Quarterly Groundwater Monitoring Report – Outside (Non-Tunnel) Wells

Red Hill Fuel Storage Facility

Pearl Harbor, Oahu, Hawaii
Latitude: 21°22'15" N
Longitude: 157°53'33" W

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Prepared by:

TEC Inc.
1003 Bishop St. Suite 1550
Pauahi Tower
Honolulu, Hawaii 96813

Prepared for:

Commander
Navy Region Hawaii
Environmental Department, Code N45
850 Ticonderoga Street, Suite 110
Pearl Harbor, Hawaii 96860-5101

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Executive Summary

There are 18 active and 2 inactive, 12.5 million gallon, field-constructed underground storage tanks (USTs) located at the Red Hill Fuel Storage Facility (the Facility). Previous environmental site investigations indicated a release had occurred and contaminated the groundwater underlying the Facility.

The United States (US) Navy implemented a groundwater monitoring program, which includes collecting groundwater samples quarterly from US Navy Well 2254-01 (RHMW2254-01) and four wells installed in the Facility lower access tunnel (RHMW01, RHMW02, RHMW03, and RHMW05). The US Navy Well 2254-01 is located approximately 3,000 feet downgradient from the Facility and provides approximately 24 percent of the potable water to the Pearl Harbor Water System (PHWS). The groundwater samples are analyzed for petroleum constituents and compared against State of Hawaii Department of Health (HDOH) Drinking Water Environmental Action Levels (EALs) (HDOH, 2008).

In response to increasing concentrations of contaminants of potential concern in the groundwater monitoring wells within the facility (specifically RHMW02) during 2008, plans were made to conduct quarterly sampling at the following outside monitoring well locations:

- RHMW04;
- Oily Waste Disposal Facility monitoring well 01 (OWDFMW01); and
- Halawa Deep Well 2253-03 (referred to as HDMW2253-03 in this report).

This groundwater monitoring report presents the analytical results for samples collected on April 26, 2010, at the three groundwater monitoring wells outside of the Facility. Laboratory analytical results indicate that Total Petroleum Hydrocarbons (TPH) as Diesel Range Organics (TPH-DRO) is present in groundwater from OWDFMW01. TPH-DRO in OWDFMW01 was detected at 288F micrograms per liter (µg/L) [F indicates that the compound was identified, but the concentration was above the laboratory method detection limit (MDL) and below the reporting limit (RL), therefore is considered an estimate]. The HDOH Drinking Water EAL for TPH-DRO is 100 µg/L.

Although the TPH-DRO concentration at OWDFMW01 remains above the HDOH Drinking Water EAL, April 2010 results show a significant decrease in concentration for TPH-DRO at this location. The previous sampling event in January 2010 at OWDFMW01 had a TPH-DRO concentration of 1,490 µg/L. No other compounds were detected above the MDL at any other sampling location during April 2010.

1.0 Introduction

This report presents the results of the fourth groundwater sampling event, conducted in April 2010 at two groundwater monitoring wells (i.e., RHMW04 and OWDFMW01). The first, second, and third sampling events for OWDFMW01 and RHMW04 were conducted in August 2009, October 2009, and January 2010, respectively. In addition, this report presents data from the third sampling event conducted in April 2010 at HDMW2253-03. The first and second sampling events at HDMW2253-03 were conducted in October 2009, and January 2010, respectively. An August 2009 sampling event for HDMW2253-03 was not conducted due to access issues.

These three wells surround the Red Hill Fuel Storage Facility, Oahu, Hawaii (hereafter referred to as "the Facility"). This outside groundwater sampling and analysis is considered supplemental to the quarterly groundwater monitoring program conducted within the Facility. This supplemental sampling was conducted in response to increasing concentrations of contaminants of potential concern in a groundwater monitoring well within the Facility, specifically RHMW02 during 2008.

1.1 Project Objective

This groundwater sampling project was performed to evaluate the presence of chemicals of potential concern in groundwater surrounding the Facility. The project was conducted to ensure the Navy remains in compliance with Hawaii Department of Health (HDOH) UST release response requirements. The groundwater sampling program followed the procedures described in *Red Hill Bulk Fuel Storage Facility Groundwater Protection Plan* [TEC Inc. (TEC), 2008 updated in 2009], also referred to as "the Plan".

This groundwater sampling event was conducted by TEC under United States (US) Navy Contract Number N47408-04-D-8514, Task Order No. 54, Amendment/Modification No. 01.

1.2 Previous Reports

As indicated earlier, this outside well sampling supplements the quarterly groundwater monitoring of wells within the Facility, which began in 2005. The following groundwater monitoring reports were previously submitted to the HDOH, for groundwater monitoring wells within the Facility:

1. Groundwater Sampling Report, First Quarter 2005 (submitted April 2005);
2. Groundwater Sampling Report, Second Quarter 2005 (submitted August 2005);
3. Groundwater Sampling Report, Third Quarter 2005 (submitted November 2005);
4. Groundwater Sampling Report, Fourth Quarter 2005 (submitted February 2006);
5. Groundwater Monitoring Results, July 2006 (submitted September 2006);
6. Groundwater Monitoring Results, December 2006 (submitted January 2007);
7. Groundwater Monitoring Results, March 2007 (submitted May 2007);

8. Groundwater Monitoring Results, June 2007 (submitted August 2007);
9. Groundwater Monitoring Results, September 2007 (submitted October 2007);
10. Groundwater Monitoring Results, January 2008 (submitted March 2008);
11. Groundwater Monitoring Results, April 2008 (submitted May 2008);
12. Groundwater Monitoring Results, July 2008 (submitted October 2008);
13. Groundwater Monitoring Results, October and December 2008 (submitted February 2009);
14. Groundwater Monitoring Results, February 2009 (submitted May 2009);
15. Groundwater Monitoring Results, May 2009 (submitted July 2009);
16. Groundwater Monitoring Results, July 2009 (submitted September 2009);
17. Groundwater Monitoring Results, October 2009 (submitted December 2009); and
18. Groundwater Monitoring Results, January, February, and March 2010 (submitted April 2010).

The following groundwater monitoring reports were previously submitted to the HDOH for groundwater monitoring wells outside the Facility:

1. Groundwater Monitoring Results, August 2009 (submitted September 2009);
2. Groundwater Monitoring Results, October 2009 (submitted December 2009); and
3. Groundwater Monitoring Results, January 2010 (submitted April 2010).

1.3 Background

The following sections provide a description of the site and information on the Facility and USTs.

1.3.1 Site Description

The Facility is located in Red Hill, Oahu, Hawaii. Land adjacent to the north of the Facility is occupied by the Halawa Correctional Facility and private businesses. Land to the south and west of the Facility includes the Coast Guard Reservation. Moanalua Valley is located east of the Facility (Dawson, 2006).

The Navy Public Works Department operates a potable water infiltration tunnel approximately 1,550 feet from the Facility (Dawson, 2006). The US Navy Well 2254-01 is located approximately 3,000 feet west of the Facility and provides approximately 24% of the potable water to the Pearl Harbor Water System, which serves approximately 52,200 military consumers (TEC, 2008).

1.3.2 Facility Information

The Facility consists of 18 active and two inactive USTs operated by Navy Fleet and Industrial Supply Center (FISC) Pearl Harbor. Each UST has a capacity of 12.5 million gallons. The Facility is located approximately 100 feet above the basal aquifer (Dawson, 2006).

In 2002, the US Navy installed a groundwater monitoring well (currently named RHMW01) into the basal aquifer, directly down-gradient from the Facility, within the lower access tunnel. Groundwater samples from this well indicated that petroleum from the Facility has migrated to the basal aquifer (AMEC, 2002). In 2005, the US Navy began quarterly monitoring of the aquifer to protect their down-gradient drinking water resource associated with the US Navy Well 2254-01.

By September 2005, the US Navy had installed two more groundwater monitoring wells (RHMW02 and RHMW03) within the Facility UST system, a groundwater monitoring well (RHMW04) north of the Facility adjacent to the US Navy Firing Range, and a groundwater monitoring well within the US Navy Well 2254-01 infiltration gallery (RHMW2254-01). Since 2005, RHMW01, RHMW02, RHMW03, and RHMW2254-01 have been sampled quarterly for TPH-DRO, TPH-GRO, VOCs, PAHs, and dissolved lead.

Due to increasing concentrations of contaminants of potential concern at the groundwater monitoring wells within the Facility (specifically RHMW02) during 2008, response measures were warranted. In April 2009, another groundwater monitoring well (RHMW05) was installed within the lower access tunnel between RHMW01 and RHMW2254-01. It was installed to identify the extent of contaminant migration before it reaches the infiltration gallery at RHMW2254-01.

Additionally, plans were made to sample three monitoring wells surrounding and outside of the Facility, RHMW04, OWDFMW01, and HDMW2253-03. RHMW04 was installed to provide contaminant chemistry data for water moving through the basal aquifer beneath the Facility. OWDFMW01 (originally known as MW08) was installed into the basal aquifer in 1998 for a Phase II Remedial Investigation/ Feasibility Study for the Red Hill Oily Waste Disposal Facility (Earth Tech Inc., 2000). It is located geographically down-gradient of the USTs and US Navy Well 2254-01. HDMW2253-03 is controlled by the State of Hawaii Commission on Water Resource Management. It is located between the Facility and the municipal drinking water supply well run by the City and County of Honolulu Board of Water Supply (Halawa Shaft pumping station 2354-01).

Table 1 summarizes basic groundwater monitoring well information, Figure 1 shows groundwater monitoring well locations, Appendix A provides the laboratory data, and Appendix B includes the well construction logs for RHMW04 and OWDFMW01.

Table 1. Monitoring Well Information

Groundwater Well	TOC Elevation (ft msl)	DTW (ft)	TD (ft)
RHMW04	313.03	293	320
OWDFMW01	138.94	120	142.8
HDMW2253-03	225	210	1,575

Notes:
DTW - Distance to water
TD - Total depth of well
TOC - Top of casing
ft – Feet
ft msl - Feet from mean sea level

1.3.3 UST Information

The USTs were constructed in the early 1940s. The tanks were constructed of steel and currently contain Jet Propulsion (JP)–5 fuel, JP-8, and F-76 (diesel marine fuel). Previously, several tanks stored Navy Special Fuel Oil, Navy Distillate, aviation gasoline, and motor gasoline. Each tank measures approximately 245 feet in height and 100 feet in diameter. The upper domes of the tanks lie at depths varying between approximately 100 feet and 200 feet below the existing ground surface (TEC, 2006).

1.4 Regulatory Updates

During the summer and fall of 2008, HDOH updated their EALs, which resulted in significant changes to the action levels associated with methylnaphthalenes. The drinking water toxicity EAL for these compounds was 240 μg/L. This concentration presumed that methylnaphthalenes were non-carcinogenic. Evidence that they are human carcinogens has now been accepted by the US Environmental Protection Agency (USEPA). As a result, HDOH adopted more rigorous EALs of 4.7 μg/L for 1-methylnaphthalene and 24 μg/L for 2-methylnaphthalene, corresponding to a residential tap water scenario, and a 1 in a million cancer risk (HDOH, 2008).

Also, the drinking water EAL for naphthalene was increased from 6.2 μg/L to 17 μg/L (HDOH, 2008). Finally, the HDOH Drinking Water EAL for TPH-DRO was increased from 100 μg/L to 210 μg/L, although the HDOH Groundwater Gross Contamination EAL for TPH-DRO remains 100 μg/L.

2.0 Sample Collection and Analyses

Field activities relating to groundwater sample collection were conducted on April 26, 2010. Groundwater samples were collected from three monitoring wells, RHMW04, OWDFMW01, and HDMW2253-03. Sampling and analysis were conducted according to *Red Hill Bulk Fuel Storage Facility Groundwater Protection Plan* (TEC, 2008). A total of six samples were collected as follows:

- one environmental sample from RHMW04, OWDFMW01, and HDMW2253-03;
- one duplicate sample from RHMW04 (sampled as RHMWA01 and reported as RHMW04D); and
- one matrix spike and matrix spike duplicate from OWDFMW01.

2.1 Monitoring Well Purging

RHMW04 and OWDFMW01 were purged prior to sampling. Well purging was considered complete when no less than three successive water quality parameter measurements had stabilized within approximately 10 percent. Field parameters were measured at regular intervals during well purging and included pH, temperature, specific conductivity, dissolved oxygen, and turbidity. Due to the well construction characteristics of HDMW2253-03, the well was not purged prior to sampling, but field parameters were recorded. Rather than purging, a grab sample was collected at a depth below the solid casing (which extends about 50 feet below the water table) and within the open-holed portion of the well.

2.2 Groundwater Sample Collection

Immediately following purging, RHMW04 was sampled directly from a dedicated bladder pump system, and OWDFMW01 was sampled using a disposable bailer. HDMW2253-03 was sampled using a disposable bailer designed to collect samples at desired depths. Samples were placed into sampling containers with appropriate preservatives [i.e., hydrochloric acid (HCl) for volatile organic analysis, nitric acid (HNO_3) for dissolved lead]. Dissolved lead samples were filtered in the field and placed in preserved bottles. Sample containers were labeled with the date, sample identification number, type of analysis, and sampler's name. The containers were placed on ice in sample coolers and transported under chain-of-custody procedures to the certified laboratory for analysis.

2.3 Groundwater Sample Analyses

Groundwater samples were analyzed by SGS Environmental Service, Inc. in Anchorage, Alaska for TPH-DRO and TPH-GRO by EPA Method 8015B, VOCs by EPA Method 8260B, PAHs by EPA Method 8270C SIM, and dissolved lead by EPA Method 6020.

3.0 Groundwater Sample Analytical Results

This section provides a summary of analytical results for groundwater samples collected from three monitoring wells, RHMW04, OWDFMW01, and HDMW2253-03. Duplicate sample results from monitoring well RHMW04 are reported in this document as RHMW04D. A summary of groundwater analytical results for TPH-DRO and TPH-GRO, VOCs, PAHs, and dissolved lead is included in Table 2. Complete analytical laboratory reports are provided in Appendix A.

3.1 April 2010 Sample Analytical Results

All groundwater samples were analyzed for TPH-DRO, TPH-GRO, VOCs, PAHs, and dissolved lead. The results for each groundwater monitoring well are discussed below.

RHMW04

No potential chemical of concern was detected above the laboratory method detection limit (MDL) in RHMW04 (Table 2).

Table 2. Analytical Results for Quarterly Groundwater Monitoring Release Response Report (April 26, 2010)
Red Hill Fuel Storage Facility, Pearl Harbor, Hawaii

Method	Chemical	HDOH Drinking Water EALs[1] for Human Toxicity UG/L	HDOH Groundwater Gross Contamination EALs[2] UG/L	HDMW2253-03 UG/L April 26, 2010				OWDFMW01 UG/L April 26, 2010				RHMW04 UG/L April 26, 2010				RHMW04D UG/L April 26, 2010			
				Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL
8015B (Petroleum)	TPH as DIESEL RANGE ORGANICS	210	100	ND	U	176	471	*288*	F	176	471	ND	U	174	465	ND	U	176	471
	TPH as GASOLINE RANGE ORGANICS	100	100	ND	U	30	100	ND	U	30	100	ND	U	30	100	ND	U	30	100
8270C SIM (PAHs)	1-METHYLNAPHTHALENE	4.7	10	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	2-METHYLNAPHTHALENE	24	10	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	ACENAPHTHENE	370	20	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	ACENAPHTHYLENE	240	2000	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	ANTHRACENE	1800	22	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	BENZO(a)ANTHRACENE	0.092	4.7	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	BENZO(a)PYRENE	0.2	0.81	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	BENZO(b)FLUORANTHENE	0.092	0.75	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	BENZO(g,h,i)PERYLENE	1500	0.13	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	BENZO(k)FLUORANTHENE	0.92	0.4	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	CHRYSENE	9.2	1	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	DIBENZ(a,h)ANTHRACENE	0.0092	0.52	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	FLUORANTHENE	1500	130	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	FLUORENE	240	950	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	INDENO(1,2,3-c,d)PYRENE	0.092	0.095	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	NAPHTHALENE	17	21	ND	U	0.036	0.116	ND	U	0.0365	0.118	ND	U	0.0365	0.118	ND	U	0.0365	0.118
	PHENANTHRENE	240	410	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
	PYRENE	180	68	ND	U	0.0174	0.0581	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588	ND	U	0.0176	0.0588
8260B (VOCs)	1,1,1,2-TETRACHLOROETHANE	0.52	50000	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	1,1,1-TRICHLOROETHANE	200	970	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,1,2,2-TETRACHLOROETHANE	0.067	500	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	1,1,2-TRICHLOROETHANE	5	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,1-DICHLOROETHANE	2.4	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,2,3-TRICHLOROPROPANE (TCP)	0.6	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,2,4-TRICHLOROBENZENE	70	3000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	0.04	10	ND	U	0.62	2	ND	U	0.62	2	ND	U	0.62	2	ND	U	0.62	2
	1,2-DIBROMOETHANE (EDB)	0.0065	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,2-DICHLOROBENZENE	600	10	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,2-DICHLOROETHANE	0.15	7000	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	1,2-DICHLOROPROPANE	5	10	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,3-DICHLOROBENZENE	180	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	1,4-DICHLOROBENZENE	75	5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	ACETONE	22000	20000	ND	U	3.1	10	ND	U	3.1	10	ND	U	3.1	10	ND	U	3.1	10
	BENZENE	5	170	ND	U	0.12	0.4	ND	U	0.12	0.4	ND	U	0.12	0.4	ND	U	0.12	0.4
	BROMODICHLOROMETHANE	0.22	50000	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	BROMOFORM	100	510	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	BROMOMETHANE	8.7	50000	ND	U	0.94	3	ND	U	0.94	3	ND	U	0.94	3	ND	U	0.94	3
	CARBON TETRACHLORIDE	5	520	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	CHLOROBENZENE	100	50	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	CHLOROETHANE	8600	16	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	CHLOROFORM	70	2400	ND	U	0.3	1	ND	U	0.3	1	ND	U	0.3	1	ND	U	0.3	1
	CHLOROMETHANE	1.8	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	cis-1,2-DICHLOROETHYLENE	70	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	cis-1,3-DICHLOROPROPENE	0.43	50000	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	DIBROMOCHLOROMETHANE	0.16	50000	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	ETHYLBENZENE	700	30	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	HEXACHLOROBUTADIENE	0.86	6	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	M,P-XYLENE (SUM OF ISOMERS)	10000	20	ND	U	0.62	2	ND	U	0.62	2	ND	U	0.62	2	ND	U	0.62	2
	METHYL ETHYL KETONE (2-BUTANONE)	7100	8400	ND	U	3.1	10	ND	U	3.1	10	ND	U	3.1	10	ND	U	3.1	10
	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	2000	1300	ND	U	3.1	10	ND	U	3.1	10	ND	U	3.1	10	ND	U	3.1	10
	METHYLENE CHLORIDE	4.8	9100	ND	U	1	5	ND	U	1	5	ND	U	1	5	ND	U	1	5
	NAPHTHALENE	17	21	ND	U	0.62	2	ND	U	0.62	2	ND	U	0.62	2	ND	U	0.62	2
	STYRENE	100	10	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	TETRACHLOROETHYLENE(PCE)	5	170	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	TOLUENE	1000	40	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	trans-1,2-DICHLOROETHENE	100	260	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	TRICHLOROETHYLENE (TCE)	5	310	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	VINYL CHLORIDE	2	3400	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1
	XYLENES, TOTAL	10000	20	ND	U	0.94	3	ND	U	0.94	3	ND	U	0.94	3	ND	U	0.94	3
6020	LEAD	15	50000	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1	ND	U	0.31	1

PAHs - Polynuclear aromatic hydrocarbons
VOCs - Volatile organic compounds
UG/L - Micrograms per Liter
Q - Data qualifier
U - Indicates that the compound was analyzed for but not detected at or above the stated limit
F - Indicates that the compound was identified but the concentration was above the MDL and below the RL
200 - Result exceeds one or both HDOH EALs
MDL - Method detection limit
RL - Reporting limit
TPH - Total petroleum hydrocarbons
ND - Indicates that the compound was not detected above the stated method detection limit

[1] Final Drinking Water Action Levels for Human Toxicity, Table D-3a, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* , HDOH, 2009
[2] Groundwater Gross Contamination Action Levels, Table G-1, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* , HDOH, 2009

OWDFMW01
TPH-DRO was detected at 288F µg/L [F indicates that the compound was identified at a concentration above the MDL, but below the reporting limit (RL), therefore is considered an estimate], exceeding the HDOH Groundwater Gross Contamination EAL and Drinking Water EAL (i.e., 100 µg/L and 210 µg/L, respectively). No other potential chemical of concern was detected above the laboratory MDLs in OWDFMW01 (Table 2).

HDMW2253-03
No potential chemical of concern was detected above the laboratory MDLs in HDMW2253-03 (Table 2).

4.0 Summary and Conclusions

Summary
At OWDFMW01, TPH-DRO was detected at 288F µg/L. This TPH-DRO concentration is above the HDOH Drinking Water EAL, and the HDOH Gross Contamination EAL. However, the April 2010 results show a significant decrease in concentration for TPH-DRO at this location. The previous sampling event conducted in January 2010 at OWDFMW01 had a TPH-DRO concentration of 1,490 µg/L.

No other potential chemicals of concern were detected above the laboratory MDLs in OWDFMW01, HDMW2253-03, or RHMW04 during the April 2010 sampling event.

Conclusions/Recommendations
No compounds were detected above the MDLs during the August 2009 sampling event at OWDFMW01 and RHMW04 (HDMW2253-03 was not sampled in August 2009 due to access issues); or during the October 2009 sampling event at OWDFMW01, RHMW04, or HDMW2253-03.

Despite the detection of TPH-DRO at HDMW2253-03 during January 2010, TPH-DRO was not detected above the laboratory MDL during the April 2010 sampling event. Since two or more consecutive sampling events of increasing (or decreasing) concentrations of TPH-DRO at HDMW2253-03 have not occurred, no trend for TPH-DRO has been established at this location.

TPH-DRO detected at OWDFMW01 during January 2010 significantly decreased in April 2010 (i.e., from 1,490 µg/L in January 2010 to 288F µg/L in April 2010).

TPH-DRO (detected at both HDMW2253-03 and OWDFMW01 in January 2010 and only at OWDFMW01 in April 2010) has been the only parameter detected above HDOH Drinking Water EALs during all four outside well sampling rounds. For the three wells surrounding the Facility (i.e., RHMW04, OWDFMW01, and HDMW2253-03), only one more sampling event remains tasked under this contract (i.e., to conduct the fourth and final round of sampling at HDMW2253-03 since it was not sampled in August 2009). Consequently, consideration should be given to conducting follow-on, periodic (perhaps semi-annually), targeted monitoring of these outside wells for TPH-DRO.

Halawa Shaft BOWS
Pump Station
2354-01

North Halawa Stream

H-3 Freeway

South Halawa Stream

2253-03

RHMW04

Navy
Firing
Range

Halawa
Correctional
Facility

Halawa
Industrial
Park

Red Hill Oily Waste
Disposal Facility

Stream Box Culvert

OWDFMW2

OWDFMW1

U.S. Navy Pumping Station
at Red Hill
2254-01

RHMW03

RHMW02

RHMW01

US Navy
Red Hill Fuel Storage Facility

RHMW05

Coast Guard
Reservation

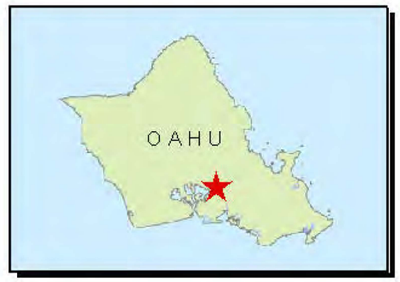
Boundary of Red Hill
Naval Reservation

Moanalua
Village

Moanalua Stream

Legend

- Red Hill UST ID Number
- Parcel
- 40-foot Interval Contour Line
- Unpaved Road
- Road
- Stream
- Red Hill Navy Installation Boundary
- Red Hill Tunnels
- 2254-01 Infiltration Gallery
- Halawa Correctional Facility Boundary
- Coast Guard Reservation



N

Meters
0 175 350

0 312.5 625 1,250
Feet

Figure 1

Site Plan Map
Red Hill Fuel Storage Facility
Oahu, Hawaii

I:\Projects\Red Hill\figures\Draft Technical Report\figure 1-2 Site Plan Map 4Nov2010.ai

5.0 References

AMEC. *Red Hill Bulk Fuel Storage Facility Investigation Report*, Prepared for NAVFAC Pacific, August 2002.

Dawson Group, Inc. *Fourth Quarter 2005 Groundwater Sampling Report, Red Hill Fuel Storage Facility, Hawaii.* February 2006.

Earth Tech, Inc. *Remedial Investigation Phase II, Volume I, Technical Report, Red Hill Oily Waste Disposal Facility, Halawa, Oahu, Hawaii*. September 2000.

Hawaii Administrative Rules, Title 11, Chapter 281, Subchapter 7.

HDOH. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Summary Lookup Tables.* March 2009.

HDOH. *Use of May 2005 Environmental Action Levels ("EALs") at Leaking Underground Storage Tank Sites*. Memo. July 2005.

HDOH. *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater*. Summer 2008 (updated October 2008).

TEC, Inc. *Red Hill Bulk Fuel Storage Facility, Final – Addendum Planning Documents, Pearl Harbor, Hawaii.* May 2006.

TEC, Inc. *Red Hill Bulk Fuel Storage Facility, Final Groundwater Protection Plan, Pearl Harbor, Hawaii.* January 2008 revised in December 2009.

Appendix A

Laboratory Analytical Reports

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	3354-010 Red Hill BFSF
Client:	The Environmental Company, Inc. (TEC)
SGS Work Order:	1101763

Released by:

Contents:

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

Case Narrative

Customer: THEENVC **The Environmental Company, Inc. (TEC)**

Project: 1101763 **3354-010 Red Hill BFSF**

Refer to the sample receipt form for information on sample condition.

1101763002 BMS **OWDFMW01-WG-04 MS**

8260B - MS recovery for chloroethane does not meet QC criteria (biased high). This analyte was not detected above LOQ in the associated samples.

1101763003 BMSD **OWDFMW01-WG-04 MSD**

8260B - MSD recovery for chloroethane does not meet QC criteria (biased high). This analyte was not detected above LOQ in the associated samples.

958813 CCV **VMS/11191]**

8260B - CCV recovery for bromomethane, acetone, and carbon tetrachloride does not meet QC criteria (biased high). These analytes were not detected above LOQ in the associated samples.

Laboratory Analytical Report

Client: **The Environmental Company, Inc.**
1003 Bishop Street,
Pauahi Tower Suite 1550
Honolulu, HI 96813

Attn: **Rick Adkisson**
T: (808)528-1445 F:(808)528-0768

Project: **3354-010 Red Hill BFSF**

Workorder No.: **1101763**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Jennifer Serna

jennifer.serna@sgs.com
Project Manager

Contents (Bookmarked in PDF):

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RL	Reporting Limit
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

SAMPLE SUMMARY

Print Date: 5/11/2010 12:34 pm

Client Name: The Environmental Company, Inc. (TEC)
Project Name: 3354-010 Red Hill BFSF
Workorder No.: 1101763

Analytical Methods

Method Description	Analytical Method
8270 PAH SIM Semi-Vol GC/MS Liq/Liq ext.	8270D SIMS
AFCEE 3.1 8260 (W)	SW8260B
Dissolved Metals by ICP-MS	SW6020
DRO by 8015C (W)	SW8015C
GRO (W)	SW8015C

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1101763001	OWDFMW01-WG-04
1101763002	OWDFMW01-WG-04 MS
1101763003	OWDFMW01-WG-04 MSD
1101763004	RHMW04-WG-04
1101763005	RHMWA01-WG-04
1101763006	HDMW2253-03-WG-04
1101763007	TB01-WG-04

Client Sample ID: **OWDFMW01-WG-04**
SGS Ref. #: 1101763001
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:35
Receipt Date/Time: 04/28/10 11:50

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	0.620 U	1.00	0.310	ug/L	5	MMS6414	MXX22933	

Batch Information

Analytical Batch: MMS6414
Analytical Method: SW6020
Analysis Date/Time: 05/04/10 11:31
Dilution Factor: 5

Prep Batch: MXX22933
Prep Method: SW3010A
Prep Date/Time: 04/29/10 16:05

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1101763001-K
Analyst: SCL

Client Sample ID: **OWDFMW01-WG-04**
SGS Ref. #: 1101763001
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:35
Receipt Date/Time: 04/28/10 11:50

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	60.0 U	100	30.0	ug/L	1	VFC9914	VXX20617	
4-Bromofluorobenzene <surr>	108	50-150		%	1	VFC9914	VXX20617	

Batch Information

Analytical Batch: VFC9914
Analytical Method: SW8015C
Analysis Date/Time: 05/07/10 10:16
Dilution Factor: 1

Prep Batch: VXX20617
Prep Method: SW5030B
Prep Date/Time: 05/07/10 08:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763001-A
Analyst: EAB

Client Sample ID: **OWDFMW01-WG-04**
SGS Ref. #: 1101763001
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:35
Receipt Date/Time: 04/28/10 11:50

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.288J	0.471	0.176	mg/L	1	XFC9168	XXX22543	
5a Androstane <surr>	88.5	50-150		%	1	XFC9168	XXX22543	

Batch Information

Analytical Batch: XFC9168
Analytical Method: SW8015C
Analysis Date/Time: 05/03/10 16:38
Dilution Factor: 1

Prep Batch: XXX22543
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:15

Initial Prep Wt./Vol.: 850 mL
Prep Extract Vol.: 1 mL
Container ID:1101763001-I
Analyst: LCE

Client Sample ID: **OWDFMW01-WG-04**
SGS Ref. #: 1101763001
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:35
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,1,1,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,1-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1,2,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,2-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dibromo-3-chloropropane	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
1,2-Dibromoethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3,5-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichloropropane	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1-Chlorohexane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2-Butanone (MEK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
2-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Isopropyltoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Methyl-2-pentanone (MIBK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Acetone	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Benzene	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
Bromobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromochloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromodichloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Bromoform	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromomethane	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
Carbon tetrachloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	

Client Sample ID: **OWDFMW01-WG-04**
SGS Ref. #: 1101763001
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:35
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chloroform	0.600 U	1.00	0.300	ug/L	1	VMS11191	VXX20600	
Chloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,3-Dichloropropene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromochloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromomethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Dichlorodifluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Ethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Hexachlorobutadiene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Isopropylbenzene (Cumene)	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Methylene chloride	2.00 U	5.00	1.00	ug/L	1	VMS11191	VXX20600	
Methyl-t-butyl ether	3.00 U	5.00	1.50	ug/L	1	VMS11191	VXX20600	
Naphthalene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
n-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
n-Propylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
o-Xylene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
P & M -Xylene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
sec-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Styrene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
tert-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Tetrachloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Toluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,3-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichlorofluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Vinyl chloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Xylenes (total)	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane-D4 <surr>	103	73-120		%	1	VMS11191	VXX20600	
4-Bromofluorobenzene <surr>	107	76-120		%	1	VMS11191	VXX20600	
Toluene-d8 <surr>	102	80-120		%	1	VMS11191	VXX20600	

Client Sample ID: **OWDFMW01-WG-04**
SGS Ref. #: 1101763001
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:35
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers

Batch Information

Analytical Batch: VMS11191
Analytical Method: SW8260B
Analysis Date/Time: 04/30/10 13:38
Dilution Factor: 1

Prep Batch: VXX20600
Prep Method: SW5030B
Prep Date/Time: 04/30/10 08:55

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763001-D
Analyst: JPI

Client Sample ID: **OWDFMW01-WG-04**
SGS Ref. #: 1101763001
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:35
Receipt Date/Time: 04/28/10 11:50

Polynuclear Aromatics GC/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1-Methylnaphthalene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
2-Methylnaphthalene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Acenaphthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Acenaphthylene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo(a)Anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[a]pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[b]Fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[g,h,i]perylene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[k]fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Chrysene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Dibenzo[a,h]anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Fluorene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Indeno[1,2,3-c,d] pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Naphthalene	0.0730 U	0.118	0.0365	ug/L	1	XMS5395	XXX22544	
Phenanthrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Terphenyl-d14 <surr>	81.8	50-126		%	1	XMS5395	XXX22544	

Batch Information

Analytical Batch: XMS5395
Analytical Method: 8270D SIMS
Analysis Date/Time: 05/08/10 09:39
Dilution Factor: 1

Prep Batch: XXX22544
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:00

Initial Prep Wt./Vol.: 850 mL
Prep Extract Vol.: 1 mL
Container ID:1101763001-G
Analyst: JDH

Client Sample ID: **RHMW04-WG-04**
SGS Ref. #: 1101763004
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 13:10
Receipt Date/Time: 04/28/10 11:50

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	0.620 U	1.00	0.310	ug/L	5	MMS6414	MXX22933	

Batch Information

Analytical Batch: MMS6414
Analytical Method: SW6020
Analysis Date/Time: 05/04/10 11:53
Dilution Factor: 5

Prep Batch: MXX22933
Prep Method: SW3010A
Prep Date/Time: 04/29/10 16:05

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1101763004-K
Analyst: SCL

Client Sample ID: **RHMW04-WG-04**
SGS Ref. #: 1101763004
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 13:10
Receipt Date/Time: 04/28/10 11:50

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	60.0 U	100	30.0	ug/L	1	VFC9914	VXX20617	
4-Bromofluorobenzene <surr>	107	50-150		%	1	VFC9914	VXX20617	

Batch Information

Analytical Batch: VFC9914
Analytical Method: SW8015C
Analysis Date/Time: 05/07/10 11:15
Dilution Factor: 1

Prep Batch: VXX20617
Prep Method: SW5030B
Prep Date/Time: 05/07/10 08:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763004-A
Analyst: EAB

Client Sample ID: **RHMW04-WG-04**
SGS Ref. #: 1101763004
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 13:10
Receipt Date/Time: 04/28/10 11:50

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.348 U	0.465	0.174	mg/L	1	XFC9168	XXX22543	
5a Androstane <surr>	98	50-150		%	1	XFC9168	XXX22543	

Batch Information

Analytical Batch: XFC9168
Analytical Method: SW8015C
Analysis Date/Time: 05/03/10 17:41
Dilution Factor: 1

Prep Batch: XXX22543
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:15

Initial Prep Wt./Vol.: 860 mL
Prep Extract Vol.: 1 mL
Container ID:1101763004-I
Analyst: LCE

Client Sample ID: **RHMW04-WG-04**
SGS Ref. #: 1101763004
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 13:10
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,1,1,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,1-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1,2,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,2-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dibromo-3-chloropropane	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
1,2-Dibromoethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3,5-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichloropropane	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1-Chlorohexane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2-Butanone (MEK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
2-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Isopropyltoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Methyl-2-pentanone (MIBK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Acetone	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Benzene	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
Bromobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromochloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromodichloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Bromoform	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromomethane	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
Carbon tetrachloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	

Client Sample ID: **RHMW04-WG-04**
SGS Ref. #: 1101763004
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 13:10
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chloroform	0.600 U	1.00	0.300	ug/L	1	VMS11191	VXX20600	
Chloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,3-Dichloropropene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromochloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromomethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Dichlorodifluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Ethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Hexachlorobutadiene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Isopropylbenzene (Cumene)	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Methylene chloride	2.00 U	5.00	1.00	ug/L	1	VMS11191	VXX20600	
Methyl-t-butyl ether	3.00 U	5.00	1.50	ug/L	1	VMS11191	VXX20600	
Naphthalene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
n-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
n-Propylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
o-Xylene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
P & M -Xylene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
sec-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Styrene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
tert-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Tetrachloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Toluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,3-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichlorofluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Vinyl chloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Xylenes (total)	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane-D4 <surr>	98.8	73-120		%	1	VMS11191	VXX20600	
4-Bromofluorobenzene <surr>	106	76-120		%	1	VMS11191	VXX20600	
Toluene-d8 <surr>	99.7	80-120		%	1	VMS11191	VXX20600	

Client Sample ID: **RHMW04-WG-04**
SGS Ref. #: 1101763004
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 13:10
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers

Batch Information

Analytical Batch: VMS11191
Analytical Method: SW8260B
Analysis Date/Time: 04/30/10 16:15
Dilution Factor: 1

Prep Batch: VXX20600
Prep Method: SW5030B
Prep Date/Time: 04/30/10 08:55

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763004-D
Analyst: JPI

Client Sample ID: **RHMW04-WG-04**
SGS Ref. #: 1101763004
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 13:10
Receipt Date/Time: 04/28/10 11:50

Polynuclear Aromatics GC/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1-Methylnaphthalene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
2-Methylnaphthalene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Acenaphthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Acenaphthylene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo(a)Anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[a]pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[b]Fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[g,h,i]perylene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[k]fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Chrysene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Dibenzo[a,h]anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Fluorene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Indeno[1,2,3-c,d] pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Naphthalene	0.0730 U	0.118	0.0365	ug/L	1	XMS5395	XXX22544	
Phenanthrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Terphenyl-d14 <surr>	83.3	50-126		%	1	XMS5395	XXX22544	

Batch Information

Analytical Batch: XMS5395
Analytical Method: 8270D SIMS
Analysis Date/Time: 05/08/10 11:18
Dilution Factor: 1

Prep Batch: XXX22544
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:00

Initial Prep Wt./Vol.: 850 mL
Prep Extract Vol.: 1 mL
Container ID:1101763004-G
Analyst: JDH

Client Sample ID: **RHMWA01-WG-04**
SGS Ref. #: 1101763005
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 12:05
Receipt Date/Time: 04/28/10 11:50

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	0.620 U	1.00	0.310	ug/L	5	MMS6414	MXX22933	

Batch Information

Analytical Batch: MMS6414
Analytical Method: SW6020
Analysis Date/Time: 05/04/10 11:55
Dilution Factor: 5

Prep Batch: MXX22933
Prep Method: SW3010A
Prep Date/Time: 04/29/10 16:05

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1101763005-K
Analyst: SCL

Client Sample ID: **RHMWA01-WG-04**
SGS Ref. #: 1101763005
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 12:05
Receipt Date/Time: 04/28/10 11:50

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	60.0 U	100	30.0	ug/L	1	VFC9914	VXX20617	
4-Bromofluorobenzene <surr>	108	50-150		%	1	VFC9914	VXX20617	

Batch Information

Analytical Batch: VFC9914
Analytical Method: SW8015C
Analysis Date/Time: 05/07/10 11:34
Dilution Factor: 1

Prep Batch: VXX20617
Prep Method: SW5030B
Prep Date/Time: 05/07/10 08:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763005-A
Analyst: EAB

Client Sample ID: **RHMWA01-WG-04**
SGS Ref. #: 1101763005
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 12:05
Receipt Date/Time: 04/28/10 11:50

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.352 U	0.471	0.176	mg/L	1	XFC9168	XXX22543	
5a Androstane <surr>	98.8	50-150		%	1	XFC9168	XXX22543	

Batch Information

Analytical Batch: XFC9168
Analytical Method: SW8015C
Analysis Date/Time: 05/03/10 18:02
Dilution Factor: 1

Prep Batch: XXX22543
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:15

Initial Prep Wt./Vol.: 850 mL
Prep Extract Vol.: 1 mL
Container ID:1101763005-I
Analyst: LCE

Client Sample ID: **RHMWA01-WG-04**
SGS Ref. #: 1101763005
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 12:05
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,1,1,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,1-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1,2,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,2-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dibromo-3-chloropropane	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
1,2-Dibromoethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3,5-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichloropropane	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1-Chlorohexane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2-Butanone (MEK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
2-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Isopropyltoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Methyl-2-pentanone (MIBK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Acetone	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Benzene	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
Bromobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromochloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromodichloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Bromoform	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromomethane	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
Carbon tetrachloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	

Client Sample ID: **RHMWA01-WG-04**
SGS Ref. #: 1101763005
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 12:05
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chloroform	0.600 U	1.00	0.300	ug/L	1	VMS11191	VXX20600	
Chloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,3-Dichloropropene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromochloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromomethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Dichlorodifluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Ethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Hexachlorobutadiene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Isopropylbenzene (Cumene)	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Methylene chloride	2.00 U	5.00	1.00	ug/L	1	VMS11191	VXX20600	
Methyl-t-butyl ether	3.00 U	5.00	1.50	ug/L	1	VMS11191	VXX20600	
Naphthalene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
n-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
n-Propylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
o-Xylene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
P & M -Xylene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
sec-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Styrene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
tert-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Tetrachloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Toluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,3-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichlorofluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Vinyl chloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Xylenes (total)	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane-D4 <surr>	99.4	73-120		%	1	VMS11191	VXX20600	
4-Bromofluorobenzene <surr>	108	76-120		%	1	VMS11191	VXX20600	
Toluene-d8 <surr>	104	80-120		%	1	VMS11191	VXX20600	

Client Sample ID: **RHMWA01-WG-04**
SGS Ref. #: 1101763005
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 12:05
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers

Batch Information

Analytical Batch: VMS11191
Analytical Method: SW8260B
Analysis Date/Time: 04/30/10 16:46
Dilution Factor: 1

Prep Batch: VXX20600
Prep Method: SW5030B
Prep Date/Time: 04/30/10 08:55

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763005-D
Analyst: JPI

Client Sample ID: **RHMWA01-WG-04**
SGS Ref. #: 1101763005
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 12:05
Receipt Date/Time: 04/28/10 11:50

Polynuclear Aromatics GC/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1-Methylnaphthalene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
2-Methylnaphthalene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Acenaphthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Acenaphthylene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo(a)Anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[a]pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[b]Fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[g,h,i]perylene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Benzo[k]fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Chrysene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Dibenzo[a,h]anthracene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Fluoranthene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Fluorene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Indeno[1,2,3-c,d] pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Naphthalene	0.0730 U	0.118	0.0365	ug/L	1	XMS5395	XXX22544	
Phenanthrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Pyrene	0.0352 U	0.0588	0.0176	ug/L	1	XMS5395	XXX22544	
Terphenyl-d14 <surr>	84.3	50-126		%	1	XMS5395	XXX22544	

Batch Information

Analytical Batch: XMS5395
Analytical Method: 8270D SIMS
Analysis Date/Time: 05/08/10 11:51
Dilution Factor: 1

Prep Batch: XXX22544
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:00

Initial Prep Wt./Vol.: 850 mL
Prep Extract Vol.: 1 mL
Container ID:1101763005-G
Analyst: JDH

Client Sample ID: **HDMW2253-03-WG-04**
SGS Ref. #: 1101763006
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 09:40
Receipt Date/Time: 04/28/10 11:50

Dissolved Metals by ICP/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	0.620 U	1.00	0.310	ug/L	5	MMS6414	MXX22933	

Batch Information

Analytical Batch: MMS6414
Analytical Method: SW6020
Analysis Date/Time: 05/04/10 11:57
Dilution Factor: 5

Prep Batch: MXX22933
Prep Method: SW3010A
Prep Date/Time: 04/29/10 16:05

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1101763006-K
Analyst: SCL

Client Sample ID: **HDMW2253-03-WG-04**
SGS Ref. #: 1101763006
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 09:40
Receipt Date/Time: 04/28/10 11:50

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	60.0 U	100	30.0	ug/L	1	VFC9914	VXX20617	
4-Bromofluorobenzene <surr>	108	50-150		%	1	VFC9914	VXX20617	

Batch Information

Analytical Batch: VFC9914
Analytical Method: SW8015C
Analysis Date/Time: 05/07/10 11:53
Dilution Factor: 1

Prep Batch: VXX20617
Prep Method: SW5030B
Prep Date/Time: 05/07/10 08:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763006-A
Analyst: EAB

Client Sample ID: **HDMW2253-03-WG-04**
SGS Ref. #: 1101763006
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 09:40
Receipt Date/Time: 04/28/10 11:50

Semivolatile Organic Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.352 U	0.471	0.176	mg/L	1	XFC9168	XXX22543	
5a Androstane <surr>	100	50-150		%	1	XFC9168	XXX22543	

Batch Information

Analytical Batch: XFC9168
Analytical Method: SW8015C
Analysis Date/Time: 05/03/10 18:23
Dilution Factor: 1

Prep Batch: XXX22543
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:15

Initial Prep Wt./Vol.: 850 mL
Prep Extract Vol.: 1 mL
Container ID:1101763006-I
Analyst: LCE

Client Sample ID: **HDMW2253-03-WG-04**
SGS Ref. #: 1101763006
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 09:40
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,1,1,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,1-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1,2,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,2-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dibromo-3-chloropropane	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
1,2-Dibromoethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3,5-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichloropropane	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1-Chlorohexane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2-Butanone (MEK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
2-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Isopropyltoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Methyl-2-pentanone (MIBK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Acetone	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Benzene	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
Bromobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromochloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromodichloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Bromoform	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromomethane	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
Carbon tetrachloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	

Client Sample ID: **HDMW2253-03-WG-04**
SGS Ref. #: 1101763006
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 09:40
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chloroform	0.600 U	1.00	0.300	ug/L	1	VMS11191	VXX20600	
Chloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,3-Dichloropropene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromochloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromomethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Dichlorodifluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Ethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Hexachlorobutadiene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Isopropylbenzene (Cumene)	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Methylene chloride	2.00 U	5.00	1.00	ug/L	1	VMS11191	VXX20600	
Methyl-t-butyl ether	3.00 U	5.00	1.50	ug/L	1	VMS11191	VXX20600	
Naphthalene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
n-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
n-Propylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
o-Xylene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
P & M -Xylene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
sec-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Styrene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
tert-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Tetrachloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Toluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,3-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichlorofluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Vinyl chloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Xylenes (total)	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane-D4 <surr>	98.5	73-120		%	1	VMS11191	VXX20600	
4-Bromofluorobenzene <surr>	108	76-120		%	1	VMS11191	VXX20600	
Toluene-d8 <surr>	102	80-120		%	1	VMS11191	VXX20600	

Client Sample ID: **HDMW2253-03-WG-04**
SGS Ref. #: 1101763006
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 09:40
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers

Batch Information

Analytical Batch: VMS11191
Analytical Method: SW8260B
Analysis Date/Time: 04/30/10 17:18
Dilution Factor: 1

Prep Batch: VXX20600
Prep Method: SW5030B
Prep Date/Time: 04/30/10 08:55

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763006-D
Analyst: JPI

Client Sample ID: **HDMW2253-03-WG-04**
SGS Ref. #: 1101763006
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 09:40
Receipt Date/Time: 04/28/10 11:50

Polynuclear Aromatics GC/MS

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1-Methylnaphthalene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
2-Methylnaphthalene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Acenaphthene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Acenaphthylene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Anthracene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Benzo(a)Anthracene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Benzo[a]pyrene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Benzo[b]Fluoranthene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Benzo[g,h,i]perylene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Benzo[k]fluoranthene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Chrysene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Dibenzo[a,h]anthracene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Fluoranthene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Fluorene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Indeno[1,2,3-c,d] pyrene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Naphthalene	0.0720 U	0.116	0.0360	ug/L	1	XMS5395	XXX22544	
Phenanthrene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Pyrene	0.0348 U	0.0581	0.0174	ug/L	1	XMS5395	XXX22544	
Terphenyl-d14 <surr>	75.9	50-126		%	1	XMS5395	XXX22544	

Batch Information

Analytical Batch: XMS5395
Analytical Method: 8270D SIMS
Analysis Date/Time: 05/08/10 12:24
Dilution Factor: 1

Prep Batch: XXX22544
Prep Method: SW3520C
Prep Date/Time: 04/29/10 08:00

Initial Prep Wt./Vol.: 860 mL
Prep Extract Vol.: 1 mL
Container ID:1101763006-G
Analyst: JDH

Client Sample ID: **TB01-WG-04**
SGS Ref. #: 1101763007
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:05
Receipt Date/Time: 04/28/10 11:50

Volatile Fuels Department

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	60.0 U	100	30.0	ug/L	1	VFC9914	VXX20617	
4-Bromofluorobenzene <surr>	108	50-150		%	1	VFC9914	VXX20617	

Batch Information

Analytical Batch: VFC9914
Analytical Method: SW8015C
Analysis Date/Time: 05/07/10 12:12
Dilution Factor: 1

Prep Batch: VXX20617
Prep Method: SW5030B
Prep Date/Time: 05/07/10 08:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763007-B
Analyst: EAB

Client Sample ID: **TB01-WG-04**
SGS Ref. #: 1101763007
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:05
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
1,1,1,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,1-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1,2,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,1,2-Trichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,1-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,3-Trichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2,4-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dibromo-3-chloropropane	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
1,2-Dibromoethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3,5-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
1,3-Dichloropropane	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
1-Chlorohexane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
2-Butanone (MEK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
2-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Chlorotoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Isopropyltoluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
4-Methyl-2-pentanone (MIBK)	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Acetone	6.20 U	10.0	3.10	ug/L	1	VMS11191	VXX20600	
Benzene	0.240 U	0.400	0.120	ug/L	1	VMS11191	VXX20600	
Bromobenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromochloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromodichloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Bromoform	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Bromomethane	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
Carbon tetrachloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chlorobenzene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	

Client Sample ID: **TB01-WG-04**
SGS Ref. #: 1101763007
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:05
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Chloroform	0.600 U	1.00	0.300	ug/L	1	VMS11191	VXX20600	
Chloromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
cis-1,3-Dichloropropene	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromochloromethane	0.300 U	0.500	0.150	ug/L	1	VMS11191	VXX20600	
Dibromomethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Dichlorodifluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Ethylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Hexachlorobutadiene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Isopropylbenzene (Cumene)	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Methylene chloride	2.00 U	5.00	1.00	ug/L	1	VMS11191	VXX20600	
Methyl-t-butyl ether	3.00 U	5.00	1.50	ug/L	1	VMS11191	VXX20600	
Naphthalene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
n-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
n-Propylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
o-Xylene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
P & M -Xylene	1.24 U	2.00	0.620	ug/L	1	VMS11191	VXX20600	
sec-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Styrene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
tert-Butylbenzene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Tetrachloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Toluene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
trans-1,3-Dichloropropene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichloroethene	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Trichlorofluoromethane	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Vinyl chloride	0.620 U	1.00	0.310	ug/L	1	VMS11191	VXX20600	
Xylenes (total)	1.88 U	3.00	0.940	ug/L	1	VMS11191	VXX20600	
1,2-Dichloroethane-D4 <surr>	101	73-120		%	1	VMS11191	VXX20600	
4-Bromofluorobenzene <surr>	106	76-120		%	1	VMS11191	VXX20600	
Toluene-d8 <surr>	102	80-120		%	1	VMS11191	VXX20600	

Client Sample ID: **TB01-WG-04**
SGS Ref. #: 1101763007
Project ID: 3354-010 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 04/26/10 08:05
Receipt Date/Time: 04/28/10 11:50

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers

Batch Information

Analytical Batch: VMS11191
Analytical Method: SW8260B
Analysis Date/Time: 04/30/10 12:35
Dilution Factor: 1

Prep Batch: VXX20600
Prep Method: SW5030B
Prep Date/Time: 04/30/10 08:55

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1101763007-A
Analyst: JPI

SGS Ref.#	958413	Method Blank	**Printed Date/Time**	05/11/2010 12:34
Client Name	The Environmental Company, Inc. (TEC)		**Prep Batch**	XXX22543
Project Name/#	3354-010 Red Hill BFSF		**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)		**Date**	04/29/2010

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	0.300 U	0.400	0.150	mg/L	05/03/10
Surrogates					
5a Androstane <surr>	105	60-120		%	05/03/10
Batch XFC9168					
Method SW8015C					
Instrument HP 7890A FID SV E R					

SGS Ref.#	958415 Method Blank	**Printed Date/Time**	05/11/2010 12:34
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	XXX22544
Project Name/#	3354-010 Red Hill BFSF	**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)	**Date**	04/29/2010

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Polynuclear Aromatics GC/MS					
1-Methylnaphthalene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
2-Methylnaphthalene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Acenaphthene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Acenaphthylene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Anthracene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Benzo(a)Anthracene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Benzo[a]pyrene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Benzo[b]Fluoranthene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Benzo[g,h,i]perylene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Benzo[k]fluoranthene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Chrysene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Dibenzo[a,h]anthracene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Fluoranthene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Fluorene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Indeno[1,2,3-c,d] pyrene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Naphthalene	0.0620 U	0.100	0.0310	ug/L	05/08/10
Phenanthrene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Pyrene	0.0300 U	0.0500	0.0150	ug/L	05/08/10
Surrogates					
Terphenyl-d14 <surr>	86.8	50-126		%	05/08/10

Batch XMS5395
Method 8270D SIMS
Instrument HP 6890 Series II MS2 SVOA

SGS Ref.#	958689	Method Blank	**Printed Date/Time**		05/11/2010 12:34
Client Name	The Environmental Company, Inc. (TEC)		**Prep**	**Batch**	MXX22933
Project Name/#	3354-010 Red Hill BFSF			**Method**	SW3010A
Matrix	Water (Surface, Eff., Ground)			**Date**	04/29/2010

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Metals by ICP/MS					
Lead	0.620 U	1.00	0.310	ug/L	05/04/10
Batch	MMS6414				
Method	SW6020				
Instrument	Perkin Elmer Sciex ICP-MS P3				

SGS Ref.#	958806	Method Blank	**Printed Date/Time**	05/11/2010	12:34
Client Name	The Environmental Company, Inc. (TEC)		**Prep Batch**	VXX20600	
Project Name/#	3354-010 Red Hill BFSF		**Method**	SW5030B	
Matrix	Water (Surface, Eff., Ground)		**Date**	04/30/2010	

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006, 1101763007

Parameter	Results	LOQ/CL	DL	Units	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS Ref.#	958806 Method Blank	**Printed Date/Time**	05/11/2010 12:34
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	VXX20600
Project Name/#	3354-010 Red Hill BFSF	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	04/30/2010

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
1,1,1,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	04/30/10
1,1,1-Trichloroethane	0.620 U	1.00	0.310	ug/L	04/30/10
1,1,2,2-Tetrachloroethane	0.300 U	0.500	0.150	ug/L	04/30/10
1,1,2-Trichloroethane	0.620 U	1.00	0.310	ug/L	04/30/10
1,1-Dichloroethane	0.620 U	1.00	0.310	ug/L	04/30/10
1,1-Dichloroethene	0.620 U	1.00	0.310	ug/L	04/30/10
1,1-Dichloropropene	0.620 U	1.00	0.310	ug/L	04/30/10
1,2,3-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	04/30/10
1,2,3-Trichloropropane	0.620 U	1.00	0.310	ug/L	04/30/10
1,2,4-Trichlorobenzene	0.620 U	1.00	0.310	ug/L	04/30/10
1,2,4-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	04/30/10
1,2-Dibromo-3-chloropropane	1.24 U	2.00	0.620	ug/L	04/30/10
1,2-Dibromoethane	0.620 U	1.00	0.310	ug/L	04/30/10
1,2-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	04/30/10
1,2-Dichloroethane	0.300 U	0.500	0.150	ug/L	04/30/10
1,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	04/30/10
1,3,5-Trimethylbenzene	0.620 U	1.00	0.310	ug/L	04/30/10
1,3-Dichlorobenzene	0.620 U	1.00	0.310	ug/L	04/30/10
1,3-Dichloropropane	0.240 U	0.400	0.120	ug/L	04/30/10
1,4-Dichlorobenzene	0.300 U	0.500	0.150	ug/L	04/30/10
1-Chlorohexane	0.620 U	1.00	0.310	ug/L	04/30/10
2,2-Dichloropropane	0.620 U	1.00	0.310	ug/L	04/30/10
2-Butanone (MEK)	6.20 U	10.0	3.10	ug/L	04/30/10
2-Chlorotoluene	0.620 U	1.00	0.310	ug/L	04/30/10
4-Chlorotoluene	0.620 U	1.00	0.310	ug/L	04/30/10
4-Isopropyltoluene	0.620 U	1.00	0.310	ug/L	04/30/10
4-Methyl-2-pentanone (MIBK)	6.20 U	10.0	3.10	ug/L	04/30/10
Acetone	6.20 U	10.0	3.10	ug/L	04/30/10
Benzene	0.240 U	0.400	0.120	ug/L	04/30/10
Bromobenzene	0.620 U	1.00	0.310	ug/L	04/30/10
Bromochloromethane	0.620 U	1.00	0.310	ug/L	04/30/10
Bromodichloromethane	0.300 U	0.500	0.150	ug/L	04/30/10
Bromoform	0.620 U	1.00	0.310	ug/L	04/30/10
Bromomethane	1.88 U	3.00	0.940	ug/L	04/30/10
Carbon tetrachloride	0.620 U	1.00	0.310	ug/L	04/30/10
Chlorobenzene	0.300 U	0.500	0.150	ug/L	04/30/10
Chloroethane	0.620 U	1.00	0.310	ug/L	04/30/10
Chloroform	0.600 U	1.00	0.300	ug/L	04/30/10
Chloromethane	0.620 U	1.00	0.310	ug/L	04/30/10

SGS Ref.#	958806 Method Blank	**Printed Date/Time**	05/11/2010 12:34
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	VXX20600
Project Name/#	3354-010 Red Hill BFSF	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	04/30/2010

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
cis-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	04/30/10
cis-1,3-Dichloropropene	0.300 U	0.500	0.150	ug/L	04/30/10
Dibromochloromethane	0.300 U	0.500	0.150	ug/L	04/30/10
Dibromomethane	0.620 U	1.00	0.310	ug/L	04/30/10
Dichlorodifluoromethane	0.620 U	1.00	0.310	ug/L	04/30/10
Ethylbenzene	0.620 U	1.00	0.310	ug/L	04/30/10
Hexachlorobutadiene	0.620 U	1.00	0.310	ug/L	04/30/10
Isopropylbenzene (Cumene)	0.620 U	1.00	0.310	ug/L	04/30/10
Methylene chloride	2.00 U	5.00	1.00	ug/L	04/30/10
Methyl-t-butyl ether	3.00 U	5.00	1.50	ug/L	04/30/10
Naphthalene	1.24 U	2.00	0.620	ug/L	04/30/10
n-Butylbenzene	0.620 U	1.00	0.310	ug/L	04/30/10
n-Propylbenzene	0.620 U	1.00	0.310	ug/L	04/30/10
o-Xylene	0.620 U	1.00	0.310	ug/L	04/30/10
P & M -Xylene	1.24 U	2.00	0.620	ug/L	04/30/10
sec-Butylbenzene	0.620 U	1.00	0.310	ug/L	04/30/10
Styrene	0.620 U	1.00	0.310	ug/L	04/30/10
tert-Butylbenzene	0.620 U	1.00	0.310	ug/L	04/30/10
Tetrachloroethene	0.620 U	1.00	0.310	ug/L	04/30/10
Toluene	0.620 U	1.00	0.310	ug/L	04/30/10
trans-1,2-Dichloroethene	0.620 U	1.00	0.310	ug/L	04/30/10
trans-1,3-Dichloropropene	0.620 U	1.00	0.310	ug/L	04/30/10
Trichloroethene	0.620 U	1.00	0.310	ug/L	04/30/10
Trichlorofluoromethane	0.620 U	1.00	0.310	ug/L	04/30/10
Vinyl chloride	0.620 U	1.00	0.310	ug/L	04/30/10
Xylenes (total)	1.88 U	3.00	0.940	ug/L	04/30/10
Surrogates					
1,2-Dichloroethane-D4 <surr>	99.5	73-120		%	04/30/10
4-Bromofluorobenzene <surr>	109	76-120		%	04/30/10
Toluene-d8 <surr>	99	80-120		%	04/30/10

Batch VMS11191
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	959759	Method Blank	**Printed Date/Time**		05/11/2010 12:34
Client Name	The Environmental Company, Inc. (TEC)		**Prep**	**Batch**	VXX20617
Project Name/#	3354-010 Red Hill BFSF			**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)			**Date**	05/07/2010

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006, 1101763007

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Gasoline Range Organics	60.0 U	100	30.0	ug/L	05/07/10
Surrogates					
4-Bromofluorobenzene <surr>	107	50-150		%	05/07/10

Batch VFC9914
Method SW8015C
Instrument HP 5890 Series II PID+FID VCA

SGS Ref.#	958416	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
			Prep Batch	XXX22544	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3520C	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/29/2010	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS								
1-Methylnaphthalene	LCS	0.392	78	(42-92)			0.5 ug/L	05/08/2010
2-Methylnaphthalene	LCS	0.353	71	(45-89)			0.5 ug/L	05/08/2010
Acenaphthene	LCS	0.396	79	(45-93)			0.5 ug/L	05/08/2010
Acenaphthylene	LCS	0.406	81	(50-101)			0.5 ug/L	05/08/2010
Anthracene	LCS	0.435	87	(55-105)			0.5 ug/L	05/08/2010
Benzo(a)Anthracene	LCS	0.448	90	(55-120)			0.5 ug/L	05/08/2010
Benzo[a]pyrene	LCS	0.448	90	(57-110)			0.5 ug/L	05/08/2010
Benzo[b]Fluoranthene	LCS	0.485	97	(45-120)			0.5 ug/L	05/08/2010
Benzo[g,h,i]perylene	LCS	0.447	89	(49-116)			0.5 ug/L	05/08/2010
Benzo[k]fluoranthene	LCS	0.456	91	(56-112)			0.5 ug/L	05/08/2010
Chrysene	LCS	0.428	86	(56-109)			0.5 ug/L	05/08/2010
Dibenzo[a,h]anthracene	LCS	0.470	94	(54-113)			0.5 ug/L	05/08/2010
Fluoranthene	LCS	0.418	84	(58-109)			0.5 ug/L	05/08/2010
Fluorene	LCS	0.423	85	(50-98)			0.5 ug/L	05/08/2010
Indeno[1,2,3-c,d] pyrene	LCS	0.476	95	(55-111)			0.5 ug/L	05/08/2010
Naphthalene	LCS	0.350	70	(44-89)			0.5 ug/L	05/08/2010
Phenanthrene	LCS	0.415	83	(50-104)			0.5 ug/L	05/08/2010
Pyrene	LCS	0.395	79	(56-105)			0.5 ug/L	05/08/2010
Surrogates								
Terphenyl-d14 <surr>	LCS		87	(50-126)				05/08/2010

SGS Ref.#	958416 Lab Control Sample	**Printed Date/Time**		05/11/2010	12:34
		Prep	**Batch**	XXX22544	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3520C	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/29/2010	
Matrix	Water (Surface, Eff., Ground)				

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Polynuclear Aromatics GC/MS

Batch	XMS5395
Method	8270D SIMS
Instrument	HP 6890 Series II MS2 SVOA

SGS Ref.#	958690	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
			Prep Batch	MXX22933	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3010A	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/29/2010	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Metals by ICP/MS								
Lead	LCS	975	98	(80-120)			1000 ug/L	05/04/2010

Batch MMS6414
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	958807	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	958808	Lab Control Sample Duplicate	**Prep Batch**	VXX20600	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/30/2010	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006, 1101763007

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS Ref.#	958807	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	958808	Lab Control Sample Duplicate	**Prep Batch**	VXX20600	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/30/2010	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
1,1,1,2-Tetrachloroethane	LCS	29.9	100	(80-120)			30 ug/L	04/30/2010
	LCSD	30.8	103		3	(< 20)	30 ug/L	04/30/2010
1,1,1-Trichloroethane	LCS	31.4	105	(80-122)			30 ug/L	04/30/2010
	LCSD	32.0	107		2	(< 20)	30 ug/L	04/30/2010
1,1,2,2-Tetrachloroethane	LCS	31.0	103	(76-123)			30 ug/L	04/30/2010
	LCSD	30.7	102		1	(< 20)	30 ug/L	04/30/2010
1,1,2-Trichloroethane	LCS	29.5	98	(77-120)			30 ug/L	04/30/2010
	LCSD	29.8	99		1	(< 20)	30 ug/L	04/30/2010
1,1-Dichloroethane	LCS	35.1	117	(80-120)			30 ug/L	04/30/2010
	LCSD	34.8	116		1	(< 20)	30 ug/L	04/30/2010
1,1-Dichloroethene	LCS	32.6	109	(76-130)			30 ug/L	04/30/2010
	LCSD	32.4	108		1	(< 20)	30 ug/L	04/30/2010
1,1-Dichloropropene	LCS	30.9	103	(80-122)			30 ug/L	04/30/2010
	LCSD	31.0	103		0	(< 20)	30 ug/L	04/30/2010
1,2,3-Trichlorobenzene	LCS	29.6	99	(77-120)			30 ug/L	04/30/2010
	LCSD	30.0	100		1	(< 20)	30 ug/L	04/30/2010
1,2,3-Trichloropropane	LCS	30.8	103	(80-120)			30 ug/L	04/30/2010
	LCSD	31.6	105		2	(< 20)	30 ug/L	04/30/2010
1,2,4-Trichlorobenzene	LCS	28.6	95	(80-120)			30 ug/L	04/30/2010
	LCSD	28.9	96		1	(< 20)	30 ug/L	04/30/2010
1,2,4-Trimethylbenzene	LCS	31.2	104	(80-125)			30 ug/L	04/30/2010
	LCSD	31.8	106		2	(< 20)	30 ug/L	04/30/2010
1,2-Dibromo-3-chloropropane	LCS	32.6	109	(73-130)			30 ug/L	04/30/2010
	LCSD	32.2	107		1	(< 20)	30 ug/L	04/30/2010
1,2-Dibromoethane	LCS	27.8	93	(80-120)			30 ug/L	04/30/2010
	LCSD	27.7	93		0	(< 20)	30 ug/L	04/30/2010
1,2-Dichlorobenzene	LCS	29.0	97	(80-120)			30 ug/L	04/30/2010
	LCSD	29.2	97		1	(< 20)	30 ug/L	04/30/2010

SGS Ref.#	958807	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	958808	Lab Control Sample Duplicate	**Prep Batch**	VXX20600	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/30/2010	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
1,2-Dichloroethane	LCS	30.0	100	(80-129)			30 ug/L	04/30/2010
	LCSD	29.7	99		1	(< 20)	30 ug/L	04/30/2010
1,2-Dichloropropane	LCS	30.3	101	(80-121)			30 ug/L	04/30/2010
	LCSD	29.7	99		2	(< 20)	30 ug/L	04/30/2010
1,3,5-Trimethylbenzene	LCS	32.1	107	(80-128)			30 ug/L	04/30/2010
	LCSD	32.3	108		1	(< 20)	30 ug/L	04/30/2010
1,3-Dichlorobenzene	LCS	28.6	95	(80-120)			30 ug/L	04/30/2010
	LCSD	29.4	98		3	(< 20)	30 ug/L	04/30/2010
1,3-Dichloropropane	LCS	29.5	98	(80-121)			30 ug/L	04/30/2010
	LCSD	29.1	97		1	(< 20)	30 ug/L	04/30/2010
1,4-Dichlorobenzene	LCS	28.8	96	(80-120)			30 ug/L	04/30/2010
	LCSD	28.4	95		1	(< 20)	30 ug/L	04/30/2010
1-Chlorohexane	LCS	45.2	100	(70-125)			45 ug/L	04/30/2010
	LCSD	45.6	101		1	(< 20)	45 ug/L	04/30/2010
2,2-Dichloropropane	LCS	31.5	105	(80-132)			30 ug/L	04/30/2010
	LCSD	31.7	106		1	(< 20)	30 ug/L	04/30/2010
2-Butanone (MEK)	LCS	93.4	104	(66-136)			90 ug/L	04/30/2010
	LCSD	95.2	106		2	(< 20)	90 ug/L	04/30/2010
2-Chlorotoluene	LCS	31.3	104	(80-125)			30 ug/L	04/30/2010
	LCSD	31.7	106		1	(< 20)	30 ug/L	04/30/2010
4-Chlorotoluene	LCS	31.9	106	(79-128)			30 ug/L	04/30/2010
	LCSD	32.5	108		2	(< 20)	30 ug/L	04/30/2010
4-Isopropyltoluene	LCS	30.9	103	(80-125)			30 ug/L	04/30/2010
	LCSD	31.0	103		0	(< 20)	30 ug/L	04/30/2010
4-Methyl-2-pentanone (MIBK)	LCS	94.6	105	(69-134)			90 ug/L	04/30/2010
	LCSD	91.1	101		4	(< 20)	90 ug/L	04/30/2010
Acetone	LCS	109	121	(50-135)			90 ug/L	04/30/2010

SGS Ref.#	958807	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	958808	Lab Control Sample Duplicate	**Prep Batch**	VXX20600	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/30/2010	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
	LCSD	103	115		5	(< 20)	90 ug/L	04/30/2010
Benzene	LCS	28.6	95	(80-120)			30 ug/L	04/30/2010
	LCSD	28.6	96		0	(< 20)	30 ug/L	04/30/2010
Bromobenzene	LCS	28.9	96	(80-120)			30 ug/L	04/30/2010
	LCSD	29.0	97		0	(< 20)	30 ug/L	04/30/2010
Bromochloromethane	LCS	31.0	103	(77-129)			30 ug/L	04/30/2010
	LCSD	30.6	102		1	(< 20)	30 ug/L	04/30/2010
Bromodichloromethane	LCS	35.3	118	(80-120)			30 ug/L	04/30/2010
	LCSD	35.4	118		0	(< 20)	30 ug/L	04/30/2010
Bromoform	LCS	34.4	115	(80-120)			30 ug/L	04/30/2010
	LCSD	34.8	116		1	(< 20)	30 ug/L	04/30/2010
Bromomethane	LCS	36.8	123	(30-140)			30 ug/L	04/30/2010
	LCSD	35.8	119		3	(< 20)	30 ug/L	04/30/2010
Carbon tetrachloride	LCS	37.1	124	(80-126)			30 ug/L	04/30/2010
	LCSD	37.2	124		0	(< 20)	30 ug/L	04/30/2010
Chlorobenzene	LCS	28.5	95	(80-120)			30 ug/L	04/30/2010
	LCSD	29.0	97		2	(< 20)	30 ug/L	04/30/2010
Chloroethane	LCS	35.7	119	(67-133)			30 ug/L	04/30/2010
	LCSD	36.1	120		1	(< 20)	30 ug/L	04/30/2010
Chloroform	LCS	29.8	99	(80-124)			30 ug/L	04/30/2010
	LCSD	30.1	100		1	(< 20)	30 ug/L	04/30/2010
Chloromethane	LCS	29.1	97	(67-125)			30 ug/L	04/30/2010
	LCSD	30.1	100		3	(< 20)	30 ug/L	04/30/2010
cis-1,2-Dichloroethene	LCS	30.3	101	(80-125)			30 ug/L	04/30/2010
	LCSD	30.0	100		1	(< 20)	30 ug/L	04/30/2010
cis-1,3-Dichloropropene	LCS	34.1	114	(80-120)			30 ug/L	04/30/2010
	LCSD	34.0	113		0	(< 20)	30 ug/L	04/30/2010

SGS Ref.#	958807	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	958808	Lab Control Sample Duplicate	**Prep Batch**	VXX20600	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/30/2010	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Dibromochloromethane	LCS	31.4	105	(80-120)			30 ug/L	04/30/2010
	LCSD	31.2	104		1	(< 20)	30 ug/L	04/30/2010
Dibromomethane	LCS	30.8	103	(80-120)			30 ug/L	04/30/2010
	LCSD	29.8	99		3	(< 20)	30 ug/L	04/30/2010
Dichlorodifluoromethane	LCS	31.4	105	(62-153)			30 ug/L	04/30/2010
	LCSD	31.7	106		1	(< 20)	30 ug/L	04/30/2010
Ethylbenzene	LCS	29.2	97	(80-120)			30 ug/L	04/30/2010
	LCSD	29.7	99		2	(< 20)	30 ug/L	04/30/2010
Hexachlorobutadiene	LCS	28.4	95	(77-125)			30 ug/L	04/30/2010
	LCSD	28.2	94		1	(< 20)	30 ug/L	04/30/2010
Isopropylbenzene (Cumene)	LCS	27.9	93	(80-121)			30 ug/L	04/30/2010
	LCSD	27.7	92		1	(< 20)	30 ug/L	04/30/2010
Methylene chloride	LCS	32.0	107	(63-131)			30 ug/L	04/30/2010
	LCSD	31.5	105		2	(< 20)	30 ug/L	04/30/2010
Methyl-t-butyl ether	LCS	49.3	110	(80-120)			45 ug/L	04/30/2010
	LCSD	47.6	106		4	(< 20)	45 ug/L	04/30/2010
Naphthalene	LCS	29.8	99	(75-120)			30 ug/L	04/30/2010
	LCSD	29.8	99		0	(< 20)	30 ug/L	04/30/2010
n-Butylbenzene	LCS	31.3	104	(80-124)			30 ug/L	04/30/2010
	LCSD	31.6	105		1	(< 20)	30 ug/L	04/30/2010
n-Propylbenzene	LCS	33.1	110	(80-129)			30 ug/L	04/30/2010
	LCSD	33.2	111		0	(< 20)	30 ug/L	04/30/2010
o-Xylene	LCS	29.5	98	(80-120)			30 ug/L	04/30/2010
	LCSD	29.5	98		0	(< 20)	30 ug/L	04/30/2010
P & M -Xylene	LCS	58.0	97	(80-120)			60 ug/L	04/30/2010
	LCSD	58.7	98		1	(< 20)	60 ug/L	04/30/2010
sec-Butylbenzene	LCS	32.1	107	(80-120)			30 ug/L	04/30/2010
	LCSD	32.3	108		1	(< 20)	30 ug/L	04/30/2010

SGS Ref.#	958807	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	958808	Lab Control Sample Duplicate	**Prep Batch**	VXX20600	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/30/2010	
Matrix	Water (Surface, Eff., Ground)				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Styrene	LCS	29.7	99	(80-120)			30 ug/L	04/30/2010
	LCSD	29.9	100		1	(< 20)	30 ug/L	04/30/2010
tert-Butylbenzene	LCS	30.9	103	(80-122)			30 ug/L	04/30/2010
	LCSD	30.9	103		0	(< 20)	30 ug/L	04/30/2010
Tetrachloroethene	LCS	27.5	92	(79-122)			30 ug/L	04/30/2010
	LCSD	28.4	95		3	(< 20)	30 ug/L	04/30/2010
Toluene	LCS	27.6	92	(77-120)			30 ug/L	04/30/2010
	LCSD	28.2	94		2	(< 20)	30 ug/L	04/30/2010
trans-1,2-Dichloroethene	LCS	32.5	108	(79-132)			30 ug/L	04/30/2010
	LCSD	32.5	108		0	(< 20)	30 ug/L	04/30/2010
trans-1,3-Dichloropropene	LCS	33.5	112	(80-124)			30 ug/L	04/30/2010
	LCSD	33.4	111		0	(< 20)	30 ug/L	04/30/2010
Trichloroethene	LCS	30.1	100	(80-125)			30 ug/L	04/30/2010
	LCSD	30.5	102		1	(< 20)	30 ug/L	04/30/2010
Trichlorofluoromethane	LCS	33.4	111	(68-145)			30 ug/L	04/30/2010
	LCSD	34.8	116		4	(< 20)	30 ug/L	04/30/2010
Vinyl chloride	LCS	32.6	109	(72-145)			30 ug/L	04/30/2010
	LCSD	32.6	109		0	(< 20)	30 ug/L	04/30/2010
Xylenes (total)	LCS	87.4	97	(80-120)			90 ug/L	04/30/2010
	LCSD	88.2	98		1	(< 20)	90 ug/L	04/30/2010
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		103	(73-120)				04/30/2010
	LCSD		97		6			04/30/2010
4-Bromofluorobenzene <surr>	LCS		100	(76-120)				04/30/2010
	LCSD		99		1			04/30/2010
Toluene-d8 <surr>	LCS		99	(80-120)				04/30/2010
	LCSD		98		1			04/30/2010

SGS Ref.#	958807	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	958808	Lab Control Sample Duplicate	**Prep Batch**	VXX20600	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/30/2010	
Matrix	Water (Surface, Eff., Ground)				

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

Batch VMS11191
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	959066	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
			Prep Batch	XXX22543	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3520C	
Project Name/#	3354-010 Red Hill BFSF		**Date**	04/29/2010	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Diesel Range Organics	LCS	4.86	97	(75-125)			5 mg/L	05/03/2010
Surrogates								
5a Androstane <surr>	LCS		98	(60-120)				05/03/2010

Batch XFC9168
Method SW8015C
Instrument HP 7890A FID SV E R

SGS Ref.#	959760	Lab Control Sample	**Printed Date/Time**	05/11/2010	12:34
	959761	Lab Control Sample Duplicate	**Prep Batch**	VXX20617	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	3354-010 Red Hill BFSF		**Date**	05/07/2010	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1101763001, 1101763004, 1101763005, 1101763006, 1101763007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	220	110	(80-116)			200 ug/L	05/07/2010
	LCSD	215	107		3	(< 20)	200 ug/L	05/07/2010
Surrogates								
4-Bromofluorobenzene <surr>	LCS		110	(50-150)				05/07/2010
	LCSD		112		2			05/07/2010

Batch VFC9914
Method SW8015C
Instrument HP 5890 Series II PID+FID VCA

SGS Ref.#	1101763002	Billable Matrix Spike	**Printed Date/Time**	05/11/2010 12:34
	1101763003	Billable Matrix Spike Dup.	**Prep Batch**	MXX22933
			Method	3010 H20 Digest for Metals ICI
			Date	04/29/2010
Original	1101763001			
Matrix	Water (Surface, Eff., Ground)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Dissolved Metals by ICP/MS									
Lead	BMS	(0.620) U	912	91	(80-120)			1000 ug/L	05/04/2010
	BMSD		976	98		7	(< 15)	1000 ug/L	05/04/2010
Batch	MMS6414								
Method	SW6020								
Instrument	Perkin Elmer Sciex ICP-MS P3								
Volatile Fuels Department									
Gasoline Range Organics	BMS	(60.0) U	484	108	(80-116)			450 ug/L	05/07/2010
	BMSD		467	104		4	(< 20)	450 ug/L	05/07/2010
Surrogates									
4-Bromofluorobenzene <surr>	BMS		55.4	111	(50-150)				05/07/2010
	BMSD		54.8	110		1			05/07/2010
Batch	VFC9914								
Method	SW8015C								
Instrument	HP 5890 Series II PID+FID VCA								
Semivolatile Organic Fuels Department									
Diesel Range Organics	BMS	0.288J	5.59	90	(75-125)			5.88 mg/L	05/03/2010
	BMSD		6.17	100		10	(< 30)	5.88 mg/L	05/03/2010
Surrogates									
5a Androstane <surr>	BMS		.109	92	(50-150)				05/03/2010
	BMSD		0.120	102		10			05/03/2010
Batch	XFC9168								
Method	SW8015C								
Instrument	HP 7890A	FID SV E R							
Volatile Gas Chromatography/Mass Spectroscopy									

SGS Ref.#	1101763002	Billable Matrix Spike	**Printed Date/Time**		05/11/2010 12:34
	1101763003	Billable Matrix Spike Dup.	**Prep**	**Batch**	VXX20600
				Method	Volatiles Extraction AFCEE 3.1
				Date	04/30/2010
Original	1101763001				
Matrix	Water (Surface, Eff., Ground)				

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy									
1,1,1,2-Tetrachloroethane	BMS	(0.300) U	32	107	(80-120)			30.0 ug/L	04/30/2010
	BMSD		31.0	103		3	(< 20)	30.0 ug/L	04/30/2010
1,1,1-Trichloroethane	BMS	(0.620) U	31.7	106	(80-122)			30.0 ug/L	04/30/2010
	BMSD		31.4	105		1	(< 20)	30.0 ug/L	04/30/2010
1,1,2,2-Tetrachloroethane	BMS	(0.300) U	31.5	105	(76-123)			30.0 ug/L	04/30/2010
	BMSD		30.4	101		4	(< 20)	30.0 ug/L	04/30/2010
1,1,2-Trichloroethane	BMS	(0.620) U	30.9	103	(77-120)			30.0 ug/L	04/30/2010
	BMSD		31.4	105		1	(< 20)	30.0 ug/L	04/30/2010
1,1-Dichloroethane	BMS	(0.620) U	35.4	118	(80-120)			30.0 ug/L	04/30/2010
	BMSD		34.9	116		1	(< 20)	30.0 ug/L	04/30/2010
1,1-Dichloroethene	BMS	(0.620) U	32.7	109	(76-130)			30.0 ug/L	04/30/2010
	BMSD		32.6	109		1	(< 20)	30.0 ug/L	04/30/2010
1,1-Dichloropropene	BMS	(0.620) U	30.9	103	(80-122)			30.0 ug/L	04/30/2010
	BMSD		31.4	105		2	(< 20)	30.0 ug/L	04/30/2010
1,2,3-Trichlorobenzene	BMS	(0.620) U	30.4	101	(77-120)			30.0 ug/L	04/30/2010
	BMSD		29.6	99		3	(< 20)	30.0 ug/L	04/30/2010
1,2,3-Trichloropropane	BMS	(0.620) U	31.7	106	(80-120)			30.0 ug/L	04/30/2010
	BMSD		30.7	102		3	(< 20)	30.0 ug/L	04/30/2010
1,2,4-Trichlorobenzene	BMS	(0.620) U	30.1	100	(80-120)			30.0 ug/L	04/30/2010
	BMSD		28.8	96		5	(< 20)	30.0 ug/L	04/30/2010
1,2,4-Trimethylbenzene	BMS	(0.620) U	32.5	108	(80-125)			30.0 ug/L	04/30/2010
	BMSD		30.8	103		6	(< 20)	30.0 ug/L	04/30/2010
1,2-Dibromo-3-chloropropane	BMS	(1.24) U	32	107	(73-130)			30.0 ug/L	04/30/2010
	BMSD		31.8	106		1	(< 20)	30.0 ug/L	04/30/2010
1,2-Dibromoethane	BMS	(0.620) U	28.7	96	(80-120)			30.0 ug/L	04/30/2010
	BMSD		27.6	92		4	(< 20)	30.0 ug/L	04/30/2010
1,2-Dichlorobenzene	BMS	(0.620) U	30	100	(80-120)			30.0 ug/L	04/30/2010
	BMSD		28.9	96		4	(< 20)	30.0 ug/L	04/30/2010
1,2-Dichloroethane	BMS	(0.300) U	29.3	98	(80-129)			30.0 ug/L	04/30/2010
	BMSD		29.6	99		1	(< 20)	30.0 ug/L	04/30/2010
1,2-Dichloropropane	BMS	(0.620) U	30.8	103	(80-121)			30.0 ug/L	04/30/2010
	BMSD		29.7	99		4	(< 20)	30.0 ug/L	04/30/2010
1,3,5-Trimethylbenzene	BMS	(0.620) U	33.2	111	(80-128)			30.0 ug/L	04/30/2010
	BMSD		31.7	106		5	(< 20)	30.0 ug/L	04/30/2010
1,3-Dichlorobenzene	BMS	(0.620) U	30.3	101	(80-120)			30.0 ug/L	04/30/2010
	BMSD		29.5	98		3	(< 20)	30.0 ug/L	04/30/2010
1,3-Dichloropropane	BMS	(0.240) U	30.5	102	(80-121)			30.0 ug/L	04/30/2010
	BMSD		30.3	101		0	(< 20)	30.0 ug/L	04/30/2010
1,4-Dichlorobenzene	BMS	(0.300) U	29.6	99	(80-120)			30.0 ug/L	04/30/2010
	BMSD		28.1	94		5	(< 20)	30.0 ug/L	04/30/2010

SGS Ref.#	1101763002	Billable Matrix Spike	**Printed Date/Time**		05/11/2010 12:34
	1101763003	Billable Matrix Spike Dup.	**Prep**	**Batch**	VXX20600
				Method	Volatiles Extraction AFCEE 3.1
				Date	04/30/2010
Original	1101763001				
Matrix	Water (Surface, Eff., Ground)				

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy									
1-Chlorohexane	BMS	(0.620) U	47	105	(70-125)			45.0 ug/L	04/30/2010
	BMSD		46.8	104		0	(< 20)	45.0 ug/L	04/30/2010
2,2-Dichloropropane	BMS	(0.620) U	28.9	96	(80-132)			30.0 ug/L	04/30/2010
	BMSD		29.2	97		1	(< 20)	30.0 ug/L	04/30/2010
2-Butanone (MEK)	BMS	(6.20) U	94.7	105	(66-136)			90.0 ug/L	04/30/2010
	BMSD		92.7	103		2	(< 20)	90.0 ug/L	04/30/2010
2-Chlorotoluene	BMS	(0.620) U	32.5	108	(80-125)			30.0 ug/L	04/30/2010
	BMSD		31.2	104		4	(< 20)	30.0 ug/L	04/30/2010
4-Chlorotoluene	BMS	(0.620) U	33.4	111	(79-128)			30.0 ug/L	04/30/2010
	BMSD		31.8	106		5	(< 20)	30.0 ug/L	04/30/2010
4-Isopropyltoluene	BMS	(0.620) U	32.4	108	(80-125)			30.0 ug/L	04/30/2010
	BMSD		30.6	102		6	(< 20)	30.0 ug/L	04/30/2010
4-Methyl-2-pentanone (MIBK)	BMS	(6.20) U	93.7	104	(69-134)			90.0 ug/L	04/30/2010
	BMSD		92.0	102		2	(< 20)	90.0 ug/L	04/30/2010
Acetone	BMS	(6.20) U	109	121	(50-135)			90.0 ug/L	04/30/2010
	BMSD		107	119		2	(< 20)	90.0 ug/L	04/30/2010
Benzene	BMS	(0.240) U	29.1	97	(80-120)			30.0 ug/L	04/30/2010
	BMSD		28.2	94		3	(< 20)	30.0 ug/L	04/30/2010
Bromobenzene	BMS	(0.620) U	29.4	98	(80-120)			30.0 ug/L	04/30/2010
	BMSD		28.5	95		3	(< 20)	30.0 ug/L	04/30/2010
Bromochloromethane	BMS	(0.620) U	30.6	102	(77-129)			30.0 ug/L	04/30/2010
	BMSD		30.6	102		0	(< 20)	30.0 ug/L	04/30/2010
Bromodichloromethane	BMS	(0.300) U	35	117	(80-120)			30.0 ug/L	04/30/2010
	BMSD		34.9	116		0	(< 20)	30.0 ug/L	04/30/2010
Bromoform	BMS	(0.620) U	34.6	115	(80-120)			30.0 ug/L	04/30/2010
	BMSD		34.9	116		1	(< 20)	30.0 ug/L	04/30/2010
Bromomethane	BMS	(1.88) U	38.5	128	(30-140)			30.0 ug/L	04/30/2010
	BMSD		37.8	126		2	(< 20)	30.0 ug/L	04/30/2010
Carbon tetrachloride	BMS	(0.620) U	36.3	121	(80-126)			30.0 ug/L	04/30/2010
	BMSD		37.2	124		2	(< 20)	30.0 ug/L	04/30/2010
Chlorobenzene	BMS	(0.300) U	30.3	101	(80-120)			30.0 ug/L	04/30/2010
	BMSD		30.0	100		1	(< 20)	30.0 ug/L	04/30/2010
Chloroethane	BMS	(0.620) U	50.4	168*	(67-133)			30.0 ug/L	04/30/2010
	BMSD		45.0	150*		12	(< 20)	30.0 ug/L	04/30/2010
Chloroform	BMS	(0.600) U	30.2	101	(80-124)			30.0 ug/L	04/30/2010
	BMSD		29.9	100		1	(< 20)	30.0 ug/L	04/30/2010
Chloromethane	BMS	(0.620) U	31.2	104	(67-125)			30.0 ug/L	04/30/2010
	BMSD		31.5	105		1	(< 20)	30.0 ug/L	04/30/2010
cis-1,2-Dichloroethene	BMS	(0.620) U	30.5	102	(80-125)			30.0 ug/L	04/30/2010
	BMSD		30.2	101		1	(< 20)	30.0 ug/L	04/30/2010

SGS Ref.#	1101763002	Billable Matrix Spike	**Printed Date/Time**		05/11/2010 12:34
	1101763003	Billable Matrix Spike Dup.	**Prep**	**Batch**	VXX20600
				Method	Volatiles Extraction AFCEE 3.1
				Date	04/30/2010
Original	1101763001				
Matrix	Water (Surface, Eff., Ground)				

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy									
cis-1,3-Dichloropropene	BMS	(0.300) U	34.3	114	(80-120)			30.0 ug/L	04/30/2010
	BMSD		33.6	112		2	(< 20)	30.0 ug/L	04/30/2010
Dibromochloromethane	BMS	(0.300) U	32.3	108	(80-120)			30.0 ug/L	04/30/2010
	BMSD		32.4	108		0	(< 20)	30.0 ug/L	04/30/2010
Dibromomethane	BMS	(0.620) U	31.1	104	(80-120)			30.0 ug/L	04/30/2010
	BMSD		30.0	100		4	(< 20)	30.0 ug/L	04/30/2010
Dichlorodifluoromethane	BMS	(0.620) U	32.8	109	(62-153)			30.0 ug/L	04/30/2010
	BMSD		32.9	110		0	(< 20)	30.0 ug/L	04/30/2010
Ethylbenzene	BMS	(0.620) U	31.2	104	(80-120)			30.0 ug/L	04/30/2010
	BMSD		30.3	101		3	(< 20)	30.0 ug/L	04/30/2010
Hexachlorobutadiene	BMS	(0.620) U	28.5	95	(77-125)			30.0 ug/L	04/30/2010
	BMSD		27.7	92		3	(< 20)	30.0 ug/L	04/30/2010
Isopropylbenzene (Cumene)	BMS	(0.620) U	29.8	99	(80-121)			30.0 ug/L	04/30/2010
	BMSD		28.6	95		4	(< 20)	30.0 ug/L	04/30/2010
Methylene chloride	BMS	(2.00) U	32.2	107	(63-131)			30.0 ug/L	04/30/2010
	BMSD		32.0	107		1	(< 20)	30.0 ug/L	04/30/2010
Methyl-t-butyl ether	BMS	(3.00) U	47.6	106	(80-120)			45.0 ug/L	04/30/2010
	BMSD		46.9	104		2	(< 20)	45.0 ug/L	04/30/2010
Naphthalene	BMS	(1.24) U	31.3	104	(75-120)			30.0 ug/L	04/30/2010
	BMSD		30.0	100		4	(< 20)	30.0 ug/L	04/30/2010
n-Butylbenzene	BMS	(0.620) U	32.2	107	(80-124)			30.0 ug/L	04/30/2010
	BMSD		30.9	103		4	(< 20)	30.0 ug/L	04/30/2010
n-Propylbenzene	BMS	(0.620) U	35	117	(80-129)			30.0 ug/L	04/30/2010
	BMSD		32.3	108		8	(< 20)	30.0 ug/L	04/30/2010
o-Xylene	BMS	(0.620) U	31	103	(80-120)			30.0 ug/L	04/30/2010
	BMSD		30.6	102		2	(< 20)	30.0 ug/L	04/30/2010
P & M -Xylene	BMS	(1.24) U	61.6	103	(80-120)			60.0 ug/L	04/30/2010
	BMSD		60.6	101		2	(< 20)	60.0 ug/L	04/30/2010
sec-Butylbenzene	BMS	(0.620) U	33.9	113	(80-120)			30.0 ug/L	04/30/2010
	BMSD		31.8	106		6	(< 20)	30.0 ug/L	04/30/2010
Styrene	BMS	(0.620) U	30.4	101	(80-120)			30.0 ug/L	04/30/2010
	BMSD		29.4	98		4	(< 20)	30.0 ug/L	04/30/2010
tert-Butylbenzene	BMS	(0.620) U	32.1	107	(80-122)			30.0 ug/L	04/30/2010
	BMSD		30.7	102		5	(< 20)	30.0 ug/L	04/30/2010
Tetrachloroethene	BMS	(0.620) U	29.9	100	(79-122)			30.0 ug/L	04/30/2010
	BMSD		29.3	98		2	(< 20)	30.0 ug/L	04/30/2010
Toluene	BMS	(0.620) U	29.7	99	(77-120)			30.0 ug/L	04/30/2010
	BMSD		28.9	96		3	(< 20)	30.0 ug/L	04/30/2010
trans-1,2-Dichloroethene	BMS	(0.620) U	32.2	107	(79-132)			30.0 ug/L	04/30/2010
	BMSD		32.1	107		1	(< 20)	30.0 ug/L	04/30/2010

SGS Ref.#	1101763002	Billable Matrix Spike	**Printed Date/Time**		05/11/2010 12:34
	1101763003	Billable Matrix Spike Dup.	**Prep**	**Batch**	VXX20600
				Method	Volatiles Extraction AFCEE 3.1
				Date	04/30/2010
Original	1101763001				
Matrix	Water (Surface, Eff., Ground)				

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount		Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy										
trans-1,3-Dichloropropene	BMS	(0.620) U	34.8	116	(80-124)			30.0	ug/L	04/30/2010
	BMSD		34.2	114		2	(< 20)	30.0	ug/L	04/30/2010
Trichloroethene	BMS	(0.620) U	30.7	102	(80-125)			30.0	ug/L	04/30/2010
	BMSD		30.6	102		0	(< 20)	30.0	ug/L	04/30/2010
Trichlorofluoromethane	BMS	(0.620) U	35.8	119	(68-145)			30.0	ug/L	04/30/2010
	BMSD		35.9	120		0	(< 20)	30.0	ug/L	04/30/2010
Vinyl chloride	BMS	(0.620) U	35.4	118	(72-145)			30.0	ug/L	04/30/2010
	BMSD		34.8	116		2	(< 20)	30.0	ug/L	04/30/2010
Xylenes (total)	BMS	(1.88) U	92.6	103	(80-120)			90.0	ug/L	04/30/2010
	BMSD		91.1	101		2	(< 20)	90.0	ug/L	04/30/2010
Surrogates										
1,2-Dichloroethane-D4 <surr>	BMS		29.3	98	(73-120)					04/30/2010
	BMSD		29.6	99		1				04/30/2010
4-Bromofluorobenzene <surr>	BMS		30	100	(76-120)					04/30/2010
	BMSD		29.4	98		2				04/30/2010
Toluene-d8 <surr>	BMS		30.7	102	(80-120)					04/30/2010
	BMSD		30.2	101		2				04/30/2010

Batch VMS11191
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

Polynuclear Aromatics GC/MS

SGS Ref.#	1101763002	Billable Matrix Spike	**Printed Date/Time**		05/11/2010 12:34
	1101763003	Billable Matrix Spike Dup.	**Prep**	**Batch**	XXX22544
				Method	3520 Liquid/Liquid Ext for 827
				Date	04/29/2010
Original	1101763001				
Matrix	Water (Surface, Eff., Ground)				

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS									
1-Methylnaphthalene	BMS	(0.0352) U	.468	80	(42-92)			0.588 ug/L	05/08/2010
	BMSD		0.455	77		3	(< 30)	0.588 ug/L	05/08/2010
2-Methylnaphthalene	BMS	(0.0352) U	.426	73	(45-89)			0.588 ug/L	05/08/2010
	BMSD		0.409	70		4	(< 30)	0.588 ug/L	05/08/2010
Acenaphthene	BMS	(0.0352) U	.486	83	(45-93)			0.588 ug/L	05/08/2010
	BMSD		0.464	79		5	(< 30)	0.588 ug/L	05/08/2010
Acenaphthylene	BMS	(0.0352) U	.487	83	(50-101)			0.588 ug/L	05/08/2010
	BMSD		0.478	81		2	(< 30)	0.588 ug/L	05/08/2010
Anthracene	BMS	(0.0352) U	.56	95	(55-105)			0.588 ug/L	05/08/2010
	BMSD		0.552	94		2	(< 30)	0.588 ug/L	05/08/2010
Benzo(a)Anthracene	BMS	(0.0352) U	.56	95	(55-120)			0.588 ug/L	05/08/2010
	BMSD		0.557	95		1	(< 30)	0.588 ug/L	05/08/2010
Benzo[a]pyrene	BMS	(0.0352) U	.555	94	(57-110)			0.588 ug/L	05/08/2010
	BMSD		0.556	95		0	(< 30)	0.588 ug/L	05/08/2010
Benzo[b]Fluoranthene	BMS	(0.0352) U	.6	102	(45-120)			0.588 ug/L	05/08/2010
	BMSD		0.606	103		1	(< 30)	0.588 ug/L	05/08/2010
Benzo[g,h,i]perylene	BMS	(0.0352) U	.562	96	(49-116)			0.588 ug/L	05/08/2010
	BMSD		0.566	96		1	(< 30)	0.588 ug/L	05/08/2010
Benzo[k]fluoranthene	BMS	(0.0352) U	.556	95	(56-112)			0.588 ug/L	05/08/2010
	BMSD		0.553	94		0	(< 30)	0.588 ug/L	05/08/2010
Chrysene	BMS	(0.0352) U	.521	89	(56-109)			0.588 ug/L	05/08/2010
	BMSD		0.519	88		0	(< 30)	0.588 ug/L	05/08/2010
Dibenzo[a,h]anthracene	BMS	(0.0352) U	.609	103	(54-113)			0.588 ug/L	05/08/2010
	BMSD		0.623	106		2	(< 30)	0.588 ug/L	05/08/2010
Fluoranthene	BMS	(0.0352) U	.523	89	(58-109)			0.588 ug/L	05/08/2010
	BMSD		0.515	88		2	(< 30)	0.588 ug/L	05/08/2010
Fluorene	BMS	(0.0352) U	.519	88	(50-98)			0.588 ug/L	05/08/2010
	BMSD		0.507	86		3	(< 30)	0.588 ug/L	05/08/2010
Indeno[1,2,3-c,d] pyrene	BMS	(0.0352) U	.6	102	(55-111)			0.588 ug/L	05/08/2010
	BMSD		0.609	103		1	(< 30)	0.588 ug/L	05/08/2010
Naphthalene	BMS	(0.0730) U	.418	71	(44-89)			0.588 ug/L	05/08/2010
	BMSD		0.403	69		4	(< 30)	0.588 ug/L	05/08/2010
Phenanthrene	BMS	(0.0352) U	.527	90	(50-104)			0.588 ug/L	05/08/2010
	BMSD		0.515	88		2	(< 30)	0.588 ug/L	05/08/2010
Pyrene	BMS	(0.0352) U	.486	83	(56-105)			0.588 ug/L	05/08/2010
	BMSD		0.482	82		1	(< 30)	0.588 ug/L	05/08/2010
Surrogates									
Terphenyl-d14 <surr>	BMS		.508	86	(50-126)				05/08/2010
	BMSD		0.494	84		3			05/08/2010

SGS Ref.#	1101763002	Billable Matrix Spike	**Printed Date/Time**		05/11/2010 12:34
	1101763003	Billable Matrix Spike Dup.	**Prep**	**Batch**	XXX22544
				Method	3520 Liquid/Liquid Ext for 827
				Date	04/29/2010
Original	1101763001				
Matrix	Water (Surface, Eff., Ground)				

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Polynuclear Aromatics GC/MS

Batch	XMS5395
Method	8270D SIMS
Instrument	HP 6890 Series II MS2 SVOA

SGS

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1101763

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CLIENT:	TEC INC.	SGS Reference #:	page 1 of 3
CONTACT:	Rick Adkisson	PHONE NO:	808.528.1445
PROJECT:	3354-010	SITE/PWSID#:	Red Hill BFSF
REPORTS TO:	Rick Adkisson	email	rkadkisson@tecinc.com
		cc	wmcwhitman@tecinc.com
INVOICE TO:	TEC INC	QUOTE #:	
		P.O. NUMBER:	

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv. Used	SAMPLE TYPE C = COMP G = GRAB	TPH-GRO (8015B) HCL	TPH-DRO (8015B) HCl	VOC's (8260B) HCl	PAH's (8270C-SIMS)	Diss Pb (6020) HNO_3	REMARKS
3 A-J	OWDFMW01-WG-04	4/26/2010	0835	Water	26			X	X	X	X		3x Volume sent in 2 coolers
4 A-F	RHMW04-WG-04	4/26/2010	1310	Water	6			X		X			
5 A-F	RHMWA01-WG-04	4/26/2010	1205	Water	6			X		X			
6 A-F	HDMW2253-03-WG-04	4/26/2010	0940	Water	6			X		X			
7 A-C	TB01-WG-04	4/26/2010	0805	Water	3			X		X			
1 A-F													
2 A-J													
3 A-I													

Collected/Relinquished By: (1)	Date	Time	Received By:	Shipping Carrier:	Samples Received Cold? YES NO
	4/27/10	1400		Shipping Ticket No: 70d	Temperature °C: TB=5.1 C=4.3
Relinquished By: (2)	Date	Time	Received By:	Special Deliverable Requirements:	Chain of Custody Seal: (Circle)
				See Contract	INTACT BROKEN ABSENT
Relinquished By: (3)	Date	Time	Received By:	Requested Turnaround Time and-or Special Instructions:	
				See Contract	
Relinquished By: (4)	Date	Time	Received For Laboratory By:		
	4/28/10	1150			

- 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
- 3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
- 255 Sand Island Access Rd., Unit 1B **Honolulu, HI 96819** Tel: (808) 224-6217 Fax: (808) 845-2287
- 151 James Drive West **St Rose, LA 70087** Tel: (504) 469-6401 Fax: (504) 463-3304
- 1258 Greenbrier Street **Charleston, WV 25311** Tel: (304) 346-0725 Fax: (304) 346-0761
- 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

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CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1101763

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CLIENT:	TEC INC.	SGS Reference #:	page 2 of 3
CONTACT:	Rick Adkisson	PHONE NO:	808.528.1445
PROJECT:	3354-010	SITE/PWSID#:	Red Hill BFSF
REPORTS TO:	Rick Adkisson	email	rkadkisson@tecinc.com
		cc	wmcwhitman@tecinc.com
INVOICE TO:	TEC INC	QUOTE #:	
		P.O. NUMBER:	

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv. Used	SAMPLE TYPE C = COMP G = GRAB	TPH-GRO (8015B) HCL	TPH-DRO (8015B) HCL	VOC's (8260B) HCl	PAH's (8270C-SIMS)	Diss Pb (6020) HNO_3	REMARKS
[illegible]	HDMW2253-03-WG-04	4/26/2010	0940	Water	5				X		X	X	
[illegible]	OWDFMW01-WG-04	4/26/2010	0835	Water	7				X		X	X	3x Volume sent in 2 coolers

Collected/Relinquished By: (1) [signature]	Date 4/27/10	Time 1400	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4) [signature]	Date 4/28/10	Time 1150	Received For Laboratory By: [signature]

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? YES NO

Temperature °C: TB: 2.8 COOLER: 2.9

Special Deliverable Requirements:

See Contract

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and-or Special Instructions:

See Contract

#36D

- 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
- 3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
- 255 Sand Island Access Rd., Unit 1B **Honolulu, HI 96819** Tel: (808) 224-6217 Fax: (808) 845-2287
- 151 James Drive West **St Rose, LA 70087** Tel: (504) 469-6401 Fax: (504) 463-3304
- 1258 Greenbrier Street **Charleston, WV 25311** Tel: (304) 346-0725 Fax: (304) 346-0761
- 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

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CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1101763

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CLIENT:	TEC INC.	SGS Reference #:	page 3 of 3
CONTACT:	Rick Adkisson	PHONE NO:	808.528.1445
PROJECT:	3354-010	SITE/PWSID#:	Red Hill BFSF
REPORTS TO:	Rick Adkisson	email	rkadkisson@tecinc.com
		cc	wmcwhitman@tecinc.com
INVOICE TO:	TEC INC	QUOTE #:	
		P.O. NUMBER:	

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv. Used	SAMPLE TYPE C = COMP G = GRAB	TPH-GRO (8015B) HCL	TPH-DRO (8015B) HCl	VOC's (8260B)	PAH's (8270C-SIMS) HNO_3	Diss Pb (6020)	REMARKS
(5) G-K	RHMWA01-WG-04	4/26/2010	1205	Water	5				X		X	X	
(4) G-K	RHMW04-WG-04	4/26/2010	1310	Water	5				X		X	X	

Collected/Relinquished By: (1)	Date 4/27/10	Time 1400	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 4/28/10	Time 1150	Received For Laboratory By:

Shipping Carrier: fed ex

Shipping Ticket No:

Special Deliverable Requirements: **See Contract**

Samples Received Cold? YES NO

Temperature °C: T=9.8 C=2.3

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and-or Special Instructions:

See Contract

☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301

☐ 3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

☐ 255 Sand Island Access Rd., Unit 1B **Honolulu, HI 96819** Tel: (808) 224-6217 Fax: (808) 845-2287

☐ 151 James Drive West **St Rose, LA 70087** Tel: (504) 469-6401 Fax: (504) 463-3304

☐ 1258 Greenbrier Street **Charleston, WV 25311** Tel: (304) 346-0725 Fax: (304) 346-0761

☐ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

SGS

1101763

SAMPLE RECEIPT FORM

SGS WO#:

Yes	No	NA	
	✓		Are samples **RUSH**, priority or *w/in 72 hrs* of **hold time**?
		✓	If yes, have you done *e-mail ALERT notification*?
	✓		Are samples *within 24 hrs.* of **hold time** or **due date**?
		✓	If yes, have you also *spoken with* supervisor?
		✓	Archiving bottles: Are lids marked w/ red "X" ?
✓			Were samples collected with proper preservative?
✓			**Any problems (ID, cond'n , HT, etc)? Explain:** ~~SAMPLE ID DOESN'T MATCH COC~~ ~~FOR PAH ANALYSIS PUMICE IN COOLER~~ 4/28
		✓	If this is for PWS, provide **PWSID:**
		✓	Payment received: $ by Check or Credit Card
	✓		Will courier charges apply?
✓			Data package required? (Level: 1 / 2 / 3 / 4)
			Notes:
✓			Is this a DoD project? (USACE, Navy, AFCEE)

TAT (circle one): ~~Standard~~ -or- Rush

Received Date: 4-28-10

Received Time: 1150

Cooler ID	Temperature	Measured w/ (Therm #)
1	2.8 °C	
2	5.1 °C	
3	2.8 °C	
	°C	

Note: Temperature readings include thermometer correction factors

Delivery method (circle all that apply):

Client / Alert Courier / Lynden / SGS
UPS / ~~FedEx~~ / USPS / DHL / Carlile
AkAir Goldstreak / NAC / ERA / PenAir
Other:

Additional Sample Remarks: (✓ *if applicable*)

- Extra Sample Volume?
- ✓ Limited Sample Volume?
- Multi-Incremental Samples?
- Lab-filtered for dissolved
- Ref Lab required for
- Foreign Soil?

This section must be filled out for DoD projects (USACE, Navy, AFCEE):

Yes	No		Yes	N/A
✓		Is received temperature ≤6°C?		Was pH verified upon receipt?
✓		Were containers ice-free? *Notify PM **immediately** of any ice in samples.* If some cooler temperatures are non-compliant, see form FS-0029 (attached) for samples/analyses affected.		
✓		Was there an airbill? *(If "yes," see attached.)*		
✓		Was cooler sealed with custody seals & were they intact? # / where: 2 FRONT & BACK TOP CLR		
✓		Was there a COC with cooler?		
✓		Was COC sealed in plastic bag & taped inside lid of cooler?		
✓		Was the COC filled out properly? Did labels correspond?		
	✓	Did the COC indicate USACE / Navy / AFCEE project?		
		Samples were packed to prevent breakage with *(circle one)*: ~~Bubble Wrap~~ Vermiculite Other (specify):		
	✓	Were all samples sealed in separate plastic bags?		
✓		Were all VOCs free of headspace and/or MeOH preserved?		
✓		Were correct container / sample sizes submitted?		
✓		Was the PM notified of arrival so they can send Sample Receipt Acknowledgement to client?		

Cooler ID 1	Cooler Temp °C 2.3	Cooler ID 3	Cooler Temp °C 2.9
Cooler ID 2	Cooler Temp °C 5.1	Cooler ID	Cooler Temp °C

This section must be completed if problems are noted.

Was client notified of problems? Yes / No

By (SGS PM):

Individual contacted:

Via: Phone / Fax / E-mail (*circle one*)

Date/Time:

Reason for contact:

Change Order Required? Yes / No

Notes: Trip Blank had been removed from trip Blank Box prior to reciept. One jar from sample 3 (1 L Amber Glass HCl pres) was broken prior to arrival. ~~MS~~ 4/28

Completed by (sign): **(print):** MARC NOCCIATI

Login proof: **Self-check completed** **Peer-reviewer's Initials**

1101763

SGS

SAMPLE RECEIPT FORM - Bottle Tracking SGS WO#

#	Container ID	Matrix	Test	QC	TB	Container Volume: 1L	500mL	250mL or 8oz	125mL or 4oz	60mL	40mL	Other:	Container Type: AG	CG	HDPE	Nalgene	Coli	Septa	Other:	Preservative: None	HCl	HNO3	H2SO4	NaOH	Ascorbic Acid	NH_4Cl	Other:	*Notes
1	A-C	i	GRO								3		✓					✓			✓							
	D-F		VOC								3		✓					✓			✓							
	G,H		PAH			2							✓							✓								
	I,J		DRO			2							✓								✓							
	K		Diss P6					1							✓							✓						
2	A-C		GRO	HS							3		✓					✓			✓							
	D-F		VOC	HS							3		✓					✓			✓							
	G,H		PAH	HS		2							✓							✓								
	I,J		DRO	HS		2							✓								✓							
	K		Diss P6	HS					S	J	A	1K																
	L		EXTRA VOC	HS				1								✓						✓						
3	A-C		GRO	HS							3		✓					✓		✓	✓							
	D-F		VOC	HS		1G					3	L						✓			✓							
	G,H		PAH	HS		2I							✓							✓								
	I,H		DRO	HS		2							✓								✓							
	J		EXTRA VOC	HS				1								✓						✓						
	K		Diss P6	HS					S	J	A	1K																
Bottle Totals						11		3			18																	

* Note: Containers which require (additional) chemical preservation upon receipt must be documented per SOP#106

Completed by: _____ Date: 4-28-10

F042r02 Revised 9/8/2009

1101763

SGS

SAMPLE RECEIPT FORM - Bottle Tracking **SGS WO#**

#	Container ID	Matrix	Test	QC	TB	Container Volume: 1L	500mL	250mL or 8oz	125mL or 4oz	60mL	40mL	Other:	Container Type: AG	CG	HDPE	Nalgene	Coli	Septa	Other:	Preservative: None	HCl	HNO3	H2SO4	NaOH	Ascorbic Acid	NH_4Cl	Other:	*Notes
4-6	A-C	1	GRO								12	9	✓					✓			✓							
	D-F		VOC								12	9	✓					✓			✓							
	G,H		PAH			6							✓							✓								
	I, J		DRO			6							✓								✓							
	K		Diss Pb					3							✓							✓						
7	A	1	GRO		✓						1		✓					✓			✓							
	B		VOC		✓						1		✓					✓			✓							
	C		EXTRA VOC		✓						1		✓					✓			✓							
											21																	
Bottle Totals						12		3			27																	

* Note: Containers which require (additional) chemical preservation upon receipt must be documented per SOP#106

Completed by: Jan Davey Date: 4-28-10

F042r02 Revised 9/8/2009

1101763

From: Origin ID: HIKA (808) 528-1445
BILL WHITMAN
TEC INC.
1550 BISHOP STREET, PAUAHI TOWER
SUITE 1550
HONOLULU, HI 96813

J101010022220224

Ship Date: 27APR10
ActWgt: 10.0 LB
CAD: 1774997/INET3010
Dims: 24 X 14 X 14 IN

Delivery Address Bar Code

Ref # P# 9121
Invoice #
PO #
Dept #

SHIP TO: (907) 562-2343 **BILL THIRD PARTY**

SAMPLE RECEIVING
SGS Environmental Services
200 W POTTER DR

ANCHORAGE, AK 99518

1 of 3

TRK# 0201 7934 8894 0254

MASTER

WED - 28 APR AM
PRIORITY OVERNIGHT
DSR

99518
AK-US
ANC

WU ANCA

505G1/DBF2/5FE8

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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BILL WHITMAN
TEC INC.
1550 BISHOP STREET, PAUAHI TOWER
SUITE 1550
HONOLULU, HI 96813

FedEx Express

J10101002220224

Ship Date: 27APR10
ActWgt: 10.0 LB
CAD: 1774997/INET3010
Dims: 24 X 14 X 14 IN

Delivery Address Bar Code

Ref # P# 9121
Invoice #
PO #
Dept #

SHIP TO: (907) 562-2343 **BILL THIRD PARTY**

SAMPLE RECEIVING
SGS Environmental Services
200 W POTTER DR

ANCHORAGE, AK 99518

2 of 3

MPS# 0263 7934 8894 0298

Mstr# 7934 8894 0254 0201

WED - 28 APR AM
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BILL WHITMAN
TEC INC.
1550 BISHOP STREET, PAUAHI TOWER
SUITE 1550
HONOLULU, HI 96813

J10101002220224

Ship Date: 27APR10
ActWgt: 10.0 LB
CAD: 1774997/INET3010
Dims: 24 X 14 X 14 IN

Delivery Address Bar Code

Ref # P# 9121
Invoice #
PO #
Dept #

SHIP TO: (907) 562-2343 **BILL THIRD PARTY**

SAMPLE RECEIVING
SGS Environmental Services
200 W POTTER DR

ANCHORAGE, AK 99518

3 of 3

MPS# 0263 7934 8894 0313

Mstr# 7934 8894 0254 0201

WED - 28 APR AM
PRIORITY OVERNIGHT
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SGS Environmental **CUSTODY SEAL**

Signature: [signature] Date/Time: 4/27/10 /1400

SGS Environmental **CUSTODY SEAL**

Signature: [signature] Date/Time: 4/27/10/1400

SGS Environmental **CUSTODY SEAL**

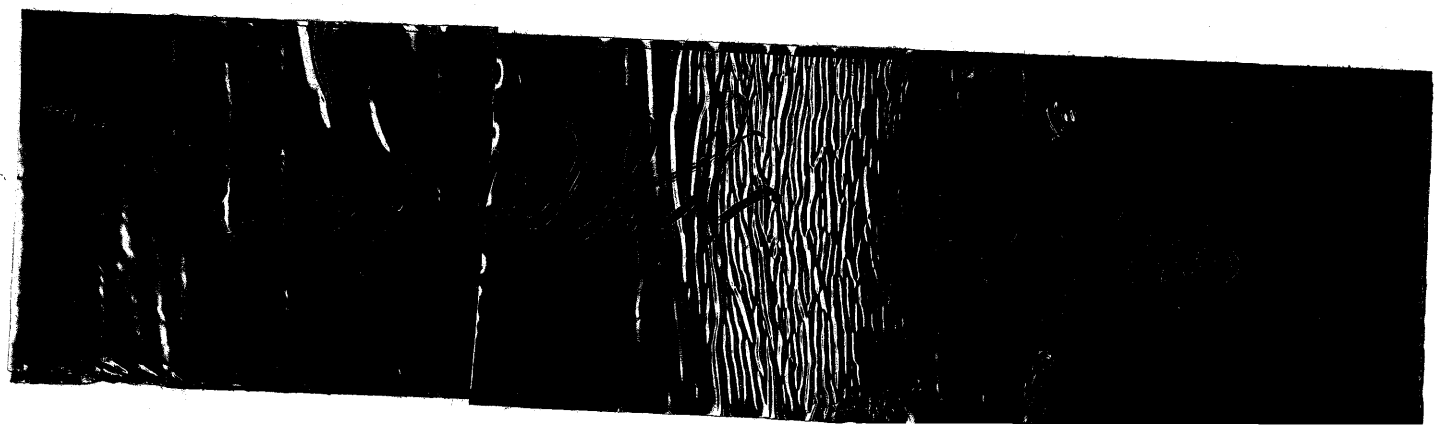
Signature: [signature] Date/Time: 4/27/10 /1400

SGS Environmental **CUSTODY SEAL**

Signature: [signature] Date/Time: 4/27/10 /1400

SGS Environmental **CUSTODY SEAL**

Signature: [signature] Date/Time: 4/27/10 /1400



THIS SAMPLE, BROKEN IN COOLER

TEC Inc.
1001 Bishop Street, Suite 1400
ASB Tower
Honolulu Hawaii 96813

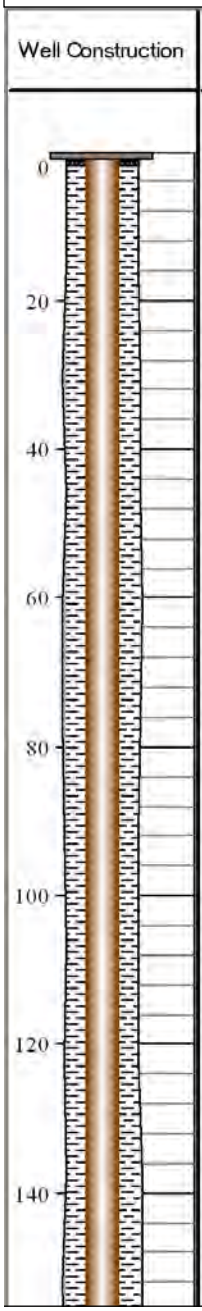
Project Name: Red Hill BFSF Quarterly Sampling
Sample ID: OWDFMW01 WG-04
Date: 4/26/10 Time: 0835
Parameters: PAH's (8270SIM)
Matrix: Groundwater
Preservatives: <4°

Appendix B

Monitoring Well Construction Logs

GEOLOGIC BOREHOLE LOG

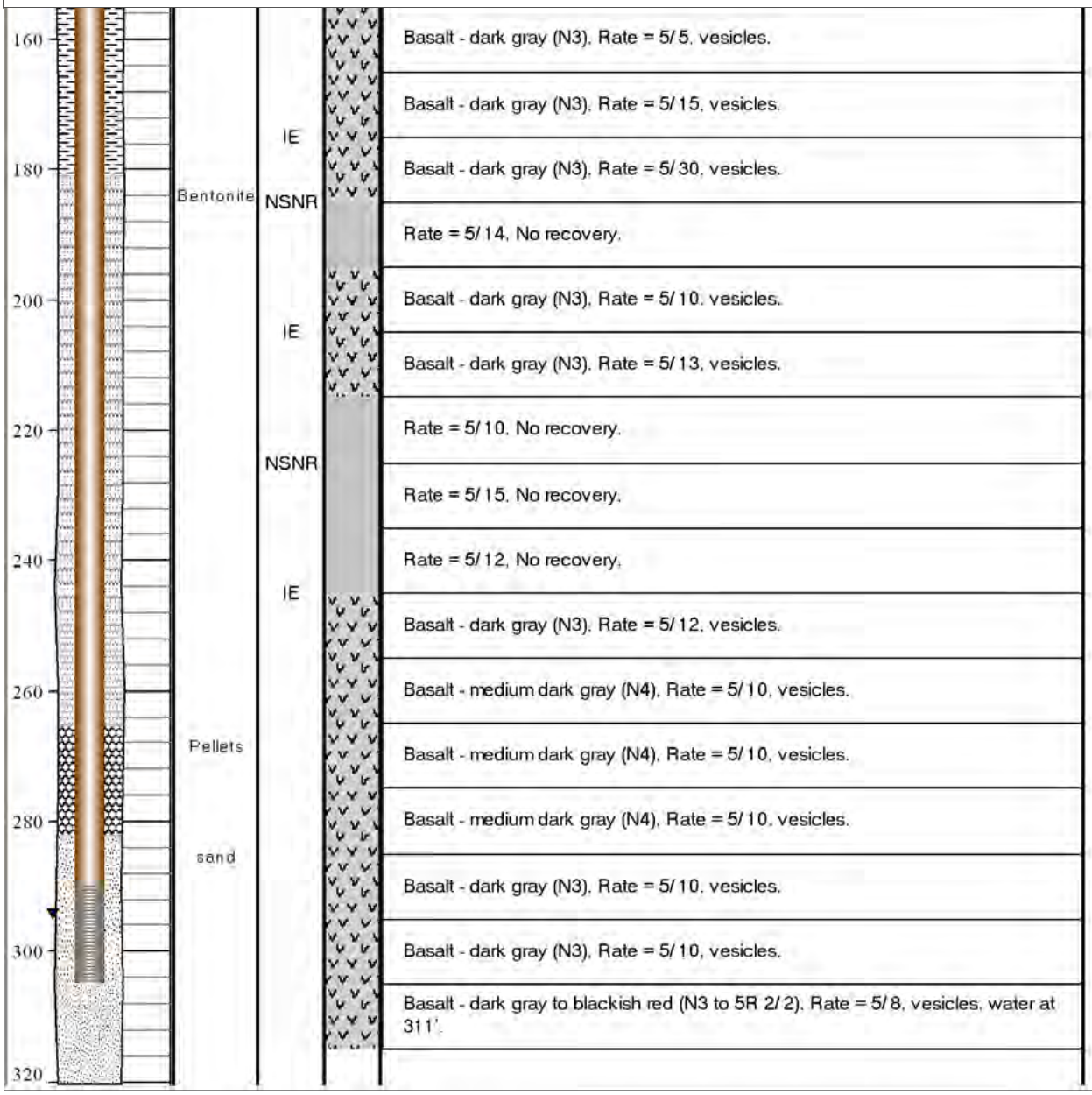
Location: **RHFSF**	Station Name: **RHMW04**	Location Type: **Monitoring Well**
Location Description: **west. access rd., S of Navy Firing Range**		Establishing Company: **TEC Inc.**
Drilling Foreman: **Tomas Fernandez**		Drilling Company: **Valley Well Drilling**
Geologist: **N. Griffin/S. MacMillan**	Ground Surface Elevation (ft): **313.03**	Datum: **MSL**
Drilling Sampling Method: **Rock Coring**		Borehole Diameter (in): **8**
Total Depth (ft): **320.5**	Date Drilling Started: **22 July 2005**	Date Drilling Ended: **26 July 2005**
Remarks:		



Well Construction	Well Fill	USCS	Soil Description	Soil Sample
	Cement Grout	GW	Well-graded gravel with sand - dark reddish brown (5YR 2.5/2), medium stiff, moist, 80% gravel, 15% fines, 5% fines, road base.	RHMW04S02
			Basalt bedrock.	
			Basalt - moderate brown (5YR 3/4), Rate = 5/5, 50 - 80% vesicles.	
			Basalt - dark gray (blue rock) (N3), Rate = 5/10, massive, 5% small crystals.	
		IE	Basalt - dark gray (N3), Rate = 5/10, 70 - 90% vesicles:small.	
			Basalt - dark gray (N3), Rate = 5/7, massive.	
			Basalt - dark gray (N3), Rate = 5/10, 70 - 90% vesicles.	
			Basalt - dark gray (N3), Rate = 5/10, vesicles.	
			Basalt - dark gray (N3), Rate = 5/10, vesicles.	
			Basalt - dark gray (N3), Rate = 5/12, vesicles.	
		NSNR	Rate = 5/18, no recovery.	
			Basalt - moderate brown to dark gray (5YR 3/4 to N3), Rate = 5/12, vesicles.	
			Basalt - dark gray (N3), Rate = 5/16, vesicles with min. deposits, Perched water encountered - to approx. 130 feet.	
			Basalt - dark gray (N3), Rate = 5/15, massive.	
			Basalt - dark reddish brown to dark gray (10YR 3/4 to N3), Rate = 5/20, vesicles.	
			Basalt - medium dark gray to dark gray (N4 to N3), Rate = 5/15, vesicles.	
		IE	Basalt - dark reddish brown to dark gray (10YR 3/4 to N3), Rate = 5/15, massive and vesicles.	
			Basalt - dark reddish brown (10YR 3/4), Rate = 5/10, vesicles.	
			Basalt - dark gray (N3), Rate = 5/12, vesicles.	

GEOLOGIC BOREHOLE LOG

Location: **RHFSF**	Station Name: **RHMW04**	Location Type: **Monitoring Well**
Location Description: **west. access rd., S of Navy Firing Range**		Establishing Company: **TEC Inc.**
Drilling Foreman: **Tomas Fernandez**		Drilling Company: **Valley Well Drilling**
Geologist: **N. Griffin/S. MacMillan**	Ground Surface Elevation (ft): **313.03**	Datum: **MSL**
Drilling Sampling Method: **Rock Coring**		Borehole Diameter (in): **8**
Total Depth (ft): **320.5**	Date Drilling Started: **22 July 2005**	Date Drilling Ended: **26 July 2005**
Remarks:		



Basalt - dark gray (N3), Rate = 5/5, vesicles.
Basalt - dark gray (N3), Rate = 5/15, vesicles.
Basalt - dark gray (N3), Rate = 5/30, vesicles.
Rate = 5/14, No recovery.
Basalt - dark gray (N3), Rate = 5/10, vesicles.
Basalt - dark gray (N3), Rate = 5/13, vesicles.
Rate = 5/10, No recovery.
Rate = 5/15, No recovery.
Rate = 5/12, No recovery.
Basalt - dark gray (N3), Rate = 5/12, vesicles.
Basalt - medium dark gray (N4), Rate = 5/10, vesicles.
Basalt - medium dark gray (N4), Rate = 5/10, vesicles.
Basalt - medium dark gray (N4), Rate = 5/10, vesicles.
Basalt - dark gray (N3), Rate = 5/10, vesicles.
Basalt - dark gray (N3), Rate = 5/10, vesicles.
Basalt - dark gray to blackish red (N3 to 5R 2/2), Rate = 5/8, vesicles, water at 311'.

EARTH TECH

Borehole/Well Construction Log

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST	*Northing*	75254 41	*Easting*	530845 19	Sheet	1 of 9
Drilling Agency	Valley Well Drilling	Driller	Dean Mclure, David Brown		
Drilling Equipment	B59, Jaswell 3000	Date & Time Started	4/7/98	Total Depth (feet)	142 8
Drilling Method	Air Rotary, Hollow Stem Auger	Top of Casing Elevation (feet msl)	138 06	Date & Time Finished	4/24/98	Depth to Water (feet)	See remarks
Size and Type of Bit	-	Borehole Diameter (in)	10	Sample Type	Bulk NA Drive x SS 16 Grab NA	Sample Length (in) 1 5 or 5 Driving Weight NA Drop Length NA
Drilling Fluid	Air	Drilling Angle (degrees)	90	Number of Samples	16		
Completion Information	See remarks			Logged By	W Wen	Checked By	B Tsutsui

Depth (feet)	Samples: Number	Type	Blow Count	Percent Recovery	Time	Estimated %: Gravel	Sand	Fines	Log: Graphic	USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
											Topsoil		Ground surface elevation 135 67 feet msl
1			50/5"	40	1352	5	TR	95		CL	**LOW PLASTIC INORGANIC CLAY**, black, 5YR 2 5/1, dry, hard, CL, 95% low plastic inorganic clay, 5% fine, subangular gravel, trace amount of sand and roots		
2													Steel casing (12 inch diameter)
3													PVC Casing
4													Grout
5			50/5"	35	1359	TR	80	20		SC	**CLAYEY SAND**, dark yellowish brown, 10YR 4/6, dry, dense, SC, 80% fine, medium, coarse, subrounded sand, 20% low plastic inorganic clay, trace amount of fine, subangular gravel		
6													
7													
8													
9													
10			50/6"	15	1410	-	-	-		IE	**EXTRUSIVE**, basalt, gray, 10YR 6/1, vesicular basalt, fresh, hard, dry, IE		
11													
12													
13													
14													
15													

EARTH TECH

Borehole/Well Construction Log
(Continuation Sheet)

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST			Sheet	2 of 9

Depth (feet)	Samples: Number	Samples: Type	Samples: Blow Count	Samples: Percent Recovery	Samples: Time	Estimated %: Gravel	Estimated %: Sand	Estimated %: Fines	Log: Graphic	Log: USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
			NA	5	1420	-	-	-		IE	Same as above		
18													
17													
18			50/3"	0		-	-	-			No Recovery Called off at 1435, 4/7/98		
19													
20			NA	70	1300	-	-	-			No recovery		
21													
22						-	-	-			No Recovery		
23													
24													
25			NA	0	1442	40 -	- -	60 -		CL	GRAVELLY CLAY, strong brown and dark gray, 7 5YR 5/6, 4/1, dry, soft, CL, 60% high plastic inorganic clay; 40% fine, subrounded basalt gravel. No Recovery Called off at 1442, 4/13/98		
26													
27													
28													
29													
30													Bottom of steel casing
31													
32			NA	80	1430	-	TR	100		CH	HIGH PLASTIC INORGANIC CLAY, dark		

EARTH TECH

Borehole/Well Construction Log (Continuation Sheet)

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST			Sheet	3 of 9

Depth (feet)	Samples: Number	Samples: Type	Samples: Blow Count	Samples: Percent Recovery	Samples: Time	Estimated %: Gravel	Estimated %: Sand	Estimated %: Fines	Log: Graphic	Log: USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
33											brown, 7 5YR 3/3, moist, soft, CH, 100% high plastic inorganic clay trace amount of sand		
34											Logged at 1439, 4/14/98		
35													
36						30	TR	70		CL	GRAVELLY CLAY, very dark gray and brown, 10YR 3/2, moist, stiff; CL, 30% subrounded gravel, 70% low plastic inorganic clay, trace amount of sand, extensive mottling.		
37			NA	60		-	-	-		IE	EXTRUSIVE, basalt, light gray, 5YR 7/2, vesicular basalt, highly weathered, friable, dry, IE		
38						-	-	-		IE	Same as above		
39						100	TR	-		GP	POORLY GRADED GRAVEL, pale olive gray, 5YR 6/2, dry, GP, 100% coarse, subrounded gravel, trace amount of coarse sand		
40						-	-	-		IE	EXTRUSIVE, basalt, pale olive, 5YR 7/2, lightly weathered, massive, friable, dry, IE		
41													
42			NA	70		80	10	10		GC	CLAYEY GRAVEL, strong brown, 7 5YR 4/6, moist, GC, 80% fine, medium and coarse subrounded gravel, 10% coarse subrounded sand, 10% high plastic inorganic clay		
43													
44						100	-	-		GW	WELL GRADED GRAVEL, brown, 7 5YR 4/3, moist; GW, 100% medium coarse subrounded gravel		
45										IE	EXTRUSIVE, basalt, brown, 7 5YR 4/3, highly weathered, vesicular basalt, fractured, moist, IE.		
46						90	5	5		GP	POORLY GRADED GRAVEL, strong brown, 7 5YR 4/6, moist, GP, 90% fine, medium, coarse subrounded gravel, 5% coarse, subrounded sand, 5% high plastic inorganic clay		
47			NA	80		-	-	-		IE	EXTRUSIVE, basalt, brown, 7 5YR 4/3, highly weathered, vesicular basalt, fractured, moist, IE		
48						-	-	100		CH	HIGH PLASTIC INORGANIC CLAY, brown, 7 5YR 4/2, moist, firm, CH, 100% medium plasticity inorganic clay		
49						-	-	-		IE	EXTRUSIVE, basalt, olive gray, 5YR 5/2, fresh, vesicular; moist, IE		
50													

EARTH TECH

Borehole/Well Construction Log
(Continuation Sheet)

Project Name: Red Hill Phase II RI/FS | Project Number: CTO-0034 | Borehole Number: MW08

Borehole Location: Near AST | Sheet 4 of 9

Depth (feet)	Number	Type	Blow Count	Percent Recovery	Time	Gravel	Sand	Fines	Graphic	USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
51													
52			NA	100	1700	-	-	-		IE	Same as above		
53													
54						-	-	-		IE	**EXTRUSIVE**, basalt, gray, 10YR 5/1, moist massive basalt with some vesicular fabric, fresh, hard, moist, IE		
55													
56						-	-	-		IE	**EXTRUSIVE**, basalt, olive gray, 5YR 5/2, fresh, vesicular; moist, IE		
57			NA	80	0917	-	-	-		IE	No Recovery		
58						-	-	-		IE	Grading to faintly weathered, well developed fracture in basalt		
59													
60											Color changes to brown (7 5YR 4/4), grading to highly weathered and soft.		
61						70	10	20		GC	**CLAYEY GRAVEL**, dark gray, 5YR 4/1, dry, dense; GC, 70% fine, subangular and subrounded gravel, 20% low plastic, inorganic clay, 10% fine, subangular sand		
62			NA	85	0947	-	-	-		IE	**EXTRUSIVE**, basalt, brown, 7 5YR 4/4, massive basalt, highly weathered, medium hard, moist, IE		
63										IE	**EXTRUSIVE**, volcanic breccia, gray, 5YR 5/1, 60% basalt clast, 20% matrix, 20% porosity, faintly weathered, hard, dry, IE		
64													
65													
66													
67			NA	80	1040	-	-	-			No recovery		

EARTH TECH

Borehole/Well Construction Log
(Continuation Sheet)

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST			Sheet	5 of 9

Depth (feet)	Samples: Number	Type	Blow Count	Percent Recovery	Time	Estimated %: Gravel	Sand	Fines	Log: Graphic	USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
68						-	-	-		IE	EXTRUSIVE, volcanic breccia, gray, 7 5YR 5/1, 40% basalt clast, 40% matrix, 20% porosity, faintly weathered, hard, wet, IE		
69						-	-	-		IE	EXTRUSIVE, basalt, dark gray, 7 5YR 4/1, massive basalt, fresh, hard, wet, IE		
70													
71													
72			NA	90	1130	-	-	-		IE	Same as above		
73													
74													
75													
76													
77						-	-	-		IE	Same as above Switch to Jaswell, no sample taken after 77 feet Lithology was estimated from blown hole		
78													
79													
80													
81													
82													
83													
84													
85													

EARTH TECH

Borehole/Well Construction Log
(Continuation Sheet)

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST			Sheet	6 of 9

Depth (feet)	Samples: Number	Samples: Type	Samples: Blow Count	Samples: Percent Recovery	Samples: Time	Estimated %: Gravel	Estimated %: Sand	Estimated %: Fines	Log: Graphic	Log: USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
86						-	-	-		IE	Same as above (Basalt)		
87													
88													
89													
90													
91													
92													
93													
94													
95													
96													
97													
98													
99													
100													
101													
102													Top of Bentonite seal

EARTH TECH

Borehole/Well Construction Log
(Continuation Sheet)

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST			Sheet	7 of 9

Depth (feet)	Samples: Number	Samples: Type	Samples: Blow Count	Samples: Percent Recovery	Samples: Time	Estimated %: Gravel	Estimated %: Sand	Estimated %: Fines	Log: Graphic	Log: USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
103						-	-	-		IE	Same as above (basalt)		
104													
105													
106													
107													
108													
109													
110													
111													
112													
113													
114													
115													
116													
117													
118													
119													
120													

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Borehole/Well Construction Log
(Continuation Sheet)

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST			Sheet	8 of 9

Depth (feet)	Samples: Number	Samples: Type	Samples: Blow Count	Samples: Percent Recovery	Samples: Time	Estimated %: Gravel	Estimated %: Sand	Estimated %: Fines	Log: Graphic	Log: USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
31						-	-	-		IE	Same as above (basalt)		
32													Approximate static basal groundwater level (122 2 feet bgs), top of filter pack
33													Top of screen; 0 02 inch stainless steel screen
34													
35													
36													
37													

EARTH TECH

Borehole/Well Construction Log
(Continuation Sheet)

Project Name	Red Hill Phase II RI/FS	Project Number	CTO-0034	Borehole Number:	MW08
Borehole Location	Near AST			Sheet	9 of 9

Depth (feet)	Samples: Number	Samples: Type	Samples: Blow Count	Samples: Percent Recovery	Samples: Time	Estimated %: Gravel	Estimated %: Sand	Estimated %: Fines	Log: Graphic	Log: USCS or Rock Type	Lithologic Description	Well Construction Diagram	Remarks
138						-	-	-		IE	Same as above (basalt)		First encountered depth of basal groundwater (138 5 feet bgs)
139													
140													
141													
142													Bottom of well
											Boring finished at 143 feet on 4/24/98		Total depth of borehole