date & Time:		3/31/09 1550		Date & Time:		3/31/09 1856		Date & Time:		Date & Time:		Date & Time:	



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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:		Page: 1 of 1	
ARI Client Company:		Phone:		Date: 4/1/2009	
Client Contact:		Client Project Name:		No. of Coolers: 3	
Client Project #:		Client Project #:		Cooler Temps: 60, 52, 74	
Client Project #:		Client Project #:		Cooler Temps: 60, 52, 74	
Sample ID		Date	Time	Matrix	No. Containers
CMP 3-090401	4/1/2009	910	W	W	1
MWZGR-090401	4/1/2009	1020	W	W	1
MWZGR-090401	4/1/2009	1025	W	W	1
MW44-090401	4/1/2009	1100	W	W	1
CMP 5-090401	4/1/2009	1315	W	W	1
MW3085-090401	4/1/2009	1430	W	W	1
Comments/Special Instructions					
Relinquished by:		Received by:		Relinquished by:	
(Signature)		(Signature)		(Signature)	
Printed Name:		Printed Name:		Printed Name:	
DAVID RUGH		Dana Hayes		DAVID RUGH	
Company:		Company:		Company:	
Asocet LLC		ACE		Asocet LLC	
Date & Time:		Date & Time:		Date & Time:	
4/1/09 1540		4/1/09 1540		4/1/09 1540	
Tot Metals 6010B/6020 (As, Pb)		Tot Metals 6010B/6020 (As, Pb, Sb, Cr, Cu)		CPAHs 8270C SIM	
NWTPHD Diesel + Oil w/silica cleanup		BEHP 8270C		PCBs 8082	
Notes/Comments		Tot Metals - As, Pb only			



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Analytical Chemists and Consultants
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206-695-6200 206-695-6201 (fax)

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:		Page: 1 of 1	
ARI Client Company:		Phone:		Date: 4/12/2009	
Aspect Consulting LLC		206 786 9370		Ice Present?	
Client Contact:		No. of Coolers:		Cooler Temps:	
Chip Goodhue		2			
Client Project Name:		Southwest Harbor Project - Phase 2 GWCMP		Analysis Requested	
Client Project #:		080064		Notes/Comments	
Sample ID		Date	Time	Matrix	No. Containers
CMP4-090402	4/12/09	855		Water	9
MW36-090402		1015			9
CMP15-090402		1115			9
MW30AN-090402		1315			9
Comments/Special Instructions		Total Metals 6010B/6020 (As, Pb)			
		Total Metals 6010B/6020 (As, Pb, Sb, Cr, Cu)			
		CPAH'S 8270C SIM			
		NwTPHD Diesel + Oil w/silica clean			
		BEHP 8270C			
		PCBs 8082			
Relinquished by:		Received by:			
(Signature)		(Signature)			
Printed Name: DAVID RUGG		Printed Name: HILDA TULUMBKA			
Company: Aspect LLC		Company: ARI			
Date & Time: 4/12/2009 1400		Date & Time: 4/12/2009 1400			



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

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Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 12.10

Casing Stickup (ft):	-0.29
----------------------	-------

Casing Stackup (ft):	0.25
Total Depth (ft TOC):	16.85

Casing Diameter (inches)	2
--------------------------	---

Casing Diameter (inches) _____

Sample Intake Depth (ft TOC): ~12 ft

$$6'' = 1.47 \text{ gpf}$$
$$6'' = 5.56 \text{ Lpf}$$
[illegible]

Total Casing Volumes Removed: 1.96

Ending Total Depth (ft TOC): 16.85

[illegible]

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 120

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

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 13.60'

Casing Stickup (ft):	-0.29
----------------------	-------

Total Depth (ft TOC):	17.3
-----------------------	------

Casing Diameter (inches)	2
--------------------------	---

Sample Intake Depth (ft TOC): ~12 ft

 $4'' = 0.65 \text{ gpf}$
$$6'' = 1.47 \text{ gpf}$$
$$2'' = 0.62 \text{ Lpf}$$
 $4'' = 2.46 \text{ Lpf}$ $6'' = 5.56 \text{ Lpf}$

Ending Total Depth (ft TOC): 17.3

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 8.45

Casing Stickup (ft): -0.37

Total Depth (ft TOC): 15.84

Casing Diameter (inches)	2
--------------------------	---

Seeding Diameter (mm) _____

Sample Intake Depth (ft TOC): ~11 ft

4" = 0.65 gpf

$$6'' = 1.47 \text{ gpf}$$
 $2'' = 0.62 \text{ Lpf}$ $4'' \approx 2.46 \text{ Lpf}$ $6'' = 5.56 \text{ Lpf}$

Ending Total Depth (ft TOC): 15.84

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 11.0

Casing Stickup (ft):	-0.32
----------------------	-------

Total Depth (ft TOC): 17

Casing Diameter (inches)	2
--------------------------	---

Sample Intake Depth (ft TOC): ~12 ft

$$4'' = 0.65 \text{ gpf}$$
$$6'' = 1.47 \text{ gpf}$$
 $4'' = 2.46 \text{ Lpf}$ $6'' = 5.56 \text{ Lpf}$

Ending Total Depth (ft TOC): 17.0

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 10.12

Casing Stickup (ft): -0.27

Total Depth (ft TOC): 15.1

Total Depth (ft TOC): 15.1

Casing Diameter (inches)	2
--------------------------	---

Casing Diameter (inches)	2
--------------------------	---

Sample Intake Depth (ft TOC): ~10.5 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

[illegible]

Total Casing Volumes Removed: 1.29

Ending Total Depth (ft TOC): 15.1

[illegible]

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 170

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

Observations/Comments: _____

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 10.101

Casing Stickup (ft):	-0.29
----------------------	-------

Total Depth (ft TOC):	17.05
-----------------------	-------

Casing Diameter (inches)	2
--------------------------	---

18 (L)(gal)

Sample Intake Depth (ft TOC): ~12 ft

$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$
[illegible]

Total Casing Volumes Removed: 0.93

Ending Total Depth (ft TOC): 17.05

[illegible]

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 120

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

Observations/Comments: _____

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-26R

Page: 1 of 1

Project Name: SOUTHWEST HARBOR PROJECT - Phase II GCWMP

Project Number: 080064

Date: 9/3/09

Starting Water Level (ft TOC): 9.129

Developed by: DFR/AT

Casing Stickup (ft):	-0.32
----------------------	-------

Measuring Point of We	TOC
-----------------------	-----

Total Depth (ft TOC): 17.05

Screened Interval (ft. TOC)	6.5-16.5
-----------------------------	----------

Casing Diameter (inches)	2
--------------------------	---

Filter Pack Interval (ft. TOC)	4.0-17.0
--------------------------------	----------

Casing Volume $\frac{7.36}{\text{(ft Water)}} \times \frac{0.62}{\text{(Lpfv)(gpf)}} = \frac{4.56}{\text{(L)(gal)}}$

Casing volumes: 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf

Sample Intake Depth (ft TOC): ~ 11.5 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

PURGING MEASUREMENTS

[illegible]

Total Gallons Purged: 24 Liters

Total Casing Volumes Removed: 0.89

Ending Water Level (ft TOC): 9.12

Ending Total Depth (ft TOC): 17.05

SAMPLE INVENTORY

Time	Volume	Bottle Type		Quantity	Filtration	Preservation	Appearance		Remarks
							Color	Turbidity & Sediment	
1350	1L	HPDE		2	none	HNO3	clear	none	Total Metals - As, Pb, Sb, Cr, Cu, Ni
↓	500mL	Amber glass		4	none	none	↓	↓	cPAHs
↓	1L	Amber glass		4	none	none	↓	↓	PCBs
↓	500mL	Amber glass		4	none	none	↓	↓	TPH- DX (w/silica gel cleanup)
↓	500mL	Amber glass		4	none	none	↓	↓	Bis(2-ethyl hexyl) phthalate
1355	dub 1ml								

METHODS

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 120

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

Observations/Comments:

Second set of bottles collected for duplicate sample

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 9.77

Casing Stickup (ft): -0.23

Total Depth (ft TOC): 73

Casing Diameter (inches)	2
--------------------------	---

Sealing Diameter (mm) _____

Sample Intake Depth (ft TOC): ~ 65.5 ft

4" = 0.65 gpf

6" = 1.47 gpf

 $4'' = 2.46 \text{ Lpf}$ $6'' = 5.56 \text{ Lpf}$

Ending Total Depth (ft TOC): 73

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 7.01

Casing Stickup (ft): -1.11

Total Depth (ft TOC):	13.35
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Casing Diameter (inche	2
------------------------	---

Sample Intake Depth (ft TOC): 13 ft

$$2'' = 0.62 \text{ Lpf} \qquad 4'' = 2.46 \text{ Lpf} \qquad 6'' = 5.56 \text{ Lpf}$$

P:\POS Terminal 5 - Phase II\Data\Field Data\2008Fall\Phase II GCMP GW Sampling Forms (Blank)

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 6.50

Casing Stickup (ft):	-0.29
----------------------	-------

Total Depth (ft TOC):	17.95
-----------------------	-------

Casing Diameter (inches) 2

Sample Intake Depth (ft TOC): ~15 ft

$$6'' = 1.47 \text{ gpf}$$
$$6'' = 5.56 \text{ Lpf}$$

Ending Total Depth (ft TOC): 17.95

Observations/Comments:

Page: 1 of 1

Project Number: 080064

Starting Water Level (ft TOC): 6.17

Casing Stickup (ft):	-0.61
----------------------	-------

Total Depth (ft TOC):	40.5
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Casing Diameter (inche	2
------------------------	---

28 (L)(gal)

Sample Intake Depth (ft TOC): ~ 37.5 ft

2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

[illegible]

Total Casing Volumes Removed: 0.12

Ending Total Depth (ft TOC): 40.5

[illegible]

Sampling Equipment and IDs: Peristaltic Pump and YSI 556 # 170

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

Observations/Comments: _____

Chain of custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: <u>SIP</u>	Date: <u>9/2/09</u>
ARI Client Company:	Phone: <u>200-750-9370</u>	Page: <u>1</u> of <u>1</u>
Client Contact:		No. of <u>3</u> Cooler

Client Project Name: SOUTHWEST HARBOR PROJECT Phase 2 GCMF							Coolers:	Temps:	Notes/Comments			
Client Project #: 000604												
Samplers: Bobbie Ann Tice												
Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested							
CMP2-090902	9/2/09	0905	W	9	GCE/GC (MS, PB)	CFFS	PMHS	8270c SIM	NMPPH-DX EFFECTIVE V/SILICA (KOH)	BCHP 8270c	PGB, SC82	
MWP25-090902		1005		12	X	X	X	X	X	X	X	
CMP17-090902		1040		12	X	X	X	X	X	X	X	
FMC5-090902		1115		12	X	X	X	X	X	X	X	
FMR5-090902.D		1120		12	X	X	X	X	X	X	X	
CMP5-090902	✓	1230	✓	9	X			X	X	X	X	
Comments/Special Instructions					Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>						
Printed Name: Amy Tice					Printed Name:			Printed Name:				
Company: Aspect					Company:			Company:				
Date & Time: 9/2/09 1345					Date & Time: 9/2/09 1105			Date & Time:				

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C

ARI Assigned Number:	Turn-around Requested:	Date:
	STD	9/13/09
ARI Client Company:	Phone:	Page: 1 of 1
Aspect Consulting		
Client Contact:	No. of Coolers:	Cooler Temps:
Chris Goodhue		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila WA 98168
206-695-6200 206-695-6201 (fax)



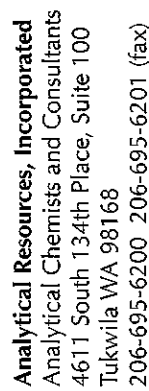
Client Project Name: <u>Sanatnagar Phase 2 GWC CMP</u>				Analysis Requested				Notes/Comments	
Client Project #: <u>650001</u>		Samplers: <u>AET PSB</u>		Analysis Requested		Notes/Comments			
Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested	Notes/Comments			
CMP3-090903	9/3/09	0900	water	9	<input checked="" type="checkbox"/> Total metals <input checked="" type="checkbox"/> As, Pb <input checked="" type="checkbox"/> Cu, Ni <input checked="" type="checkbox"/> Cd, Pb, Zn <input checked="" type="checkbox"/> Cr, Mn <input checked="" type="checkbox"/> Fe, Ni, Pb <input checked="" type="checkbox"/> Se, Zn <input checked="" type="checkbox"/> Total metals <input checked="" type="checkbox"/> As, Pb <input checked="" type="checkbox"/> Cu, Ni <input checked="" type="checkbox"/> Cd, Pb, Zn <input checked="" type="checkbox"/> Cr, Mn <input checked="" type="checkbox"/> Fe, Ni, Pb <input checked="" type="checkbox"/> Se, Zn <input checked="" type="checkbox"/> Total metals <input checked="" type="checkbox"/> As, Pb <input checked="" type="checkbox"/> Cu, Ni <input checked="" type="checkbox"/> Cd, Pb, Zn <input checked="" type="checkbox"/> Cr, Mn <input checked="" type="checkbox"/> Fe, Ni, Pb <input checked="" type="checkbox"/> Se, Zn <input checked="" 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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:
	SID
ARI Client Company:	Phone:
Aspet Consulting LLC	206-780-9370
Client Contact:	
Chip Goodhue	
Client Project Name:	
Southwest Harbor Project Phase 2 GW CMP	
Client Project #:	Samplers:
0800064	NET PSB

Date:	9/17/79
Page:	1 of 1
No. of Coolers:	1
Cooler Temps:	17.2, 19.3

[illegible]

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 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-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.

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:

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3530 32nd Way NW
Olympia, WA 98502

December 22, 2008

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 sample
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
µg/L	microgram per liter
MDL	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 plan
QA/QC	quality assurance/quality control

RF	response factor
RPD	relative percent difference
SDG	sample delivery group
SIM	selective ion monitoring
SVOCs	semi-volatile organic compounds
TPH	total petroleum hydrocarbon
VOCs	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:

Field Sample ID	Laboratory Sample ID	Sampling Date	Sample Type	Analysis						
				VOCs	SVOCs	PAH	PCBs	As Pb	Metals	TPH
CMP1-081013	NU12A	10/13/08	GW		X	X	X	X		X
CMP2-081013	NU12B	10/13/08	GW		X	X	X	X		X
FM105-081013	NU12C	10/13/08	GW	X	X	X	X	X		X
FM105-081013D	NU12D	10/13/08	FD	X	X	X	X	X		X
MW125-081013	NU12E	10/13/08	GW	X	X	X	X	X		X
CMP17-081013	NU12F	10/13/08	GW	X	X	X	X	X		X
CMP5-081013	NU12G	10/13/08	GW		X	X	X	X		X
MW308S-081013	NU12H	10/13/08	GW		X	X	X	X		X
MW308N-081013	NU12I	10/13/08	GW		X	X	X	X		X
Trip Blank	NU12J	10/13/08	TB	X						
CMP3-081014	NU25A	10/14/08	GW		X	X	X	X		X
CMP4-081014	NU25B	10/14/08	GW		X	X	X	X		X
MW26R-081014	NU25C	10/14/08	GW		X	X	X		X	X
MW26R-081014D	NU25D	10/14/08	FD		X	X	X		X	X
MW44-081014	NU25E	10/14/08	GW		X	X	X		X	X
CMP15-081014	NU25F	10/14/08	GW		X	X	X		X	X
MW36-081014	NU25G	10/14/08	GW		X	X	X		X	X

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

Notes:

1. 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 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 $\pm 20\%$, 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 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 $\pm 15\%$ 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 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 -50% to $+100\%$ 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 \leq 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 FM105-081013 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:

Sample ID	Analyte	Data Qualifier	Reason	Report Section
No data were qualified 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.
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:

Detected Target Analyte	RL ($\mu\text{g/L}$)	Sample ID & Concentration ($\mu\text{g/L}$)		RPD (%)	Conc. Difference ($\mu\text{g/L}$)	Data Qualification
		FM105-081013	FM105-081013D			
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
Detected Target Analyte	RL ($\mu\text{g/L}$)	Sample ID & Concentration ($\mu\text{g/L}$)		RPD (%)	Conc. Difference ($\mu\text{g/L}$)	Data Qualification
		MW26R-081014	MW26R-081014D			
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

May 18, 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 sample
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
µg/L	microgram per liter
MDL	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 difference
SDG	sample delivery group
SIM	selective ion monitoring
SVOCs	semi-volatile organic compounds
TPH	total petroleum hydrocarbon
VOCs	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:

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

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	Analytical Resources, Inc. (ARI) Tukwila, WA
SVOCs	SW846 Method 8270C – Full Scan	
PAHs	SW846 Method 8270C-SIM	
PCB Aroclors	SW846 Method 8082	
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°C, 6.6°C, and 7.4°C) was outside the upper limit of $4\pm 2^\circ\text{C}$ 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 $\pm 20\%$, 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 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 $+100\%$ 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 \leq 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	UJ J	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:

Detected Target Analyte	RL ($\mu\text{g/L}$)	Sample ID & Concentration ($\mu\text{g/L}$)		RPD (%)	Conc. Difference ($\mu\text{g/L}$)	Data Qualification
		FM105-090331	FM105-090331D			
Arsenic	0.2	0.50	0.50	-	0	No action
<i>cis</i> -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
<i>bis</i> (2-Ethylhexyl)phthalate	1.0	ND	5.8	-	5.8	UJ/J
Detected Target Analyte	RL ($\mu\text{g/L}$)	Sample ID & Concentration ($\mu\text{g/L}$)		RPD (%)	Conc. Difference ($\mu\text{g/L}$)	Data Qualification
		MW26R-090401	MW26R-090401D			
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:

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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 sample
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
µg/L	microgram per liter
MDL	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 hydrocarbon
VOCs	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:

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

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

Notes:

1. 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 $4\pm 2^{\circ}\text{C}$ 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- d_{14} , 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- d_{10} , 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 -50% to $+100\%$ 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 \leq 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 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:

Detected Target Analyte	RL ($\mu\text{g/L}$)	Sample ID & Concentration ($\mu\text{g/L}$)		RPD (%)	Conc. Difference ($\mu\text{g/L}$)	Data Qualification
		FM105-090902	FM105-090902D			
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
Detected Target Analyte	RL ($\mu\text{g/L}$)	Sample ID & Concentration ($\mu\text{g/L}$)		RPD (%)	Conc. Difference ($\mu\text{g/L}$)	Data Qualification
		MW26R-090903	MW26R-090903D			
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



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Page: 1	of 1
Date: 10/13/2008	Ice Present? Y
No. of Coolers: 4 3	Cooler Temps: 15.4 - 10.2

ARI Assigned Number:	NU12	Turn-around Requested:	>TP
ARI Client Company:	Aspect Consulting LLC		
Client Contact:	Chip Goodhue	Phone:	206 780 9370
Client Project Name:	Southwest Harbor Project - Phase 2 GWCM P		
Client Project #:	080064	Samplers:	DAVE RUEH/AMY TICE

Sample ID	Date	Time	Matrix	No. Containers
CMP1-081013 CMP1-081013	10/13/08	900	water	9
CMP2-081013		1000		9
FM105-081013		1125		12
FM105-081013D		1130		12
MW125-081013		1325		12
CMP17-081013		1420		12
CMP5-081013		1520		9
MW308S-081013		1630		9
MW308N-081013	↓	1715	↓	9
Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)		
Supplemental Code	Printed Name:	Printed Name:		
S_LB1695	DAVID RUGHA	Brian Keel		
	Company:	Company:		
	Aspet LLC	MMI		
Date & Time:	Date & Time:	Date & Time:		
10/13/08 1800	10/13/08 1800	10/13/08 1800		

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 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-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 \geq 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 $\geq 40\%$ RPD with no obvious chromatographic interference

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MB-101508

Page 1 of 1

METHOD BLANK


Lab Sample ID: MB-101508

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27618

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

Data Release Authorized: 

Date Sampled: NA

Reported: 10/17/08

Date Received: NA

Instrument/Analyst: NT5/JZ

Sample Amount: 20.0 mL

Date Analyzed: 10/15/08 12:35

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	< 0.2	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 µg/L (ppb)

Volatile Surrogate Recovery

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


ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B
Page 1 of 1Sample ID: FM105-081013
SAMPLE

Lab Sample ID: NU12C

LIMS ID: 08-27618

Matrix: Water

Data Release Authorized: 

Reported: 10/17/08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08

Date Received: 10/13/08

Instrument/Analyst: NT5/JZ

Date Analyzed: 10/15/08 17:53

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	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	6.1	
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 µg/L (ppb)

Volatile Surrogate Recovery

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


ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B
Page 1 of 1Sample ID: FM105-081013D
SAMPLE

Lab Sample ID: NU12D

LIMS ID: 08-27619

Matrix: Water

Data Release Authorized: 

Reported: 10/17/08

QC Report No: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Date Sampled: 10/13/08

Date Received: 10/13/08

Instrument/Analyst: NT5/JZ

Date Analyzed: 10/15/08 18:21

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	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 µg/L (ppb)

Volatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MW125-081013

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SAMPLE


Lab Sample ID: NU12E

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27620

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

Data Release Authorized: 

Date Sampled: 10/13/08

Reported: 10/17/08

Date Received: 10/13/08

Instrument/Analyst: NT5/JZ

Sample Amount: 20.0 mL

Date Analyzed: 10/15/08 18:48

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	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: CMP17-081013

Page 1 of 1

SAMPLE


Lab Sample ID: NU12F

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27621

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

Data Release Authorized: 

Date Sampled: 10/13/08

Reported: 10/17/08

Date Received: 10/13/08

Instrument/Analyst: NT5/JZ

Sample Amount: 20.0 mL

Date Analyzed: 10/15/08 19:15

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 µg/L (ppb)

Volatile Surrogate Recovery

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
SAMPLE

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Lab Sample ID: NU12J

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27625

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

Data Release Authorized: 

Date Sampled: 10/13/08

Reported: 10/17/08

Date Received: 10/13/08

Instrument/Analyst: NT5/JZ

Sample Amount: 20.0 mL

Date Analyzed: 10/15/08 17:26

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	< 0.2	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 µg/L (ppb)

Volatile Surrogate Recovery

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

Sample ID: LCS-101508

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-101508

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27618

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

Data Release Authorized:

Date Sampled: NA

Reported: 10/17/08

Date Received: NA

Instrument/Analyst LCS: NT5/JZ

Sample Amount LCS: 20.0 mL

LCSD: NT5/JZ

LCSD: 20.0 mL

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

Purge Volume LCS: 20.0 mL

LCSD: 10/15/08 12:08

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 $\mu\text{g/L}$ (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MB-101608
METHOD BLANK

Lab Sample ID: MB-101608

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27616

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

NA

Data Release Authorized: *mm*

Date Sampled: NA

Reported: 10/24/08

Date Received: NA

Date Extracted: 10/16/08

Sample Amount: 500 mL

Date Analyzed: 10/23/08 12:35

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/PK

Dilution Factor: 1.00

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP1-081013
SAMPLE

Lab Sample ID: NU12A

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27616

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

NA

Data Release Authorized: *MMW*

Date Sampled: 10/13/08

Reported: 10/24/08

Date Received: 10/13/08

Date Extracted: 10/16/08

Sample Amount: 500 mL

Date Analyzed: 10/23/08 14:16

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/PK

Dilution Factor: 1.00

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: CMP2-081013
SAMPLE

Lab Sample ID: NU12B
LIMS ID: 08-27617
Matrix: Water
Data Release Authorized: *MM*
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

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 14:50
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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: FM105-081013
SAMPLE

Lab Sample ID: NU12C

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27618

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

NA

Data Release Authorized: *MMW*

Date Sampled: 10/13/08

Reported: 10/24/08

Date Received: 10/13/08

Date Extracted: 10/16/08

Sample Amount: 500 mL

Date Analyzed: 10/23/08 15:24

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/PK

Dilution Factor: 1.00

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: FM105-081013D
SAMPLE

Lab Sample ID: NU12D

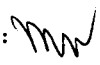
QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27619

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

NA

Data Release Authorized: 

Date Sampled: 10/13/08

Reported: 10/24/08

Date Received: 10/13/08

Date Extracted: 10/16/08

Sample Amount: 500 mL

Date Analyzed: 10/23/08 15:58

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/PK

Dilution Factor: 1.00

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW125-081013
SAMPLE

Lab Sample ID: NU12E
LIMS ID: 08-27620
Matrix: Water
Data Release Authorized: *MMW*
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

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 16:32
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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	37.6%
2-Fluorobiphenyl	52.4%
d14-p-Terphenyl	68.4%
d4-1,2-Dichlorobenzene	37.4%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: CMP17-081013
SAMPLE

Lab Sample ID: NU12F

QC Report No: NU12-Aspect Consulting LLC

LIMS ID: 08-27621

Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water

NA

Data Release Authorized: *WW*

Date Sampled: 10/13/08

Reported: 10/24/08

Date Received: 10/13/08

Date Extracted: 10/16/08

Sample Amount: 500 mL

Date Analyzed: 10/23/08 17:06

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/PK

Dilution Factor: 1.00

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP5-081013
SAMPLE

Lab Sample ID: NU12G
LIMS ID: 08-27622
Matrix: Water
Data Release Authorized: *WW*
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

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	44.8%
2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	78.4%
d4-1,2-Dichlorobenzene	43.2%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: MW308S-081013
SAMPLE

Lab Sample ID: NU12H
LIMS ID: 08-27623
Matrix: Water
Data Release Authorized: *WW*
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

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 18:14
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	1.5

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: MW308N-081013
SAMPLE

Lab Sample ID: NU12I
LIMS ID: 08-27624
Matrix: Water
Data Release Authorized: *MMW*
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

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

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: LCS-101608
LCS/LCSD

Lab Sample ID: LCS-101608
LIMS ID: 08-27616
Matrix: Water
Data Release Authorized: *MMW*
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

Date Extracted LCS/LCSD: 10/16/08

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

Instrument/Analyst LCS: NT4/PK

Dilution Factor LCS: 1.00

LCSD: NT4/PK

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%	47.6%
2-Fluorobiphenyl	64.0%	61.6%
d14-p-Terphenyl	76.4%	73.6%
d4-1,2-Dichlorobenzene	48.4%	40.8%

Results reported in $\mu\text{g/L}$

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: MB-101708
METHOD BLANK

Lab Sample ID: MB-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

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

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo (a,h) anthracene 70.3%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS


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Sample ID: CMP1-081013
SAMPLE

Lab Sample ID: NU12A

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: 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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 96.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

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Sample ID: CMP2-081013

SAMPLE

Lab Sample ID: NU12B

LIMS ID: 08-27617

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d14-Dibenzo (a,h) anthracene 92.3%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: FM105-081013
SAMPLE

Lab Sample ID: NU12C
LIMS ID: 08-27618
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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 93.0%


ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo (a,h) anthracene 93.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

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Sample ID: MW125-081013

SAMPLE

Lab Sample ID: NU12E

LIMS ID: 08-27620

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 88.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

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Sample ID: CMP17-081013

SAMPLE

Lab Sample ID: NU12F

LIMS ID: 08-27621

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d14-Dibenzo (a,h) anthracene 88.0%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: CMP5-081013
SAMPLE

Lab Sample ID: NU12G
LIMS ID: 08-27622
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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo (a,h) anthracene 94.0%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: MW308S-081013
SAMPLE

Lab Sample ID: NU12H

LIMS ID: 08-27623

Matrix: Water

Data Release Authorized: *AB*

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo (a,h) anthracene 80.0%

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: 08-27616
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

Date Extracted LCS/LCSD: 10/17/08

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 10/24/08 16:29
LCSD: 10/24/08 16:51

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT1/YZ
LCSD: NT1/YZ

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 $\mu\text{g/L}$ (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

Sample ID: MB-101508
METHOD BLANK

Lab Sample ID: MB-101508
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: NA
Date Received: NA

Date Extracted: 10/15/08
Date Analyzed: 10/25/08 20:20
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

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

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

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery


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
Project: SOUTHWEST HARBOR PROJECT PHASE 2

Matrix: Water
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
GPC Cleanup: No
Sulfur Cleanup: Yes

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	0.012	< 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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	57.2%
Tetrachlorometaxylene	61.5%

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

Sample ID: FM105-081013
SAMPLE

Lab Sample ID: NU12C
LIMS ID: 08-27618
Matrix: Water
Data Release Authorized: *[Signature]*
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 21:46
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

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

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 22:03

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

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

Matrix: Water

Data Release Authorized: *AB*

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 22:20

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

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
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

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: Yes

Date Extracted: 10/15/08
Date Analyzed: 10/25/08 22:37
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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

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

Matrix: Water

Data Release Authorized: 

Date Sampled: 10/13/08

Reported: 10/31/08

Date Received: 10/13/08

Date Extracted: 10/15/08

Sample Amount: 1000 mL

Date Analyzed: 10/25/08 22:55

Final Extract Volume: 0.50 mL

Instrument/Analyst: ECD5/JGR

Dilution Factor: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	70.2%
Tetrachlorometaxylene	60.2%

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

Sample ID: MW308S-081013
SAMPLE

Lab Sample ID: NU12H
LIMS ID: 08-27623
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 23:12
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.2%
Tetrachlorometaxylene	58.5%

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

Matrix: Water

Data Release Authorized: *AB*

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 23:29

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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	0.014
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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	59.0%
Tetrachlorometaxylene	56.5%

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

Sample ID: LCS-101508
LCS/LCSD

Lab Sample ID: LCS-101508
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: NA
Date Received: NA

Date Extracted LCS/LCSD: 10/15/08

Sample Amount LCS: 1000 mL
LCSD: 1000 mL

Date Analyzed LCS: 10/25/08 20:37
LCSD: 10/25/08 20:54

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

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

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: No
Sulfur Cleanup: Yes

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	0.038	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 $\mu\text{g/L}$
RPD calculated using sample concentrations per SW846.

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: NU12-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT PHASE

Data Release Authorized: *mm*

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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1Sample ID: LCS-101608
LCS/LCSD

Lab Sample ID: LCS-101608

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: *mmw*

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

Date Extracted LCS/LCSD: 10/16/08

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 10/28/08 06:24

Final Extract Volume LCS: 1.0 mL

LCSD: 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

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

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

PC
10/29/08

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	Range	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			
C26	5.654	0.000	24752	34422			
C28	5.892	0.000	8768	15327			
C32	6.439	0.000	5167	8767			
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 (C10-C22)	18180381	1132
AZMOIL (C22-C32)	1082276	168

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	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/1027a082.d

Date: 28-OCT-2008 06:24

Client ID: NU12LCSM1

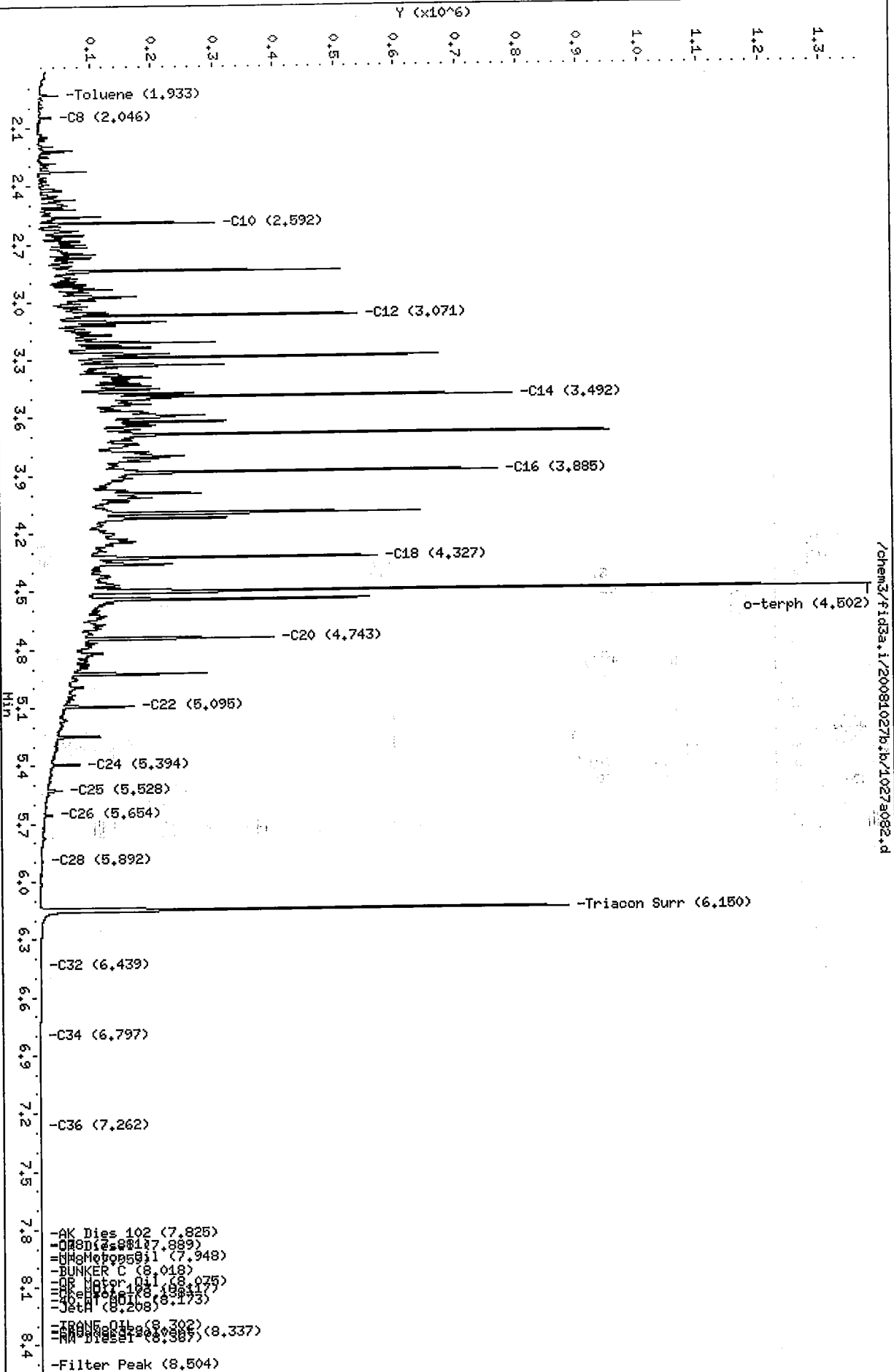
Sample Info: NU12LCSM1

Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PC
10/29/08

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

Compound	RT	Shift	Height	Area	Range	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			
C26	5.657	0.003	24500	35768			
C28	5.898	0.006	8411	11830			
C32	6.445	0.007	4871	6114			
C34	6.798	-0.003	2766	880			
Filter Peak	8.504	-0.001	1921	1371	JP-4 (Tol-C14)	7208136	634
C36	7.260	-0.005	2418	1302	CREOSOT (C8-C22)	20338391	3262
C38	7.884	0.003	2073	824			
C40	8.327	-0.002	1967	1138	BUNKERC (C10-C38)	21000767	2350
=====							
AZDIESEL (C10-C22)			19427790	1210			
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)

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

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

Date : 28-OCT-2008 06:39

Client ID: NU12LCSDM1

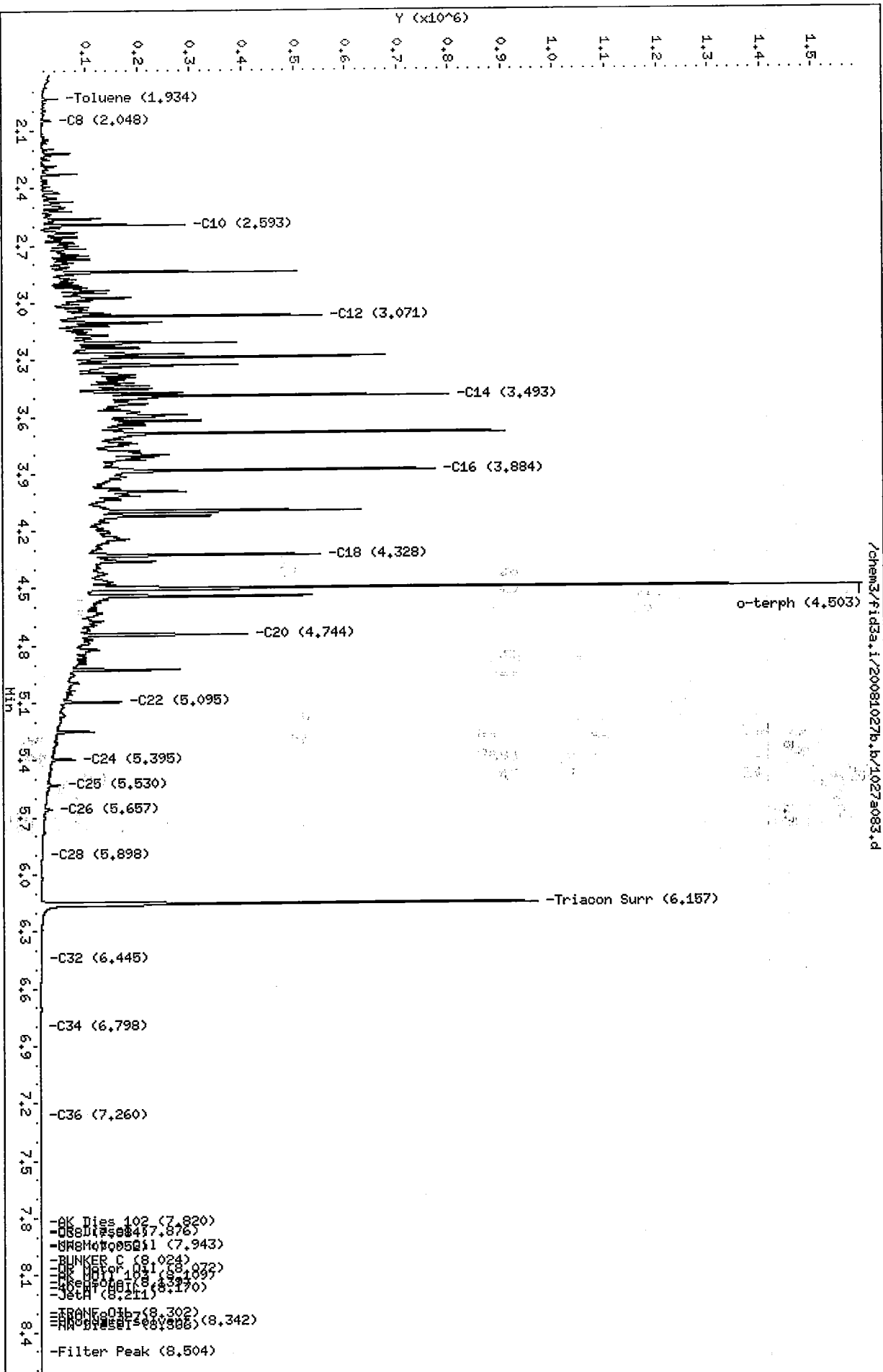
Sample Info: NU12LCSDM1

Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PC
10/29/08

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	Range	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			
C32	6.453	0.014	3587	6831			
C34	6.831	0.031	2331	1434			
Filter Peak	8.498	-0.005	1800	1221	JP-4 (Tol-C14)	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 (C10-C22)			458265	29			
AZMOIL (C22-C32)			180136	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	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/1027a084.d

Date : 28-OCT-2008 06:55

Client ID: NUL2HBM4

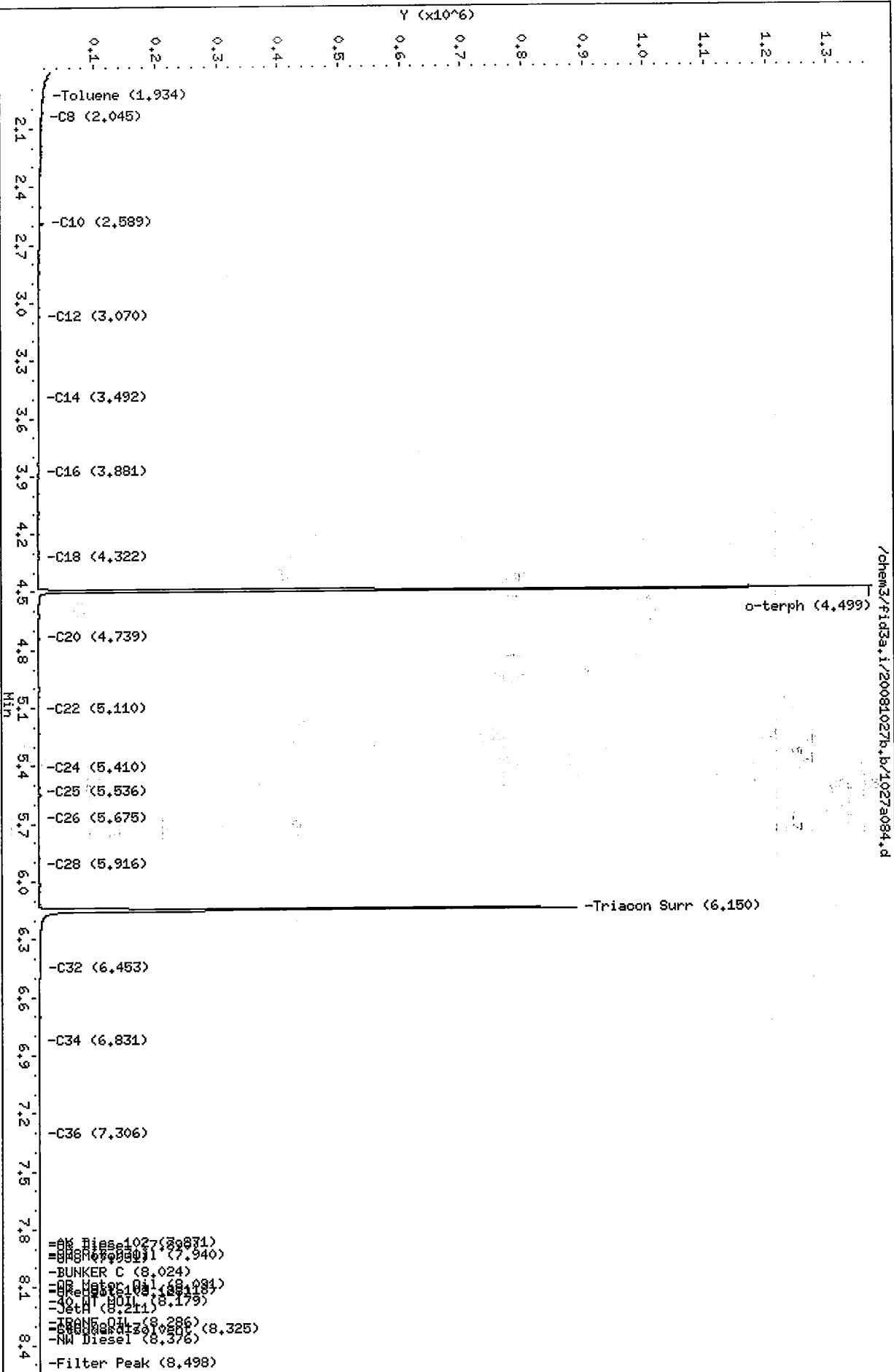
Sample Info: NUL2HBM4

Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

PC
10/29/08

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	Range	Total 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			
C26	5.673	0.018	2185	650			
C28	5.916	0.024	2341	1165			
C32	6.461	0.022	4207	6563			
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)	746235	120
C38	7.927	0.046	1853	996			
C40	8.313	-0.016	1798	499	BUNKERC (C10-C38)	844308	94
=====							
AZDIESEL (C10-C22)			450876	28			
AZMOIL (C22-C32)			191893	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	767561	36.1	80.2
Triacontane	657252	40.0	89.0

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

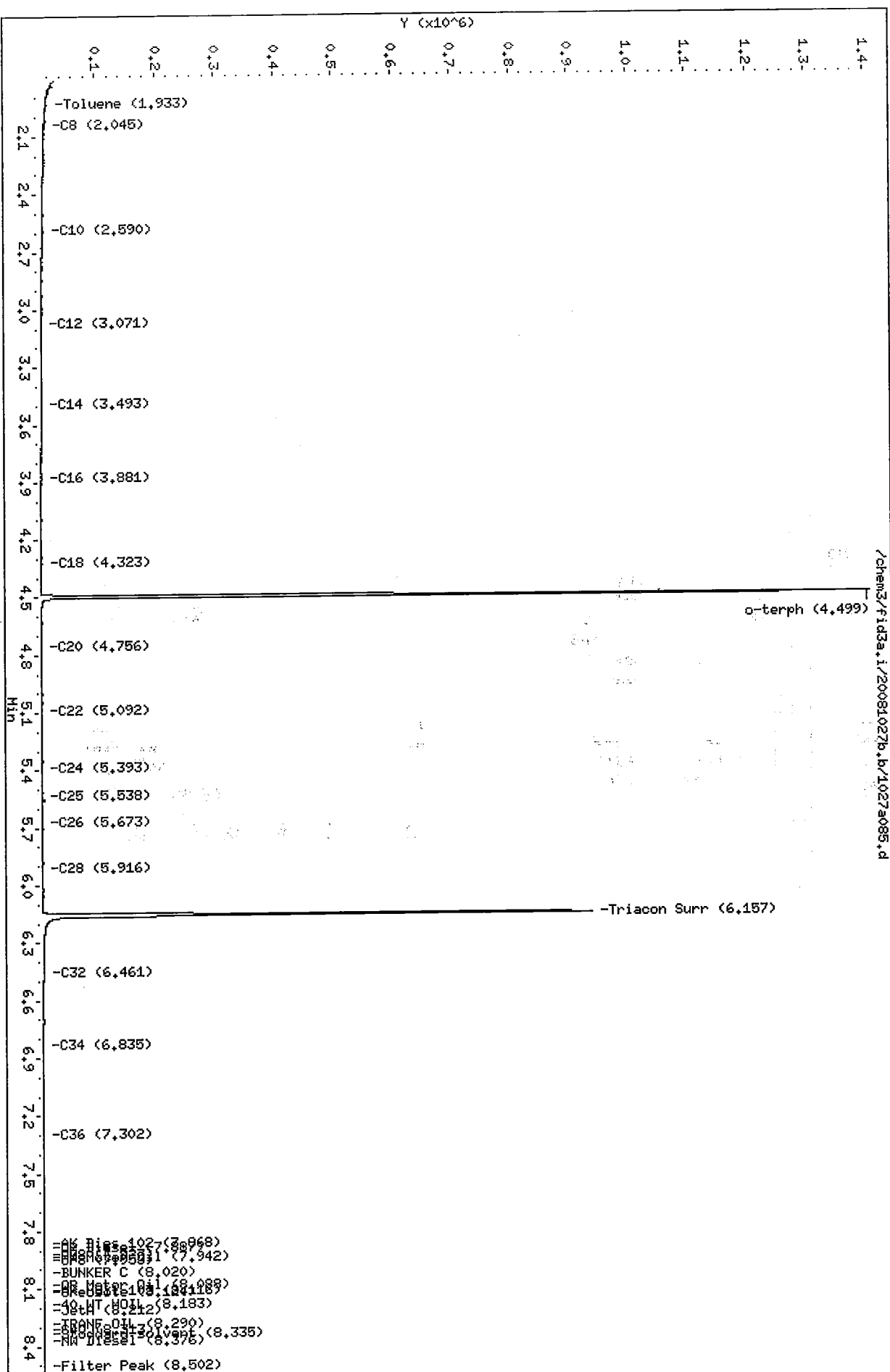
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Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

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Analytical Resources Inc.
TPH Quantitation Report

10/12/2008

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

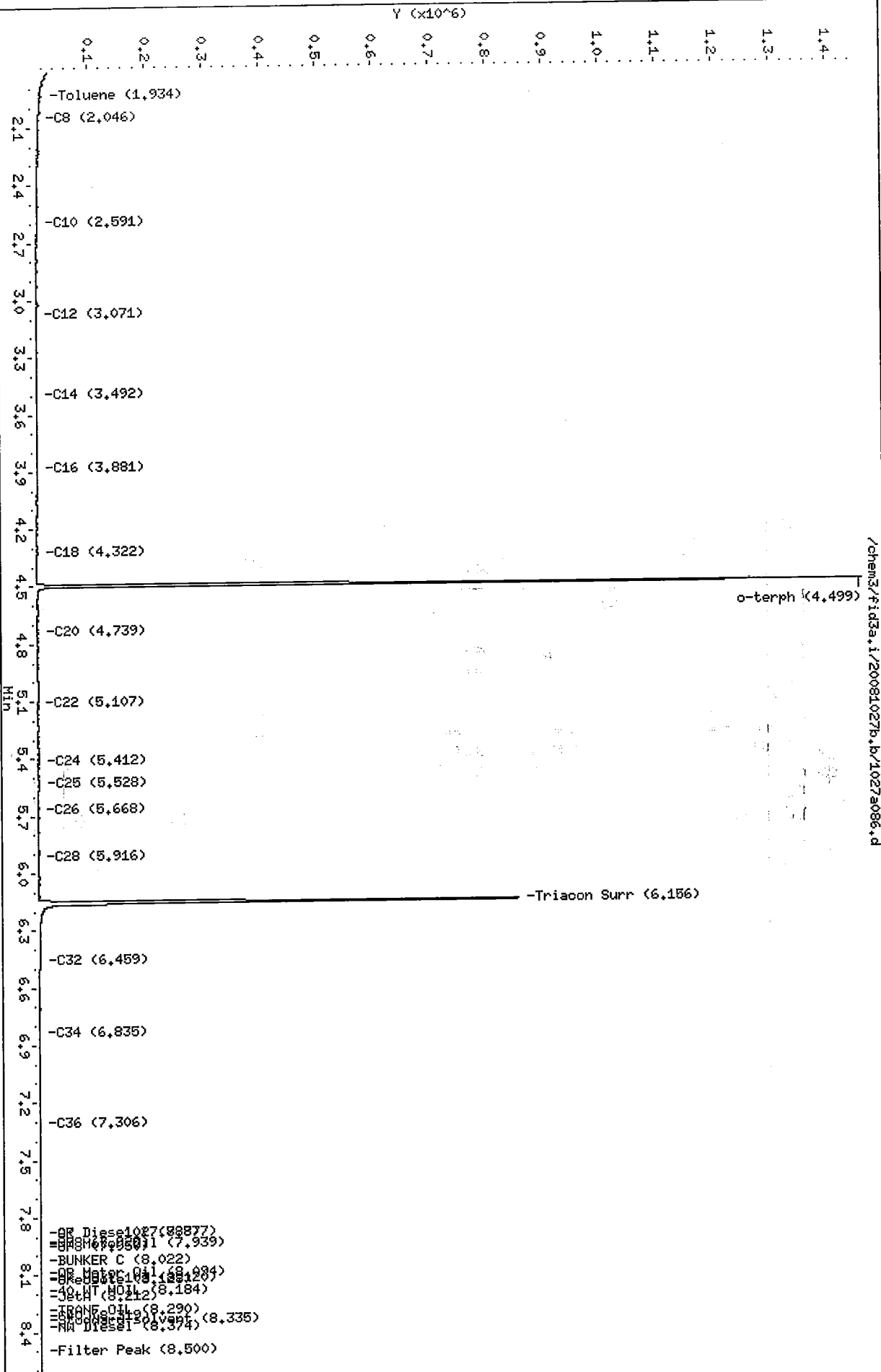
FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.934	-0.002	15792	17929	GAS (Tol-C12)	516177	20
C8	2.046	-0.002	10131	5739	DIESEL (C12-C24)	433248	22
C10	2.591	-0.003	7128	7400	M.OIL (C24-C38)	342371	25
C12	3.071	0.001	5210	4897	AK-102 (C10-C25)	617089	25
C14	3.492	0.000	5116	3149	AK-103 (C25-C36)	265913	38
C16	3.881	-0.001	4632	4534	OR.DIES (C10-C28)	693879	44
C18	4.322	-0.003	3705	5605	OR.MOIL (C28-C40)	301107	32
C20	4.739	-0.004	3467	4636	JET-A (C10-C18)	438048	30
C22	5.107	0.012	2921	640	MIN.OIL (C24-C38)	342371	27
C24	5.412	0.019	3062	2847	MSPIRIT (Tol-C12)	516177	33
C25	5.528	-0.001	3032	2666			
C26	5.668	0.013	2799	836			
C28	5.916	0.024	2734	435			
C32	6.459	0.021	3601	5454			
C34	6.835	0.035	2399	1341			
Filter Peak	8.500	-0.003	1789	1246	JP-4 (Tol-C14)	620668	55
C36	7.306	0.041	2136	468	CREOSOT (C8-C22)	819633	131
C38	7.929	0.049	1898	984			
C40	8.319	-0.010	1848	367	BUNKERC (C10-C38)	951382	106
AZDIESEL (C10-C22)			519951	32			
AZMOIL (C22-C32)			217819	34			

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	741359	34.9	77.4
Triacontane	623589	38.0	84.4

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



Analytical Resources Inc.
TPH Quantitation Report

PC
10/29/08

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

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.934	-0.002	16406	14677	GAS (Tol-C12)	518435	20
C8	2.046	-0.002	10205	5985	DIESEL (C12-C24)	422264	22
C10	2.591	-0.003	7159	7898	M.OIL (C24-C38)	934884	70
C12	3.071	0.001	4825	8602	AK-102 (C10-C25)	612748	25
C14	3.493	0.002	3937	4736	AK-103 (C25-C36)	766682	109
C16	3.881	-0.001	3609	4630	OR.DIES (C10-C28)	821669	52
C18	4.323	-0.002	3115	3671	OR.MOIL (C28-C40)	801656	86
C20	4.740	-0.004	3145	5677	JET-A (C10-C18)	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			
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			
C40	8.325	-0.004	3235	2156	BUNKERC (C10-C38)	1534988	172
=====							
AZDIESEL (C10-C22)			473460	29			
AZMOIL (C22-C32)			585867	91			

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	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

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Date: 28-OCT-2008 08:25

Client ID: FH405-081013

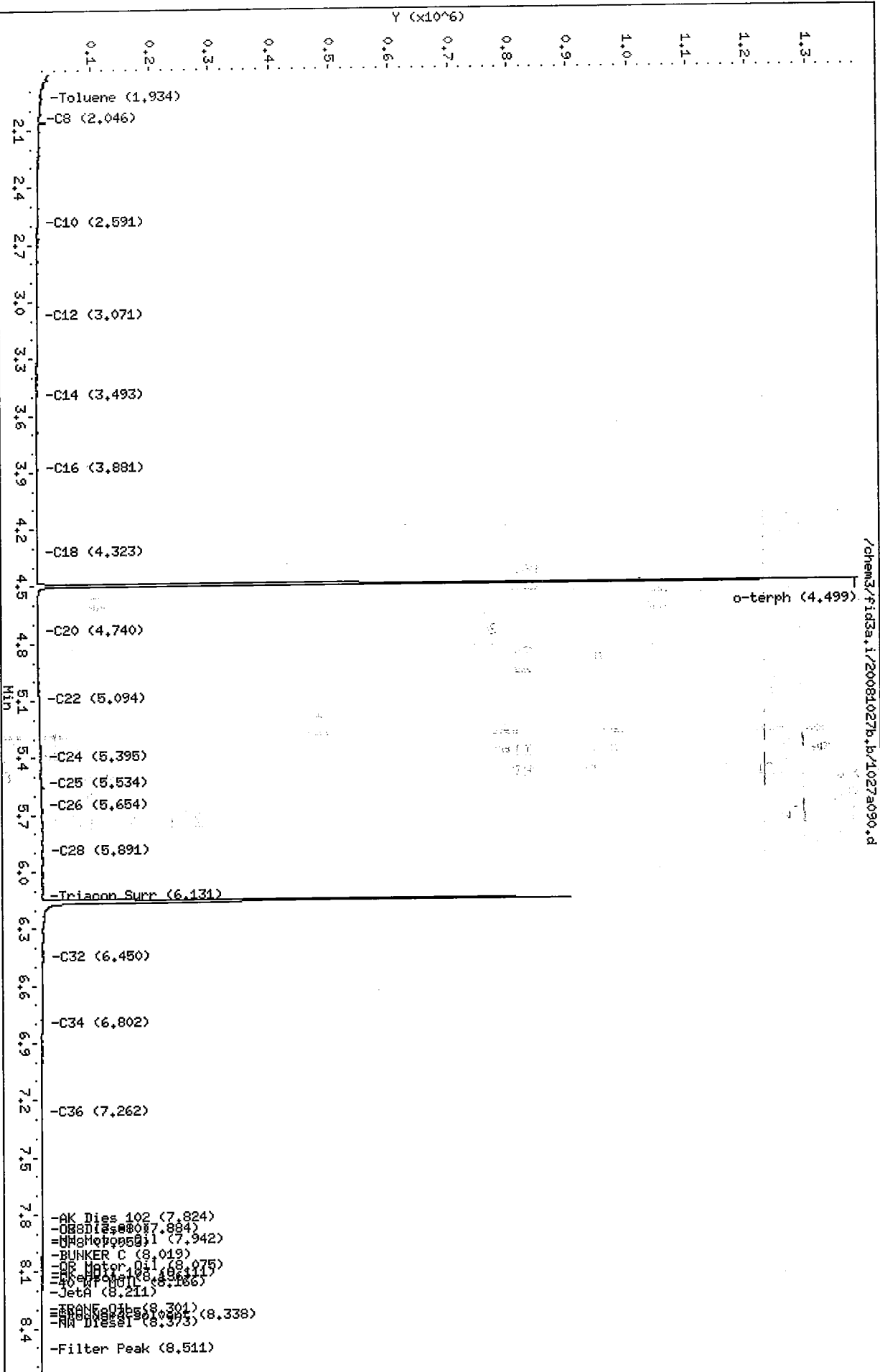
Sample Info: NU12C

Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

PC
10/29/08

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	Range	Total Area	Conc
Toluene	1.931	-0.005	15880	14054	GAS (Tol-C12)	515721	20
C8	2.042	-0.006	10111	5732	DIESEL (C12-C24)	312949	16
C10	2.588	-0.006	22841	15518	M.OIL (C24-C38)	343477	26
C12	3.070	0.000	4612	4027	AK-102 (C10-C25)	492468	20
C14	3.494	0.002	3650	4781	AK-103 (C25-C36)	262983	37
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	MIN.OIL (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			
C28	5.914	0.022	2679	1426			
C32	6.476	0.037	3080	2648			
C34	6.834	0.034	2702	1758			
Filter Peak	8.495	-0.008	1822	901	JP-4 (Tol-C14)	596889	53
C36	7.307	0.042	2313	1325	CREOSOT (C8-C22)	716209	115
C38	7.926	0.046	2012	1517			
C40	8.320	-0.009	1878	672	BUNKERC (C10-C38)	830189	93
AZDIESEL (C10-C22)			405944	25			
AZMOIL (C22-C32)			191508	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	692695	32.6	72.4
Triacontane	622178	37.9	84.2

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

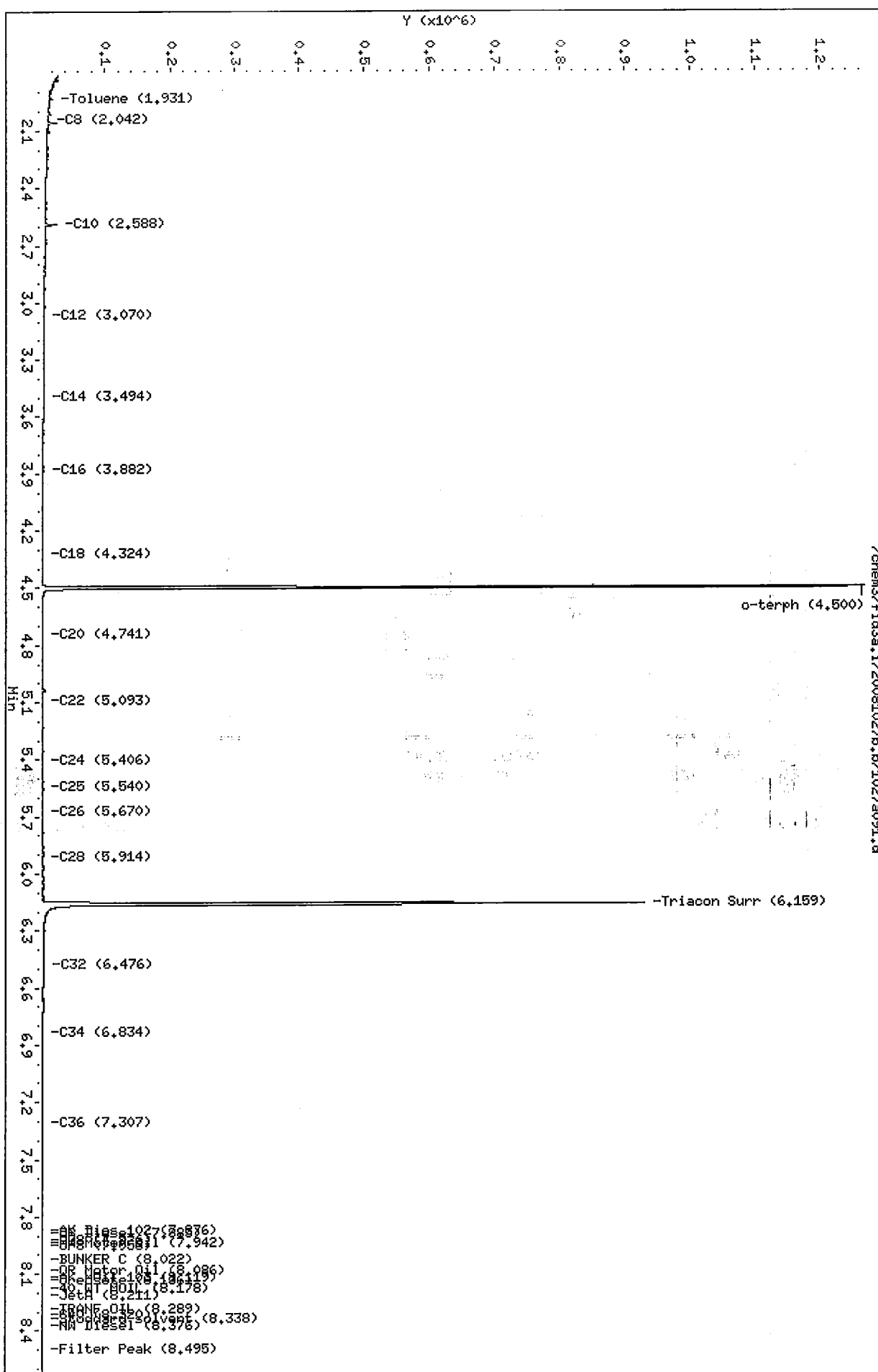
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Instrument: fid3a.i

Client ID: FM105-081013D

Operator: ms

Column diameter: Ø.25



PC
10/29/08

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	Area	Range	Total Area	Conc
Toluene	1.933	-0.003	16299	19041	GAS (Tol-C12)	542121	21
C8	2.044	-0.004	10244	6007	DIESEL (C12-C24)	334762	17
C10	2.589	-0.005	22219	18482	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			
C26	5.678	0.023	2078	1200			
C28	5.917	0.025	2318	369			
C32	6.485	0.046	2891	1652			
C34	6.834	0.034	2343	1071			
Filter Peak	8.501	-0.002	1720	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 (C10-C22)			442973	28			
AZMOIL (C22-C32)			179151	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	705795	33.2	73.7
Triacontane	612325	37.3	82.9

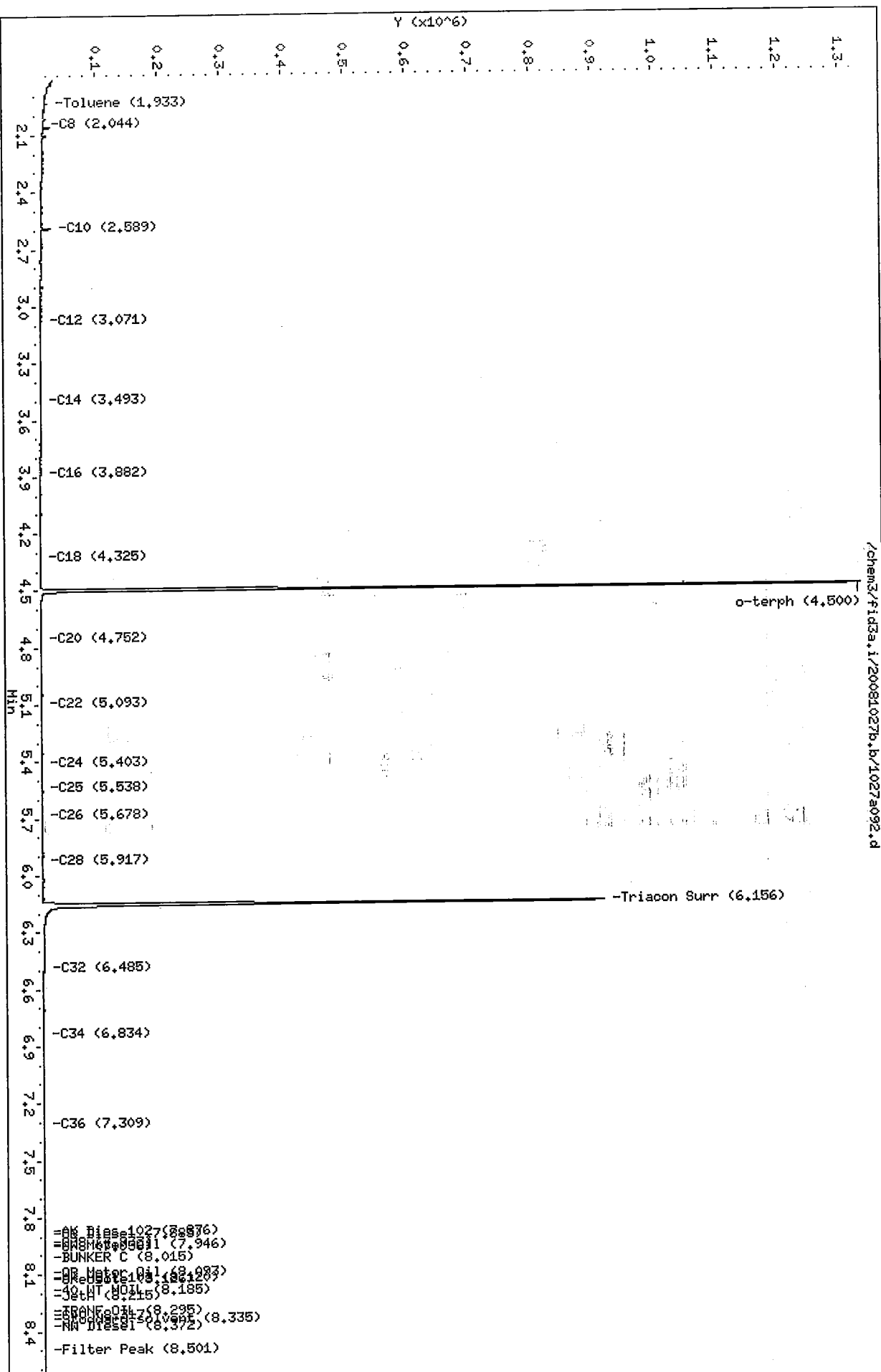
Analyte	RF	Curve Date
o-Terph Surr	21272.0	25-OCT-2008
Triacon Surr	16418.1	25-OCT-2008
Gas	25535.6	27-OCT-2008
Diesel	19596.8	25-OCT-2008
Motor Oil	13427.8	25-OCT-2008
AK102	24271.2	25-OCT-2008
AK103	7036.1	26-JULY-2008
JP4	11362.0	05-FEB-2007
JetA	14845.5	11-JUL-2008
Min Oil	12823.0	27-JUN-2008
Min 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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Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

KL
10/12/08

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	Range	Total 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			
C32	6.458	0.019	3930	2882			
C34	6.835	0.035	2290	1456			
Filter Peak	8.504	0.001	1684	803	JP-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
=====							
AZDIESEL (C10-C22)			420775	26			
AZMOIL (C22-C32)			170615	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	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

Page 1

Instrument: fid3a.i

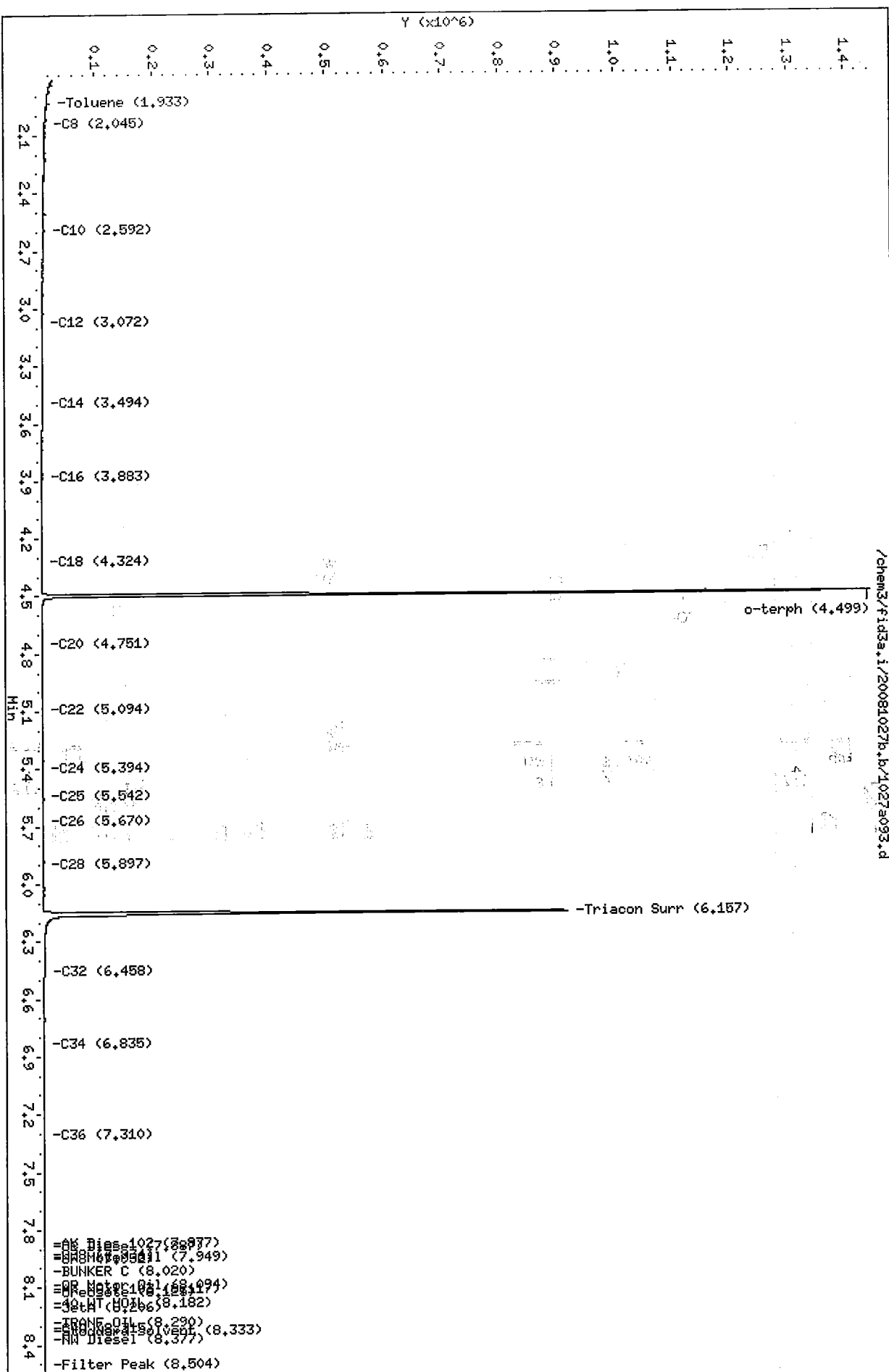
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Sample Info: NU12F

Operator: ms

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

PC
11/9/08

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

FID:3A RESULTS

Compound	RT	Shift	Height	Area	Range	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			
C26	5.668	0.013	1895	641			
C28	5.899	0.007	2543	3413			
C32	6.448	0.010	3787	6310			
C34	6.829	0.029	2161	1243			
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 (C10-C22)			407434	25			
AZMOIL (C22-C32)			150459	23			

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	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

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

Date: 28-OCT-2008 09:26

Client ID: CHPS-081013

Sample Info: NU126

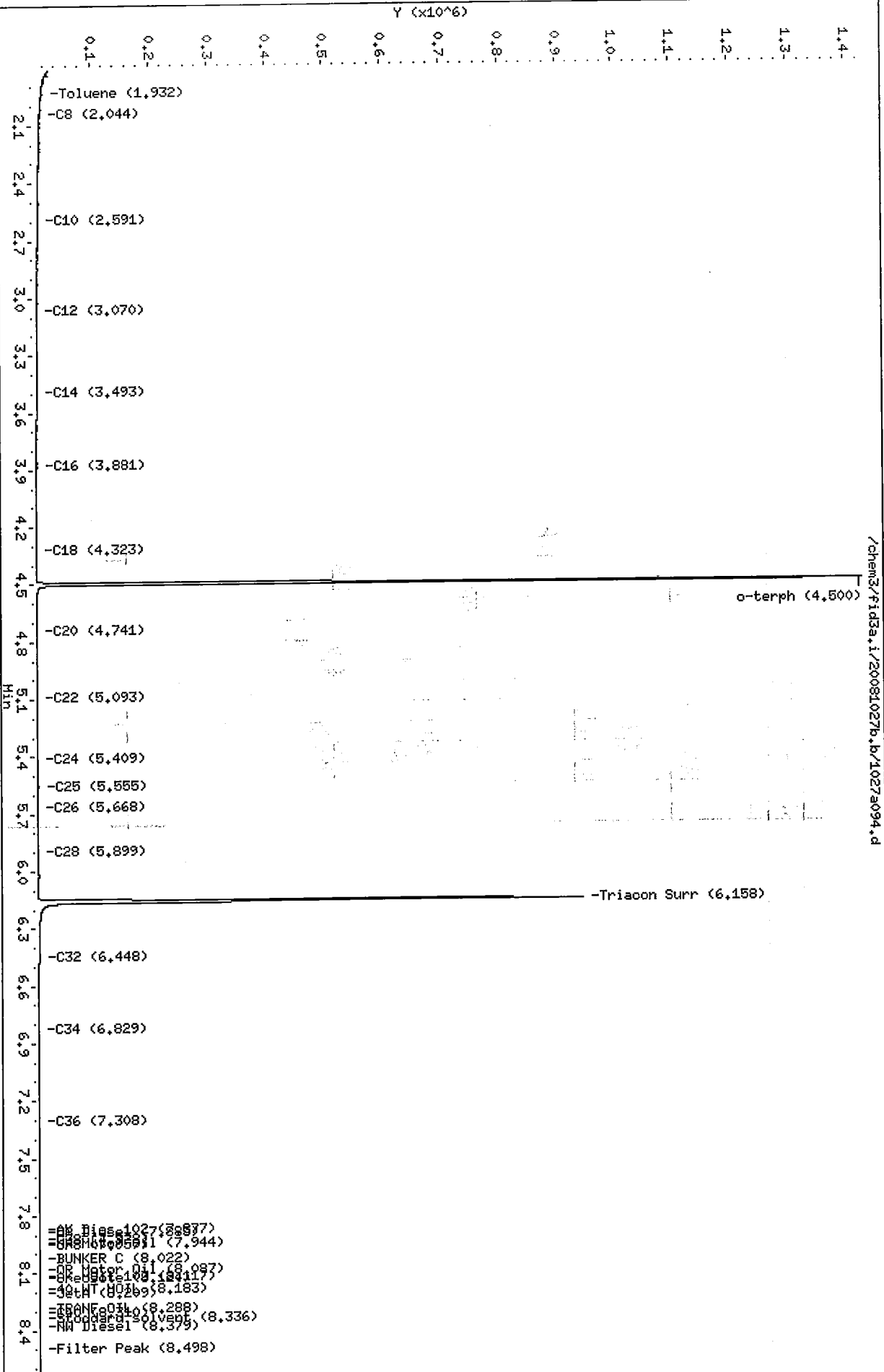
Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

/chem3/fid3a.i/20081027b.b/1027a094.d



Analytical Resources Inc.
TPH Quantitation Report

PC
10/29/08
Double

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			
C26	5.675	0.020	2015	480			
C28	5.910	0.018	3828	2721			
C32	6.451	0.012	5519	8516			
C34	6.834	0.034	2491	1640			
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			
C40	8.314	-0.014	1762	559	BUNKERC (C10-C38)	820462	92
=====							
AZDIESEL (C10-C22)			429074	27			
AZMOIL (C22-C32)			181233	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	1413621	66.5	147.7
Triacontane	1207269	73.5	163.4

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/1027a095.d

Date : 28-OCT-2008 09:41

Client ID: MM308S-081013

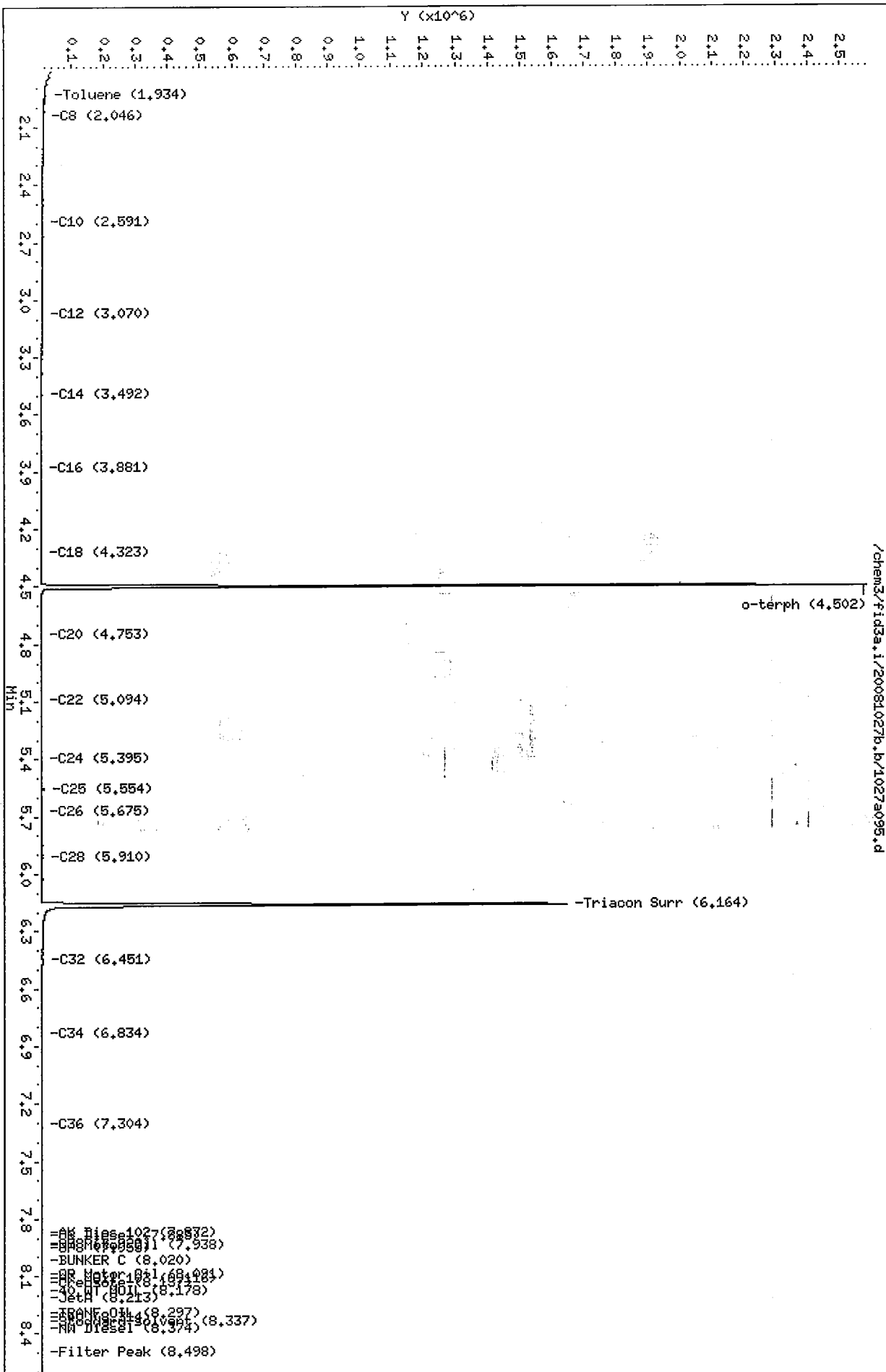
Sample Info: NU12H

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
TPH Quantitation Report

PC
10/29/08

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	Range	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	2419	2107			
Filter Peak	8.503	0.000	1702	405	JP-4 (Tol-C14)	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

=====
AZDIESEL (C10-C22) 433357 27
AZMOIL (C22-C32) 211808 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)

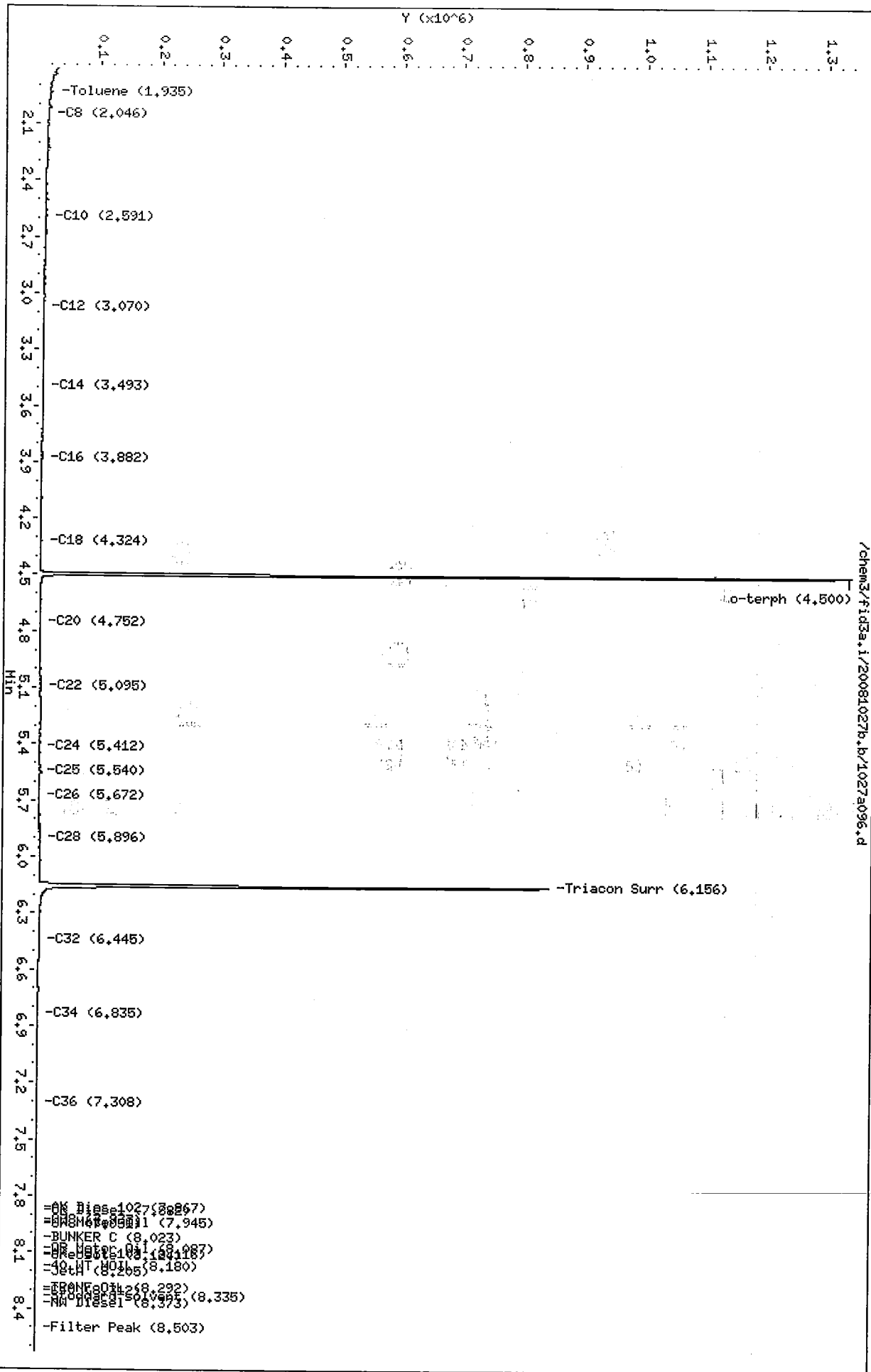
Surrogate	Area	Amount	%Rec
o-Terphenyl	685631	32.2	71.6
Triacontane	594741	36.2	80.5

Analyte	RF	Curve Date
o-Terph Surr	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/1027a096.d
Date : 28-OCT-2008 09:56
Client ID: M4308H-081013
Sample Info: N1121

Column phase: RTX-1

Instrument: fid3a.i
Operator: ms
Column diameter: 0.25



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: NU12MB

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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	10/23/08	7440-38-2	Arsenic	0.2	0.2	U
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


Sample ID: CMP1-081013

SAMPLE

Lab Sample ID: NU12A

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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	2.8	
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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: CMP2-081013
SAMPLE

Lab Sample ID: NU12B

LIMS ID: 08-27617

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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	10/24/08	7440-38-2	Arsenic	0.2	22.7	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	15	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: FM105-081013

SAMPLE

Lab Sample ID: NU12C

LIMS ID: 08-27618

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: FM105-081013D

SAMPLE

Lab Sample ID: NU12D

LIMS ID: 08-27619

Matrix: Water

Data Release Authorized 

Reported: 11/04/08

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

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

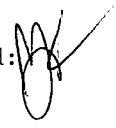
Sample ID: MW125-081013

SAMPLE

Lab Sample ID: NU12E

LIMS ID: 08-27620

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: CMP17-081013

SAMPLE

Lab Sample ID: NU12F

LIMS ID: 08-27621

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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

Sample ID: CMP5-081013

SAMPLE

Lab Sample ID: NU12G

LIMS ID: 08-27622

Matrix: Water

Data Release Authorized

Reported: 11/04/08

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


Sample ID: MW308S-081013

SAMPLE

Lab Sample ID: NU12H

LIMS ID: 08-27623

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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

Page 1 of 1

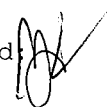
Sample ID: MW308N-081013

SAMPLE

Lab Sample ID: NU12I

LIMS ID: 08-27624

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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

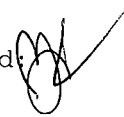
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: NU12LCS

LIMS ID: 08-27616

Matrix: Water

Data Release Authorized: 

Reported: 11/04/08

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%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Supplemental Code	DAVID RUGH	AMANDA AGARDSEN		
S-LB1695	Aspect LLC	AR1		
	Date & Time: 10/14/08 1430	Date & Time: 10/14/08 1430		

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 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-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 \geq 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 $\geq 40\%$ RPD with no obvious chromatographic interference

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP3-081014
SAMPLE

Lab Sample ID: NU25A

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized: *mw*

Reported: 10/24/08

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08

Date Received: 10/14/08

Date Extracted: 10/16/08

Date Analyzed: 10/23/08 19:22

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

Sample ID: CMP4-081014
SAMPLE

Lab Sample ID: NU25B

LIMS ID: 08-27635

Matrix: Water

Data Release Authorized: *MM*

Reported: 10/24/08

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08

Date Received: 10/14/08

Date Extracted: 10/16/08

Date Analyzed: 10/23/08 19:56

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

Sample ID: MW26R-081014
SAMPLE

Lab Sample ID: NU25C
LIMS ID: 08-27636
Matrix: Water
Data Release Authorized: *WW*
Reported: 10/24/08

QC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
080064
Date Sampled: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 20:30
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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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
Page 1 of 1

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

Lab Sample ID: NU25D

LIMS ID: 08-27637

Matrix: Water

Data Release Authorized: *WW*

Reported: 10/24/08

Date Extracted: 10/16/08

Date Analyzed: 10/23/08 21:04

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	47.2%
2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	62.8%
d4-1,2-Dichlorobenzene	48.4%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW44-081014
SAMPLE

Lab Sample ID: NU25E
LIMS ID: 08-27638
Matrix: Water
Data Release Authorized: *MM*
Reported: 10/24/08

QC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
080064
Date Sampled: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 21:37
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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	35.4%
2-Fluorobiphenyl	49.6%
d14-p-Terphenyl	73.6%
d4-1,2-Dichlorobenzene	30.0%

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: *MW*
Reported: 10/24/08

QC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
080064
Date Sampled: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 22:11
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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

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

Sample ID: MW36-081014
SAMPLE

Lab Sample ID: NU25G
LIMS ID: 08-27640

QC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
080064

Matrix: Water
Data Release Authorized: *WW*
Reported: 10/24/08

Date Sampled: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/16/08
Date Analyzed: 10/23/08 22:45
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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	49.6%
2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	62.4%
d4-1,2-Dichlorobenzene	49.6%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: MB-101708
METHOD BLANK

Lab Sample ID: MB-101708
LIMS ID: 08-27634
Matrix: Water
Data Release Authorized: 
Reported: 10/27/08

QC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
Event: 080064
Date Sampled: NA
Date Received: NA

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

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 $\mu\text{g/L}$ (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

Sample ID: CMP3-081014
SAMPLE

Lab Sample ID: NU25A
LIMS ID: 08-27634
Matrix: Water
Data Release Authorized: 
Reported: 10/27/08

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

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
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 $\mu\text{g/L}$ (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 1Lab Sample ID: NU25B
LIMS ID: 08-27635
Matrix: Water
Data Release Authorized: 
Reported: 10/27/08Date Extracted: 10/17/08
Date Analyzed: 00000
Instrument/Analyst: /Sample ID: CMP4-081014
SAMPLEQC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
Event: 080064
Date Sampled: 10/14/08
Date Received: 10/14/08Sample 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 $\mu\text{g/L}$ (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

Sample ID: MW26R-081014
SAMPLE

Lab Sample ID: NU25C
LIMS ID: 08-27636
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 10/27/08

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

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	0.025
218-01-9	Chrysene	0.010	0.027
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 $\mu\text{g/L}$ (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


Sample ID: MW26R-081014D

SAMPLE

Lab Sample ID: NU25D

LIMS ID: 08-27637

Matrix: Water

Data Release Authorized: 

Reported: 10/27/08

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

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	0.024
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 $\mu\text{g/L}$ (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

Sample ID: MW44-081014
SAMPLE

Lab Sample ID: NU25E
LIMS ID: 08-27638
Matrix: Water
Data Release Authorized: 
Reported: 10/27/08

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

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 $\mu\text{g/L}$ (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

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

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: /

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 $\mu\text{g/L}$ (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 1Sample ID: MW36-081014
SAMPLELab Sample ID: NU25G
LIMS ID: 08-27640
Matrix: Water
Data Release Authorized: 
Reported: 10/27/08QC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
Event: 080064
Date Sampled: 10/14/08
Date Received: 10/14/08Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00Date Extracted: 10/17/08
Date Analyzed: 00000
Instrument/Analyst: /

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 $\mu\text{g/L}$ (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: *MS*

Reported: 10/27/08

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 10/17/08

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 10/24/08 16:29

Final Extract Volume LCS: 0.50 mL

LCSD: 10/24/08 16:51

LCSD: 0.50 mL

Instrument/Analyst LCS: NT1/YZ

Dilution Factor LCS: 1.00

LCSD: 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%
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 $\mu\text{g/L}$ (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

Sample ID: MB-101508
METHOD BLANK

Lab Sample ID: MB-101508
LIMS ID: 08-27634
Matrix: Water
Data Release Authorized: *[Signature]*
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: 10/15/08
Date Analyzed: 10/25/08 20:20
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	65.0%
Tetrachlorometaxylene	62.0%

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

Sample ID: CMP3-081014
SAMPLE

Lab Sample ID: NU25A
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: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 00:55
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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	0.20	< 0.20 Y
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.15	< 0.15 Y
11096-82-5	Aroclor 1260	0.015	< 0.015 Y
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U


Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	56.2%
Tetrachlorometaxylene	68.2%

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

Sample ID: CMP4-081014
SAMPLE

Lab Sample ID: NU25B
LIMS ID: 08-27635
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: 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

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 01:12
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	0.013
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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	61.8%

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

Sample ID: MW26R-081014
SAMPLE

Lab Sample ID: NU25C
LIMS ID: 08-27636
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: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 01:29
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	59.8%
Tetrachlorometaxylene	51.8%

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

Sample ID: MW26R-081014D
SAMPLE

Lab Sample ID: NU25D
LIMS ID: 08-27637
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: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 01:46
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	55.0%
Tetrachlorometaxylene	55.8%

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

Sample ID: MW44-081014
SAMPLE

Lab Sample ID: NU25E
LIMS ID: 08-27638
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: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 02:04
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	58.8%
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
Matrix: Water
Data Release Authorized: *AB*
Reported: 10/31/08

QC Report No: NU25-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2
080064
Date Sampled: 10/14/08
Date Received: 10/14/08

Date Extracted: 10/15/08
Date Analyzed: 10/26/08 02:21
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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	0.018	< 0.018 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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.0%
Tetrachlorometaxylene	80.5%

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

Sample ID: MW36-081014
SAMPLE

Lab Sample ID: NU25G

LIMS ID: 08-27640

Matrix: Water

Data Release Authorized: *MS*

Reported: 10/31/08

QC Report No: NU25-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2

080064

Date Sampled: 10/14/08

Date Received: 10/14/08

Date Extracted: 10/15/08

Date Analyzed: 10/26/08 02:38

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.8%
Tetrachlorometaxylene	61.5%

ORGANICS ANALYSIS DATA SHEET

PCB by GC/ECD Method SW8082

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED 

Sample ID: LCS-101508

LCS/LCSD

Lab Sample ID: LCS-101508

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized: *BNP*

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

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

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

Final Extract Volume LCS: 0.50 mL

LCSD: 10/25/08 20:54

LCSD: 0.50 mL

Instrument/Analyst LCS: ECD5/JGR

Dilution Factor LCS: 1.00

LCSD: ECD5/JGR

LCSD: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

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	0.038	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 $\mu\text{g/L}$

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
 NWT PHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1
 Matrix: Water

QC Report No: NU25-Aspect Consulting LLC
 Project: SW HARBOR PROJECT-PHASE 2
 080064

Data Release Authorized: *MW*
 Reported: 10/29/08

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-101608 08-27634	Method Blank 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%
NU25A 08-27634	CMP3-081014 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 77.6%
NU25B 08-27635	CMP4-081014 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%
NU25C 08-27636	MW26R-081014 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 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 1.0	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 1.0	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 1.0	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
 Page 1 of 1

Sample ID: LCS-101608
 LCS/LCSD

Lab Sample ID: LCS-101608
 LIMS ID: 08-27634
 Matrix: Water
 Data Release Authorized: *MM*
 Reported: 10/29/08

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 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 Extracted LCS/LCSD: 10/16/08

Date Analyzed LCS: 10/28/08 06:24
 LCSD: 10/28/08 06:39

Instrument/Analyst LCS: FID/PKC
 LCSD: FID/PKC

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

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	68.4%	79.8%

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

RC
10/29/08

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	Range	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			
C26	5.654	0.000	24752	34422			
C28	5.892	0.000	8768	15327			
C32	6.439	0.000	5167	8767			
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 (C10-C22)			18180381	1132			
AZMOIL (C22-C32)			1082276	168			

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	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/1027a082.d

Date: 28-OCT-2008 06:24

Client ID: NU12LCSM1

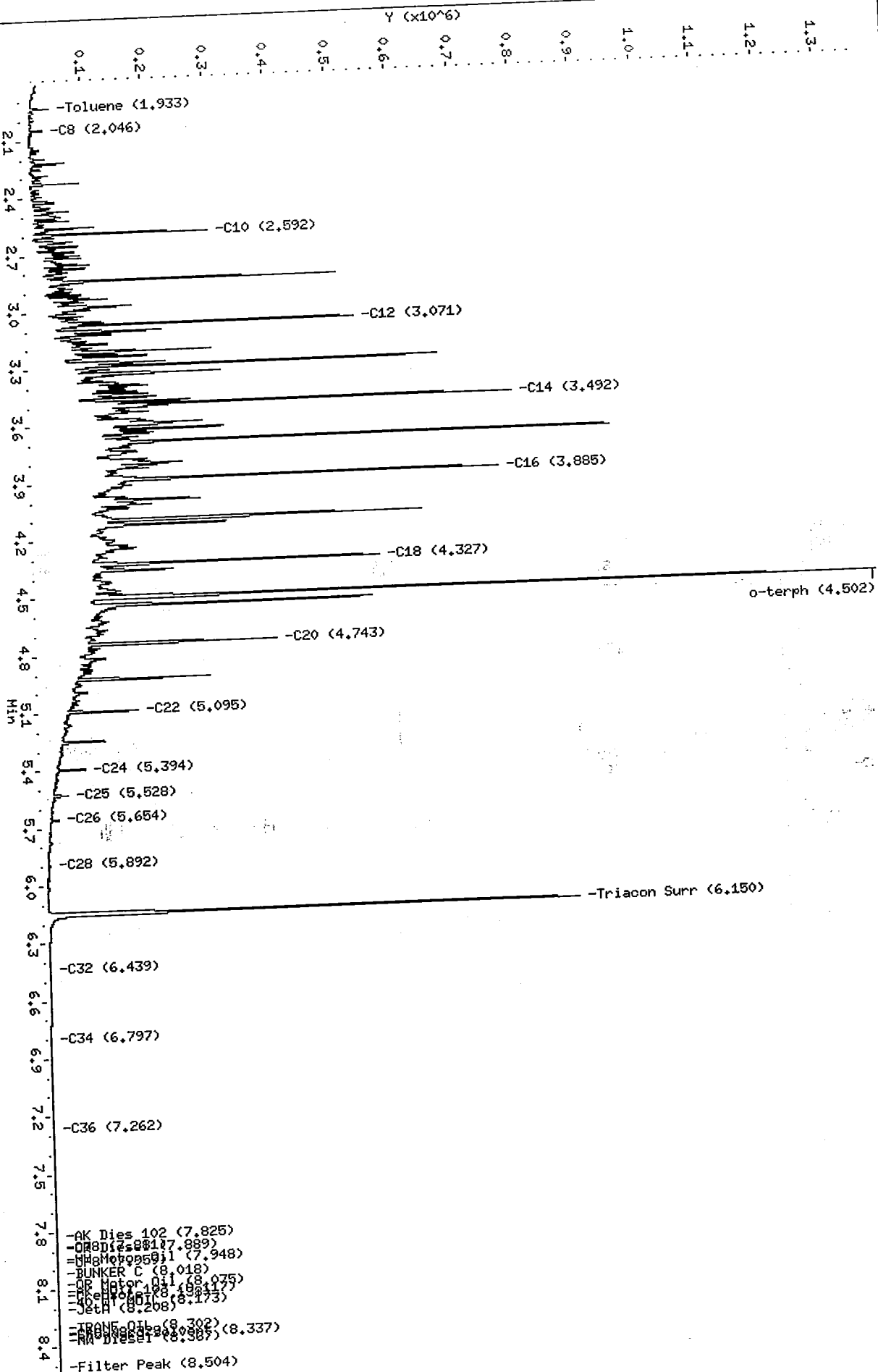
Sample Info: NU12LCSM1

Column Phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PC
10/29/08

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					Range	Total Area	Conc
Compound	RT	Shift	Height	Area			
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			
C26	5.657	0.003	24500	35768			
C28	5.898	0.006	8411	11830			
C32	6.445	0.007	4871	6114			
C34	6.798	-0.003	2766	880			
Filter Peak	8.504	-0.001	1921	1371	JP-4 (Tol-C14)	7208136	634
C36	7.260	-0.005	2418	1302	CREOSOT (C8-C22)	20338391	3262
C38	7.884	0.003	2073	824			
C40	8.327	-0.002	1967	1138	BUNKERC (C10-C38)	21000767	2350
=====							
AZDIESEL (C10-C22)			19427790	1210			
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)

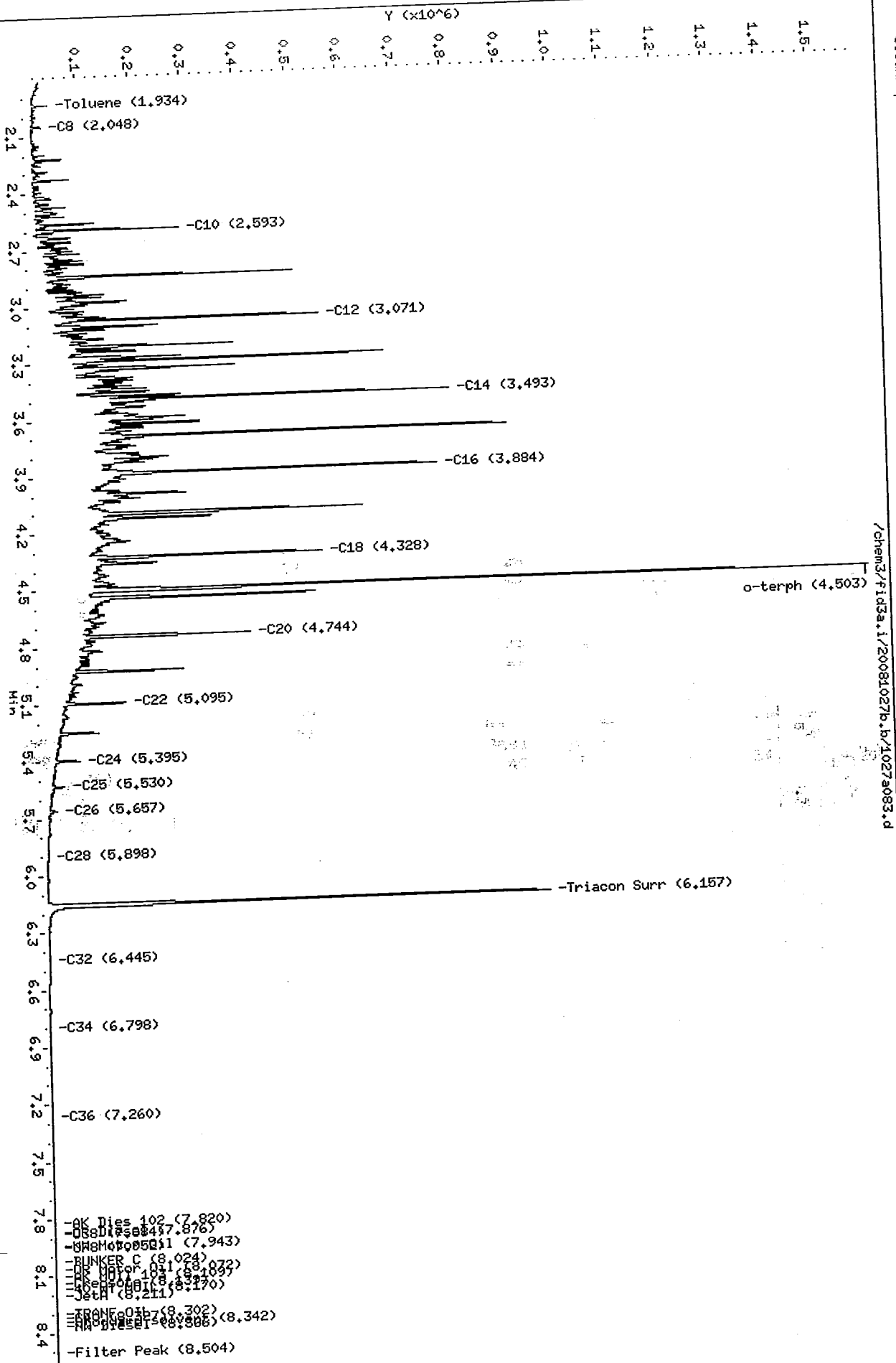
Surrogate	Area	Amount	%Rec
o-Terphenyl	763242	35.9	79.7
Triacontane	672853	41.0	91.1

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
Date: 28-OCT-2008 06:39
Client ID: NU12LCSDM4
Sample Info: NU12LCSDM4

Column phase: RTX-1

Instrument: fid3a.i
Operator: ms
Column diameter: 0.25



PC
10/29/08

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					Range	Total Area	Conc
Compound	RT	Shift	Height	Area			
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			
C32	6.453	0.014	3587	6831			
C34	6.831	0.031	2331	1434			
Filter Peak	8.498	-0.005	1800	1221	JP-4 (Tol-C14)	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 (C10-C22)			458265	29			
AZMOIL (C22-C32)			180136	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	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

Date : 28-OCT-2008 06:55

Client ID: NU12MBW1

Sample Info: NU12MBW1

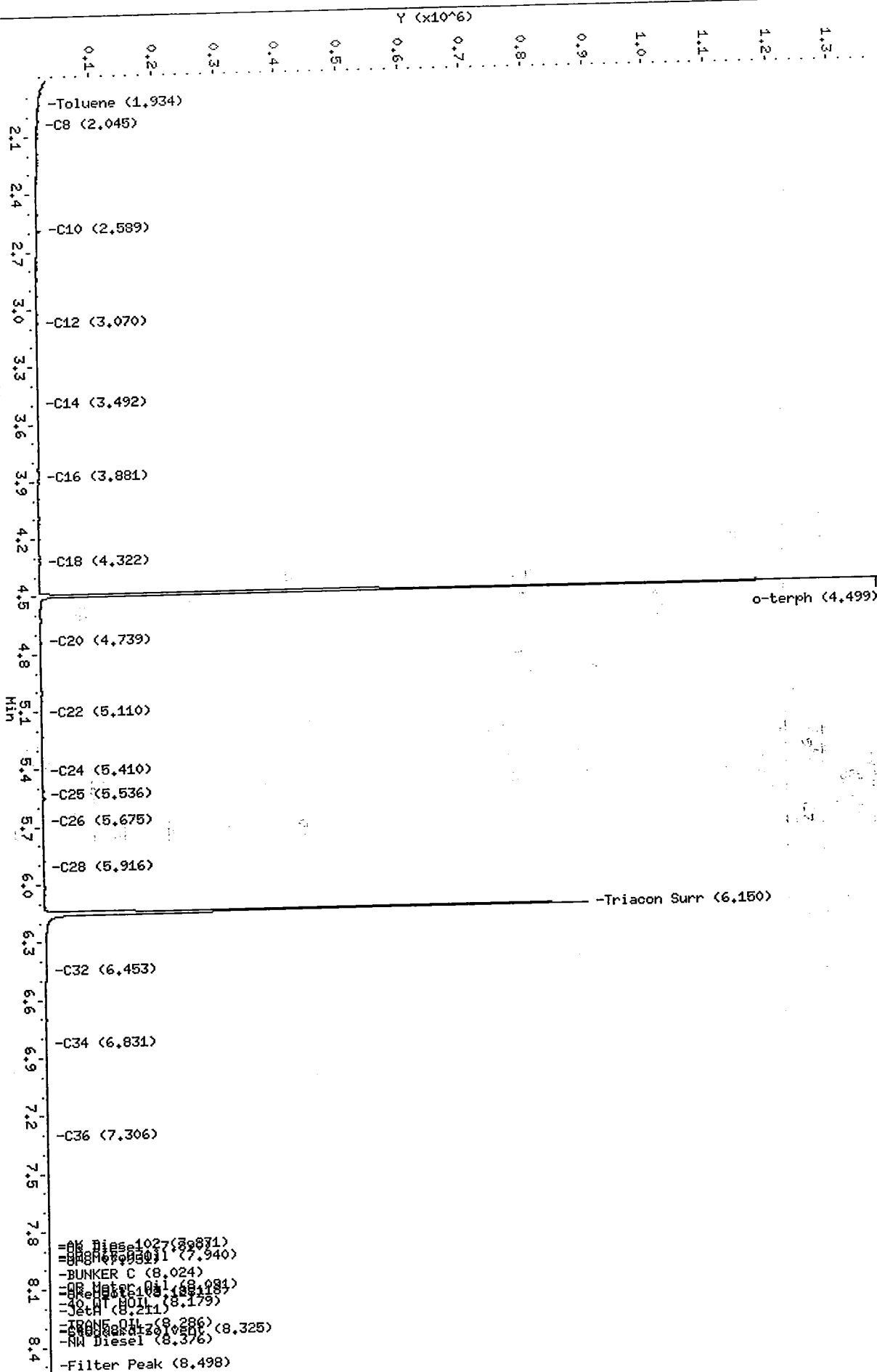
Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: Ø.25

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Analytical Resources Inc.
TPH Quantitation Report

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

FID:3A RESULTS					Range	Total Area	Conc
Compound	RT	Shift	Height	Area			
Toluene	1.932	-0.004	23364	22418	GAS (Tol-C12)	639480	25
C8	2.044	-0.005	10743	6250	DIESEL (C12-C24)	589663	30
C10	2.589	-0.004	7651	7949	M.OIL (C24-C38)	954392	71
C12	3.069	-0.001	5221	2810	AK-102 (C10-C25)	863497	36
C14	3.492	0.001	4458	1628	AK-103 (C25-C36)	789853	112
C16	3.881	-0.001	3989	3892	OR.DIES (C10-C28)	1091370	69
C18	4.322	-0.003	3377	5262	OR.MOIL (C28-C40)	795104	85
C20	4.740	-0.004	3617	5541	JET-A (C10-C18)	570453	38
C22	5.096	0.001	5059	2718	MIN.OIL (C24-C38)	954392	74
C24	5.395	0.002	7476	4632	MSPIRIT (Tol-C12)	639480	40
C25	5.525	-0.003	8477	5672			
C26	5.659	0.004	9067	7766			
C28	5.892	0.000	8241	1630			
C32	6.436	-0.003	8220	2728			
C34	6.800	0.000	5874	1856			
Filter Peak	8.507	0.004	2864	2710	JP-4 (Tol-C14)	775392	68
C36	7.269	0.004	4945	4518	CREOSOT (C8-C22)	1032397	166
C38	7.877	-0.003	3761	2967			
C40	8.333	0.004	3073	1953	BUNKERC (C10-C38)	1800546	201
AZDIESEL (C10-C22)				690508	43		
AZMOIL (C22-C32)				635383	99		

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	742937	34.9	77.6
Triacontane	602504	36.7	81.6

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/1027a100.d

Date: 28-OCT-2008 10:56

Client ID: CHP3-081014

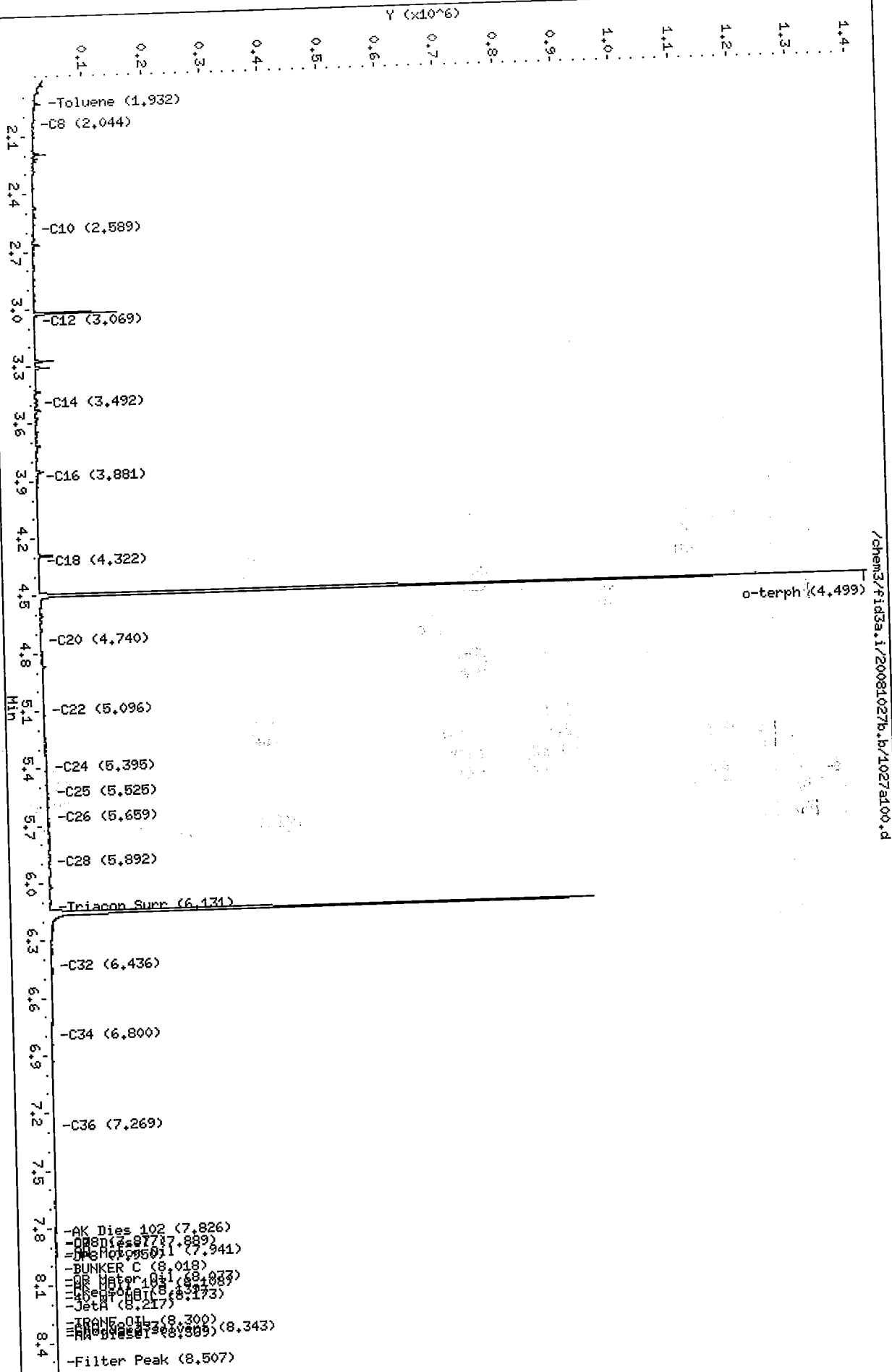
Sample Info: NU259

Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PL
10/29/08

Analytical Resources Inc.
TPH Quantitation Report

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
Dilution Factor: 1

FID:3A RESULTS					Range	Total Area	Conc
Compound	RT	Shift	Height	Area			
Toluene	1.933	-0.003	17382	20143	GAS (Tol-C12)	531627	21
C8	2.046	-0.003	10571	6384	DIESEL (C12-C24)	328343	17
C10	2.591	-0.003	7179	11021	M.OIL (C24-C38)	339439	25
C12	3.070	0.000	4733	6915	AK-102 (C10-C25)	508864	21
C14	3.493	0.001	3755	2668	AK-103 (C25-C36)	264201	38
C16	3.882	0.000	3043	4399	OR.DIES (C10-C28)	578777	37
C18	4.326	0.000	2509	3798	OR.MOIL (C28-C40)	309842	33
C20	4.742	-0.002	2336	2789	JET-A (C10-C18)	379420	26
C22	5.094	-0.001	2276	2128	MIN.OIL (C24-C38)	339439	26
C24	5.396	0.002	2280	1805	MSPIRIT (Tol-C12)	531627	34
C25	5.539	0.010	2410	622			
C26	5.654	-0.001	2491	1561			
C28	5.899	0.006	3206	4708			
C32	6.432	-0.007	3392	1080			
C34	6.800	-0.001	2617	1898			
Filter Peak	8.506	0.003	1760	662	JP-4 (Tol-C14)	616061	54
C36	7.264	-0.001	2180	1166	CREOSOT (C8-C22)	740452	119
C38	7.880	-0.001	1991	987			
C40	8.323	-0.006	1824	1011	BUNKERC (C10-C38)	841697	94
AZDIESEL (C10-C22)			429107	27			
AZMOIL (C22-C32)			192287	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)

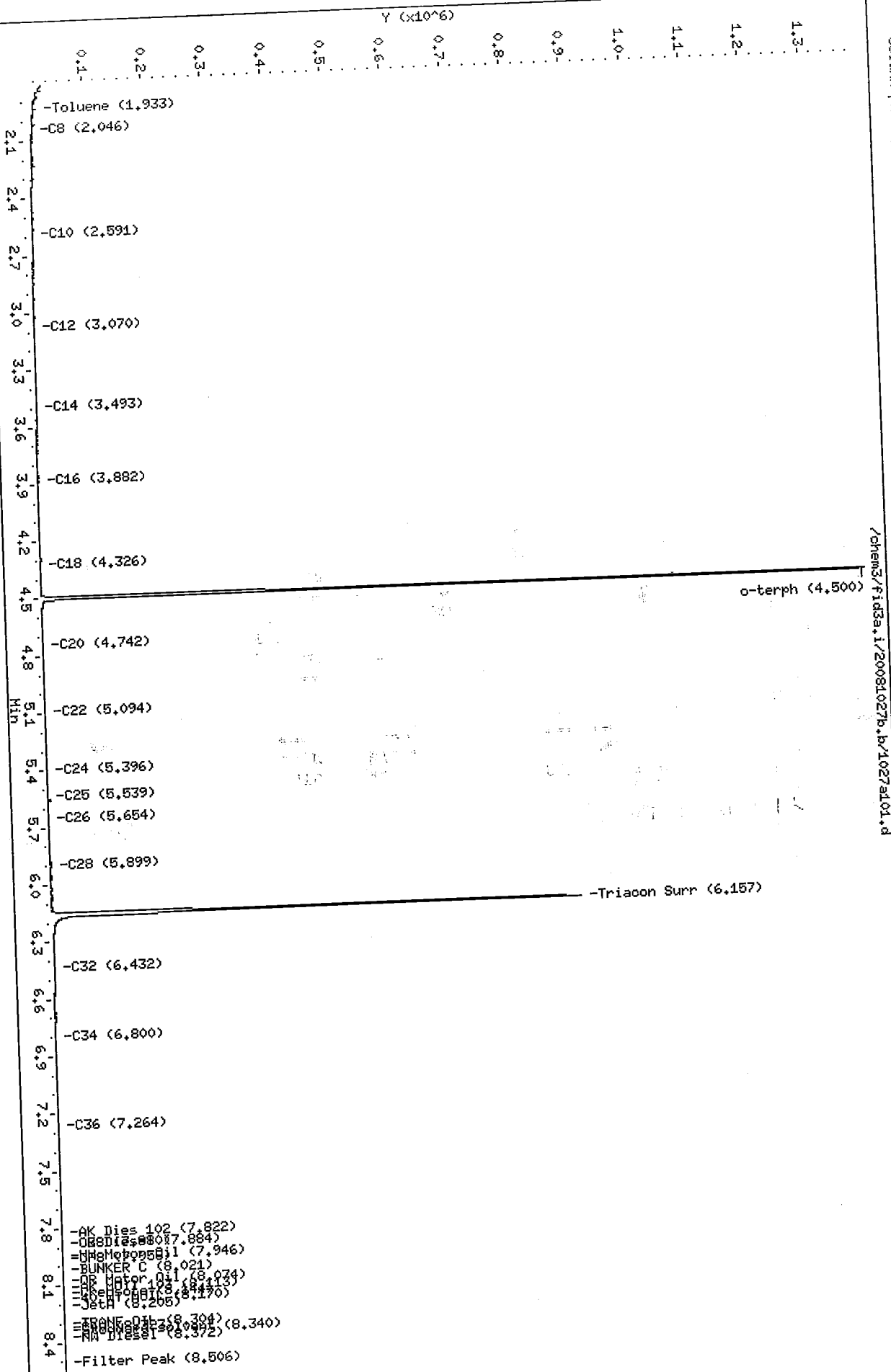
Surrogate	Area	Amount	%Rec
o-Terphenyl	715215	33.6	74.7
Triacontane	620412	37.8	84.0

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

Data File: /chem3/fid3a.i/20081027b.b/1027a101.d
Date : 28-OCT-2008 11:11
Client ID: CMP4-081014
Sample Info: NU25B

Column Phase: RTX-1

Instrument: fid3a.i
Operator: ms
Column diameter: 0.25



PC
10/29/08

Analytical Resources Inc.
TPH Quantitation Report

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

FID:3A RESULTS						Total Area	Conc
Compound	RT	Shift	Height	Area	Range		
Toluene	1.933	-0.003	19095	15790	GAS (Tol-C12)	548018	21
C8	2.045	-0.003	10701	6258	DIESEL (C12-C24)	379998	19
C10	2.591	-0.002	7807	7674	M.OIL (C24-C38)	320136	24
C12	3.070	0.000	5017	6581	AK-102 (C10-C25)	574165	24
C14	3.492	0.000	4017	3077	AK-103 (C25-C36)	249113	35
C16	3.881	-0.002	3329	3317	OR.DIES (C10-C28)	646146	41
C18	4.323	-0.002	2921	3341	OR.MOIL (C28-C40)	284724	30
C20	4.738	-0.006	2722	2320	JET-A (C10-C18)	417246	28
C22	5.091	-0.004	2693	2533	MIN.OIL (C24-C38)	320136	25
C24	5.391	-0.003	2751	2248	MSPIRIT (Tol-C12)	548018	35
C25	5.525	-0.004	2644	2762			
C26	5.653	-0.002	2587	3849			
C28	5.893	0.000	2996	3613			
C32	6.442	0.003	4082	5206			
C34	6.796	-0.004	2331	1477			
Filter Peak	8.499	-0.004	1679	499	JP-4 (Tol-C14)	641047	56
C36	7.264	-0.001	2032	686	CREOSOT (C8-C22)	807127	129
C38	7.884	0.003	1788	919			
C40	8.323	-0.006	1711	1188	BUNKERC (C10-C38)	887840	99
=====							
AZDIESEL (C10-C22)			486095	30			
AZMOIL (C22-C32)			197515	31			

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	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

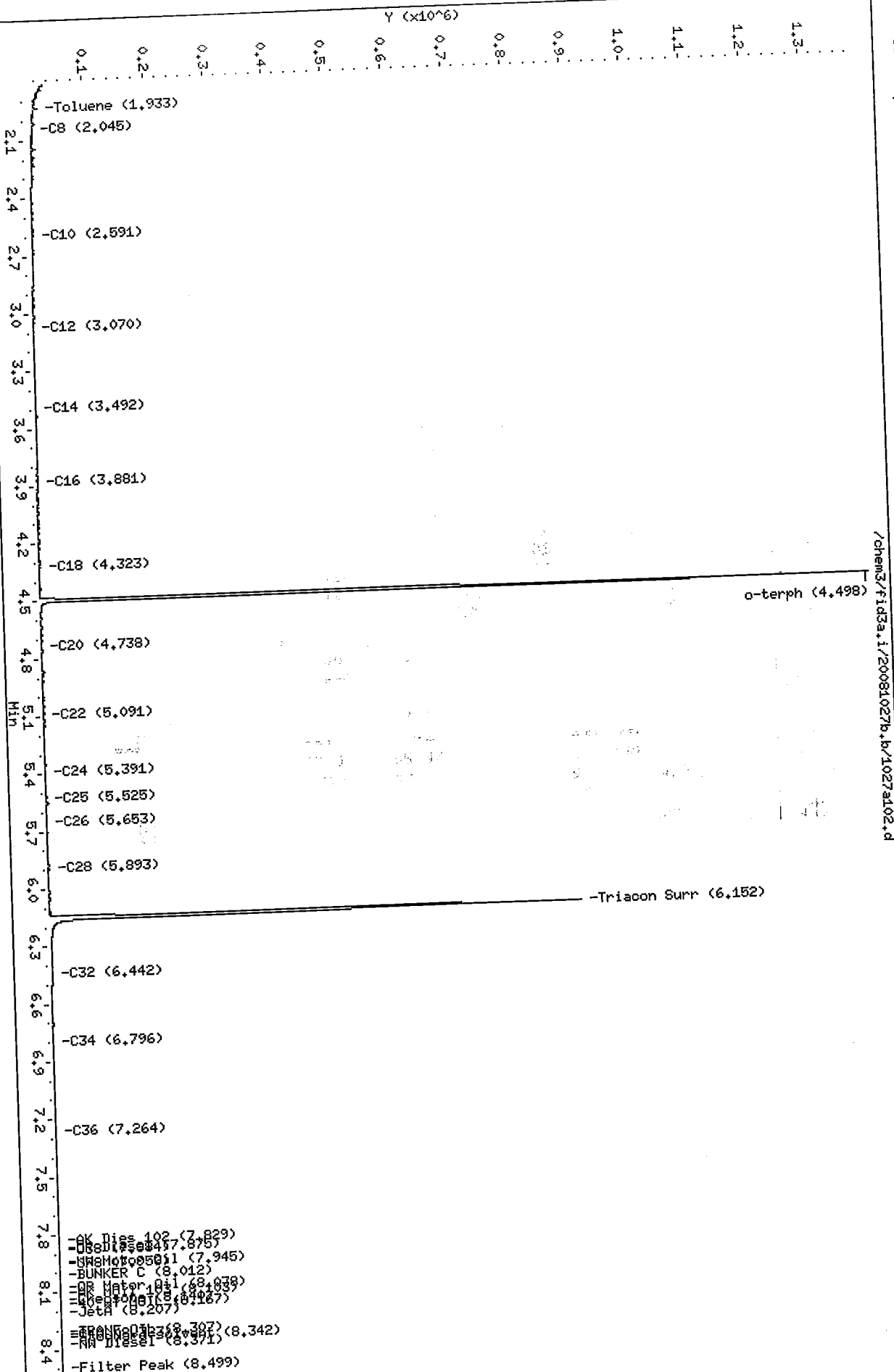
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 Date: 28-OCT-2008 11:26
 Client ID: NM26R-081014
 Sample Info: NU25C

Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



PC
10/29/08

Analytical Resources Inc.
TPH Quantitation Report

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

FID:3A RESULTS							Total Area	Conc
Compound	RT	Shift	Height	Area	Range			
Toluene	1.933	-0.002	19166	21996	GAS (Tol-C12)		553054	22
C8	2.046	-0.003	10562	6369	DIESEL (C12-C24)		361835	18
C10	2.592	-0.002	8500	7526	M.OIL (C24-C38)		301295	22
C12	3.070	0.000	5106	4682	AK-102 (C10-C25)		559846	23
C14	3.492	0.001	3764	3847	AK-103 (C25-C36)		236251	34
C16	3.882	0.000	3138	3216	OR.DIES (C10-C28)		627018	40
C18	4.324	-0.001	2811	4231	OR.MOIL (C28-C40)		265904	28
C20	4.740	-0.004	2632	2491	JET-A (C10-C18)		411538	28
C22	5.091	-0.004	2602	2391	MIN.OIL (C24-C38)		301295	23
C24	5.392	-0.002	2645	2198	MSPIRIT (Tol-C12)		553054	35
C25	5.533	0.004	2458	1311				
C26	5.653	-0.001	2520	3648				
C28	5.892	0.000	2904	4733				
C32	6.440	0.002	3876	5181				
C34	6.799	-0.001	2207	1528				
Filter Peak	8.500	-0.003	1603	477	JP-4 (Tol-C14)		639758	56
C36	7.263	-0.002	1953	1542	CREOSOT (C8-C22)		791272	127
C38	7.882	0.001	1698	608				
C40	8.331	0.003	1604	922	BUNKERC (C10-C38)		854858	96
=====								
AZDIESEL (C10-C22)			472590	29				
AZMOIL (C22-C32)			192023	30				

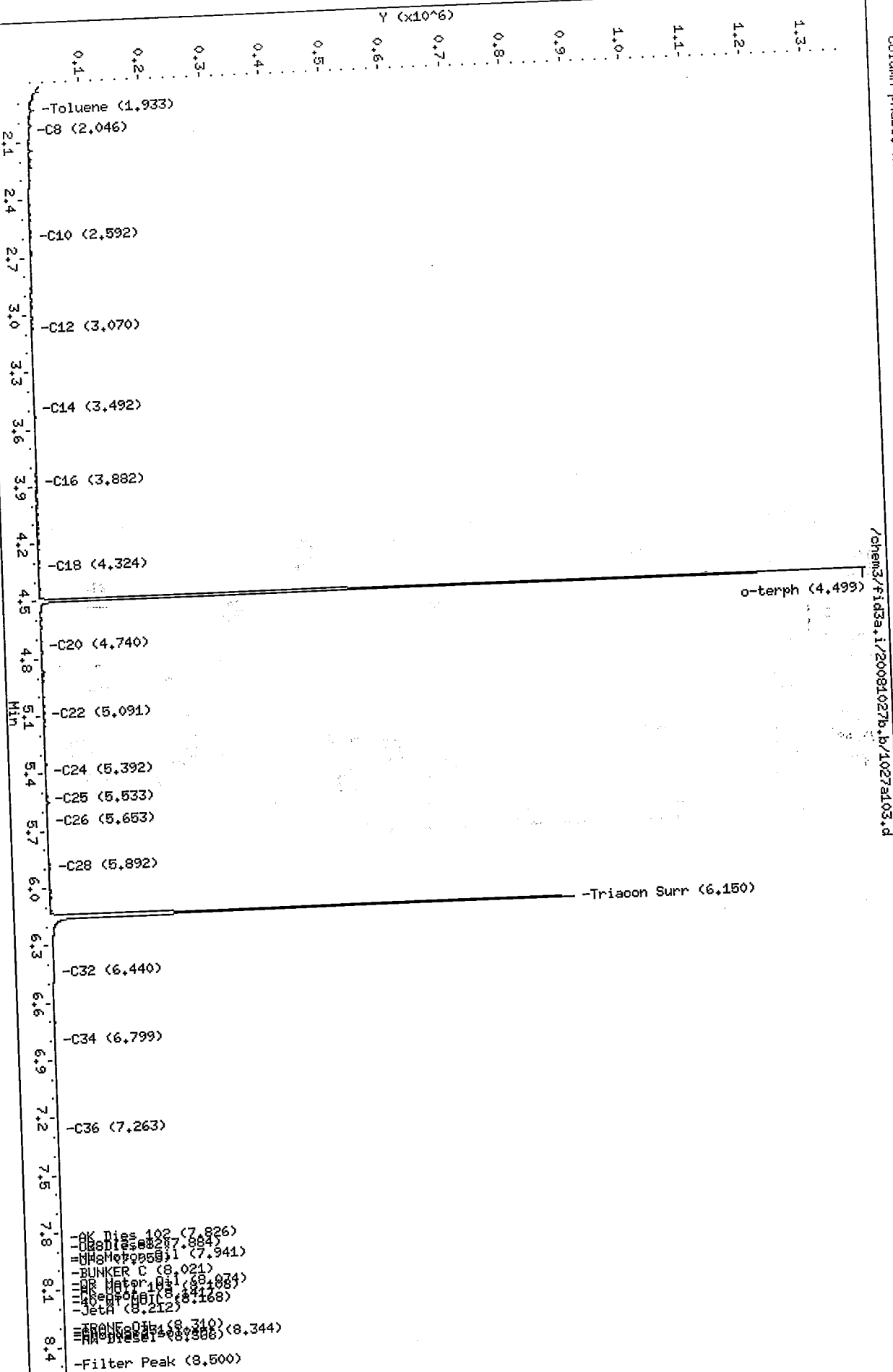
Range Times: NW Diesel(3.120 - 5.444) NW Gas(1.886 - 3.120) NW M.Oil(5.444 - 7.931)
AK102(2.543 - 5.479) AK103(5.479 - 7.315) Jet A(2.543 - 4.375)

Surrogate	Area	Amount	%Rec
o-Terphenyl	714377	33.6	74.6
Triacontane	606237	36.9	82.1

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

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

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

FID:3A RESULTS						
Compound	RT	Shift	Height	Area	Range	Total Area Conc
Toluene	1.934	-0.002	17705	20020	GAS (Tol-C12)	538611 21
C8	2.046	-0.003	10581	5978	DIESEL (C12-C24)	369079 19
C10	2.590	-0.003	7287	7721	M.OIL (C24-C38)	480125 36
C12	3.070	0.000	4763	5202	AK-102 (C10-C25)	556299 23
C14	3.492	0.001	3732	4563	AK-103 (C25-C36)	397079 56
C16	3.880	-0.002	3142	4105	OR.DIES (C10-C28)	690722 44
C18	4.324	-0.001	2871	4090	OR.MOIL (C28-C40)	388068 41
C20	4.739	-0.004	2916	2394	JET-A (C10-C18)	380928 26
C22	5.092	-0.003	3783	4262	MIN.OIL (C24-C38)	480125 37
C24	5.390	-0.004	4591	4197	MSPIRIT (Tol-C12)	538611 34
C25	5.524	-0.004	5326	4981		
C26	5.651	-0.003	5291	4852		
C28	5.889	-0.004	6541	10013		
C32	6.435	-0.004	5808	8362		
C34	6.794	-0.006	3380	3554		
Filter Peak	8.507	0.004	1840	879	JP-4 (Tol-C14)	619827 55
C36	7.274	0.009	2555	1521	CREOSOT (C8-C22)	758025 122
C38	7.880	-0.001	2159	684		
C40	8.329	0.000	1894	602	BUNKERC (C10-C38)	1030146 115
AZDIESEL (C10-C22)			441997	28		
AZMOIL (C22-C32)			336935	52		

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	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/1027a104.d

Date : 28-OCT-2008 11:57

Client ID: MM44-081014

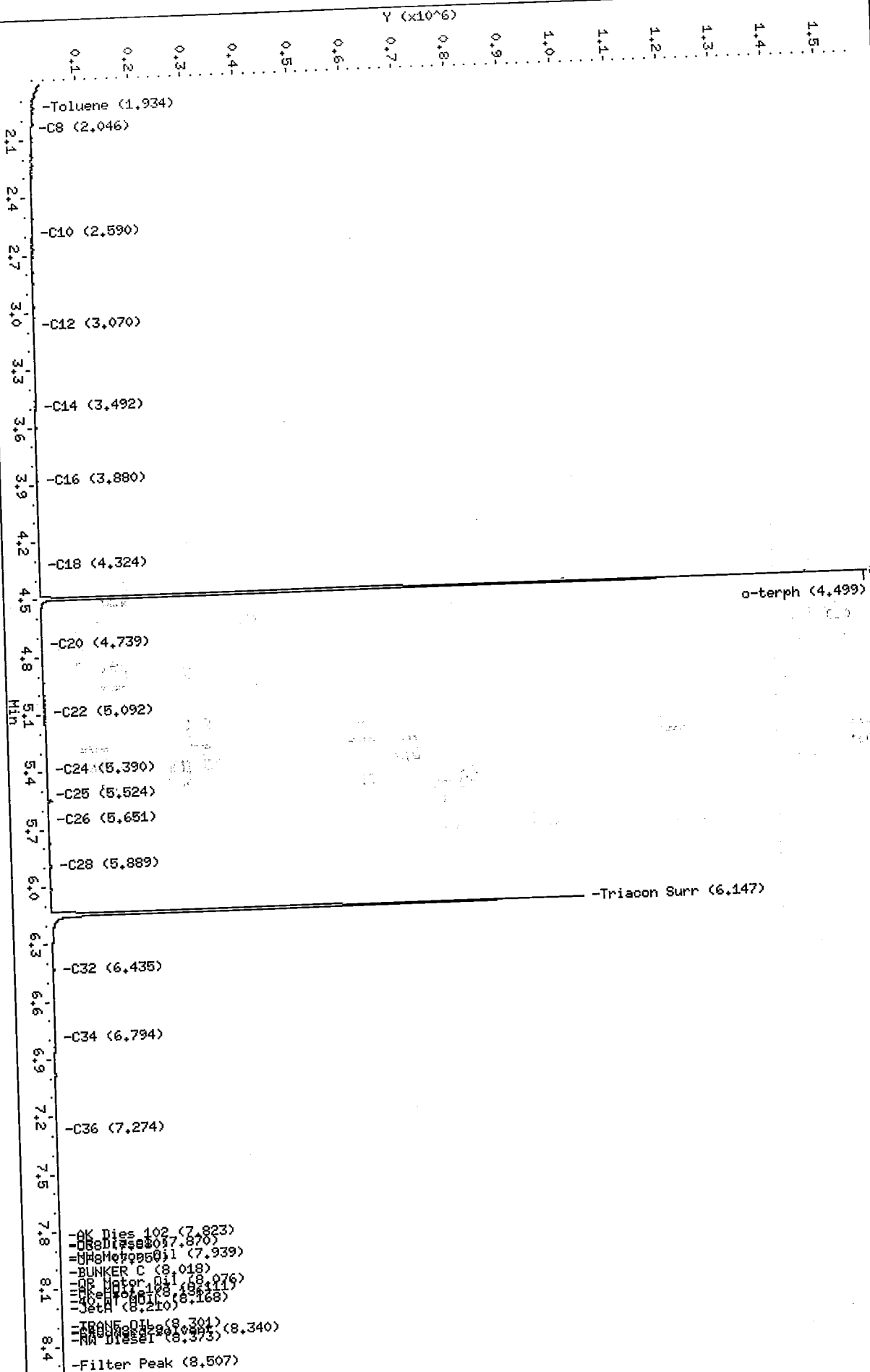
Sample Info: NU25E

Column phase: RTX-1

Instrument: fid3a.i

Operator: ms

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

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

FID:3A RESULTS					Range	Total Area	Conc
Compound	RT	Shift	Height	Area			
Toluene	1.933	-0.003	20503	20313	GAS (Tol-C12)	567082	22
C8	2.045	-0.004	10963	5960	DIESEL (C12-C24)	424456	22
C10	2.590	-0.003	7453	5186	M.OIL (C24-C38)	398560	30
C12	3.070	0.000	4856	2420	AK-102 (C10-C25)	623509	26
C14	3.492	0.000	3870	4825	AK-103 (C25-C36)	319605	45
C16	3.880	-0.002	3256	3027	OR.DIES (C10-C28)	720753	45
C18	4.322	-0.003	3049	3580	OR.MOIL (C28-C40)	341885	36
C20	4.740	-0.004	3471	3279	JET-A (C10-C18)	432442	29
C22	5.091	-0.004	4198	4760	MIN.OIL (C24-C38)	398560	31
C24	5.390	-0.003	4015	4030	MSPIRIT (Tol-C12)	567082	36
C25	5.527	-0.002	3984	3293			
C26	5.653	-0.001	3952	6468			
C28	5.892	0.000	4229	6615			
C32	6.440	0.002	4738	5206			
C34	6.798	-0.002	2758	2828			
Filter Peak	8.506	0.003	1821	1581	JP-4 (Tol-C14)	667327	59
C36	7.255	-0.010	3767	10358	CREOSOT (C8-C22)	839389	135
C38	7.873	-0.008	1999	1151			
C40	8.330	0.001	1840	512	BUNKERC (C10-C38)	1016559	114
=====							
AZDIESEL (C10-C22)			508107	32			
AZMOIL (C22-C32)			268521	42			

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	761999	35.8	79.6
Triacontane	658440	40.1	89.1

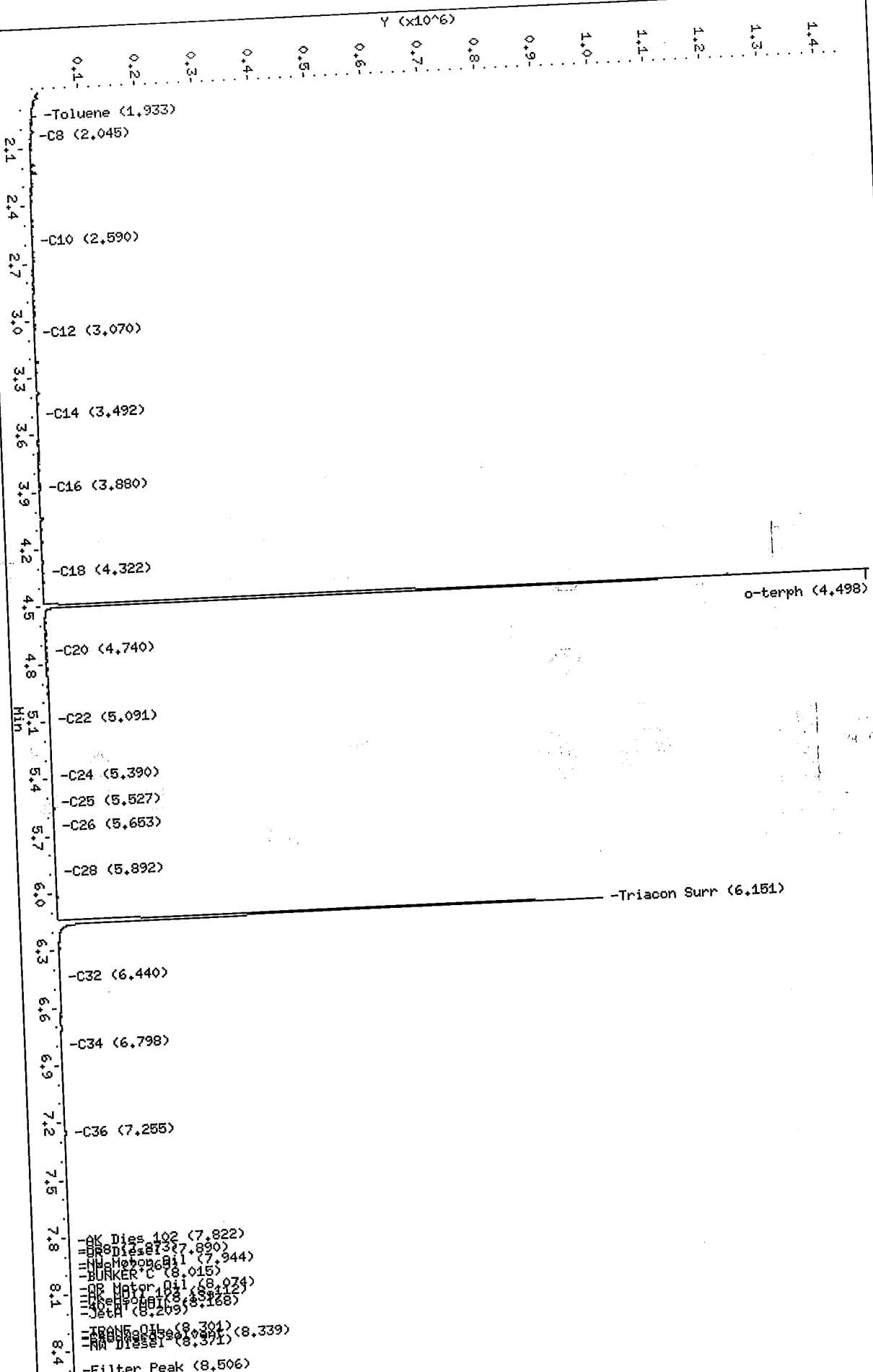
Analyte	RF	Curve Date
o-Terph Surr	21272.0	25-OCT-2008
Triacon Surr	16418.1	25-OCT-2008
Gas	25535.6	27-OCT-2008
Diesel	19596.8	25-OCT-2008
Motor Oil	13427.8	25-OCT-2008
AK102	24271.2	25-OCT-2008
AK103	7036.1	26-JULY-2008
JP4	11362.0	05-FEB-2007
JetA	14845.5	11-JUL-2008
Min Oil	12823.0	27-JUN-2008
Min 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/1027a105.d
 Date : 28-OCT-2008 12:12
 Client ID: CML15-081014
 Sample Info: NU25F

Instrument: fid3a.i
 Operator: ms
 Column diameter: 0.25

Column phase: RTX-1

/chem3/fid3a.i/20081027b.b/1027a105.d



PC
10/29/08

Analytical Resources Inc.
TPH Quantitation Report

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

FID:3A RESULTS					Range	Total Area	Conc
Compound	RT	Shift	Height	Area			
Toluene	1.930	-0.005	16243	18309	GAS (Tol-C12)	504336	20
C8	2.053	0.005	10325	7457	DIESEL (C12-C24)	295647	15
C10	2.589	-0.004	6832	5406	M.OIL (C24-C38)	285868	21
C12	3.070	0.000	4556	7784	AK-102 (C10-C25)	467182	19
C14	3.492	0.001	3556	5332	AK-103 (C25-C36)	223978	32
C16	3.880	-0.002	3003	3292	OR.DIES (C10-C28)	526173	33
C18	4.322	-0.003	2485	3654	OR.MOIL (C28-C40)	261512	28
C20	4.738	-0.005	2238	2724	JET-A (C10-C18)	356309	24
C22	5.092	-0.003	2106	2805	MIN.OIL (C24-C38)	285868	22
C24	5.390	-0.003	1941	1988	MSPIRIT (Tol-C12)	504336	32
C25	5.511	-0.017	2521	5184			
C26	5.651	-0.004	2078	3497			
C28	5.888	-0.005	2595	3823			
C32	6.433	-0.006	3759	6258			
C34	6.800	0.000	2200	700			
Filter Peak	8.500	-0.003	1611	639	JP-4 (Tol-C14)	582245	51
C36	7.267	0.002	1964	1436	CREOSOT (C8-C22)	689656	111
C38	7.877	-0.004	1722	1497			
C40	8.326	-0.003	1628	970	BUNKERC (C10-C38)	747730	84
AZDIESEL (C10-C22)				393614	25		
AZMOIL (C22-C32)				168738	26		

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	699846	32.9	73.1
Triacontane	600625	36.6	81.3

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

Data File: /chem3/fid3a.i/20081027b.b/1027a106.d

Date : 28-OCT-2008 12:27

Client ID: MM36-081014

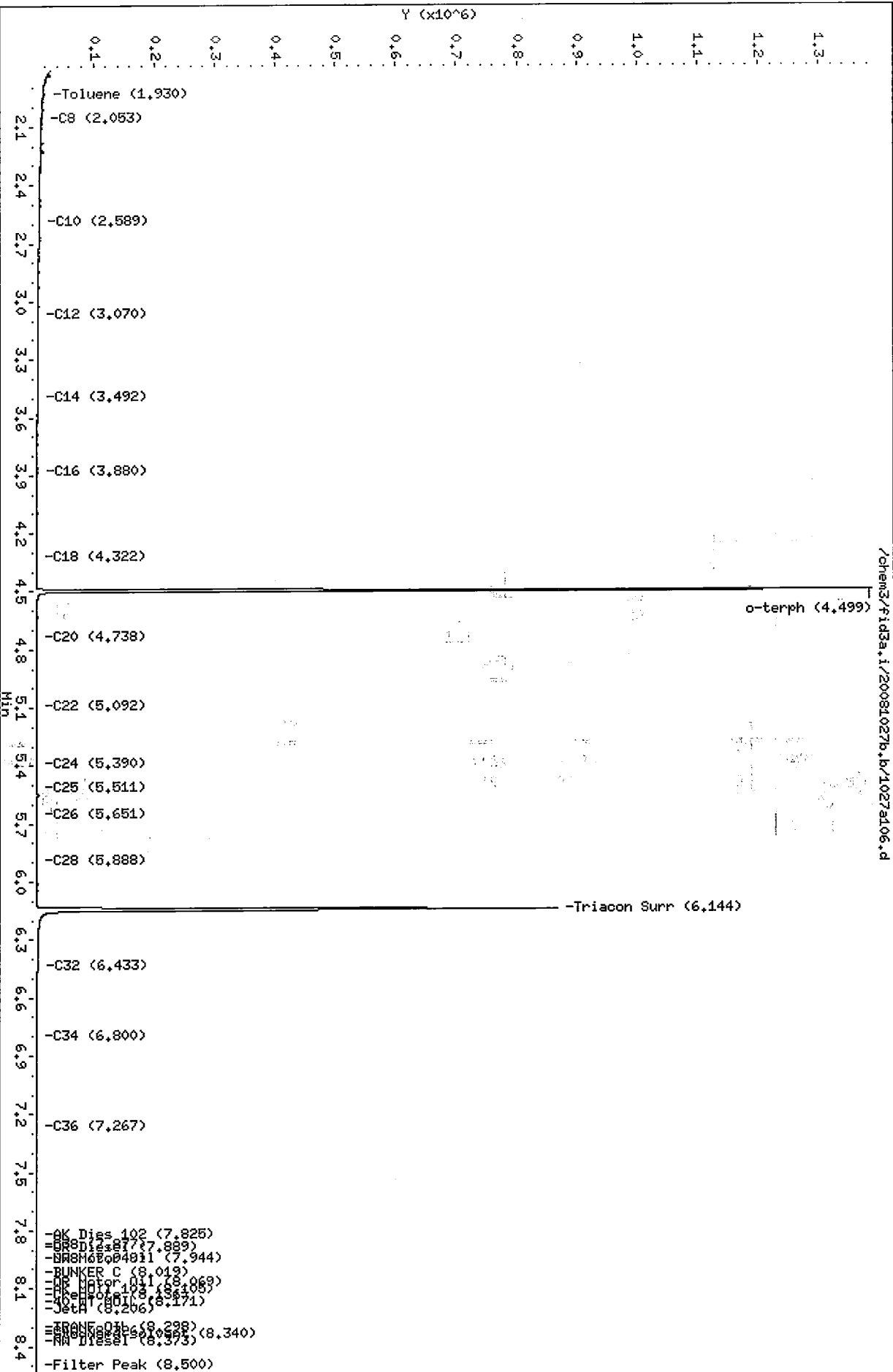
Sample Info: NU25C

Instrument: fid3a.i

Operator: ms


Column diameter: 0.25

Column phase: RTX-1



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

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	0.2	0.2	U
200.8	10/16/08	200.8	10/24/08	7440-47-3	Chromium	0.5	0.5	U
200.8	10/16/08	200.8	10/24/08	7440-50-8	Copper	0.5	0.5	U
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U
200.8	10/16/08	200.8	10/24/08	7440-02-0	Nickel	0.5	0.5	U

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: CMP3-081014
SAMPLE

Lab Sample ID: NU25A

LIMS ID: 08-27634

Matrix: Water

Data Release Authorized 

Reported: 10/29/08

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	10/28/08	7440-38-2	Arsenic	0.2	11.6	
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


Sample ID: CMP4-081014

SAMPLE

Lab Sample ID: NU25B

LIMS ID: 08-27635

Matrix: Water

Data Release Authorized: 

Reported: 10/29/08

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

INORGANICS ANALYSIS DATA SHEET
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 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	2	U
200.8	10/16/08	200.8	10/28/08	7440-47-3	Chromium	2	2	U
200.8	10/16/08	200.8	10/24/08	7440-50-8	Copper	2	2	U
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U
200.8	10/16/08	200.8	10/24/08	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


Sample ID: MW26R-081014D

SAMPLE

Lab Sample ID: NU25D

LIMS ID: 08-27637

Matrix: Water

Data Release Authorized: 

Reported: 10/29/08

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: MW44-081014

SAMPLE

Lab Sample ID: NU25E

LIMS ID: 08-27638

Matrix: Water

Data Release Authorized: 

Reported: 10/29/08

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


Sample ID: CMP15-081014

SAMPLE

Lab Sample ID: NU25F

LIMS ID: 08-27639

Matrix: Water

Data Release Authorized 

Reported: 10/29/08

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	0.5	1.0	
200.8	10/16/08	200.8	10/28/08	7440-47-3	Chromium	1	1	U
200.8	10/16/08	200.8	10/24/08	7440-50-8	Copper	0.5	0.8	
200.8	10/16/08	200.8	10/23/08	7439-92-1	Lead	1	1	U
200.8	10/16/08	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

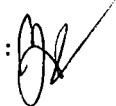
Page 1 of 1

Sample ID: MW36-081014
SAMPLE

Lab Sample ID: NU25G

LIMS ID: 08-27640

Matrix: Water

Data Release Authorized: 

Reported: 10/29/08

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	7440-36-0	Antimony	5	5	U
200.8	10/16/08	200.8	10/24/08	7440-38-2	Arsenic	5	6	
200.8	10/16/08	200.8	10/24/08	7440-47-3	Chromium	10	10	U
200.8	10/16/08	200.8	10/24/08	7440-50-8	Copper	10	10	U
200.8	10/16/08	200.8	10/24/08	7439-92-1	Lead	20	20	U
200.8	10/16/08	200.8	10/24/08	7440-02-0	Nickel	10	10	U

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: NU25LCS

LIMS ID: 08-27636

Matrix: Water

Data Release Authorized: 

Reported: 10/29/08

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	200.8	24.9	25.0	99.6%	
Arsenic	200.8	23.9	25.0	95.6%	
Chromium	200.8	25.7	25.0	103%	
Copper	200.8	24.2	25.0	96.8%	
Lead	200.8	25	25	100%	
Nickel	200.8	23.5	25.0	94.0%	

Reported in µg/L

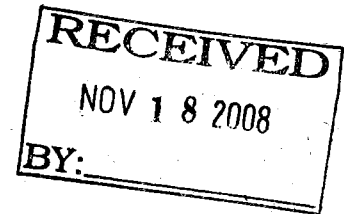
N-Control limit not met
Control Limits: 80-120%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

Sample ID: MW308N-081013

SAMPLE

Lab Sample ID: NU12I

LIMS ID: 08-27624

Matrix: Water

Data Release Authorized: *AB*

Reported: 11/14/08

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: 10/24/08 20:05

Instrument/Analyst: NT1/YZ

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d14-Dibenzo(a,h)anthracene 85.0%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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.

OT19: 000001

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Page: 1	of 1
Date: 3/31/2009	Ice Present? Y
No. of Coolers: 4	Cooler Temps: 5.4, 3.8, 7.2, 3.8

ARI Assigned Number:	Turn-around Requested:
	STD
ARI Client Company:	Phone:
Aspect Consulting LLC	206 780 9370
Client Contact:	
Chip Goodhue	
Client Project Name:	
Southwest Harbor Project - Phase 2 GWCMP	
Client Project #:	Samplers:
080064	DAVE RUGH / AMY TICE

Sample ID	Date	Time	Matrix	No. Containers
CMP2-090331	3/31/09	845	W	9
CMP1-090331		945		9
FM105-090331		1140		12
MW125-090331		1345		12
CMP17-090331	↓	1450	↓	12
FM105-090331 D	↓	1145	↓	12

[illegible]

Analysis Requested						Notes/Comments
Tot Metals 60108/6020 (As, Pb)	CEE's 82200	CPAHs 82300 SM	NwTPH-DX Dioxin + d'l w/silica cleanup	BEHP 82700	PCBs 8082	
X		X	X	X	X	
X		X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
Relinquished by: _____ (Signature)						Received by: _____ (Signature)
Printed Name: <u>Blagardsen</u>						Printed Name: _____
Company: _____						Company: _____
Date & Time: <u>11/09/2015</u>						Date & Time: _____

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 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-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.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Aspect

COC No(s): _____ NA

Assigned ARI Job No: OT19

Project Name: Southwest Harbor Project

Delivered by: Fed-Ex UPS Courier (Hand) Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? _____

YES (NO)

Were custody papers included with the cooler? _____

(YES) NO

Were custody papers properly filled out (ink, signed, etc.) _____

(YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 5.4 3.8 7.2 5.8

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 101886

Cooler Accepted by: AV Date: 3/31/09 Time: 1550

Complete custody forms and 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 Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? _____

NA (YES) NO

Were all bottles sealed in individual plastic bags? _____

YES (NO)

Did all bottles arrive in good condition (unbroken)? _____

(YES) NO

Were all bottle labels complete and legible? _____

(YES) NO

Did the number of containers listed on COC match with the number of containers received? _____

(YES) NO

Did all bottle labels and tags agree with custody papers? _____

(YES) NO

Were all bottles used correct for the requested analyses? _____

(YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...

NA (YES) NO

Were all VOC vials free of air bubbles? _____

NA YES (NO)

Was sufficient amount of sample sent in each bottle? _____

(YES) NO

Samples Logged by: uu Date: 4/1/2009 Time: 902

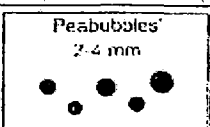
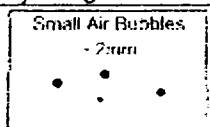
**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

4 trip blanks found in cooler not included on COC. 4 of 6 vials of the trip blanks had pb

By: uu Date: 4-1-2009



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"



Cooler Temperature Compliance Form

Cooler#:	1	Temperature(°C):	7.2
Sample ID	Bottle Count	Bottle Type	
MW125-090331	1	3202 HDPE	
"	6	500 ml AG	
"	2	1000 ml AG	
CHP17-090331	1	3202 HDPE	
	6	500 ml AG	
	2	1000 ml AG	

Cooler#:		Temperature(°C):	
Sample ID	Bottle Count	Bottle Type	

Cooler#:		Temperature(°C):	
Sample ID	Bottle Count	Bottle Type	

Cooler#:		Temperature(°C):	
Sample ID	Bottle Count	Bottle Type	

Completed by: MM Date: 4-1-2009 Time: 906

PRESERVATION VERIFICATION 04/01/09

Page 1 of 1



ARI Job No: OT19

PC: Mark

VTSR: 03/31/09

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:

Project #: 080064

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Sample Site:

SDG No:

Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN	WAD	NH3	COD	FOG	MET	PHEN	PHOS	TKN	NO23	TOC	S2	AK102	DMET	DOC	FLT	FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-7851 OT19A	CMP2-090331						TOT																
09-7852 OT19B	CMP1-090331						TOT																
09-7853 OT19C	FM105-090331						TOT																
09-7854 OT19D	MW125-090331						TOT																
09-7855 OT19E	CMP17-090331						TOT																
09-7856 OT19F	FM105-090331D						TOT																

OT19: 000005

Checked By

Date

4-1-2009

Case Narrative

prepared
for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT19

prepared
by

Analytical Resources, Inc.

OT19: 00006



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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.

OT19:000008



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

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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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: FM105-090331


Page 1 of 1

SAMPLE

Lab Sample ID: OT19C

LIMS ID: 09-7853

Matrix: Water

Data Release Authorized: 

Reported: 04/03/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Instrument/Analyst: NT10/JZ

Date Analyzed: 04/01/09 19:22

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	0.4	
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	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	101%
Bromofluorobenzene	99.8%
d4-1,2-Dichlorobenzene	105%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: MW125-090331


Page 1 of 1

SAMPLE

Lab Sample ID: OT19D

LIMS ID: 09-7854

Matrix: Water

Data Release Authorized: 

Reported: 04/03/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Instrument/Analyst: NT10/JZ

Date Analyzed: 04/01/09 19:46

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	U
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 µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	111%
d8-Toluene	100%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	105%


ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B
Page 1 of 1Sample ID: CMP17-090331
SAMPLE

Lab Sample ID: OT19E

LIMS ID: 09-7855

Matrix: Water

Data Release Authorized: 

Reported: 04/03/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 03/31/09

Date Received: 03/31/09

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	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	
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 µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	98.9%
Bromofluorobenzene	106%
d4-1,2-Dichlorobenzene	105%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: FM105-090331D


Page 1 of 1

SAMPLE

Lab Sample ID: OT19F

LIMS ID: 09-7856

Matrix: Water

Data Release Authorized: 

Reported: 04/03/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Instrument/Analyst: NT10/JZ

Date Analyzed: 04/01/09 20:35

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	0.5	
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 µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	98.4%
Bromofluorobenzene	106%
d4-1,2-Dichlorobenzene	108%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B
Page 1 of 1Sample ID: TRIP BLANKS
SAMPLE

Lab Sample ID: OT19G

LIMS ID: 09-7857

Matrix: Water

Data Release Authorized: 

Reported: 04/03/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Instrument/Analyst: NT10/JZ

Date Analyzed: 04/01/09 16:37

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 µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	98.9%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	102%

VOA SURROGATE RECOVERY SUMMARY



Matrix: Water

QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-040109	Method Blank	10	96.5%	98.7%	103%	105%	0
LCS-040109	Lab Control	10	98.0%	98.6%	102%	100%	0
LCSD-040109	Lab Control Dup	10	105%	99.3%	102%	98.8%	0
OT19C	FM105-090331	10	107%	101%	99.8%	105%	0
OT19D	MW125-090331	10	111%	100%	102%	105%	0
OT19E	CMP17-090331	10	105%	98.9%	106%	105%	0
OT19F	FM105-090331D	10	108%	98.4%	106%	108%	0
OT19G	TRIP BLANKS	10	103%	98.9%	100%	102%	0

LCS/MB LIMITS

QC LIMITS

SW8260B

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene70-130
70-130
70-130
70-13070-130
70-130
70-130
70-130

Prep Method: SW5030B

Log Number Range: 09-7853 to 09-7857

OT19: 00016

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: *AB*
Reported: 04/03/09

QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT10/JZ
LCSD: NT10/JZ
Date Analyzed LCS: 04/01/09 15:07
LCSD: 04/01/09 15:37

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	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 µg/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%

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB0401

Lab Name: ANALYTICAL RESOURCES, INC

Contract: ASPECT CONSULTING LLC

Lab Code: OT19

Case No.: SOUTHWEST HARBOR PROJECT

SDG No.: OT19

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
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:

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260B
Page 1 of 1Sample ID: MB-040109
METHOD BLANKLab Sample ID: MB-040109
LIMS ID: 09-7853
Matrix: Water
Data Release Authorized: 
Reported: 04/03/09QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NAInstrument/Analyst: NT10/JZ
Date Analyzed: 04/01/09 16:07Sample 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 µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.5%
d8-Toluene	98.7%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	105%

SEMIVOLATILE ANALYSIS

Sample ID: CMP2-090331
SAMPLE

Lab Sample ID: OT19A
LIMS ID: 09-7851
Matrix: Water
Data Release Authorized: *[Signature]*
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: 04/01/09
Date Analyzed: 04/03/09 15:52
Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%
2-Fluorobiphenyl	74.0%
d14-p-Terphenyl	58.8%
d4-1,2-Dichlorobenzene	65.2%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: CMP1-090331
SAMPLE

Lab Sample ID: OT19B

LIMS ID: 09-7852

Matrix: Water

Data Release Authorized: *AB*

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.0%
2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	79.2%
d4-1,2-Dichlorobenzene	69.6%

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: *[Signature]*

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

Date Extracted: 04/01/09
Date Analyzed: 04/03/09 17:00
Instrument/Analyst: NT4/LJR

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery


d5-Nitrobenzene	66.8%
2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	82.8%
d4-1,2-Dichlorobenzene	69.6%

Sample ID: MW125-090331
SAMPLE

Lab Sample ID: OT19D

LIMS ID: 09-7854

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: 04/01/09

Date Analyzed: 04/03/09 17:34

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (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

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: 04/01/09

Date Analyzed: 04/03/09 18:08

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery


d5-Nitrobenzene	66.4%
2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	79.2%
d4-1,2-Dichlorobenzene	67.2%

Sample ID: FM105-090331D
SAMPLE

Lab Sample ID: OT19F

LIMS ID: 09-7856

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: 04/01/09

Date Analyzed: 04/03/09 18:43

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (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 TOT	OUT
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 1Sample ID: LCS-040109
LCS/LCSDLab Sample ID: LCS-040109
LIMS ID: 09-7851
Matrix: Water
Data Release Authorized: *RB*
Reported: 04/06/09QC 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: 04/03/09 14:44

Final Extract Volume LCS: 0.50 mL

LCSD: 04/03/09 15:17

LCSD: 0.50 mL

Instrument/Analyst LCS: NT4/LJR

Dilution Factor LCS: 1.00

LCSD: NT4/LJR

LCSD: 1.00

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 µg/L

RPD calculated using sample concentrations per SW846.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	OT19LCSW1	OT19LCSW1	OT19SB	04/03/09
02	OT19LCSDW1	OT19LCSDW1	OT19SBD	04/03/09
03	CMP2-090331	OT19A	OT19A	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	FM105-090331D	OT19F	OT19F	04/03/09
09				
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COMMENTS:

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D 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

QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 04/01/09
Date Analyzed: 04/03/09 14:10
Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.0%
2-Fluorobiphenyl	74.8%
d14-p-Terphenyl	83.6%
d4-1,2-Dichlorobenzene	62.8%

SIM SEMIVOLATILE ANALYSIS

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: CMP2-090331

SAMPLE

Lab Sample ID: OT19A

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

Event: 080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 17:08

Instrument/Analyst: NT8/VTS

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 $\mu\text{g/L}$ (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


Sample ID: CMP1-090331

SAMPLE

Lab Sample ID: OT19B

LIMS ID: 09-7852

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 17:29

Instrument/Analyst: NT8/VTS

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 $\mu\text{g/L}$ (ppb)**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	67.0%
d14-Dibenzo(a,h)anthracene	62.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM 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: 

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

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 17:50

Instrument/Analyst: NT8/VTS

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	69.3%
d14-Dibenzo(a,h)anthracene	64.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED 


Sample ID: MW125-090331

SAMPLE

Lab Sample ID: OT19D

LIMS ID: 09-7854

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 18:11

Instrument/Analyst: NT8/VTS

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 73.7%

d14-Dibenzo(a,h)anthracene 62.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM 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

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

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 18:31

Instrument/Analyst: NT8/VTS

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.7%
d14-Dibenzo(a,h)anthracene	67.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: FM105-090331D

SAMPLE

Lab Sample ID: OT19F

LIMS ID: 09-7856

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 18:52

Instrument/Analyst: NT8/VTS

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	50.0%
d14-Dibenzo (a,h) anthracene	55.3%

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

(MNP) = d10-2-Methylnaphthalene (48-101) (40-114)
(DBA) = d14-Dibenzo(a,h)anthracene (52-108) (17-122)

Prep Method: SW3510C
Log Number Range: 09-7851 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

Matrix: Water

Data Release Authorized: *JB*

Reported: 04/06/09

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 04/01/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/03/09 16:26

Final Extract Volume LCS: 0.50 mL

LCSD: 04/03/09 16:47

LCSD: 0.50 mL

Instrument/Analyst LCS: NT8/VTs

Dilution Factor LCS: 1.00

LCSD: NT8/VTs

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 $\mu\text{g/L}$ (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

BLANK NO.

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	OT19LCSW1	OT19LCSW1	OT19SB	04/03/09
02	OT19LCSDW1	OT19LCSDW1	OT19SBD	04/03/09
03	CMP2-090331	OT19A	OT19A	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	FM105-090331D	OT19F	OT19F	04/03/09
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COMMENTS:

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

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA

Date Received: NA

Date Extracted: 04/01/09

Date Analyzed: 04/03/09 16:05

Instrument/Analyst: NT8/VTS

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	78.7%
d14-Dibenzo(a,h)anthracene	55.7%

PCB ANALYSIS


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

Sample ID: CMP2-090331
SAMPLE

Lab Sample ID: OT19A

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

080064

Date Sampled: 03/31/09

Date Received: 03/31/09

Date Extracted: 04/02/09

Date Analyzed: 04/04/09 16:36

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	57.0%
Tetrachlorometaxylene	51.0%

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



Sample ID: CMP1-090331
SAMPLE

Lab Sample ID: OT19B

LIMS ID: 09-7852

Matrix: Water

Data Release Authorized: *[Signature]*

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

Date Extracted: 04/02/09

Date Analyzed: 04/04/09 16:53

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery


Decachlorobiphenyl	59.0%
Tetrachlorometaxylene	55.8%

Sample ID: FM105-090331
SAMPLE

Lab Sample ID: OT19C

LIMS ID: 09-7853

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

Date Extracted: 04/02/09

Date Analyzed: 04/04/09 17:10

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.8%
Tetrachlorometaxylene	54.8%

Sample ID: MW125-090331
SAMPLE

Lab Sample ID: OT19D
LIMS ID: 09-7854
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

Date Extracted: 04/02/09
Date Analyzed: 04/04/09 17:28
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)


PCB Surrogate Recovery

Decachlorobiphenyl	65.2%
Tetrachlorometaxylene	59.5%

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
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

Date Extracted: 04/02/09
Date Analyzed: 04/04/09 17:45
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	68.5%
Tetrachlorometaxylene	59.2%

ORGANICS ANALYSIS DATA SHEET

PCB by GC/ECD Method SW8082

Page 1 of 1

Sample ID: FM105-090331D

SAMPLE

Lab Sample ID: OT19F

LIMS ID: 09-7856

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

Date Extracted: 04/02/09

Date Analyzed: 04/04/09 18:02

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (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
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 1Sample ID: LCS-040209
LCS/LCSDLab Sample ID: LCS-040209
LIMS ID: 09-7851
Matrix: Water
Data Release Authorized: 
Reported: 04/07/09QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 04/02/09

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Date Analyzed LCS: 04/04/09 16:02

Final Extract Volume LCS: 0.50 mL

LCSD: 04/04/09 16:19

LCSD: 0.50 mL

Instrument/Analyst LCS: ECD5/JGR

Dilution Factor LCS: 1.00

LCSD: ECD5/JGR

LCSD: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

Acid 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 $\mu\text{g/L}$

RPD calculated using sample concentrations per SW846.

4
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 =====
01	OT19LCSW1	OT19LCSW1	04/04/09
02	OT19LCSDW1	OT19LCSDW1	04/04/09
03	CMP2-090331	OT19A	04/04/09
04	CMP1-090331	OT19B	04/04/09
05	FM105-090331	OT19C	04/04/09
06	MW125-090331	OT19D	04/04/09
07	CMP17-090331	OT19E	04/04/09
08	FM105-090331D	OT19F	04/04/09

ALL RUNS ARE DUAL COLUMN

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: *[Signature]*
Reported: 04/07/09

QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 04/02/09
Date Analyzed: 04/04/09 15:44
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	69.8%
Tetrachlorometaxylene	66.2%

TPHD ANALYSIS

ORGANICS ANALYSIS DATA SHEET

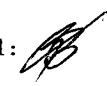
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Matrix: Water

QC Report No: OT19-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE
080064Data 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 1.0	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 84.4%
OT19A 09-7851	CMP2-090331 HC ID: ---	04/01/09	04/04/09 FID3A	1.00 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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.

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT19-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
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

Final Extract Volume LCS: 1.0 mL

LCSD: 04/04/09 13:36

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/PKC

Dilution Factor LCS: 1.00

LCSD: FID/PKC

LCSD: 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.

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 03/31/09

ARI Job: OT19
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
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 mL	04/01/09

4
TPH METHOD BLANK SUMMARY

BLANK NO.

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	OS95LCSW1	OS95LCSW1	04/04/09
02	OS95LCSDW1	OS95LCSDW1	04/04/09
03	CMP2-090331	OT19A	04/04/09
04	CMP1-090331	OT19B	04/04/09
05	FM105-090331	OT19C	04/04/09
06	MW125-090331	OT19D	04/04/09
07	CMP17-090331	OT19E	04/04/09
08	FM105-090331	OT19F	04/04/09
09			
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METALS ANALYSIS

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: CMP2-090331

SAMPLE

Lab Sample ID: OT19A

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

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	23.2	
200.8	04/02/09	200.8	04/06/09	7439-92-1	Lead	1	1	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: CMP1-090331

SAMPLE

Lab Sample ID: OT19B

LIMS ID: 09-7852

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	2.7	
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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

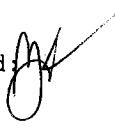
Sample ID: FM105-090331

SAMPLE

Lab Sample ID: OT19C

LIMS ID: 09-7853

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	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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: MW125-090331

SAMPLE

Lab Sample ID: OT19D

LIMS ID: 09-7854

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	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

INORGANICS ANALYSIS DATA SHEET

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: FM105-090331D

SAMPLE

Lab Sample ID: OT19F

LIMS ID: 09-7856

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	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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: OT19MB

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

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	U
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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: OT19LCS

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

080064

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	27.2	25.0	109%	
Lead	200.8	27	25	108%	

Reported in µg/L

N-Control limit not met

Control Limits: 80-120%



Analytical Resources, Incorporated

Analytical Chemists and Consultants

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.

OT68 : 00001

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	OT38	Turn-around Requested:	SVD	Page:	1	of	1
ARI Client Company:	Aspect Consulting LLC			Date:	4/11/2009	Ice Present?	Yes
Client Contact:	Chip Goodhue			No. of Coolers:	3	Cooler Temps:	66.5, 27.4

Client Project Name:	Southwest Harbor Project - Phase 2 GWCMP
Client Project #:	080064
Samplers:	DAVID RUGH/AMY TICE

Sample ID	Date	Time	Matrix	No. Containers
CMP 3-090401	4/1/2009	910	W	9
MW26R-090401	↓	1020	W	9
MW26R-090401D		1025	W	9
MW44-090401		1100	W	9
CMP 5-090401		1315	W	9
MW308S-090401	↓	1430	W	9

[illegible]

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 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-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.

PRESERVATION VERIFICATION 04/01/09

Page 1 of 1



ARI Job No: OT38

PC: Mark

VTSR: 04/01/09

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:

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	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-7965 OT38A	CMP3-090401						TOT OK														
09-7966 OT38B	MW26R-090401						TOT														
09-7967 OT38C	MW26R-090401D						TOT														
09-7968 OT38D	MW44-090401						TOT														
09-7969 OT38E	CMP5-090401						TOT														
09-7970 OT38F	MW308S-090401						TOT OK														

OT68 : 000003

Checked By JH Date 4/1/09



Cooler Temperature Compliance Form

Cooler#:	1	Temperature(°C):	10.6
Sample ID	Bottle Count	Bottle Type	
CMP3-090401	6	1 32oz HDPE, 6 500ml AG	
MW26R-090401	1	32oz HDPE	
MW26K-090401D	1	↓	
MW44-090401	1	32oz HDPE	
CMP5-090401	6	1 32oz HDPE, 6 500ml AG	
MW308S-090401	3	1 32oz HDPE, 2 1 Litre AG	
		* all HDPE bottles are 32oz *	

Cooler#:	3	Temperature(°C):	7.4
Sample ID	Bottle Count	Bottle Type	
CMP3-090401	2	Liter Amber glass	
MW26R-090401	2		
MW26K-090401D	2		
MW44-090401	2		
CMP5-090401	2	Liter Amber glass	

Cooler#:		Temperature(°C):	
Sample ID	Bottle Count	Bottle Type	

Cooler#:		Temperature(°C):	
Sample ID	Bottle Count	Bottle Type	

Completed by: _____ Date: _____ Time: _____



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Aspect

COC No(s): _____ NA

Assigned ARI Job No: OT38

Project Name: Southwest Harbor Project-Phase 2

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 6.6 5.2 7.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 10886

Cooler Accepted by: JH Date: 4/1/09 Time: 1542

Complete custody forms and 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 Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

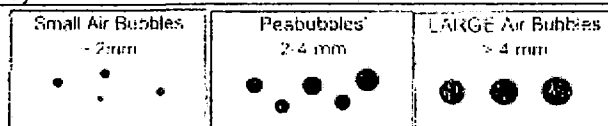
Samples Logged by: JH Date: 4/1/09 Time: 1658

**** 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:

By: _____ Date: _____



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Page:	1	of	1
Date:	4/2/2009	Ice Present?	Gel packs
No. of Coolers:	2	Cooler Temps:	3.4, 3.6

ARI Assigned Number:	Turn-around Requested:
	STD
ARI Client Company:	Phone:
Aspect Consulting LLC	206 780 9370
Client Contact:	
Chip Goodhue	
Client Project Name:	
Southwest Harbor Project - Phase 2	GWC-MP
Client Project #:	Samples:
080064	DAUP RUGH/AMY TICE

[illegible]

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 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-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.

PRESERVATION VERIFICATION 04/03/09

Page 1 of 1



ARI Job No: OT68

PC: Mark

VTSR: 04/02/09

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:

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	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-8182 OT68A	CMP4-090402						TOT yes														
09-8183 OT68B	MW36-090402						TOT yes														
09-8184 OT68C	CMP15-090402						TOT yes														
09-8185 OT68D	MW308N-090402						TOT yes														

OT68 : 000007

Checked By MM Date 9-3-2009



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client:

Aspect Consulting

COC No(s):

NA

Assigned ARI Job No:

0768

Project Name:

Southwest Harbor

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Tracking No:

NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?

YES

NO

Were custody papers included with the cooler?

YES

NO

Were custody papers properly filled out (ink, signed, etc.)

YES

NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

3.4 3.6

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#:

101886

Cooler Accepted by:

MM

Date:

4/2/2009

Time:

1400

Complete custody forms and 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 Ice Gel Packs Baggies Foam Block Paper Other:

NA

YES

NO

Was sufficient ice used (if appropriate)?

YES

NO

Were all bottles sealed in individual plastic bags?

YES

NO

Did all bottles arrive in good condition (unbroken)?

YES

NO

Were all bottle labels complete and legible?

YES

NO

Did the number of containers listed on COC match with the number of containers received?

YES

NO

Did all bottle labels and tags agree with custody papers?

YES

NO

Were all bottles used correct for the requested analyses?

YES

NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...

NA

YES

NO

Were all VOC vials free of air bubbles?

NA

YES

NO

Was sufficient amount of sample sent in each bottle?

YES

NO

Samples Logged by:

MM

Date:

4-3-2009

Time:

800

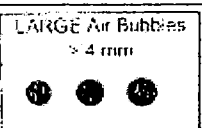
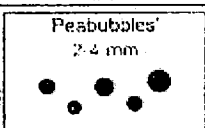
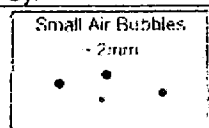
** Notify Project Manager of discrepancies or concerns **

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By:

Date:



Small → "sm"

Peabubbles → "pb"

Large → "lg"

Headspace → "hs"

Case Narrative

prepared
for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: OT38, OT68

prepared
by

Analytical Resources, Inc.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1




Sample ID: CMP3-090401
SAMPLE

Lab Sample ID: OT38A

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
080064

Date Sampled: 04/01/09

Date Received: 04/01/09

Date Extracted: 04/03/09

Date Analyzed: 04/07/09 15:57

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%
2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	65.2%
d4-1,2-Dichlorobenzene	58.0%


ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D 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

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 04/01/09

Date Received: 04/01/09

Date Extracted: 04/03/09

Date Analyzed: 04/07/09 16:32

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%
2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	72.0%
d4-1,2-Dichlorobenzene	66.8%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW26R-090401D
SAMPLE

Lab Sample ID: OT38C
LIMS ID: 09-7967
Matrix: Water
Data Release Authorized: 
Reported: 04/08/09

QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 04/01/09
Date Received: 04/01/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 17:07
Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.0%
2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	67.6%
d4-1,2-Dichlorobenzene	70.8%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW44-090401
SAMPLE

Lab Sample ID: OT38D
LIMS ID: 09-7968
Matrix: Water
Data Release Authorized: 
Reported: 04/08/09

QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 04/01/09
Date Received: 04/01/09

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 17:41
Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.4%
2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	64.0%
d4-1,2-Dichlorobenzene	53.6%


ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP5-090401
SAMPLE

Lab Sample ID: OT38E

LIMS ID: 09-7969

Matrix: Water

Data Release Authorized: 

Reported: 04/08/09

QC Report No: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 04/01/09

Date Received: 04/01/09

Date Extracted: 04/03/09

Date Analyzed: 04/07/09 18:16

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	38.2%
2-Fluorobiphenyl	56.4%
d14-p-Terphenyl	77.2%
d4-1,2-Dichlorobenzene	35.2%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D 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

QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
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

CAS Number	Analyte	RL	Result
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	5.0

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%
2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	65.2%
d4-1,2-Dichlorobenzene	63.2%

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	TOT	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
(54-102)	(40-103)
(47-99)	(35-98)
(50-119)	(21-122)
(39-86)	(28-85)

(NBZ) = d5-Nitrobenzene
(FBP) = 2-Fluorobiphenyl
(TPH) = d14-p-Terphenyl
(DCB) = d4-1,2-Dichlorobenzene

Prep Method: SW3520C
Log Number Range: 09-7965 to 09-7970

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP4-090402
SAMPLE

Lab Sample ID: OT68A

LIMS ID: 09-8182

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/08/09

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: 04/03/09

Date Analyzed: 04/07/09 19:26

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%
2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	75.2%
d4-1,2-Dichlorobenzene	60.8%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW36-090402
SAMPLE

Lab Sample ID: OT68B

LIMS ID: 09-8183

Matrix: Water

Data Release Authorized: 

Reported: 04/08/09

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: 04/03/09

Date Analyzed: 04/07/09 20:01

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%
2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	61.6%
d4-1,2-Dichlorobenzene	64.0%


ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP15-090402
SAMPLE

Lab Sample ID: OT68C

LIMS ID: 09-8184

Matrix: Water

Data Release Authorized: 

Reported: 04/08/09

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: 04/03/09

Date Analyzed: 04/07/09 20:36

Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	44.4%
2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	65.2%
d4-1,2-Dichlorobenzene	34.9%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW308N-090402
SAMPLE

Lab Sample ID: OT68D
LIMS ID: 09-8185
Matrix: Water
Data Release Authorized: 
Reported: 04/08/09

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: 04/03/09
Date Analyzed: 04/07/09 21:11
Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.0%
2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	52.4%
d4-1,2-Dichlorobenzene	52.8%

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT68-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

<u>Client ID</u>	<u>NBZ</u>	<u>FBP</u>	<u>TPH</u>	<u>DCB TOT</u>	<u>OUT</u>
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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: LCS-040309
LCS/LCSD

Lab Sample ID: LCS-040309
LIMS ID: 09-7965
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 04/08/09

QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 04/01/09
Date Received: 04/01/09

Date Extracted LCS/LCSD: 04/03/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/07/09 13:37

Final Extract Volume LCS: 0.50 mL

LCSD: 04/07/09 14:12

LCSD: 0.50 mL

Instrument/Analyst LCS: NT4/LJR

Dilution Factor LCS: 1.00

LCSD: NT4/LJR

LCSD: 1.00

GPC Cleanup: NO

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
bis(2-Ethylhexyl)phthalate	20.6	25.0	82.4%	20.6	25.0	82.4%	0.0%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	64.4%	65.2%
2-Fluorobiphenyl	78.4%	76.4%
d14-p-Terphenyl	75.6%	73.6%
d4-1,2-Dichlorobenzene	66.4%	62.4%

Results reported in $\mu\text{g/L}$

RPD calculated using sample concentrations per SW846.

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
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	04/07/09
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
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COMMENTS:

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MB-040309
METHOD BLANK

Lab Sample ID: MB-040309
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
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 04/03/09
Date Analyzed: 04/07/09 13:03
Instrument/Analyst: NT4/LJR

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%
2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	66.8%
d4-1,2-Dichlorobenzene	61.6%

SIM SEMIVOLATILE ANALYSIS

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: CMP3-090401

SAMPLE

Lab Sample ID: OT38A

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: 04/01/09

Date Received: 04/01/09

Date Extracted: 04/06/09

Date Analyzed: 04/07/09 13:46

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	0.015
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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 56.0%

d14-Dibenzo(a,h)anthracene 70.7%

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

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

Date Extracted: 04/06/09

Date Analyzed: 04/07/09 14:13

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	0.011
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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.0%
d14-Dibenzo(a,h)anthracene	72.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1




Sample ID: MW26R-090401D

SAMPLE

Lab Sample ID: OT38C

LIMS ID: 09-7967

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: 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 $\mu\text{g/L}$ (ppb)**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 69.0%

d14-Dibenzo(a,h)anthracene 73.3%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MW44-090401

SAMPLE

Lab Sample ID: OT38D

LIMS ID: 09-7968

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: 04/01/09

Date Received: 04/01/09

Date Extracted: 04/06/09

Date Analyzed: 04/07/09 15:06

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	0.059
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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 64.3%

d14-Dibenzo(a,h)anthracene 78.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: CMP5-090401

SAMPLE

Lab Sample ID: OT38E

LIMS ID: 09-7969

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: 04/01/09

Date Received: 04/01/09

Date Extracted: 04/06/09

Date Analyzed: 04/07/09 15:33

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 60.3%

d14-Dibenzo(a,h)anthracene 70.3%

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

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

Date Extracted: 04/06/09

Date Analyzed: 04/07/09 15:59

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.3%
d14-Dibenzo(a,h)anthracene	74.0%

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

(MNP) = d10-2-Methylnaphthalene (48-101) (40-114)
(DBA) = d14-Dibenzo(a,h)anthracene (52-108) (17-122)

Prep Method: SW3510C
Log Number Range: 09-7965 to 09-7970

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: *AB*

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

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/07/09 12:53

Final Extract Volume LCS: 0.50 mL

LCSD: 04/07/09 13:20

LCSD: 0.50 mL

Instrument/Analyst LCS: NT2/PK

Dilution Factor LCS: 1.00

LCSD: NT2/PK

LCSD: 1.00

Analyte	LCS	Spike		LCS	LCSD	Spike		LCS	LCSD	RPD
		Added-LCS	Recovery			Added-LCSD	Recovery			
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 $\mu\text{g/L}$ (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%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

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:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	OT38LCSW1	OT38LCSW1	040702	04/07/09
02	OT38LCSDW1	OT38LCSDW1	040703	04/07/09
03	CMP3-090401	OT38A	040704	04/07/09
04	MW26R-090401	OT38B	040705	04/07/09
05	MW26R-090401D	OT38C	040706	04/07/09
06	MW44-090401	OT38D	040707	04/07/09
07	CMP5-090401	OT38E	040708	04/07/09
08	MW308S-090401	OT38F	040709	04/07/09
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COMMENTS:

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MB-040609

METHOD BLANK

Lab Sample ID: MB-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: 04/06/09

Date Analyzed: 04/07/09 12:26

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 71.3%
d14-Dibenzo(a,h)anthracene 59.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: CMP4-090402

SAMPLE

Lab Sample ID: OT68A

LIMS ID: 09-8182

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 04/07/09

Sample Amount: 500 mL

Date Analyzed: 04/13/09 18:59

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT2/VTS

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 72.0%

d14-Dibenzo(a,h)anthracene 66.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MW36-090402

SAMPLE

Lab Sample ID: OT68B

LIMS ID: 09-8183

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 04/07/09

Sample Amount: 500 mL

Date Analyzed: 04/13/09 19:26

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT2/VTS

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 63.3%

d14-Dibenzo(a,h)anthracene 63.3%

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: 

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

Date Extracted: 04/07/09

Date Analyzed: 04/13/09 19:52

Instrument/Analyst: NT2/VTS

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 63.0%

d14-Dibenzo(a,h)anthracene 60.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: MW308N-090402

SAMPLE

Lab Sample ID: OT68D

LIMS ID: 09-8185

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 04/07/09

Sample Amount: 500 mL

Date Analyzed: 04/13/09 20:18

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT2/VTS

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 61.7%

d14-Dibenzo(a,h)anthracene 64.3%

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: *AB*
Reported: 04/14/09

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

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/13/09 14:09

Final Extract Volume LCS: 0.50 mL

LCSD: 04/13/09 14:35

LCSD: 0.50 mL

Instrument/Analyst LCS: NT2/VTS

Dilution Factor LCS: 1.00

LCSD: NT2/VTS

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 $\mu\text{g/L}$ (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%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

OT63MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT

ARI Job No: OT68

Project: SOUTHWEST HARBOR PROJECT

Lab File ID: 041301

Date Extracted: 04/07/09

Instrument ID: NT2

Date Analyzed: 04/13/09

Matrix: LIQUID

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	OT63LCSW1	OT63LCSW1	041302	04/13/09
02	OT63LCSDW1	OT63LCSDW1	041303	04/13/09
03	CMP4-090402	OT68A	041313	04/13/09
04	MW36-090402	OT68B	041314	04/13/09
05	CMP15-090402	OT68C	041315	04/13/09
06	MW308N-090402	OT68D	041316	04/13/09
07				
08				
09				
10				
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30				

COMMENTS:

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MB-040709

METHOD BLANK

Lab Sample ID: MB-040709

LIMS ID: 09-8182

Matrix: Water

Data Release Authorized: 

Reported: 04/14/09

QC Report No: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA

Date Received: NA

Date Extracted: 04/07/09

Date Analyzed: 04/13/09 13:42

Instrument/Analyst: NT2/VTS

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 64.7%

d14-Dibenzo(a,h)anthracene 71.0%

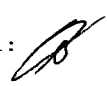
PCB ANALYSIS

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

Date Extracted: 04/04/09

Date Analyzed: 04/07/09 15:06

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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	0.40	< 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 µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	56.0%
Tetrachlorometaxylene	68.0%

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1Sample ID: MW26R-090401
SAMPLELab Sample ID: OT38B
LIMS ID: 09-7966
Matrix: Water
Data Release Authorized: 
Reported: 04/10/09QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 04/01/09
Date Received: 04/01/09Date Extracted: 04/04/09
Date Analyzed: 04/07/09 15:23
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: YesSample 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 µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	46.8%
Tetrachlorometaxylene	57.2%

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: *AB*
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

Date Extracted: 04/04/09
Date Analyzed: 04/07/09 15:40
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 µg/L (ppb)

PCB Surrogate Recovery


Decachlorobiphenyl	60.8%
Tetrachlorometaxylene	62.2%

Sample ID: MW44-090401
SAMPLE

Lab Sample ID: OT38D

LIMS ID: 09-7968

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

Date Extracted: 04/04/09

Date Analyzed: 04/07/09 15:58

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.2%
Tetrachlorometaxylene	57.5%

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

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

Date Extracted: 04/04/09
Date Analyzed: 04/07/09 16:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	52.5%
Tetrachlorometaxylene	58.2%

Sample ID: MW308S-090401
SAMPLE

Lab Sample ID: OT38F
LIMS ID: 09-7970
Matrix: Water
Data Release Authorized: *AB*
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

Date Extracted: 04/04/09
Date Analyzed: 04/07/09 16:32
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	54.0%
Tetrachlorometaxylene	56.2%


SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT38-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-040409	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

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1Sample ID: LCS-040409
LCS/LCSDLab Sample ID: LCS-040409
LIMS ID: 09-7965
Matrix: Water
Data Release Authorized: 
Reported: 04/10/09QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 04/04/09

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Date Analyzed LCS: 04/07/09 14:32

Final Extract Volume LCS: 0.50 mL

LCSD: 04/07/09 14:49

LCSD: 0.50 mL

Instrument/Analyst LCS: ECD5/JGR

Dilution Factor LCS: 1.00

LCSD: ECD5/JGR

LCSD: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

Acid Cleanup: Yes

Analyte	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	LCSD	Recovery	
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 $\mu\text{g/L}$

RPD calculated using sample concentrations per SW846.

4
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 SAMPLE NO. =====	LAB SAMPLE ID =====	DATE ANALYZED =====
01	OT38LCSW1	OT38LCSW1	04/07/09
02	OT38LCSDW1	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

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1Sample ID: MB-040409
METHOD BLANKLab Sample ID: MB-040409
LIMS ID: 09-7965
Matrix: Water
Data Release Authorized: 
Reported: 04/10/09QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NADate Extracted: 04/04/09
Date Analyzed: 04/07/09 14:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: YesSample 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 µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	54.8%
Tetrachlorometaxylene	51.5%

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

Date Extracted: 04/07/09
Date Analyzed: 04/09/09 18:15
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	55.8%
Tetrachlorometaxylene	49.2%

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

Sample ID: MW36-090402
SAMPLE

Lab Sample ID: OT68B
LIMS ID: 09-8183
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

Date Extracted: 04/07/09
Date Analyzed: 04/09/09 18:32
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	53.2%
Tetrachlorometaxylene	43.5%


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

Sample ID: CMP15-090402
SAMPLE

Lab Sample ID: OT68C

LIMS ID: 09-8184

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

Date Extracted: 04/07/09

Date Analyzed: 04/09/09 18:50

Instrument/Analyst: ECD5/PK

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery


Decachlorobiphenyl	45.0%
Tetrachlorometaxylene	50.5%

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1Sample ID: MW308N-090402
SAMPLE

Lab Sample ID: OT68D

LIMS ID: 09-8185

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

Date Extracted: 04/07/09

Date Analyzed: 04/09/09 19:07

Instrument/Analyst: ECD5/PK

GPC Cleanup: No

Sulfur Cleanup: Yes

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 µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	56.5%
Tetrachlorometaxylene	48.8%

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	0
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

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

Sample ID: LCS-040709
LCS/LCSD

Lab Sample ID: LCS-040709
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: NA
Date Received: NA

Date Extracted LCS/LCSD: 04/07/09

Sample Amount LCS: 1000 mL

LCSD: 1000 mL

Date Analyzed LCS: 04/09/09 15:06

Final Extract Volume LCS: 0.50 mL

LCSD: 04/09/09 15:23

LCSD: 0.50 mL

Instrument/Analyst LCS: ECD5/PK

Dilution Factor LCS: 1.00

LCSD: ECD5/PK

LCSD: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

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	0.045	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 $\mu\text{g/L}$

RPD calculated using sample concentrations per SW846.

4
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 SAMPLE NO. =====	LAB SAMPLE ID =====	DATE 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

ALL RUNS ARE DUAL COLUMN

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

Sample ID: MB-040709
METHOD BLANK

Lab Sample ID: MB-040709
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: NA
Date Received: NA

Date Extracted: 04/07/09
Date Analyzed: 04/09/09 14:49
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.0%
Tetrachlorometaxylene	63.0%

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: OT38-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE
080064

Data Release Authorized: *AB*

Reported: 04/07/09

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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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.

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: OT38-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
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

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: 

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

Date Extracted LCS/LCSD: 04/03/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/04/09 17:58

Final Extract Volume LCS: 1.0 mL

LCSD: 04/04/09 18:17

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/PKC

Dilution Factor LCS: 1.00

LCSD: FID/PKC

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
o-Terphenyl	94.7%	93.1%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

4
TPH METHOD BLANK SUMMARY

BLANK NO.

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	OT38LCSW1	OT38LCSW1	04/04/09
02	OT38LCSDW1	OT38LCSDW1	04/04/09
03	CMP3-090401	OT38A	04/04/09
04	MW26R-090401	OT38B	04/04/09
05	MW26R-090401	OT38C	04/04/09
06	MW44-090401	OT38D	04/04/09
07	CMP5-090401	OT38E	04/04/09
08	MW308S-09040	OT38F	04/04/09
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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: OT68-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE
080064Data 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 1.0	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 1.0	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 1.0	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 1.0	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 1.0	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.

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

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

Date Analyzed LCS: 04/08/09 15:35

Final Extract Volume LCS: 1.0 mL

LCSD: 04/08/09 15:49

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JGR

Dilution Factor LCS: 1.00

LCSD: FID/JGR

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD 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.

4
TPH METHOD BLANK SUMMARY

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 SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	OT63LCSW1	OT63LCSW1	04/08/09
02	OT63LCSDW1	OT63LCSDW1	04/08/09
03	CMP4-090402	OT68A	04/08/09
04	MW36-090402	OT68B	04/08/09
05	CMP15-090402	OT68C	04/08/09
06	MW308N-09040	OT68D	04/08/09

METALS ANALYSIS

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

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

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	7	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: MW44-090401

SAMPLE

Lab Sample ID: OT38D

LIMS ID: 09-7968

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

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	0.6	
200.8	04/06/09	200.8	04/08/09	7440-38-2	Arsenic	0.2	0.8	
200.8	04/06/09	200.8	04/08/09	7440-47-3	Chromium	0.5	11.0	
200.8	04/06/09	200.8	04/08/09	7440-50-8	Copper	0.5	18.0	
200.8	04/06/09	200.8	04/08/09	7439-92-1	Lead	1	33	
200.8	04/06/09	200.8	04/08/09	7440-02-0	Nickel	0.5	4.3	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: MW308S-090401

SAMPLE

Lab Sample ID: OT38F

LIMS ID: 09-7970

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: OT38LCS

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: 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%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: OT38MB

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: 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	U
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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: CMP4-090402

SAMPLE

Lab Sample ID: OT68A

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: MW36-090402

SAMPLE

Lab Sample ID: OT68B

LIMS ID: 09-8183

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: CMP15-090402

SAMPLE

Lab Sample ID: OT68C

LIMS ID: 09-8184

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

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	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

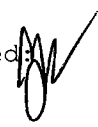
Sample ID: MW308N-090402

SAMPLE

Lab Sample ID: OT68D

LIMS ID: 09-8185

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: OT68LCS

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: 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 µg/L

N-Control limit not met

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: OT68MB

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: 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



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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.

PM70 : 00002

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)

Date:	9/2/09	
Page:	1	of 1
No. of Coolers:	3	Cooler Temps: 10.6, 11.4, 9.8

ARI Assigned Number:	Turn-around Requested: STD
ARI Client Company:	Phone:
ASPECT Consulting LLC	206 780 9370
Client Contact:	
Chip Goodhue	
Client Project Name:	
Southwest Harbor Project - Phase 2 Gwcmp	
Client Project #:	Samplers:
0800604	Bob Hanford, Amy Tice

[illegible]

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 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-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.



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

Cooler Receipt Form

ARI Client: Aspect

Project Name: _____

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 10.6 11.4 9.8

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 487405

Cooler Accepted by: AV Date: 9/2/09 Time: 1345

Complete custody forms and 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 Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

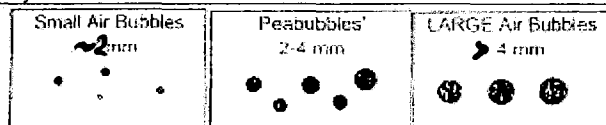
Samples Logged by: MM Date: 9-2-09 Time: 1435

**** Notify Project Manager of discrepancies or concerns ****

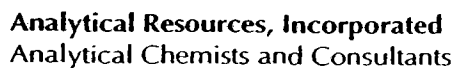
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"



Cooler Temperature Compliance Form

Completed by:

Date: _____

Time

PRESERVATION VERIFICATION 09/02/09

Page 1 of 1



ARI Job No: **PM70**

PC: Mark

VTSR: 09/02/09

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:

Project #: 080064

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Sample Site:

SDG No:

Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102Fe2+ <2	DMET DOC FLT FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-20472 PM70A	CMP2-090902						TOT													
09-20473 PM70B	MW125-090902						TOT													
09-20474 PM70C	CMP17-090902						TOT													
09-20475 PM70D	FM105-090902						TOT													
09-20476 PM70E	FM105-090902D						TOT													
09-20477 PM70F	CMP5-090902						TOT													

PM70: 00006

Checked By WMM Date 9-2-09

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.

PM70 : 00007



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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


ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MW125-090902
SAMPLE

Lab Sample ID: PM70B

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized: 

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

Instrument/Analyst: NT10/PAB

Date Analyzed: 09/03/09 16:48

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	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.7%
d8-Toluene	99.2%
Bromofluorobenzene	104%
d4-1,2-Dichlorobenzene	104%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: CMP17-090902

SAMPLE

Lab Sample ID: PM70C

LIMS ID: 09-20474

Matrix: Water

Data Release Authorized: 

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

Instrument/Analyst: NT10/PAB

Date Analyzed: 09/03/09 17:17

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 µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	101%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	106%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: FM105-090902

Page 1 of 1

SAMPLE

Lab Sample ID: PM70D


QC Report No: PM70-Aspect Consulting LLC

LIMS ID: 09-20475

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Matrix: Water

080064

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/10/09

Date Received: 09/02/09

Instrument/Analyst: NT10/PAB

Sample Amount: 10.0 mL

Date Analyzed: 09/03/09 17:47

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	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	102%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	104%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: FM105-090902D

Page 1 of 1

SAMPLE

Lab Sample ID: PM70E

QC Report No: PM70-Aspect Consulting LLC

LIMS ID: 09-20476

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Matrix: Water

080064

Data Release Authorized: 

Date Sampled: 09/02/09

Reported: 09/10/09

Date Received: 09/02/09

Instrument/Analyst: NT10/PAB

Sample Amount: 10.0 mL

Date Analyzed: 09/03/09 18:17

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	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	101%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	106%

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
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 LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene70-132
80-120
80-120
80-12080-143
80-120
80-120
80-120

Prep Method: SW5030B

Log Number Range: 09-20473 to 09-20476

PM70: 00016

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

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: NT10/PAB

LCSD: NT10/PAB

Date Analyzed LCS: 09/03/09 10:08

LCSD: 09/03/09 10:38

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

Analyte	LCS	Spike	LCS	LCSD	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
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	104%	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 $\mu\text{g/L}$ (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.

MB0903

Lab Name: ANALYTICAL RESOURCES, INC

Client: ASPECT CONSULTING

ARI Job No: PM70

Project: SW HARBOR PROJECT

Lab File ID: MB0903

Lab Sample ID: MB0903

Date Analyzed: 09/03/09

Time Analyzed: 1108

Instrument ID: NT10

Heated Purge: (Y/N) N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME 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	PM70D	PM70D	1747
06	FM105-090902	PM70E	PM70E	1817
07				
08				
09				
10				
11				
12				
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COMMENTS:

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MB-090309
METHOD BLANK

Lab Sample ID: MB-090309

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized: *AB*

Reported: 09/10/09

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT10/PAB

Date Analyzed: 09/03/09 11:08

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 µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	101%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	103%

SEMIVOLATILE ANALYSIS

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: CMP2-090902
SAMPLE

Lab Sample ID: PM70A

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 09/09/09

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

Date Extracted: 09/03/09

Date Analyzed: 09/04/09 16:37

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

dl4-p-Terphenyl	90.8%
-----------------	-------

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: MW125-090902
SAMPLE

Lab Sample ID: PM70B

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 09/09/09

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

Date Extracted: 09/03/09

Date Analyzed: 09/04/09 17:13

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)


Semivolatile Surrogate Recovery

d14-p-Terphenyl	92.0%
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ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: CMP17-090902
SAMPLE

Lab Sample ID: PM70C
LIMS ID: 09-20474
Matrix: Water
Data Release Authorized: 
Reported: 09/09/09

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

Date Extracted: 09/03/09
Date Analyzed: 09/04/09 17:48
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	88.0%
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ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1




Sample ID: FM105-090902
SAMPLE

Lab Sample ID: PM70D

LIMS ID: 09-20475

Matrix: Water

Data Release Authorized: 

Reported: 09/09/09

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

Date Extracted: 09/03/09

Date Analyzed: 09/04/09 18:24

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	98.0%
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ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1



Sample ID: FM105-090902D
SAMPLE

Lab Sample ID: PM70E
LIMS ID: 09-20476
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 09/09/09

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

Date Extracted: 09/03/09
Date Analyzed: 09/04/09 18:59
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	89.6%
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ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP5-090902
SAMPLE

Lab Sample ID: PM70F
LIMS ID: 09-20477
Matrix: Water
Data Release Authorized: 
Reported: 09/09/09

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

Date Extracted: 09/03/09
Date Analyzed: 09/04/09 19:35
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	73.6%
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SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064

<u>Client ID</u>	<u>TPH TOT OUT</u>	
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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: LCS-090309
LCS/LCSD

Lab Sample ID: LCS-090309
LIMS ID: 09-20472
Matrix: Water
Data Release Authorized: *BB*
Reported: 09/09/09

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

Date Extracted LCS/LCSD: 09/03/09

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 09/04/09 15:25
LCSD: 09/04/09 16:01

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ

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	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 $\mu\text{g/L}$
RPD calculated using sample concentrations per SW846.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE 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
09				
10				
11				
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COMMENTS:

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
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: 09/09/09

QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 09/03/09
Date Analyzed: 09/04/09 14:50
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	97.6%
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SIM SEMIVOLATILE ANALYSIS

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

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

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

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 12:57

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	30.9%
d14-Dibenzo(a,h)anthracene	86.3%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: CMP2-090902

DILUTION

Lab Sample ID: PM70A

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: 09/02/09

Date Received: 09/02/09

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 19:25

Instrument/Analyst: NT2/PK

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	56.3%
d14-Dibenzo(a,h)anthracene	74.2%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

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

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

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 13:21

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	0.051
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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 71.0%

d14-Dibenzo (a,h) anthracene 97.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: CMP17-090902

SAMPLE

Lab Sample ID: PM70C

LIMS ID: 09-20474

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: 09/02/09

Date Received: 09/02/09

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 13:45

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.3%
d14-Dibenzo(a,h)anthracene	88.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: FM105-090902

SAMPLE

Lab Sample ID: PM70D

LIMS ID: 09-20475

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: 09/02/09

Date Received: 09/02/09

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 14:09

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	71.0%
d14-Dibenzo (a,h) anthracene	82.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: FM105-090902D

SAMPLE

Lab Sample ID: PM70E

LIMS ID: 09-20476

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: 09/02/09

Date Received: 09/02/09

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 14:34

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 70.3%

d14-Dibenzo(a,h)anthracene 82.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: CMP5-090902

SAMPLE

Lab Sample ID: PM70F

LIMS ID: 09-20477

Matrix: Water

Data Release Authorized: *B*

Reported: 09/10/09

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

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 70.7%

d14-Dibenzo(a,h)anthracene 84.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
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

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(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

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


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

Date Extracted LCS/LCSD: 09/03/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 09/09/09 12:09

Final Extract Volume LCS: 0.50 mL

LCSD: 09/09/09 12:33

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	0.246	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 $\mu\text{g/L}$ (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	73.3%	73.7%
d14-Dibenzo(a,h)anthracene	97.7%	95.0%

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	PM70LCSW1	PM70LCSW1	090902	09/09/09
02	PM70LCSDW1	PM70LCSDW1	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	FM105-090902D	PM70E	090908	09/09/09
08	CMP5-090902	PM70F	090909	09/09/09
09	CMP2-090902	PM70A	090920	09/09/09
10				
11				
12				
13				
14				
15				
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17				
18				
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22				
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24				
25				
26				
27				
28				
29				
30				

COMMENTS:

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

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

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP

Event: 080064

Date Sampled: NA

Date Received: NA

Date Extracted: 09/03/09

Date Analyzed: 09/09/09 11:45

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 76.3%

d14-Dibenzo(a,h)anthracene 90.7%

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

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

Date Extracted: 09/03/09

Date Analyzed: 09/08/09 04:13

Instrument/Analyst: ECD6/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	41.5%
Tetrachlorometaxylene	46.5%

ORGANICS ANALYSIS DATA SHEET

PCB by GC/ECD Method SW8082

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

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

Date Extracted: 09/03/09

Date Analyzed: 09/08/09 04:36

Instrument/Analyst: ECD6/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	55.5%

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1Sample ID: CMP17-090902
SAMPLELab Sample ID: PM70C
LIMS ID: 09-20474
Matrix: Water
Data Release Authorized: 
Reported: 09/10/09QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064
Date Sampled: 09/02/09
Date Received: 09/02/09Date Extracted: 09/03/09
Date Analyzed: 09/08/09 04:59
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: YesSample 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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery


Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	53.0%

Sample ID: FM105-090902
SAMPLE

Lab Sample ID: PM70D

LIMS ID: 09-20475

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 09/03/09

Date Analyzed: 09/08/09 05:22

Instrument/Analyst: ECD6/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	66.8%
Tetrachlorometaxylene	61.0%

ORGANICS ANALYSIS DATA SHEET

PCB by GC/ECD Method SW8082

Page 1 of 1


Sample ID: FM105-090902D

SAMPLE

Lab Sample ID: PM70E

LIMS ID: 09-20476

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 09/03/09

Date Analyzed: 09/08/09 05:45

Instrument/Analyst: ECD6/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	59.5%

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1Sample ID: CMP5-090902
SAMPLELab Sample ID: PM70F
LIMS ID: 09-20477
Matrix: Water
Data Release Authorized: 
Reported: 09/10/09QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064
Date Sampled: 09/02/09
Date Received: 09/02/09Date Extracted: 09/03/09
Date Analyzed: 09/08/09 06:08
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: YesSample 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 $\mu\text{g/L}$ (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

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
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: 09/10/09

QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 09/03/09

Sample Amount LCS: 1000 mL
LCSD: 1000 mL

Date Analyzed LCS: 09/08/09 02:18
LCSD: 09/08/09 02:41

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: ECD6/JGR
LCSD: ECD6/JGR

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: No
Sulfur Cleanup: Yes

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%	0.040	0.050	80.0%	2.5%
Aroclor 1260	0.048	0.050	96.0%	0.049	0.050	98.0%	2.1%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	67.0%	69.5%
Tetrachlorometaxylene	57.5%	58.2%

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

4
PCB METHOD BLANK SUMMARY

BLANK NO.

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 SAMPLE NO. =====	LAB SAMPLE ID =====	DATE 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
08	CMP5-090902	PM70F	09/08/09

ALL RUNS ARE DUAL COLUMN

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

QC Report No: PM70-Aspect Consulting LLC

Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064

Date Sampled: NA

Date Received: NA

Date Extracted: 09/03/09

Date Analyzed: 09/08/09 01:55

Instrument/Analyst: ECD6/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (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 1.0	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 1.0	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 65.3%
PM70B 09-20473	MW125-090902 HC ID: ---	09/03/09	09/03/09 FID3A	1.00 1.0	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 1.0	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 1.0	Diesel Motor Oil o-Terphenyl	0.25 0.50	< 0.25 U < 0.50 U 77.7%
PM70E 09-20476	FM105-090902D HC ID: ---	09/03/09	09/03/09 FID3A	1.00 1.0	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 1.0	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.

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PM70-Aspect Consulting LLC
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
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

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: *JB*

Reported: 09/07/09

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

Date Extracted LCS/LCSD: 09/03/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 09/03/09 18:55

Final Extract Volume LCS: 1.0 mL

LCSD: 09/03/09 19:14

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/AAR

Dilution Factor LCS: 1.00

LCSD: FID/AAR

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

	LCS	LCSD
o-Terphenyl	81.4%	79.2%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 09/02/09

ARI Job: PM70
Project: SW HARBOR PROJECT-PHASE 2 GW CMP
080064

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
09-20472-090309MB1	Method Blank	500 mL	1.00 mL	09/03/09
09-20472-090309LCS1	Lab Control	500 mL	1.00 mL	09/03/09
09-20472-090309LCSD1	Lab Control Dup	500 mL	1.00 mL	09/03/09
09-20472-PM70A	CMP2-090902	500 mL	1.00 mL	09/03/09
09-20473-PM70B	MW125-090902	500 mL	1.00 mL	09/03/09
09-20474-PM70C	CMP17-090902	500 mL	1.00 mL	09/03/09
09-20475-PM70D	FM105-090902	500 mL	1.00 mL	09/03/09
09-20476-PM70E	FM105-090902D	500 mL	1.00 mL	09/03/09
09-20477-PM70F	CMP5-090902	500 mL	1.00 mL	09/03/09

4
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:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	PM70LCSW1	PM70LCSW1	09/03/09
02	PM70LCSDW1	PM70LCSDW1	09/03/09
03	CMP2-090902	PM70A	09/03/09
04	MW125-090902	PM70B	09/03/09
05	CMP17-090902	PM70C	09/03/09
06	FM105-090902	PM70D	09/03/09
07	FM105-090902	PM70E	09/03/09
08	CMP5-090902	PM70F	09/03/09
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			

METALS ANALYSIS

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: CMP2-090902

SAMPLE

Lab Sample ID: PM70A

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized 

Reported: 09/15/09

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

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


Sample ID: MW125-090902

SAMPLE

Lab Sample ID: PM70B

LIMS ID: 09-20473

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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

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


Sample ID: CMP17-090902

SAMPLE

Lab Sample ID: PM70C

LIMS ID: 09-20474

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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

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

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: FM105-090902

SAMPLE

Lab Sample ID: PM70D

LIMS ID: 09-20475

Matrix: Water

Data Release Authorized 

Reported: 09/15/09

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: FM105-090902D

SAMPLE

Lab Sample ID: PM70E

LIMS ID: 09-20476

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: CMP5-090902
SAMPLE

Lab Sample ID: PM70F

LIMS ID: 09-20477

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: PM70MB

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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

Sample ID: LAB CONTROL

Lab Sample ID: PM70LCS

LIMS ID: 09-20472

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

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.

PN04 : 00002

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Date:
	STD	9/3/09
ARI Client Company:	Phone:	Page: 1 of 1
Aspect Consulting		
Client Contact:	No. of Coolers:	Cooler Temps:
Chip Goodhue		

Client Project Name:	Southwest Harbor Project - Phase 2 GW CMP	
Client Project #:	080064	Samplers: AET, PSB

[illegible]

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 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-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.

PC: Mark
VTSR: 09/03/09

Project #: 080064
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
Sample Site:
SDG No:
Analytical Protocol: In-house

Analytical Protocol: In-house

Q-4-09 DM

Checked By

Date _____

9-4-04.



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

Cooler Receipt Form

ARI Client:

Aspect Consulting

COC No(s):

NA

Assigned ARI Job No:

Project Name:

Southwest Harbor Project

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Tracking No:

NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?

YES

NO

Were custody papers included with the cooler?

YES

NO

Were custody papers properly filled out (ink, signed, etc.)

YES

NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

11-2 15-2 12-6

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#:

Cooler Accepted by:

MM

Date:

9-3-09

Time:

1512

Complete custody forms and 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 Ice Gel Packs Baggies Foam Block Paper Other:

Was sufficient ice used (if appropriate)?

NA

YES

NO

Were all bottles sealed in individual plastic bags?

YES

NO

Did all bottles arrive in good condition (unbroken)?

YES

NO

Were all bottle labels complete and legible?

YES

NO

Did the number of containers listed on COC match with the number of containers received?

YES

NO

Did all bottle labels and tags agree with custody papers?

YES

NO

Were all bottles used correct for the requested analyses?

YES

NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)

NA

YES

NO

Were all VOC vials free of air bubbles?

NA

YES

NO

Was sufficient amount of sample sent in each bottle?

YES

NO

Samples Logged by:

MM

Date:

9-4-09

Time:

849

** Notify Project Manager of discrepancies or concerns **

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

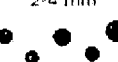
Additional Notes, Discrepancies, & Resolutions:

By:

Date:



Peabubbles' 2-4 mm



LARGE Air Bubbles 4 mm

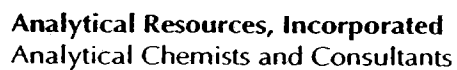


Small → "sm"

Peabubbles → "pb"

Large → "lg"

Headspace → "hs"



Cooler Temperature Compliance Form

Completed by: _____ Date: _____ Time: _____

Case Narrative

prepared
for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN04

prepared
by

Analytical Resources, Inc.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

Sample ID: CMP3-090903
SAMPLE

Lab Sample ID: PN04A

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 15:20

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	76.4%
-----------------	-------

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP4-090903
SAMPLE

Lab Sample ID: PN04B
LIMS ID: 09-20696
Matrix: Water
Data Release Authorized: 
Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 09/03/09
Date Received: 09/03/09

Date Extracted: 09/07/09
Date Analyzed: 09/09/09 15:55
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	76.0%
-----------------	-------


ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: CMP15-090903
SAMPLE

Lab Sample ID: PN04C

LIMS ID: 09-20697

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 16:31

Instrument/Analyst: NT4/JZ

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	1.6

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	65.6%
-----------------	-------

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW26R-090903
SAMPLE

Lab Sample ID: PN04D

QC Report No: PN04-Aspect Consulting LLC

LIMS ID: 09-20698

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water

080064

Data Release Authorized: 

Date Sampled: 09/03/09

Reported: 09/15/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Sample Amount: 500 mL

Date Analyzed: 09/09/09 17:06

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/JZ

Dilution Factor: 1.00

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

Reported in $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	73.2%
-----------------	-------


ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW26R-090903D
SAMPLE

Lab Sample ID: PN04E

LIMS ID: 09-20699

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 17:42

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	80.0%
-----------------	-------


ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW44-090903
SAMPLE

Lab Sample ID: PN04F

LIMS ID: 09-20700

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 18:17

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	72.0%
-----------------	-------


ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW36-090903
SAMPLE

Lab Sample ID: PN04G

LIMS ID: 09-20701

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 18:53

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	73.6%
-----------------	-------

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

<u>Client ID</u>	<u>TPH TOT OUT</u>	
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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
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: 09/15/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 09/03/09
Date Received: 09/03/09

Date Extracted LCS/LCSD: 09/07/09

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 09/09/09 14:09
LCSD: 09/09/09 14:44

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ

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	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 µg/L
RPD calculated using sample concentrations per SW846.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

PN04MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: UNSPECIFIED

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
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:

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MB-090709
METHOD BLANK

Lab Sample ID: MB-090709
LIMS ID: 09-20695
Matrix: Water
Data Release Authorized: *AL*
Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 09/07/09
Date Analyzed: 09/09/09 13:33
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	84.0%
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SIM SEMIVOLATILE ANALYSIS

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: CMP3-090903

SAMPLE

Lab Sample ID: PN04A

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: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 16:35

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
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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	40.7%
d14-Dibenzo(a,h)anthracene	76.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: CMP4-090903

SAMPLE

Lab Sample ID: PN04B

LIMS ID: 09-20696

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: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 16:59

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	57.7%
d14-Dibenzo(a,h)anthracene	75.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: CMP15-090903

SAMPLE

Lab Sample ID: PN04C

LIMS ID: 09-20697

Matrix: Water

Data Release Authorized: *JB*

Reported: 09/10/09

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

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 17:23

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 $\mu\text{g/L}$ (ppb)SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 46.0%

d14-Dibenzo(a,h)anthracene 82.3%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MW26R-090903

SAMPLE

Lab Sample ID: PN04D

LIMS ID: 09-20698

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: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 17:48

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	0.013
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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.0%
d14-Dibenzo(a,h)anthracene	82.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MW26R-090903D

SAMPLE

Lab Sample ID: PN04E

LIMS ID: 09-20699

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: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 18:12

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	0.013
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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	63.3%
d14-Dibenzo(a,h)anthracene	79.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: MW44-090903

SAMPLE

Lab Sample ID: PN04F

LIMS ID: 09-20700

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: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 18:36

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
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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 44.7%

d14-Dibenzo(a,h)anthracene 80.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: MW36-090903

SAMPLE

Lab Sample ID: PN04G

LIMS ID: 09-20701

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: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 19:01

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 $\mu\text{g/L}$ (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	53.7%
d14-Dibenzo(a,h)anthracene	78.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

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

(MNP) = d10-2-Methylnaphthalene	(42-100)	(31-109)
(DBA) = d14-Dibenzo(a,h)anthracene	(40-125)	(10-133)

Prep Method: SW3510C
Log Number Range: 09-20695 to 09-20701

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

Date Extracted LCS/LCSD: 09/07/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 09/09/09 15:46

Final Extract Volume LCS: 0.50 mL

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 $\mu\text{g/L}$ (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%

4B
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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE 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
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COMMENTS:

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MB-090709

METHOD BLANK

Lab Sample ID: MB-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

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 15:22

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 $\mu\text{g/L}$ (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: CMP3-090903
SAMPLE

Lab Sample ID: PN04A


QC Report No: PN04-Aspect Consulting LLC

LIMS ID: 09-20695

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Matrix: Water

080064

Data Release Authorized: 

Date Sampled: 09/03/09

Reported: 09/14/09

Date Received: 09/03/09

Date Extracted: 09/08/09

Sample Amount: 1000 mL

Date Analyzed: 09/14/09 11:09

Final Extract Volume: 0.50 mL

Instrument/Analyst: ECD5/JGR

Dilution Factor: 10.0

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

Acid Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.5%
Tetrachlorometaxylene	57.8%

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

Sample ID: CMP4-090903
SAMPLE

Lab Sample ID: PN04B
LIMS ID: 09-20696
Matrix: Water
Data Release Authorized: 
Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 09/03/09
Date Received: 09/03/09

Date Extracted: 09/08/09
Date Analyzed: 09/11/09 17:45
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	58.2%
Tetrachlorometaxylene	50.2%

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




Sample ID: CMP15-090903
SAMPLE

Lab Sample ID: PN04C

LIMS ID: 09-20697

Matrix: Water

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/08/09

Date Analyzed: 09/11/09 18:08

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	55.5%
Tetrachlorometaxylene	59.2%

Sample ID: MW26R-090903
SAMPLE

Lab Sample ID: PN04D
LIMS ID: 09-20698
Matrix: Water
Data Release Authorized: 
Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 09/03/09
Date Received: 09/03/09

Date Extracted: 09/08/09
Date Analyzed: 09/11/09 18:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	61.5%
Tetrachlorometaxylene	48.0%

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

Sample ID: MW26R-090903D
SAMPLE

Lab Sample ID: PN04E
LIMS ID: 09-20699
Matrix: Water
Data Release Authorized: 
Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 09/03/09
Date Received: 09/03/09

Date Extracted: 09/08/09
Date Analyzed: 09/11/09 18:54
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	63.8%
Tetrachlorometaxylene	56.8%

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

Sample ID: MW44-090903
SAMPLE

Lab Sample ID: PN04F

LIMS ID: 09-20700

Matrix: Water

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/08/09

Date Analyzed: 09/11/09 19:17

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.0%
Tetrachlorometaxylene	54.5%

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

Matrix: Water

Data Release Authorized: 

Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

Date Extracted: 09/08/09

Date Analyzed: 09/11/09 19:40

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (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
080064

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
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

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

Sample ID: LCS-090809
LCS/LCSD

Lab Sample ID: LCS-090809
LIMS ID: 09-20695
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 09/08/09

Sample Amount LCS: 1000 mL

Date Analyzed LCS: 09/11/09 14:20

LCSD: 1000 mL

LCSD: 09/11/09 14:42

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Instrument/Analyst LCS: ECD5/JGR

Dilution Factor LCS: 1.00

LCSD: ECD5/JGR

LCSD: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

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 µg/L

RPD calculated using sample concentrations per SW846.

4
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 SAMPLE NO. =====	LAB SAMPLE ID =====	DATE 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

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

Sample ID: MB-090809
METHOD BLANK

Lab Sample ID: MB-090809
LIMS ID: 09-20695
Matrix: Water
Data Release Authorized: 
Reported: 09/14/09

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 09/08/09
Date Analyzed: 09/11/09 13:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.2%
Tetrachlorometaxylene	40.2%

TPHD ANALYSIS

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWT PHD 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	Method Blank	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20695	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		93.2%
PN04A	CMP3-090903	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20695	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		92.6%
PN04B	CMP4-090903	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20696	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		90.8%
PN04C	CMP15-090903	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20697	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		95.3%
PN04D	MW26R-090903	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20698	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		96.2%
PN04E	MW26R-090903D	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20699	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		91.4%
PN04F	MW44-090903	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20700	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		87.0%
PN04G	MW36-090903	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20701	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		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.

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN04-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-090709	93.2%	0
LCS-090709	94.5%	0
LCSD-090709	88.7%	0
CMP3-090903	92.6%	0
CMP4-090903	90.8%	0
CMP15-090903	95.3%	0
MW26R-090903	96.2%	0
MW26R-090903D	91.4%	0
MW44-090903	87.0%	0
MW36-090903	86.5%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(51-120)

(41-121)

Prep Method: SW3510C
Log Number Range: 09-20695 to 09-20701

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: *B*

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

Date Extracted LCS/LCSD: 09/07/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 09/07/09 18:10

Final Extract Volume LCS: 1.0 mL

LCSD: 09/07/09 18:29

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/MS

Dilution Factor LCS: 1.00

LCSD: FID/MS

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

	LCS	LCSD
o-Terphenyl	94.5%	88.7%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

4
TPH METHOD BLANK SUMMARY

BLANK NO.

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 SAMPLE NO. =====	LAB SAMPLE ID =====	DATE 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

METALS ANALYSIS

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: CMP3-090903

SAMPLE

Lab Sample ID: PN04A

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/03/09

Date Received: 09/03/09

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	8.3	
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


Sample ID: CMP4-090903

SAMPLE

Lab Sample ID: PN04B

LIMS ID: 09-20696

Matrix: Water

Data Release Authorized 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: CMP15-090903

SAMPLE

Lab Sample ID: PN04C

LIMS ID: 09-20697

Matrix: Water

Data Release Authorized

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: MW26R-090903
SAMPLE

Lab Sample ID: PN04D

LIMS ID: 09-20698

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

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	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: MW26R-090903D

SAMPLE

Lab Sample ID: PN04E

LIMS ID: 09-20699

Matrix: Water

Data Release Authorized 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

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


Sample ID: MW44-090903

SAMPLE

Lab Sample ID: PN04F

LIMS ID: 09-20700

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: MW36-090903

SAMPLE

Lab Sample ID: PN04G

LIMS ID: 09-20701

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/03/09

Date Received: 09/03/09

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	U
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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: PN04LCS

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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 µg/L

N-Control limit not met

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: PN04MB

LIMS ID: 09-20695

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN04-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

Laboratory Data Package

prepared
for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN04

prepared
by

Analytical Resources, Inc.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

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



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

Cooler Receipt Form

ARI Client: Aspect

COC No(s): CNA

Assigned ARI Job No: _____

Project Name: Southwest Harbor Project - Phase 2

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? _____

YES NO

Were custody papers included with the cooler? _____

YES NO

Were custody papers properly filled out (ink, signed, etc.) _____

YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry).....

17.2 17.2

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 489405

Cooler Accepted by: AV

Date: 9/4/09

Time: 1135

Complete custody forms and 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 Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? _____

NA YES NO

Were all bottles sealed in individual plastic bags? _____

YES NO

Did all bottles arrive in good condition (unbroken)? _____

YES NO

Were all bottle labels complete and legible? _____

YES NO

Did the number of containers listed on COC match with the number of containers received? _____

YES NO

Did all bottle labels and tags agree with custody papers? _____

YES NO

Were all bottles used correct for the requested analyses? _____

YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...

NA YES NO

Were all VOC vials free of air bubbles? _____

NA YES NO

Was sufficient amount of sample sent in each bottle? _____

YES NO

Samples Logged by: H11

Date: 9/4/09

Time: 1205

**** 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:

By: _____ Date: _____

Small Air Bubbles

2 mm



Peabubbles

2-4 mm



LARGE Air Bubbles

4 mm

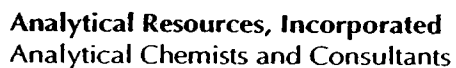


Small → "sm"

Peabubbles → "pb"

Large → "lg"

Headspace → "hs"



Cooler Temperature Compliance Form

Completed by:

Date:

Time:



ARI Job No: PN16

PC: Mark
VTSR: 09/04/09

Inquiry Number: NONE
Analysis Requested: 09/04/09
Contact: Goodhue, Chip
Client: Aspect Consulting LLC
Logged by: MM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

Project #: 080064
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN	WAD	NH3	COD	FOG	MET	PHEN	PHOS	TKN	NO23	TOC	S2	AK102Fe2+	DMET DOC FLT FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
09-20753 PNI6A	CMP1-090904	>12	>12	<2	<2	<2	TOT pass	<2	<2	<2	<2	<2	>9	<2						
09-20754 PNI6B	MW308N-090904						TOT pass													
09-20755 PNI6C	MW308S-090904						TOT [REDACTED]										L2	1108100	2.5AL	9-4-09 DM

PN16 : 00006

Checked By MM Date 9-4-09

Case Narrative

prepared
for

Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2, 080064

ARI JOB NO: PN16

prepared
by

Analytical Resources, Inc.

PN16 : 00007



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

Sample ID: CMP1-090904
SAMPLE

Lab Sample ID: PN16A

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/04/09

Date Received: 09/04/09

Date Extracted: 09/07/09

Date Analyzed: 09/14/09 16:53

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	135%
-----------------	------

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW308N-090904
SAMPLE

Lab Sample ID: PN16B

LIMS ID: 09-20754

Matrix: Water

Data Release Authorized: *AB*

Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09

Date Received: 09/04/09

Date Extracted: 09/07/09

Date Analyzed: 09/14/09 17:28

Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	76.0%
-----------------	-------

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MW308S-090904
SAMPLE

Lab Sample ID: PN16C
LIMS ID: 09-20755
Matrix: Water
Data Release Authorized: *B*
Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 09/04/09
Date Received: 09/04/09

Date Extracted: 09/07/09
Date Analyzed: 09/14/09 18:03
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	109%
-----------------	------

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

<u>Client ID</u>	<u>TPH TOT OUT</u>	
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
(53-119)	(26-114)

Prep Method: SW3520C
Log Number Range: 09-20753 to 09-20755

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: LCS-090709
LCS/LCSD

Lab Sample ID: LCS-090709
LIMS ID: 09-20753
Matrix: Water
Data Release Authorized: *AB*
Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: 09/04/09
Date Received: 09/04/09

Date Extracted LCS/LCSD: 09/07/09

Sample Amount LCS: 500 mL

Date Analyzed LCS: 09/09/09 14:09
LCSD: 09/09/09 14:44

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ

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	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 $\mu\text{g/L}$

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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE 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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30				

COMMENTS:

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: MB-090709
METHOD BLANK

Lab Sample ID: MB-090709
LIMS ID: 09-20753
Matrix: Water
Data Release Authorized: 
Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 09/07/09
Date Analyzed: 09/09/09 13:33
Instrument/Analyst: NT4/JZ

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 $\mu\text{g/L}$ (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	84.0%
-----------------	-------

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: *AB*

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

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 19:49

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 62.7%
d14-Dibenzo(a,h)anthracene 81.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1


Sample ID: MW308N-090904

SAMPLE

Lab Sample ID: PN16B

LIMS ID: 09-20754

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 20:13

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	54.0%
d14-Dibenzo(a,h)anthracene	77.3%

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

Matrix: Water

Data Release Authorized: 

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

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 20:38

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 µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 59.3%

d14-Dibenzo(a,h)anthracene 79.3%

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

(MNP) = d10-2-Methylnaphthalene (42-100) (31-109)
(DBA) = d14-Dibenzo(a,h)anthracene (40-125) (10-133)

Prep Method: SW3510C
Log Number Range: 09-20753 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: *[Signature]*
Reported: 09/10/09

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
Event: 080064
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 09/07/09

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 09/09/09 15:46
LCSD: 09/09/09 16:11

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT2/PK
LCSD: NT2/PK

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 µg/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%

4B
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 SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE 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
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COMMENTS:

ORGANICS ANALYSIS DATA SHEET

PNAs by Low Level SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: MB-090709

METHOD BLANK

Lab Sample ID: MB-090709

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized: 

Reported: 09/10/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

Event: 080064

Date Sampled: NA

Date Received: NA

Date Extracted: 09/07/09

Date Analyzed: 09/09/09 15:22

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 $\mu\text{g/L}$ (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

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

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

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.5%
Tetrachlorometaxylene	45.0%

ORGANICS ANALYSIS DATA SHEET

PCB by GC/ECD Method SW8082

Page 1 of 1


Sample ID: MW308N-090904

SAMPLE

Lab Sample ID: PN16B

LIMS ID: 09-20754

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/04/09

Date Received: 09/04/09

Date Extracted: 09/08/09

Date Analyzed: 09/11/09 20:26

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 µg/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

Sample ID: MW308S-090904

SAMPLE

Lab Sample ID: PN16C

LIMS ID: 09-20755

Matrix: Water

Data Release Authorized: *B*

Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2

080064

Date Sampled: 09/04/09

Date Received: 09/04/09

Date Extracted: 09/08/09

Date Analyzed: 09/11/09 20:49

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	54.5%
Tetrachlorometaxylene	45.2%

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	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
CMP1-090904	60.5%	19-111	45.0%	21-100	0
MW308N-090904	61.5%	19-111	45.2%	21-100	0
MW308S-090904	54.5%	19-111	45.2%	21-100	0

Prep Method: SW3510C
Log Number Range: 09-20753 to 09-20755

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

Sample ID: LCS-090809
LCS/LCSD

Lab Sample ID: LCS-090809
LIMS ID: 09-20753
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 09/08/09

Sample Amount LCS: 1000 mL

Date Analyzed LCS: 09/11/09 14:20

LCSD: 1000 mL

LCSD: 09/11/09 14:42

Final Extract Volume LCS: 0.50 mL

LCSD: 0.50 mL

Instrument/Analyst LCS: ECD5/JGR

Dilution Factor LCS: 1.00

LCSD: ECD5/JGR

LCSD: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

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 µg/L

RPD calculated using sample concentrations per SW846.

4
PCB METHOD BLANK SUMMARY

BLANK NO.

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 SAMPLE NO. =====	LAB SAMPLE ID =====	DATE ANALYZED =====
01	PN04LCSW1	PN04LCSW1	09/11/09
02	PN04LCSDW1	PN04LCSDW1	09/11/09
03	CMP1-090904	PN16A	09/11/09
04	MW308N-090904	PN16B	09/11/09
05	MW308S-090904	PN16C	09/11/09

ALL RUNS ARE DUAL COLUMN

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

Sample ID: MB-090809
METHOD BLANK

Lab Sample ID: MB-090809
LIMS ID: 09-20753
Matrix: Water
Data Release Authorized: 
Reported: 09/15/09

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064
Date Sampled: NA
Date Received: NA

Date Extracted: 09/08/09
Date Analyzed: 09/11/09 13:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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 $\mu\text{g/L}$ (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: PN16-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	Method Blank	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20753	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		93.2%
PN16A	CMP1-090904	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20753	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		90.4%
PN16B	MW308N-090904	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20754	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		88.9%
PN16C	MW308S-090904	09/07/09	09/07/09	1.00	Diesel	0.25	< 0.25 U
09-20755	HC ID: ---		FID3A	1.0	Motor Oil	0.50	< 0.50 U
					o-Terphenyl		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 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.

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: PN16-Aspect Consulting LLC
Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
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

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: 09-20753

Matrix: Water

Data Release Authorized: *AB*

Reported: 09/09/09

QC Report No: PN16-Aspect Consulting LLC

Project: SOUTHWEST HARBOR PROJECT-PHASE 2
080064

Date Sampled: 09/04/09

Date Received: 09/04/09

Date Extracted LCS/LCSD: 09/07/09

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 09/07/09 18:10

Final Extract Volume LCS: 1.0 mL

LCSD: 09/07/09 18:29

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/MS

Dilution Factor LCS: 1.00

LCSD: FID/MS

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

	LCS	LCSD
o-Terphenyl	94.5%	88.7%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 09/04/09

ARI Job: PN16
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

4
TPH METHOD BLANK SUMMARY

BLANK NO.

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 SAMPLE NO. =====	LAB SAMPLE ID =====	DATE 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

METALS ANALYSIS

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: CMP1-090904
SAMPLE**

Lab Sample ID: PN16A

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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	0.2	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


Sample ID: MW308N-090904

SAMPLE

Lab Sample ID: PN16B

LIMS ID: 09-20754

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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


Sample ID: MW308S-090904

SAMPLE

Lab Sample ID: PN16C

LIMS ID: 09-20755

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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

Sample ID: METHOD BLANK

Lab Sample ID: PN16MB

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized: 

Reported: 09/15/09

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

Sample ID: LAB CONTROL

Lab Sample ID: PN16LCS

LIMS ID: 09-20753

Matrix: Water

Data Release Authorized 

Reported: 09/15/09

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	200.8	25.4	25.0	102%	
Lead	200.8	24	25	96.0%	

Reported in µg/L

N-Control limit not met

Control Limits: 80-120%