

Quarterly Groundwater Monitoring Report Red Hill Fuel Storage Facility

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Executive Summary

This Quarterly Groundwater Monitoring Report presents the results of groundwater sampling conducted on July 29, 2008 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 Air Force Center for Engineering and the Environment (AFCEE) and the Fleet 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 United States (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 downgradient 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, 2005a). In addition, a three-dimensional (3-D) groundwater model was developed to produce site-specific risk-based action 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 of 2008, HDOH updated their EALs, which resulted in significant changes to the action levels associated with methylnaphthalenes (total 1- and 2-). 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 United States Environmental Protection Agency (USEPA), and HDOH adopted a more rigorous

EAL of 0.47 µg/L, corresponding to a residential tap water scenario, and a 1 in a million cancer risk. This equates to lowering the previous action level by a factor of 510 (HDOH, 2008).

Groundwater Protection Plan

In 2008, the US Navy completed the *Red Hill Bulk Fuel Storage Facility Final Groundwater Protection Plan* (TEC, 2008), or Plan, 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. In the current quarterly groundwater monitoring report, the current water quality is compared to these categories and actions are recommended, based on those specified in the Plan.

Current Results

This quarterly groundwater monitoring report presents the analytical results from samples collected in July 2008 and compares them to State and site-specific action levels. Concentration trends for chemicals that exceeded HDOH Drinking Water EALs are also provided. Four normal samples were collected from RHMW2254-01, RHMW01, RHMW02 and RHMW03; a duplicate sample was collected at RHMW02; and the laboratory conducted matrix spike/matrix spike duplicate (MS/MSD) analysis on the sample aliquot from RHMW2254-01. 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.

Laboratory analytical results indicate that TPH-DRO and PAHs were detected in the groundwater from beneath the Facility at concentrations that exceed HDOH Drinking Water EALs. TPH-DRO was detected at 327 micrograms per liter (µg/L) in RHMW01, at 4,055 µg/L (average of normal and duplicate sample) in RHMW02, and 199 µg/L in RHMW03. The HDOH Drinking Water EAL for TPH-DRO is 100 µg/L. Three PAHs were detected in the normal and duplicate samples associated with RHMW02 at average concentrations above the HDOH Drinking Water EALs: naphthalene at 136 µg/L (HDOH EAL is 6.2 µg/L), 1-methylnaphthalene at 99 µg/L and 2-methylnaphthalene at 36.9 µg/L (HDOH EAL for total methylnaphthalenes [1- and 2-] is 0.47 µg/L).

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. TPH-DRO has been decreasing in concentration over the last three rounds, since January 2008.

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. TPH-DRO has been increasing in concentration over the last three rounds, since January 2008, and the average concentration from the July 2008 sampling event was

approximately 91 percent of the SSRBL (solubility limit). Three PAHs (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) also have exceeded the EALs since September 2005, and have been increasing in concentration since January 2008. There are no SSRBLs set for these PAHs to date.

At RHMW03, concentrations of TPH-DRO have fluctuated around the HDOH EAL since September 2005 and are significantly lower than at RHMW01 and RHMW02. There are no significant trends observed in the results at RHMW03.

Current Groundwater Status

Based on the monitoring event that occurred in July 2008, no free product was observed at RHMW01, RHMW02, or RHMW03. Results from groundwater samples indicate that RHMW01 and RHMW03 are presently in Category 2 status, since TPH-DRO is greater than the HDOH EAL for drinking water (100 µg/L), but less than half the SSRBL of 4,500 µg/L (solubility limit of JP-5). Category 2 response at RHMW01 and RHMW03 requires:

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

Results from groundwater samples indicate that RHM02 is presently in Category 3 status, since TPH-DRO (4,470 µg/L and 3,640 µg/L [duplicate]) is greater than the HDOH EAL for drinking water (100 µg/L), and greater than half the SSRBL of 4,500 µg/L (solubility limit of JP-5).

Category 3 response at RHMW02 requires:

1. Quarterly reports to be sent to HDOH;
2. Initiation of a leak determination program to identify if tanks are leaking;
3. Increase monitoring frequency to once per month if concentrations are increasing;
4. Notify HDOH within 7 days and follow with written notification within 30 days;
5. Measure product with interface probe in wells of concern;
6. Immediately determine if tanks are leaking.

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. It is recommended that RHMW01 and RHMW02 be evaluated monthly for the presence of fuel on groundwater, in accordance with the Plan. It is also recommended that quarterly groundwater sampling for TPH-DRO, TPH-GRO, VOCs, PAHs, and lead be continued as previously scheduled until new data indicates a different schedule is required.

1.0 Introduction

This report presents the results of the 12th groundwater sampling and analysis event, conducted in July 2008 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 Industrial and 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 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 Air Force Center for Engineering and the Environment (AFCEE) Contract Number F41624-03-D-8618, Task Order 021.

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); and
11. Groundwater Monitoring Results, April 2008 (submitted May 2008);

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 downgradient from the Facility (Dawson, 2006). The US Navy Well 2254-01 is located approximately 3,000 feet downgradient (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 ($\mu\text{g/L}$) to 1,050 $\mu\text{g/L}$ and total lead ranging from 10.4 $\mu\text{g/L}$ to 15 $\mu\text{g/L}$. The maximum total lead concentration in the samples was equal to the primary drinking water standard of 15 $\mu\text{g/L}$ for lead and exceeded the HDOH Tier 1 groundwater action level of 5.6 $\mu\text{g/L}$ (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 June 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 and April 2008. 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;
- TPH-GRO did not exceed HDOH Drinking Water EALs at RHMW02;
- TPH-DRO and naphthalene exceeded HDOH Drinking Water EALs at RHMW02;
- 1-methylnaphthalene and 2-methylnaphthalene exceeded HDOH Drinking Water EAL for taste and odor at RHMW02; and
- TPH-DRO exceeded HDOH Drinking Water EALs at RHMW03.

1.5 Regulatory Updates

During the Summer of 2008, HDOH updated their EALs, which resulted in significant changes to the action levels associated with methylnaphthalenes (total 1- and 2-). 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 United States Environmental Protection Agency (USEPA), and HDOH adopted a more rigorous EAL of 0.47 µg/L, corresponding to a residential tap water scenario, and a 1 in a million cancer risk. This equates to lowering the previous action level by a factor of 510.

2.0 Sample Collection and Analyses

Field activities relating to groundwater sample collection were conducted on July 29, 2008. 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, 2008). A total of seven samples were collected; one normal sample from monitoring wells US Navy Well 2254-01, RHMW01, RHMW02 and RHMW03, one duplicate sample from RHMW02 (Sampled as RHMWA01 and reported as RHMW02-WG11D), 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 [HNO₃] 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, volatile organic compounds (VOCs) by EPA Method 8260B, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C SIMS, 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 well 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 July 2008 Sample Analytical Results

All groundwater samples were analyzed for TPH-DRO, TPH-GRO, VOCs, PAHs, and dissolved lead. Bromomethane was detected at US Navy Well 2254-01 at 1.26F $\mu\text{g/L}$, which is below the HDOH Drinking Water EAL of 8.5 $\mu\text{g/L}$. Data qualifier "F" indicates the result is between the method detection limit (MDL) and the reporting limit (RL) and considered an estimated value.

TPH-DRO was detected at RHMW01 at 327 $\mu\text{g/L}$, which is above the HDOH Drinking Water EAL of 100 $\mu\text{g/L}$. All other chemicals of potential concern were below HDOH Drinking Water EALs at RHMW01.

TPH-DRO was detected at RHMW02 and duplicate sample at 4,470 and 3,640 $\mu\text{g/L}$, respectively (HDOH EAL is 100 $\mu\text{g/L}$). Naphthalene was analyzed by EPA Method 8270 SIM and EPA Method 8260B and detected by both methods at RHMW02. EPA Method 8260B produced the highest naphthalene concentrations, which were 320 and 309 $\mu\text{g/L}$ for the normal and duplicate sample, respectively (HDOH EAL is 6.2 $\mu\text{g/L}$). The concentrations of 1-methylnaphthalene and 2-methylnaphthalene were above the new HDOH Drinking Water EALs toxicity of 0.47 $\mu\text{g/L}$. All other chemicals of potential concern were below HDOH Drinking Water EALs at RHMW02.

Only three compounds were detected at RHMW03: TPH-DRO, naphthalene, and 1-methylnaphthylene. TPH-DRO was detected at RHMW03 at 199 $\mu\text{g/L}$, (HDOH EAL is 100 $\mu\text{g/L}$). All other chemicals of potential concern were below HDOH Drinking Water EALs at RHMW03.

Table 1. Analytical Results for Quarterly Groundwater Monitoring Release Response Report (July 29, 2008)
Red Hill Fuel Storage Facility, Pearl Harbor, Hawaii

Method	Chemical	HDOH Residential Drinking Water EALs ¹ UG/L	HDOH Drinking Water Ceiling EALs ² UG/L	RHMW01 UG/L July 29, 2008				RHMW02 UG/L July 29, 2008				RHMW02D UG/L July 29, 2008				RHMW03 UG/L July 29, 2008				RHMW2254 UG/L July 29, 2008						
				Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL			
				SW8015B (Petroleum)	TPH (middle distillates) TPH (gasolines)	208 100	100 100	327 ND	F U	80 10	400 100	4470 61.7	F F	83.3 10	417 100	3640 61.2	F F	80 10	400 100	199 ND	F U	82.5 10	412 100	ND ND	U U	83.3 10
SW8270SIM (PAHs)	METHYLNAPHTHALENE,1- METHYLNAPHTHALENE,2- METHYLNAPHTHALENE (total 1- & 2-) ACENAPHTHENE ACENAPHTHYLENE ANTHRACENE BENZO(a)ANTHRACENE BENZO(a)PYRENE BENZO(b)FLUORANTHENE BENZO(g,h,i)PERYLENE BENZO(k)FLUORANTHENE CHRYSENE DIBENZO(a,h)ANTHTRACENE FLUORANTHENE FLUORENE INDENO(1,2,3-cd)PYRENE NAPHTHALENE PHENANTHRENE PYRENE	0.47 0.47 0.47 365 243 1825 0.09 0.2 0.09 1460 0.92 9.2 0.01 1460 243 0.09 6.2 243 182.5	10 10 10 20 1965 21.7 4.7 0.81 0.75 0.13 0.4 1 0.515 130 945 0.095 21 408 67.5	ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND	U U U U U U U U U U U U U U U U U U	0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015	0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05	102 31.5 133.5 0.470 ND ND ND ND ND ND ND ND ND 0.324 ND 140 ND ND	F U F F U U U U U U U U U U F U U U	0.773 0.773 0.773 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155	2.58 2.58 2.58 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515	96.0 42.2 138.2 0.45 ND ND ND ND ND ND ND ND ND 0.304 ND 132 ND ND	F F F F U U U U U U U F U U U U U U	0.773 0.773 0.773 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155 0.155	2.58 2.58 2.58 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515	0.0294 ND ND ND ND ND ND ND ND ND ND ND ND ND 0.0294 ND 0.0689 ND ND	F U U U U U U U U U U U U U F F U U	0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156	0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521	ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND ND	U U U U U U U U U U U U U U U U U U U	0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156 0.0156	0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521 0.0521			
	SW8260 (VOCs)	TETRACHLOROETHANE, 1,1,1,2- TRICHLOROETHANE, 1,1,1- TETRACHLOROETHANE, 1,1,2,2- TRICHLOROETHANE, 1,1,2- TRICHLOROBENZENE, 1,2,4- DIBROMO,1,2- CHLOROPROPANE,3- DICHLOROPROPANE, 1,2- DICHLOROBENZENE, 1,3- DICHLOROPROPENE, 1,3- DICHLOROBENZENE, 1,4- ACETONE BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE CHLOROFORM CHLOROMETHANE DICHLOROETHYLENE, Cis 1,2- DIBROMOETHANE, 1,2- ETHYLBENZENE HEXACHLOROBUTADIENE XYLENES METHYL ETHYL KETONE METHYL ISOBUTYL KETONE METHYLENE CHLORIDE NAPHTHALENE STYRENE TETRACHLOROETHYLENE TOLUENE DICHLOROETHYLENE, Trans 1,2- TRICHLOROETHYLENE VINYL CHLORIDE	0.52 200 0.07 5 70 0.04 5 183 0.43 75 21783 5 0.22 100 8.7 5 100 8588 70 1.8 70 0.0065 700 0.86 10000 7065 1991 4.8 6.2 100 5 1000 100 5 2	50000 970 500 50000 3000 10 10 50000 50000 5 20000 170 50000 510 50000 520 50 16 2400 50000 50000 50000 30 6 20 8400 1300 9100 21 10 170 40 260 310 3400	ND ND	U U	0.15 0.31 0.15 0.31 0.31 0.62 0.31 0.31 0.12 0.15 3.1 0.12 0.15 0.31 0.94 0.31 0.15 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31	0.5 1 0.5 1 1 2 1 1 0.4 0.5 10 0.4 0.5 1 3 1 0.5 1 1 1 1 1 1 1 1 1 10 10 5 2 10 1 1 1 1 1 1	ND ND	U U	0.15 0.31 0.15 0.31 0.31 0.62 0.31 0.31 0.12 0.15 3.1 0.12 0.15 0.31 0.94 0.31 0.15 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31	0.5 1 0.5 1 1 2 1 1 0.4 0.5 10 0.4 0.5 1 3 1 0.5 1 1 1 1 1 1 1 10 10 5 2 10 1 1 1 1 1 1	ND ND	U U	0.15 0.31 0.15 0.31 0.31 0.62 0.31 0.31 0.12 0.15 3.1 0.12 0.15 0.31 0.94 0.31 0.15 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31	0.5 1 0.5 1 1 2 1 1 0.4 0.5 10 0.4 0.5 1 3 1 0.5 1 1 1 1 1 1 1 10 10 5 2 10 1 1 1 1 1 1	ND ND	U U	0.15 0.31 0.15 0.31 0.31 0.62 0.31 0.31 0.12 0.15 3.1 0.12 0.15 0.31 0.94 0.31 0.15 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31	0.5 1 0.5 1 1 2 1 1 0.4 0.5 10 0.4 0.5 1 3 1 0.5 1 1 1 1 1 1 1 10 10 5 2 10 1 1 1 1 1 1	ND ND	U U	0.15 0.31 0.15 0.31 0.31 0.62 0.31 0.31 0.12 0.15 3.1 0.12 0.15 0.31 0.94 0.31 0.15 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31	0.5 1 0.5 1 1 2 1 1 0.4 0.5 10 0.4 0.5 1 3 1 0.5 1 1 1 1 1 1 1 10 10 5 2 10 1 1 1 1 1 1	ND ND	U U
		SW6020	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

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

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 EAL's

¹ Toxicity-based environmental action levels, Table D-1b, Screening For Environmental Hazards At Sites With Contaminated Soil and Groundwater, HDOH, 2008

² Taste, odor and solubility thresholds, Table D-1b, Screening For Environmental Hazards At Sites With Contaminated Soil and Groundwater, HDOH, 2008

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 been detected in April 2008 at 13.6F µg/L, which is below the HDOH Drinking Water EAL of 100 µg/L. In July 2008, TPH-GRO was not detected. TPH-DRO was detected above the HDOH Drinking Water EAL of 100 µg/L during all groundwater sampling events and had shown a decreasing trend until the January 2008 sampling event. Concentration of TPH-DRO observed during the July 2008 sampling event was lower than the concentrations observed in January and April 2008, but higher than the previous four rounds.

RHMW02

TPH-GRO was detected in eight of nine sampling events since September 2005, and exceeded the HDOH Drinking Water EAL three times during 2006 and 2007. The maximum concentration detected was 148 µg/L, which is slightly above the EAL of 100 µg/L. The concentration of TPH-DRO was relatively stable at RHMW02 until January 2008, ranging from 2,250 to 3,180 µg/L. However, since January 2008 it has shown an increasing trend with concentrations up to 4,470 µg/L, well above the HDOH Drinking Water EAL of 100 µg/L. PAHs at RHMW02 remain above the HDOH Drinking Water EALs, and concentrations have also been increasing since January 2008.

RHMW03

TPH-GRO has never been detected. TPH-DRO had shown a decreasing trend until the January 2008 sampling event. Concentrations of TPH-DRO observed during the July 2008 sampling event were lower than the concentrations observed in January 2008, but higher than the previous rounds. In general, concentrations of petroleum-related compounds at RHMW03 have 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 100 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 to date.

Measurements to determine the presence and thickness of fuel were conducted at RHMW01, RHMW02, and RHMW03 during the current sampling round. No fuel product was observed in any of these wells during this event (see Table 2).

Table 2. Oil-Water Interface Measurements

Date	RHMW01		RHMW02		RHMW03	
	SWL (ft)	LNAPL (ft)	SWL (ft)	LNAPL (ft)	SWL (ft)	LNAPL (ft)
January 2008	17.74	< 0.01	18.78	< 0.01	NT	NT
April 2008	NT	NT	NT	NT	NT	NT
July 2008	19.04	0.00	18.91	0.00	18.86	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

Compounds 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), the following categories may be applicable based on the concentration of a compound at a specific well related to site-specific risk-based action levels (SSRBL) and EALs (see Table 3) and groundwater concentration trends.

Table 3. Action Levels for Compounds of Concern

Chemical	EAL (µg/L)	SSRBL (µg/L)
Petroleum Mixtures		
TPH-DRO	100	4,500
TPH-GRO	100	4,500
Semi-Volatile Compounds		
1-Methylnaphthalene	0.47	NA
2-Methylnaphthalene	0.47	NA
Naphthalene	6.22	NA

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

Based on the monitoring event that occurred in July 2008, no free product was observed at RHMW01, RHMW02, or RHMW03. Results from groundwater samples indicate that RHMW01 and RHMW03 are presently in Category 2 status, since TPH-DRO is greater than the HDOH EAL for drinking water (100 µg/L), but less than half the SSRBL of 4,500 µg/L (solubility limit of JP-5). Category 2 response at RHMW01 and RHMW03 requires:

1. Quarterly reports to be sent to HDOH; and

2. Initiation of a leak determination program to identify if tanks are leaking.

Results from groundwater samples indicate that RHM02 is presently in Category 3 status, since TPH-DRO (4,470 µg/L and 3,640 µg/L [duplicate]) is greater than the HDOH EAL for drinking water (100 µg/L), and greater than half the SSRBL of 4,500 µg/L (solubility limit of JP-5). Category 3 response at RHMW02 requires:

1. Quarterly reports to be sent to HDOH;
2. Initiation of a leak determination program to identify if tanks are leaking;
3. Increase monitoring frequency to once per month if concentrations are increasing;
4. Notify HDOH within 7 days and follow with written notification within 30 days;
5. Measure product with interface probe in wells of concern;
6. Immediately determine if tanks are leaking.

Table 4 describes each category and identifies response actions to be taken in accordance with the Plan.

Table 4. Responses to Groundwater Monitoring Results

Results Category	RHMW02 or RHMW03	RHMW01	U.S. 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 measured or 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 (see Appendix C), 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
For permission to sample 2253-03, call DLNR Commission on Water Resource Management (808) 587-0214, DLNR.CWRM@Hawaii.gov
 - 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

4.0 Summary and Conclusions

TPH-DRO and PAHs are present in the groundwater beneath the Facility at concentrations that exceed HDOH Drinking Water EALs. There is no indication of an imminent threat to the US Navy Well 2254-01 water resources, since petroleum concentrations at RHMW01 remain less than half the SSRBLs.

It is recommended that RHMW01 and RHMW02 be evaluated monthly for the presence of fuel on groundwater, in accordance with the Plan. It is also recommended that quarterly groundwater sampling for TPH-DRO, TPH-GRO, VOCs, PAHs, and lead be continued as previously scheduled until new data indicates a different schedule is required. 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.

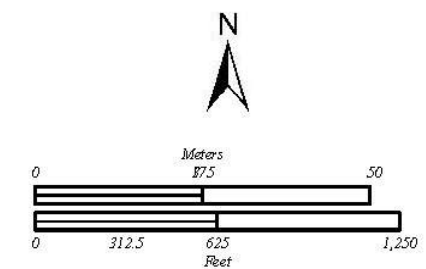
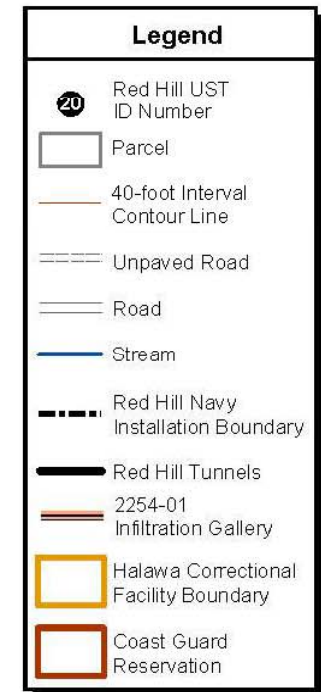
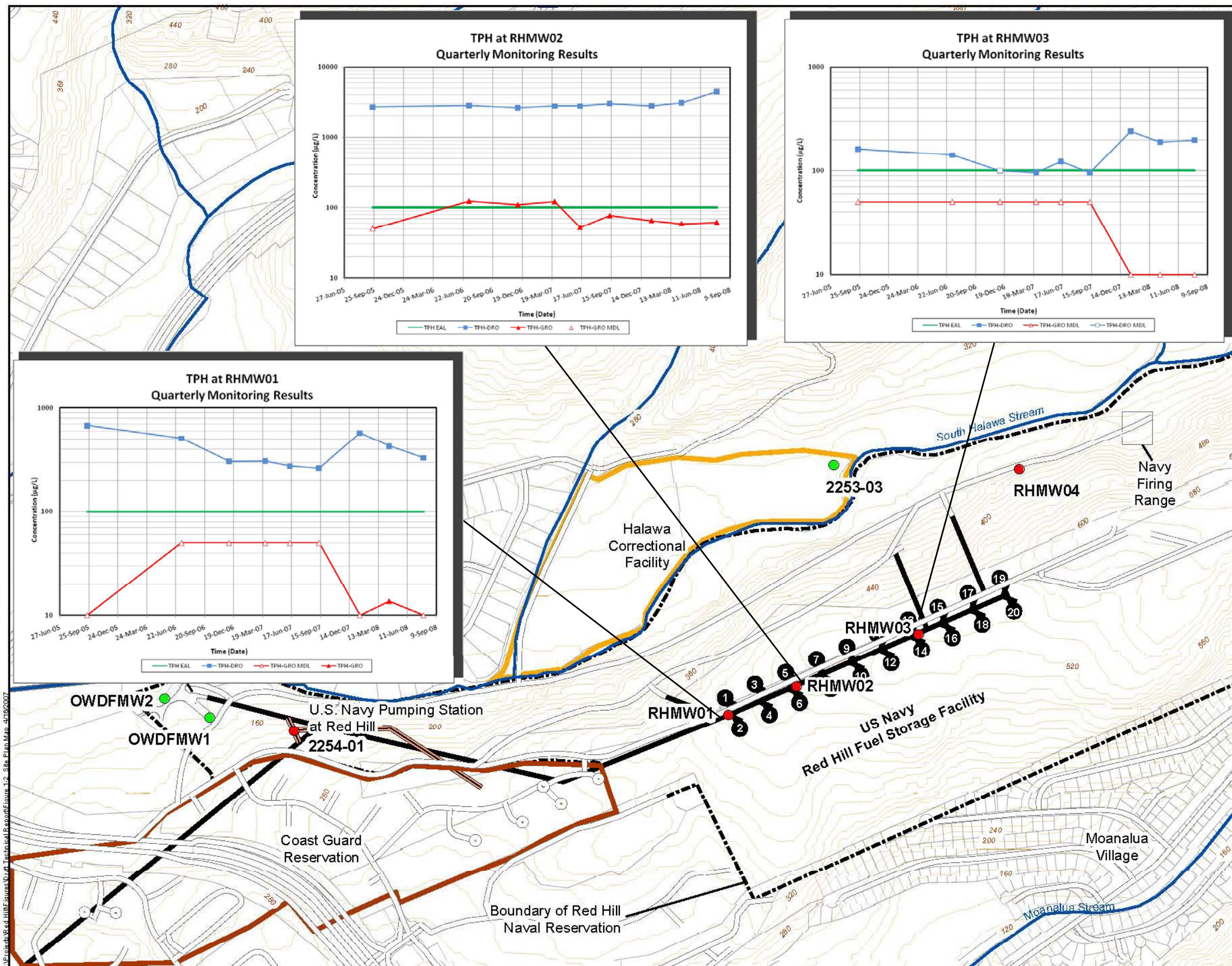
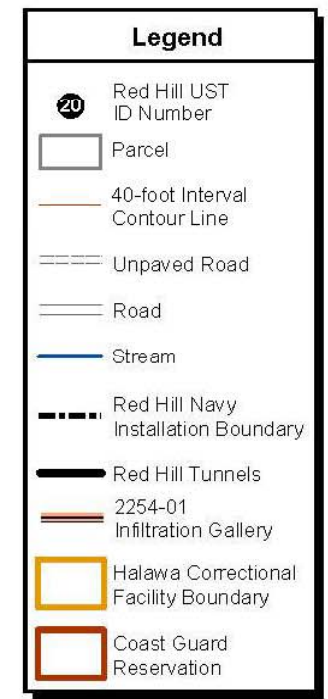
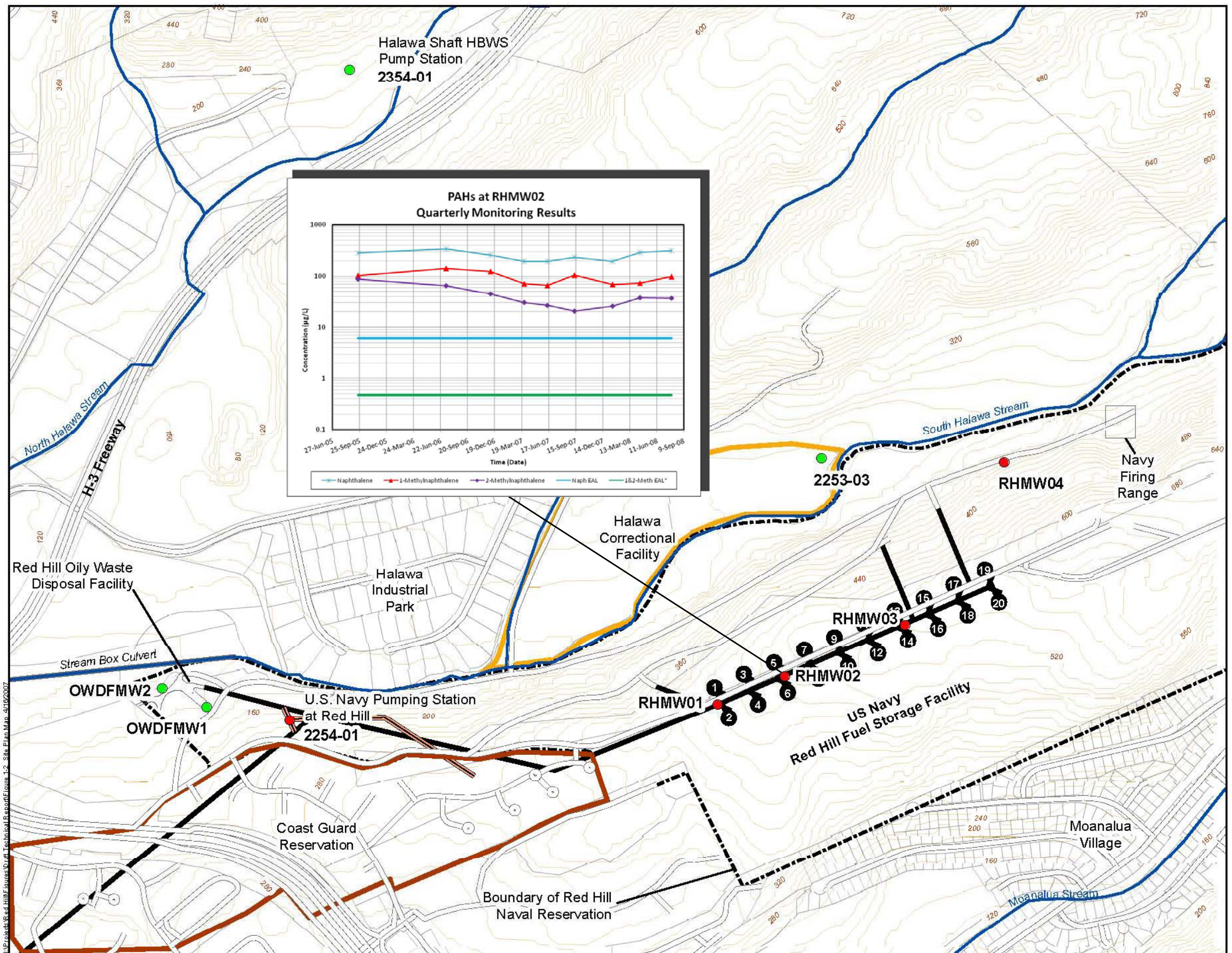


Figure 1
TPH Trends in Groundwater
Round 12 (July 29, 2008)
Red Hill Fuel Storage Facility
Oahu, Hawaii



* The HDOH EAL was updated in the Summer of 2008, based on the US EPA Evaluation of 1- and 2- methylnaphthalene as a carcinogen, Residential Tap Water Scenario, and 1 in a million cancer risk (HDOH, 2008).

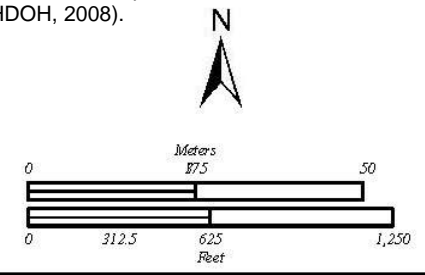


Figure 2
PAH Trends in Groundwater
Round 12 (July 29, 2008)
Red Hill Fuel Storage Facility
Oahu, Hawaii

5.0 References

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

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Appendix A
Laboratory Analytical Reports



**SGS Environmental Services
Alaska Division
Level II Laboratory Data Report**

Project: 9121-003 Red Hill BFSF
Client: The Environmental Company, Inc. (TEC)
SGS Work Order: 1083866

Released by:

Contents:

Cover Page
Case Narrative
Final Report Pages
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms

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



CASE NARRATIVE

Print Date: 9/9/2008

Client Name: The Environmental Company, Inc. (TEC)
Project Name: 9121-003 Red Hill BFSF
Workorder No.: 1083866

Sample Comments

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

<u>Lab Sample ID</u>	<u>Sample Type</u>	<u>Client Sample ID</u>
1083866002	PS	RHMWA01-WG-12
	AK102 - The pattern is consistent with a weathered gasoline.	
1083866003	PS	RHMW02-WG-12
	AK102 - The pattern is consistent with a weathered gasoline.	
1083866006	BMS	RHMW2254-WG-12 MS
	AK101 - BMS recovery for GRO does not meet QC goals. The associated LCS/LCSD meet all QC goals.	
1083866007	BMSD	RHMW2254-WG-12 MSD
	AK101 - BMS/BMSD recoveries do not meet RPD goals. The associated LCS/LCSD meet all QC goals.	
847977	CCV	CCV for HBN 204112 [VMS/9995]
	8260B - Initial calibration verification (ICV) recovery for several analytes did 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: **9121-003 Red Hill BFSF**

Workorder No.: **1083866**

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.

Barbara Hager
Barbara.Hager@sgs.com
Project Manager



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), UST-005 (CS) and AK00971 (Micro) for ADEC and 001992 for NELAP (RCRA methods: 1020A, 1311, 6010B, 7470A, 7471A, 9040B, 9045C, 9056, 9060, 9065, 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.

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
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: 9/9/2008

Client Name: The Environmental Company, Inc. (TEC)

Project Name: 9121-003 Red Hill BFSF

Workorder No.: 1083866

Analytical Methods

<u>Method Description</u>	<u>Analytical Method</u>
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

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
1083866001	RHMW03-WG-12
1083866002	RHMWA01-WG-12
1083866003	RHMW02-WG-12
1083866004	RHMW01-WG-12
1083866005	RHMW2254-WG-12
1083866006	RHMW2254-WG-12 MS
1083866007	RHMW2254-WG-12 MSD
1083866008	TB01



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW03-WG-12**
SGS Ref. #: 1083866001
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 11:30
Receipt Date/Time: 07/31/08 11:00

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Lead	ND	1.00	0.310	ug/L	5	MMS5551	MXX20608	

Batch Information

Analytical Batch: MMS5551
Analytical Method: SW6020
Analysis Date/Time: 08/05/08 19:24
Dilution Factor: 5

Prep Batch: MXX20608
Prep Method: SW3010A
Prep Date/Time: 08/04/08 16:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1083866001-G
Analyst: MH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW03-WG-12**
SGS Ref. #: 1083866001
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 11:30
Receipt Date/Time: 07/31/08 11:00

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	ND	100	10.0	ug/L	1	VFC9090	VXX18484	
4-Bromofluorobenzene <sur>	105	50-150		%	1	VFC9090	VXX18484	

Batch Information

Analytical Batch: VFC9090
Analytical Method: SW8015C
Analysis Date/Time: 08/05/08 11:15
Dilution Factor: 1

Prep Batch: VXX18484
Prep Method: SW5030B
Prep Date/Time: 08/05/08 10:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1083866001-A
Analyst: HM



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW03-WG-12**

SGS Ref. #: 1083866001

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 11:30

Receipt Date/Time: 07/31/08 11:00

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	0.199 J	0.412	0.0825	mg/L	1	XFC8106	XXX19765	
5a Androstane <sur>	98	50-150		%	1	XFC8106	XXX19765	

Batch Information

Analytical Batch: XFC8106

Analytical Method: SW8015C

Analysis Date/Time: 08/11/08 16:31

Dilution Factor: 1

Prep Batch: XXX19765

Prep Method: SW3520C

Prep Date/Time: 08/05/08 09:40

Initial Prep Wt./Vol.: 970 mL

Prep Extract Vol.: 1 mL

Container ID:1083866001-J

Analyst: HKG



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMW03-WG-12

SGS Ref. #: 1083866001

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 11:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Benzene	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
Toluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Styrene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Acetone	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS9995	VXX18532	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
Chloroform	ND	1.00	0.300	ug/L	1	VMS9995	VXX18532	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS9995	VXX18532	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMW03-WG-12

SGS Ref. #: 1083866001

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 11:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS9995	VXX18532	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromoform	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane-D4 <surr>	103	73-120		%	1	VMS9995	VXX18532	
Toluene-d8 <surr>	100	80-120		%	1	VMS9995	VXX18532	
4-Bromofluorobenzene <surr>	99.6	76-120		%	1	VMS9995	VXX18532	

Batch Information

Analytical Batch: VMS9995
Analytical Method: SW8260B
Analysis Date/Time: 08/09/08 13:16
Dilution Factor: 1

Prep Batch: VXX18532
Prep Method: SW5030B
Prep Date/Time: 08/09/08 05:28

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID: 1083866001-D
Analyst: DSH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW03-WG-12**
SGS Ref. #: 1083866001
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 11:30
Receipt Date/Time: 07/31/08 11:00

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Acenaphthylene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Acenaphthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Fluorene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Phenanthrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Anthracene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Fluoranthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Pyrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo(a)Anthracene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Chrysene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[b]Fluoranthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[k]fluoranthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[a]pyrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Indeno[1,2,3-c,d] pyrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Dibenzo[a,h]anthracene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[g,h,i]perylene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Naphthalene	0.0689 J	0.104	0.0323	ug/L	1	XMS4671	XXX19761	
1-Methylnaphthalene	0.0294 J	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
2-Methylnaphthalene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Terphenyl-d14 <surr>	89.9	50-135		%	1	XMS4671	XXX19761	

Batch Information

Analytical Batch: XMS4671
Analytical Method: 8270D SIMS
Analysis Date/Time: 08/26/08 14:25
Dilution Factor: 1

Prep Batch: XXX19761
Prep Method: SW3520C
Prep Date/Time: 08/05/08 09:15

Initial Prep Wt./Vol.: 960 mL
Prep Extract Vol.: 1 mL
Container ID:1083866001-H
Analyst: JDH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMWA01-WG-12**
SGS Ref. #: 1083866002
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:05
Receipt Date/Time: 07/31/08 11:00

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Lead	ND	1.00	0.310	ug/L	5	MMS5551	MXX20608	

Batch Information

Analytical Batch: MMS5551
Analytical Method: SW6020
Analysis Date/Time: 08/05/08 19:31
Dilution Factor: 5

Prep Batch: MXX20608
Prep Method: SW3010A
Prep Date/Time: 08/04/08 16:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1083866002-G
Analyst: MH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMWA01-WG-12**

SGS Ref. #: 1083866002

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:05

Receipt Date/Time: 07/31/08 11:00

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	61.2 J	100	10.0	ug/L	1	VFC9090	VXX18484	
4-Bromofluorobenzene <sur>	142	50-150		%	1	VFC9090	VXX18484	

Batch Information

Analytical Batch: VFC9090

Analytical Method: SW8015C

Analysis Date/Time: 08/05/08 11:33

Dilution Factor: 1

Prep Batch: VXX18484

Prep Method: SW5030B

Prep Date/Time: 08/05/08 10:00

Initial Prep Wt./Vol.: 5 mL

Prep Extract Vol.: 5 mL

Container ID:1083866002-A

Analyst: HM



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMWA01-WG-12**

SGS Ref. #: 1083866002

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:05

Receipt Date/Time: 07/31/08 11:00

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	3.64	0.400	0.0800	mg/L	1	XFC8106	XXX19765	
5a Androstane <sur>	83.3	50-150		%	1	XFC8106	XXX19765	

Batch Information

Analytical Batch: XFC8106

Analytical Method: SW8015C

Analysis Date/Time: 08/11/08 16:41

Dilution Factor: 1

Prep Batch: XXX19765

Prep Method: SW3520C

Prep Date/Time: 08/05/08 09:40

Initial Prep Wt./Vol.: 1000 mL

Prep Extract Vol.: 1 mL

Container ID:1083866002-J

Analyst: HKG



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMWA01-WG-12

SGS Ref. #: 1083866002

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:05

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Benzene	0.120 J	0.400	0.120	ug/L	1	VMS9995	VXX18532	
Toluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Ethylbenzene	0.560 J	1.00	0.310	ug/L	1	VMS9995	VXX18532	
n-Butylbenzene	9.10	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
n-Propylbenzene	12.1	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Styrene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Acetone	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS9995	VXX18532	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
Chloroform	ND	1.00	0.300	ug/L	1	VMS9995	VXX18532	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS9995	VXX18532	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMWA01-WG-12

SGS Ref. #: 1083866002

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:05

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
sec-Butylbenzene	8.34	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS9995	VXX18532	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Naphthalene	309	20.0	6.20	ug/L	10	VMS10000	VXX18539	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromoform	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
tert-Butylbenzene	1.33	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Isopropylbenzene (Cumene)	7.24	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane-D4 <surr>	103	73-120		%	1	VMS9995	VXX18532	
Toluene-d8 <surr>	99.4	80-120		%	1	VMS9995	VXX18532	
4-Bromofluorobenzene <surr>	92.1	76-120		%	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMWA01-WG-12**

SGS Ref. #: 1083866002

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:05

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Batch Information								
Analytical Batch: VMS10000			Prep Batch: VXX18539				Initial Prep Wt./Vol.: 5 mL	
Analytical Method: SW8260B			Prep Method: SW5030B				Prep Extract Vol.: 5 mL	
Analysis Date/Time: 08/11/08 19:33			Prep Date/Time: 08/11/08 15:11				Container ID:1083866002-E	
Dilution Factor: 10							Analyst: DSH	
Analytical Batch: VMS9995			Prep Batch: VXX18532				Initial Prep Wt./Vol.: 5 mL	
Analytical Method: SW8260B			Prep Method: SW5030B				Prep Extract Vol.: 5 mL	
Analysis Date/Time: 08/09/08 13:50			Prep Date/Time: 08/09/08 05:28				Container ID:1083866002-D	
Dilution Factor: 1							Analyst: DSH	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMWA01-WG-12

SGS Ref. #: 1083866002

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:05

Receipt Date/Time: 07/31/08 11:00

Polynuclear Aromatics GC/MS

Parameter	Result	PQL/CL	MDL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Acenaphthylene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Acenaphthene	0.450 J	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Fluorene	0.304 J	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Phenanthrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Anthracene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Fluoranthene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Pyrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo(a)Anthracene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Chrysene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[b]Fluoranthene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[k]fluoranthene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[a]pyrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Indeno[1,2,3-c,d] pyrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Dibenzo[a,h]anthracene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[g,h,i]perylene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Naphthalene	132	10.3	3.20	ug/L	100	XMS4683	XXX19761	
1-Methylnaphthalene	96.0	2.58	0.773	ug/L	50	XMS4682	XXX19761	
2-Methylnaphthalene	42.2	2.58	0.773	ug/L	50	XMS4682	XXX19761	
Terphenyl-d14 <sur>	78.7	50-135		%	10	XMS4677	XXX19761	

Batch Information

Analytical Batch: XMS4677 Prep Batch: XXX19761 Initial Prep Wt./Vol.: 970 mL
Analytical Method: 8270D SIMS Prep Method: SW3520C Prep Extract Vol.: 1 mL
Analysis Date/Time: 08/29/08 02:45 Prep Date/Time: 08/05/08 09:15 Container ID:1083866002-H
Dilution Factor: 10 Analyst: JDH

Analytical Batch: XMS4682 Prep Batch: XXX19761 Initial Prep Wt./Vol.: 970 mL
Analytical Method: 8270D SIMS Prep Method: SW3520C Prep Extract Vol.: 1 mL
Analysis Date/Time: 09/04/08 04:46 Prep Date/Time: 08/05/08 09:15 Container ID:1083866002-H
Dilution Factor: 50 Analyst: JDH

Analytical Batch: XMS4683 Prep Batch: XXX19761 Initial Prep Wt./Vol.: 970 mL
Analytical Method: 8270D SIMS Prep Method: SW3520C Prep Extract Vol.: 1 mL
Analysis Date/Time: 09/05/08 14:22 Prep Date/Time: 08/05/08 09:15 Container ID:1083866002-H
Dilution Factor: 100 Analyst: JDH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW02-WG-12**
SGS Ref. #: 1083866003
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:30
Receipt Date/Time: 07/31/08 11:00

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Lead	ND	1.00	0.310	ug/L	5	MMS5551	MXX20608	

Batch Information

Analytical Batch: MMS5551
Analytical Method: SW6020
Analysis Date/Time: 08/05/08 20:06
Dilution Factor: 5

Prep Batch: MXX20608
Prep Method: SW3010A
Prep Date/Time: 08/04/08 16:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1083866003-G
Analyst: MH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW02-WG-12**
SGS Ref. #: 1083866003
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:30
Receipt Date/Time: 07/31/08 11:00

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	61.7 J	100	10.0	ug/L	1	VFC9090	VXX18484	
4-Bromofluorobenzene <sur>	145	50-150		%	1	VFC9090	VXX18484	

Batch Information

Analytical Batch: VFC9090
Analytical Method: SW8015C
Analysis Date/Time: 08/05/08 11:51
Dilution Factor: 1

Prep Batch: VXX18484
Prep Method: SW5030B
Prep Date/Time: 08/05/08 10:00

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID:1083866003-A
Analyst: HM



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW02-WG-12**

SGS Ref. #: 1083866003

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:30

Receipt Date/Time: 07/31/08 11:00

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	4.47	0.417	0.0833	mg/L	1	XFC8106	XXX19765	
5a Androstane <sur>	94.2	50-150		%	1	XFC8106	XXX19765	

Batch Information

Analytical Batch: XFC8106

Analytical Method: SW8015C

Analysis Date/Time: 08/11/08 16:50

Dilution Factor: 1

Prep Batch: XXX19765

Prep Method: SW3520C

Prep Date/Time: 08/05/08 09:40

Initial Prep Wt./Vol.: 960 mL

Prep Extract Vol.: 1 mL

Container ID:1083866003-J

Analyst: HKG



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMW02-WG-12

SGS Ref. #: 1083866003

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Benzene	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
Toluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Ethylbenzene	0.580 J	1.00	0.310	ug/L	1	VMS9995	VXX18532	
n-Butylbenzene	9.52	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
n-Propylbenzene	12.3	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Styrene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Acetone	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS9995	VXX18532	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
Chloroform	ND	1.00	0.300	ug/L	1	VMS9995	VXX18532	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS9995	VXX18532	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMW02-WG-12

SGS Ref. #: 1083866003

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
sec-Butylbenzene	8.55	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS9995	VXX18532	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Naphthalene	320	20.0	6.20	ug/L	10	VMS10000	VXX18539	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromoform	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
tert-Butylbenzene	1.31	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Isopropylbenzene (Cumene)	7.22	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane-D4 <surr>	102	73-120		%	1	VMS9995	VXX18532	
Toluene-d8 <surr>	99	80-120		%	1	VMS9995	VXX18532	
4-Bromofluorobenzene <surr>	90.9	76-120		%	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW02-WG-12**

SGS Ref. #: 1083866003

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Batch Information								
Analytical Batch: VMS10000			Prep Batch: VXX18539				Initial Prep Wt./Vol.: 5 mL	
Analytical Method: SW8260B			Prep Method: SW5030B				Prep Extract Vol.: 5 mL	
Analysis Date/Time: 08/11/08 20:07			Prep Date/Time: 08/11/08 15:11				Container ID:1083866003-E	
Dilution Factor: 10							Analyst: DSH	
Analytical Batch: VMS9995			Prep Batch: VXX18532				Initial Prep Wt./Vol.: 5 mL	
Analytical Method: SW8260B			Prep Method: SW5030B				Prep Extract Vol.: 5 mL	
Analysis Date/Time: 08/09/08 14:24			Prep Date/Time: 08/09/08 05:28				Container ID:1083866003-D	
Dilution Factor: 1							Analyst: DSH	



Client Sample ID: **RHMW02-WG-12**
SGS Ref. #: 1083866003
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 12:30
Receipt Date/Time: 07/31/08 11:00

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Acenaphthylene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Acenaphthene	0.470 J	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Fluorene	0.324 J	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Phenanthrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Anthracene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Fluoranthene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Pyrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo(a)Anthracene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Chrysene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[b]Fluoranthene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[k]fluoranthene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[a]pyrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Indeno[1,2,3-c,d] pyrene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Dibenzo[a,h]anthracene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Benzo[g,h,i]perylene	ND	0.515	0.155	ug/L	10	XMS4677	XXX19761	
Naphthalene	140	10.3	3.20	ug/L	100	XMS4683	XXX19761	
1-Methylnaphthalene	102	2.58	0.773	ug/L	50	XMS4682	XXX19761	
2-Methylnaphthalene	31.5	2.58	0.773	ug/L	50	XMS4682	XXX19761	
Terphenyl-d14 <surr>	80.5	50-135		%	10	XMS4677	XXX19761	

Batch Information

Analytical Batch: XMS4677	Prep Batch: XXX19761	Initial Prep Wt./Vol.: 970 mL
Analytical Method: 8270D SIMS	Prep Method: SW3520C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 08/29/08 03:18	Prep Date/Time: 08/05/08 09:15	Container ID:1083866003-H
Dilution Factor: 10		Analyst: JDH

Analytical Batch: XMS4682	Prep Batch: XXX19761	Initial Prep Wt./Vol.: 970 mL
Analytical Method: 8270D SIMS	Prep Method: SW3520C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 09/04/08 05:18	Prep Date/Time: 08/05/08 09:15	Container ID:1083866003-H
Dilution Factor: 50		Analyst: JDH

Analytical Batch: XMS4683	Prep Batch: XXX19761	Initial Prep Wt./Vol.: 970 mL
Analytical Method: 8270D SIMS	Prep Method: SW3520C	Prep Extract Vol.: 1 mL
Analysis Date/Time: 09/05/08 14:55	Prep Date/Time: 08/05/08 09:15	Container ID:1083866003-H
Dilution Factor: 100		Analyst: JDH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW01-WG-12**
SGS Ref. #: 1083866004
Project ID: 9121-003 Red Hill BFSF
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 14:30
Receipt Date/Time: 07/31/08 11:00

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Lead	ND	1.00	0.310	ug/L	5	MMS5551	MXX20608	

Batch Information

Analytical Batch: MMS5551
Analytical Method: SW6020
Analysis Date/Time: 08/05/08 20:13
Dilution Factor: 5

Prep Batch: MXX20608
Prep Method: SW3010A
Prep Date/Time: 08/04/08 16:00

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1083866004-G
Analyst: MH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW01-WG-12**

SGS Ref. #: 1083866004

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 14:30

Receipt Date/Time: 07/31/08 11:00

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	ND	100	10.0	ug/L	1	VFC9090	VXX18484	
4-Bromofluorobenzene <sur>	109	50-150		%	1	VFC9090	VXX18484	

Batch Information

Analytical Batch: VFC9090

Analytical Method: SW8015C

Analysis Date/Time: 08/05/08 12:10

Dilution Factor: 1

Prep Batch: VXX18484

Prep Method: SW5030B

Prep Date/Time: 08/05/08 10:00

Initial Prep Wt./Vol.: 5 mL

Prep Extract Vol.: 5 mL

Container ID:1083866004-A

Analyst: HM



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW01-WG-12**

SGS Ref. #: 1083866004

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 14:30

Receipt Date/Time: 07/31/08 11:00

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	0.327 J	0.400	0.0800	mg/L	1	XFC8106	XXX19765	
5a Androstane <sur>	94.7	50-150		%	1	XFC8106	XXX19765	

Batch Information

Analytical Batch: XFC8106

Analytical Method: SW8015C

Analysis Date/Time: 08/11/08 16:59

Dilution Factor: 1

Prep Batch: XXX19765

Prep Method: SW3520C

Prep Date/Time: 08/05/08 09:40

Initial Prep Wt./Vol.: 1000 mL

Prep Extract Vol.: 1 mL

Container ID:1083866004-J

Analyst: HKG



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW01-WG-12**

SGS Ref. #: 1083866004

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 14:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Benzene	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
Toluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Isopropyltoluene	0.400 J	1.00	0.310	ug/L	1	VMS9995	VXX18532	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Styrene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Acetone	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS9995	VXX18532	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
Chloroform	ND	1.00	0.300	ug/L	1	VMS9995	VXX18532	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromomethane	ND	3.00	0.940	ug/L	1	VMS9995	VXX18532	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW01-WG-12**

SGS Ref. #: 1083866004

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 14:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Chloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS9995	VXX18532	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS10000	VXX18539	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromoform	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane-D4 <sur>	103	73-120		%	1	VMS9995	VXX18532	
Toluene-d8 <sur>	100	80-120		%	1	VMS9995	VXX18532	
4-Bromofluorobenzene <sur>	95.8	76-120		%	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW01-WG-12**

SGS Ref. #: 1083866004

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 14:30

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Batch Information								
Analytical Batch: VMS10000			Prep Batch: VXX18539				Initial Prep Wt./Vol.: 5 mL	
Analytical Method: SW8260B			Prep Method: SW5030B				Prep Extract Vol.: 5 mL	
Analysis Date/Time: 08/11/08 19:00			Prep Date/Time: 08/11/08 15:11				Container ID:1083866004-E	
Dilution Factor: 1							Analyst: DSH	
Analytical Batch: VMS9995			Prep Batch: VXX18532				Initial Prep Wt./Vol.: 5 mL	
Analytical Method: SW8260B			Prep Method: SW5030B				Prep Extract Vol.: 5 mL	
Analysis Date/Time: 08/09/08 14:58			Prep Date/Time: 08/09/08 05:28				Container ID:1083866004-D	
Dilution Factor: 1							Analyst: DSH	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW01-WG-12**

SGS Ref. #: 1083866004

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 14:30

Receipt Date/Time: 07/31/08 11:00

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Acenaphthylene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Acenaphthene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Fluorene	0.0206 J	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Phenanthrene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Anthracene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Fluoranthene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Pyrene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Benzo(a)Anthracene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Chrysene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Benzo[b]Fluoranthene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Benzo[k]fluoranthene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Benzo[a]pyrene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Indeno[1,2,3-c,d] pyrene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Dibenzo[a,h]anthracene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Benzo[g,h,i]perylene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Naphthalene	0.114	0.100	0.0310	ug/L	1	XMS4671	XXX19761	
1-Methylnaphthalene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
2-Methylnaphthalene	ND	0.0500	0.0150	ug/L	1	XMS4671	XXX19761	
Terphenyl-d14 <surr>	84.9	50-135		%	1	XMS4671	XXX19761	

Batch Information

Analytical Batch: XMS4671

Analytical Method: 8270D SIMS

Analysis Date/Time: 08/26/08 16:06

Dilution Factor: 1

Prep Batch: XXX19761

Prep Method: SW3520C

Prep Date/Time: 08/05/08 09:15

Initial Prep Wt./Vol.: 1000 mL

Prep Extract Vol.: 1 mL

Container ID:1083866004-H

Analyst: JDH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW2254-WG-12**

SGS Ref. #: 1083866005

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 09:45

Receipt Date/Time: 07/31/08 11:00

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Lead	ND	1.00	0.310	ug/L	5	MMS5551	MXX20608	

Batch Information

Analytical Batch: MMS5551

Analytical Method: SW6020

Analysis Date/Time: 08/05/08 17:30

Dilution Factor: 5

Prep Batch: MXX20608

Prep Method: SW3010A

Prep Date/Time: 08/04/08 16:00

Initial Prep Wt./Vol.: 50 mL

Prep Extract Vol.: 50 mL

Container ID:1083866005-G

Analyst: MH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW2254-WG-12**

SGS Ref. #: 1083866005

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 09:45

Receipt Date/Time: 07/31/08 11:00

Volatile Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Gasoline Range Organics	ND	100	10.0	ug/L	1	VFC9090	VXX18484	
4-Bromofluorobenzene <sur>	109	50-150		%	1	VFC9090	VXX18484	

Batch Information

Analytical Batch: VFC9090

Analytical Method: SW8015C

Analysis Date/Time: 08/05/08 12:28

Dilution Factor: 1

Prep Batch: VXX18484

Prep Method: SW5030B

Prep Date/Time: 08/05/08 10:00

Initial Prep Wt./Vol.: 5 mL

Prep Extract Vol.: 5 mL

Container ID:1083866005-A

Analyst: HM



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **RHMW2254-WG-12**

SGS Ref. #: 1083866005

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 09:45

Receipt Date/Time: 07/31/08 11:00

Semivolatile Organic Fuels Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	ND	0.417	0.0833	mg/L	1	XFC8106	XXX19765	
5a Androstane <sur>	94.1	50-150		%	1	XFC8106	XXX19765	

Batch Information

Analytical Batch: XFC8106

Analytical Method: SW8015C

Analysis Date/Time: 08/11/08 17:09

Dilution Factor: 1

Prep Batch: XXX19765

Prep Method: SW3520C

Prep Date/Time: 08/05/08 09:40

Initial Prep Wt./Vol.: 960 mL

Prep Extract Vol.: 1 mL

Container ID:1083866005-J

Analyst: HKG



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMW2254-WG-12

SGS Ref. #: 1083866005

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 09:45

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Benzene	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
Toluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Styrene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Acetone	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS9995	VXX18532	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
Chloroform	ND	1.00	0.300	ug/L	1	VMS9995	VXX18532	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromomethane	1.26 J	3.00	0.940	ug/L	1	VMS9995	VXX18532	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMW2254-WG-12

SGS Ref. #: 1083866005

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 09:45

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS9995	VXX18532	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromoform	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane-D4 <sur>	102	73-120		%	1	VMS9995	VXX18532	
Toluene-d8 <sur>	99.2	80-120		%	1	VMS9995	VXX18532	
4-Bromofluorobenzene <sur>	100	76-120		%	1	VMS9995	VXX18532	

Batch Information

Analytical Batch: VMS9995
Analytical Method: SW8260B
Analysis Date/Time: 08/09/08 12:42
Dilution Factor: 1

Prep Batch: VXX18532
Prep Method: SW5030B
Prep Date/Time: 08/09/08 05:28

Initial Prep Wt./Vol.: 5 mL
Prep Extract Vol.: 5 mL
Container ID: 1083866005-D
Analyst: DSH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: RHMW2254-WG-12

SGS Ref. #: 1083866005

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 09:45

Receipt Date/Time: 07/31/08 11:00

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Acenaphthylene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Acenaphthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Fluorene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Phenanthrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Anthracene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Fluoranthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Pyrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo(a)Anthracene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Chrysene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[b]Fluoranthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[k]fluoranthene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[a]pyrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Indeno[1,2,3-c,d] pyrene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Dibenzo[a,h]anthracene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Benzo[g,h,i]perylene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Naphthalene	ND	0.104	0.0323	ug/L	1	XMS4671	XXX19761	
1-Methylnaphthalene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
2-Methylnaphthalene	ND	0.0521	0.0156	ug/L	1	XMS4671	XXX19761	
Terphenyl-d14 <sur>	97	50-135		%	1	XMS4671	XXX19761	

Batch Information

Analytical Batch: XMS4671

Analytical Method: 8270D SIMS

Analysis Date/Time: 08/26/08 16:39

Dilution Factor: 1

Prep Batch: XXX19761

Prep Method: SW3520C

Prep Date/Time: 08/05/08 09:15

Initial Prep Wt./Vol.: 960 mL

Prep Extract Vol.: 1 mL

Container ID:1083866005-H

Analyst: JDH



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **TB01**

SGS Ref. #: 1083866008

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 08:05

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical</u> <u>Batch</u>	<u>Prep</u> <u>Batch</u>	<u>Qualifiers</u>
Benzene	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
Toluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Ethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
n-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chlorobenzene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
4-Isopropyltoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
n-Propylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Styrene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromomethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Acetone	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	1	VMS9995	VXX18532	
Tetrachloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dibromochloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,3-Dichloropropane	ND	0.400	0.120	ug/L	1	VMS9995	VXX18532	
1,2-Dibromoethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Carbon tetrachloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
Chloroform	ND	1.00	0.300	ug/L	1	VMS9995	VXX18532	
Bromobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Chloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromomethane	1.36 J	3.00	0.940	ug/L	1	VMS9995	VXX18532	
Bromochloromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Vinyl chloride	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	



The Environmental Company, Inc. (TEC)

Print Date: 9/9/2008

Client Sample ID: **TB01**

SGS Ref. #: 1083866008

Project ID: 9121-003 Red Hill BFSF

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 07/29/08 08:05

Receipt Date/Time: 07/31/08 11:00

Volatile Gas Chromatography/Mass Spectroscopy

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
sec-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromodichloromethane	ND	0.500	0.150	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Butanone (MEK)	ND	10.0	3.10	ug/L	1	VMS9995	VXX18532	
Methylene chloride	ND	5.00	1.00	ug/L	1	VMS9995	VXX18532	
Trichlorofluoromethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
P & M -Xylene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
Naphthalene	ND	2.00	0.620	ug/L	1	VMS9995	VXX18532	
o-Xylene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Bromoform	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1-Chlorohexane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
tert-Butylbenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2-Chlorotoluene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Trichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
2,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Hexachlorobutadiene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloropropane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1-Dichloropropene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	1	VMS9995	VXX18532	
1,2-Dichloroethane-D4 <surr>	102	73-120		%	1	VMS9995	VXX18532	
Toluene-d8 <surr>	100	80-120		%	1	VMS9995	VXX18532	
4-Bromofluorobenzene <surr>	99.5	76-120		%	1	VMS9995	VXX18532	

Batch Information

Analytical Batch: VMS9995

Analytical Method: SW8260B

Analysis Date/Time: 08/09/08 12:08

Dilution Factor: 1

Prep Batch: VXX18532

Prep Method: SW5030B

Prep Date/Time: 08/09/08 05:28

Initial Prep Wt./Vol.: 5 mL

Prep Extract Vol.: 5 mL

Container ID:1083866008-A

Analyst: DSH



SGS Ref.# 846324 Method Blank
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch MXX20608
Method SW3010A
Date 08/04/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Metals by ICP/MS

Lead	ND	1.00	0.310	ug/L	08/05/08
Batch	MMS5551				
Method	SW6020				
Instrument	Perkin Elmer Sciex ICP-MS P3				



SGS Ref.# 846350 Method Blank
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch XXX19761
Method SW3520C
Date 08/05/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<u>Polynuclear Aromatics GC/MS</u>					
Acenaphthylene	ND	0.0500	0.0150	ug/L	08/27/08
Acenaphthene	ND	0.0500	0.0150	ug/L	08/27/08
Fluorene	ND	0.0500	0.0150	ug/L	08/27/08
Phenanthrene	ND	0.0500	0.0150	ug/L	08/27/08
Anthracene	ND	0.0500	0.0150	ug/L	08/27/08
Fluoranthene	ND	0.0500	0.0150	ug/L	08/27/08
Pyrene	ND	0.0500	0.0150	ug/L	08/27/08
Benzo(a)Anthracene	ND	0.0500	0.0150	ug/L	08/27/08
Chrysene	ND	0.0500	0.0150	ug/L	08/27/08
Benzo[b]Fluoranthene	ND	0.0500	0.0150	ug/L	08/27/08
Benzo[k]fluoranthene	ND	0.0500	0.0150	ug/L	08/27/08
Benzo[a]pyrene	ND	0.0500	0.0150	ug/L	08/27/08
Indeno[1,2,3-c,d] pyrene	ND	0.0500	0.0150	ug/L	08/27/08
Dibenzo[a,h]anthracene	ND	0.0500	0.0150	ug/L	08/27/08
Benzo[g,h,i]perylene	ND	0.0500	0.0150	ug/L	08/27/08
Naphthalene	ND	0.100	0.0310	ug/L	08/27/08
1-Methylnaphthalene	ND	0.0500	0.0150	ug/L	08/27/08
2-Methylnaphthalene	ND	0.0500	0.0150	ug/L	08/27/08
Surrogates					
Terphenyl-d14 <surr>	122	50-135		%	08/27/08
Batch	XMS4673				
Method	8270D SIMS				
Instrument	HP 5890 Series II MS2 SVOA				



SGS Ref.# 846380 Method Blank
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch XXX19765
Method SW3520C
Date 08/05/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Semivolatile Organic Fuels Department

Diesel Range Organics	ND	0.400	0.0800	mg/L	08/11/08
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Surrogates

5a Androstane <surr>	100	60-120		%	08/11/08
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Batch XFC8106

Method SW8015C

Instrument HP 5890 Series II FID SV D R



SGS Ref.# 846453 Method Blank
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18484
Method SW5030B
Date 08/05/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Volatile Fuels Department

Gasoline Range Organics	ND	100	10.0	ug/L	08/05/08
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Surrogates

4-Bromofluorobenzene <surr>	99.4	50-150		%	08/05/08
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Batch VFC9090

Method SW8015C

Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 847971 Method Blank
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method SW5030B
Date 08/09/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005, 1083866008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 847971 Method Blank
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method SW5030B
Date 08/09/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>					
Benzene	ND	0.400	0.120	ug/L	08/09/08
Toluene	ND	1.00	0.310	ug/L	08/09/08
Ethylbenzene	ND	1.00	0.310	ug/L	08/09/08
n-Butylbenzene	ND	1.00	0.310	ug/L	08/09/08
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	08/09/08
1,2-Dichloroethane	ND	0.500	0.150	ug/L	08/09/08
1,3,5-Trimethylbenzene	ND	1.00	0.310	ug/L	08/09/08
4-Chlorotoluene	ND	1.00	0.310	ug/L	08/09/08
Chlorobenzene	ND	0.500	0.150	ug/L	08/09/08
4-Methyl-2-pentanone (MIBK)	ND	10.0	3.10	ug/L	08/09/08
cis-1,2-Dichloroethene	ND	1.00	0.310	ug/L	08/09/08
4-Isopropyltoluene	ND	1.00	0.310	ug/L	08/09/08
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	08/09/08
n-Propylbenzene	ND	1.00	0.310	ug/L	08/09/08
Styrene	ND	1.00	0.310	ug/L	08/09/08
Dibromomethane	ND	1.00	0.310	ug/L	08/09/08
trans-1,3-Dichloropropene	ND	1.00	0.310	ug/L	08/09/08
1,2,4-Trichlorobenzene	ND	1.00	0.310	ug/L	08/09/08
Acetone	ND	10.0	3.10	ug/L	08/09/08
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	08/09/08
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	08/09/08
Methyl-t-butyl ether	ND	5.00	1.50	ug/L	08/09/08
Tetrachloroethene	ND	1.00	0.310	ug/L	08/09/08
Dibromochloromethane	ND	0.500	0.150	ug/L	08/09/08
1,3-Dichloropropane	ND	0.400	0.120	ug/L	08/09/08
1,2-Dibromoethane	ND	1.00	0.310	ug/L	08/09/08
Carbon tetrachloride	ND	1.00	0.310	ug/L	08/09/08
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	08/09/08
Chloroform	ND	1.00	0.300	ug/L	08/09/08
Bromobenzene	ND	1.00	0.310	ug/L	08/09/08
Chloromethane	ND	1.00	0.310	ug/L	08/09/08
1,2,3-Trichloropropane	ND	1.00	0.310	ug/L	08/09/08
Bromomethane	ND	3.00	0.940	ug/L	08/09/08
Bromochloromethane	ND	1.00	0.310	ug/L	08/09/08
Vinyl chloride	ND	1.00	0.310	ug/L	08/09/08
Dichlorodifluoromethane	ND	1.00	0.310	ug/L	08/09/08
Chloroethane	ND	1.00	0.310	ug/L	08/09/08
sec-Butylbenzene	ND	1.00	0.310	ug/L	08/09/08
Bromodichloromethane	ND	0.500	0.150	ug/L	08/09/08



SGS Ref.#	847971	Method Blank	Printed Date/Time	09/09/2008 8:32
Client Name	The Environmental Company, Inc. (TEC)		Prep	VXX18532
Project Name/#	9121-003 Red Hill BFSF		Batch	SW5030B
Matrix	Water (Surface, Eff., Ground)		Method	SW5030B
			Date	08/09/2008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,1-Dichloroethene	ND	1.00	0.310	ug/L	08/09/08
2-Butanone (MEK)	ND	10.0	3.10	ug/L	08/09/08
Methylene chloride	ND	5.00	1.00	ug/L	08/09/08
Trichlorofluoromethane	ND	1.00	0.310	ug/L	08/09/08
P & M -Xylene	ND	2.00	0.620	ug/L	08/09/08
Naphthalene	ND	2.00	0.620	ug/L	08/09/08
o-Xylene	ND	1.00	0.310	ug/L	08/09/08
Bromoform	ND	1.00	0.310	ug/L	08/09/08
1-Chlorohexane	ND	1.00	0.310	ug/L	08/09/08
1,2,4-Trimethylbenzene	ND	1.00	0.310	ug/L	08/09/08
tert-Butylbenzene	ND	1.00	0.310	ug/L	08/09/08
1,1,1-Trichloroethane	ND	1.00	0.310	ug/L	08/09/08
1,1-Dichloroethane	ND	1.00	0.310	ug/L	08/09/08
2-Chlorotoluene	ND	1.00	0.310	ug/L	08/09/08
Trichloroethene	ND	1.00	0.310	ug/L	08/09/08
trans-1,2-Dichloroethene	ND	1.00	0.310	ug/L	08/09/08
1,2-Dichlorobenzene	ND	1.00	0.310	ug/L	08/09/08
2,2-Dichloropropane	ND	1.00	0.310	ug/L	08/09/08
Hexachlorobutadiene	ND	1.00	0.310	ug/L	08/09/08
Isopropylbenzene (Cumene)	ND	1.00	0.310	ug/L	08/09/08
1,2-Dichloropropane	ND	1.00	0.310	ug/L	08/09/08
1,1-Dichloropropene	ND	1.00	0.310	ug/L	08/09/08
1,1,2-Trichloroethane	ND	1.00	0.310	ug/L	08/09/08
1,3-Dichlorobenzene	ND	1.00	0.310	ug/L	08/09/08
1,2,3-Trichlorobenzene	ND	1.00	0.310	ug/L	08/09/08

Surrogates

1,2-Dichloroethane-D4 <surr>	102	73-120		%	08/09/08
Toluene-d8 <surr>	101	80-120		%	08/09/08
4-Bromofluorobenzene <surr>	97.4	76-120		%	08/09/08

Batch	VMS9995
Method	SW8260B
Instrument	HP 5890 Series II MS3 VNA



SGS Ref.# 848185 Method Blank
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18539
Method SW5030B
Date 08/11/2008

QC results affect the following production samples:
1083866002, 1083866003, 1083866004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

Naphthalene	ND	2.00	0.620	ug/L	08/11/08
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Surrogates

1,2-Dichloroethane-D4 <surr>	108	73-120		%	08/11/08
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Toluene-d8 <surr>	102	80-120		%	08/11/08
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Batch VMS10000
Method SW8260B
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 846325 Lab Control Sample

Printed Date/Time 09/09/2008 8:32

Client Name The Environmental Company, Inc. (TEC)

Prep Batch MXX20608

Project Name/# 9121-003 Red Hill BFSF

Method SW3010A

Matrix Water (Surface, Eff., Ground)

Date 08/04/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Metals by ICP/MS

Lead	LCS	1080	108	(80-120)		1000 ug/L	08/05/2008
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Batch MMS5551

Method SW6020

Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 846351 Lab Control Sample

Printed Date/Time 09/09/2008 8:32
Prep Batch XXX19761
Method SW3520C
Date 08/05/2008

Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Polynuclear Aromatics GC/MS



SGS Ref.# 846351 Lab Control Sample

Printed Date/Time 09/09/2008 8:32
 Prep Batch XXX19761
 Method SW3520C
 Date 08/05/2008

Client Name The Environmental Company, Inc. (TEC)
 Project Name/# 9121-003 Red Hill BFSF
 Matrix Water (Surface, Eff., Ground)

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polynuclear Aromatics GC/MS							
Acenaphthylene	LCS 0.315	63	(50-105)			0.5 ug/L	08/26/2008
Acenaphthene	LCS 0.317	63	(45-110)			0.5 ug/L	08/26/2008
Fluorene	LCS 0.324	65	(50-110)			0.5 ug/L	08/26/2008
Phenanthrene	LCS 0.334	67	(50-115)			0.5 ug/L	08/26/2008
Anthracene	LCS 0.327	66	(55-110)			0.5 ug/L	08/26/2008
Fluoranthene	LCS 0.378	76	(55-125)			0.5 ug/L	08/26/2008
Pyrene	LCS 0.365	73	(50-130)			0.5 ug/L	08/26/2008
Benzo(a)Anthracene	LCS 0.399	80	(55-120)			0.5 ug/L	08/26/2008
Chrysene	LCS 0.368	74	(55-120)			0.5 ug/L	08/26/2008
Benzo[b]Fluoranthene	LCS 0.380	76	(46-130)			0.5 ug/L	08/26/2008
Benzo[k]fluoranthene	LCS 0.381	76	(60-125)			0.5 ug/L	08/26/2008
Benzo[a]pyrene	LCS 0.423	85	(55-120)			0.5 ug/L	08/26/2008
Indeno[1,2,3-c,d] pyrene	LCS 0.393	79	(45-125)			0.5 ug/L	08/26/2008
Dibenzo[a,h]anthracene	LCS 0.405	81	(41-140)			0.5 ug/L	08/26/2008
Benzo[g,h,i]perylene	LCS 0.391	78	(46-125)			0.5 ug/L	08/26/2008
Naphthalene	LCS 0.344	69	(42-100)			0.5 ug/L	08/26/2008
1-Methylnaphthalene	LCS 0.328	66	(46-115)			0.5 ug/L	08/26/2008
2-Methylnaphthalene	LCS 0.311	62	(45-105)			0.5 ug/L	08/26/2008
Surrogates							
Terphenyl-d14 <surr>	LCS	120	(50-135)				08/26/2008



SGS Ref.# 846351 Lab Control Sample

Printed Date/Time 09/09/2008 8:32

Client Name The Environmental Company, Inc. (TEC)

Prep Batch XXX19761

Project Name/# 9121-003 Red Hill BFSF

Method SW3520C

Matrix Water (Surface, Eff., Ground)

Date 08/05/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Polynuclear Aromatics GC/MS

Batch XMS4671
Method 8270D SIMS
Instrument HP 5890 Series II MS2 SVOA



SGS Ref.# 846381 Lab Control Sample
846382 Lab Control Sample Duplicate
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch XXX19765
Method SW3520C
Date 08/05/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department							
Diesel Range Organics	LCS	4.61	(75-125)	8	(< 20)	5 mg/L	08/11/2008
	LCSD	4.97				99	5 mg/L
Surrogates							
5a Androstane <surr>	LCS	106	(60-120)	9		08/11/2008	
	LCSD	117			08/11/2008		

Batch XFC8106
Method SW8015C
Instrument HP 5890 Series II FID SV D R



SGS Ref.# 846454 Lab Control Sample
846455 Lab Control Sample Duplicate
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18484
Method SW5030B
Date 08/05/2008

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

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

Gasoline Range Organics	LCS 191	95	(79-108)			200 ug/L	08/05/2008
	LCSD 192	96		1	(< 20)	200 ug/L	08/05/2008

Surrogates

4-Bromofluorobenzene <surr>	LCS	109	(50-150)				08/05/2008
	LCSD	110		1			08/05/2008

Batch VFC9090
Method SW8015C
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 847972 Lab Control Sample

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method SW5030B
Date 08/09/2008

Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005, 1083866008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 847972 Lab Control Sample

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532

Client Name The Environmental Company, Inc. (TEC)

Project Name/# 9121-003 Red Hill BFSF

Method SW5030B

Date 08/09/2008

Matrix Water (Surface, Eff., Ground)

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>							
Benzene	LCS 28.4	95	(80-120)			30 ug/L	08/09/2008
Toluene	LCS 29.2	97	(77-120)			30 ug/L	08/09/2008
Ethylbenzene	LCS 30.8	103	(80-120)			30 ug/L	08/09/2008
n-Butylbenzene	LCS 27.6	92	(80-124)			30 ug/L	08/09/2008
1,4-Dichlorobenzene	LCS 30.8	103	(80-120)			30 ug/L	08/09/2008
1,2-Dichloroethane	LCS 31.9	106	(80-129)			30 ug/L	08/09/2008
1,3,5-Trimethylbenzene	LCS 29.1	97	(80-128)			30 ug/L	08/09/2008
4-Chlorotoluene	LCS 28.3	94	(79-128)			30 ug/L	08/09/2008
Chlorobenzene	LCS 31.7	106	(80-120)			30 ug/L	08/09/2008
4-Methyl-2-pentanone (MIBK)	LCS 91.0	101	(69-134)			90 ug/L	08/09/2008
cis-1,2-Dichloroethene	LCS 30.2	101	(80-125)			30 ug/L	08/09/2008
4-Isopropyltoluene	LCS 29.1	97	(80-125)			30 ug/L	08/09/2008
cis-1,3-Dichloropropene	LCS 25.6	85	(80-120)			30 ug/L	08/09/2008
n-Propylbenzene	LCS 29.9	100	(80-129)			30 ug/L	08/09/2008
Styrene	LCS 31.8	106	(80-120)			30 ug/L	08/09/2008
Dibromomethane	LCS 31.6	105	(80-120)			30 ug/L	08/09/2008
trans-1,3-Dichloropropene	LCS 27.4	91	(80-124)			30 ug/L	08/09/2008
1,2,4-Trichlorobenzene	LCS 30.6	102	(80-120)			30 ug/L	08/09/2008
Acetone	LCS 81.6	91	(50-135)			90 ug/L	08/09/2008
1,1,2,2-Tetrachloroethane	LCS 29.8	99	(76-123)			30 ug/L	08/09/2008
1,2-Dibromo-3-chloropropane	LCS 26.9	90	(73-130)			30 ug/L	08/09/2008



SGS Ref.# 847972 Lab Control Sample

Printed Date/Time 09/09/2008 8:32
 Prep Batch VXX18532

Client Name The Environmental Company, Inc. (TEC)
 Project Name/# 9121-003 Red Hill BFSF
 Matrix Water (Surface, Eff., Ground)

Method SW5030B
 Date 08/09/2008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>							
Methyl-t-butyl ether	LCS 40.9	91	(80-120)			45 ug/L	08/09/2008
Tetrachloroethene	LCS 30.6	102	(79-122)			30 ug/L	08/09/2008
Dibromochloromethane	LCS 30.5	102	(80-120)			30 ug/L	08/09/2008
1,3-Dichloropropane	LCS 29.2	97	(80-121)			30 ug/L	08/09/2008
1,2-Dibromoethane	LCS 31.7	106	(80-120)			30 ug/L	08/09/2008
Carbon tetrachloride	LCS 29.0	97	(80-126)			30 ug/L	08/09/2008
1,1,1,2-Tetrachloroethane	LCS 30.4	101	(80-120)			30 ug/L	08/09/2008
Chloroform	LCS 30.7	102	(80-124)			30 ug/L	08/09/2008
Bromobenzene	LCS 30.4	101	(80-120)			30 ug/L	08/09/2008
Chloromethane	LCS 26.4	88	(67-125)			30 ug/L	08/09/2008
1,2,3-Trichloropropane	LCS 29.4	98	(80-120)			30 ug/L	08/09/2008
Bromomethane	LCS 26.2	87	(30-140)			30 ug/L	08/09/2008
Bromochloromethane	LCS 31.9	106	(77-129)			30 ug/L	08/09/2008
Vinyl chloride	LCS 26.5	88	(72-145)			30 ug/L	08/09/2008
Dichlorodifluoromethane	LCS 24.8	83	(62-153)			30 ug/L	08/09/2008
Chloroethane	LCS 26.0	87	(67-133)			30 ug/L	08/09/2008
sec-Butylbenzene	LCS 29.3	98	(80-120)			30 ug/L	08/09/2008
Bromodichloromethane	LCS 28.9	96	(80-120)			30 ug/L	08/09/2008
1,1-Dichloroethene	LCS 29.9	100	(76-130)			30 ug/L	08/09/2008
2-Butanone (MEK)	LCS 87.7	97	(66-136)			90 ug/L	08/09/2008



SGS Ref.# 847972 Lab Control Sample

Printed Date/Time 09/09/2008 8:32
 Prep Batch VXX18532
 Method SW5030B
 Date 08/09/2008

Client Name The Environmental Company, Inc. (TEC)
 Project Name/# 9121-003 Red Hill BFSF
 Matrix Water (Surface, Eff., Ground)

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>							
Methylene chloride	LCS 28.7	96	(63-131)			30 ug/L	08/09/2008
Trichlorofluoromethane	LCS 31.6	105	(68-145)			30 ug/L	08/09/2008
P & M -Xylene	LCS 61.9	103	(80-120)			60 ug/L	08/09/2008
Naphthalene	LCS 30.2	101	(75-120)			30 ug/L	08/09/2008
o-Xylene	LCS 31.4	105	(80-120)			30 ug/L	08/09/2008
Bromoform	LCS 31.8	106	(80-120)			30 ug/L	08/09/2008
1-Chlorohexane	LCS 40.8	91	(70-125)			45 ug/L	08/09/2008
1,2,4-Trimethylbenzene	LCS 29.8	99	(80-125)			30 ug/L	08/09/2008
tert-Butylbenzene	LCS 28.8	96	(80-122)			30 ug/L	08/09/2008
1,1,1-Trichloroethane	LCS 27.8	93	(80-122)			30 ug/L	08/09/2008
1,1-Dichloroethane	LCS 29.6	99	(80-120)			30 ug/L	08/09/2008
2-Chlorotoluene	LCS 28.4	95	(80-125)			30 ug/L	08/09/2008
Trichloroethene	LCS 30.0	100	(80-125)			30 ug/L	08/09/2008
trans-1,2-Dichloroethene	LCS 28.7	96	(79-132)			30 ug/L	08/09/2008
1,2-Dichlorobenzene	LCS 30.7	102	(80-120)			30 ug/L	08/09/2008
2,2-Dichloropropane	LCS 27.3	91	(80-132)			30 ug/L	08/09/2008
Hexachlorobutadiene	LCS 28.5	95	(77-125)			30 ug/L	08/09/2008
Isopropylbenzene (Cumene)	LCS 31.3	104	(80-121)			30 ug/L	08/09/2008
1,2-Dichloropropane	LCS 30.2	101	(80-121)			30 ug/L	08/09/2008
1,1-Dichloropropene	LCS 28.9	96	(80-122)			30 ug/L	08/09/2008
1,1,2-Trichloroethane	LCS 29.2	97	(77-120)			30 ug/L	08/09/2008



SGS Ref.# 847972 Lab Control Sample

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method SW5030B
Date 08/09/2008

Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,3-Dichlorobenzene	LCS	30.4	101	(80-120)		30 ug/L	08/09/2008
1,2,3-Trichlorobenzene	LCS	31.8	106	(77-120)		30 ug/L	08/09/2008
Surrogates							
1,2-Dichloroethane-D4 <surr>	LCS		103	(73-120)			08/09/2008
Toluene-d8 <surr>	LCS		99	(80-120)			08/09/2008
4-Bromofluorobenzene <surr>	LCS		91	(76-120)			08/09/2008

Batch VMS9995
Method SW8260B
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 848186 Lab Control Sample
848187 Lab Control Sample Duplicate
Client Name The Environmental Company, Inc. (TEC)
Project Name/# 9121-003 Red Hill BFSF
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18539
Method SW5030B
Date 08/11/2008

QC results affect the following production samples:

1083866002, 1083866003, 1083866004

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<u>Volatile Gas Chromatography/Mass Spectroscopy</u>							
Naphthalene	LCS	32.7	109	(75-120)		30 ug/L	08/11/2008
	LCSD	32.9	110		1	(< 20)	30 ug/L 08/11/2008
Surrogates							
1,2-Dichloroethane-D4 <surr>	LCS		106	(73-120)			08/11/2008
	LCSD		103		3		08/11/2008
Toluene-d8 <surr>	LCS		100	(80-120)			08/11/2008
	LCSD		99		0		08/11/2008
4-Bromofluorobenzene <surr>	LCS		90	(76-120)			08/11/2008
	LCSD		94		4		08/11/2008

Batch VMS10000
Method SW8260B
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 846326 Matrix Spike
846327 Matrix Spike Duplicate

Printed Date/Time 09/09/2008 8:32
Prep Batch MXX20608
Method 3010 H2O Digest for Metals ICI
Date 08/04/2008

Original 1083829004
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:
1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Metals by ICP/MS

Lead	MS	128	1210	108	(80-120)			1000	ug/L 08/05/2008
	MSD		1180	105		2	(< 15)	1000	ug/L 08/05/2008

Batch MMS5551
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 846328 Bench Spike DIGESTED

Printed Date/Time 09/09/2008 8:32
Prep Batch MXX20608
Method 3010 H2O Digest for Metals ICI
Date 08/04/2008

Original 1083829004
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:

1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Metals by ICP/MS

Lead BND 128 1440 105 (75-125) 1250 ug/L 08/05/2008

Batch MMS5551
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 846397 Bench Spike DIGESTED

Printed Date/Time 09/09/2008 8:32
Prep Batch MXX20608
Method 3010 H2O Digest for Metals ICI
Date 08/04/2008

Original 1083866005
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:
1083866001, 1083866002, 1083866003, 1083866004, 1083866005

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Metals by ICP/MS

Lead	BND ND	1200	96	(75-125)				1250	ug/L 08/05/2008
Batch	MMS5551								
Method	SW6020								
Instrument	Perkin Elmer Sciex ICP-MS P3								



SGS Ref.# 847974 Matrix Spike
847975 Matrix Spike Duplicate

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method Volatiles Extraction AFCEE 3.1
Date 08/09/2008

Original 847973
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:
1083866001, 1083866002, 1083866003, 1083866004, 1083866005, 1083866008

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.#	847974	Matrix Spike	Printed Date/Time	09/09/2008 8:32
	847975	Matrix Spike Duplicate	Prep	VXX18532
			Batch	Volatiles Extraction AFCEE 3.1
			Method	08/09/2008
Original	847973		Date	
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	MS	ND	31.1	104	(80-120)			30.0	ug/L 08/09/2008
	MSD		28.0	93		10	(< 20)	30.0	ug/L 08/09/2008
Toluene	MS	ND	31.8	106	(77-120)			30.0	ug/L 08/09/2008
	MSD		29.5	98		7	(< 20)	30.0	ug/L 08/09/2008
Ethylbenzene	MS	ND	32.9	110	(80-120)			30.0	ug/L 08/09/2008
	MSD		30.1	100		9	(< 20)	30.0	ug/L 08/09/2008
n-Butylbenzene	MS	ND	29.8	99	(80-124)			30.0	ug/L 08/09/2008
	MSD		26.9	90		10	(< 20)	30.0	ug/L 08/09/2008
1,4-Dichlorobenzene	MS	ND	34	113	(80-120)			30.0	ug/L 08/09/2008
	MSD		31.0	103		9	(< 20)	30.0	ug/L 08/09/2008
1,2-Dichloroethane	MS	ND	34.1	114	(80-129)			30.0	ug/L 08/09/2008
	MSD		31.6	105		8	(< 20)	30.0	ug/L 08/09/2008
1,3,5-Trimethylbenzene	MS	ND	31.6	105	(80-128)			30.0	ug/L 08/09/2008
	MSD		29.3	98		8	(< 20)	30.0	ug/L 08/09/2008
4-Chlorotoluene	MS	ND	30.9	103	(79-128)			30.0	ug/L 08/09/2008
	MSD		28.6	96		8	(< 20)	30.0	ug/L 08/09/2008
Chlorobenzene	MS	ND	33.9	113	(80-120)			30.0	ug/L 08/09/2008
	MSD		31.3	104		8	(< 20)	30.0	ug/L 08/09/2008
4-Methyl-2-pentanone (MIBK)	MS	ND	100	111	(69-134)			90.0	ug/L 08/09/2008
	MSD		93.7	104		7	(< 20)	90.0	ug/L 08/09/2008
cis-1,2-Dichloroethene	MS	ND	32.6	109	(80-125)			30.0	ug/L 08/09/2008
	MSD		30.4	101		7	(< 20)	30.0	ug/L 08/09/2008
4-Isopropyltoluene	MS	ND	31.3	104	(80-125)			30.0	ug/L 08/09/2008
	MSD		28.7	96		9	(< 20)	30.0	ug/L 08/09/2008
cis-1,3-Dichloropropene	MS	ND	28.3	94	(80-120)			30.0	ug/L 08/09/2008
	MSD		26.4	88		7	(< 20)	30.0	ug/L 08/09/2008
n-Propylbenzene	MS	ND	32.2	107	(80-129)			30.0	ug/L 08/09/2008
	MSD		29.7	99		8	(< 20)	30.0	ug/L 08/09/2008
Styrene	MS	ND	33	110	(80-120)			30.0	ug/L 08/09/2008
	MSD		30.6	102		8	(< 20)	30.0	ug/L 08/09/2008
Dibromomethane	MS	ND	33.5	112	(80-120)			30.0	ug/L 08/09/2008
	MSD		31.5	105		6	(< 20)	30.0	ug/L 08/09/2008
trans-1,3-Dichloropropene	MS	ND	30	100	(80-124)			30.0	ug/L 08/09/2008
	MSD		28.7	96		5	(< 20)	30.0	ug/L 08/09/2008
1,2,4-Trichlorobenzene	MS	ND	33.4	111	(80-120)			30.0	ug/L 08/09/2008
	MSD		30.1	100		10	(< 20)	30.0	ug/L 08/09/2008
Acetone	MS	ND	90.6	101	(50-135)			90.0	ug/L 08/09/2008
	MSD		80.2	89		12	(< 20)	90.0	ug/L 08/09/2008
1,1,2,2-Tetrachloroethane	MS	ND	32.1	107	(76-123)			30.0	ug/L 08/09/2008
	MSD		30.6	102		5	(< 20)	30.0	ug/L 08/09/2008



SGS Ref.# 847974 Matrix Spike **Printed Date/Time** 09/09/2008 8:32
 847975 Matrix Spike Duplicate **Prep Batch** VXX18532
Method Volatiles Extraction AFCEE 3.1
Date 08/09/2008

Original 847973
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	MS	ND	32	107	(73-130)			30.0	ug/L 08/09/2008
	MSD		27.7	93		14	(< 20)	30.0	ug/L 08/09/2008
Methyl-t-butyl ether	MS	ND	44.8	99	(80-120)			45.0	ug/L 08/09/2008
	MSD		41.6	93		7	(< 20)	45.0	ug/L 08/09/2008
Tetrachloroethene	MS	ND	33.3	111	(79-122)			30.0	ug/L 08/09/2008
	MSD		30.7	102		8	(< 20)	30.0	ug/L 08/09/2008
Dibromochloromethane	MS	ND	33.5	112	(80-120)			30.0	ug/L 08/09/2008
	MSD		32.8	109		2	(< 20)	30.0	ug/L 08/09/2008
1,3-Dichloropropane	MS	ND	31.1	104	(80-121)			30.0	ug/L 08/09/2008
	MSD		29.2	97		6	(< 20)	30.0	ug/L 08/09/2008
1,2-Dibromoethane	MS	ND	33.6	112	(80-120)			30.0	ug/L 08/09/2008
	MSD		29.4	98		13	(< 20)	30.0	ug/L 08/09/2008
Carbon tetrachloride	MS	ND	32.4	108	(80-126)			30.0	ug/L 08/09/2008
	MSD		31.9	106		2	(< 20)	30.0	ug/L 08/09/2008
1,1,1,2-Tetrachloroethane	MS	ND	33	110	(80-120)			30.0	ug/L 08/09/2008
	MSD		31.9	106		3	(< 20)	30.0	ug/L 08/09/2008
Chloroform	MS	ND	33.8	113	(80-124)			30.0	ug/L 08/09/2008
	MSD		30.5	102		10	(< 20)	30.0	ug/L 08/09/2008
Bromobenzene	MS	ND	32.9	110	(80-120)			30.0	ug/L 08/09/2008
	MSD		30.3	101		8	(< 20)	30.0	ug/L 08/09/2008
Chloromethane	MS	ND	30	100	(67-125)			30.0	ug/L 08/09/2008
	MSD		27.4	91		9	(< 20)	30.0	ug/L 08/09/2008
1,2,3-Trichloropropane	MS	ND	30.7	102	(80-120)			30.0	ug/L 08/09/2008
	MSD		29.3	98		5	(< 20)	30.0	ug/L 08/09/2008
Bromomethane	MS	1.26 J	29.1	93	(30-140)			30.0	ug/L 08/09/2008
	MSD		27.4	87		6	(< 20)	30.0	ug/L 08/09/2008
Bromochloromethane	MS	ND	34.5	115	(77-129)			30.0	ug/L 08/09/2008
	MSD		32.0	107		8	(< 20)	30.0	ug/L 08/09/2008
Vinyl chloride	MS	ND	29.7	99	(72-145)			30.0	ug/L 08/09/2008
	MSD		27.2	91		9	(< 20)	30.0	ug/L 08/09/2008
Dichlorodifluoromethane	MS	ND	28.4	95	(62-153)			30.0	ug/L 08/09/2008
	MSD		25.3	84		12	(< 20)	30.0	ug/L 08/09/2008
Chloroethane	MS	ND	27.7	93	(67-133)			30.0	ug/L 08/09/2008
	MSD		24.4	81		13	(< 20)	30.0	ug/L 08/09/2008
sec-Butylbenzene	MS	ND	30.8	103	(80-120)			30.0	ug/L 08/09/2008
	MSD		28.5	95		8	(< 20)	30.0	ug/L 08/09/2008
Bromodichloromethane	MS	ND	30.9	103	(80-120)			30.0	ug/L 08/09/2008
	MSD		29.2	97		6	(< 20)	30.0	ug/L 08/09/2008
1,1-Dichloroethene	MS	ND	32.6	109	(76-130)			30.0	ug/L 08/09/2008
	MSD		29.7	99		9	(< 20)	30.0	ug/L 08/09/2008



SGS Ref.# 847974 Matrix Spike
847975 Matrix Spike Duplicate

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method Volatiles Extraction AFCEE 3.1
Date 08/09/2008

Original 847973
Matrix Water (Surface, Eff., Ground)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

2-Butanone (MEK)	MS	ND	97.5	108	(66-136)			90.0	ug/L 08/09/2008
	MSD		89.6	100		9	(< 20)	90.0	ug/L 08/09/2008
Methylene chloride	MS	ND	31	103	(63-131)			30.0	ug/L 08/09/2008
	MSD		28.5	95		9	(< 20)	30.0	ug/L 08/09/2008
Trichlorofluoromethane	MS	ND	34.1	114	(68-145)			30.0	ug/L 08/09/2008
	MSD		30.2	101		12	(< 20)	30.0	ug/L 08/09/2008
P & M -Xylene	MS	ND	66.9	112	(80-120)			60.0	ug/L 08/09/2008
	MSD		61.8	103		8	(< 20)	60.0	ug/L 08/09/2008
Naphthalene	MS	ND	33.4	111	(75-120)			30.0	ug/L 08/09/2008
	MSD		30.7	102		9	(< 20)	30.0	ug/L 08/09/2008
o-Xylene	MS	ND	33.3	111	(80-120)			30.0	ug/L 08/09/2008
	MSD		31.4	105		6	(< 20)	30.0	ug/L 08/09/2008
Bromoform	MS	ND	34.4	115	(80-120)			30.0	ug/L 08/09/2008
	MSD		34.5	115		0	(< 20)	30.0	ug/L 08/09/2008
1-Chlorohexane	MS	ND	44.2	98	(70-125)			45.0	ug/L 08/09/2008
	MSD		40.2	89		10	(< 20)	45.0	ug/L 08/09/2008
1,2,4-Trimethylbenzene	MS	ND	32.6	109	(80-125)			30.0	ug/L 08/09/2008
	MSD		29.7	99		9	(< 20)	30.0	ug/L 08/09/2008
tert-Butylbenzene	MS	ND	31	103	(80-122)			30.0	ug/L 08/09/2008
	MSD		28.6	95		8	(< 20)	30.0	ug/L 08/09/2008
1,1,1-Trichloroethane	MS	ND	30.7	102	(80-122)			30.0	ug/L 08/09/2008
	MSD		28.8	96		7	(< 20)	30.0	ug/L 08/09/2008
1,1-Dichloroethane	MS	ND	32.3	108	(80-120)			30.0	ug/L 08/09/2008
	MSD		29.4	98		9	(< 20)	30.0	ug/L 08/09/2008
2-Chlorotoluene	MS	ND	30.2	101	(80-125)			30.0	ug/L 08/09/2008
	MSD		28.1	94		7	(< 20)	30.0	ug/L 08/09/2008
Trichloroethene	MS	ND	32.2	107	(80-125)			30.0	ug/L 08/09/2008
	MSD		29.6	99		9	(< 20)	30.0	ug/L 08/09/2008
trans-1,2-Dichloroethene	MS	ND	30.9	103	(79-132)			30.0	ug/L 08/09/2008
	MSD		28.7	96		7	(< 20)	30.0	ug/L 08/09/2008
1,2-Dichlorobenzene	MS	ND	33.6	112	(80-120)			30.0	ug/L 08/09/2008
	MSD		30.8	103		9	(< 20)	30.0	ug/L 08/09/2008
2,2-Dichloropropane	MS	ND	29.3	98	(80-132)			30.0	ug/L 08/09/2008
	MSD		27.7	92		6	(< 20)	30.0	ug/L 08/09/2008
Hexachlorobutadiene	MS	ND	31.1	104	(77-125)			30.0	ug/L 08/09/2008
	MSD		27.5	92		13	(< 20)	30.0	ug/L 08/09/2008
Isopropylbenzene (Cumene)	MS	ND	34.2	114	(80-121)			30.0	ug/L 08/09/2008
	MSD		31.5	105		8	(< 20)	30.0	ug/L 08/09/2008
1,2-Dichloropropane	MS	ND	32.2	107	(80-121)			30.0	ug/L 08/09/2008
	MSD		29.9	100		7	(< 20)	30.0	ug/L 08/09/2008



SGS Ref.# 847974 Matrix Spike
847975 Matrix Spike Duplicate

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method Volatiles Extraction AFCEE 3.1
Date 08/09/2008

Original 847973
Matrix Water (Surface, Eff., Ground)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,1-Dichloropropene	MS	ND	31.9	106	(80-122)			30.0	ug/L 08/09/2008
	MSD		29.3	98		8	(< 20)	30.0	ug/L 08/09/2008
1,1,2-Trichloroethane	MS	ND	31.3	104	(77-120)			30.0	ug/L 08/09/2008
	MSD		29.1	97		8	(< 20)	30.0	ug/L 08/09/2008
1,3-Dichlorobenzene	MS	ND	32.5	108	(80-120)			30.0	ug/L 08/09/2008
	MSD		30.2	101		7	(< 20)	30.0	ug/L 08/09/2008
1,2,3-Trichlorobenzene	MS	ND	34.4	115	(77-120)			30.0	ug/L 08/09/2008
	MSD		31.4	105		9	(< 20)	30.0	ug/L 08/09/2008

Surrogates

1,2-Dichloroethane-D4 <surr>	MS		30.9	103	(73-120)				08/09/2008
	MSD		30.4	101		1			08/09/2008
Toluene-d8 <surr>	MS		29.8	99	(80-120)				08/09/2008
	MSD		30.1	100		1			08/09/2008
4-Bromofluorobenzene <surr>	MS		27.9	93	(76-120)				08/09/2008
	MSD		27.6	92		1			08/09/2008

Batch VMS9995
Method SW8260B
Instrument HP 5890 Series II MS3 VNA



SGS Ref.# 1083866006 Billable Matrix Spike
1083866007 Billable Matrix Spike Dup.

Printed Date/Time 09/09/2008 8:32
Prep Batch MXX20608
Method 3010 H2O Digest for Metals ICI
Date 08/04/2008

Original 1083866005
Matrix Water (Surface, Eff., Ground)

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Dissolved Metals by ICP/MS

Lead	BMS ND	1060	106	(80-120)				1000	ug/L 08/05/2008
	BMSD	1060	106			0	(< 15)	1000	ug/L 08/05/2008

Batch MMS5551
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3

Volatile Fuels Department

Gasoline Range Organics	BMS ND	515	114*	(79-108)				450	ug/L 08/05/2008
	BMSD	412	92			22 *	(< 20)	450	ug/L 08/05/2008

Surrogates

4-Bromofluorobenzene <surr>	BMS	56.2	112	(50-150)					08/05/2008
	BMSD	55.6	111			1			08/05/2008

Batch VFC9090
Method SW8015C
Instrument HP 5890 Series II PID+FID VCA

Semivolatile Organic Fuels Department

Diesel Range Organics	BMS ND	4.82	94	(75-125)				5.15	mg/L 08/11/2008
	BMSD	4.78	91			1	(< 30)	5.26	mg/L 08/11/2008

Surrogates

5a Androstane <surr>	BMS	.112	109	(50-150)					08/11/2008
	BMSD	0.110	105			2			08/11/2008

Batch XFC8106
Method SW8015C
Instrument HP 5890 Series II FID SV D R

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 1083866006 Billable Matrix Spike **Printed Date/Time** 09/09/2008 8:32
 1083866007 Billable Matrix Spike Dup. **Prep Batch** VXX18532
Method Volatiles Extraction AFCEE 3.1
Date 08/09/2008
Original 1083866005
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	31.1	104	(80-120)			30.0	ug/L 08/09/2008
	BMSD		28.0	93		10	(< 20)	30.0	ug/L 08/09/2008
Toluene	BMS	ND	31.8	106	(77-120)			30.0	ug/L 08/09/2008
	BMSD		29.5	98		7	(< 20)	30.0	ug/L 08/09/2008
Ethylbenzene	BMS	ND	32.9	110	(80-120)			30.0	ug/L 08/09/2008
	BMSD		30.1	100		9	(< 20)	30.0	ug/L 08/09/2008
n-Butylbenzene	BMS	ND	29.8	99	(80-124)			30.0	ug/L 08/09/2008
	BMSD		26.9	90		10	(< 20)	30.0	ug/L 08/09/2008
1,4-Dichlorobenzene	BMS	ND	34	113	(80-120)			30.0	ug/L 08/09/2008
	BMSD		31.0	103		9	(< 20)	30.0	ug/L 08/09/2008
1,2-Dichloroethane	BMS	ND	34.1	114	(80-129)			30.0	ug/L 08/09/2008
	BMSD		31.6	105		8	(< 20)	30.0	ug/L 08/09/2008
1,3,5-Trimethylbenzene	BMS	ND	31.6	105	(80-128)			30.0	ug/L 08/09/2008
	BMSD		29.3	98		8	(< 20)	30.0	ug/L 08/09/2008
4-Chlorotoluene	BMS	ND	30.9	103	(79-128)			30.0	ug/L 08/09/2008
	BMSD		28.6	96		8	(< 20)	30.0	ug/L 08/09/2008
Chlorobenzene	BMS	ND	33.9	113	(80-120)			30.0	ug/L 08/09/2008
	BMSD		31.3	104		8	(< 20)	30.0	ug/L 08/09/2008
4-Methyl-2-pentanone (MIBK)	BMS	ND	100	111	(69-134)			90.0	ug/L 08/09/2008
	BMSD		93.7	104		7	(< 20)	90.0	ug/L 08/09/2008
cis-1,2-Dichloroethene	BMS	ND	32.6	109	(80-125)			30.0	ug/L 08/09/2008
	BMSD		30.4	101		7	(< 20)	30.0	ug/L 08/09/2008
4-Isopropyltoluene	BMS	ND	31.3	104	(80-125)			30.0	ug/L 08/09/2008
	BMSD		28.7	96		9	(< 20)	30.0	ug/L 08/09/2008
cis-1,3-Dichloropropene	BMS	ND	28.3	94	(80-120)			30.0	ug/L 08/09/2008
	BMSD		26.4	88		7	(< 20)	30.0	ug/L 08/09/2008
n-Propylbenzene	BMS	ND	32.2	107	(80-129)			30.0	ug/L 08/09/2008
	BMSD		29.7	99		8	(< 20)	30.0	ug/L 08/09/2008
Styrene	BMS	ND	33	110	(80-120)			30.0	ug/L 08/09/2008
	BMSD		30.6	102		8	(< 20)	30.0	ug/L 08/09/2008
Dibromomethane	BMS	ND	33.5	112	(80-120)			30.0	ug/L 08/09/2008
	BMSD		31.5	105		6	(< 20)	30.0	ug/L 08/09/2008
trans-1,3-Dichloropropene	BMS	ND	30	100	(80-124)			30.0	ug/L 08/09/2008
	BMSD		28.7	96		5	(< 20)	30.0	ug/L 08/09/2008
1,2,4-Trichlorobenzene	BMS	ND	33.4	111	(80-120)			30.0	ug/L 08/09/2008
	BMSD		30.1	100		10	(< 20)	30.0	ug/L 08/09/2008
Acetone	BMS	ND	90.6	101	(50-135)			90.0	ug/L 08/09/2008
	BMSD		80.2	89		12	(< 20)	90.0	ug/L 08/09/2008
1,1,2,2-Tetrachloroethane	BMS	ND	32.1	107	(76-123)			30.0	ug/L 08/09/2008
	BMSD		30.6	102		5	(< 20)	30.0	ug/L 08/09/2008



SGS Ref.#	1083866006	Billable Matrix Spike	Printed Date/Time	09/09/2008 8:32
	1083866007	Billable Matrix Spike Dup.	Prep	VXX18532
			Batch	Volatiles Extraction AFCEE 3.1
			Method	08/09/2008
			Date	
Original	1083866005			
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	32	107	(73-130)			30.0	ug/L 08/09/2008
	BMSD		27.7	93		14	(< 20)	30.0	ug/L 08/09/2008
Methyl-t-butyl ether	BMS	ND	44.8	99	(80-120)			45.0	ug/L 08/09/2008
	BMSD		41.6	93		7	(< 20)	45.0	ug/L 08/09/2008
Tetrachloroethene	BMS	ND	33.3	111	(79-122)			30.0	ug/L 08/09/2008
	BMSD		30.7	102		8	(< 20)	30.0	ug/L 08/09/2008
Dibromochloromethane	BMS	ND	33.5	112	(80-120)			30.0	ug/L 08/09/2008
	BMSD		32.8	109		2	(< 20)	30.0	ug/L 08/09/2008
1,3-Dichloropropane	BMS	ND	31.1	104	(80-121)			30.0	ug/L 08/09/2008
	BMSD		29.2	97		6	(< 20)	30.0	ug/L 08/09/2008
1,2-Dibromoethane	BMS	ND	33.6	112	(80-120)			30.0	ug/L 08/09/2008
	BMSD		29.4	98		13	(< 20)	30.0	ug/L 08/09/2008
Carbon tetrachloride	BMS	ND	32.4	108	(80-126)			30.0	ug/L 08/09/2008
	BMSD		31.9	106		2	(< 20)	30.0	ug/L 08/09/2008
1,1,1,2-Tetrachloroethane	BMS	ND	33	110	(80-120)			30.0	ug/L 08/09/2008
	BMSD		31.9	106		3	(< 20)	30.0	ug/L 08/09/2008
Chloroform	BMS	ND	33.8	113	(80-124)			30.0	ug/L 08/09/2008
	BMSD		30.5	102		10	(< 20)	30.0	ug/L 08/09/2008
Bromobenzene	BMS	ND	32.9	110	(80-120)			30.0	ug/L 08/09/2008
	BMSD		30.3	101		8	(< 20)	30.0	ug/L 08/09/2008
Chloromethane	BMS	ND	30	100	(67-125)			30.0	ug/L 08/09/2008
	BMSD		27.4	91		9	(< 20)	30.0	ug/L 08/09/2008
1,2,3-Trichloropropane	BMS	ND	30.7	102	(80-120)			30.0	ug/L 08/09/2008
	BMSD		29.3	98		5	(< 20)	30.0	ug/L 08/09/2008
Bromomethane	BMS	1.26 J	29.1	93	(30-140)			30.0	ug/L 08/09/2008
	BMSD		27.4	87		6	(< 20)	30.0	ug/L 08/09/2008
Bromochloromethane	BMS	ND	34.5	115	(77-129)			30.0	ug/L 08/09/2008
	BMSD		32.0	107		8	(< 20)	30.0	ug/L 08/09/2008
Vinyl chloride	BMS	ND	29.7	99	(72-145)			30.0	ug/L 08/09/2008
	BMSD		27.2	91		9	(< 20)	30.0	ug/L 08/09/2008
Dichlorodifluoromethane	BMS	ND	28.4	95	(62-153)			30.0	ug/L 08/09/2008
	BMSD		25.3	84		12	(< 20)	30.0	ug/L 08/09/2008
Chloroethane	BMS	ND	27.7	93	(67-133)			30.0	ug/L 08/09/2008
	BMSD		24.4	81		13	(< 20)	30.0	ug/L 08/09/2008
sec-Butylbenzene	BMS	ND	30.8	103	(80-120)			30.0	ug/L 08/09/2008
	BMSD		28.5	95		8	(< 20)	30.0	ug/L 08/09/2008
Bromodichloromethane	BMS	ND	30.9	103	(80-120)			30.0	ug/L 08/09/2008
	BMSD		29.2	97		6	(< 20)	30.0	ug/L 08/09/2008
1,1-Dichloroethene	BMS	ND	32.6	109	(76-130)			30.0	ug/L 08/09/2008
	BMSD		29.7	99		9	(< 20)	30.0	ug/L 08/09/2008



SGS Ref.# 1083866006 Billable Matrix Spike
 1083866007 Billable Matrix Spike Dup.

Printed Date/Time 09/09/2008 8:32
 Prep Batch VXX18532
 Method Volatiles Extraction AFCEE 3.1
 Date 08/09/2008

Original 1083866005
 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	97.5	108	(66-136)			90.0	ug/L 08/09/2008
	BMSD		89.6	100		9	(< 20)	90.0	ug/L 08/09/2008
Methylene chloride	BMS	ND	31	103	(63-131)			30.0	ug/L 08/09/2008
	BMSD		28.5	95		9	(< 20)	30.0	ug/L 08/09/2008
Trichlorofluoromethane	BMS	ND	34.1	114	(68-145)			30.0	ug/L 08/09/2008
	BMSD		30.2	101		12	(< 20)	30.0	ug/L 08/09/2008
P & M -Xylene	BMS	ND	66.9	112	(80-120)			60.0	ug/L 08/09/2008
	BMSD		61.8	103		8	(< 20)	60.0	ug/L 08/09/2008
Naphthalene	BMS	ND	33.4	111	(75-120)			30.0	ug/L 08/09/2008
	BMSD		30.7	102		9	(< 20)	30.0	ug/L 08/09/2008
o-Xylene	BMS	ND	33.3	111	(80-120)			30.0	ug/L 08/09/2008
	BMSD		31.4	105		6	(< 20)	30.0	ug/L 08/09/2008
Bromoform	BMS	ND	34.4	115	(80-120)			30.0	ug/L 08/09/2008
	BMSD		34.5	115		0	(< 20)	30.0	ug/L 08/09/2008
1-Chlorohexane	BMS	ND	44.2	98	(70-125)			45.0	ug/L 08/09/2008
	BMSD		40.2	89		10	(< 20)	45.0	ug/L 08/09/2008
1,2,4-Trimethylbenzene	BMS	ND	32.6	109	(80-125)			30.0	ug/L 08/09/2008
	BMSD		29.7	99		9	(< 20)	30.0	ug/L 08/09/2008
tert-Butylbenzene	BMS	ND	31	103	(80-122)			30.0	ug/L 08/09/2008
	BMSD		28.6	95		8	(< 20)	30.0	ug/L 08/09/2008
1,1,1-Trichloroethane	BMS	ND	30.7	102	(80-122)			30.0	ug/L 08/09/2008
	BMSD		28.8	96		7	(< 20)	30.0	ug/L 08/09/2008
1,1-Dichloroethane	BMS	ND	32.3	108	(80-120)			30.0	ug/L 08/09/2008
	BMSD		29.4	98		9	(< 20)	30.0	ug/L 08/09/2008
2-Chlorotoluene	BMS	ND	30.2	101	(80-125)			30.0	ug/L 08/09/2008
	BMSD		28.1	94		7	(< 20)	30.0	ug/L 08/09/2008
Trichloroethene	BMS	ND	32.2	107	(80-125)			30.0	ug/L 08/09/2008
	BMSD		29.6	99		9	(< 20)	30.0	ug/L 08/09/2008
trans-1,2-Dichloroethene	BMS	ND	30.9	103	(79-132)			30.0	ug/L 08/09/2008
	BMSD		28.7	96		7	(< 20)	30.0	ug/L 08/09/2008
1,2-Dichlorobenzene	BMS	ND	33.6	112	(80-120)			30.0	ug/L 08/09/2008
	BMSD		30.8	103		9	(< 20)	30.0	ug/L 08/09/2008
2,2-Dichloropropane	BMS	ND	29.3	98	(80-132)			30.0	ug/L 08/09/2008
	BMSD		27.7	92		6	(< 20)	30.0	ug/L 08/09/2008
Hexachlorobutadiene	BMS	ND	31.1	104	(77-125)			30.0	ug/L 08/09/2008
	BMSD		27.5	92		13	(< 20)	30.0	ug/L 08/09/2008
Isopropylbenzene (Cumene)	BMS	ND	34.2	114	(80-121)			30.0	ug/L 08/09/2008
	BMSD		31.5	105		8	(< 20)	30.0	ug/L 08/09/2008
1,2-Dichloropropane	BMS	ND	32.2	107	(80-121)			30.0	ug/L 08/09/2008
	BMSD		29.9	100		7	(< 20)	30.0	ug/L 08/09/2008



SGS Ref.# 1083866006 Billable Matrix Spike
1083866007 Billable Matrix Spike Dup.

Printed Date/Time 09/09/2008 8:32
Prep Batch VXX18532
Method Volatiles Extraction AFCEE 3.1
Date 08/09/2008

Original 1083866005
Matrix Water (Surface, Eff., Ground)

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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Volatile Gas Chromatography/Mass Spectroscopy

1,1-Dichloropropene	BMS ND	31.9	106	(80-122)				30.0	ug/L 08/09/2008
	BMSD	29.3	98		8	(< 20)		30.0	ug/L 08/09/2008
1,1,2-Trichloroethane	BMS ND	31.3	104	(77-120)				30.0	ug/L 08/09/2008
	BMSD	29.1	97		8	(< 20)		30.0	ug/L 08/09/2008
1,3-Dichlorobenzene	BMS ND	32.5	108	(80-120)				30.0	ug/L 08/09/2008
	BMSD	30.2	101		7	(< 20)		30.0	ug/L 08/09/2008
1,2,3-Trichlorobenzene	BMS ND	34.4	115	(77-120)				30.0	ug/L 08/09/2008
	BMSD	31.4	105		9	(< 20)		30.0	ug/L 08/09/2008

Surrogates

1,2-Dichloroethane-D4 <surr>	BMS	30.9	103	(73-120)					08/09/2008
	BMSD	30.4	101		1				08/09/2008
Toluene-d8 <surr>	BMS	29.8	99	(80-120)					08/09/2008
	BMSD	30.1	100		1				08/09/2008
4-Bromofluorobenzene <surr>	BMS	27.9	93	(76-120)					08/09/2008
	BMSD	27.6	92		1				08/09/2008

Batch VMS9995
Method SW8260B
Instrument HP 5890 Series II MS3 VNA

Polynuclear Aromatics GC/MS



SGS Ref.# 1083866006 Billable Matrix Spike **Printed Date/Time** 09/09/2008 8:32
 1083866007 Billable Matrix Spike Dup. **Prep Batch** XXX19761
Method 3520 Liquid/Liquid Ext for 827/
Date 08/05/2008

Original 1083866005
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	.326		63	(50-105)			0.521	ug/L 08/26/2008
	BMSD	0.305		59		7	(< 30)	0.521	ug/L 08/26/2008
Acenaphthene	BMS ND	.321		62	(45-110)			0.521	ug/L 08/26/2008
	BMSD	0.308		59		4	(< 30)	0.521	ug/L 08/26/2008
Fluorene	BMS ND	.331		64	(50-110)			0.521	ug/L 08/26/2008
	BMSD	0.306		59		8	(< 30)	0.521	ug/L 08/26/2008
Phenanthrene	BMS ND	.331		64	(50-115)			0.521	ug/L 08/26/2008
	BMSD	0.302		58		9	(< 30)	0.521	ug/L 08/26/2008
Anthracene	BMS ND	.353		68	(55-110)			0.521	ug/L 08/26/2008
	BMSD	0.321		62		10	(< 30)	0.521	ug/L 08/26/2008
Fluoranthene	BMS ND	.356		68	(55-125)			0.521	ug/L 08/26/2008
	BMSD	0.335		64		6	(< 30)	0.521	ug/L 08/26/2008
Pyrene	BMS ND	.338		65	(50-130)			0.521	ug/L 08/26/2008
	BMSD	0.320		62		6	(< 30)	0.521	ug/L 08/26/2008
Benzo(a)Anthracene	BMS ND	.409		79	(55-120)			0.521	ug/L 08/26/2008
	BMSD	0.382		73		7	(< 30)	0.521	ug/L 08/26/2008
Chrysene	BMS ND	.347		67	(55-120)			0.521	ug/L 08/26/2008
	BMSD	0.329		63		5	(< 30)	0.521	ug/L 08/26/2008
Benzo[b]Fluoranthene	BMS ND	.383		74	(46-130)			0.521	ug/L 08/26/2008
	BMSD	0.340		65		12	(< 30)	0.521	ug/L 08/26/2008
Benzo[k]fluoranthene	BMS ND	.358		69	(60-125)			0.521	ug/L 08/26/2008
	BMSD	0.326		63		9	(< 30)	0.521	ug/L 08/26/2008
Benzo[a]pyrene	BMS ND	.434		83	(55-120)			0.521	ug/L 08/26/2008
	BMSD	0.385		74		12	(< 30)	0.521	ug/L 08/26/2008
Indeno[1,2,3-c,d] pyrene	BMS ND	.379		73	(45-125)			0.521	ug/L 08/26/2008
	BMSD	0.328		63		14	(< 30)	0.521	ug/L 08/26/2008
Dibenzo[a,h]anthracene	BMS ND	.395		76	(41-140)			0.521	ug/L 08/26/2008
	BMSD	0.338		65		15	(< 30)	0.521	ug/L 08/26/2008
Benzo[g,h,i]perylene	BMS ND	.372		71	(46-125)			0.521	ug/L 08/26/2008
	BMSD	0.328		63		13	(< 30)	0.521	ug/L 08/26/2008
Naphthalene	BMS ND	.306		59	(42-100)			0.521	ug/L 08/26/2008
	BMSD	0.305		59		0	(< 30)	0.521	ug/L 08/26/2008
1-Methylnaphthalene	BMS ND	.313		60	(46-115)			0.521	ug/L 08/26/2008
	BMSD	0.306		59		2	(< 30)	0.521	ug/L 08/26/2008
2-Methylnaphthalene	BMS ND	.308		59	(45-105)			0.521	ug/L 08/26/2008
	BMSD	0.298		57		3	(< 30)	0.521	ug/L 08/26/2008
Surrogates									
Terphenyl-d14 <surr>	BMS	.479		92	(50-135)				08/26/2008
	BMSD	0.386		74		21			08/26/2008



SGS Ref.# 1083866006 Billable Matrix Spike
1083866007 Billable Matrix Spike Dup.

Printed Date/Time 09/09/2008 8:32
Prep Batch XXX19761
Method 3520 Liquid/Liquid Ext for 827/
Date 08/05/2008

Original 1083866005
Matrix Water (Surface, Eff., Ground)

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

Batch XMS4671
Method 8270D SIMS
Instrument HP 5890 Series II MS2 SVOA

Hager, Barbara (Anchorage)

From: MacMillan, Shawn N. [SNMacMillan@tecinc.com]
Sent: Wednesday, July 30, 2008 6:27 PM
To: Hager, Barbara (Anchorage)
Cc: Whitman, William M.C.
Subject: COC mistake
Attachments: SGS COC Corrected MW03-MW01.pdf

1083866

Hi Barbara,

I was looking over the COC's for the samples we took yesterday and realized there is a mistake. The COC with samples RHMW02-WG-12 and RHMW01-WG-12 is incorrect; RHMW02-WG-12 should be RHMW03-WG-12 and the time should be 1130 and sample RHMW01-WG-12 is correct. I have attached the original COC with the corrections. Please let me know if you need anything else to correct this.

Thanks,

Shawn MacMillan
TEC Inc.
1001 Bishop St. Suite 1400
ASB Tower
Honolulu, Hi. 96813
808.528.1445

7/31/2008



CHAIN OF CUSTODY RECC SGS Environmental Services I

1083866



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

CLIENT: TEC INC.					SGS Reference #:										page _____ of _____				
CONTACT: Jeff Hart					PHONE NO: 808.528.1445														
PROJECT: 9121-003					SITE/PWSID#: Red Hill BFSF														
REPORTS TO: Jeff Hart					email jshart@tecinc.com														
					cc snmacmillan@tecinc.com														
INVOICE TO: TEC INC					QUOTE #:														
					P.O. NUMBER:														
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv. Used	HCL	HCL	HCL	HNO ₃								REMARKS	
	RHMW2254-WG-12	7/29/2008	0945	Water	11	C=	X	X	X	X	X							3x Volume sent in 2 coolers	
① A-F	RHMW03-WG-12	7/29/2008	1130	Water	6	G=	X		X										
③ A-F	RHMW02-WG-12	7/29/2008	1230	Water	6	GRAB	X		X										
④ A-F	RHMWA01-WG-12	7/29/2008	1205	Water	6		X		X										
④ A-F	RHMW01-WG-12	7/29/2008	1430	Water	6		X		X										
⑤ A-C	TB01	7/29/2008	0805	Water	3				X										
⑤ A-F,G-M																			
⑥ A-F,G-K																			
⑦ A-F,G-J																			
Collected/Relinquished By: (1)		Date	Time	Received By:		Shipping Carrier:					Samples Received Cold? YES NO								
		7/29/08	1625								Temperature °C:								
Relinquished By: (2)		Date	Time	Received By:		Special Deliverable Requirements:					Chain of Custody Seal: (Circle)								
		7/30/08	1430			See Contract					INTACT BROKEN ABSENT								
Relinquished By: (3)		Date	Time	Received By:		Requested Turnaround Time and-or Special Instructions:													
						See Contract													
Relinquished By: (4)		Date	Time	Received For Laboratory By:															
		7-31-08	1100																

- 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) 845-22
- 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

COCOCK #1 TP = 5.5 C = 5.8
 2 4.2 4.5
 3 5.2 5.1
 4 4.5 4.9



CHAIN OF CUSTODY RECORD
SGS Environmental Services Inc.

1083866

Locations Nationwide
 Alaska Hawaii
 Maryland Louisiana
 New Jersey West Virginia
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CLIENT: TEC INC.					SGS Reference #:					page _____ of _____	
CONTACT: Jeff Hart			PHONE NO: 808.528.1445								
PROJECT: 9121-003			SITE/PWSID#: Red Hill BFSF								
REPORTS TO: Jeff Hart			email ishart@tecinc.com cc snmacmillan@tecinc.com								
INVOICE TO: TEC INC			QUOTE #: P.O. NUMBER:								
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv. Used	HCL	HCL	HCL	ENO ₃	REMARKS
	RHMW01-WG-12	7/29/2008	1230	Water	5	TPH-GRO (8015B)		X		X	X
	RHMW01-WG-12	7/29/2008	1430	Water	5	TPH-DRO (8015B)		X		X	X
						VOC's (8260B)					
						PAH's (8270C-SIMS)					
						Diss Pb (6020)					
Collected/Relinquished By: (1)		Date	Time	Received By:		Shipping Carrier:			Samples Received Cold? YES NO		
Relinquished By: (2)		Date	Time	Received By:		Shipping Ticket No:			Temperature °C:		
Relinquished By: (3)		Date	Time	Received By:		Special Deliverable Requirements:			Chain of Custody Seal: (Circle)		
Relinquished By: (4)		Date	Time	Received For Laboratory By:		Requested Turnaround Time and-or Special Instructions:			INTACT BROKEN ABSENT		

- 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
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- 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557



CHAIN OF CUSTODY REC
SGS Environmental Services

1083866



Locations Nationwide

Alaska Hawaii
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New Jersey West Virginia
North Carolina

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CLIENT: TEC INC.					SGS Reference #:										page _____ of _____						
CONTACT: Jeff Hart					PHONE NO: 808.528.1445																
PROJECT: 9121-003					SITE/PWSID#: Red Hill BFSF																
REPORTS TO: Jeff Hart					email jshart@tecinc.com																
					cc snmacmillan@tecinc.com																
INVOICE TO: TEC INC					QUOTE #:																
					P.O. NUMBER:																
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv.	HCL	HCL	HCl	HNO ₃											
						Used															
						SAMPLE TYPE															
						C = COMP	TPH-GRO (8015B)	TPH-DRO (8015B)	VOC's (8260B)	PAH's (8270C-SIMS)	Diss Pb (6020)										
						G = GRAB															
											REMARKS										
	RHMW02-WG-12	7/29/2008	1230	Water	5			X	X	X											
② G-K	RHMWA01-WG-12	7/29/2008	1205	Water	5			X	X	X											
Collected/Relinquished By: (1)						Date	Time	Received By:			Shipping Carrier:					Samples Received Cold? YES NO					
						7/29/08	1625									Temperature °C:					
Relinquished By: (2)						Date	Time	Received By:			Special Deliverable Requirements:					Chain of Custody Seal: (Circle)					
						7/30/08	1450				See Contract					INTACT BROKEN ABSENT					
Relinquished By: (3)						Date	Time	Received By:			Requested Turnaround Time and-or Special Instructions:										
											See Contract										
Relinquished By: (4)						Date	Time	Received For Laboratory By:													
						7/31/08	1100														

- 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
- 151 James Drive West St Rose, LA 70087 Tel: (504) 469-6401 Fax: (504) 463-3304
- 3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax: (907) 474-9685
- 1258 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0761
- 255 Sand Island Access Rd., Unit 1B Honolulu, HI 96819 Tel: (808) 224-6217 Fax: (808) 845-22
- 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557



CHAIN OF CUSTODY RECO
SGS Environmental Services Inc

1083866



Locations Nationwide
Alaska Hawaii
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CLIENT: TEC INC.					SGS Reference #:					page _____ of _____	
CONTACT: Jeff Hart					PHONE NO: 808.528.1445						
PROJECT: 9121-003					SITE/PWSID#: Red Hill BFSF						
REPORTS TO: Jeff Hart					email jshart@tecinc.com cc snmacmillan@tecinc.com						
INVOICE TO: TEC INC					QUOTE #: P.O. NUMBER:						
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv. Used	HCL	HCL	HCl	HNO ₃	REMARKS
	RHMW2254-WG-12	7/29/2008	0945	Water	10			X	X	X	3x Volume sent in 2 coolers
Collected/Relinquished By: (1)					Date	Time	Received By:			Shipping Carrier:	Samples Received Cold? YES NO
Relinquished By: (2)					Date	Time	Received By:			Shipping Ticket No:	Temperature °C:
Relinquished By: (3)					Date	Time	Received By:			Special Deliverable Requirements:	Chain of Custody Seal: (Circle)
Relinquished By: (4)					Date	Time	Received For Laboratory By:			Requested Turnaround Time and-or Special Instructions:	INTACT BROKEN ABSENT

- 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) 845-22
- 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



CHAIN OF CUSTODY RI
SGS Environmental Service

1083866



Locations Nationwide

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

CLIENT: TEC INC.					SGS Reference #:					page _____ of _____							
CONTACT: Jeff Hart					PHONE NO: 808.528.1445												
PROJECT: 9121-003					SITE/PWSID#: Red Hill BFSF												
REPORTS TO: Jeff Hart					email jshart@tecinc.com												
					cc snmacmillan@tecinc.com												
INVOICE TO: TEC INC					QUOTE #:												
					P.O. NUMBER:												
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv. Used	HCL	HCL	HCL	HNO ₃							REMARKS
③ G-K	RHMW02-WG-12	7/29/2008	1230	Water	5			X		X	X						
④ G-K	RHMW01-WG-12	7/29/2008	1430	Water	5			X		X	X						
Collected/Relinquished By: (1)		Date	Time	Received By:		Shipping Carrier:					Samples Received Cold? YES NO						
<i>[Signature]</i>		7/29/08	1625	<i>[Signature]</i>							Temperature °C:						
Relinquished By: (2)		Date	Time	Received By:		Special Deliverable Requirements:					Chain of Custody Seal: (Circle)						
<i>[Signature]</i>		7/30/08	1430	<i>[Signature]</i>		See Contract					INTACT BROKEN ABSENT						
Relinquished By: (3)		Date	Time	Received By:		Requested Turnaround Time and-or Special Instructions:											
<i>[Signature]</i>				<i>[Signature]</i>		See Contract											
Relinquished By: (4)		Date	Time	Received For Laboratory By:													
<i>[Signature]</i>		7/31/08	1100	<i>[Signature]</i>													

- 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) 845-22
- 151 James Drive West St Rose, LA 70087 Tel: (504) 469-6401 Fax: (504) 463-3304
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- 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557



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?

TAT (circle one): Standard -or- Rush

Received Date: 7-31-08

Received Time: 1100

Is date/time conversion necessary? NO

of hours to AK Local Time:

Thermometer ID: 69d 70d

Cooler ID	Temp Blank	Cooler Temp
1	5.5 °C	5.8 °C
2	4.2 °C	4.5 °C
3	5.2 °C	5.1 °C
4	4.8 °C	4.9 °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 / Carlisle / Lynden / SGS / Other: _____

Airbill # 8665 6727 7526

Additional Sample Remarks: (if applicable)

- 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 out for DoD projects (USACE, Navy, AFCEE)

Yes No

- Is received temperature $4 \pm 2^\circ\text{C}$?
Exceptions: _____ Samples/Analyses Affected: _____
- If temperature(s) $< 0^\circ\text{C}$, 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 FRONT AND BACK FOR LHX4
- 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?

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 RHMW2254 - WG-12 1 liter Amber bottle in cooler, sample lost

Sample RHMW03 - WG12 JARS FOR ANALYSIS; Diss Pb, PAH and DAO Not listed on COC

Sample ID RHMW02 - WG12 LISTEN TWICE ON COC FOR ANALYSIS; Diss Pb, PAH, DAO. SEE E.M.H.

Sample ID RHMW2254 - WG-12 LISTEN ON COC Bottle Count is incorrect, should total 33. J.H.

Completed by (sign): [Signature]

(print): JAMES MOGGITY

Login proof (check one): waived _____ required _____ performed by: _____

SAMPLES ① G ⑤ G, L, M AND 500ml HAND

SAMPLE RECEIPT FORM

SGS WO#: _____

- Yes No NA Are samples **RUSH**, priority, or w/n 72 hrs. of hold time?
- Yes No NA If yes have you done *e-mail notification*?
- Yes No NA Are samples *within 24 hrs. of hold time or due date*?
- Yes No NA If yes, have you *spoken with Supervisor*?
- Yes No NA Archiving bottles- if req., are they properly marked?
- Yes No NA Are there any **problems**? PM Notified? _____
- Yes No NA Were samples preserved correctly and pH verified?

Due Date: 8-14-03
Received Date: 7-29-03
Received Time: 1625
 Is **date/time conversion** necessary? YES
 # of hours to AK Local Time: +2hr
Thermometer ID: D2

Cooler ID	Temp Blank	Cooler Temp
#2	2.8 °C	°C
#3	3.0 °C	°C
#7	2.6 °C	°C
#10	3.2 °C	°C

*Temperature readings include thermometer correction factors

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

Airbill # _____

- Additional Sample Remarks:** (*√if applicable*)
- Extra Sample Volume? _____
 - Limited Sample Volume? _____
 - Field preserved for volatiles? _____
 - Field-filtered for dissolved? _____
 - Lab-filtered for dissolved? _____
 - Ref Lab required? _____
 - Foreign Soil? _____

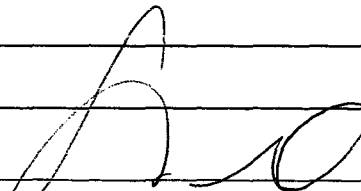
This section must be filled out for DoD projects (USACE, Navy, AFCEE)

- Yes No Is received temperature $4 \pm 2^\circ\text{C}$?
 Exceptions: _____ Samples/Analyses Affected: _____
- Yes No Rad Screen performed? Result: _____
- Yes No Was there an airbill? (Note # above in the right hand column)
- Yes No Was cooler sealed with custody seals?
 # / where: _____
- Yes No Were seal(s) intact upon arrival?
- Yes No Was there a COC with cooler?
- Yes No Was COC sealed in plastic bag & taped inside lid of cooler?
- Yes No Was the COC filled out properly?
- Yes No Did the COC indicate COE / AFCEE / Navy project?
- Yes No Did the COC and samples correspond?
- Yes No Were all sample packed to prevent breakage?
 Packing material: _____
- Yes No Were all samples unbroken and clearly labeled?
- Yes No Were all samples sealed in separate plastic bags?
- Yes No Were all VOCs free of headspace and/or MeOH preserved?
- Yes No Were correct container / sample sizes submitted?
- Yes No Is sample condition good?
- Yes No Was copy of CoC, SRF, and custody seals given to PM to fax?

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: _____

Completed by (sign):  **(print):** Mark Price
Login proof (check one): waived required performed by: _____



#	Container ID	Matrix	Test	QC	TB	Container Volume								Container Type							Preservative																
						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 ₂ SO ₄	MeOH	Na ₂ S ₂ O ₃	NaOH	Other							
1-4	A-FC	1	GRO							12																											
	D-F		VOC							12																											
	G		Diss Pb				1	3																													
	H,I		PAH				8/2/11																														
	J,K		TPH DAO				8																														
5	A-C	1	GRO							3																											
	D-F		VOC							3																											
	G		Diss Pb					1																													
	H,I		PAH					2																													
	J,K		TPH DAO					2																													
6	A-C		GRO	M5						3																											
	D-F		VOC	M5						3																											
	G		Diss Pb	M5						5	J	A	5G																								
	H,I		PAH	M5				2																													
	J,K		TPH DAO	M5				2																													
7	A-C		GRO	M30						3																											
	D-F		VOC	M30						3																											
	G		Diss Pb	M30						5	J	A	5G																								
	H		PAH	M30				1																													
	I,J		TPH DAO	M30				2																													
8	A-C	1	VOC							3																											

Bottle Totals	27	4	3		45			
---------------	----	---	---	--	----	--	--	--

Completed by:

Date: 7-31-08

SGS

Environmental

CUSTODY SEAL

Signature: _____

Date/Time: _____

7-30-08

SGS

Environmental

CUSTODY SEAL

Signature: _____

Date/Time: _____

7-30-08

SGS

Environmental

CUSTODY SEAL

Signature: _____

Date/Time: _____

7-30-08

SGS

Environmental

CUSTODY SEAL

Signature: _____

Date/Time: _____

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7-30-08

SGS

Environmental

CUSTODY SEAL

Signature: _____

Date/Time: _____

7-30-08

SGS

Environmental

CUSTODY SEAL

Signature: _____

Date/Time: _____

7-30-08

SGS

Environmental

CUSTODY SEAL

Signature: _____

Date/Time: _____

7-30-08

1083866



1 From
 Date 7-20-07 Sender's FedEx Account Number _____
 Sender's Name _____ Phone 808 487-0067
 Company ESN PACIFIC
 Address 1414 KAHAI ST.
 City HONOLULU State HI ZIP 96819

2 Your Internal Billing Reference

3 To
 Recipient's Name _____ Phone 907 562-2343
 Company SGS ENVIRONMENTAL SERVICES
 Recipient's Address 200 W. POTTER DR.
 Address _____
 City ANCHORAGE State AK ZIP 99518



8665 6327 7526

4a Express Package Service
 FedEx Priority Overnight
 FedEx Standard Overnight
 FedEx First Overnight

1083866



4b Express Freight
 FedEx 1Day Freight
 FedEx 2Day Freight

5 Packaging
 FedEx Envelope
 FedEx Pak
 Federal Quarantine 330.300

6 Special Handling
 SATURDAY Delivery
 HOLD Weekday at FedEx Location
 HOLD Saturday at FedEx Location

Does this shipment contain dangerous goods?
 No
 Yes
 Dry Ice
 Cargo Aircraft Only

7 Payment Bill to:
 Sender
 Recipient
 Third Party
 Credit Card
 Cash/Check

Total Packages 113
 Total Weight 200

8 Residential Delivery Signature Options
 No Signature Required
 Direct Signature
 Indirect Signature

520