Quarterly Groundwater Monitoring Report
Red Hill Fuel Storage Facility

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

HDOH Facility ID No. 9-102271
HDOH Release ID No. 99051, 010011, 020028

April 2009

Prepared by:

TEC Inc.
1001 Bishop St. Suite 1400
American Savings Bank Tower
Honolulu, Hawaii 96813

Prepared for:

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

Table of Contents

List of Tables

List of Figures

List of Appendices

Executive Summary

This Quarterly Groundwater Monitoring Report presents the results of groundwater sampling conducted on February 4, 2009 at the United States (US) Navy Bulk Fuel Storage Facility at Red Hill, Oahu, Hawaii (the Facility). The sampling and reporting was conducted by TEC Inc. (TEC) for the Fleet and Industrial Supply Center (FISC) at Pearl Harbor, Hawaii. This report is part of a series of quarterly groundwater monitoring reports provided by the US Navy to the State of Hawaii Department of Health (HDOH) in accordance with HDOH's release response requirements. Currently, there are 18 active and 2 inactive, 12.5 million gallon, field-constructed underground storage tanks (USTs) located at the Facility.

Background

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 had 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. The US Navy Well 2254-01 is located approximately 3,000 feet down-gradient from the Red Hill Fuel Storage Facility and provides approximately 24 % of the potable water to the Pearl Harbor Water System (PHWS).

By September 2005, the US Navy had installed two more groundwater monitoring wells (RHMW02 and RHMW03) within the Facility lower access tunnel, a background groundwater monitoring well (RHMW04) up-gradient from the Facility at ground surface adjacent to the US Navy Firing Range, and a groundwater monitoring well within the US Navy Well 2254-01 infiltration gallery (RHMW2254-01).

All five wells were sampled twice as part of a comprehensive environmental investigation and risk assessment (TEC, 2006). For this investigation, groundwater samples were analyzed for petroleum constituents and compared against HDOH Drinking Water Environmental Action Levels (EALs) (HDOH, July 2005). In addition, a three-dimensional (3-D) groundwater model was developed to produce site-specific risk-based levels (SSRBLs) for compounds of concern. The results of this modeling effort indicated that Jet Propulsion (JP)–5 fuel presented the biggest risk to the US Navy water supply, due to its mobility and toxicity. Finally, the model indicated that a non-aqueous plume (free product) of JP-5 must migrate to within 1,100 feet of the US Navy Well 2254-01 infiltration gallery for HDOH EALs to be exceeded within the gallery. Based on this, free-product must be observed at RHMW01 for EALs to be exceeded at the US Navy Well 2254-01.

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 each previously 240 μg/L, assuming they were not carcinogens. Evidence that they are carcinogenic to humans has now been accepted by the US Environmental Protection Agency (USEPA), and HDOH adopted more rigorous EALs of 4.7 μg/L for 1-methylnaphthalene and 24 μg/L for 2-methylnaphthalene (HDOH, 2008).

The drinking water EAL for naphthalene was also updated during this process. Previously, HDOH based their naphthalene EAL on USEPA Region 9 Preliminary Remediation Goal (USEPA PRG) of 6.2 µg/L, which is associated with a non-cancer Hazard Index of 1. HDOH has updated their naphthalene drinking water EAL to 17 µg/L, in deference to the California Department of Public Health's Drinking Water Notification Levels (HDOH, 2008).

Finally, the drinking water EAL for TPH-DRO was increased from 100 µg/L to 210 µg/L, although the gross contamination EAL for TPH-DRO remains 100 µg/L.

Groundwater Protection Plan

In 2008, the US Navy completed the *Red Hill Bulk Fuel Storage Facility Final Groundwater Protection Plan* (TEC, 2008), which specified SSRBLs for each well, and actions that would occur for the pertinent cases, based on categories for each groundwater monitoring well (Categories 1 through 4). The main object of the Plan is to protect groundwater quality entering the US Navy Well 2254-01, which provides potable water to the PHWS. This is accomplished by comparing petroleum concentrations in the Facility wells (RHMW01, RHMW02, and RHMW03) to the SSRBLs and taking the corresponding action. A secondary, but important objective of the Plan is to identify leaking USTs by evaluating increasing concentration trends, or the sudden and lasting presence of free product in one or more groundwater monitoring wells. This quarterly report compares the water quality to these categories and recommended actions.

Current Results

On February 4, 2009 four groundwater samples were collected from RHMW01, RHMW02, RHMW03 and the US Navy Well 2254-01, along with the required quality control samples (duplicate, matrix spike, spike duplicate, trip blank). Samples were analyzed for Total Petroleum Hydrocarbons (TPH) quantified as Diesel-Range Organics (DRO) and Gasoline Range Organics (GRO), Volatile Organic Compounds (VOCs), Polynuclear Aromatic Hydrocarbons (PAHs), and lead.

TPH-DRO

TPH-DRO was detected at 387 micrograms per liter (µg/L) in RHMW01, 2,840 µg/L (i.e., the average of normal and duplicate samples) in RHMW02, and at 207 µg/L in RHMW03. The HDOH Drinking Water EAL and SSRBL for TPH-DRO are 210 µg/L and 4,500 µg/L, respectively.

TPH-GRO

For TPH-GRO the HDOH Drinking Water EAL is 100 µg/L. In samples collected at RHMW01, RHMW02, RHMW02D (i.e., the duplicate sample collected), RHMW03, and RHMW2254-01 estimated values (i.e., values below the laboratory reporting limit, but above the method detection limit) were observed at the following respective levels: 14.4 µg/L, 52.3 µg/L, 54.3 µg/L, 16.1 µg/L, and 14 µg/L. The estimated value of 14 µg/L of TPH-GRO detected at RHMW2254-01, which is well below the HDOH Drinking Water EAL of 100 µg/L and just above the method detection limit of 10 µg/L was unexpected. Therefore, analytical results will be closely monitored during future quarterly groundwater sampling events at RHMW2254-01 to

assess whether the detection of trace quantities of TPH-GRO from the February 2009 sampling event represents an anomaly or an apparent analytical trend relative to RHMW2254-01.

Other Parameters
At RHMW02, average concentrations between the normal and duplicate samples were determined to be above the HDOH Drinking Water EALs as follows: naphthalene at 42.9 µg/L (HDOH EAL is 17 µg/L) and 1-methylnaphthalene at 22 µg/L (HDOH Drinking Water EAL is 4.7 µg/L).

The average analytical values of the normal and duplicate samples for 2-methylnaphthalene at RHMW02 were 10.8 µg/L. This value slightly exceeds the HDOH Drinking Water Ceiling EAL for 2-methylnaphthalene of 10 µg/L.

It is noteworthy that 1-methylnaphthalene, which was detected at trace quantities (i.e., estimated to be 0.03 µg/L) at RHMW2254-01 during the October 2008 sampling event, was not detected during the February 2009 sampling event.

Trend Analysis
At RHMW01, concentrations of TPH-DRO have been greater than the HDOH Drinking Water EAL since September 2005, but less than 25 percent of the SSRBL of 4,500 µg/L. In February 2009, TPH-DRO was lower in concentration than the October 2008 sampling event. Prior to the October 2008 event, TPH-DRO concentrations had decreased for three consecutive sampling rounds.

At RHMW02, concentrations of TPH-DRO have been greater than the HDOH Drinking Water EAL since September 2005 and greater than 50 percent of the SSRBL of 4,500 µg/L over that same period. The average TPH-DRO concentration from the October 2008 sampling event increased to above the SSRBL (estimated solubility limit). However, the February TPH-DRO concentration dropped below the SSRBL of 4,500 µg/L (i.e., average of normal and duplicate samples of 2,840 µg/L). Three parameters (i.e., naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) also have exceeded EALs since September 2005. In October 2008, these parameters decreased in concentrations following increasing trends over three previous rounds (since January 2008). During the February 2009 sampling event, the decrease continued as all three parameter concentrations were less than the respective October 2008 values. There are no SSRBLs established for these parameters.

At RHMW03, concentrations of TPH-DRO have fluctuated around the HDOH EAL since September 2005 and are significantly lower than corresponding values observed at RHMW01 and RHMW02. During the February 2009 sampling event, TPH-DRO at RHMW03 (i.e., 207 µg/L) slightly decreased from the observed October value (i.e., 244 µg/L) and was slightly less than the newly established HDOH Drinking Water EAL value of 210 µg/L. Prior to the February 2009 event, TPH-DRO has been increasing in concentration since April 2008.

Current Groundwater Status

Based on the monitoring event that occurred in February 2009, no free product was observed at RHMW01, RHMW02, or RHMW03.

Although TPH-GRO was detected at US Navy Well 2254-01 during the February 2009 sampling event, it does not place the well into the Category 1 status. Since no contamination trend (i.e., two or more consecutive sampling rounds) has been observed at US Navy Well 2254-01, the well does not meet the Category 1 definition.

Category 1 Status Locations

Based upon the February 2009 sampling event, RHMW03 is presently in Category 1 status, since the TPH-DRO value (i.e., 207 µg/L) dipped slightly below the HDOH Drinking Water EAL (i.e., 210 µg/L) and this represents a slight decrease in the concentration as compared with the October 2008 concentration. Category 1 response for RHMW03 requires:

1. Quarterly reports to be sent to HDOH.

Category 2 Status Locations

Results from the February 2009 sampling event indicate that RHMW01 is presently in Category 2 status, since the TPH-DRO concentration of 387 µg/L is greater than the HDOH Drinking Water EAL (210 µg/L), but less than half the SSRBL of 4,500 µg/L (estimated solubility limit of JP-5). Category 2 response at RHMW01 requires:

1. Quarterly reports to be sent to HDOH; and
2. Initiation of a leak determination program to identify if tanks are leaking.

Category 3 Status Locations

Results from the February 2009 sampling event indicate that RHMW02 is presently in Category 3 status (i.e., downgraded from Category 4 status observed during the October 2008 sampling event), since TPH-DRO [2,840 µg/L and 2,840 µg/L (duplicate)] is greater than the HDOH Drinking Water EAL (210 µg/L), but is between one half and the established SSRBL value of 4,500 µg/L (estimated solubility limit of JP-5). In addition, the HDOH Drinking Water EAL of 4.7 µg/L for 1-methylnaphthalene was exceeded [i.e., 21.2 µg/L and 22.8 µg/L (duplicate)].

Category 3 response at RHMW02 requires:

1. Send quarterly reports to HDOH;
2. Initiation of a leak determination program to identify if tanks are leaking;
3. Increase free product monitoring frequency to once per month (if concentrations increasing);
4. Notify HDOH verbally within 7 days and follow with written notification in 30 days;
5. Remove sampling pumps, measure product in pertinent wells with interface probe, re-install pumps if product is not detected; and
6. Immediately evaluate tanks for leaks.

Conclusions and Recommendations

There is no indication of an imminent threat to the US Navy Well 2254-01 water resources based on this report, since petroleum concentrations at RHMW01 remain less than half the SSRBLs. Additionally, based upon the February 2009 sampling event, the groundwater status at RHMW02 is Category 3 (i.e., downgraded from Category 4 status observed during the October 2008 sampling event) since the concentration of TPH-DRO was greater than the HDOH Drinking Water EAL (210 µg/L), but was between one half and the established SSRBL value of 4,500 µg/L. The Groundwater Protection Plan requires specific responses to Category 3, which should be conducted.

Although 1-methylnaphthalene was detected at trace quantities (i.e., estimated to be 0.03 µg/L) at RHMW2254-01 during the October 2008 sampling event, it was not detected during the February 2009 sampling event. An unexpected estimated value of 14 µg/L of TPH-GRO was detected at RHMW2254-01; however, this concentration is well below the HDOH Drinking Water EAL of 100 µg/L and just above the method detection limit of 10 µg/L.

The US Navy plans to install an additional monitoring well in the Facility lower access tunnel and dedicated oil/water interface probes in four lower access tunnel wells in the coming year to better monitor contaminant migration in the basal drinking water aquifer.

Quarterly groundwater sampling for TPH-DRO, TPH-GRO, VOCs, PAHs, and lead will continue as previously scheduled until such time that new data indicates that a different schedule is warranted. It is recommended that future quarterly analytical results be closely monitored at RHMW2254-01 to assess whether the detection of trace quantities (i.e., 14 µg/L) of TPH-GRO from the February 2009 sampling event represents an anomaly or an apparent analytical trend.

1.0 Introduction

This report presents the results of the 14th groundwater sampling and analysis event, conducted in February 2009 at the Red Hill Fuel Storage Facility, Oahu, Hawaii (hereafter referred to as "the Facility"). The Facility consists of 18 active and 2 inactive underground storage tanks (USTs) operated by the Fleet and Industrial Supply Center (FISC), Pearl Harbor. The groundwater sampling and analysis event is part of a groundwater monitoring program for the UST site in response to past UST releases, previous environmental investigations, and recommendations from the State of Hawaii Department of Health (HDOH).

1.1 Project Objective

This groundwater sampling and analysis project was performed to evaluate the presence of chemicals of potential concern in groundwater underlying the Facility. The project was conducted to ensure the Navy remains in compliance with HDOH UST release response requirements as described in Hawaii Administrative Rules (HAR) 11-281 Subchapter 7, Release Response Action. The groundwater sampling and analysis procedures generally followed the procedures described in *Red Hill Bulk Fuel Storage Facility Groundwater Protection Plan* [TEC Inc (TEC), 2008 also referred to as "the Plan"].

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

1.2 Previous Reports

The following groundwater monitoring reports were previously submitted to the HDOH:

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); and
13. Groundwater Monitoring Results, October and December 2008 (submitted February 2009)

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 Halawa Heights on Oahu, Hawaii. Land adjacent to the north of the Facility is occupied by 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 hydraulically down-gradient from the Facility (Dawson, 2006). The US Navy Well 2254-01 is located approximately 3,000 feet down-gradient (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 2 inactive USTs operated by Navy 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).

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 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 Previous Environmental Investigations

1998 to 2001: From 1998 to 2001, the Navy conducted an investigation at the Facility to assess potential releases from the fuel storage USTs and piping systems. In February 2001, the Navy installed a one-inch diameter sentinel well RHMW01 (previously known as MW-V1D) to monitor for contamination of the basal aquifer underlying the Facility. The well was installed and completed at approximately 100 feet below grade within the underground access tunnel. At the time of well completion, depth to water in RHMW01 was measured at 86 feet below grade (Dawson, 2006).

In February 2001, groundwater samples collected from sentinel well RHMW01 contained total petroleum hydrocarbons (TPH) concentrations ranging from 883 micrograms per liter (µg/L) to 1,050 µg/L and total lead ranging from 10.4 µg/L to 15 µg/L. The maximum total lead concentration in the samples was equal to the primary drinking water standard of 15 µg/L for lead and exceeded the HDOH Tier 1 groundwater action level of 5.6 µg/L (Dawson, 2006).

2005 – Groundwater Sampling: The Navy began quarterly groundwater sampling at existing monitoring wells in 2005. Dawson Group, Inc. collected groundwater samples from RHMW01 and the Red Hill Navy Pump Station (US Navy Well 2254-01) in February, June, September, and December 2005.

Samples collected in February and June 2005 were not filtered in the field prior to analysis for lead. Analytical results for samples collected from RHMW01 indicated concentrations of total lead were above the HDOH Tier 1 action level of 5.6 μg/L. The results were not considered appropriate for risk assessment since the sample had not been filtered. In addition, lead was not a component of fuels from the tanks near RHMW01. Lead may have been part of the Facility construction material (TEC, 2007).

Samples were filtered in September and December 2005, and dissolved lead concentrations were below the HDOH Tier 1 action level. Concentrations of all other contaminants of potential concern were below HDOH Tier 1 action levels.

2005 – Site Investigation: As part of a site investigation, TEC installed three groundwater monitoring wells at the Facility between June and September 2005. Well RHMW02 was installed in the lower access tunnel near Tanks 5 and 6. Well RHMW03 was installed in the lower access tunnel near Tanks 13 and 14. Well RHMW04 was installed hydraulically upgradient of the USTs to provide geochemistry for water moving through the basal aquifer beneath the Facility. Wells RHMW02 and RHMW03 were completed to depths of approximately 125 feet below the tunnel floor, and well RHMW04 was completed to a depth of approximately 300 feet below ground surface outside the tunnel. Groundwater samples were collected from the three newly installed wells and two existing wells (RHMW01 and US Navy Well 2254-01) in September 2005.

Naphthalene and trichloroethylene were detected in samples collected from RHMW02 at concentrations greater than the HDOH Tier 1 action levels. Lead was detected in the sample collected from RHMW01 at a concentration greater than the HDOH Tier 1 action level; however, the sample was not filtered in the field prior to analysis. Analytical results for filtered samples obtained by Dawson during the same period indicated concentrations of dissolved lead were below the HDOH Tier 1 action level.

2006 – Site Investigation: Dedicated sampling pumps were installed in five wells (RHMW01, RHMW02, RHMW03, RHMW04, and US Navy Well 2254-01). TEC collected groundwater samples from the wells in July 2006. The groundwater samples were analyzed for petroleum constituents. Naphthalene was detected in samples collected from RHMW02 at concentrations above the HDOH Tier 1 action level.

In September 2005, with concurrence from the HDOH, the Navy decided to use the newer HDOH Environmental Action Levels (EALs) for the Red Hill Site Investigation and Risk Assessment project. The EALs are current and provide action levels for more chemicals, and are much more useful for conducting screening risk assessments. Since the HDOH (HDOH May 2005) Policy Letter stated that the two sets of action levels should not be mixed, the Tier 1

screening levels presented in HAR Section 11-281-78 would no longer be used to evaluate environmental impact at the Facility.

2006 – Groundwater Sampling: Groundwater samples were collected in December 2006. Analytical results indicated the following:

- No chemicals were detected in groundwater from US Navy Well 2254-01 or RHMW03;
- TPH as diesel range organics (TPH-DRO) was detected in groundwater above the HDOH Drinking Water EALs in RHMW01; and
- TPH as gasoline range organics (TPH-GRO), TPH-DRO, and naphthalene were detected in groundwater above the HDOH Drinking Water EALs in RHMW02.

2007 – Groundwater Sampling: Groundwater samples were collected in March, June, and September 2007. Analytical results indicated the following:

- No chemicals were detected above HDOH Drinking Water EALs at US Navy Well 2254-01;
- TPH-DRO exceeded HDOH Drinking Water EALs at RHMW01 during all three sampling events;
- TPH-GRO exceeded HDOH Drinking Water EALs at RHMW02 in March;
- TPH-DRO and naphthalene exceeded HDOH Drinking Water EALs at RHMW02 during all three sampling events;
- 1-methylnaphthalene and 2-methylnaphthalene exceeded HDOH Drinking Water EAL for taste and odor at RHMW02 during all three sampling events; and
- TPH-DRO exceeded HDOH Drinking Water EALs at RHMW03 in June.

2008 – Groundwater Sampling: Groundwater samples were collected in January, April, July, and October 2008. Analytical results indicated the following:

- No chemicals were detected above HDOH Drinking Water EALs at US Navy Well 2254-01;
- Trace detections of 1-methylnaphthalene and naphthalene prompted a resample event in December at US Navy Well 2254-01, no chemicals were detected above the method detection limit (MDL);
- TPH-DRO exceeded HDOH Drinking Water EALs at RHMW01;
- TPH-GRO did not exceed HDOH Drinking Water EALs at RHMW02;
- TPH-DRO, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene exceeded HDOH Drinking Water EALs at RHMW02; and
- TPH-DRO exceeded HDOH Drinking Water EALs at RHMW03 in October.

1.5 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 previously 240 μg/L, assuming they were not carcinogens. Evidence that they are carcinogenic to humans has now been accepted by the US Environmental Protection Agency (USEPA), and 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).

The drinking water EAL for naphthalene has also been updated during this process. Previously, HDOH based their naphthalene EAL on USEPA Region 9 Preliminary Remediation Goal (USEPA PRG) of 6.2 μg/L, which is associated with a non-cancer Hazard Index of 1. HDOH has updated their naphthalene drinking water EAL to 17 μg/L, in deference to the California Department of Public Health's Drinking Water Notification Levels, a Hazard Index of 2.7 (HDOH, 2008).

Finally, the drinking water EAL for TPH-DRO was increased from 100 μg/L to 210 μg/L, although the 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 February 4, 2009. Groundwater samples were collected from three monitoring wells located inside the Facility lower access tunnel and one monitoring well located at the Red Hill Navy Pump Station. Sampling and analysis were conducted according to *Red Hill Bulk Fuel Storage Facility Groundwater Protection Plan* (TEC, 2009). A total of seven samples were collected; one normal environmental sample from monitoring wells US Navy Well 2254-01, RHMW01, RHMW02 and RHMW03, one duplicate sample from RHMW02 (Sampled as RHMWA01 and reported as RHMW02D), and one matrix spike and matrix spike duplicate from US Navy Well 2254-01.

2.1 Monitoring Well Purging

The groundwater monitoring wells were purged and sampled using a dedicated pump system. 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. Purge water was disposed in the Facility oil/water separator system.

2.2 Groundwater Sample Collection

Each monitoring well was sampled immediately following purging. All wells were sampled directly from their dedicated bladder pump system. 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, polynuclear aromatic hydrocarbons (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 located in the lower access tunnel of the Facility and one monitoring well located at the Red Hill Navy Pump Station. Duplicate sample results from monitoring wells RHMW02 are reported in this document as RHMW02D. A summary of groundwater analytical results is included in Table 1. Complete analytical laboratory reports are provided in Appendix A.

3.1 February 2009 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.

RHMW01

TPH-DRO at 387 µg/L exceeded the HDOH Drinking Water EAL of 210 µg/L. Trace concentrations of TPH-GRO, fluorine, and naphthalene were detected well below HDOH EALs (Table 1). All other constituents were not detected.

RHMW02

Eight petroleum constituents were detected at RHMW02: TPH-DRO, TPH-GRO, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, acetone, benzene, and ethylbenzene. TPH-DRO was detected at RHMW02 in the normal and duplicate samples, at 2,840 µg/L. This result exceeded the HDOH EAL of 210 µg/L, but not the site-specific risk based level (SSRBL) of 4,500 µg/L. TPH-GRO was detected at an estimated average concentration of 53.3 µg/L, well below the HDOH Drinking Water EAL of 100 µg/L.

Naphthalene was analyzed by USEPA Method 8270C SIM and USEPA Method 8260B. USEPA Method 8260B produced the highest naphthalene concentrations, which averaged 42.9 µg/L from the normal and duplicate sample (HDOH EAL is 17 µg/L). In addition, 1-methylnaphthalene and 2-methylnapthalene were detected by USEPA Method 8270C SIM in the normal and duplicate samples. The average result for 1-methylnaphthalene was 22 µg/L, greater than the HDOH toxicity EAL of 4.7 µg/L. The average result for 2-methylnaphthalene was 10.8 µg/L, less than the HDOH drinking water toxicity EAL of 24 µg/L, but slightly greater than the HDOH drinking water taste and odor EAL of 10 µg/L. All other petroleum constituents, including trace concentrations of acetone, benzene, and ethylbenzene, were well below HDOH Drinking Water EALs at RHMW02 (Table 1).

RHMW03

Two constituents were detected at RHMW03: TPH-DRO and TPH-GRO (Table 1). TPH-DRO was detected at an estimated 207 µg/L, slightly below the HDOH Drinking Water toxicity EAL of 210 µg/L, but greater than the HDOH Drinking Water taste and odor EAL of 100 µg/L. TPH-GRO was detected at an estimated 16.1 µg/L, well below the HDOH Drinking Water EALs of 100 µg/L. All other constituents were below HDOH Drinking Water EALs at RHMW03.

Table 1. Red Hill Analytical Results for Quarterly Groundwater Monitoring Release Response Report (February 4, 2009)

Method	Chemical	HDOH Residential Drinking Water EALs[1] UG/L	HDOH Drinking Water Ceiling EALs[2] UG/L	RHMW01 UG/L February 4, 2009				RHMW02 UG/L February 4, 2009				RHMW02D UG/L February 4, 2009				RHMW03 UG/L February 4, 2009				RHMW2254-01 UG/L February 4, 2009			
				Result	Q	MDL	RL	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	***387***	F	89.9	449	***2840***		89.9	449	***2840***		88.4	442	***207***	F	89.4	447	ND	U	92	460
	TPH as GASOLINE RANGE ORGANICS	100	100	14.4	F	10	100	52.3	F	10	100	54.3	F	10	100	16.1	F	10	100	14	F	10	100
8270C SIM (PAHs)	1-METHYLNAPHTHALENE	4.7	10	ND	U	0.0165	0.0549	***21.2***		0.161	0.538	***22.8***		0.163	0.543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	2-METHYLNAPHTHALENE	24	10	ND	U	0.0165	0.0549	***10.5***		0.161	0.538	***11.1***		0.163	0.543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	ACENAPHTHENE	370	20	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	ACENAPHTHYLENE	240	2000	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	ANTHRACENE	1800	22	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	BENZO(a)ANTHRACENE	**0.092**	**4.7**	**ND**	**U**	**0.0165**	**0.0549**	**ND**	**U**	**0.161**	**0.538**	**ND**	**U**	**0.0163**	**0.0543**	**ND**	**U**	**0.0161**	**0.0538**	**ND**	**U**	**0.0161**	**0.0538**
	BENZO(a)PYRENE	0.2	0.81	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	BENZO(b)FLUORANTHENE	0.092	0.75	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	BENZO(g,h,i)PERYLENE	1500	0.13	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	BENZO(k)FLUORANTHENE	0.92	0.4	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	CHRYSENE	9.2	1	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	DIBENZ(a,h)ANTHRACENE	0.0092	0.52	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	FLUORANTHENE	1500	130	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	FLUORENE	240	950	0.0235	F	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	INDENO(1,2,3-c,d)PYRENE	0.092	0.095	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	NAPHTHALENE	17	21	0.173		0.0341	0.11	15.2		0.333	1.08	16.6		0.337	1.09	ND	U	0.0333	0.108	ND	U	0.0333	0.108
	PHENANTHRENE	240	410	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
	PYRENE	180	68	ND	U	0.0165	0.0549	ND	U	0.161	0.538	ND	U	0.0163	0.0543	ND	U	0.0161	0.0538	ND	U	0.0161	0.0538
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	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	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	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	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	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	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	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	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**	**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	ND	U	0.31	1
	1,2-DICHLOROETHANE	0.15	700	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5	ND	U	0.15	0.5
	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	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	ND	U	0.31	1
	1,3-DICHLOROPROPANE	0.4	50000	ND	U	0.12	0.4	ND	U	0.12	0.4	ND	U	0.12	0.4	ND	U	0.12	0.4	ND	U	0.12	0.4
	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	ND	U	0.15	0.5
	ACETONE	22000	20000	ND	U	3.1	10	8.51	F	3.1	10	8.59	F	3.1	10	ND	U	3.1	10	ND	U	3.1	10
	BENZENE	5	170	ND	U	0.12	0.4	0.26	F	0.12	0.4	0.24	F	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	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	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	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	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	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	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	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	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	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	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	ND	U	0.15	0.5
	ETHYLBENZENE	700	30	ND	U	0.31	1	0.49	F	0.31	1	0.52	F	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**	**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	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	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	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	ND	U	1	5
	NAPHTHALENE	17	21	ND	U	0.62	2	***42.8***		0.62	2	***43***		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	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	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	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	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	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	ND	U	0.31	1
6020	LEAD	15	50000	ND	U	0.31	1	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
[1] Toxicity-based environmental action levels, Table D-1b, *Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater,* HDOH, 2008
[2] Taste, odor and solubility thresholds, Table G-1, *Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater* , HDOH, 2008

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
NA - not analyzed

US Navy Well 2254-01
TPH-GRO was detected at US Navy Well 2254-01 at 14 µg/L estimated value (i.e., the value is below the laboratory reporting limit, but above the method detection limit). The HDOH Drinking Water EAL for TPH-GRO is 100 µg/L.

3.2 Groundwater Contaminant Trend

Groundwater samples have been collected and analyzed by TEC since September 2005. Figure 1 shows TPH trends in groundwater at the Facility. Figure 2 shows PAH trends in groundwater at the Facility. In these figures, open icons (without fill) represent the method detection limit for chemicals that were not detected.

RHMW01
TPH-GRO has only previously been detected in April 2008 at 13.6F µg/L, which is below the HDOH Drinking Water EAL of 100 µg/L. In February 2009, TPH-GRO was detected at 14.4 µg/L. TPH-DRO was detected above the HDOH Drinking Water EAL during all groundwater sampling events. The concentration of TPH-DRO observed during the February 2009 sampling event decreased after showing an increase in October 2008.

RHMW02
TPH-GRO was detected in all but one of the sampling rounds since September 2005, and exceeded the HDOH Drinking Water EAL of 100 µg/L three times during 2006 and 2007. The maximum concentration detected has been 148 µg/L.

The concentration of TPH-DRO was relatively stable at RHMW02 until July 2008, ranging from 2,250 to 2,995 µg/L. However, during the July and October 2008 sampling events, these average concentrations increased (i.e., average between the normal and duplicate samples). Specifically, the July 2008 average concentration was 4,055 µg/L and the October 2008 average concentration was 5,420 µg/L. Both of these values were well above the HDOH Drinking Water EAL of 210 µg/L, with the October 2008 average also exceeding the SSRBL of 4,500 µg/L. The average concentration of TPH-DRO observed during the February 2009 sampling event (i.e., 2,840 µg/L) decreased relative to the July and October 2008 sampling event concentrations to approximate levels not observed since the April 2008 sampling event. This decrease in the February 2009 sampling event downgraded RHMW02 to a Category 3 status from the previous Category 4 status that followed the October 2008 sampling event.

PAHs at RHMW02 remain above the HDOH Drinking Water EALs for naphthalene and 1-methylnaphthalene. Concentrations decreased in the October 2008 and February 2009 sampling events after showing a slight increasing trend since the April 2008 sampling event.

RHMW03
TPH-GRO has never been detected prior to February 2009. The February 2009 sampling event detected TPH-GRO at an estimated value of 16.1 µg/L, well below the HDOH Drinking Water EAL of 100 µg/L.

TPH-DRO had shown a slight increasing trend peaking at 244 µg/L during the October 2008 sampling event. During the February 2009 sampling event, TPH-DRO concentrations decreased to 207 µg/L. Generally, the concentrations of TPH-DRO have remained relatively stable, near the DOH Drinking Water EAL of 210 µg/L. Concentrations of petroleum-related compounds at RHMW03 have normally been the lowest of the three wells located within the Facility.

3.3 Results of Oil/Water Interface Measurements

The presence and thickness of light-non aqueous phased liquids (LNAPL), otherwise known as free product, released from the USTs were measured during this sampling event using a 300 ft Heron Oil/Water Interface Meter. The static water levels were measured to a precision of ± 0.01 ft and fuel thickness was measured to a precision of ± 0.01 ft with this equipment.

In January 2008, fuel was measured in monitoring wells RHMW01 and RHMW02 at a thickness of < 0.01 ft, but has not been observed in other monitoring wells as of this document.

Measurements to determine the presence and thickness of fuel were conducted at RHMW01, RHMW02, and RHMW03 prior to the current sampling round. At the end of February and the end of March subsequent rounds of oil/water interface measurements were conducted. In February, a measurement at RHMW01 was planned but was not completed due to extensive work being performed by Tank 02, making RHMW01 inaccessible. No free product was observed in any of these wells before and after this event (see Table 2).

Table 2. Oil/Water Interface Measurements

	RHMW01		RHMW02		RHMW03	
Date	SWL (ft)	LNAPL (ft)	SWL (ft)	LNAPL (ft)	SWL (ft)	LNAPL (ft)
January 2008	17.74	< 0.01	18.78	< 0.01	NT	NT
July 2008	19.04	0.00	18.91	0.00	18.86	0.00
October 2008	18.61	0.00	18.56	0.00	18.82	0.00
November 2008	18.50	0.00	18.45	0.00	18.51	0.00
January 2009	19.28	0.00	19.22	0.00	102.04	0.00
February 2009	NT	NT	18.66	0.00	18.75	0.00
March 2009	18.59	0.00	18.57	0.00	18.67	0.00

SWL Static water level, elevation above mean sea level
LNAPL Light Non-Aqueous Phased Liquid, fuel product on groundwater
ft Feet
NT Not Taken

3.4 Groundwater Status

Constituents of concern are defined as those petroleum-related chemicals that have been observed in the groundwater samples above the HDOH EALs. In accordance with the *Red Hill Bulk Fuel Storage Facility Final Groundwater Protection Plan* (TEC, 2008), Table 3 defines the

constituents of concern in groundwater at the Facility and the SSRBLs and updated EALs for each (HDOH 2008).

Table 3. Action Levels for Constituents of Concern

Chemical	EAL (µg/L)	SSRBL (µg/L)
Petroleum Mixtures		
TPH-DRO	210	4,500
TPH-GRO	100	4,500
Semi-Volatile Compounds		
1-Methylnaphthalene	4.7	NA
2-Methylnaphthalene	24	NA
Naphthalene	17	NA

NA – Not applicable or not determined
SSRBLs are applicable at RHMW01, RHMW02, and RHMW03
EALs are applicable at US Navy Well 2254-01

In addition, the Plan defines four results categories of groundwater status for the Facility, based on concentrations of constituents of concern in RHMW01, RHMW02, RHMW03 and the US Navy Well 2254-01, and requires specific responses when these categories are observed during quarterly groundwater sampling. Table 4 describes each of the four results categories and identifies response actions to be taken in accordance with the Plan.

Table 4. Results Categories and Response Actions to Changes in Groundwater Status

Results Category	RHMW02 or RHMW03	RHMW01	US Navy Pumping Well 2254-01
Results Category 1: Result above detection limit but below drinking water EAL and trend for all compounds stable or decreasing	A	A	A,D,M,E,P
Results Category 2: Trend for any compound increasing or drinking water EAL exceeded	A, B	A, B	A,B,C,D,E,F,G,K, L,O
Results Category 3: Result Between 1/10X SSRBL and SSRBL for benzene, or between 1/2X SSRBL and SSRBL for TPH	A,B,G,H,I,J	A,B,E,G,H,I,J	A,B,C,D,E,F,G,I,J, K,L,O
Results Category 4: Result Exceeding any SSRBL or petroleum product observed	A,C,D,E,F,I,J, K,M,N	A,C,D,E,F,I, J,K,M,N,O	A,C,D,E,F,G,I,J,K, L,O

Specific Responses:
A. Send quarterly reports to HDOH
B. Begin program to determine the source of leak
C. Notify HDOH verbally within 1 day and follow with written notification in 30 days
D. Notify FISC Chain of Command within 1 day
E. Send Type 1 Report (see box below) to HDOH

F. Send Type 2 Report (see box below) to HDOH
G. Increase monitoring frequency to once per month (if concentrations increasing)
H. Notify HDOH verbally within 7 days and follow with written notification in 30 days
I. Remove sampling pumps, measure product in pertinent wells with interface probe, re-install pumps if product is not detected.
J. Immediately determine leaking tank
K. Collect samples from nearby Halawa Deep Monitoring Well (2253-03) and OWDF MW01
L. Provide alternative water source at 2254-01
M. Prepare for alternative water source at US Navy Well 2254-01
N. Re-measure for product every month with reports to HDOH
O. Install additional monitoring well downgradient

Report Types
HDOH Type 1 Report

- Re-evaluate Tier 3 Risk Assessment/groundwater model results
- Proposal to HDOH on a course of action

HDOH Type 2 Report

- Proposal for groundwater treatment

In response to the previous Category 3 conditions at RHMW02, oil/water interface measurements were collected in October 2008, November 2008, January 2009, February 2009, and March 2009 at Red Hill tunnel monitoring wells (Table 2). To date, there is no evidence of fuel on groundwater at any of these wells based on oil/water interface measurements.

Although TPH-GRO was detected at US Navy Well 2254-01 during the February 2009 sampling event, it does not place the well into the Category 1 status. Since no contamination trend (i.e., two or more consecutive sampling rounds) has been observed at US Navy Well 2254-01, the well does not meet the Category 1 definition.

Category 1 Status Locations
Based upon the February 2009 sampling event, RHMW03 is presently in Category 1 status, since the TPH-DRO value (i.e., 207 μg/L) dipped slightly below the HDOH EAL for drinking water (i.e., 210 μg/L) and this represents a slight decrease in the concentration as compared with the October 2008 concentration. Category 1 response requires:

1. Quarterly reports to be sent to HDOH.

Category 2 Status Locations
Results from the February 2009 sampling event indicate that RHMW01 is presently in Category 2 status, since the TPH-DRO concentration of 387μg/L is greater than the HDOH EAL for drinking water (210 μg/L), but less than half the SSRBL of 4,500 μg/L (estimated solubility limit of JP-5). Category 2 response at RHMW01 requires:

1. Quarterly reports to be sent to HDOH; and
2. Initiation of a leak determination program to identify if tanks are leaking.

Category 3 Status Locations
Results from the February 2009 sampling event indicate that RHMW02 is presently in Category 3 status (i.e., downgraded from Category 4 status observed during the October 2008 sampling event), since TPH-DRO [2,840 µg/L and 2,840 µg/L (duplicate)] is greater than the HDOH EAL for drinking water (210 µg/L), but is between one half and the established SSRBL value of 4,500 µg/L (estimated solubility limit of JP-5). In addition, the HDOH Drinking Water EAL of 4.7 µg/L for 1-methylnaphthalene was exceeded [i.e., 21.2 µg/L and 22.8 µg/L (duplicate)].

Category 3 response at RHMW02 requires:

1. Send quarterly reports to HDOH;
2. Initiation of a leak determination program to identify if tanks are leaking;
3. Increase free product monitoring frequency to once per month (if concentrations increasing);
4. Notify HDOH verbally within 7 days and follow with written notification in 30 days;
5. Remove sampling pumps, measure product in pertinent wells with interface probe, re-install pumps if product is not detected; and
6. Immediately evaluate tanks for leaks.

4.0 Summary and Conclusions

Summary
At RHMW02, the concentration of TPH-DRO in groundwater exceeded the EAL of 210 µg/L and was between one half and the established SSRBL value of 4,500 µg/L, which indicates Category 3 groundwater status at RHMW02. This represents a downgrade from Category 4 status, which was prompted by the October 2008 sampling effort. Although 1-methylnaphthalene which was detected at RHMW2254-01 during the October 2008 sampling event, it was not detected during the February 2009 sampling event. An unexpected estimated value of 14 µg/L of TPH-GRO was detected at RHMW2254-01; however, this concentration is well below the HDOH Drinking Water EAL of 100 µg/L and just above the method detection limit of 10 µg/L.

Conclusions
- Oil/water interface measurements were collected in October 2008, November 2008, January 2009, February 2009, and March 2009 from Red Hill tunnel monitoring wells and no free product was measured (Table 2).
- The concentration of TPH-DRO measured at RHMW01 in February 2009 was less than one tenth of the SSRBL. RHMW01 is down-gradient from RHMW02 and between RHMW02 and the US Navy Well 2254-01, an important drinking water source for the Pearl Harbor Water System.
- The US Navy Well 2254-01 is not imminently threatened at this time; however, conditions should be monitored closely to determine if any USTs in the Facility are currently leaking fuel into the subsurface and whether or not the unexpected value at

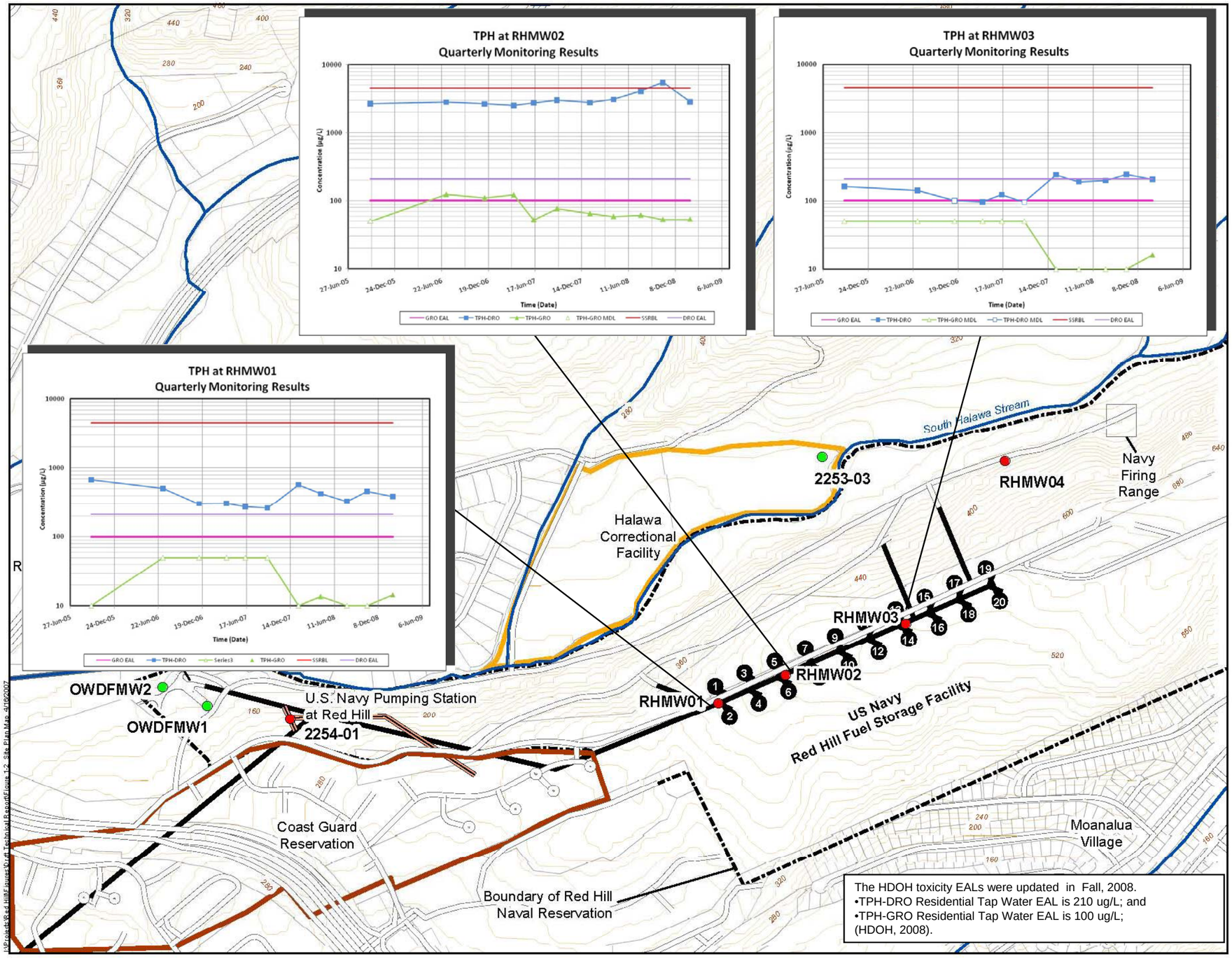
RHMW2254-01 of 14 µg/L of TPH-GRO from the February 2009 sampling event represents an anomaly or an apparent analytical trend.

- Category 4 activities should continue due to the October 2008 analytical results. These activities include:
    - Re-evaluate risk assessment and groundwater model (TEC, 2007) to ensure both are valid and protective of human health and the environment under the existing conditions and provide a report describing the results of this re-evaluation to the HDOH;
    - Evaluate potential requirement for groundwater treatment and provide a report describing the results of this re-evaluation to the HDOH;
    - Implement monthly oil/water interface measurements at RHMW01, RHMW02, and RHMW03, and provide monthly letter reports of the results;
    - Evaluate tanks associated with the middle section of the Facility (Tanks 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14);
    - Collect samples from nearby Halawa Deep Monitoring Well (2253-03) and OWDF MW01;
    - Prepare for alternative water source at US Navy Well 2254-01, as necessary.

The US Navy plans to install an additional monitoring well (RHMW05) in the lower access tunnel of the Facility between RHMW01 and the US Navy Well 2254-01 to better monitor the quality of the groundwater moving from the Facility to the US Navy Well 2254-01.

It is recommended that RHMW01, RHMW02, RHMW03, and RHMW05 (once installed) be evaluated monthly for the presence of fuel on groundwater, in accordance with the Plan. The US Navy plans to install dedicated oil/water interface probes in each of these wells to facilitate these measurements.

Quarterly groundwater sampling for TPH-DRO, TPH-GRO, VOCs, PAHs, and lead will continue as previously scheduled until such time that new data indicates that a different schedule is warranted. The quarterly collection and analysis of groundwater samples will continue to monitor the quality of the groundwater located beneath the Facility. Groundwater monitoring reports will be submitted to the HDOH upon receipt and evaluation of laboratory analytical results. It is recommended that future quarterly analytical results be closely monitored at RHMW2254-01 to assess whether the detection of trace quantities (i.e., 14 µg/L) of TPH-GRO from the February 2009 sampling event represents an anomaly or an apparent analytical trend.



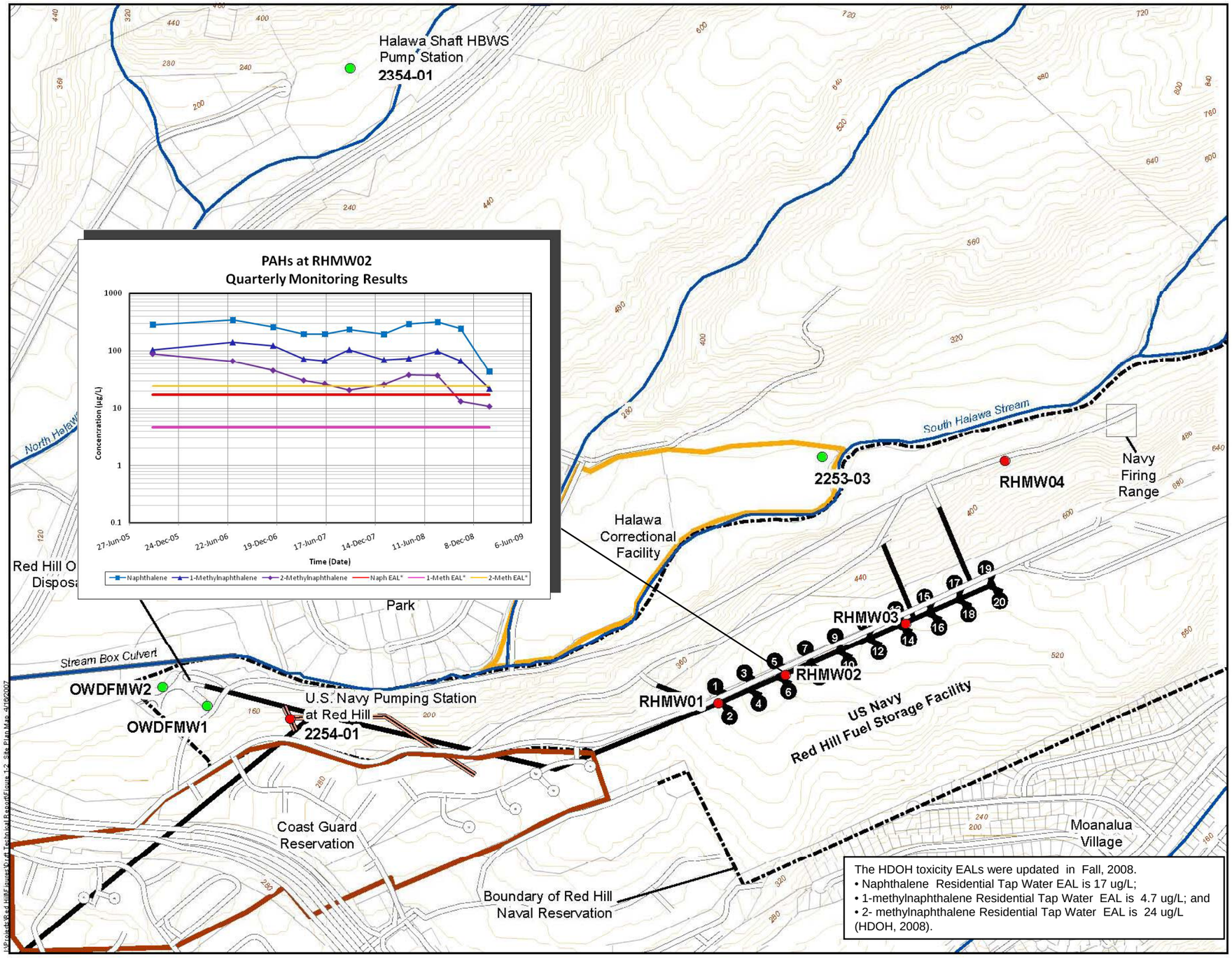
Legend

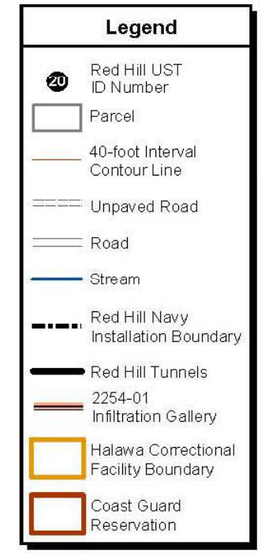
- Red Hill UST ID Number
- Parcel
- 40-foot Interval Contour Line
- Unpaved Road
- Road
- Stream
- Red Hill Navy Installation Boundary
- Red Hill Tunnels
- 2254-01 Infiltration Gallery
- Halawa Correctional Facility Boundary
- Coast Guard Reservation

N

Meters
0 87.5 50
0 312.5 625 1,250
Feet

Figure 1
TPH Trends in Groundwater
Round 14 (February 4, 2009)
Red Hill Fuel Storage Facility
Oahu, Hawaii





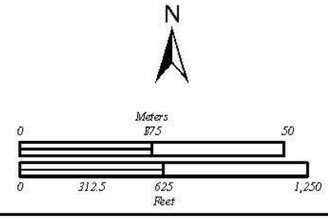


Figure 2
PAH Trends in Groundwater
Round 14 (February 4, 2009)
Red Hill Fuel Storage Facility
Oahu, Hawaii

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.

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

HDOH. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Volume 1: Summary Tier 1 Lookup Tables.* Interim Final. May 2005.

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).

The Environmental Company, Inc. and AMEC. *Red Hill Bulk Fuel Storage Facility Work Plan, Pearl Harbor, Hawaii.* June 2005.

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 Technical Report, Pearl Harbor, Hawaii.* August 2007.

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

Appendix A
Laboratory Analytical Reports

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

Project:	Red Hill BFSF
Client:	The Environmental Company, Inc. (TEC)
SGS Work Order:	1090476

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.

SGS Environmental Services Inc.

Case Narrative

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

Project: 1090476 **Red Hill BFSF**

NPDL WO:

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

1090476005 PS **RHMW02-WG14**

8015C - DRO - The pattern is consistent with a weathered middle distillate.

8270D SIM - PQLs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

8270D SIM - Surrogate recovery for terphenyl-d14 doe snot meet QC criteria (biased high) due to sample dilution.

1090476006 PS **RHMWA01-WG14**

8015C - DRO - The pattern is consistent with a weathered middle distillate.

1090476002 BMS **RHMW2254-WG14 MS**

8260B - BMS recoveries for dichlorodifluoromethane, chloromethane, vinyl chloride and trans-1,2-dichloroethene do not meet QC goals (biased high). Refer to LCS for accuracy.

8260B - BMS/BMSD RPD for trans-1,2-dichloroethene does not meet QC goals (biased high). Refer to LCS/LCSD RPD for precision.

1090476003 BMSD **RHMW2254-WG14 MSD**

8260B - BMSD recoveries for dichlorodifluoromethane, chloromethane and vinyl chloride do not meet QC goals (biased high). Refer to LCS for accuracy.

8260B - BMS/BMSD RPD for trans-1,2-dichloroethene does not meet QC goals (biased high). Refer to LCS/LCSD RPD for precision.

883392 LCS **VXX/19212]**

8260B - LCS recoveries for dichlorodifluoromethane, chloromethane and vinyl chloride do not meet QC goals (biased high). These analytes were not detected above the PQL in the associated samples.

883393 LCSD **VXX/19212**

8260B - LCSD recoveries for dichlorodifluoromethane, chloromethane and vinyl chloride do not meet QC goals (biased high). These analytes were not detected above the PQL in the associated samples.

883395 CCV **VMS/10380]**

8260B - CCV recoveries for dichlorodifluoromethane, chloromethane, vinyl chloride and trichlorofluoromethane do not meet QC goals (biased high). These analytes were not detected above the PQL in the associated samples.

8260B - ICV recoveries for several analytes do not meet QC goals (biased high). These analytes were not detected above the PQL in the associated samples.

Laboratory Analytical Report

Client: **The Environmental Company, Inc.**
1001 Bishop Street Ste 1400
ASB Tower
Honolulu, HI 96813

Attn: **Jeff Hart**
T: (808)528-1445 F:(808)528-0768
jshart@tecinc.com

Project: **Red Hill BFSF**

Workorder No.: **1090476**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the 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.

Tamara Rentz
tamara.rentz@sgs.com
Project Manager

Print Date: 2/19/2009

Enclosed are the analytical results associated with this workorder.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by SGS. A copy of our Quality Assurance Plan (QAP), which outlines this program is available at your request.

The Laboratory certification numbers are AK971-05 (DW), UTS-005 (CS) and AK00971 (Micro) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 8015B, 8021B, 8081A/8082, 8260B, 8270C).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP, the National Environmental Laboratory Accreditation Program and, when applicable, other regulatory authorities.

If you have any questions regarding this report or if we can be of any assistance, please contact your SGS Project Manager at 907-562-2343. All work is being provided under SGS general terms and conditions (http://www.sgs.com/terms_and_conditions.htm)

The following descriptors may be found on your report which will serve to further qualify the data.

MDL	Method Detection Limit
PQL	Practical Quantitation Limit (reporting limit).
CL	Control Limit
U	Indicates the analyte was analyzed for but not detected.
F	Indicates value that is greater than or equal to the MDL.
J	The quantitation is an estimation.
ND	Indicates the analyte is not detected
B	Indicates the analyte is found in a blank associated with the sample.
*	The analyte has exceeded allowable regulatory or control limits.
D	The analyte concentration is the result of dilution.
GT	Greater Than
LT	Less Than
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
E	The analyte result is above the calibrated range.
R	Rejected
DF	Analytical Dilution Factor
JL	The analyte was positively identified, but the quantitation is a low estimation.
<Surr>	Surrogate QC spiked standard
<Surr/IS>	Surrogate / Internal Standard QC spiked standard
QC	Quality Control
QA	Quality Assurance
MB	Method Blank
LCS (D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
BMS(D)	Site Specific Matrix Spike (Duplicate)
RPD	Relative Percent Difference
ICV	Initial Calibration Verification
CCV	Continuous Calibration Verification
MSA	Method of Standard Addition

Notes: Soil samples are reported on a dry weight basis unless otherwise specified
All DRO/RRO analyses are integrated per SOP.

SAMPLE SUMMARY

Print Date: 2/19/2009 10:58 am

Client Name: The Environmental Company, Inc. (TEC)
Project Name: Red Hill BFSF
Workorder No.: 1090476

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 8015B (W)	SW8015C
GRO (W)	SW8015C

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1090476001	RHMW2254-WG14
1090476002	RHMW2254-WG14 MS
1090476003	RHMW2254-WG14 MSD
1090476004	RHMW03-WG14
1090476005	RHMW02-WG14
1090476006	RHMWA01-WG14
1090476007	RHMW01-WG14
1090476008	TB01-WG14

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW2254-WG14**
SGS Ref. #: 1090476001
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 09:20
Receipt Date/Time: 02/06/09 11:00

Dissolved Metals by ICP/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	ND	1.00	0.310	ug/L	5	MMS5820	MXX21362	

Batch Information

Analytical Batch: MMS5820
Analytical Method: SW6020
Analysis Date/Time: 02/17/09 11:41
Dilution Factor: 5

Prep Batch: MXX21362
Prep Method: SW3010A
Prep Date/Time: 02/12/09 12:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1090476001-G
Analyst: SCL

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW2254-WG14**
SGS Ref. #: 1090476001
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 09:20
Receipt Date/Time: 02/06/09 11:00

Volatile Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	14.0 J	100	10.0	ug/L	1	VFC9351	VXX19194	
4-Bromofluorobenzene <surr>	85.2	50-150		%	1	VFC9351	VXX19194	

Batch Information

Analytical Batch: VFC9351
Analytical Method: SW8015C
Analysis Date/Time: 02/10/09 12:33
Dilution Factor: 1

Prep Batch: VXX19194
Prep Method: SW5030B
Prep Date/Time: 02/10/09 09:30

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476001-A
Analyst: HM

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW2254-WG14**
SGS Ref. #: 1090476001
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 09:20
Receipt Date/Time: 02/06/09 11:00

Semivolatile Organic Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	ND	0.460	0.0920	mg/L	1	XFC8449	XXX20585	
5a Androstane <surr>	79.6	50-150		%	1	XFC8449	XXX20585	

Batch Information

Analytical Batch: XFC8449
Analytical Method: SW8015C
Analysis Date/Time: 02/11/09 15:55
Dilution Factor: 1

Prep Batch: XXX20585
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 870 mL
Prep Extract Vol.: 1 mL
Container ID:1090476001-H
Analyst: KDC

Client Sample ID: **RHMW2254-WG14**
SGS Ref. #: 1090476001
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 09:20
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
Toluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Styrene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Acetone	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS10380	VXX19212	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
Chloroform	ND	1.00	0.300	ug/L	1	VMS10380	VXX19212	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS10380	VXX19212	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	

Client Sample ID: **RHMW2254-WG14**
SGS Ref. #: 1090476001
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 09:20
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS10380	VXX19212	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromoform	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane-D4 <surr>	102	73-120		%	1	VMS10380	VXX19212	
Toluene-d8 <surr>	98	80-120		%	1	VMS10380	VXX19212	
4-Bromofluorobenzene <surr>	103	76-120		%	1	VMS10380	VXX19212	

Batch Information

Analytical Batch: VMS10380
Analytical Method: SW8260B
Analysis Date/Time: 02/16/09 17:18
Dilution Factor: 1

Prep Batch: VXX19212
Prep Method: SW5030B
Prep Date/Time: 02/16/09 11:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476001-D
Analyst: DSH

Client Sample ID: **RHMW2254-WG14**
SGS Ref. #: 1090476001
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 09:20
Receipt Date/Time: 02/06/09 11:00

Polynuclear Aromatics GC/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthylene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Acenaphthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Fluorene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Phenanthrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Anthracene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Fluoranthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Pyrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo(a)Anthracene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Chrysene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[b]Fluoranthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[k]fluoranthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[a]pyrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Indeno[1,2,3-c,d] pyrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Dibenzo[a,h]anthracene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[g,h,i]perylene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Naphthalene	ND	0.108	0.0333	ug/L	1	XMS4825	XXX20586	
1-Methylnaphthalene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
2-Methylnaphthalene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Terphenyl-d14 <surr>	92.7	50-135		%	1	XMS4825	XXX20586	

Batch Information

Analytical Batch: XMS4825
Analytical Method: 8270D SIMS
Analysis Date/Time: 02/10/09 22:34
Dilution Factor: 1

Prep Batch: XXX20586
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 930 mL
Prep Extract Vol.: 1 mL
Container ID:1090476001-J
Analyst: JDH

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW03-WG14**
SGS Ref. #: 1090476004
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 11:10
Receipt Date/Time: 02/06/09 11:00

Dissolved Metals by ICP/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	ND	1.00	0.310	ug/L	5	MMS5820	MXX21362	

Batch Information

Analytical Batch: MMS5820
Analytical Method: SW6020
Analysis Date/Time: 02/17/09 11:48
Dilution Factor: 5

Prep Batch: MXX21362
Prep Method: SW3010A
Prep Date/Time: 02/12/09 12:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1090476004-G
Analyst: SCL

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW03-WG14**
SGS Ref. #: 1090476004
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 11:10
Receipt Date/Time: 02/06/09 11:00

Volatile Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	16.1 J	100	10.0	ug/L	1	VFC9351	VXX19194	
4-Bromofluorobenzene <surr>	85.4	50-150		%	1	VFC9351	VXX19194	

Batch Information

Analytical Batch: VFC9351
Analytical Method: SW8015C
Analysis Date/Time: 02/10/09 13:28
Dilution Factor: 1

Prep Batch: VXX19194
Prep Method: SW5030B
Prep Date/Time: 02/10/09 09:30

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476004-A
Analyst: HM

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW03-WG14**
SGS Ref. #: 1090476004
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 11:10
Receipt Date/Time: 02/06/09 11:00

Semivolatile Organic Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.207 J	0.447	0.0894	mg/L	1	XFC8449	XXX20585	
5a Androstane <surr>	88.9	50-150		%	1	XFC8449	XXX20585	

Batch Information

Analytical Batch: XFC8449
Analytical Method: SW8015C
Analysis Date/Time: 02/11/09 16:23
Dilution Factor: 1

Prep Batch: XXX20585
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 895 mL
Prep Extract Vol.: 1 mL
Container ID:1090476004-H
Analyst: KDC

Client Sample ID: **RHMW03-WG14**
SGS Ref. #: 1090476004
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 11:10
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
Toluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Styrene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Acetone	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS10380	VXX19212	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
Chloroform	ND	1.00	0.300	ug/L	1	VMS10380	VXX19212	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS10380	VXX19212	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW03-WG14**
SGS Ref. #: 1090476004
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 11:10
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS10380	VXX19212	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromoform	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane-D4 <surr>	105	73-120		%	1	VMS10380	VXX19212	
Toluene-d8 <surr>	98.8	80-120		%	1	VMS10380	VXX19212	
4-Bromofluorobenzene <surr>	102	76-120		%	1	VMS10380	VXX19212	

Batch Information

Analytical Batch: VMS10380
Analytical Method: SW8260B
Analysis Date/Time: 02/16/09 17:52
Dilution Factor: 1

Prep Batch: VXX19212
Prep Method: SW5030B
Prep Date/Time: 02/16/09 11:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476004-D
Analyst: DSH

Client Sample ID: **RHMW03-WG14**
SGS Ref. #: 1090476004
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 11:10
Receipt Date/Time: 02/06/09 11:00

Polynuclear Aromatics GC/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthylene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Acenaphthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Fluorene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Phenanthrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Anthracene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Fluoranthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Pyrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo(a)Anthracene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Chrysene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[b]Fluoranthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[k]fluoranthene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[a]pyrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Indeno[1,2,3-c,d] pyrene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Dibenzo[a,h]anthracene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Benzo[g,h,i]perylene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Naphthalene	ND	0.108	0.0333	ug/L	1	XMS4825	XXX20586	
1-Methylnaphthalene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
2-Methylnaphthalene	ND	0.0538	0.0161	ug/L	1	XMS4825	XXX20586	
Terphenyl-d14 <surr>	85.2	50-135		%	1	XMS4825	XXX20586	

Batch Information

Analytical Batch: XMS4825
Analytical Method: 8270D SIMS
Analysis Date/Time: 02/11/09 00:11
Dilution Factor: 1

Prep Batch: XXX20586
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 930 mL
Prep Extract Vol.: 1 mL
Container ID:1090476004-J
Analyst: JDH

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW02-WG14**
SGS Ref. #: 1090476005
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:40
Receipt Date/Time: 02/06/09 11:00

Dissolved Metals by ICP/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	ND	1.00	0.310	ug/L	5	MMS5820	MXX21362	

Batch Information

Analytical Batch: MMS5820
Analytical Method: SW6020
Analysis Date/Time: 02/17/09 11:50
Dilution Factor: 5

Prep Batch: MXX21362
Prep Method: SW3010A
Prep Date/Time: 02/12/09 12:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1090476005-G
Analyst: SCL

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW02-WG14**
SGS Ref. #: 1090476005
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:40
Receipt Date/Time: 02/06/09 11:00

Volatile Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	52.3 J	100	10.0	ug/L	1	VFC9351	VXX19194	
4-Bromofluorobenzene <surr>	116	50-150		%	1	VFC9351	VXX19194	

Batch Information

Analytical Batch: VFC9351
Analytical Method: SW8015C
Analysis Date/Time: 02/10/09 13:46
Dilution Factor: 1

Prep Batch: VXX19194
Prep Method: SW5030B
Prep Date/Time: 02/10/09 09:30

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476005-A
Analyst: HM

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW02-WG14**
SGS Ref. #: 1090476005
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:40
Receipt Date/Time: 02/06/09 11:00

Semivolatile Organic Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	2.84	0.449	0.0899	mg/L	1	XFC8449	XXX20585	
5a Androstane <surr>	69.3	50-150		%	1	XFC8449	XXX20585	

Batch Information

Analytical Batch: XFC8449
Analytical Method: SW8015C
Analysis Date/Time: 02/11/09 16:32
Dilution Factor: 1

Prep Batch: XXX20585
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 890 mL
Prep Extract Vol.: 1 mL
Container ID:1090476005-H
Analyst: KDC

Client Sample ID: **RHMW02-WG14**
SGS Ref. #: 1090476005
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:40
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.260 J	0.400	0.120	ug/L	1	VMS10380	VXX19212	
Toluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Ethylbenzene	0.490 J	1.00	0.310	ug/L	1	VMS10380	VXX19212	
n-Butylbenzene	2.37	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
n-Propylbenzene	8.60	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Styrene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Acetone	8.51 J	10.0	3.10	ug/L	1	VMS10380	VXX19212	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS10380	VXX19212	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
Chloroform	ND	1.00	0.300	ug/L	1	VMS10380	VXX19212	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS10380	VXX19212	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW02-WG14**
SGS Ref. #: 1090476005
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:40
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
sec-Butylbenzene	7.67	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS10380	VXX19212	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Naphthalene	42.8	2.00	0.620	ug/L	1	VMS10380	VXX19212	
o-Xylene	0.400 J	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromoform	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
tert-Butylbenzene	1.19	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Isopropylbenzene (Cumene)	6.48	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane-D4 <surr>	104	73-120		%	1	VMS10380	VXX19212	
Toluene-d8 <surr>	98.4	80-120		%	1	VMS10380	VXX19212	
4-Bromofluorobenzene <surr>	101	76-120		%	1	VMS10380	VXX19212	

Batch Information

Analytical Batch: VMS10380
Analytical Method: SW8260B
Analysis Date/Time: 02/16/09 18:26
Dilution Factor: 1

Prep Batch: VXX19212
Prep Method: SW5030B
Prep Date/Time: 02/16/09 11:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476005-D
Analyst: DSH

Client Sample ID: **RHMW02-WG14**
SGS Ref. #: 1090476005
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:40
Receipt Date/Time: 02/06/09 11:00

Polynuclear Aromatics GC/MS

Parameter	Result		PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthylene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Acenaphthene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Fluorene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Phenanthrene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Anthracene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Fluoranthene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Pyrene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Benzo(a)Anthracene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Chrysene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Benzo[b]Fluoranthene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Benzo[k]fluoranthene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Benzo[a]pyrene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Indeno[1,2,3-c,d] pyrene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Dibenzo[a,h]anthracene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Benzo[g,h,i]perylene	ND		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Naphthalene	15.2		1.08	0.333	ug/L	10	XMS4828	XXX20586	
1-Methylnaphthalene	21.2		0.538	0.161	ug/L	10	XMS4828	XXX20586	
2-Methylnaphthalene	10.5		0.538	0.161	ug/L	10	XMS4828	XXX20586	
Terphenyl-d14 <surr>	162	*	50-135		%	10	XMS4828	XXX20586	

Batch Information

Analytical Batch: XMS4828
Analytical Method: 8270D SIMS
Analysis Date/Time: 02/12/09 19:57
Dilution Factor: 10

Prep Batch: XXX20586
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 930 mL
Prep Extract Vol.: 1 mL
Container ID:1090476005-I
Analyst: JDH

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMWA01-WG14**
SGS Ref. #: 1090476006
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:05
Receipt Date/Time: 02/06/09 11:00

Dissolved Metals by ICP/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	ND	1.00	0.310	ug/L	5	MMS5820	MXX21362	

Batch Information

Analytical Batch: MMS5820
Analytical Method: SW6020
Analysis Date/Time: 02/17/09 11:52
Dilution Factor: 5

Prep Batch: MXX21362
Prep Method: SW3010A
Prep Date/Time: 02/12/09 12:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1090476006-G
Analyst: SCL

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMWA01-WG14**
SGS Ref. #: 1090476006
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:05
Receipt Date/Time: 02/06/09 11:00

Volatile Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	54.3 J	100	10.0	ug/L	1	VFC9351	VXX19194	
4-Bromofluorobenzene <surr>	116	50-150		%	1	VFC9351	VXX19194	

Batch Information

Analytical Batch: VFC9351
Analytical Method: SW8015C
Analysis Date/Time: 02/10/09 14:05
Dilution Factor: 1

Prep Batch: VXX19194
Prep Method: SW5030B
Prep Date/Time: 02/10/09 09:30

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476006-A
Analyst: HM

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMWA01-WG14**
SGS Ref. #: 1090476006
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:05
Receipt Date/Time: 02/06/09 11:00

Semivolatile Organic Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	2.84	0.442	0.0884	mg/L	1	XFC8449	XXX20585	
5a Androstane <surr>	73	50-150		%	1	XFC8449	XXX20585	

Batch Information

Analytical Batch: XFC8449
Analytical Method: SW8015C
Analysis Date/Time: 02/11/09 16:42
Dilution Factor: 1

Prep Batch: XXX20585
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 905 mL
Prep Extract Vol.: 1 mL
Container ID:1090476006-H
Analyst: KDC

Client Sample ID: **RHMWA01-WG14**
SGS Ref. #: 1090476006
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:05
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	0.240 J	0.400	0.120	ug/L	1	VMS10380	VXX19212	
Toluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Ethylbenzene	0.520 J	1.00	0.310	ug/L	1	VMS10380	VXX19212	
n-Butylbenzene	2.46	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
n-Propylbenzene	9.00	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Styrene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Acetone	8.59 J	10.0	3.10	ug/L	1	VMS10380	VXX19212	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS10380	VXX19212	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
Chloroform	ND	1.00	0.300	ug/L	1	VMS10380	VXX19212	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS10380	VXX19212	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	

Client Sample ID: **RHMWA01-WG14**
SGS Ref. #: 1090476006
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:05
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
sec-Butylbenzene	7.81	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS10380	VXX19212	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Naphthalene	43.0	2.00	0.620	ug/L	1	VMS10380	VXX19212	
o-Xylene	0.470 J	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromoform	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
tert-Butylbenzene	1.14	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Isopropylbenzene (Cumene)	6.88	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane-D4 <surr>	99.7	73-120		%	1	VMS10380	VXX19212	
Toluene-d8 <surr>	99.8	80-120		%	1	VMS10380	VXX19212	
4-Bromofluorobenzene <surr>	99.5	76-120		%	1	VMS10380	VXX19212	

Batch Information

Analytical Batch: VMS10380
Analytical Method: SW8260B
Analysis Date/Time: 02/16/09 18:59
Dilution Factor: 1

Prep Batch: VXX19212
Prep Method: SW5030B
Prep Date/Time: 02/16/09 11:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476006-D
Analyst: DSH

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMWA01-WG14**
SGS Ref. #: 1090476006
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 12:05
Receipt Date/Time: 02/06/09 11:00

Polynuclear Aromatics GC/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthylene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Acenaphthene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Fluorene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Phenanthrene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Anthracene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Fluoranthene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Pyrene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Benzo(a)Anthracene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Chrysene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Benzo[b]Fluoranthene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Benzo[k]fluoranthene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Benzo[a]pyrene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Indeno[1,2,3-c,d] pyrene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Dibenzo[a,h]anthracene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Benzo[g,h,i]perylene	ND	0.0543	0.0163	ug/L	1	XMS4825	XXX20586	
Naphthalene	16.6	1.09	0.337	ug/L	10	XMS4828	XXX20586	
1-Methylnaphthalene	22.8	0.543	0.163	ug/L	10	XMS4828	XXX20586	
2-Methylnaphthalene	11.1	0.543	0.163	ug/L	10	XMS4828	XXX20586	
Terphenyl-d14 <surr>	87.2	50-135		%	1	XMS4825	XXX20586	

Batch Information

Analytical Batch: XMS4825
Analytical Method: 8270D SIMS
Analysis Date/Time: 02/11/09 01:16
Dilution Factor: 1
Prep Batch: XXX20586
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50
Initial Prep Wt./Vol.: 920 mL
Prep Extract Vol.: 1 mL
Container ID:1090476006-I
Analyst: JDH

Analytical Batch: XMS4828
Analytical Method: 8270D SIMS
Analysis Date/Time: 02/12/09 20:29
Dilution Factor: 10
Prep Batch: XXX20586
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50
Initial Prep Wt./Vol.: 920 mL
Prep Extract Vol.: 1 mL
Container ID:1090476006-I
Analyst: JDH

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW01-WG14**
SGS Ref. #: 1090476007
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 14:55
Receipt Date/Time: 02/06/09 11:00

Dissolved Metals by ICP/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Lead	ND	1.00	0.310	ug/L	5	MMS5820	MXX21362	

Batch Information

Analytical Batch: MMS5820
Analytical Method: SW6020
Analysis Date/Time: 02/17/09 11:54
Dilution Factor: 5

Prep Batch: MXX21362
Prep Method: SW3010A
Prep Date/Time: 02/12/09 12:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1090476007-E
Analyst: SCL

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW01-WG14**
SGS Ref. #: 1090476007
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 14:55
Receipt Date/Time: 02/06/09 11:00

Volatile Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Gasoline Range Organics	14.4 J	100	10.0	ug/L	1	VFC9351	VXX19194	
4-Bromofluorobenzene <surr>	85.5	50-150		%	1	VFC9351	VXX19194	

Batch Information

Analytical Batch: VFC9351
Analytical Method: SW8015C
Analysis Date/Time: 02/10/09 14:23
Dilution Factor: 1

Prep Batch: VXX19194
Prep Method: SW5030B
Prep Date/Time: 02/10/09 09:30

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476007-A
Analyst: HM

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW01-WG14**
SGS Ref. #: 1090476007
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 14:55
Receipt Date/Time: 02/06/09 11:00

Semivolatile Organic Fuels Department

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Diesel Range Organics	0.387 J	0.449	0.0899	mg/L	1	XFC8449	XXX20585	
5a Androstane <surr>	77.9	50-150		%	1	XFC8449	XXX20585	

Batch Information

Analytical Batch: XFC8449
Analytical Method: SW8015C
Analysis Date/Time: 02/11/09 16:51
Dilution Factor: 1

Prep Batch: XXX20585
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 890 mL
Prep Extract Vol.: 1 mL
Container ID:1090476007-F
Analyst: KDC

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW01-WG14**
SGS Ref. #: 1090476007
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 14:55
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
Toluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Styrene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Acetone	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS10380	VXX19212	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
Chloroform	ND	1.00	0.300	ug/L	1	VMS10380	VXX19212	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS10380	VXX19212	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **RHMW01-WG14**
SGS Ref. #: 1090476007
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 14:55
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS10380	VXX19212	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromoform	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane-D4 <surr>	102	73-120		%	1	VMS10380	VXX19212	
Toluene-d8 <surr>	99.1	80-120		%	1	VMS10380	VXX19212	
4-Bromofluorobenzene <surr>	100	76-120		%	1	VMS10380	VXX19212	

Batch Information

Analytical Batch: VMS10380
Analytical Method: SW8260B
Analysis Date/Time: 02/16/09 19:33
Dilution Factor: 1

Prep Batch: VXX19212
Prep Method: SW5030B
Prep Date/Time: 02/16/09 11:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476007-C
Analyst: DSH

Client Sample ID: **RHMW01-WG14**
SGS Ref. #: 1090476007
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 14:55
Receipt Date/Time: 02/06/09 11:00

Polynuclear Aromatics GC/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthylene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Acenaphthene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Fluorene	0.0235 J	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Phenanthrene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Anthracene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Fluoranthene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Pyrene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Benzo(a)Anthracene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Chrysene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Benzo[b]Fluoranthene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Benzo[k]fluoranthene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Benzo[a]pyrene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Indeno[1,2,3-c,d] pyrene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Dibenzo[a,h]anthracene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Benzo[g,h,i]perylene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Naphthalene	0.173	0.110	0.0341	ug/L	1	XMS4825	XXX20586	
1-Methylnaphthalene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
2-Methylnaphthalene	ND	0.0549	0.0165	ug/L	1	XMS4825	XXX20586	
Terphenyl-d14 <surr>	86.2	50-135		%	1	XMS4825	XXX20586	

Batch Information

Analytical Batch: XMS4825
Analytical Method: 8270D SIMS
Analysis Date/Time: 02/11/09 01:48
Dilution Factor: 1

Prep Batch: XXX20586
Prep Method: SW3520C
Prep Date/Time: 02/10/09 10:50

Initial Prep Wt./Vol.: 910 mL
Prep Extract Vol.: 1 mL
Container ID:1090476007-H
Analyst: JDH

Client Sample ID: **TB01-WG14**
SGS Ref. #: 1090476008
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 08:05
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Benzene	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
Toluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Styrene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Acetone	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS10380	VXX19212	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS10380	VXX19212	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
Chloroform	ND	1.00	0.300	ug/L	1	VMS10380	VXX19212	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS10380	VXX19212	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	

The Environmental Company, Inc. (TEC) Print Date: 2/19/2009 10:58 am

Client Sample ID: **TB01-WG14**
SGS Ref. #: 1090476008
Project ID: Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 02/04/09 08:05
Receipt Date/Time: 02/06/09 11:00

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Chloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS10380	VXX19212	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS10380	VXX19212	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS10380	VXX19212	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Bromoform	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS10380	VXX19212	
1,2-Dichloroethane-D4 <surr>	101	73-120		%	1	VMS10380	VXX19212	
Toluene-d8 <surr>	102	80-120		%	1	VMS10380	VXX19212	
4-Bromofluorobenzene <surr>	98.9	76-120		%	1	VMS10380	VXX19212	

Batch Information

Analytical Batch: VMS10380
Analytical Method: SW8260B
Analysis Date/Time: 02/16/09 16:45
Dilution Factor: 1

Prep Batch: VXX19212
Prep Method: SW5030B
Prep Date/Time: 02/16/09 11:48

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1090476008-A
Analyst: DSH

SGS Ref.#	882405	Method Blank	**Printed Date/Time**		02/19/2009 10:58
Client Name	The Environmental Company, Inc. (TEC)		**Prep**	**Batch**	XXX20585
Project Name/#	Red Hill BFSF			**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)			**Date**	02/10/2009

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	ND	0.400	0.0800	mg/L	02/11/09
Surrogates					
5a Androstane <surr>	77.3	60-120		%	02/11/09

Batch XFC8449
Method SW8015C
Instrument HP 6890 Series II FID SV D R

SGS Ref.#	882440 Method Blank	**Printed Date/Time**	02/19/2009 10:58
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	XXX20586
Project Name/#	Red Hill BFSF	**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)	**Date**	02/10/2009

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Polynuclear Aromatics GC/MS					
Acenaphthylene	ND	0.0500	0.0150	ug/L	02/10/09
Acenaphthene	ND	0.0500	0.0150	ug/L	02/10/09
Fluorene	ND	0.0500	0.0150	ug/L	02/10/09
Phenanthrene	ND	0.0500	0.0150	ug/L	02/10/09
Anthracene	ND	0.0500	0.0150	ug/L	02/10/09
Fluoranthene	ND	0.0500	0.0150	ug/L	02/10/09
Pyrene	ND	0.0500	0.0150	ug/L	02/10/09
Benzo(a)Anthracene	ND	0.0500	0.0150	ug/L	02/10/09
Chrysene	ND	0.0500	0.0150	ug/L	02/10/09
Benzo[b]Fluoranthene	ND	0.0500	0.0150	ug/L	02/10/09
Benzo[k]fluoranthene	ND	0.0500	0.0150	ug/L	02/10/09
Benzo[a]pyrene	ND	0.0500	0.0150	ug/L	02/10/09
Indeno[1,2,3-c,d] pyrene	ND	0.0500	0.0150	ug/L	02/10/09
Dibenzo[a,h]anthracene	ND	0.0500	0.0150	ug/L	02/10/09
Benzo[g,h,i]perylene	ND	0.0500	0.0150	ug/L	02/10/09
Naphthalene	ND	0.100	0.0310	ug/L	02/10/09
1-Methylnaphthalene	ND	0.0500	0.0150	ug/L	02/10/09
2-Methylnaphthalene	ND	0.0500	0.0150	ug/L	02/10/09
Surrogates					
Terphenyl-d14 <surr>	90.6	50-135		%	02/10/09

Batch XMS4825
Method 8270D SIMS
Instrument HP 6890/5973 MS SVOA

SGS Ref.#	882496 Method Blank	**Printed Date/Time**	02/19/2009 10:58
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	VXX19194
Project Name/#	Red Hill BFSF	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	02/10/2009

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Volatile Fuels Department					
Gasoline Range Organics	ND	100	10.0	ug/L	02/10/09
Surrogates					
4-Bromofluorobenzene <surr>	85.6	50-150		%	02/10/09

Batch VFC9351
Method SW8015C
Instrument HP 5890 Series II PID+HECD VBA

SGS Ref.#	882936 Method Blank	**Printed Date/Time**	02/19/2009 10:58
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	MXX21362
Project Name/#	Red Hill BFSF	**Method**	SW3010A
Matrix	Water (Surface, Eff., Ground)	**Date**	02/12/2009

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Metals by ICP/MS					
Lead	ND	1.00	0.310	ug/L	02/17/09
Batch	MMS5820				
Method	SW6020				
Instrument	Perkin Elmer Sciex ICP-MS P3				

SGS Ref.#	883391	Method Blank	**Printed Date/Time**		02/19/2009 10:58
Client Name	The Environmental Company, Inc. (TEC)		**Prep**	**Batch**	VXX19212
Project Name/#	Red Hill BFSF			**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)			**Date**	02/16/2009

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007, 1090476008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS Ref.#	883391 Method Blank	**Printed Date/Time**	02/19/2009 10:58
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	VXX19212
Project Name/#	Red Hill BFSF	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	02/16/2009

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Benzene	ND	0.400	0.120	ug/L	02/16/09
Toluene	ND	1.00	0.310	ug/L	02/16/09
Ethylbenzene	ND	1.00	0.310	ug/L	02/16/09
n-Butylbenzene	ND	1.00	0.310	ug/L	02/16/09
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	02/16/09
1,2-Dichloroethane	ND	0.500	0.150	ug/L	02/16/09
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	02/16/09
4-Chlorotoluene	ND	1.00	0.310	ug/L	02/16/09
Chlorobenzene	ND	0.500	0.150	ug/L	02/16/09
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	02/16/09
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	02/16/09
4-Isopropyltoluene	ND	1.00	0.310	ug/L	02/16/09
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	02/16/09
n-Propylbenzene	ND	1.00	0.310	ug/L	02/16/09
Styrene	ND	1.00	0.310	ug/L	02/16/09
Dibromomethane	ND	1.00	0.310	ug/L	02/16/09
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	02/16/09
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	02/16/09
Acetone	ND	10.0	3.10	ug/L	02/16/09
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	02/16/09
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	02/16/09
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	02/16/09
Tetrachloroethene	ND	1.00	0.310	ug/L	02/16/09
Dibromochloromethane	ND	0.500	0.150	ug/L	02/16/09
1,3-Dichloropropane	ND	0.400	0.120	ug/L	02/16/09
1,2-Dibromoethane	ND	1.00	0.310	ug/L	02/16/09
Carbon tetrachloride	ND	1.00	0.310	ug/L	02/16/09
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	02/16/09
Chloroform	ND	1.00	0.300	ug/L	02/16/09
Bromobenzene	ND	1.00	0.310	ug/L	02/16/09
Chloromethane	ND	1.00	0.310	ug/L	02/16/09
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	02/16/09
Bromomethane	ND	3.00	0.940	ug/L	02/16/09
Bromochloromethane	ND	1.00	0.310	ug/L	02/16/09
Vinyl chloride	ND	1.00	0.310	ug/L	02/16/09
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	02/16/09
Chloroethane	ND	1.00	0.310	ug/L	02/16/09
sec-Butylbenzene	ND	1.00	0.310	ug/L	02/16/09
Bromodichloromethane	ND	0.500	0.150	ug/L	02/16/09

SGS Ref.#	883391 Method Blank	**Printed Date/Time**	02/19/2009 10:58
Client Name	The Environmental Company, Inc. (TEC)	**Prep Batch**	VXX19212
Project Name/#	Red Hill BFSF	**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)	**Date**	02/16/2009

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
1,1-Dichloroethene	ND	1.00	0.310	ug/L	02/16/09
2-Butanone (MEK)	ND	10.0	3.10	ug/L	02/16/09
Methylene chloride	ND	5.00	1.00	ug/L	02/16/09
Trichlorofluoromethane	ND	1.00	0.310	ug/L	02/16/09
P & M -Xylene	ND	2.00	0.620	ug/L	02/16/09
Naphthalene	ND	2.00	0.620	ug/L	02/16/09
o-Xylene	ND	1.00	0.310	ug/L	02/16/09
Bromoform	ND	1.00	0.310	ug/L	02/16/09
1-Chlorohexane	ND	1.00	0.310	ug/L	02/16/09
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	02/16/09
tert-Butylbenzene	ND	1.00	0.310	ug/L	02/16/09
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	02/16/09
1,1-Dichloroethane	ND	1.00	0.310	ug/L	02/16/09
2-Chlorotoluene	ND	1.00	0.310	ug/L	02/16/09
Trichloroethene	ND	1.00	0.310	ug/L	02/16/09
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	02/16/09
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	02/16/09
2,2-Dichloropropane	ND	1.00	0.310	ug/L	02/16/09
Hexachlorobutadiene	ND	1.00	0.310	ug/L	02/16/09
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	02/16/09
1,2-Dichloropropane	ND	1.00	0.310	ug/L	02/16/09
1,1-Dichloropropene	ND	1.00	0.310	ug/L	02/16/09
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	02/16/09
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	02/16/09
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	02/16/09
Surrogates					
1,2-Dichloroethane-D4 <surr>	101	73-120		%	02/16/09
Toluene-d8 <surr>	101	80-120		%	02/16/09
4-Bromofluorobenzene <surr>	103	76-120		%	02/16/09

Batch VMS10380
Method SW8260B
Instrument HP 5890 Series II MS1 VJA

SGS

SGS Ref.#	882441	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
			Prep Batch	XXX20586	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3520C	
Project Name/#	Red Hill BFSF		**Date**	02/10/2009	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS								
Acenaphthylene	LCS	0.259	52	(50-105)			0.5 ug/L	02/10/2009
Acenaphthene	LCS	0.253	51	(45-110)			0.5 ug/L	02/10/2009
Fluorene	LCS	0.271	54	(50-110)			0.5 ug/L	02/10/2009
Phenanthrene	LCS	0.288	58	(50-115)			0.5 ug/L	02/10/2009
Anthracene	LCS	0.282	56	(55-110)			0.5 ug/L	02/10/2009
Fluoranthene	LCS	0.374	75	(55-125)			0.5 ug/L	02/10/2009
Pyrene	LCS	0.364	73	(50-130)			0.5 ug/L	02/10/2009
Benzo(a)Anthracene	LCS	0.363	73	(55-120)			0.5 ug/L	02/10/2009
Chrysene	LCS	0.360	72	(55-120)			0.5 ug/L	02/10/2009
Benzo[b]Fluoranthene	LCS	0.382	76	(46-130)			0.5 ug/L	02/10/2009
Benzo[k]fluoranthene	LCS	0.357	71	(60-125)			0.5 ug/L	02/10/2009
Benzo[a]pyrene	LCS	0.364	73	(55-120)			0.5 ug/L	02/10/2009
Indeno[1,2,3-c,d] pyrene	LCS	0.361	72	(45-125)			0.5 ug/L	02/10/2009
Dibenzo[a,h]anthracene	LCS	0.361	72	(41-140)			0.5 ug/L	02/10/2009
Benzo[g,h,i]perylene	LCS	0.361	72	(46-125)			0.5 ug/L	02/10/2009
Naphthalene	LCS	0.252	50	(42-100)			0.5 ug/L	02/10/2009
1-Methylnaphthalene	LCS	0.243	49	(46-115)			0.5 ug/L	02/10/2009
2-Methylnaphthalene	LCS	0.233	47	(45-105)			0.5 ug/L	02/10/2009
Surrogates								
Terphenyl-d14 <surr>	LCS		84	(50-135)				02/10/2009

SGS Ref.#	882441 Lab Control Sample		**Printed Date/Time**	02/19/2009	10:58
		Prep	**Batch**	XXX20586	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3520C	
Project Name/#	Red Hill BFSF		**Date**	02/10/2009	
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	XMS4825
Method	8270D SIMS
Instrument	HP 6890/5973 MS SVOA

SGS Ref.#	882497	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	882498	Lab Control Sample Duplicate	**Prep Batch**	VXX19194	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/10/2009	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	192	96	(79-108)			200 ug/L	02/10/2009
	LCSD	191	95		1	(< 20)	200 ug/L	02/10/2009
Surrogates								
4-Bromofluorobenzene <surr>	LCS		91	(50-150)				02/10/2009
	LCSD		90		1			02/10/2009

Batch VFC9351
Method SW8015C
Instrument HP 5890 Series II PID+HECD VBA

SGS Ref.#	882788	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	882789	Lab Control Sample Duplicate	**Prep Batch**	XXX20585	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3520C	
Project Name/#	Red Hill BFSF		**Date**	02/10/2009	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Diesel Range Organics	LCS	4.47	90	(75-125)			5 mg/L	02/11/2009
	LCSD	4.27	85		5	(< 20)	5 mg/L	02/11/2009
Surrogates								
5a Androstane <surr>	LCS		88	(60-120)				02/11/2009
	LCSD		84		4			02/11/2009

Batch XFC8449
Method SW8015C
Instrument HP 6890 Series II FID SV D R

SGS

SGS Ref.#	882937	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
			Prep Batch	MXX21362	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW3010A	
Project Name/#	Red Hill BFSF		**Date**	02/12/2009	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Metals by ICP/MS								
Lead	LCS	986	99	(80-120)			1000 ug/L	02/17/2009

Batch MMS5820
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3

SGS Ref.#	883392	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	883393	Lab Control Sample Duplicate	**Prep Batch**	VXX19212	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/16/2009	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1090476001, 1090476004, 1090476005, 1090476006, 1090476007, 1090476008

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

Volatile Gas Chromatography/Mass Spectroscopy

SGS

SGS Ref.#	883392	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	883393	Lab Control Sample Duplicate	**Prep Batch**	VXX19212	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/16/2009	
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								
Benzene	LCS	31.1	104	(80-120)			30 ug/L	02/16/2009
	LCSD	29.2	97		7	(< 20)	30 ug/L	02/16/2009
Toluene	LCS	30.7	102	(77-120)			30 ug/L	02/16/2009
	LCSD	30.6	102		0	(< 20)	30 ug/L	02/16/2009
Ethylbenzene	LCS	32.9	110	(80-120)			30 ug/L	02/16/2009
	LCSD	32.1	107		2	(< 20)	30 ug/L	02/16/2009
n-Butylbenzene	LCS	33.0	110	(80-124)			30 ug/L	02/16/2009
	LCSD	31.9	106		3	(< 20)	30 ug/L	02/16/2009
1,4-Dichlorobenzene	LCS	30.9	103	(80-120)			30 ug/L	02/16/2009
	LCSD	30.9	103		0	(< 20)	30 ug/L	02/16/2009
1,2-Dichloroethane	LCS	31.5	105	(80-129)			30 ug/L	02/16/2009
	LCSD	29.8	99		6	(< 20)	30 ug/L	02/16/2009
1,3,5-Trimethylbenzene	LCS	32.6	109	(80-128)			30 ug/L	02/16/2009
	LCSD	31.9	106		2	(< 20)	30 ug/L	02/16/2009
4-Chlorotoluene	LCS	31.2	104	(79-128)			30 ug/L	02/16/2009
	LCSD	31.2	104		0	(< 20)	30 ug/L	02/16/2009
Chlorobenzene	LCS	32.5	108	(80-120)			30 ug/L	02/16/2009
	LCSD	31.8	106		2	(< 20)	30 ug/L	02/16/2009
4-Methyl-2-pentanone (MIBK)	LCS	91.4	102	(69-134)			90 ug/L	02/16/2009
	LCSD	86.8	97		5	(< 20)	90 ug/L	02/16/2009
cis-1,2-Dichloroethene	LCS	32.5	108	(80-125)			30 ug/L	02/16/2009
	LCSD	31.5	105		3	(< 20)	30 ug/L	02/16/2009
4-Isopropyltoluene	LCS	32.5	108	(80-125)			30 ug/L	02/16/2009
	LCSD	32.0	107		2	(< 20)	30 ug/L	02/16/2009
cis-1,3-Dichloropropene	LCS	32.2	107	(80-120)			30 ug/L	02/16/2009
	LCSD	30.8	103		4	(< 20)	30 ug/L	02/16/2009
n-Propylbenzene	LCS	32.0	107	(80-129)			30 ug/L	02/16/2009
	LCSD	31.8	106		1	(< 20)	30 ug/L	02/16/2009

SGS

SGS Ref.#	883392	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	883393	Lab Control Sample Duplicate	**Prep Batch**	VXX19212	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/16/2009	
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	33.3	111	(80-120)			30 ug/L	02/16/2009
	LCSD	32.7	109		2	(< 20)	30 ug/L	02/16/2009
Dibromomethane	LCS	32.8	109	(80-120)			30 ug/L	02/16/2009
	LCSD	31.2	104		5	(< 20)	30 ug/L	02/16/2009
trans-1,3-Dichloropropene	LCS	29.1	97	(80-124)			30 ug/L	02/16/2009
	LCSD	29.2	97		0	(< 20)	30 ug/L	02/16/2009
1,2,4-Trichlorobenzene	LCS	32.1	107	(80-120)			30 ug/L	02/16/2009
	LCSD	31.6	105		2	(< 20)	30 ug/L	02/16/2009
Acetone	LCS	100	111	(50-135)			90 ug/L	02/16/2009
	LCSD	89.3	99		12	(< 20)	90 ug/L	02/16/2009
1,1,2,2-Tetrachloroethane	LCS	30.7	102	(76-123)			30 ug/L	02/16/2009
	LCSD	30.3	101		1	(< 20)	30 ug/L	02/16/2009
1,2-Dibromo-3-chloropropane	LCS	30.5	102	(73-130)			30 ug/L	02/16/2009
	LCSD	29.7	99		2	(< 20)	30 ug/L	02/16/2009
Methyl-t-butyl ether	LCS	38.7	86	(80-120)			45 ug/L	02/16/2009
	LCSD	39.3	87		1	(< 20)	45 ug/L	02/16/2009
Tetrachloroethene	LCS	32.9	110	(79-122)			30 ug/L	02/16/2009
	LCSD	31.6	105		4	(< 20)	30 ug/L	02/16/2009
Dibromochloromethane	LCS	29.9	100	(80-120)			30 ug/L	02/16/2009
	LCSD	29.5	98		1	(< 20)	30 ug/L	02/16/2009
1,3-Dichloropropane	LCS	32.1	107	(80-121)			30 ug/L	02/16/2009
	LCSD	31.8	106		1	(< 20)	30 ug/L	02/16/2009
1,2-Dibromoethane	LCS	32.2	107	(80-120)			30 ug/L	02/16/2009
	LCSD	31.6	105		2	(< 20)	30 ug/L	02/16/2009
Carbon tetrachloride	LCS	35.2	117	(80-126)			30 ug/L	02/16/2009
	LCSD	33.2	111		6	(< 20)	30 ug/L	02/16/2009
1,1,1,2-Tetrachloroethane	LCS	29.7	99	(80-120)			30 ug/L	02/16/2009

SGS

SGS Ref.#	883392	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	883393	Lab Control Sample Duplicate	**Prep Batch**	VXX19212	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/16/2009	
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	30.1	100			2	(< 20)	30 ug/L	02/16/2009
Chloroform	LCS	31.5	105		(80-124)			30 ug/L	02/16/2009
	LCSD	29.8	99			5	(< 20)	30 ug/L	02/16/2009
Bromobenzene	LCS	29.9	100		(80-120)			30 ug/L	02/16/2009
	LCSD	30.6	102			2	(< 20)	30 ug/L	02/16/2009
Chloromethane	LCS	48.5	162	*	(67-125)			30 ug/L	02/16/2009
	LCSD	56.4	188	*		15	(< 20)	30 ug/L	02/16/2009
1,2,3-Trichloropropane	LCS	32.2	107		(80-120)			30 ug/L	02/16/2009
	LCSD	31.3	104			3	(< 20)	30 ug/L	02/16/2009
Bromomethane	LCS	25.3	84		(30-140)			30 ug/L	02/16/2009
	LCSD	30.5	102			19	(< 20)	30 ug/L	02/16/2009
Bromochloromethane	LCS	34.1	114		(77-129)			30 ug/L	02/16/2009
	LCSD	32.4	108			5	(< 20)	30 ug/L	02/16/2009
Vinyl chloride	LCS	44.4	148	*	(72-145)			30 ug/L	02/16/2009
	LCSD	44.4	148	*		0	(< 20)	30 ug/L	02/16/2009
Dichlorodifluoromethane	LCS	56.6	189	*	(62-153)			30 ug/L	02/16/2009
	LCSD	55.0	183	*		3	(< 20)	30 ug/L	02/16/2009
Chloroethane	LCS	30.3	101		(67-133)			30 ug/L	02/16/2009
	LCSD	27.6	92			9	(< 20)	30 ug/L	02/16/2009
sec-Butylbenzene	LCS	31.6	105		(80-120)			30 ug/L	02/16/2009
	LCSD	31.4	105			1	(< 20)	30 ug/L	02/16/2009
Bromodichloromethane	LCS	34.1	114		(80-120)			30 ug/L	02/16/2009
	LCSD	32.0	107			7	(< 20)	30 ug/L	02/16/2009
1,1-Dichloroethene	LCS	35.1	117		(76-130)			30 ug/L	02/16/2009
	LCSD	32.0	107			9	(< 20)	30 ug/L	02/16/2009
2-Butanone (MEK)	LCS	103	115		(66-136)			90 ug/L	02/16/2009
	LCSD	93.7	104			10	(< 20)	90 ug/L	02/16/2009

SGS

SGS Ref.#	883392	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	883393	Lab Control Sample Duplicate	**Prep Batch**	VXX19212	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/16/2009	
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								
Methylene chloride	LCS	32.9	110	(63-131)			30 ug/L	02/16/2009
	LCSD	31.4	105		5	(< 20)	30 ug/L	02/16/2009
Trichlorofluoromethane	LCS	37.7	126	(68-145)			30 ug/L	02/16/2009
	LCSD	33.9	113		11	(< 20)	30 ug/L	02/16/2009
P & M -Xylene	LCS	68.1	113	(80-120)			60 ug/L	02/16/2009
	LCSD	66.4	111		2	(< 20)	60 ug/L	02/16/2009
Naphthalene	LCS	31.0	103	(75-120)			30 ug/L	02/16/2009
	LCSD	30.9	103		0	(< 20)	30 ug/L	02/16/2009
o-Xylene	LCS	33.4	111	(80-120)			30 ug/L	02/16/2009
	LCSD	32.7	109		2	(< 20)	30 ug/L	02/16/2009
Bromoform	LCS	31.9	106	(80-120)			30 ug/L	02/16/2009
	LCSD	30.9	103		3	(< 20)	30 ug/L	02/16/2009
1-Chlorohexane	LCS	49.9	111	(70-125)			45 ug/L	02/16/2009
	LCSD	47.8	106		4	(< 20)	45 ug/L	02/16/2009
1,2,4-Trimethylbenzene	LCS	31.6	105	(80-125)			30 ug/L	02/16/2009
	LCSD	31.3	104		1	(< 20)	30 ug/L	02/16/2009
tert-Butylbenzene	LCS	31.4	105	(80-122)			30 ug/L	02/16/2009
	LCSD	30.9	103		1	(< 20)	30 ug/L	02/16/2009
1,1,1-Trichloroethane	LCS	32.7	109	(80-122)			30 ug/L	02/16/2009
	LCSD	31.0	103		5	(< 20)	30 ug/L	02/16/2009
1,1-Dichloroethane	LCS	32.6	109	(80-120)			30 ug/L	02/16/2009
	LCSD	30.7	102		6	(< 20)	30 ug/L	02/16/2009
2-Chlorotoluene	LCS	30.7	102	(80-125)			30 ug/L	02/16/2009
	LCSD	31.0	103		1	(< 20)	30 ug/L	02/16/2009
Trichloroethene	LCS	30.8	103	(80-125)			30 ug/L	02/16/2009
	LCSD	28.8	96		7	(< 20)	30 ug/L	02/16/2009
trans-1,2-Dichloroethene	LCS	31.8	106	(79-132)			30 ug/L	02/16/2009
	LCSD	31.1	104		2	(< 20)	30 ug/L	02/16/2009

SGS

SGS Ref.#	883392	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	883393	Lab Control Sample Duplicate	**Prep Batch**	VXX19212	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/16/2009	
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-Dichlorobenzene	LCS	30.6	102	(80-120)			30 ug/L	02/16/2009
	LCSD	30.5	102		0	(< 20)	30 ug/L	02/16/2009
2,2-Dichloropropane	LCS	33.4	111	(80-132)			30 ug/L	02/16/2009
	LCSD	31.9	106		5	(< 20)	30 ug/L	02/16/2009
Hexachlorobutadiene	LCS	28.4	95	(77-125)			30 ug/L	02/16/2009
	LCSD	28.6	95		1	(< 20)	30 ug/L	02/16/2009
Isopropylbenzene (Cumene)	LCS	33.4	111	(80-121)			30 ug/L	02/16/2009
	LCSD	32.3	108		3	(< 20)	30 ug/L	02/16/2009
1,2-Dichloropropane	LCS	33.0	110	(80-121)			30 ug/L	02/16/2009
	LCSD	31.4	105		5	(< 20)	30 ug/L	02/16/2009
1,1-Dichloropropene	LCS	33.0	110	(80-122)			30 ug/L	02/16/2009
	LCSD	31.5	105		5	(< 20)	30 ug/L	02/16/2009
1,1,2-Trichloroethane	LCS	32.1	107	(77-120)			30 ug/L	02/16/2009
	LCSD	31.7	106		1	(< 20)	30 ug/L	02/16/2009
1,3-Dichlorobenzene	LCS	31.4	105	(80-120)			30 ug/L	02/16/2009
	LCSD	31.1	104		1	(< 20)	30 ug/L	02/16/2009
1,2,3-Trichlorobenzene	LCS	30.9	103	(77-120)			30 ug/L	02/16/2009
	LCSD	30.2	101		2	(< 20)	30 ug/L	02/16/2009
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		98	(73-120)				02/16/2009
	LCSD		95		3			02/16/2009
Toluene-d8 <surr>	LCS		99	(80-120)				02/16/2009
	LCSD		101		1			02/16/2009
4-Bromofluorobenzene <surr>	LCS		95	(76-120)				02/16/2009
	LCSD		99		4			02/16/2009

SGS Ref.#	883392	Lab Control Sample	**Printed Date/Time**	02/19/2009	10:58
	883393	Lab Control Sample Duplicate	**Prep Batch**	VXX19212	
Client Name	The Environmental Company, Inc. (TEC)		**Method**	SW5030B	
Project Name/#	Red Hill BFSF		**Date**	02/16/2009	
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	VMS10380
Method	SW8260B
Instrument	HP 5890 Series II MS1 VJA

SGS Ref.#	1090476002	Billable Matrix Spike	**Printed Date/Time**	02/19/2009 10:58
	1090476003	Billable Matrix Spike Dup.	**Prep Batch**	MXX21362
			Method	3010 H20 Digest for Metals ICI
			Date	02/12/2009
Original	1090476001			
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	ND	877	88	(80-120)			1000 ug/L	02/17/2009
	BMSD		922	92		5	(< 15)	1000 ug/L	02/17/2009
Batch	MMS5820								
Method	SW6020								
Instrument	Perkin Elmer Sciex ICP-MS P3								
Volatile Fuels Department									
Gasoline Range Organics	BMS	14.0 J	423	91	(79-108)			450 ug/L	02/10/2009
	BMSD		411	88		3	(< 20)	450 ug/L	02/10/2009
Surrogates									
4-Bromofluorobenzene <surr>	BMS		45.2	90	(50-150)				02/10/2009
	BMSD		46.0	92		2			02/10/2009
Batch	VFC9351								
Method	SW8015C								
Instrument	HP 5890 Series II PID+HECD VBA								
Semivolatile Organic Fuels Department									
Diesel Range Organics	BMS	ND	4.9	88	(75-125)			5.56 mg/L	02/11/2009
	BMSD		5.23	95		6	(< 30)	5.49 mg/L	02/11/2009
Surrogates									
5a Androstane <surr>	BMS		.0984	89	(50-150)				02/11/2009
	BMSD		0.0985	90		0			02/11/2009
Batch	XFC8449								
Method	SW8015C								
Instrument	HP 6890 Series II FID SV D R								
Volatile Gas Chromatography/Mass Spectroscopy									

SGS

SGS Ref.#	1090476002	Billable Matrix Spike	**Printed Date/Time**	02/19/2009 10:58
	1090476003	Billable Matrix Spike Dup.	**Prep Batch**	VXX19212
			Method	Volatiles Extraction AFCEE 3.1
			Date	02/16/2009
Original	1090476001			
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									
Benzene	BMS	ND	31	103	(80-120)			30.0 ug/L	02/16/2009
	BMSD		29.4	98		5	(< 20)	30.0 ug/L	02/16/2009
Toluene	BMS	ND	31.7	106	(77-120)			30.0 ug/L	02/16/2009
	BMSD		29.6	99		7	(< 20)	30.0 ug/L	02/16/2009
Ethylbenzene	BMS	ND	33.9	113	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.8	106		6	(< 20)	30.0 ug/L	02/16/2009
n-Butylbenzene	BMS	ND	33.8	113	(80-124)			30.0 ug/L	02/16/2009
	BMSD		31.8	106		6	(< 20)	30.0 ug/L	02/16/2009
1,4-Dichlorobenzene	BMS	ND	32.2	107	(80-120)			30.0 ug/L	02/16/2009
	BMSD		30.8	103		5	(< 20)	30.0 ug/L	02/16/2009
1,2-Dichloroethane	BMS	ND	30.9	103	(80-129)			30.0 ug/L	02/16/2009
	BMSD		29.5	98		5	(< 20)	30.0 ug/L	02/16/2009
1,3,5-Trimethylbenzene	BMS	ND	33.7	112	(80-128)			30.0 ug/L	02/16/2009
	BMSD		31.6	105		6	(< 20)	30.0 ug/L	02/16/2009
4-Chlorotoluene	BMS	ND	32.6	109	(79-128)			30.0 ug/L	02/16/2009
	BMSD		31.0	103		5	(< 20)	30.0 ug/L	02/16/2009
Chlorobenzene	BMS	ND	32.7	109	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.1	104		5	(< 20)	30.0 ug/L	02/16/2009
4-Methyl-2-pentanone (MIBK)	BMS	ND	97.8	109	(69-134)			90.0 ug/L	02/16/2009
	BMSD		90.2	100		8	(< 20)	90.0 ug/L	02/16/2009
cis-1,2-Dichloroethene	BMS	ND	33.5	112	(80-125)			30.0 ug/L	02/16/2009
	BMSD		31.6	105		6	(< 20)	30.0 ug/L	02/16/2009
4-Isopropyltoluene	BMS	ND	33.7	112	(80-125)			30.0 ug/L	02/16/2009
	BMSD		32.3	108		4	(< 20)	30.0 ug/L	02/16/2009
cis-1,3-Dichloropropene	BMS	ND	32.1	107	(80-120)			30.0 ug/L	02/16/2009
	BMSD		30.4	101		6	(< 20)	30.0 ug/L	02/16/2009
n-Propylbenzene	BMS	ND	33.3	111	(80-129)			30.0 ug/L	02/16/2009
	BMSD		31.6	105		5	(< 20)	30.0 ug/L	02/16/2009
Styrene	BMS	ND	33.3	111	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.5	105		6	(< 20)	30.0 ug/L	02/16/2009
Dibromomethane	BMS	ND	32.1	107	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.0	103		3	(< 20)	30.0 ug/L	02/16/2009
trans-1,3-Dichloropropene	BMS	ND	30.3	101	(80-124)			30.0 ug/L	02/16/2009
	BMSD		27.6	92		9	(< 20)	30.0 ug/L	02/16/2009
1,2,4-Trichlorobenzene	BMS	ND	32.2	107	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.4	105		3	(< 20)	30.0 ug/L	02/16/2009
Acetone	BMS	ND	95.7	106	(50-135)			90.0 ug/L	02/16/2009
	BMSD		92.0	102		4	(< 20)	90.0 ug/L	02/16/2009
1,1,2,2-Tetrachloroethane	BMS	ND	32.3	108	(76-123)			30.0 ug/L	02/16/2009
	BMSD		31.4	105		3	(< 20)	30.0 ug/L	02/16/2009

SGS

SGS Ref.#	1090476002	Billable Matrix Spike	**Printed Date/Time**	02/19/2009 10:58
	1090476003	Billable Matrix Spike Dup.	**Prep Batch**	VXX19212
			Method	Volatiles Extraction AFCEE 3.1
			Date	02/16/2009
Original	1090476001			
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									
1,2-Dibromo-3-chloropropane	BMS	ND	31.4	105	(73-130)			30.0 ug/L	02/16/2009
	BMSD		30.5	102		3	(< 20)	30.0 ug/L	02/16/2009
Methyl-t-butyl ether	BMS	ND	50	111	(80-120)			45.0 ug/L	02/16/2009
	BMSD		43.6	97		14	(< 20)	45.0 ug/L	02/16/2009
Tetrachloroethene	BMS	ND	34.3	114	(79-122)			30.0 ug/L	02/16/2009
	BMSD		31.6	105		8	(< 20)	30.0 ug/L	02/16/2009
Dibromochloromethane	BMS	ND	29.5	98	(80-120)			30.0 ug/L	02/16/2009
	BMSD		27.1	90		8	(< 20)	30.0 ug/L	02/16/2009
1,3-Dichloropropane	BMS	ND	32.8	109	(80-121)			30.0 ug/L	02/16/2009
	BMSD		30.9	103		6	(< 20)	30.0 ug/L	02/16/2009
1,2-Dibromoethane	BMS	ND	32.5	108	(80-120)			30.0 ug/L	02/16/2009
	BMSD		30.5	102		6	(< 20)	30.0 ug/L	02/16/2009
Carbon tetrachloride	BMS	ND	35.2	117	(80-126)			30.0 ug/L	02/16/2009
	BMSD		32.7	109		7	(< 20)	30.0 ug/L	02/16/2009
1,1,1,2-Tetrachloroethane	BMS	ND	30.6	102	(80-120)			30.0 ug/L	02/16/2009
	BMSD		28.7	96		6	(< 20)	30.0 ug/L	02/16/2009
Chloroform	BMS	ND	31.1	104	(80-124)			30.0 ug/L	02/16/2009
	BMSD		29.4	98		6	(< 20)	30.0 ug/L	02/16/2009
Bromobenzene	BMS	ND	31.7	106	(80-120)			30.0 ug/L	02/16/2009
	BMSD		30.0	100		5	(< 20)	30.0 ug/L	02/16/2009
Chloromethane	BMS	ND	54.3	181*	(67-125)			30.0 ug/L	02/16/2009
	BMSD		50.5	168*		7	(< 20)	30.0 ug/L	02/16/2009
1,2,3-Trichloropropane	BMS	ND	33.1	110	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.1	104		6	(< 20)	30.0 ug/L	02/16/2009
Bromomethane	BMS	ND	37.6	125	(30-140)			30.0 ug/L	02/16/2009
	BMSD		39.7	132		5	(< 20)	30.0 ug/L	02/16/2009
Bromochloromethane	BMS	ND	34.1	114	(77-129)			30.0 ug/L	02/16/2009
	BMSD		32.1	107		6	(< 20)	30.0 ug/L	02/16/2009
Vinyl chloride	BMS	ND	47.5	158*	(72-145)			30.0 ug/L	02/16/2009
	BMSD		45.0	150*		5	(< 20)	30.0 ug/L	02/16/2009
Dichlorodifluoromethane	BMS	ND	56.3	188*	(62-153)			30.0 ug/L	02/16/2009
	BMSD		52.8	176*		7	(< 20)	30.0 ug/L	02/16/2009
Chloroethane	BMS	ND	30.1	100	(67-133)			30.0 ug/L	02/16/2009
	BMSD		27.4	91		9	(< 20)	30.0 ug/L	02/16/2009
sec-Butylbenzene	BMS	ND	32.6	109	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.1	104		5	(< 20)	30.0 ug/L	02/16/2009
Bromodichloromethane	BMS	ND	33.8	113	(80-120)			30.0 ug/L	02/16/2009
	BMSD		32.0	107		6	(< 20)	30.0 ug/L	02/16/2009
1,1-Dichloroethene	BMS	ND	33.1	110	(76-130)			30.0 ug/L	02/16/2009
	BMSD		31.7	106		4	(< 20)	30.0 ug/L	02/16/2009

SGS

SGS Ref.#	1090476002	Billable Matrix Spike	**Printed Date/Time**	02/19/2009 10:58
	1090476003	Billable Matrix Spike Dup.	**Prep Batch**	VXX19212
			Method	Volatiles Extraction AFCEE 3.1
			Date	02/16/2009
Original	1090476001			
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									
2-Butanone (MEK)	BMS	ND	104	115	(66-136)			90.0 ug/L	02/16/2009
	BMSD		97.8	109		6	(< 20)	90.0 ug/L	02/16/2009
Methylene chloride	BMS	ND	32.7	109	(63-131)			30.0 ug/L	02/16/2009
	BMSD		31.2	104		5	(< 20)	30.0 ug/L	02/16/2009
Trichlorofluoromethane	BMS	ND	35.6	119	(68-145)			30.0 ug/L	02/16/2009
	BMSD		32.4	108		9	(< 20)	30.0 ug/L	02/16/2009
P & M -Xylene	BMS	ND	68.3	114	(80-120)			60.0 ug/L	02/16/2009
	BMSD		64.6	108		6	(< 20)	60.0 ug/L	02/16/2009
Naphthalene	BMS	ND	33.1	110	(75-120)			30.0 ug/L	02/16/2009
	BMSD		31.1	104		6	(< 20)	30.0 ug/L	02/16/2009
o-Xylene	BMS	ND	33.8	113	(80-120)			30.0 ug/L	02/16/2009
	BMSD		31.1	104		8	(< 20)	30.0 ug/L	02/16/2009
Bromoform	BMS	ND	30.2	101	(80-120)			30.0 ug/L	02/16/2009
	BMSD		28.6	95		6	(< 20)	30.0 ug/L	02/16/2009
1-Chlorohexane	BMS	ND	50.7	113	(70-125)			45.0 ug/L	02/16/2009
	BMSD		48.2	107		5	(< 20)	45.0 ug/L	02/16/2009
1,2,4-Trimethylbenzene	BMS	ND	33.1	110	(80-125)			30.0 ug/L	02/16/2009
	BMSD		31.1	104		6	(< 20)	30.0 ug/L	02/16/2009
tert-Butylbenzene	BMS	ND	33	110	(80-122)			30.0 ug/L	02/16/2009
	BMSD		31.2	104		5	(< 20)	30.0 ug/L	02/16/2009
1,1,1-Trichloroethane	BMS	ND	33	110	(80-122)			30.0 ug/L	02/16/2009
	BMSD		31.5	105		5	(< 20)	30.0 ug/L	02/16/2009
1,1-Dichloroethane	BMS	ND	33.3	111	(80-120)			30.0 ug/L	02/16/2009
	BMSD		30.5	102		9	(< 20)	30.0 ug/L	02/16/2009
2-Chlorotoluene	BMS	ND	32.5	108	(80-125)			30.0 ug/L	02/16/2009
	BMSD		30.6	102		6	(< 20)	30.0 ug/L	02/16/2009
Trichloroethene	BMS	ND	31.1	104	(80-125)			30.0 ug/L	02/16/2009
	BMSD		29.5	98		5	(< 20)	30.0 ug/L	02/16/2009
trans-1,2-Dichloroethene	BMS	ND	48.4	161*	(79-132)			30.0 ug/L	02/16/2009
	BMSD		32.2	107		40 *	(< 20)	30.0 ug/L	02/16/2009
1,2-Dichlorobenzene	BMS	ND	31.2	104	(80-120)			30.0 ug/L	02/16/2009
	BMSD		30.4	101		2	(< 20)	30.0 ug/L	02/16/2009
2,2-Dichloropropane	BMS	ND	35.3	118	(80-132)			30.0 ug/L	02/16/2009
	BMSD		33.0	110		7	(< 20)	30.0 ug/L	02/16/2009
Hexachlorobutadiene	BMS	ND	29.4	98	(77-125)			30.0 ug/L	02/16/2009
	BMSD		29.0	97		1	(< 20)	30.0 ug/L	02/16/2009
Isopropylbenzene (Cumene)	BMS	ND	33.3	111	(80-121)			30.0 ug/L	02/16/2009
	BMSD		31.5	105		6	(< 20)	30.0 ug/L	02/16/2009
1,2-Dichloropropane	BMS	ND	33.4	111	(80-121)			30.0 ug/L	02/16/2009
	BMSD		31.8	106		5	(< 20)	30.0 ug/L	02/16/2009

SGS Ref.#	1090476002	Billable Matrix Spike	**Printed Date/Time**	02/19/2009 10:58
	1090476003	Billable Matrix Spike Dup.	**Prep Batch**	VXX19212
			Method	Volatiles Extraction AFCEE 3.1
			Date	02/16/2009
Original	1090476001			
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-Dichloropropene	BMS	ND	34.1	114	(80-122)			30.0	ug/L	02/16/2009
	BMSD		31.6	105		8	(< 20)	30.0	ug/L	02/16/2009
1,1,2-Trichloroethane	BMS	ND	33.3	111	(77-120)			30.0	ug/L	02/16/2009
	BMSD		31.3	104		6	(< 20)	30.0	ug/L	02/16/2009
1,3-Dichlorobenzene	BMS	ND	32.6	109	(80-120)			30.0	ug/L	02/16/2009
	BMSD		30.7	102		6	(< 20)	30.0	ug/L	02/16/2009
1,2,3-Trichlorobenzene	BMS	ND	31.8	106	(77-120)			30.0	ug/L	02/16/2009
	BMSD		30.5	102		4	(< 20)	30.0	ug/L	02/16/2009
Surrogates										
1,2-Dichloroethane-D4 <surr>	BMS		28.9	96	(73-120)					02/16/2009
	BMSD		29.1	97		1				02/16/2009
Toluene-d8 <surr>	BMS		29.9	100	(80-120)					02/16/2009
	BMSD		29.4	98		2				02/16/2009
4-Bromofluorobenzene <surr>	BMS		29.9	100	(76-120)					02/16/2009
	BMSD		29.9	100		0				02/16/2009

Batch VMS10380
Method SW8260B
Instrument HP 5890 Series II MS1 VJA

Polynuclear Aromatics GC/MS

SGS

SGS Ref.#	1090476002	Billable Matrix Spike	**Printed Date/Time**		02/19/2009 10:58
	1090476003	Billable Matrix Spike Dup.	**Prep**	**Batch**	XXX20586
				Method	3520 Liquid/Liquid Ext for 827
				Date	02/10/2009
Original	1090476001				
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									
Acenaphthylene	BMS	ND	.345	60	(50-105)			0.575 ug/L	02/10/2009
	BMSD		0.313	58		10	(< 30)	0.538 ug/L	02/10/2009
Acenaphthene	BMS	ND	.332	58	(45-110)			0.575 ug/L	02/10/2009
	BMSD		0.311	58		7	(< 30)	0.538 ug/L	02/10/2009
Fluorene	BMS	ND	.351	61	(50-110)			0.575 ug/L	02/10/2009
	BMSD		0.326	61		7	(< 30)	0.538 ug/L	02/10/2009
Phenanthrene	BMS	ND	.348	61	(50-115)			0.575 ug/L	02/10/2009
	BMSD		0.332	62		5	(< 30)	0.538 ug/L	02/10/2009
Anthracene	BMS	ND	.352	61	(55-110)			0.575 ug/L	02/10/2009
	BMSD		0.329	61		7	(< 30)	0.538 ug/L	02/10/2009
Fluoranthene	BMS	ND	.42	73	(55-125)			0.575 ug/L	02/10/2009
	BMSD		0.395	73		6	(< 30)	0.538 ug/L	02/10/2009
Pyrene	BMS	ND	.41	71	(50-130)			0.575 ug/L	02/10/2009
	BMSD		0.380	71		8	(< 30)	0.538 ug/L	02/10/2009
Benzo(a)Anthracene	BMS	ND	.413	72	(55-120)			0.575 ug/L	02/10/2009
	BMSD		0.383	71		8	(< 30)	0.538 ug/L	02/10/2009
Chrysene	BMS	ND	.409	71	(55-120)			0.575 ug/L	02/10/2009
	BMSD		0.375	70		9	(< 30)	0.538 ug/L	02/10/2009
Benzo[b]Fluoranthene	BMS	ND	.411	72	(46-130)			0.575 ug/L	02/10/2009
	BMSD		0.389	72		6	(< 30)	0.538 ug/L	02/10/2009
Benzo[k]fluoranthene	BMS	ND	.426	74	(60-125)			0.575 ug/L	02/10/2009
	BMSD		0.386	72		10	(< 30)	0.538 ug/L	02/10/2009
Benzo[a]pyrene	BMS	ND	.432	75	(55-120)			0.575 ug/L	02/10/2009
	BMSD		0.391	73		10	(< 30)	0.538 ug/L	02/10/2009
Indeno[1,2,3-c,d] pyrene	BMS	ND	.435	76	(45-125)			0.575 ug/L	02/10/2009
	BMSD		0.387	72		12	(< 30)	0.538 ug/L	02/10/2009
Dibenzo[a,h]anthracene	BMS	ND	.445	77	(41-140)			0.575 ug/L	02/10/2009
	BMSD		0.395	73		12	(< 30)	0.538 ug/L	02/10/2009
Benzo[g,h,i]perylene	BMS	ND	.422	73	(46-125)			0.575 ug/L	02/10/2009
	BMSD		0.390	73		8	(< 30)	0.538 ug/L	02/10/2009
Naphthalene	BMS	ND	.334	58	(42-100)			0.575 ug/L	02/10/2009
	BMSD		0.307	57		9	(< 30)	0.538 ug/L	02/10/2009
1-Methylnaphthalene	BMS	ND	.332	58	(46-115)			0.575 ug/L	02/10/2009
	BMSD		0.301	56		10	(< 30)	0.538 ug/L	02/10/2009
2-Methylnaphthalene	BMS	ND	.32	56	(45-105)			0.575 ug/L	02/10/2009
	BMSD		0.289	54		10	(< 30)	0.538 ug/L	02/10/2009
Surrogates									
Terphenyl-d14 <surr>	BMS		.456	79	(50-135)				02/10/2009
	BMSD		0.425	79		7			02/10/2009

SGS Ref.#	1090476002	Billable Matrix Spike	**Printed Date/Time**		02/19/2009 10:58
	1090476003	Billable Matrix Spike Dup.	**Prep**	**Batch**	XXX20586
				Method	3520 Liquid/Liquid Ext for 827
				Date	02/10/2009
Original	1090476001				
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	XMS4825
Method	8270D SIMS
Instrument	HP 6890/5973 MS SVOA

SGS

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1090476

www.us.sgs.com

CLIENT:	TEC INC.	SGS Reference #:	page _____ of _____
CONTACT:	**Rick Adkisson**	PHONE NO:	808.528.1445
PROJECT:		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)	TPH-DRO (8015B)	VOC's (8260B)	PAH's (8270C-SIMS)	Diss Pb (6020)	HCl	HCl	HCl	HNO3							REMARKS
1 A-K	RHMW2254-WG14	2/4/2009	0920	Water	23			X	X	X	X	X	1	A-K									3x Volume sent in 2 coolers
4 A-F	RHMW03-WG14	2/4/2009	1110	Water	6			X		X													
5 A-F	RHMW02-WG14	2/4/2009	1240	Water	6			X		X													
6 A-F	RHMWA01-WG14	2/4/2009	1205	Water	6			X		X													
7 A-F	RHMW01-WG14	2/4/2009	1455	Water	6			X		X													
8 A-C	TB01-WG14	2/4/2009	0805	Water	3					X													

Collected/Relinquished By: (1)	Date 2/4/09	Time 1530	Received By:
Relinquished By: (2)	Date 2/5/09	Time 1030	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 2/6/09	Time 1100	Received For Laboratory By:

Shipping Carrier:	Samples Received Cold? YES NO (20D)
Shipping Ticket No:	Temperature °C: TB=1.7 C=2.3
Special Deliverable Requirements: **See Contract**	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

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1090476

Locations Nationwide
Alaska Hawaii
Maryland Louisiana
New Jersey West Virginia
North Carolina
www.us.sgs.com

CLIENT:	TEC INC.	SGS Reference #:	page _____ of _____
CONTACT:	Rick Adkisson	PHONE NO:	808.528.1445
PROJECT:		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)	TPH-DRO (8015B)	VOC's (8260B)	PAH's (8270C-SIMS)	Diss Pb (6020)								REMARKS
								HCl	HCl	HCl		HNO3								
(2)A6-K0A LGJK	RHMW2254-WG14	2/4/2009	0920	Water	10				X		X	X								3x Volume sent in 2 coolers

Collected/Relinquished By: (1)	Date: 2/4/09	Time: 1530	Received By:
Relinquished By: (2)	Date: 2/5/09	Time: 1030	Received By:
Relinquished By: (3)	Date:	Time:	Received By:
Relinquished By: (4)	Date: 2/6/09	Time: 1100	Received For Laboratory By:

Shipping Carrier:	Samples Received Cold? YES NO
Shipping Ticket No:	Temperature °C: TB= 1.4 <= 1.3
Special Deliverable Requirements: See Contract	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

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1090476

...tions Nationwide
Hawaii
Louisiana
...ey West Virginia
...rolina

www.us.sgs.com

CLIENT:	TEC INC.	SGS Reference #:	page _____ of _____
CONTACT:	**Rick Adkisson**	PHONE NO:	808.528.1445
PROJECT:		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) HNO3	REMARKS
5)6-H	**RHMW02-WG14**	**2/4/2009**	**1240**	**Water**	**5**				X		X	X	
6)6-J	**RHMWA01-WG14**	**2/4/2009**	**1205**	**Water**	**5**				X		X	X	

Collected/Relinquished By: (1)	Date 2/4/09	Time 1530	Received By:
Relinquished By: (2)	Date 2/5/09	Time 1030	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 2/6/09	Time 1100	Received For Laboratory By:

Shipping Carrier:	Samples Received Cold? YES NO
Shipping Ticket No:	Temperature °C: TB= 3.4 <= 2.5
Special Deliverable Requirements: **See Contract**	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

CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1090476

...cations Nationwide
Hawaii
Louisiana
...sey West Virginia
...arolina
...w.us.sgs.com

CLIENT:	TEC INC.	SGS Reference #:	page _____ of _____
CONTACT:	**Rick Adkisson**	PHONE NO:	808.528.1445
PROJECT:		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) HNO3	REMARKS
(7)G-K	RHMW01-WG14	2/4/2009	1455	Water	5				X		X	X	
(4)G-K	RHMW03-WG14	2/4/2009	1110	Water	5				X		X	X	

Collected/Relinquished By: (1)	Date: 2/4/09	Time: 1530	Received By:
Relinquished By: (2)	Date: 2/5/09	Time: 1030	Received By:
Relinquished By: (3)	Date:	Time:	Received By:
Relinquished By: (4)	Date: 2/6/09	Time: 1100	Received For Laboratory By:

Shipping Carrier:
Shipping Ticket No:
Special Deliverable Requirements: **See Contract**

Samples Received Cold? YES (NO)
Temperature °C: TB= 2.6 = 2.2

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

1090476

SGS

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 (if req'd): Are they properly marked?
			Are there any **problems**? PM Notified?
		✓	Were samples preserved correctly and pH verified?
		✓	If this is for PWS, provide **PWSID.**
	✓		Will courier charges apply?
			Method of payment?
		✓	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: 2/6/09

Received Time: 1100

Is **date/time conversion** necessary? NO

# of hours to AK Local Time: —

Thermometer ID: 10 D

Cooler ID	Temp Blank	Cooler Temp
1 (I)	2.6 °C	2.2 °C
2 (II)	1.4 °C	1.3 °C
3 (III)	1.7 °C	2.3 °C
4 (IV)	3.4 °C	2.5 °C
	°C	°C

Note: Temperature readings include thermometer correction factors

Delivery method (circle all that apply): Client / Alert Courier / UPS / FedEx / USPS / DHL / AA Goldstreak / NAC / ERA / PenAir / Carlile/ Lynden / SGS / Other:

Airbill # 8672 3188 4870

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

Yes	No	
		Is received temperature 4 ± 2°C?
		Exceptions: Samples/Analyses Affected:
✓		If temperature(s) <0°C, were containers ice-free? N/A *Notify PM immediately of any ice in samples.*
✓		Was there an airbill? *(Note # above in the right hand column)*
✓		Was cooler sealed with custody seals? # / where: 2, 1 on front + 1 on back x 4
✓		Were seal(s) intact upon arrival?
✓		Was there a COC with cooler?
✓		Was COC sealed in plastic bag & taped inside lid of cooler?
✓		Was the COC filled out properly?
	✓	Did the COC indicate USACE / Navy / AFCEE project?
✓		Did the COC and samples correspond?
✓		Were all sample packed to prevent breakage? Packing material: Bubble wrap
	✓	Were all samples unbroken and clearly labeled?
	✓	Were all samples sealed in separate plastic bags?
✓		Were all VOCs free of headspace and/or MeOH preserved?
✓		Were correct container / sample sizes submitted?
		Is sample condition good?
✓		Was copy of CoC, SRF, and custody seals given to PM to fax?

Additional Sample Remarks: (√ if applicable)

JJB X	Extra Sample Volume?
✓	Limited Sample Volume?
	MeOH field preserved for volatiles?
	Field-filtered for dissolved
	Lab-filtered for dissolved
	Ref Lab required?
	Foreign Soil?

This section must be filled if problems are found.

Yes	No	
		Was client notified of problems?

Individual contacted:

Via: Phone / Fax / Email (*circle one*)

Date/Time:

Reason for contact:

Change Order Required?

SGS Contact:

Notes: Sample (3) is missing one jar for PAHs (recieved broken), Sample (5) is missing a PAHs jar and a TPH-DRO jar (both recieved broken) and sample (6) is missing a TPH-DRO jar (also recieved broken) sample (7) is missing one VOC 8% and one GRO jar (recieved broken)

Completed by (sign): [signature] (print): Annie Adkins

Login proof (check one): waived ____ required X performed by: Joe Rud 2/10/09

Form # F004r17 revised 04/11/08

SGS

1090476

SAMPLE RECEIPT FORM (page 2)

SGS WO#:

#	Container ID	Matrix	Test	QC	TB	1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz (250 mL)	4oz (125 mL)	Other	AG	CG	HDPE	Nalgene	Cubie	Coli	Septa	Other	None	HCl	HNO_3	H_2SO_4	MeOH	$Na_2S_2O_3$	NaOH	Other
						Container Volume									**Container Type**								**Preservative**							
1	A-C	1	GRO								3				✓						✓			✓						
	D-F	↓	VOC								3				✓						✓			✓						
	G	↓	Diss Pb				1										✓								✓					
	H,I	↓	DRO			2									✓									✓						
	J, K	↓	PAH			2									✓								✓							
2	A-C	1	GRO	TS							3				✓						✓			✓						
	D-F	↓	VOC	↓							3				✓						✓			✓						
	G	↓	extra Volume	↓			1										✓								✓					
	H,I	↓	DRO	↓		2									✓									✓						
	J,K	↓	PAH	↓		2									✓								✓							
	L	↓	Diss Pb	↓				S	J	A	①	G																		
3	A-C	1	~~Vo~~ GRO	TSD							3				✓						✓			✓						
	D-F	↓	VOC	↓							3				✓						✓			✓						
	G	↓	extra Volume	↓			1										✓													
	H,I	↓	DRO	↓		2									✓									✓						
	J	↓	PAH	↓		1									✓								✓							
	K	↓	Diss Pb	↓				S	J	A	①	G																		
	A-C	(3)																												
4	~~A-K~~	1	GRO								3				✓						✓			✓						
	D-F	↓	VOC								3				✓						✓			✓						
	G	↓	Diss Pb				1										✓								✓					
	H,I	↓	DRO			2									✓									✓						
	J K	↓	PAH			2									✓								✓							

	1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz	4oz	Other
Bottle Totals	13	4				24			

Completed by: Joe Reed

Date: ~~2/5/09~~ 2/6/09

Form # F004r16 revised 03/10/08

SGS

1090476

SAMPLE RECEIPT FORM (page 2)

SGS WO#:

#	Container ID	Matrix	Test	QC	TB	Container Volume: 1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz (250 mL)	4oz (125 mL)	Other	Container Type: AG	CG	HDPE	Nalgene	Cubie	Coli	Septa	Other	Preservative: None	HCl	HNO_3	H_2SO_4	MeOH	$Na_2S_2O_3$	NaOH	Other
5	A-C	1	GRO								3				✓						✓			✓						
	D-F	↓	VOC								3				✓						✓			✓						
	G		Diss Pb				1										✓								✓					
	H					1									✓									✓						
	I	↓	PAH			1									✓								✓							
6	A-C	1	GRO								3				✓									✓						
	D-F	↓	VOC								3				✓									✓						
	G		Diss Pb				1										✓								✓					
	H,~~I~~		DRO			1									✓									✓						
	I,J	↓	PAH			2									✓								✓							
7	A-C																													
	D-F																													
	G																													
	H,~~I~~																													
	J,K																													
7	A,B	1	GRO								2				✓						✓			✓						
	C,D	↓	VOC								2				✓						✓			✓						
	E		Diss Pb				~~1~~										✓								✓					
	F,G		DRO			2									✓									✓						
	H,I	↓	PAH			2									✓								✓							
8	A-C	1	VOC		✓						3				✓						✓			✓						

Bottle Totals	9	3				19			

Completed by: Joe Rudi Date: ~~2/5/09~~ 2/6/09

Form # F004r16 revised 03/10/08

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

TOD
TB= 2.6
C=2.2

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

TOD
TB=1.4
C=1.3

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

TOD
TB=1.7
C=2.3

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

TOD
TB=3.4
C=2.5

SGS Environmental **CUSTODY SEAL**

Signature: _____ Date/Time: 2/5/09

1090476

FedEx Express *US Airbill*

8672 3188 4870

0200 Form ID No.

FedEx Retrieval Copy

1 From

Date 2/5/09

Sender's FedEx Account Number

Sender's Name

Phone 808 847-0067

Company ESN Pacific

Address 2020 Kahai St.

Dept./Floor/Suite/Room

City Honolulu State HI ZIP 96819

2 Your Internal Billing Reference

3 To

Recipient's Name

Phone 907 562 2343

Company SGS Environmental

Recipient's Address 200 W. Potter Dr.

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Anchorage State AK ZIP 99518

8672 3188 4870

4a Express Package Service

Packages up to 150 lbs

1 [ ] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is sele...

5 [X] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

6 [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.

3 [ ] FedEx 2Day — Second business day.* Thursd... shipments will be delivered on... unless SATURDAY Delivery is s...

FedEx Envelope rate not av...

1090476

...most location

4b Express Freight S...

...ver 150 lbs

7 [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered or... unless SATURDAY Delivery is...

...Freight ** ...NOT available

* Call for Confirmation:

...most location

5 Packaging

6 [ ] FedEx Envelope*

2 [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.

3 [ ] FedEx Box

4 [ ] FedEx Tube

1 [X] Other

* Declared value limit $500

6 Special Handling

Include FedEx address in Section 3.

3 [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

1 [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.

31 [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

[ ] No 4 [ ] Yes — As per attached Shipper's Declaration. [ ] Yes — Shipper's Declaration not required. 6 [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

[ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

Obtain Recip. Acct. No. [ ]

1 [ ] Sender — Acct. No. in Section 1 will be billed.

2 [X] Recipient

3 [ ] Third Party

4 [ ] Credit Card

5 [ ] Cash/Check

[redacted] 11 [redacted]

Total Packages 4

Total Weight 191

[redacted]

Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

8 Residential Delivery Signature Options

If you require a signature, check Direct or Indirect.

[ ] No Signature Required — Package may be left without obtaining a signature for delivery.

10 [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520