Final

Demolition Report
Demolish Abandoned Tank Cleaning Water Piping and JP-5 Pipeline and Appurtenances
RED HILL BULK FUEL STORAGE FACILITY, NAVSUP FLEET LOGISTICS CENTER, JOINT BASE PEARL HARBOR-HICKAM,HAWAI'I

June 2012

Department of the Navy
Naval Facilities Engineering Command, Hawaii
400 Marshall Road
JBPHH, HI 96860-3139

NAVFAC
Naval Facilities Engineering Command
NAVFAC HAWAII

Contract Number N62742-09-D-1959, CTO HC06

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Prepared for:

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Executive Summary

The Department of the Navy, Navy Facilities Engineering Command Hawaii (NAVFAC Hawaii), retained Engineering/Remediation Resources Group, Inc. (ERRG), under Fixed-Price Remedial Action Contract No. N62742-09-D-1959, Contract Task Order HC06, to demolish various abandoned pipelines and appurtenances within the Red Hill Bulk Fuel Storage Facility (RHBFSF), on the island of Oahu, Hawaii. The work began on February 7, 2011, and was completed on July 20, 2011. A contract modification for additional demolition work that included demolishing abandoned water pipelines and a former train charging station was awarded on November 4, 2011; fieldwork for the additional demolition work began on February 28, 2012, and was completed on March 30, 2012. Fieldwork was performed in compliance with contract documents, approved planning documents, and applicable guidance documents and regulations. General site control was maintained throughout the project, including environmental protection, fire prevention, and waste management procedures.

In general, the scope of work performed under the initial project contract and subsequent contract modification comprised demolition, removal, and recycling of piping and appurtenances from within RHBFSF. Table 1 summarizes the piping and appurtenances that were demolished for this project. Work was completed at the following locations within RHBFSF:

- Adit 3 Tunnel
- Lower Access Tunnel
- Pearl Harbor Tunnel
- Zone 7
- Adit 6 Tunnel

Demolition of pipelines involved cutting pipe with pneumatic saws to prevent spark or ignition sources. Generally, pipelines were cut into approximate 6.5-foot sections for removal from the tunnel. Appurtenances were also demolished using pneumatic hand tools to disassemble components of the appurtenances, except for the transfer pump and former train charging station, which were demolished using manual hand tools and wrenches. Prior to demolition, pipelines were cold tapped, as applicable, and any liquid found was removed via vacuum truck provided by Naval Supply Fleet Logistics Center or ERRG's subcontractor, Pacific Commercial Services, Ltd. Liquid wastes were tested prior to being taken off site and disposed of in accordance with state and federal regulations as identified in the Site Health and Safety Plan. An estimated 4,300 gallons of wastewater and approximately 300 gallons of JP-5 slop were disposed of from the pipelines. Four drums of lead waste and one drum of asbestos waste were also

disposed of in accordance with state and federal regulations. Metal from the steel piping, appurtenances, and other metal components was recycled to the greatest extent practicable.

On September 27, 2011, a pre-final inspection was conducted of the work performed under the initial project contract. Punchlist items identified during the pre-final inspection were addressed by ERRG and subsequently accepted by NAVFAC Hawaii on September 30, 2011. A second pre-final inspection for the additional demolition work associated with the subsequent contract modification was performed on April 2, 2012. Punchlist items identified during the second pre-final inspection were addressed by ERRG and subsequently accepted by NAVFAC Hawaii during the final inspection on April 12, 2012. This demolition report documents all the project field activities occurring from February 2011 through to the final inspection in April 2012.

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Acronyms and Abbreviations

BTEX	benzene, toluene, ethylbenzene, and xylenes
CQCP	Construction Quality Control Plan
EPA	U.S. Environmental Protection Agency
ERRG	Engineering/Remediation Resources Group, Inc.
JBPHH	Joint Base Pearl Harbor-Hickam
JP-5	jet propellant 5
NAVFAC	Naval Facilities Engineering Command
NAVSUP FLC	Naval Supply Fleet Logistics Center
Navy	Department of the Navy
NEA	negative exposure assessment
NIOSH	National Institute of Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PCS	Pacific Commercial Services, Ltd
PPE	personal protective equipment
QC	quality control
RCRA	Resource Conservation and Recovery Act
RHBFSF	Red Hill Bulk Fuel Storage Facility
SHSP	Site Health and Safety Plan
TCLP	toxicity characteristic leaching procedure
TPH	total petroleum hydrocarbons

Section 1. Introduction

The Department of the Navy (Navy), Navy Facilities Engineering Command (NAVFAC) Hawaii, retained Engineering/Remediation Resources Group, Inc. (ERRG), under Fixed-Price Remedial Action Contract No. N62742-09-D-1959, Contract Task Order HC06, to demolish various abandoned pipelines and appurtenances within the Red Hill Bulk Fuel Storage Facility (RHBFSF), on the island of Oahu, Hawaii. The purpose of the demolition project was to remove pipelines and appurtenances that were severely corroded and abandoned and therefore no longer served any uses in naval support operations at RHBFSF.

This Demolition Report details the work performed for demolition, removal, and recycling of piping and associated appurtenances. Table 1 summarizes the demolished items as required by the project scope of work. Work was performed in accordance with contract documents, applicable regulations, and the approved Site Work Plan, which included the Construction Quality Control Plan (CQCP) and Site Health and Safety Plan (SHSP) (Navy, 2011a). Fieldwork was completed between February 7, 2011, and March 30, 2012.

The remainder of this report is organized as follows:

- Section 2, Site Background – summarizes the site location and history.
- Section 3, General Site Procedures – presents the overall site procedures followed to meet the objectives outlined in the planning and contract documents.
- Section 4, Fieldwork – describes each task that was performed as part of the demolition activities at the site.
- Section 5, Waste Disposal – summarizes waste handling, characterization, and disposal practices performed during the project.
- Section 6, References – lists the documents and guidance used to prepare this report.

Figures and tables are presented following Section 6. In addition, the following supplemental information is appended to this report:

- Appendix A, Laboratory Analytical Report
- Appendix B, As-Built Drawings
- Appendix C, Photographic Logs
- Appendix D, Waste Disposal Documentation

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Section 2. Site Background

This section contains general information about the project, including location and background information pertaining to the RHBFSF.

2.1. SITE LOCATION

The RHBFSF is located within the Red Hill Ridge, north–northeast of Joint Base Pearl Harbor-Hickam (JBPHH), on the island of Oahu, Hawaii. Figure 1 shows the approximate location of the RHBFSF. Work was completed in the following locations within the RHBFSF, as shown on Figure 2:

- Adit 3 Tunnel
- Lower Access Tunnel
- Pearl Harbor Tunnel
- Zone 7
- Adit 6 Tunnel

2.2. SITE HISTORY

The RHBFSF is an active fuel facility that includes 20 underground storage tanks, each with a capacity of 12.5 million gallons, and a series of tunnels and pipelines that transmit fuel to and from the Pearl Harbor Naval Base (now referred to as JBPHH). The tanks are located in pairs intermittently along the Lower Access Tunnel, flanking the both sides of the tunnel. The RHBFSF was constructed prior to World War II to support naval activities in the Pacific (Navy, 2010).

In 1960, a tank cleaning system, including approximately 5,600 linear feet of a [redacted]-inch water pipeline, Tank S311, and a 300-horsepower transfer pump, was installed at the facility. The [redacted]-inch water pipeline and Tank S311 were later converted to transport waste fuel and fuel/water materials (slop service). Tank S311 is still used for slop oil service. In 2002, the [redacted]-inch pipeline was cleaned and abandoned because it had experienced multiple failures. The line was dilapidated, obstructed entry to the lower access tunnel, and required removal (Navy, 2010).

Most of the existing [redacted]-inch-diameter jet propellant 5 (JP-5) piping in the lower tunnel had been previously removed, while the cross tunnel piping, pig launcher (a device used to clean the pipelines), manifold, and valves remained in place. However, the pipes and their associated appurtenances were severely corroded and in need of removal (Navy, 2010).

The project work conducted under this contract removed the remaining [redacted]-inch pipeline as well as the residual JP-5 piping.

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Section 3. General Site Procedures

The following sections describe the overarching procedures for site controls, quality control, health and safety, security clearance, and photograph permitting. Section 4 describes specific field work procedures for removal of the pipelines.

3.1. SITE CONTROL

Site control was maintained throughout the duration of the project and was performed in accordance with the approved Work Plan, including the SHSP (Navy, 2011a). The following site control measures were implemented:

- Environmental protection procedures to prevent unnecessary damage to the areas surrounding the worksite. Procedures included good housekeeping, preventive maintenance, visual inspections, and recordkeeping.
- Site access restrictions that only allowed preapproved personnel with acceptable background screening results to perform work at the RHBFSF (see Section 3.4)
- Fire prevention procedures to reduce the potential for fire or explosion. Procedures included work with spark-resistant tools, restrictions on hot work and smoking, and proper material handling procedures. A marine chemist performed inspections, and a Hot Work Permit issued by the Federal Fire Department was used as applicable.
- Waste management procedures to ensure proper storage and disposal of petroleum-impacted materials, in accordance with local, state, and federal transportation regulations, as applicable.
- Installation of caution signs along the train tracks during demolition activities.

3.2. QUALITY CONTROL

Work activities associated with this project were performed in accordance with the approved CQCP (Navy, 2011a), which was developed to establish standard quality control (QC) procedures for ERRG and subcontractor personnel during performance of their work on this project. The CQCP established procedures to control and document the following:

- The quality of the techniques, materials, and equipment used during the project to ensure that they met contract specifications and applicable government standards.
- The timeliness of performance through integration of quality functions (such as inspections, audits, documentation, etc.) within routine project schedules.
- The framework for communicating QC procedures and requirements to the individuals who worked on this project.

QC procedures were implemented at the start of the project and performed throughout the duration of field activities. A three-phase QC system, including preparatory, initial, and follow-up inspections, was implemented to document quality during field activities. Inspections and reviews were conducted to ensure that the work met or exceeded the regulatory requirements, project plans, and specifications. QC documentation developed during the course of the project was submitted in accordance with the CQCP, and is maintained in the project files.

The appropriate project stakeholders (ERRG, Navy, and Naval Supply Fleet Logistics Center [NAVSUP FLC] personnel) mutually agreed to eliminate the Mutual Understanding Meeting during the preconstruction meeting because of the numerous partnering contracts implemented between NAVFAC Hawaii and ERRG and the team's demonstration in familiarity with the QC system.

3.3. HEALTH AND SAFETY

Work activities associated with this project were performed in accordance with the approved SHSP (Navy, 2011a), which was developed to define the protocols necessary for protecting on-site personnel from the hazards associated with the work. A Certified Industrial Hygienist was consulted during development of the SHSP to ensure potential safety concerns were properly addressed in the plan. Work was performed in accordance with applicable regulations and guidelines of the Occupational Safety and Health Administration (OSHA) and U.S. Army Corps of Engineers' Consolidated Engineer Manual 385-1-1 (U.S. Army Corps of Engineers, 2008). The following safety-related documents were prepared during the fieldwork portion of this project:

- Meeting records from tailgate safety meetings held at the start of each workday.
- Machinery and mechanized equipment certification forms prepared for motorized equipment used on the site.
- Daily equipment inspection forms for motorized equipment used on site.
- Hot work permits issued by the Federal Fire Department and approved by a marine chemist for welding activities.

Copies of the safety-related documents are maintained with the project files in accordance with the project plans and are maintained in the project files.

3.4. SECURITY CLEARANCE AND COORDINATION

The RHBFSF is considered a high-security facility, requiring clearance for all entrants. Field staff was required to complete a P-85 security form and submit fingerprints and identification for security review prior to gaining access to the RHBFSF. Short-term staff (i.e., required on site for less than 1 week) was escorted by a government employee with site access, maintaining sight at all times.

3.5. PHOTOGRAPH PERMITS

Photograph permits were obtained throughout the duration of the fieldwork. Photographers were identified, and photographs were submitted to security for review and approval prior to distribution to the public. Appendix C contains a photograph log of the project.

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Section 4. Fieldwork

The following sections describe the specific field activities and the deviations from the Site Work Plan. Fieldwork included the following tasks:

- Pre-Mobilization Sampling
- Mobilization and Site Preparation
- Air Monitoring
- Demolition of Components – Adit 3 Tunnel
- Demolition of Components – Lower Access Tunnel
- Demolition of Components – Pearl Harbor Tunnel
- Demolition of Components – Zone 7
- Demolition of Components – Adit 6 Tunnel
- Site Inspections and Demobilization

Field activities were completed in two phases between February 7, 2011, and March 30, 2012. Work performed under the initial project contract was completed from February 7, 2011, through July 20, 2011, and work completed under a contract modification was completed February 28, 2012, through March 30, 2012. Table 1 summarizes the demolished items, including system type, location, length, respective report section reference, and whether the work was completed under the initial contract or the contract modification. Activities are discussed in detail in the following subsections. Supporting information, including laboratory analytical reports (Appendix A), updated as-built drawings (Appendix B), and a photographic log (Appendix C), are also provided in this report.

4.1. PRE-MOBILIZATION SAMPLING

Prior to the start of pipeline removal activities, ERRG performed a visual inspection of materials and equipment to be affected by the work to identify any potential hazardous materials that might result in environmental or health and safety impacts to project personnel. The visual inspection identified potential lead-based paint and asbestos-containing materials that required sampling and laboratory analysis and materials that required special handling.

A representative number of samples of the pipeline paint coatings (suspected of containing high concentrations of lead) and the pipe wrappings (suspected of containing asbestos) were collected. Twenty-four samples for lead analysis and three samples for asbestos analysis were collected from

various locations on the pipelines and appurtenances. Samples were collected in accordance with standard industry practice and the NAVFAC Pacific Project Procedures Manual (Navy, 2007). Figure 3 shows the approximate locations where samples were collected.

Samples were submitted to (b) (4) in Honolulu, Hawaii, for analysis of lead by National Institute for Occupational Safety and Health (NIOSH) Method 7082 (NIOSH, 2003) and analysis of bulk asbestos by U.S. Environmental Protection Agency (EPA) Methods 600/R-93-116 and 600/M4-82-020 (EPA, 1993 and 1982). Analytical results indicated concentrations of lead ranged from 930 to 310,000 milligrams per kilogram. Asbestos was not detected in any of the pipe wrapping samples. Tables 2 and 3 summarize the analytical results for lead and asbestos, respectively. Appendix A provides the complete analytical laboratory reports and chain-of-custody documentation. Because the lead concentrations in the pipe coatings were elevated, a negative exposure assessment (NEA) was performed to determine if a potential safety hazard exist for exposure to lead during demolition activities (see Section 4.3). In addition, paint chip debris generated during the pipeline cutting activities was collected and disposed of as hazardous waste.

4.2. MOBILIZATION AND SITE PREPARATION

Mobilization and site preparation activities for this project included setting up temporary construction facilities and traffic control devices, reviewing on-site procedures, mobilizing equipment to the RHBFSF, and coordinating with subcontractors and facility personnel. Because the RHBFSF remained operational for the duration of the project, ERRG also coordinated with other Navy contractors, operators, and facility personnel to minimize the interruption to ongoing operations as much as possible. To minimize handling and storage of equipment on site, equipment was mobilized to the RHBFSF in accordance with the field schedule and on an as-needed basis.

Existing conditions at the RHBFSF were visually inspected during mobilization. Photographs were taken to document general site conditions and the condition of any features that had the potential to be impacted during the work. No findings of potential project impacts were documented during these inspections. Appendix C provides photographic logs documenting pre-mobilization site conditions.

4.3. AIR MONITORING

Because pre-mobilization sampling identified lead in pipe coatings at concentrations ranging from 930 to 310,000 milligrams per kilogram, a NEA was performed to evaluate whether demolition activities might result in lead concentrations in the breathing zone greater than the OSHA's permissible exposure limit of 30 micrograms per cubic meter of air averaged over an 8-hour period (Title 29 Code of Federal Regulations Section 1910.1025). The NEA was performed by air sampling.

The NEA was conducted on March 7, 2011, with additional air sampling events on March 17 and April 17, 2011, to verify the accuracy of the NEA results. On March 7, 2011, the first day of cutting,

crewmembers wore Level C personal protective equipment (PPE), which included full-face personal air-purifying respirators, Tyvek, hardhat, work boots, and gloves, as well as an AirChek 52 air sampling device. No further pipe cutting was performed until air monitoring results were received from the analytical laboratory. Lead concentrations were nondetect in all samples. Based on the analytical data, it was concluded that, if the work and safety procedures and methods specified in the project plans were followed, exposure to airborne lead would not pose a risk to project personnel performing demolition activities in Level D PPE. Following confirmation of lead concentrations, crewmembers downgraded PPE to Level D and resumed pipe cutting activities. Air sampling was conducted in accordance with NIOSH Method 7300. Table 4 summarizes the air sampling results, and Appendix A provides the complete laboratory reports.

4.4. DEMOLITION OF COMPONENTS – ADIT 3 TUNNEL

Adit 3 provides outdoor access to and egress from the Lower Access Tunnel, as shown on the schematic diagram provided on Figure 2. The following features, both inside and outside of the Adit 3 tunnel, were demolished:

- Truck Fill Stand
- [redacted]-Inch Slop and Former Water Pipeline
- [redacted]-Inch Water Pipeline
- [redacted]-Inch Water Pipeline

ERRG and its subcontractor, FOPCO, Inc., performed the mechanical demolition of pipelines and components in Adit 3. The following subsections describe the demolition activities performed on each of the site features listed above.

4.4.1. Truck Fill Stand

An abandoned truck fill stand was located [redacted]. The fill stand, several gate valves, small pipes, and a concrete box were visible and designated for removal by NAVSUP FLC.

Because little information was available on the layout of the fill stand and associated piping, [redacted] was subcontracted to perform utility location using both toning and electromagnetic surveying techniques. Subsurface utilities were located on February 7, 2011. Locations of identified utilities and system piping were marked with paint on the grass and asphalt.

The aboveground components of the fill stand were removed, and the surrounding area was excavated to uncover the associated subsurface piping. The excavation did not exceed 5 feet below grade, and a safe slope was maintained throughout excavation activities.

The below-grade piping was removed and cut back to the extent possible. The pipeline sections remaining in place were plugged with concrete and the area was subsequently backfilled. Following backfill, grass seed mixture was spread on the ground surface by hand to encourage revegetation of the disturbed area. The following components from the former truck fill stand were removed:

- Concrete vault
- Truck fill stand
- Eyewash station
- Steel pipes – various sizes ((b) (3) (A))
- Eight gate valves – various sizes

Figure B-1 in Appendix B provides a drawing of the former truck fill stand area and demolished components.

4.4.2. (b)-Inch Slop and Former Water Pipeline

The former slop pipeline, (b) (3) (A) , included a (b) (3) inch pipeline that (b) (3) (A) (Section 4.5.1). The entire pipeline was marked for demolition, of which approximately (b) (3) (A) feet was within the Adit 3 Tunnel.

Prior to demolition, the pipeline was investigated to ensure that the line was clean and inert, which involved removing several 2-inch plugs along the length of the pipeline. A five-gas meter was used to test the atmosphere inside of the pipe. The pipe was found to be an empty pipe and monitored gas concentrations did not exceed action levels specified in the SHSP. As an additional precaution, the pipe was vented for 2 days at the terminus of the pipeline located at Waste Oil Tank S311 where the pipeline was accessible through a blank flange.

The pipeline was then removed by cutting it with a pneumatic reciprocating saw powered by a generator (b) (3) (A) . Cut pieces of pipe were stockpiled and removed via cart to on-site roll-off bins for recycling. The pipeline was then cut flush with the (b) (3) (A) and plugged with concrete.

Figures B-2, B-3, and B-4 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.4.3. 10-Inch Water Pipeline

A former (b) (3) (A) inch water pipeline ran roughly (b) (3) (A) above the (b) (3) -inch (b) (3) (A) pipeline (b) (3) (A) , until it veered into the existing water treatment and pump room (b) (3) (A)

(b) (3) (A) . The pipeline then terminated, open-ended, in the water treatment and pump room approximately (b) (3) feet above the pump room floor. The total length of the pipeline was approximately (b) (3) (A) feet from the (b) (3) (A) to the pipeline terminus in the pump room, although the actual starting location of the pipeline was unknown.

Three cold taps were performed on the pipeline prior to demolition. The first cold tap was performed at the apparent low point in Adit 3, (b) (3) (A) , the second near the (b) (3) (A) , and the third inside the water treatment and pump room. All three taps released pressurized clear liquid, presumably residual non-potable water, and ERRG drained the liquid into drums for removal from the Adit 3 Tunnel. NAVSUP FLC conducted the required sampling and analyses and removed the stored liquids in the drums by vacuum truck (see Section 5.2). Approximately 3,400 gallons of liquid was drained and removed from the pipeline. A five-gas meter was not required to test the atmosphere inside of the empty pipe following draining because the pipelines had a previous use as a water line.

The pipeline was then removed by cutting it with a pneumatic reciprocating saw powered by a generator (b) (3) (A) . Higher elevation cuts were made using a snorkel lift. Cut pieces of pipe were stockpiled until their removal by cart to on-site roll-off bins for recycling. The pipeline was cut flush with the (b) (3) (A) and capped with concrete.

Figures B-2 and B-3 provide drawings showing the location of the former pipeline and demolished components.

4.4.4. (b) (3) nch Water Pipeline

The former (b) (3) nch water pipeline began (b) (3) (A) as a (b) -inch pipeline that increased in diameter to (b) inches (b) (3) (A) . The pipeline ran along the tunnel wall (b) (3) (A) . Approximately (b) (3) (A) feet from the firewall, the pipe curved down and penetrated into the floor, and resurfaced on the other side of the 3Y intersection, where it (b) (3) (A) and eventually decreased in diameter to (b) (3) inches via a flange (see Section 4.6.2). The (b) (3) nch pipeline was approximately (b) (3)) feet long, with (b) feet located in the (b) (3) (A) and (b) (3) (A) feet located in the (b) (3) (A) . The (b) -inch pipeline ran below an existing (b) (3) -inch slop line. In addition, the (b) -inch pipeline was equipped with periodic supports that consisted of double wall-mounted brackets in the (b) (3) (A) which connected it to the parallel (b) (3) -inch slop line, and single wall-mounted brackets in the (b) (3) (A)

A cold tap was performed on the pipeline prior to demolition at the apparent low point in (b) (3) directly across from the sump pump. The tap provided pressurized clear liquid, presumably residual non-potable water, and ERRG drained the liquid into drums for removal from the (b) (3) (A) . NAVSUP FLC conducted the required sampling and analyses and removed the stored liquids in the drums by vacuum truck (see Section 5.2). Approximately 150 gallons of liquid was removed from the pipeline. A five-gas

meter was used to test the atmosphere inside of the empty pipe following draining, and the meter indicated none of the monitored gases were present at concentrations equal to or greater than the action levels specified in the SHSP (Navy, 2011a).

During pipe cutting activities, remnant clear liquid was found in the pipe. ERRG drained 40 gallons of the clear liquid into containers. On-site visual and olfactory observations of the remnant clear liquid found no sheen on the surface or petroleum odor. Based on the pipe's use as a water line and observations of the clear liquid, NAVFAC Hawaii personnel confirmed that the liquid was likely water. The water was disposed of by discharge onto the unpaved, grassy area adjacent to the laydown yard.

The pipeline was then removed by cutting it with a pneumatic hacksaw powered by an air compressor (b) (3) (A) Cut pieces of pipe were staged in-place, on the ground underneath the existing [redacted]-inch slop line. The pipes were stored out of the walkway, until their removal by cart to the on-site roll-off bins for recycling. In addition, a [redacted]-foot-long, [redacted]-inch aluminum pipe was cut from the firewall (b) (3) (A) to gain access to cut the [redacted]-inch pipeline. Demolition of the [redacted]-inch pipeline also included removal of the single wall-mounted bracket supports (b) (3) (A) Double wall-mounted bracket supports (b) (3) (A) were left in-place because they continued to support the [redacted]-inch slop line and were unlikely to pose a walking hazard in the tunnel. Pipes and metal supports were removed from the tunnel (b) (3) (A) and transported to the roll-off bins for metal recycling with a backhoe. The pipe was cut flush and capped with concrete in the two locations where the pipeline penetrated the floor and resurfaced. Additionally, the pipe was left in place for future use as a wall conduit at the location where the pipeline penetrated the (b) (3) (A)

Figures B-2, B-3, and B-4 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.5. DEMOLITION OF COMPONENTS – LOWER ACCESS TUNNEL

The Lower Access Tunnel is the main artery connecting the tank pairs and the Pearl Harbor Tunnel, as shown on the schematic provided on Figure 2. Work was performed along the entire Lower Access Tunnel and consisted of demolishing the following site features:

- [redacted]-Inch Slop and Former Water Pipeline
- [redacted]-Inch Water Pipeline
- Transfer Pump
- Train Charging Station

ERRG and its subcontractor, FOPCO, Inc., performed the mechanical demolition of components in the Lower Access Tunnel. The following subsections describe the demolition activities performed at each of the site features listed above.

4.5.1. [redacted]-inch Slop and Former Water Pipeline

As stated in Section 4.4.2, the former slop system included a [redacted]-inch pipeline [redacted]. While approximately [redacted] feet of the pipeline was within Adit 3, roughly [redacted] feet of the pipeline continued through the Lower Access Tunnel.

Clear liquids, presumably rinsate remaining from the previous flushing of the slop line, were found in the [redacted]-inch pipeline in the location near Tank 2 and were drained into drums prior to demolition. NAVSUP FLC conducted the required sampling and analyses and removed the stored liquids in the drums by vacuum truck (see Section 5.2). Approximately [redacted] gallons of liquid was drained and removed from the pipeline.

The [redacted]-inch pipeline was equipped with periodic supports, connecting it to a parallel [redacted]-inch compressed air pipeline. Demolition of the [redacted]-inch pipeline also included removal of the supports. Brackets were recommended initially as replacement supports; however, were later deemed unnecessary.

The pipeline was removed by cutting it into sections with a pneumatic reciprocating saw powered by an electric generator [redacted]. The pipeline penetrated through three concrete firewalls [redacted] Each pipeline penetration was hammered through the concrete firewall and the remaining hole encased with concrete. Cut pieces of pipe were stockpiled until their removal via cart to on-site roll-off bins for recycling.

Figures B-4, B-5 and B-6 in Appendix B provide drawings showing the location of the former pipeline.

4.5.2. [redacted]-inch Water Pipeline

The former [redacted]-inch water pipeline consisted of approximately [redacted] feet of pipe. The pipeline began [redacted] feet from the firewall located in between the [redacted] intersection in the Pearl Harbor Tunnel near an electrical panel, ran through the Pearl Harbor Tunnel, proceeded to the Lower Access Tunnel, and ended at the [redacted] in the Lower Access Tunnel. The pipeline ran overhead on supported beams attached to the ceiling [redacted] and were secured to the beam with u-bolts. As the pipeline veered [redacted], it extended down from the ceiling toward and along the wall, where it then ran between an active [redacted]-inch JP-5 line and an active [redacted]-inch fuel oil line. The [redacted]-inch pipeline was closed with a blind flange on the pipe end [redacted] and welded shut with an elliptical head cap on the pipe end [redacted].

A cold tap was performed on the pipeline at the apparent low point prior to demolition. The tap provided pressurized clear liquid, and ERRG drained the liquid into drums for removal from the Lower Access Tunnel. NAVSUP FLC conducted the required sampling and analyses and removed the stored liquids in the drums by vacuum truck (see Section 5.2). Approximately 100 gallons of liquid was removed from the pipeline. A five-gas meter was used to test the atmosphere inside of the empty pipe following draining, and the meter indicated none of the monitored gases were present at concentrations equal to or greater than the action levels specified in the SHSP (Navy, 2011a).

The pipeline was then removed by cutting it with a pneumatic hacksaw powered by a generator (b) (3) (A) [redacted]. The pipes were supported with a contractor lift during cutting and slowly lowered down with the lift from the ceiling supports. Cut pieces of pipe were staged in-place, on the ground, underneath the (b)-inch fuel oil line. The pipes were stored out of the walkway until their removal via cart to the on-site roll-off bins for recycling. In addition, supporting metal pipe brackets and ceiling pipe clamps were removed and disposed of in the on-site roll-off bins for recycling. Pipes and brackets were removed out of the tunnel (b) (3) (A) [redacted] and transported to the roll-off bins for metal recycling with a backhoe. In the two locations where the pipeline passed through firewalls, the pipeline was cut flush with the wall and the remaining hole encased with concrete.

Figure B-4 in Appendix B provides a drawing showing the location of the former pipeline and demolished components.

4.5.3. Transfer Pump

An abandoned transfer pump was housed in a room (b) (3) (A) [redacted]. The 300-horsepower transfer pump and associated valves were disassembled with non-sparking tools and removed from the area. The following components were removed:

- 300-horsepower centrifugal pump
- Six gate valves
- One Cla-Val
- Various piping

Two concrete slabs in the transfer pump room were also removed, including the slab upon which the transfer pump had been supported and the slab located near the Tank 2 sampling lines. The slabs were hammered out to below grade and repoured to be flush with the existing floor. Rebar was placed within the slab for support, which was overlain with aggregate base and concrete.

Figure B-5 provides a drawing showing the location of the transfer pump room and former transfer pump, and demolished components.

4.5.4. Train Charging Station

An abandoned train charging station was located in the Lower Access Tunnel near Tank 2, outside of the Transfer Pump room. The associated motor and stator unit weighed approximately 1,000 pounds and was mounted on a rectangular equipment stand comprised of steel supports. The components were disassembled into pieces of manageable weight and size using hand tools and cordless drills. The charging motor was connected to a junction box with breakers and other miscellaneous components inside. It was unbolted from the concrete and dismantled. The junction box was connected to a timing control mechanism that was mounted on a plywood backing. The metal components were separated from the wood. All components were staged in the Transfer Pump room until they were later removed and recycled. The plywood backing was disposed of in the trash bin.

The components were removed later from the tunnel via cart to Adit 3. The components were removed from the cart using a chainfall hoist and were then transported using a backhoe to the roll-off bins for metal recycling.

Figure B-5 provides a drawing of the approximate location of the former train charging station.

4.6. DEMOLITION OF COMPONENTS – PEARL HARBOR TUNNEL

The Pearl Harbor Tunnel provides the Pearl Harbor Naval Base (now referred to as JBPHH) access to the fuel tanks, as shown on the schematic provided on Figure 2. Work performed in the Pearl Harbor Tunnel consisted of demolishing the following site features:

- [redacted]-Inch Water Pipeline
- [redacted]-Inch Water Pipeline

The following subsections describe the demolition activities performed by ERRG at each of the site features listed above.

4.6.1. [redacted]Inch Water Pipeline

The former [redacted]-inch water pipeline consisted of approximately [redacted] feet of piping. The pipeline ran the length of the (b) (3) (A) in the Pearl Harbor Tunnel, beginning near an electrical panel (b) feet away from the firewall located in between the (b) (3) (A) in the Pearl Harbor Tunnel and ending at the point where the tunnel (b) (3) (A). The pipeline ran overhead alongside the [redacted]-feet [redacted]-inch water pipeline (see Section 4.5.2), on supported beams attached to the ceiling, and were secured to the beam with u-bolts. The pipeline was initially closed with a concrete plug on one end, near the electrical panel, and welded shut with an elliptical head cap on the other end, [redacted].

A cold tap was not required because the pipe appeared to be decommissioned previously. The pipeline was removed by cutting it with a pneumatic hacksaw powered by a generator (b) (3) (A) . The pipes were supported with a contractor lift during cutting and slowly lowered down with the lift from the ceiling supports. Cut pieces of pipe were staged in placed, on the ground, underneath the active [redacted]-inch large pipelines, and out of the walkway until they could be removed by cart to on-site roll-off bins for recycling. In addition, supporting metal pipe brackets and clamps were removed and disposed of in the on-site roll-off bins for recycling. Pipes and brackets were removed out of the tunnel (b) (3) (A) and transported to the roll-off bins for metal recycling with a backhoe.

Figure B-4 in Appendix B provides a drawing showing the approximate location of the former pipeline and demolished components.

4.6.2. [redacted]-Inch Water Pipeline

A former [redacted]-inch water pipeline ran for [redacted] feet (b) (3) (A) . The [redacted]-inch water pipeline originated from the [redacted]-inch pipeline (b) (3) (A) . The [redacted]-inch water pipeline (see Section 4.4.4) reduced down at a flange to [redacted] inches in diameter. The [redacted]-inch pipeline then terminated open-ended, (b) (3) (A) .

As previously stated in Section 4.4.4, cold tapping and atmosphere testing were performed on the [redacted]-inch portion of the pipeline, from which the [redacted] inch pipeline originated. The pipeline was removed by cutting it with a pneumatic hacksaw powered by a compressor (b) (3) (A) and stockpiled on the floor out of the walkway, until it could be removed by cart to on-site roll-off bins for recycling. In addition, metal supports were unbolted and removed from the [redacted]-inch pipeline. Pipes and metal supports were removed out of the tunnel (b) (3) (A) and transported to the roll-off bins for metal recycling with a backhoe.

Figure B-4 in Appendix B provides a drawing showing the approximate location of the former pipeline and demolished components.

4.7. DEMOLITION OF COMPONENTS – ZONE 7

For the purposes of this report, Zone 7 is considered to be the area from Tanks 15 and 16 through Tanks 19 and 20, including the gauging station, operator's office, and Zone 7 proper, as shown on the schematic provided on Figure 2. Work was performed throughout the Zone 7 area and consisted of demolishing the following site features:

- [redacted]-Inch Water Pipeline
- [redacted]-Inch Water Pipeline
- [redacted]-Inch JP-5 Slop Pipeline

- [redacted]-Inch JP-5 Slop Pipeline
- Pig Launchers
- Pumps and Tank
- Electrical Equipment

The following subsections describe the demolition activities performed by ERRG of each of the site features listed above.

4.7.1. [redacted]-Inch Water Pipeline

The former [redacted]-inch water piping system included approximately [redacted] feet of pipe that traversed from (b) (3) (A) as well as from (b) (3) (A) connecting to a perpendicular [redacted]-inch water pipeline (Section 4.7.2). An additional [redacted] feet of [redacted]-inch pipe was also removed from the (b) (3) (A) The section of piping in the (b) (3) (A) connected (b) (3) to the [redacted]-inch fire suppression supply pipeline. This section of pipe was removed at the request of NAVSUP FLC during the initial mobilization under a contract modification.

The pipelines were removed by cutting them into sections with a pneumatic hacksaw powered by an electric compressor powered (b) (3) (A) Cut pieces of pipe were stockpiled and removed by cart to on-site roll-off bins for recycling.

Figures B-7 and B-8 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.7.2. [redacted]-Inch Water Pipeline

The former [redacted]-inch water pipeline consisted of approximately [redacted] feet of pipe connecting the [redacted]-inch pig launcher (b) (3) (A) (Section 4.7.5) to the 600-gallon tank in Zone 7 (Section 4.7.6).

The pipeline was tapped prior to removal and was found to be full of what appeared to be water, which was subsequently drained into drums for removal from Zone 7. To characterize the waste for disposal, samples were collected of the water, and shipped to (b) (4) in Honolulu, Hawaii, for analysis of total petroleum hydrocarbon (TPH) as diesel-range organics by EPA SW-846 Method 8015; benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA SW-846 Method 8260; Resources Conservation and Recovery Act (RCRA) 8 metals by EPA SW-846 Methods 6010B and 7470A, and pH by EPA Method 150.1. Pacific Commercial Services, LTD (PCS) was then retained to appropriately dispose of the waste, which was removed from the drums by vacuum truck. Appendix D provides the waste disposal documentation. Section 5 further discusses waste disposal activities.

The pipelines were removed by cutting them into sections with a pneumatic reciprocating saw powered by an electric compressor located (b) (3) (A) Cut pieces of pipe were stockpiled and removed by cart to on-site roll-off bins for recycling.

Figures B-7, B-8, and B-9 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.7.3. [redacted]-Inch JP-5 Slop Pipeline

The former [redacted]inch JP-5 slop pipeline consisted of approximately [redacted] feet of pipe running from the [redacted]-inch pig launcher (b) (3) (A) (Section 4.7.5), through Zone 7, and terminating with a pipe plug near (b) (3) (A) The pipeline also branched into laterals traversing between (b) (3) (A) and (b) (3) (A)

The pipeline was tapped prior to removal and was found to be full of JP-5 slop, which was subsequently discharged to drums for removal from Zone 7. To characterize the waste for disposal, samples were collected of the slop and shipped to (b) (4) in Honolulu, Hawaii, for analysis of TPH as diesel-, and residual-range organics by EPA SW-846 Method 8015; TPH as gasoline-range organics and BTEX by EPA SW-846 Method 8260; RCRA 8 metals by toxicity characteristic leaching procedure (TCLP) by EPA SW-846 Methods 1311 and 8260B; and ignitability by EPA SW-846 Method 1010. PCS was retained to appropriately dispose of the waste, which was removed from the drums by vacuum truck. Appendix D provides the waste disposal documentation. Section 5 further discusses waste disposal activities.

The pipelines were removed by cutting them into sections with a pneumatic reciprocating saw powered by an electric compressor located inside of Zone 7. Cut pieces of pipe were stockpiled and removed by cart to on-site roll-off bins for recycling.

Figures B-7 and B-8 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.7.4. [redacted]Inch JP-5 Slop Pipeline

The former[redacted]nch JP-5 slop pipeline consisted of approximately [redacted] feet of pipe, consisting of two parallel pipes, beginning in Zone 7 and terminating at pipe plugs in the (b) (3) (A) area. Each pipeline was also equipped with a tee and traversed from (b) (3) (A)

The pipelines were opened at flanges and found to have a small amount of JP-5 slop, which was discharged to drums for removal from Zone 7. To characterize the waste for disposal, samples of the slop were collected and shipped to (b) (4) in Honolulu, Hawaii, for analysis of TPH as diesel-, and residual-range organics by EPA SW-846 Method 8015; TPH as gasoline-range organics and

BTEX by EPA SW-846 Method 8260; RCRA 8 metals by toxicity characteristic leaching procedure (TCLP) by EPA SW-846 Methods 1311 and 8260B; and flash point by EPA SW-846 Method 1010. PCS was retained to appropriately dispose of the waste, which was removed from the drums by vacuum truck. Appendix D provides the waste disposal documentation. Section 5 further discusses waste disposal activities.

The pipelines were removed by cutting them with a pneumatic reciprocating saw powered by an electric compressor located inside of Zone 7. Cut pieces of pipe were stockpiled and removed by cart to on-site roll-off bins for recycling.

Figures B-7 and B-9 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.7.5. Pig Launchers

A (b) (3) (A) -inch pig launcher were removed as part of the project as discussed in the following subsections.

4.7.5.1. [redacted]Inch Pig Launcher

The abandoned slop system included a [redacted]-inch pig launcher that was located near the lower entrance to the maintenance elevator, Elevator 73. The` launching station was equipped with a run of [redacted]-inch pipe, a gate valve, and a [redacted]-inch drain that dropped down into the concrete slab. The associated [redacted]-inch pipeline ran from the pig launcher to two [redacted]-inch gate valve manifolds and into the (b) (3) (A)

The drains on the pig launcher were opened, and the launcher and associated piping were found to be dry. The pig launcher was disassembled with pneumatic hand tools and a reciprocating saw powered by an electric compressor located inside of Zone 7. The components were then removed by cart to on-site roll-off bins for recycling.

At the request of NAVSUP FLC, the [redacted]-inch pipeline was cut inches from the (b) (3) (A) and a blind flange was installed. Welding (i.e., hot work) was necessary to install the blind flange, requiring a Hot Work Permit. (b) (6) , marine chemist, inspected the area, and the Federal Fire Department issued the Hot Work Permit. Hot work was also used to cut the [redacted]-inch gate valve casing into manageable pieces for removal from the tunnel. The welding procedures were prepared and submitted to the Navy Technical Representative and NAVSUP FLC for review and approval prior to performing the work.

Figure B-7 in Appendix B provides a drawing showing the location of the former pig launcher and demolished components.

4.7.5.2. [redacted]Inch Pig Launcher

As part of the abandoned slop system, an [redacted]-inch pig launcher was located near [redacted](b) (3) (A) and was the terminus of the [redacted]-inch piping in Zone 7. The launching station was equipped with a run of [redacted]-inch piping, a gate valve, and a [redacted]nch water connection.

The pig launcher was opened, drained, cold tapped, and found to have a small amount of JP-5 slop, which was subsequently removed to drums for appropriate disposal by PCS. Appendix D provides the waste disposal documentation.

The pig launcher was disassembled with pneumatic hand tools powered by an electric compressor located inside of Zone 7 and removed via cart to on-site roll-off bins for recycling.

Figures B-7 in Appendix B provides a drawing showing the location of the former pig launcher and demolished components.

4.7.6. Pumps and Tank

Two abandoned pump motors (300 and 800 gallons per minute) and a 600-gallon steel tank were demolished within Zone 7. ERRG coordinated with NAVSUP FLC personnel to obtain power sources for the pumps, which were subsequently locked out and tagged out prior to work. The pump motors and tank were then disassembled using pneumatic hand tools and removed from the tunnel for recycling.

Figures B-7 and B-8 in Appendix B provide drawings showing the location of the former pumps and tank and demolished components.

4.7.7. Electrical Equipment

Two abandoned electrical transformers were removed from the gauging station area. Pneumatic hand tools were used to demolish the equipment, and the components were removed from the tunnel for recycling. The concrete pads were also removed.

4.8. DEMOLITION OF COMPONENTS – ADIT 6 TUNNEL

Adit 6 provides [redacted](b) (3) (A) (currently inoperable) and is located at the [redacted](b) (3) of the lower main access road. Work was performed along the [redacted](b) (3) (A) and within the maintenance [redacted](b) (3) (A) and consisted of demolition of the following features:

- [redacted]-Inch JP-5 Slop Pipeline
- [redacted]-Inch JP-5 Slop Pipeline – [redacted](b) (3) (A)

ERRG and FOPCO, Inc. performed the mechanical demolition of the site features in Adit 6, as discussed in the following subsections.

4.8.1. [redacted]-Inch JP-5 Slop Pipeline

The former [redacted]nch pipeline consisted of approximately 450 feet of pipe running through the [redacted] Tunnel. The terminus of the pipeline was blind flanged at the [redacted] and [redacted] feet below [redacted] in Zone 7 (see Section 4.8.2), while the actual start of the pipeline is unknown. The pipeline drops below grade through the concrete slab approximately [redacted]

Prior to demolition, the blind flange at the pipe terminus was loosened and removed, and the pipeline was observed to be empty of fluids. The pipe was then removed by cutting it with a pneumatic reciprocating saw powered by an electric compressor [redacted]. Cut pieces of pipe were stockpiled and removed by hand cart to on-site roll-off bins for recycling.

A [redacted]-inch pipeline, which extended from the [redacted]-inch pipeline to the sump pump located in the [redacted], was also cut approximately [redacted] inches from the [redacted]. At the request of NAVSUP FLC, a flange was welded to the pipe end and a blind flange was installed. This hot work was also done in accordance with the Hot Work Permit issued by the Federal Fire Department and approved by the marine chemist.

Figures B-10 and B-11 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.8.2. [redacted]-Inch JP-5 Slop Pipeline – [redacted] Shaft

The [redacted]inch JP-5 slop pipeline [redacted], described in the previous section, continued down the [redacted] shaft for approximately [redacted] feet before emerging into Zone 7. The [redacted] shaft is equipped with steel platforms at [redacted]-foot increments and connected by steel ladders and acts as an emergency exit from the Lower Access Tunnel and as part of the facility ventilation system.

Before work began in the shaft, ERRG consulted [redacted], a structural engineering firm, to provide an analysis of the structural integrity of existing platforms and ladders. Two engineers were escorted on site to perform a visual inspection. Based on observations during the inspection and follow-up research, not enough information was available to determine whether the existing platforms met the requirements of the project-specific fall protection plan. A design was developed to provide the required anchor point support (designated as 5,000 pounds per person by OSHA), which included installation of a beam under the existing platforms. Harnessed crewmembers were then able to anchor their fall protection properly (Navy, 2011b).

The pipe was removed by cutting it with a pneumatic reciprocating saw powered by an electric generator [redacted]. Cut pieces of pipe were lowered by chainfall hoist to the bottom of the elevator shaft and removed through the Lower Access Tunnel and [redacted] by cart to on-site roll-off bins for recycling.

Figures B-10 and B-11 in Appendix B provide drawings showing the location of the former pipeline and demolished components.

4.9. SITE INSPECTIONS AND DEMOBILIZATION

Site inspections and demobilization were performed following the completion of initial contract work and contract modification work. As part of the demobilization effort, equipment, materials, and supplies not belonging to NAVFAC Hawaii were removed from the RHBFSF. Demobilization for the initial contract was performed for 2 days on August 15 and 16, 2012. On September 27, 2011, a pre-final inspection was conducted for work performed under the initial contract. Five punchlist items were identified during the inspection. The punchlist items were subsequently addressed, and NAVFAC Hawaii accepted all work on September 30, 2011.

During the pre-final inspection on September 27, 2011, NAVFAC Hawaii identified additional work that was necessary and issued a contract modification to cover the additional work as identified in Table 1. Demobilization for contract modification work was performed for 3 days from March 28 to March 30, 2012. On April 2, 2012, a pre-final inspection for the contract modification work was conducted. Two punchlist items were identified during the inspection. The punchlist items were subsequently addressed, and NAVFAC Hawaii accepted all contract modification work during a final inspection performed on April 12, 2012.

Section 5. Waste Disposal

Wastes were disposed of in accordance with Navy and NAVSUP FLC requirements and with local, state, and federal standards. The following sections detail the disposal of metals and liquid wastes generated during demolition activities.

5.1. METALS RECYCLING

ERRG retained the services of (b) (4), a metals recycler, to transport and recycle steel pipe, appurtenances, and other metal components. A total of approximately 168.58 tons of metal was removed from the RHBFSF. Appendix D provides receipts of recycle and related documentation.

5.2. LIQUID WASTE

The liquid waste discovered throughout the project consisted of water with debris and JP-5 slop. The liquid waste was containerized in 55-gallon drums that were temporarily staged outside of the tunnel for off-site disposal in accordance with the Waste Management Plan (Navy, 2011a). Liquids were removed from the drums by vacuum trucks provided by the NAVFAC FLC or PCS. Liquid was found in the following site features:

- (b) (3) (A) Tunnel: approximately 3,400 gallons of water and debris in the [redacted]-inch upper water pipeline
- (b) (3) (A) Tunnel: approximately 150 gallons of water and debris in the 670-foot-long [redacted]-inch water pipeline
- (b) (3) (A) Tunnel: approximately 700 gallons of water and debris in the [redacted]-inch slop and former water pipeline
- (b) (3) (A) Tunnel: approximately 100 gallons of water and debris in the 450-foot-long [redacted]-inch water pipeline
- Zone 7: approximately 200 gallons of water/debris in the [redacted]-inch pipeline
- Zone 7: approximately 150 gallons of JP-5 slop in the [redacted]-inch pipeline
- Zone 7: approximately 150 gallons of JP-5 slop in the [redacted]-inch pipeline
- Zone 7: small amount of JP-5 slop in the [redacted]-inch pig launcher

Liquids from the [redacted] inch and [redacted]-inch upper water pipeline (b) (3) (A), and the [redacted]-inch and [redacted]-inch slop and former water pipeline located (b) (3) (A) were characterized and removed by NAVSUP FLC.

The remaining liquids were characterized by ERRG and removed and disposed of by PCS. To properly characterize the waste, liquid samples were collected and analyzed were for TPH as gasoline-, diesel-, and residual-range organics; BTEX; TCLP RCRA 8 metals; and ignitability for JP-5 slop and TPH as diesel-range organics; BTEX; RCRA 8 metals; and pH for wastewater. Laboratory analytical results of the liquid samples indicated the waste was nonhazardous and acceptable for disposal at the designated disposal facilities. The JP-5 slop was transported to PVT Land Company, Ltd.'s disposal facility in Waianae, Hawaii, and all other liquid wastewater was transported to Unitek Solvents Services, Inc.'s disposal facility in Kapolei, Hawaii. Appendix D provides the disposal manifests and supporting documentation.

5.3. LEAD AND ASBESTOS WASTES

Lead debris, including lead paint chips, generated during pipeline cutting activities was vacuumed with a commercial wet and dry shop vacuum using a high-efficiency particulate air grade filter. Vacuum bags with lead debris were contained in 55-gallon drums displaying a Hazardous Waste label.

Gaskets potentially containing asbestos were also encountered during demolition activities. Gaskets were collected and contained in 55-gallon drums displaying a Hazardous Waste label. Four drums of lead waste and one drum of asbestos waste were generated during project activities. ERRG contracted PCS to remove, transport, and dispose of the lead and asbestos wastes. Lead and asbestos were disposed of at the designated facility Clean Harbors San Jose, LLC in San Jose, California, and PVT Land Company, Ltd. in Waianae, Hawaii. Appendix D provides the disposal manifests and supporting documentation.

Section 6. References

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U.S. Environmental Protection Agency (EPA), 1993. "Method for the Determination of Asbestos in Bulk Building Materials, EPA-600/R-93-116." July.

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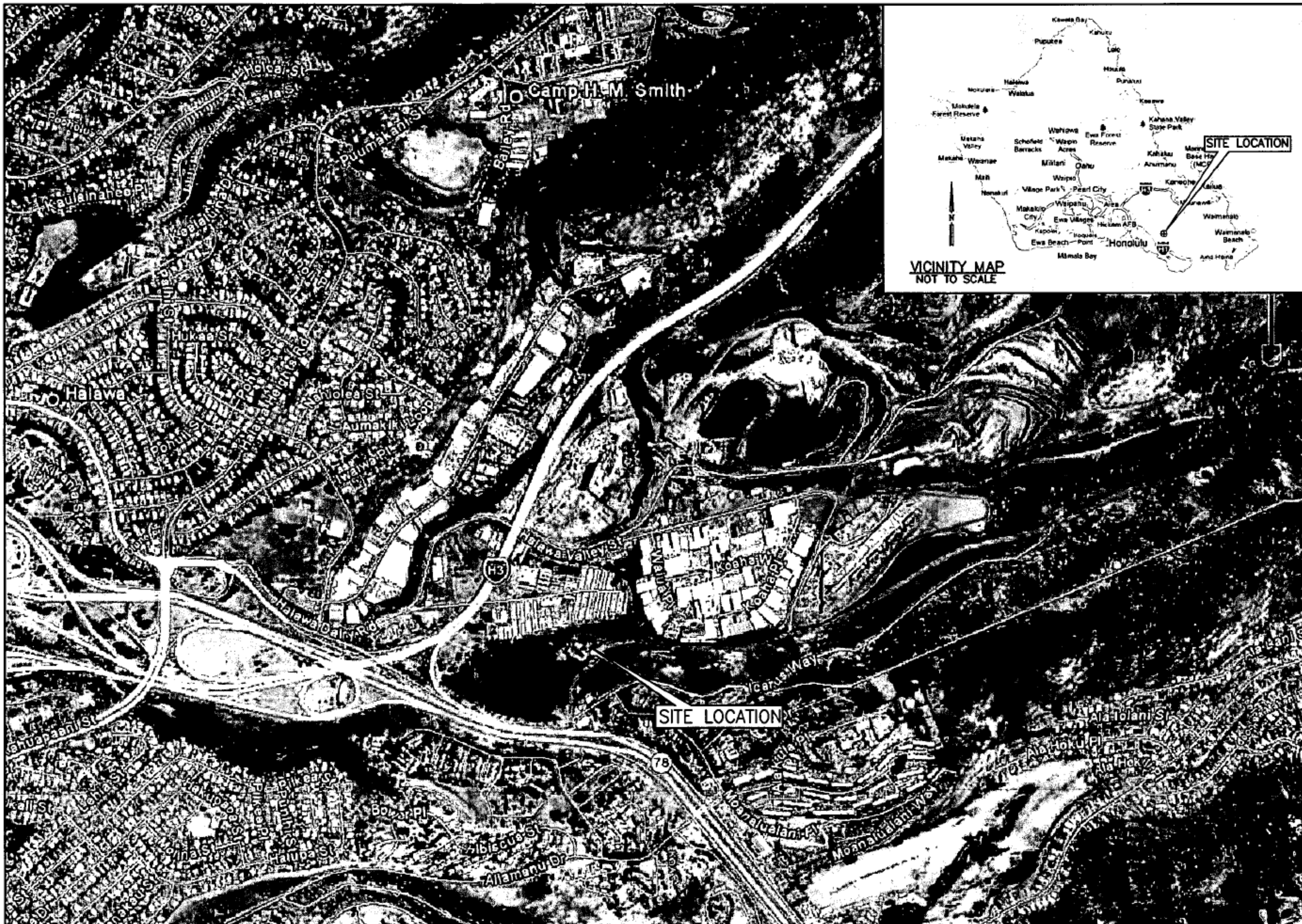
Figures

Figures



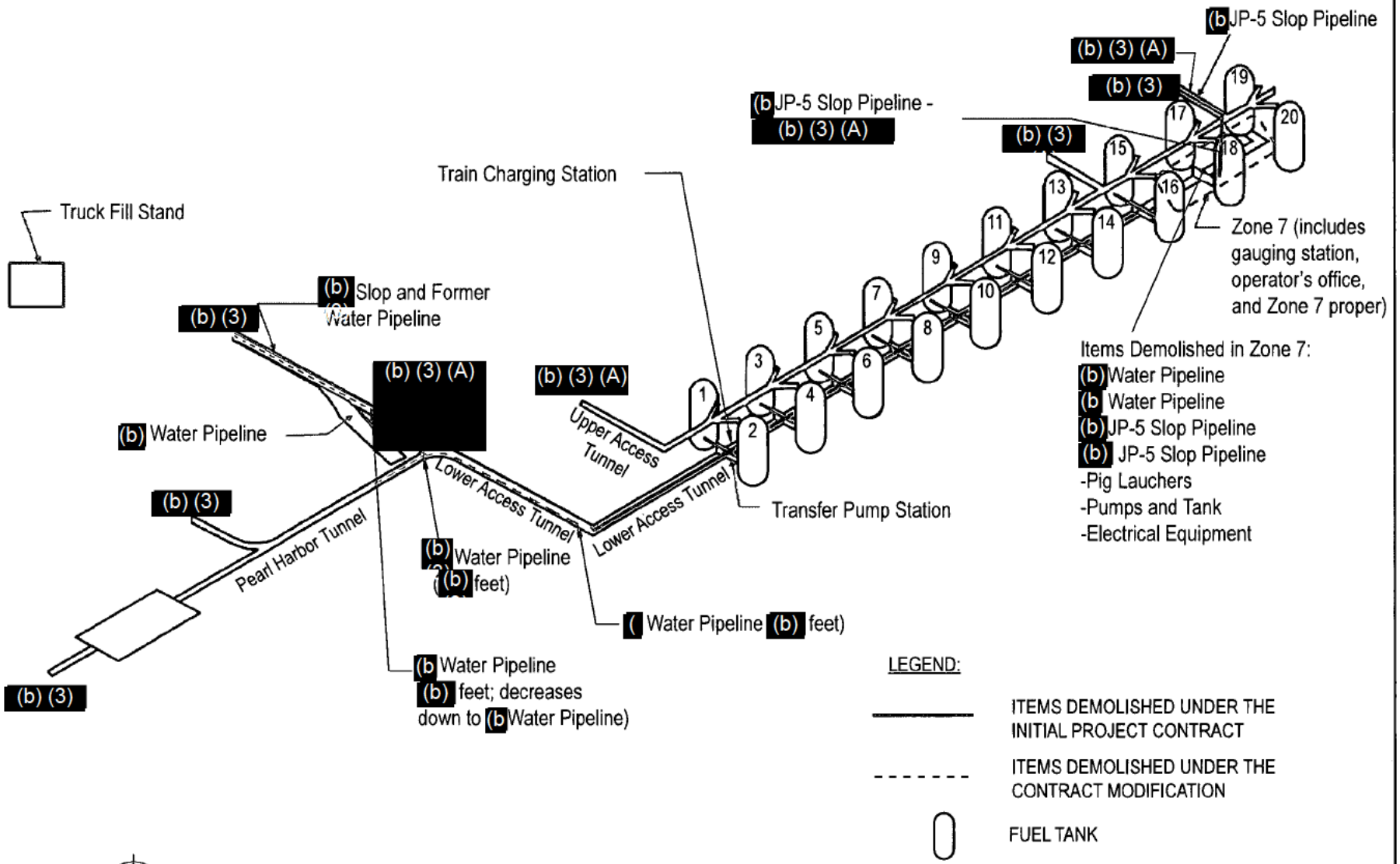
SOURCE: GOOGLE MAPS

N

Department of the Navy
NAVFAC Hawaii
400 Marshall Road
JBPHH, HI 96860-3139

PROJECT: DEMOLISH ABANDONED TANK CLEANING WATER PIPING AND JP-5 PIPELINES AND APPURTENANCES		SITE LOCATION			
CONTRACT: N62742-09-D-1959	CTO: HC06	DRAWN BY: [redacted] 04/26/12	CHECKED BY: [redacted] 04/26/12	PROJECT NO. 2010-136	FIG NO. 1
LOCATION: RED HILL JOINT BASE PEARL HARBOR-HICKAM OAHU, HAWAII					

FILE NAME: N:\Graphics\2010\2010-136 NAVFAC Red Hill Pipe Demo\Fig1.dwg LAYOUT NAME: 1 PLOTTED: Monday, April 30, 2012 - 8:23am



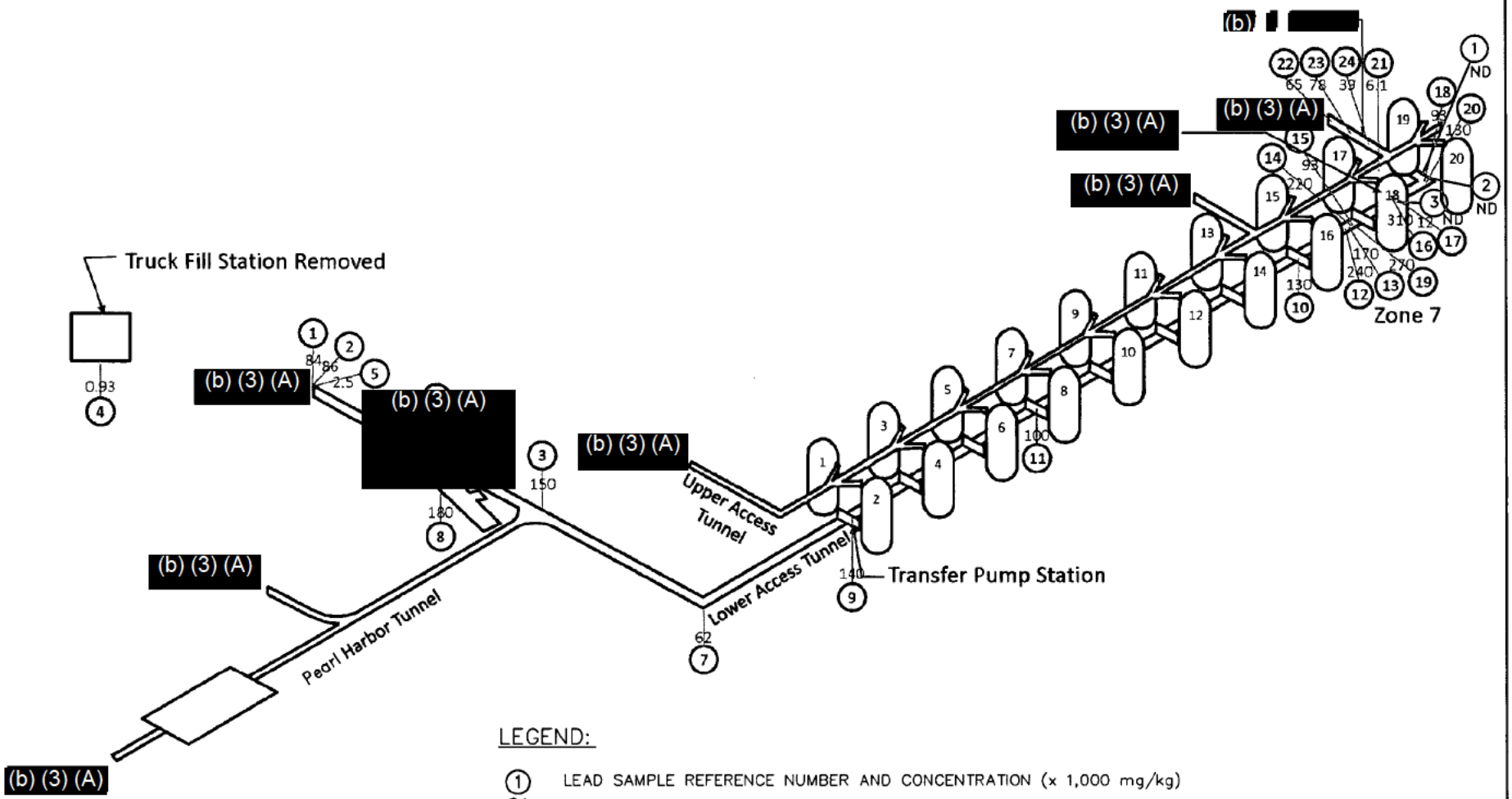
FILE NAME: M:\Graphics\2010\2010-136 NAVFAC Red Hill Pipe Demo\Fig2.dwg LAYOUT NAME: 2 PLOTTED: Thursday, April 19, 2012 - 3:55pm

Department of the Navy
NAVFAC, Hawaii
400 Marshall Road,
JBPHH, HI 96860-3139

PROJECT: DEMOLISH ABANDONED TANK CLEANING WATER PIPING AND (b) (3) PIPELINE AND APPURTENANCES
CONTRACT: N62742-09-D-1959
CTO: HC06
LOCATION: RED HILL, JOINT BASE PEARL HARBOR-HICKAM, OAHU, HAWAII

FACILITY SCHEMATIC DIAGRAM

DRAWN BY:	CHECKED BY:	PROJECT NO.	FIG NO.
(b) (6) 04/19/12	(b) (6) 04/19/12	2010-136	2



LEGEND:

(1) 84 LEAD SAMPLE REFERENCE NUMBER AND CONCENTRATION (x 1,000 mg/kg)

(1) 17 ASBESTOS SAMPLE REFERENCE NUMBER AND CONCENTRATION (%)

NOTES:

ND = NONE DETECTED

mg/kg = MILLIGRAMS PER KILOGRAM

N

Not to Scale

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PROJECT: DEMOLISH ABANDONED TANK CLEANING WATER PIPING AND JP-5 PIPELINES AND APPURTENANCES

CONTRACT: N62742-09-D-1959

CTO: HC06

LOCATION: RED HILL
JOINT BASE PEARL HARBOR-HICKAM
OAHU, HAWAII

LEAD AND ASBESTOS SAMPLING LOCATIONS

DRAWN BY:	CHECKED BY:	PROJECT NO.	FIG NO.
(b) 04/26/12	(b) 04/26/12	2010-136	3

Tables

Tables

Table 1. Demolition Summary

System Type	Demolished Component	Location	Length	Report Section Reference
		Initial Project Contract		
Water Line System	Truck Fill Stand	(b) (3) (A)	N/A	4.4.1
Slop Line System and Former Water Line System	(b) (3) (A)nch Slop and Former Water Pipeline	(b) (3) (A)	600	4.4.2
		(b) (3) (A) (b) (3)	4600	4.5.1
Water Line System	(b) (3) (A)nch Water Pipeline	(b) (3) (A)	600	4.4.3
Water Line System	Transfer Pump	(b) (3) (A) (b) (3)	N/A	4.5.3
JP-5 Slop Line System	(b) (3)nch Water Pipeline	Zone 7	200	4.7.1
JP-5 Slop Line System	(b) (3)Inch Water Pipeline	Zone 7	250	4.7.2
JP-5 Slop Line System	(b) (3)nch JP-5 Slop Pipeline	Zone 7	450	4.7.3
JP-5 Pipeline System	(b) (3)-Inch (b) (3) (A) Slop Pipeline	Zone 7	265	4.7.4
JP-5 Pipeline System	(b) (3)-Inch Pig Launcher	Zone 7	N/A	4.7.5.1
JP-5 Slop Line System	(b) (3)nch Pig Launcher	Zone 7	N/A	4.7.5.2
JP-5 Slop Line System	Pumps and Tank	Zone 7	N/A	4.7.6
N/A	Electrical Equipment	Zone 7	N/A	4.7.7
JP-5 Slop Line System	(b) (3)nch JP-5 Slop Pipeline	(b) (3) (A)	450	4.8.1
JP-5 Slop Line System	(b)-Inch JP-5 Slop Pipeline - (b) (3) (A) Shaft	(b) (3) (A) (b) (3) (A)	150	4.8.2
		Contract Modification		
Water System Line	(b)-Inch Water Pipeline	(b) (3) (A)	600	4.4.4
		(b) (3) (A) (b) (3)	30	4.4.4
		(b) (3) (A)	40	4.4.4
Water System Line	(b)-Inch Water Pipeline	(b) (3) (A) (b) (3)	450	4.5.2
N/A	Train Charging Station	Lower Access Tunnel	N/A	4.5.4
Water System Line	(b)-Inch Water Pipeline	(b) (3) (A)	140	4.6.1
Water System Line	(b)-Inch Water Pipeline	(b) (3) (A)	90	4.6.2
JP-5 Slop Line System	(b)-Inch Water Pipeline	Zone 7	50	4.7.1

Notes:
N/A = Not Applicable

Table 2. Paint Sampling – Total Lead Analysis Summary

Sample No.	Project Component	Sample Location and Description	Date	Result[1] (mg/kg)
1	[redacted]-inch water pipeline	(b) (3) (A)	01/13/2011	84,000
2	[redacted]-inch water pipeline		01/13/2011	86,000
3	[redacted]-inch slop and former water pipeline		01/13/2011	150,000
4	Truck fill stand		02/15/2011	930
5	[redacted]-inch water pipeline		02/15/2011	2,500
6	[redacted]-inch slop and former water pipeline		02/15/2011	2,300
7	[redacted]-inch slop pipeline		02/15/2011	62,000
8	[redacted]-inch water pipeline		02/15/2011	180,000
9	[redacted]-inch slop and former water pipeline		02/15/2011	140,000
10	[redacted]-inch slop and former water pipeline		02/15/2011	130,000
11	[redacted]-inch slop and former water pipeline		02/15/2011	100,000
12	[redacted]-inch [redacted] slop pipeline		03/11/2011	240,000
13	[redacted]-inch [redacted] slop pipeline		03/11/2011	170,000
14	[redacted]-inch [redacted] slop pipeline		03/11/2011	220,000
15	[redacted]-inch [redacted] slop pipeline		03/11/2011	97,000
16	[redacted]-inch manifold		03/11/2011	310,000
17	[redacted]-inch pig launcher		03/11/2011	12,000
18	[redacted]-inch pig launcher		03/11/2011	93,000
19	[redacted]-inch water pipeline		03/11/2011	270,000
20	[redacted]-inch water pipeline		03/11/2011	130,000
21	Top platform in the [redacted]		06/09/2011	6,100
22	[redacted]-inch [redacted] slop pipeline		06/09/2011	65,000
23	[redacted]-inch [redacted] slop pipeline		06/09/2011	78,000
24	[redacted]nch [redacted] slop pipeline		06/09/2011	39,000

Notes:

1 Results were compared to Occupational Safety and Health Administration guidelines for occupational safety. Detections greater than 400 mg/kg were considered to contain lead.

mg/kg = milligrams per kilogram

Table 3. Pipe Wrap Sampling – Asbestos Analysis Summary

Sample No.	Project Component	Sample Location	Date	Result (mg/kg)
1	[redacted]-inch water pipeline	(b) (3) (A)	02/03/2011	Not Detected
2	[redacted]-inch pig launcher		02/03/2011	Not Detected
3	[redacted]-inch pig launcher		02/03/2011	Not Detected

Notes:
mg/kg = milligrams per kilogram

Table 4. Air Sampling – Lead Analysis Summary

Sample No.	Date	Work Activity	Air Volume (liter)	Total (µg)	Concentration (mg/m³)
0307-001	03/07/2011	Began cutting the (b)(3)(A)-inch slop pipeline (b) (3) (A)	720	<0.38	<0.00052
0307-002	03/07/2011		754	<0.38	<0.00050
0307-003*	03/07/2011		764	<0.38	<0.00049
0307-004	03/07/2011		720	<0.38	<0.00052
0307-005*	03/07/2011		720	<0.38	<0.00052
0307-006	03/07/2011		760	<0.38	<0.00049
0317-001	03/17/2011	Continued cutting the (b)(3)-inch slop pipeline approximately (b) (3) (A)	902	0.78	0.00086
0317-002	03/17/2011		894	<0.38	<0.00042
0317-003	03/17/2011		910	<0.38	<0.00041
0317-004*	03/17/2011		910	<0.38	<0.00041
0317-005	03/17/2011		908	<0.38	<0.00041
0317-006*	03/17/2011		910	<0.38	NA
0413-001	04/13/2011	Continued disassembly of the (b)(3)-inch pipelines (b)(3)	920	2.5	0.0028
0413-002*	04/13/2011		920	<0.38	<0.00041
0413-003	04/13/2011		921	2.4	0.0027
0413-004	04/13/2011		922	2.6	0.0029
0413-005	04/13/2011		919	10	0.011
0413-006*	04/13/2011		921	<0.38	<0.00041

Notes:

* = Sample blanks sent to the laboratory.

mg/m^3 = milligrams per cubic meter

NA = not available

µg = micrograms

< = not detected at concentration greater than laboratory reporting limit

Appendix A -
Laboratory Analytical Reports

Appendix A. Laboratory Analytical Reports

Lead Paint/Asbestos Results – (b) (4)

(b) (4)

(b) (4)

LABORATORY DIVISION ANALYTICAL REPORT

NVLAP LAB CODE (b) (4)

Tuesday, January 18, 2011

(b) (4)

AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL MICROBIOLOGY ISO/IEC 17025:2005 LAB # 101812

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Email: (b) (6) @errg.com

(b) (4) **Job No:** 20110058
Your Project: 2010-136 Pipeline demolition

Lead, total (paint chips)

NIOSH **Method:** 7082 LEAD by FAAS

Sample No.	Your Sample Description	Sample Type	Results	Units	Date Submitted	Date Analyzed
20110113001	**001 Under stair, paint chip, black over red 12/2/10**	UNK	84000	mg/kg	1/13/2011	1/13/2011
Comments	MRL = 83 mg/kg					
20110113001	**001 Under stair, paint chip, black over red 12/2/10**	DUP	86000	mg/kg	1/13/2011	1/13/2011
Comments	MRL = 83 mg/kg					
20110113002	**002 Past airlock, paint chip fragments, red 12/2/10**	UNK	150000	mg/kg	1/13/2011	1/13/2011
Comments	MRL = 92 mg/kg					

All Quality Control data are acceptable unless otherwise noted.

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Phone Number: (b) (6)
Facsimile: (808) 533-6010
Email: (b) (6) @errg.com

(b) (4) **Job No:** 20110058
Your Project: 2010-136 Pipeline demolition

General Comments
All analysts participate in interlaboratory quality control testing to continuously document profiency. The samples analyses subject of this analytical report were conducted in general accordance with the procedures associated with the" analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sampl relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. This report is not to be duplicated except in full without the expressed written permission of (b) (4) This report should not be construed as an endorsement for a product or a service by the AIHA or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. For air samples, results are calculated based on the reported air volumes. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

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> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
ND = NOT DETECTED which means the analyte, if present below our stated detection limit/ level.
RPD = Relative Percent Deviation [unk-dup]/ave(unk,dup)*100.
# = Analytical methods marked with an "#" are not within our AIHA Scope of Accreditation.
MRL = Method Reporting Limit.

(b) (6)

(b) (6)
Laboratory Manager

DID (b) (4) FORENSIC DIVISION COLLECT THESE SAMPLES? No

(b) (4)

(b) (4)

LABORATORY DIVISION ANALYTICAL REPORT

NVLAP LAB CODE (b) (4)

Tuesday, February 08, 2011

(b) (4)

AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL MICROBIOLOGY ISO/IEC 17025:2005 LAB # 101812

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Phone Number: (b) (6)
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Email:

(b) (4) **Job No:** 20110178
Your Project: Pipeline Demolition, 2/3/11

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present? / Type	%v/v	Other Fibrous	% v/v	Matrix	% v/v	Date Received	Date Analyzed
20110203024	003 RED HILL (b) (3) (A) PIPE WRAP	NONE DETECTED	< 1	Synthetic fiber (undulose extinction)	< 40	Calcite + quartz + polymeric binder + paint	> 60	2/3/2011	2/8/2011
Layer	Whole Sample Basis								
Comments	Brown mastic/oil like material with brown fibers and gray paint. Visual estimation: <1%.								
20110203025	004 RED HILL (b) (3) (A) PIG LAUNCHER	NONE DETECTED	< 1	Synthetic fiber (undulose extinction)	< 40	Calcite + quartz + polymeric binder	> 60	2/3/2011	2/8/2011
Layer	Mastic/oil and fibers								
Comments	Brown mastic/oil like material with brown fibers, and silver and orange paint. Visual estimation: <1%.								
	Brown mastic/oil with brown fibers								

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(b) (4) [redacted] **Job No:** 20110178
Your Project: Pipeline Demolition, 2/3/11

Bulk Asbestos Determination

Sample No.	Your Sample Description	Asbestos Present? / Type	%v/v	Other Fibrous	% v/v	Matrix	% v/v	Date Received	Date Analyzed
20110203025	**004 RED HILL (b) (3) (A) [redacted] PIG LAUNCHER**	NONE DETECTED	**< 1**	None Detected	**< 1**	Paint + calcite	**> 99**	2/3/2011	2/8/2011
Layer	Paint								
Comments	Brown mastic/oil like material with brown fibers, and silver and orange paint. Visual estimation: <1%.								
	Silver and orange paint								
20110203026	**005 RED HILL (b) (3) (A) [redacted] PIG LAUNCHER**	NONE DETECTED	**< 1**	Synthetic fiber (undulose extinction)	**< 40**	Calcite + quartz + polymeric binder	**> 60**	2/3/2011	2/8/2011
Layer	Mastic/oil and fibers								
Comments	Brown mastic/oil like material with brown fibers, and silver paint. Visual estimation: <1%.								
	Brown mastic/oil with brown fibers								
20110203026	**005 RED HILL (b) (3) (A) [redacted] PIG LAUNCHER**	NONE DETECTED	**< 1**	None Detected	**< 1**	Paint + calcite	**> 99**	2/3/2011	2/8/2011
Layer	Paint								
Comments	Brown mastic/oil like material with brown fibers, and silver paint. Visual estimation: <1%.								
	Silver and orange paint								

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(b) (4) **Job No:** 20110178
Your Project: Pipeline Demolition, 2/3/11

General Comments

The bulk samples analyses subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and/ or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable and suffer from serious analytical limitations of their own including a lack of standardized or accredited methodology. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 50% relative (1 to 5%); 25% relative (6 to 25%) and 20% (>26% v/v). Whole sample percentage results are estimated on the basis of the relative "volume" of each readily discernable layer. We will not separate layers which in our opinion are not readily discernable. This report is not to be duplicated except in full without the expressed written permission of (b) (4) This report does not represent a product endorsement by the AIHA, NIST or any affiliated organizations. Unless otherwise indicated, the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions

None Detected = asbestos was not observed in the sample.
Tr = TRACE, i.e., asbestos WAS detected above our detection limits of 0.1% but BELOW quantifiable limits of 1.0%. Point counting must be used for concentration ranges below 1%.
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
 # = Analytical methods marked with an "#" are not within our AIHA Scope of Accreditation.

(b) (6) [redacted]

DID (b) (4) FORENSIC DIVISION COLLECT THESE SAMPLES? No

(b) (6) [redacted]
Laboratory Manager

(b) (4)

(b) (4)

LABORATORY DIVISION ANALYTICAL REPORT

NVLAP LAB CODE (b) (4)

Tuesday, February 22, 2011

(b) (4)

AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL MICROBIOLOGY ISO/IEC 17025:2005 LAB # 101812

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Email: (b) (6) @errg.com

(b) (4) **Job No:** 20110276
Your Project: RED HILL

Lead, total (paint chips)

NIOSH **Method:** 7082 LEAD by FAAS

Sample No.	Your Sample Description	Sample Type	Results	Units	Date Submitted	Date Analyzed
20110215033	**0214-001 OUTSIDE (b) (3) (A), SILVER PAINT TRUCK STAND**	UNK	930	mg/kg	2/15/2011	2/16/2011
Comments	MRL = 39 mg/kg, sample limited (< 0.25g)					
20110215034	**0214-002 INSIDE TUNNEL, TOP (b) (3) WATER LINE-ENTRY**	UNK	2500	mg/kg	2/15/2011	2/16/2011
Comments	MRL = 63 mg/kg, sample limited (< 0.25g)					
20110215035	**0214-003 INSIDE TUNNEL, BOTTOM (b) (3) WATER LINE-PUMP ROOM DOOR**	UNK	2300	mg/kg	2/15/2011	2/16/2011
Comments	MRL = 51 mg/kg, sample limited (< 0.25g)					
20110215036	**0214-004 INSIDE TUNNEL (b) (3) (A) WATER LINE-RUSTED**	UNK	62000	mg/kg	2/15/2011	2/16/2011
Comments	MRL = 39 mg/kg					

All Quality Control data are acceptable unless otherwise noted.

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(b) (4) [redacted] **Job No:** 20110276
Your Project: RED HILL

General Comments
All analysts participate in interlaboratory quality control testing to continuously document profiency. The samples analyses subject of this analytical report were conducted in general accordance with the procedures associated with the" analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sampl relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. This report is not to be duplicated except in full without the expressed written permission of (b) (4) [redacted]. This report should not be construed as an endorsement for a product or a service by the AIHA or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. For air samples, results are calculated based on the reported air volumes. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

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MRL = Method Reporting Limit.

(b) (6) [redacted]

DID (b) (4) [redacted] FORENSIC DIVISION COLLECT THESE SAMPLES? No

(b) (6) [redacted]
Laboratory Manager

(b) (4)

(b) (4) LABORATORY DIVISION ANALYTICAL REPORT

NVLAP LAB CODE (b) (4)

Thursday, March 17, 2011

(b) (4)

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(b) (4) **Job No:** 20110442
Your Project: Red Hill 03/10/11

Lead, total (paint chips)

NIOSH **Method:** 7082 LEAD by FAAS

Sample No.	Your Sample Description	Sample Type	Results	Units	Date Submitted	Date Analyzed
20110311043	0310-001 Pump Room (b)(3)	UNK	180000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 110 mg/kg; Sample limited < 0.25g					
20110311044	0310-002 Tank #2, New Paint Outside P.R.	UNK	140000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 76 mg/kg; Sample limited < 0.25g					
20110311045	0310-003 Tank #16, End of (b)(3)	UNK	130000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 80 mg/kg; Sample limited < 0.25g					
20110311046	0310-004 Tank #8 (b)(3)	UNK	100000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 68 mg/kg; Sample limited < 0.25g					

All Quality Control data are acceptable unless otherwise noted.

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(b) (4) [redacted] **Job No:** 20110442
Your Project: Red Hill 03/10/11

General Comments
All analysts participate in interlaboratory quality control testing to continuously document profiency. The samples analyses subject of this analytical report were conducted in general accordance with the procedures associated with the" analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sampl relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. This report is not to be duplicated except in full without the expressed written permission of (b) (4) [redacted] This report should not be construed as an endorsement for a product or a service by the AIHA or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. For air samples, results are calculated based on the reported air volumes. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

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MRL = Method Reporting Limit.

(b) (6) [redacted]

DID (b) (4) [redacted] FORENSIC DIVISION COLLECT THESE SAMPLES? No

(b) (6) [redacted]
Laboratory Manager

(b) (4)

(b) (4)

LABORATORY DIVISION ANALYTICAL REPORT

NVLAP LAB CODE (b) (4)

Thursday, March 17, 2011

(b) (4)

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Email: (b) (6)

(b) (4) **Job No:** 20110443
Your Project: Red Hill 03/09/11

Lead, total (paint chips)

NIOSH **Method:** 7082 LEAD by FAAS

Sample No.	Your Sample Description	Sample Type	Results	Units	Date Submitted	Date Analyzed
20110311047	**0309-01** (b) (3) (A)	UNK	240000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 39 mg/kg; Sample limited < 0.25g					
20110311048	**0309-02** (b) (3) (A) **#2**	UNK	170000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 38 mg/kg					
20110311049	**0309-03** (b) (3) (A)	UNK	220000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 40 mg/kg; Sample limited < 0.25g					
20110311050	**0309-04** (b) (3) (A)	UNK	97000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 80 mg/kg; Sample limited < 0.25g					

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Email: (b) (6) [redacted]@errg.com

(b) (4) [redacted] **Job No:** 20110443
Your Project: Red Hill 03/09/11

Lead, total (paint chips)

NIOSH **Method:** 7082 LEAD by FAAS

Sample No.	Your Sample Description	Sample Type	Results	Units	Date Submitted	Date Analyzed
20110311051	**0309-05** (b) (3) (A) [redacted]	UNK	310000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 39 mg/kg					
20110311052	**0309-06** (b) (3) (A) [redacted] **PIG LAUNCHER**	UNK	12000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 41 mg/kg; Sample limited < 0.25g					
20110311053	**0309-07** (b) (3) (A) [redacted] **PIG LAUNCHER**	UNK	93000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 37 mg/kg					
20110311054	**0309-08** (b) (3) (A) [redacted] **WATER LINE**	UNK	270000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 39 mg/kg; Sample limited < 0.25g					
20110311055	**0309-09** (b) (3) (A) [redacted] **WATER LINE**	UNK	130000	mg/kg	3/11/2011	3/17/2011
Comments	MRL = 39 mg/kg; Sample limited < 0.25g					

All Quality Control data are acceptable unless otherwise noted.

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(b) (4) [redacted] **Job No:** 20110443
Your Project: Red Hill 03/09/11

General Comments
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MRL = Method Reporting Limit.

(b) (6) [redacted]

DID (b) (4) [redacted] FORENSIC DIVISION COLLECT THESE SAMPLES? No

(b) (6) [redacted]
Laboratory Manager

(b) (4)

(b) (4)

LABORATORY DIVISION ANALYTICAL REPORT

NVLAP LAB CODE (b) (4)

Tuesday, June 14, 2011

(b) (4)

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AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL LEAD ISO/IEC 17025:2005 LAB # 101812

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE ISO/IEC 17025:2005 LAB # 101812

(b) (6)

ERRG
677 Ala Moana Blvd. Suite 308

Honolulu HI 96813

Phone Number: (b) (6)
Facsimile: (808) 533-6010
Email: (b) (6) @errg.com

(b) (4) **Job No:** 20111238
Your Project: RED HILL

Lead, total (paint chips)

NIOSH **Method:** 7082 LEAD by FAAS

Sample No.	Your Sample Description	Sample Type	Results	Units	Date Submitted	Date Analyzed
20110609071	0608-01 (b) (3) (A) TUNNEL 06/08/11	UNK	39000	mg/kg	6/9/2011	6/13/2011
Comments	MRL = 38 mg/kg					
20110609072	0608-02 (b) (3) (A) 06/08/11	UNK	6100	mg/kg	6/9/2011	6/13/2011
Comments	MRL = 40 mg/kg					
20110609073	0608-03 (b) (3) (A) 06/08/11	UNK	65000	mg/kg	6/9/2011	6/13/2011
Comments	MRL = 40 mg/kg					
20110609074	0608-04 (b) (3) (A) 06/08/11	UNK	78000	mg/kg	6/9/2011	6/13/2011
Comments	MRL = 40 mg/kg					

(b) (6) [redacted]
ERRG
677 Ala Moana Blvd. Suite 308

Honolulu HI 96813

Phone Number: (b) (6) [redacted]
Facsimile: (808) 533-6010
Email: (b) (6) [redacted]@errg.com

(b) (4) [redacted] **Job No:** 20111238
Your Project: RED HILL

Lead, total (paint chips)

NIOSH **Method:** 7082 LEAD by FAAS

Sample No.	Your Sample Description	Sample Type	Results	Units	Date Submitted	Date Analyzed
20110609074	0608-04 (b) (3) (A) [redacted] 06/08/11	REP	61000	mg/kg	6/9/2011	6/13/2011
Comments	MRL = 40 mg/kg					

All Quality Control data are acceptable unless otherwise noted.

General Comments
All analysts participate in interlaboratory quality control testing to continuously document profiency. The samples analyses subject of this analytical report were conducted in general accordance with the procedures associated with the" analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sampl relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. This report is not to be duplicated except in full without the expressed written permission of (b) (4) [redacted] This report should not be construed as an endorsement for a product or a service by the AIHA or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. For air samples, results are calculated based on the reported air volumes. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
UNK = sample submitted for this evaluation / analysis.
DUP = duplicate sample analysis of the UNK sample.
REP = replicate sample analysis which is a second preparation of the UNK sample analysis.
Tr = TRACE, i.e., the analyte of interest was, to a reasonable degree of scientific certainty present, but was BELOW the quantifiable limits of this determination (stated).
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
ND = NOT DETECTED which means the analyte, if present below our stated detection limit/ level.
RPD = Relative Percent Deviation [unk-dup]/ave(unk,dup)*100.
# = Analytical methods marked with an "#" are not within our AIHA Scope of Accreditation.
MRL = Method Reporting Limit.

(b) (6) [redacted]

DID (b) (4) [redacted] FORENSIC DIVISION COLLECT THESE SAMPLES? No

(b) (6) [redacted]
Laboratory Manager

Air Sampling Results – (b) (4)

(b) (4)

(b) (6)
ERRG
677 Ala Moana Blvd #308
Honolulu, HI 96813

March 11, 2011

DOH ELAP# 11626 Account# 22335 Login# L235386

Dear (b) (6):

Enclosed are the analytical results for the samples received by our laboratory on March 10, 2011. All test results meet the quality control requirements of AIHA and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report.

Please contact (b) (6), if you would like any additional information regarding this report.

Thank you for using (b) (4)

Sincerely,

(b) (4)

(b) (6)

(b) (6)
Laboratory Director

Enclosure(s)

[redacted]

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www[redacted].com

Client : Engineering/Remediation Resources Group
Site : Red Hill
Project No. : Pipe Demo

Date Sampled : 07-MAR-11
Date Received : 10-MAR-11
Date Analyzed : 11-MAR-11
Report ID : 684086

Account No.: 22335
Login No. : L235386

Lead

Sample ID	Lab ID	Air Vol liter	Total ug	Conc mg/m3
0307-001	L235386-1	720	<0.38	<0.00052
0307-002	L235386-2	754	<0.38	<0.00050
0307-006	L235386-3	760	<0.38	<0.00049
0307-003	L235386-4	764	<0.38	<0.00049
0307-004	L235386-5	720	<0.38	<0.00052
0307-005	L235386-6	720	<0.38	<0.00052
LAB BLANK	L235386-7	NA	<0.38	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.38 ug
Analytical Method : mod. NIOSH 7300/ mod. OSHA 125G; ICP
OSHA PEL (TWA) : 0.05 mg/m3
Collection Media : Filter

Submitted by: cju
Approved by : DEH
Date : 11-MAR-11 NYS DOH # : 11626
QC by: [redacted]

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

(b) (4)

LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.(b) (4).com

Client Name : Engineering/Remediation Resources Group
Site : Red Hill
Project No. : Pipe Demo

Date Sampled : 07-MAR-11 Account No.: 22335
Date Received: 10-MAR-11 Login No. : L235386
Date Analyzed: 11-MAR-11

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

L235386 (Report ID: 684086):
The Lead results are considered accurate to within 101% +/-6.7 based on a 95% confidence interval. The estimated uncertainty applies to the media, technology, and SOP(s) referenced in this report and does not account for any uncertainty associated with the sampling process.
Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.
SOPs: MT-SOP-9(11), im-mwvfilt(14)

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters NS -Not Specified
NA -Not Applicable ND -Not Detected ppm -Parts per Million

(b) (4)

☐ Check if change of address

New Client ? ☐ yes ☑ no

Report To : (b) (6) [redacted]
677 ALA MOANA BLVD STE 308
HONOLULU, HI 96813

Phone No. : (808) 533-6000
Fax No. : (808) 533-6010

Invoice To : Engineering Remediation Resources Group
677 Ala Moana Blvd. Ste. 308
Honolulu, HI 96813
RUS

Phone No. : 808-533-6000
Fax No. : 808-533-6010

Site Name : RED HILL Project : PIPE DEMO Sampled By : (b) (6) [redacted]

Need Results By:	(surcharge)
☐ 5 Business Days	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☒ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same day	200%

☒ Samples submitted using the FreePumpLoan™ Program. ☐ Samples submitted using the FreeSamplingBadges™ Program.

Client Account No. :
Purchase Order No. :
Credit Card No. : Card Holder Name : Exp. :

Email / Fax Results To : (b) (6) [redacted] @ERRG.COM
Email Address : (b) (6) [redacted] @ERRG.COM Fax No. : (808) 533-6010

Sample Identification	Date Sampled	Collection Medium	*Air Volume (Liters)	Passive Monitors (Min)	Analysis Requested	Method Reference	Specific DL Needed
1. 0307-001	3/7/11	SUMMA air	720	360	lead	NIOSH 7300	
2. 0307-002	3/7/11		754	377			
3. 0307-006	3/7/11		760	380			
4. 0307-003	3/7/11		764	382			
5. 0307-004	3/7/11		720	360			
6. 0307-005	3/7/11		720	360			
7.							
8.							
9.							
10.							
11.							

Report Received 10-MAR-11 16:55

☒ Yes ☐ No We normally add a laboratory blank for each analyte. We will charge you for this at our normal rate. If you agree please check "Yes" otherwise check "No".

List description of industry or process / interference's present in sampling area:

Comments:

Chain of Custody	Print Name	Signature	Date/Time
Relinquished by :	(b) (6) [redacted]		FedEx 870 4305 9969 3/8/11 @ 0830
Received by LAB :			3/10/11 0954

Samples received after 3pm will be considered as next da[illegible]iness. * sample collection time X LPM = Air Vol.

Page 1 of 1

LAB ORIGINAL

Page 4 of 4

(b) (4)

(b) (6)
ERRG
677 Ala Moana Blvd #308
Honolulu, HI 96813

March 23, 2011

DOH ELAP# 11626 Account# 22335 Login# L236099

Dear (b) (6):

Enclosed are the analytical results for the samples received by our laboratory on March 21, 2011. All test results meet the quality control requirements of AIHA and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report.

Please contact (b) (6) at (b) (6), if you would like any additional information regarding this report.

Thank you for using (b) (4)

Sincerely,

(b) (4)

(b) (6)

(b) (6)
Laboratory Director

Enclosure(s)

[redacted]

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www[redacted].com

Client : Engineering/Remediation Resources Group
Site : Red Hill
Project No. : Pipe Demo

Date Sampled : 17-MAR-11 Account No.: 22335
Date Received : 21-MAR-11 Login No. : L236099
Date Analyzed : 21-MAR-11 - 22-MAR-11
Report ID : 685444

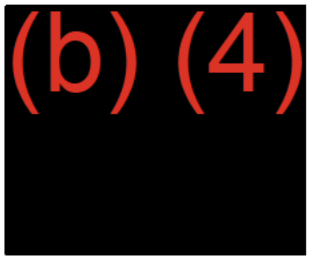
Lead

Sample ID	Lab ID	Air Vol liter	Total ug	Conc mg/m3
0317-001	L236099-1	902	0.78	0.00086
0317-002	L236099-2	894	<0.38	<0.00042
0317-003	L236099-3	910	<0.38	<0.00041
0317-004	L236099-4	910	<0.38	<0.00041
0317-005	L236099-5	908	<0.38	<0.00041
0317-006	L236099-6	910	<0.38	<0.00041
LAB BLANK	L236099-7	NA	<0.38	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.38 ug Submitted by: cju
Analytical Method : mod. NIOSH 7300/ mod. OSHA 125G; ICP Approved by : DEH
OSHA PEL (TWA) : 0.05 mg/m3 Date : 23-MAR-11 NYS DOH # : 11626
Collection Media : Filter QC by: [redacted]

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters NS -Not Specified
NA -Not Applicable ND -Not Detected ppm -Parts per Million



LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.[redacted].com

Client Name : Engineering/Remediation Resources Group
Site : Red Hill
Project No. : Pipe Demo

Date Sampled : 17-MAR-11 Account No.: 22335
Date Received: 21-MAR-11 Login No. : L236099
Date Analyzed: 21-MAR-11 - 22-MAR-11

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

L236099 (Report ID: 685444):
The Lead results are considered accurate to within 101% +/-6.7 based on a 95% confidence interval. The estimated uncertainty applies to the media, technology, and SOP(s) referenced in this report and does not account for any uncertainty associated with the sampling process.
Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.
SOPs: MT-SOP-9(12), im-mwvfilt(14)

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

[redacted]

☐ Check if change of address

New Client ? ☐ yes ☒ no

Report To : [redacted]
677 Ala Moana Blvd St. 308
Honolulu, HI 96813

Phone No. : (808) 533-6000
Fax No. : (808) 533-6010

Invoice To : Engineering/Remediation Resources Group
677 Ala Moana Blvd Ste. 308
Honolulu, HI 96813

Phone No. : 808-533-6000
Fax No. : 808-533-6010

Site Name : RED HILL   Project : PIPE DEMO   Sampled By : [redacted]

Need Results By:	(surcharge)
☐ 5 Business Days	0%
☐ 4 Business Days	35%
☒ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same day	200%

☒ Samples submitted using the FreePumpLoan™ Program.   ☐ Samples submitted using the FreeSamplingBadges™ Program

Client Account No. :
Purchase Order No. :
Credit Card No. :   Card Holder Name :   Exp. :   (RW)

Email / Fax Results To : [redacted]@errg.com
Email Address [redacted].com   Fax No. : (808) 533-6010

Page 4 of 4 Report Reference:1 Generated:28-MAR-11 15:46

Sample Identification	Date Sampled	Collection Medium	*Air Volume (Liters)	Passive Monitors (Min)	Analysis Requested	Method Reference	Specific DL Needed
1. 0317-001	3/17/11	3 piece mce Air	902	451	Lead	NIOSH 7300	
2. 0317-002	3/17/11	↓	894	447	↓	↓	
3. 0317-003	3/17/11	↓	910	455	↓	↓	
4. 0317-004	3/17/11	↓	910	455	↓	↓	
5. 0317-005	3/17/11	↓	908	454	↓	↓	
6. 0317-006	3/17/11	↓	910	455	↓	↓	
7.							
8.							
9.							
10.							
11.							

☒ Yes ☐ No **We normally add a laboratory blank for each analyte. We will charge you for this at our normal rate. If you agree please check "Yes" otherwise check "No".**

List description of industry or process / interference's present in sampling area:

Comments:

Chain of Custody	Print Name	Signature	Date/Time
Relinquished by :	[redacted]		3/18/11 / 4:45
Received by LAB :			3/21/11 935

Samples received after 3pm will be considered as next day business. *** sample collection time X LPM = Air Vol.** Page 1 of 1

[redacted]

[redacted]
ERRG
677 Ala Moana Blvd #308
Honolulu, HI 96813

April 29, 2011

DOH ELAP# 11626 Account# 22335 Login# L238672

Dear [redacted]:

Enclosed are the analytical results for the samples received by our laboratory on April 22, 2011. All test results meet the quality control requirements of AIHA and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report.

Please contact [redacted] at [redacted], if you would like any additional information regarding this report.

Thank you for using [redacted]

Sincerely,

[redacted]

[redacted]

[redacted]
Laboratory Director

Enclosure(s)

[redacted]

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www[redacted].com

Client	: Engineering/Remediation Resources Group			
Site	: RED HILL			
Project No.	: PIPE DEMO			
Date Sampled	: 13-APR-11		Account No.:	22335
Date Received	: 22-APR-11		Login No.	: L238672
Date Analyzed	: 25-APR-11			
Report ID	: 689836			

Lead

Sample ID	Lab ID	Air Vol liter	Total ug	Conc mg/m3
0413-001	L238672-1	920	2.5	0.0028
0413-002	L238672-2	920	<0.38	<0.00041
0413-003	L238672-3	921	2.4	0.0027
^ 0413-004	L238672-4	922	2.6	0.0029
0413-005	L238672-5	919	10	0.011
0413-006	L238672-6	921	<0.38	<0.00041
8	L238672-7	40	<0.38	<0.0094

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.38 ug
Analytical Method : mod. NIOSH 7300/ mod. OSHA 125G; ICP
OSHA PEL (TWA) : 0.05 mg/m3
Collection Media : Filter

Submitted by: cju
Approved by : LLS
Date : 27-APR-11 NYS DOH # : 11626
QC by: [redacted]

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

(b) (4)

LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.(b) (4).com

Client Name : Engineering/Remediation Resources Group
Site : RED HILL
Project No. : PIPE DEMO

Date Sampled : 13-APR-11
Date Received: 22-APR-11
Date Analyzed: 25-APR-11

Account No.: 22335
Login No. : L238672

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

L238672 (Report ID: 689836):
The Lead results are considered accurate to within 101% +/-6.7 based on a 95% confidence interval. The estimated uncertainty applies to the media, technology, and SOP(s) referenced in this report and does not account for any uncertainty associated with the sampling process.
Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.
SOPs: MT-SOP-9(12), im-mwvfilt(14)

^ L238672 (Report ID: 689836):
Received with intake uncapped. Affect on results is unknown.

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

(b) (4)

Check if change of address ☐
New Client ? yes ☐ no ☒

Report To* : (b) (6)
607 ALA MOANA BLVD STE 308
HONOLULU, HI 96814
Phone No.* : (808) 533-6000
Cell No.* : (808) 533-6010

67

Invoice To* : ENGINEERING/REMEDIATION RESOURCES GROUP, INC.
607 ALA MOANA BLVD STE 308
HONOLULU, HI 96814
Phone No. : (808) 533-6000
Fax/Email : (808) 533-6010

Name : RED HILL | Project: PIPE DEMO | Sampled By : (b) (6)

Need Results By*:	(surcharge)
☒ 5 Business Days	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same day	200%

☒ Samples submitted using FreePumpLoan™ Program. ☐ Samples submitted using the FreeSamplingBadges™ Program.
Client Account No.* :
Purchase Order No. :
Credit Card : ☐ Credit Card on File ☐ Will Phone in Credit Card Information

Email Results To : (b) (6)
Email Address : (b) (6) @ERRG.COM

Please indicate which OEL this data will be used for:
☐ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ Other (please specify):

Sample Identification*	Date Sampled (mm/dd/yy)	Collection Medium	Sample*: Volume, Time, or Area	Sample Units*: L, ml, min., in2, cm2, ft2	Analysis Requested*	Method Reference*	Metals Technique Required, ICAP or ICPMS^ (^Additional Cost)
EXAMPLE	01/01/10	3pc UW MCE	960	L	Lead	Mod. NIOSH 7300	ICPMS
0413-001	04/13/11	AIR	920	L	LEAD	NIOSH 7300	
0413-002		3PC UWMCE	920				
0413-003			921				
0413-004 **			922				
0413-005			919				
0413-006			921				

For Hexavalent Chromium: process must be listed for each sample submitted (ex. welding, plating, painting, etc.)*:
For Crystalline Silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:
List description of industry or process/interferences present in sampling area:
Comments: * RECVD 1 3PC UWMCF NOT ON COC ** RECVD INTACT UNCAPPED

Chain of Custody	ID "8" Print Name	Signature	Date/Time
Relinquished by :	(b) (6)		4/18/11 4:03 PM
Received by LAB :			4/22/11 1035

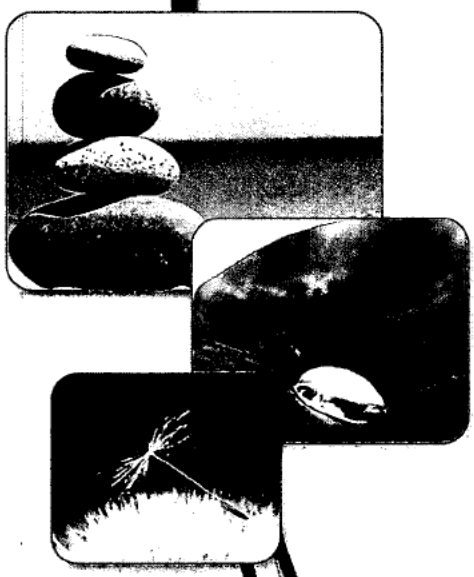
Samples received after 3pm will be considered as next day's business. *Required fields, failure to complete these fields may result in delay in your samples being processed.

Page ____ of ____

LAB ORIGINAL

Page 4 of 4 Report Request Generated: 29-APR-11 1:14

Waste Sampling Results – Test America



(b) (4)

ANALYTICAL REPORT

(b) (4)

Job ID: HUD0051
Client Project/Site: Red Hill Pipe Demolition Project (2010-136)
Client Project Description:
Red Hill Pipe Demolition Project (2010-136)

For:
ERRG, Inc Honolulu
677 Ala Moana Blvd
Honolulu, HI 96813

Attn: (b) (6)
(b) (6)

Authorized for release by:
04/26/2011 02:50:18 PM

(b) (6)
Project Manager
(b) (6) @ (b) (4) .com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Table of Contents

Qualifier Defi n/Glossary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

ualifiers

GCMS Volatiles

Qualifier	Qualifier Description
M1	The MS and/or MSD were outside the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
U	Analyte was not detected and is reported as less than the LOD.

GC Semivolatiles

Qualifier	Qualifier Description
J	Estimated value. Analyte detected at a level less than the Reporting Limit/Limit of Quantitation and greater than or equal to the Detection Limit.
Q1	Does not match typical pattern
Z9	Unable to calculate surrogate recovery due to matrix interference.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
[redacted]	Percent Recovery
[redacted]D	Relative Percent Difference, a measure of the relative difference between two points.

Job ID: HUD0051

Laboratory: (b) (4)

Narrative

Sample/cooler was received at 10 degrees C on ice and intact 4/12/2011 3:15:00 PM Samples were delivered to (b) (4) to be run according to the Department of Defense Quality Service Manual version 4.2 (DODQSM4.2).

Laboratory: (b) (4)

Narrative

CASE NARRATIVE

Client: (b) (4)

Project: HUD0051

Report Number: 580-25598-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interfererences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 04/14/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.1 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

TOTAL RECOVERABLE METALS (ICP)

Samples HUD0051-01 (580-25598-1) and HUD0051-02 (580-25598-2) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared and analyzed on 04/15/2011.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples HUD0051-01 (580-25598-1) and HUD0051-02 (580-25598-2) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/18/2011.

No difficulties were encountered during the mercury analyses.

ob ID: HUD0051 (Continued)

Laboratory: (b) (4) (Continued)

All quality control parameters were within the acceptance limits.

Sample Summary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HUD0051-01	RHPD-A	Water - NonPotable	04/12/11 02:40	04/12/11 15:15
HUD0051-02	RHPD-B	Water - NonPotable	04/12/11 02:42	04/12/11 15:15

lient Sample ID: RHPD-A — Lab Sample ID: HUD0051-01

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.43		2.40	0.301	ug/L	1.00		EPA 8260	total
Ethylbenzene	16.7		2.40	0.341	ug/L	1.00		EPA 8260	total
m,p-Xylene	101		2.40	0.782	ug/L	1.00		EPA 8260	total
o-Xylene	51.6		2.40	0.375	ug/L	1.00		EPA 8260	total
Toluene	31.0		2.40	0.374	ug/L	1.00		EPA 8260	total
DRO	3850	Q1	85.5	11.6	ug/L	1.00		EPA 8015	total
Barium	0.055		0.010	0.00050	mg/L	1		6010B	Total Recovera
Lead	0.012	J	0.030	0.0021	mg/L	1		6010B	Total Recovera
Selenium	0.030	J	0.10	0.0042	mg/L	1		6010B	Total Recovera
pH	5.71		1.00	1.00	pH Units	1.00		EPA 150.1	total

Client Sample ID: RHPD-B — Lab Sample ID: HUD0051-02

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.17		2.40	0.301	ug/L	1.00		EPA 8260	total
Ethylbenzene	15.1		2.40	0.341	ug/L	1.00		EPA 8260	total
m,p-Xylene	93.2		2.40	0.782	ug/L	1.00		EPA 8260	total
o-Xylene	48.3		2.40	0.375	ug/L	1.00		EPA 8260	total
Toluene	27.6		2.40	0.374	ug/L	1.00		EPA 8260	total
DRO	3490	Q1	85.9	11.7	ug/L	1.00		EPA 8015	total
Barium	0.065		0.010	0.00050	mg/L	1		6010B	Total Recovera
Lead	0.016	J	0.030	0.0021	mg/L	1		6010B	Total Recovera
Selenium	0.034	J	0.10	0.0042	mg/L	1		6010B	Total Recovera
pH	5.72		1.00	1.00	pH Units	1.00		EPA 150.1	total

Client Sample ID: RHPD-A

Date Collected: 04/12/11 02:40
Date Received: 04/12/11 15:15

Lab Sample ID: HUD0051-01

Matrix: Water - NonPotable

Method: EPA 8260 - Gasoline Range Organics/BTEX/MTBE by EPA 8015/8260

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.43		2.40	0.301	ug/L		04/14/11 09:18	04/14/11 13:17	1.00
Ethylbenzene	16.7		2.40	0.341	ug/L		04/14/11 09:18	04/14/11 13:17	1.00
m,p-Xylene	101		2.40	0.782	ug/L		04/14/11 09:18	04/14/11 13:17	1.00
o-Xylene	51.6		2.40	0.375	ug/L		04/14/11 09:18	04/14/11 13:17	1.00
Toluene	31.0		2.40	0.374	ug/L		04/14/11 09:18	04/14/11 13:17	1.00

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8	*99*		*85 - 120*	*04/14/11 09:18*	*04/14/11 13:17*	*1.00*

Method: EPA 8015 - Extractable Petroleum Hydrocarbons by 8015M

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
DRO	3850	Q1	85.5	11.6	ug/L		04/18/11 09:27	04/18/11 17:07	1.00

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*8*	*Z9*	*25 - 115*	*04/18/11 09:27*	*04/18/11 17:07*	*1.00*

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014	U	0.060	0.0047	mg/L		04/15/11 08:55	04/15/11 18:46	1
Barium	0.055		0.010	0.00050	mg/L		04/15/11 08:55	04/15/11 18:46	1
Cadmium	0.0045	U	0.010	0.0015	mg/L		04/15/11 08:55	04/15/11 18:46	1
Chromium	0.0099	U	0.025	0.0033	mg/L		04/15/11 08:55	04/15/11 18:46	1
Lead	0.012	J	0.030	0.0021	mg/L		04/15/11 08:55	04/15/11 18:46	1
Selenium	0.030	J	0.10	0.0042	mg/L		04/15/11 08:55	04/15/11 18:46	1
Silver	0.0099	U	0.020	0.0085	mg/L		04/15/11 08:55	04/15/11 18:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	U	0.00020	0.000041	mg/L		04/18/11 07:26	04/18/11 11:05	1

Method: EPA 150.1 - General Chemistry Parameters

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.71		1.00	1.00	pH Units		04/12/11 16:53	04/12/11 16:57	1.00

Client Sample ID: RHPD-B

Date Collected: 04/12/11 02:42
Date Received: 04/12/11 15:15

Lab Sample ID: HUD0051-02

Matrix: Water - NonPotable

Method: EPA 8260 - Gasoline Range Organics/BTEX/MTBE by EPA 8015/8260

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.17		2.40	0.301	ug/L		04/14/11 09:18	04/14/11 13:42	1.00
Ethylbenzene	15.1		2.40	0.341	ug/L		04/14/11 09:18	04/14/11 13:42	1.00
m,p-Xylene	93.2		2.40	0.782	ug/L		04/14/11 09:18	04/14/11 13:42	1.00
o-Xylene	48.3		2.40	0.375	ug/L		04/14/11 09:18	04/14/11 13:42	1.00
Toluene	27.6		2.40	0.374	ug/L		04/14/11 09:18	04/14/11 13:42	1.00

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8	*99*		*85 - 120*	*04/14/11 09:18*	*04/14/11 13:42*	*1.00*

Method: EPA 8015 - Extractable Petroleum Hydrocarbons by 8015M

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
DRO	3490	Q1	85.9	11.7	ug/L		04/18/11 09:27	04/18/11 17:55	1.00

Client Sample ID: RHPD-B
Date Collected: 04/12/11 02:42
Date Received: 04/12/11 15:15

Lab Sample ID: HUD0051-02
Matrix: Water - NonPotable

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*25 - 115*	*04/18/11 09:27*	*04/18/11 17:55*	*1.00*

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014	U	0.060	0.0047	mg/L		04/15/11 08:55	04/15/11 18:52	1
Barium	**0.065**		0.010	0.00050	mg/L		04/15/11 08:55	04/15/11 18:52	1
Cadmium	0.0045	U	0.010	0.0015	mg/L		04/15/11 08:55	04/15/11 18:52	1
Chromium	0.0099	U	0.025	0.0033	mg/L		04/15/11 08:55	04/15/11 18:52	1
Lead	**0.016**	**J**	0.030	0.0021	mg/L		04/15/11 08:55	04/15/11 18:52	1
Selenium	**0.034**	**J**	0.10	0.0042	mg/L		04/15/11 08:55	04/15/11 18:52	1
Silver	0.0099	U	0.020	0.0085	mg/L		04/15/11 08:55	04/15/11 18:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	U	0.00020	0.000041	mg/L		04/18/11 07:26	04/18/11 10:14	1

Method: EPA 150.1 - General Chemistry Parameters

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**5.72**		1.00	1.00	pH Units		04/12/11 16:53	04/12/11 17:01	1.00

Surrogate Summary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

Method: EPA 8260 - Gasoline Range Organics/BTEX/MTBE by EPA 8015/8260

Matrix: Water - NonPotable **Prep Type: total**

		Percent Surrogate Recovery (Acceptance Limits)
		TOL
Lab Sample ID	Client Sample ID	(85-120)
11D0079-BLK1	11D0079-BLK1	99
11D0079-BS1	11D0079-BS1	97
11D0079-MS1	RHPD-A	90
11D0079-MSD1	RHPD-A	88
HUD0051-01	RHPD-A	99
HUD0051-02	RHPD-B	99

Surrogate Legend

TOL = Toluene-d8

Method: EPA 8015 - Extractable Petroleum Hydrocarbons by 8015M

Matrix: Water - NonPotable **Prep Type: total**

		Percent Surrogate Recovery (Acceptance Limits)
		OTPH
Lab Sample ID	Client Sample ID	(25-115)
11D0057-BLK1	11D0057-BLK1	63
11D0057-BS2	11D0057-BS2	82
11D0057-BSD2	11D0057-BSD2	77
11D0057-MS1	RHPD-A	83
HUD0051-01	RHPD-A	8 Z9
HUD0051-02	RHPD-B	70

Surrogate Legend

OTPH = o-Terphenyl

ethod: EPA 8260 - Gasoline Range Organics/BTEX/MTBE by EPA 8015/8260

Lab Sample ID: 11D0079-BLK1
Matrix: Water - NonPotable
Analysis Batch: 11D0079

Client Sample ID: 11D0079-BLK1
Prep Type: total
Prep Batch: 11D0079_P

Analyte	Blank Result	Blank Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.40	0.301	ug/L		04/14/11 09:18	04/14/11 12:51	1.00
Ethylbenzene	<2.00	U	2.40	0.341	ug/L		04/14/11 09:18	04/14/11 12:51	1.00
m,p-Xylene	<2.00	U	2.40	0.782	ug/L		04/14/11 09:18	04/14/11 12:51	1.00
o-Xylene	<2.00	U	2.40	0.375	ug/L		04/14/11 09:18	04/14/11 12:51	1.00
Toluene	<2.00	U	2.40	0.374	ug/L		04/14/11 09:18	04/14/11 12:51	1.00

Surrogate	*Blank % Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8	*99*		*85 - 120*	*04/14/11 09:18*	*04/14/11 12:51*	*1.00*

Lab Sample ID: 11D0079-BS1
Matrix: Water - NonPotable
Analysis Batch: 11D0079

Client Sample ID: 11D0079-BS1
Prep Type: total
Prep Batch: 11D0079_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Benzene	24.9	25.9		ug/L		104	75 - 120
Ethylbenzene	24.8	24.0		ug/L		97	80 - 120
m,p-Xylene	50.0	48.8		ug/L		98	70 - 120
o-Xylene	24.8	23.7		ug/L		96	80 - 120
Toluene	25.0	24.1		ug/L		96	60 - 120

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8	*97*		*85 - 120*

Lab Sample ID: 11D0079-MS1
Matrix: Water - NonPotable
Analysis Batch: 11D0079

Client Sample ID: RHPD-A
Prep Type: total
Prep Batch: 11D0079_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	% Rec	% Rec. Limits
Benzene	3.43		24.9	25.3		ug/L		88	75 - 120
Ethylbenzene	16.7		24.8	34.4	M1	ug/L		71	80 - 120
m,p-Xylene	101		50.0	123	M1	ug/L		45	70 - 120
o-Xylene	51.6		24.8	61.9	M1	ug/L		42	80 - 120
Toluene	31.0		25.0	46.0		ug/L		60	60 - 120

Surrogate	*Matrix Spike % Recovery*	*Matrix Spike Qualifier*	*Limits*
Toluene-d8	*90*		*85 - 120*

Lab Sample ID: 11D0079-MSD1
Matrix: Water - NonPotable
Analysis Batch: 11D0079

Client Sample ID: RHPD-A
Prep Type: total
Prep Batch: 11D0079_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Benzene	3.43		24.9	25.5		ug/L		89	75 - 120	0.5	25
Ethylbenzene	16.7		24.8	34.0	M1	ug/L		70	80 - 120	1	25
m,p-Xylene	101		50.0	120	M1	ug/L		39	70 - 120	3	25
Xylene	51.6		24.8	61.4	M1	ug/L		40	80 - 120	0.9	25
oluene	31.0		25.0	45.1	M1	ug/L		56	60 - 120	2	25

Method: EPA 8260 - Gasoline Range Organics/BTEX/MTBE by EPA 8015/8260 (Continued)

Lab Sample ID: 11D0079-MSD1
Matrix: Water - NonPotable
Analysis Batch: 11D0079

Client Sample ID: RHPD-A
Prep Type: total
Prep Batch: 11D0079_P

Surrogate	*Matrix Spike Dup % Recovery*	*Matrix Spike Dup Qualifier*	*Limits*
Toluene-d8	*88*		*85 - 120*

Method: EPA 8015 - Extractable Petroleum Hydrocarbons by 8015M

Lab Sample ID: 11D0057-BLK1
Matrix: Water - NonPotable
Analysis Batch: 11D0057

Client Sample ID: 11D0057-BLK1
Prep Type: total
Prep Batch: 11D0057_P

Analyte	Blank Result	Blank Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
DRO	28.5	J	82.5	11.2	ug/L		04/18/11 09:45	04/18/11 15:47	1.00

Surrogate	*Blank % Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*63*		*25 - 115*	*04/18/11 09:45*	*04/18/11 15:47*	*1.00*

Lab Sample ID: 11D0057-BS2
Matrix: Water - NonPotable
Analysis Batch: 11D0057

Client Sample ID: 11D0057-BS2
Prep Type: total
Prep Batch: 11D0057_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
DRO	5000	4280		ug/L		86	50 - 120

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*82*		*25 - 115*

Lab Sample ID: 11D0057-BSD2
Matrix: Water - NonPotable
Analysis Batch: 11D0057

Client Sample ID: 11D0057-BSD2
Prep Type: total
Prep Batch: 11D0057_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
DRO	5000	3970		ug/L		79	50 - 120	8	30

Surrogate	*LCS Dup % Recovery*	*LCS Dup Qualifier*	*Limits*
o-Terphenyl	*77*		*25 - 115*

Lab Sample ID: 11D0057-MS1
Matrix: Water - NonPotable
Analysis Batch: 11D0057

Client Sample ID: RHPD-A
Prep Type: total
Prep Batch: 11D0057_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	% Rec	% Rec. Limits
DRO	3850	Q1	5620	9520		ug/L		101	50 - 120

Surrogate	*Matrix Spike % Recovery*	*Matrix Spike Qualifier*	*Limits*
o-Terphenyl	*83*		*25 - 115*

ethod: 6010B - Metals (ICP)

Lab Sample ID: MB 580-84082/19-A — **Client Sample ID: MB 580-84082/19-A**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 84137 — **Prep Batch: 84082**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014	U	0.060	0.0047	mg/L		04/15/11 08:55	04/15/11 17:36	1
Barium	0.0010	U	0.010	0.00050	mg/L		04/15/11 08:55	04/15/11 17:36	1
Cadmium	0.0045	U	0.010	0.0015	mg/L		04/15/11 08:55	04/15/11 17:36	1
Chromium	0.0099	U	0.025	0.0033	mg/L		04/15/11 08:55	04/15/11 17:36	1
Lead	0.0050	U	0.030	0.0021	mg/L		04/15/11 08:55	04/15/11 17:36	1
Selenium	0.0058	U	0.10	0.0042	mg/L		04/15/11 08:55	04/15/11 17:36	1
Silver	0.0099	U	0.020	0.0085	mg/L		04/15/11 08:55	04/15/11 17:36	1

Lab Sample ID: LCS 580-84082/20-A — **Client Sample ID: LCS 580-84082/20-A**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 84137 — **Prep Batch: 84082**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Arsenic	4.00	3.93		mg/L		98	80 - 120
Barium	4.00	3.90		mg/L		97	80 - 120
Cadmium	0.100	0.0961		mg/L		96	80 - 120
Chromium	0.400	0.403		mg/L		101	80 - 120
Lead	1.00	0.995		mg/L		100	80 - 120
Selenium	4.00	3.99		mg/L		100	80 - 120
Silver	0.600	0.604		mg/L		101	80 - 120

Lab Sample ID: LCSD 580-84082/21-A — **Client Sample ID: LCSD 580-84082/21-A**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 84137 — **Prep Batch: 84082**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Arsenic	4.00	4.08		mg/L		102	80 - 120	4	20
Barium	4.00	4.01		mg/L		100	80 - 120	3	20
Cadmium	0.100	0.0991		mg/L		99	80 - 120	3	20
Chromium	0.400	0.412		mg/L		103	80 - 120	2	20
Lead	1.00	1.02		mg/L		102	80 - 120	3	20
Selenium	4.00	4.12		mg/L		103	80 - 120	3	20
Silver	0.600	0.628		mg/L		105	80 - 120	4	20

Lab Sample ID: LCSSRM 580-84082/22-A — **Client Sample ID: LCSSRM 580-84082/22-A**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 84137 — **Prep Batch: 84082**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec. Limits
Arsenic	4.00	3.97		mg/L		99	80 - 120
Barium	4.00	3.96		mg/L		99	80 - 120
Cadmium	0.100	0.0961		mg/L		96	80 - 120
Chromium	0.400	0.402		mg/L		100	80 - 120
Lead	1.00	0.993		mg/L		99	80 - 120
Selenium	4.00	4.00		mg/L		100	80 - 120
Silver	0.600	0.609		mg/L		102	75 - 120

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 580-25409-D-1-G MS
Matrix: Water
Analysis Batch: 84137

Client Sample ID: 580-25409-D-1-G MS
Prep Type: Total Recoverable
Prep Batch: 84082

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Arsenic	0.014		4.00	4.34		mg/L		108	80 - 120
Barium	0.96		4.00	4.82		mg/L		97	80 - 120
Cadmium	0.0045		0.100	0.100		mg/L		100	80 - 120
Chromium	0.0099		0.400	0.379		mg/L		95	80 - 120
Lead	0.0050		1.00	1.01		mg/L		101	80 - 120
Selenium	0.0058		4.00	4.28		mg/L		107	80 - 120
Silver	0.0099		0.600	0.696		mg/L		116	80 - 120

Lab Sample ID: 580-25409-D-1-H MSD
Matrix: Water
Analysis Batch: 84137

Client Sample ID: 580-25409-D-1-H MSD
Prep Type: Total Recoverable
Prep Batch: 84082

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Arsenic	0.014		4.00	4.34		mg/L		108	80 - 120	0	20
Barium	0.96		4.00	4.85		mg/L		97	80 - 120	1	20
Cadmium	0.0045		0.100	0.101		mg/L		101	80 - 120	1	20
Chromium	0.0099		0.400	0.386		mg/L		96	80 - 120	2	20
Lead	0.0050		1.00	1.02		mg/L		102	80 - 120	0	20
Selenium	0.0058		4.00	4.28		mg/L		107	80 - 120	0	20
Silver	0.0099		0.600	0.696		mg/L		116	80 - 120	0	20

Lab Sample ID: 580-25409-D-1-F DU
Matrix: Water
Analysis Batch: 84137

Client Sample ID: 580-25409-D-1-F DU
Prep Type: Total Recoverable
Prep Batch: 84082

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.014		0.014	U	mg/L		NC	20
Barium	0.96		0.950		mg/L		0.8	20
Cadmium	0.0045		0.0045	U	mg/L		NC	20
Chromium	0.0099		0.0099	U	mg/L		NC	20
Lead	0.0050		0.0050	U	mg/L		NC	20
Selenium	0.0058		0.0058	U	mg/L		NC	20
Silver	0.0099		0.0099	U	mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-84144/21-A
Matrix: Water
Analysis Batch: 84231

Client Sample ID: MB 580-84144/21-A
Prep Type: Total/NA
Prep Batch: 84144

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	U	0.00020	0.000041	mg/L		04/18/11 07:26	04/18/11 09:53	1

Lab Sample ID: LCS 580-84144/22-A
Matrix: Water
Analysis Batch: 84231

Client Sample ID: LCS 580-84144/22-A
Prep Type: Total/NA
Prep Batch: 84144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.00200	0.00212		mg/L		106	80 - 120

ethod: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-84144/23-A — **Client Sample ID: LCSD 580-84144/23-A**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 84231 — **Prep Batch: 84144**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00211		mg/L		105	80 - 120	1	20

Lab Sample ID: LCSSRM 580-84144/24-A — **Client Sample ID: LCSSRM 580-84144/24-A**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 84231 — **Prep Batch: 84144**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.00200	0.00212		mg/L		106	75 - 125

Lab Sample ID: 580-25598-1 MS — **Client Sample ID: HUD0051-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 84231 — **Prep Batch: 84144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.00010	U	0.00200	0.00205		mg/L		103	80 - 120

Lab Sample ID: 580-25598-1 MSD — **Client Sample ID: HUD0051-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 84231 — **Prep Batch: 84144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
ercury	0.00010	U	0.00200	0.00207		mg/L		104	80 - 120	1	20

Lab Sample ID: 580-25598-1 DU — **Client Sample ID: HUD0051-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 84231 — **Prep Batch: 84144**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.00010	U	0.00010	U	mg/L		NC	20

Method: EPA 150.1 - General Chemistry Parameters

Lab Sample ID: 11D0065-DUP1 — **Client Sample ID: RHPD-A**
Matrix: Water - NonPotable — **Prep Type: total**
Analysis Batch: 11D0065 — **Prep Batch: 11D0065_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
pH	5.71		5.72		pH Units		0.2	20

Lab Sample ID: 11D0065-DUP2 — **Client Sample ID: RHPD-A**
Matrix: Water - NonPotable — **Prep Type: total**
Analysis Batch: 11D0065 — **Prep Batch: 11D0065_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
pH	5.71		5.69		pH Units		0.4	20

QC Association Summary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

GCMS Volatiles

Analysis Batch: 11D0079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11D0079-BS1	11D0079-BS1	total	Water - NonPotable	EPA 8260	11D0079_P
11D0079-BLK1	11D0079-BLK1	total	Water - NonPotable	EPA 8260	11D0079_P
HUD0051-01	RHPD-A	total	Water - NonPotable	EPA 8260	11D0079_P
HUD0051-02	RHPD-B	total	Water - NonPotable	EPA 8260	11D0079_P
11D0079-MS1	RHPD-A	total	Water - NonPotable	EPA 8260	11D0079_P
11D0079-MSD1	RHPD-A	total	Water - NonPotable	EPA 8260	11D0079_P

Prep Batch: 11D0079_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11D0079-BS1	11D0079-BS1	total	Water - NonPotable	EPA 5030/5035	
11D0079-BLK1	11D0079-BLK1	total	Water - NonPotable	EPA 5030/5035	
HUD0051-01	RHPD-A	total	Water - NonPotable	EPA 5030/5035	
HUD0051-02	RHPD-B	total	Water - NonPotable	EPA 5030/5035	
11D0079-MS1	RHPD-A	total	Water - NonPotable	EPA 5030/5035	
11D0079-MSD1	RHPD-A	total	Water - NonPotable	EPA 5030/5035	

GC Semivolatiles

Analysis Batch: 11D0057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11D0057-BLK1	11D0057-BLK1	total	Water - NonPotable	EPA 8015	11D0057_P
11D0057-BS2	11D0057-BS2	total	Water - NonPotable	EPA 8015	11D0057_P
11D0057-BSD2	11D0057-BSD2	total	Water - NonPotable	EPA 8015	11D0057_P
11D0057-MS1	RHPD-A	total	Water - NonPotable	EPA 8015	11D0057_P
HUD0051-01	RHPD-A	total	Water - NonPotable	EPA 8015	11D0057_P
HUD0051-02	RHPD-B	total	Water - NonPotable	EPA 8015	11D0057_P

Prep Batch: 11D0057_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11D0057-BLK1	11D0057-BLK1	total	Water - NonPotable	EPA 3510 GC	
11D0057-BS2	11D0057-BS2	total	Water - NonPotable	EPA 3510 GC	
11D0057-BSD2	11D0057-BSD2	total	Water - NonPotable	EPA 3510 GC	
11D0057-MS1	RHPD-A	total	Water - NonPotable	EPA 3510 GC	
HUD0051-01	RHPD-A	total	Water - NonPotable	EPA 3510 GC	
HUD0051-02	RHPD-B	total	Water - NonPotable	EPA 3510 GC	

Metals

Prep Batch: 84082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-84082/19-A	MB 580-84082/19-A	Total Recoverable	Water	3005A	
580-25409-D-1-F DU	580-25409-D-1-F DU	Total Recoverable	Water	3005A	
LCS 580-84082/20-A	LCS 580-84082/20-A	Total Recoverable	Water	3005A	
LCSD 580-84082/21-A	LCSD 580-84082/21-A	Total Recoverable	Water	3005A	
LCSSRM 580-84082/22-A	LCSSRM 580-84082/22-A	Total Recoverable	Water	3005A	
580-25409-D-1-G MS	580-25409-D-1-G MS	Total Recoverable	Water	3005A	
580-25409-D-1-H MSD	580-25409-D-1-H MSD	Total Recoverable	Water	3005A	
HUD0051-01	RHPD-A	Total Recoverable	Water - NonPotable	3005A	
HUD0051-02	RHPD-B	Total Recoverable	Water - NonPotable	3005A	

Analysis Batch: 84137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-84082/19-A	MB 580-84082/19-A	Total Recoverable	Water	6010B	84082
LCS 580-84082/20-A	LCS 580-84082/20-A	Total Recoverable	Water	6010B	84082
LCSD 580-84082/21-A	LCSD 580-84082/21-A	Total Recoverable	Water	6010B	84082
LCSSRM 580-84082/22-A	LCSSRM 580-84082/22-A	Total Recoverable	Water	6010B	84082
580-25409-D-1-F DU	580-25409-D-1-F DU	Total Recoverable	Water	6010B	84082
580-25409-D-1-G MS	580-25409-D-1-G MS	Total Recoverable	Water	6010B	84082
580-25409-D-1-H MSD	580-25409-D-1-H MSD	Total Recoverable	Water	6010B	84082
HUD0051-01	RHPD-A	Total Recoverable	Water - NonPotable	6010B	84082
HUD0051-02	RHPD-B	Total Recoverable	Water - NonPotable	6010B	84082

Prep Batch: 84144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
HUD0051-01	RHPD-A	Total/NA	Water - NonPotable	7470A	
580-25598-1 DU	HUD0051-01	Total/NA	Water	7470A	
MB 580-84144/21-A	MB 580-84144/21-A	Total/NA	Water	7470A	
LCS 580-84144/22-A	LCS 580-84144/22-A	Total/NA	Water	7470A	
LCSD 580-84144/23-A	LCSD 580-84144/23-A	Total/NA	Water	7470A	
LCSSRM 580-84144/24-A	LCSSRM 580-84144/24-A	Total/NA	Water	7470A	
580-25598-1 MS	HUD0051-01	Total/NA	Water	7470A	
580-25598-1 MSD	HUD0051-01	Total/NA	Water	7470A	
HUD0051-02	RHPD-B	Total/NA	Water - NonPotable	7470A	

Analysis Batch: 84231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-84144/21-A	MB 580-84144/21-A	Total/NA	Water	7470A	84144
LCS 580-84144/22-A	LCS 580-84144/22-A	Total/NA	Water	7470A	84144
LCSD 580-84144/23-A	LCSD 580-84144/23-A	Total/NA	Water	7470A	84144
LCSSRM 580-84144/24-A	LCSSRM 580-84144/24-A	Total/NA	Water	7470A	84144
HUD0051-02	RHPD-B	Total/NA	Water - NonPotable	7470A	84144
HUD0051-01	RHPD-A	Total/NA	Water - NonPotable	7470A	84144
580-25598-1 DU	HUD0051-01	Total/NA	Water	7470A	84144
580-25598-1 MS	HUD0051-01	Total/NA	Water	7470A	84144
580-25598-1 MSD	HUD0051-01	Total/NA	Water	7470A	84144

QC Association Summary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

WetChem

Analysis Batch: 11D0065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
HUD0051-01	RHPD-A	total	Water - NonPotable	EPA 150.1	11D0065_P
11D0065-DUP1	RHPD-A	total	Water - NonPotable	EPA 150.1	11D0065_P
HUD0051-02	RHPD-B	total	Water - NonPotable	EPA 150.1	11D0065_P
11D0065-DUP2	RHPD-A	total	Water - NonPotable	EPA 150.1	11D0065_P

Prep Batch: 11D0065_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
HUD0051-01	RHPD-A	total	Water - NonPotable	Default Prep GenChem	
11D0065-DUP1	RHPD-A	total	Water - NonPotable	Default Prep GenChem	
HUD0051-02	RHPD-B	total	Water - NonPotable	Default Prep GenChem	
11D0065-DUP2	RHPD-A	total	Water - NonPotable	Default Prep GenChem	

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

Client Sample ID: RHPD-A
Date Collected: 04/12/11 02:40
Date Received: 04/12/11 15:15

Lab Sample ID: HUD0051-01
Matrix: Water - NonPotable

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030/5035		1.00	11D0079_P	04/14/11 09:18	DJK	(b) (4)
total	Analysis	EPA 8260		1.00	11D0079	04/14/11 13:17	DK	(b) (4)
total	Prep	EPA 3510 GC		1.04	11D0057_P	04/18/11 09:27	KB	(b) (4)
total	Analysis	EPA 8015		1.00	11D0057	04/18/11 17:07	DEB	(b) (4)
Total Recoverable	Prep	3005A			84082	04/15/11 08:55	PAB	(b) (4)
Total Recoverable	Analysis	6010B		1	84137	04/15/11 18:46	SP	(b) (4)
Total/NA	Prep	7470A			84144	04/18/11 07:26	PAB	(b) (4)
Total/NA	Analysis	7470A		1	84231	04/18/11 11:05	FCW	(b) (4)
total	Prep	Default Prep GenChem		1.00	11D0065_P	04/12/11 16:53	JLM	(b) (4)
total	Analysis	EPA 150.1		1.00	11D0065	04/12/11 16:57	JLM	(b) (4)

Client Sample ID: RHPD-B
Date Collected: 04/12/11 02:42
Date Received: 04/12/11 15:15

Lab Sample ID: HUD0051-02
Matrix: Water - NonPotable

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Prep	EPA 5030/5035		1.00	11D0079_P	04/14/11 09:18	DJK	(b) (4)
total	Analysis	EPA 8260		1.00	11D0079	04/14/11 13:42	DK	(b) (4)
tal	Prep	EPA 3510 GC		1.04	11D0057_P	04/18/11 09:27	KB	(b) (4)
otal	Analysis	EPA 8015		1.00	11D0057	04/18/11 17:55	DEB	(b) (4)
Total Recoverable	Prep	3005A			84082	04/15/11 08:55	PAB	(b) (4)
Total Recoverable	Analysis	6010B		1	84137	04/15/11 18:52	SP	(b) (4)
Total/NA	Prep	7470A			84144	04/18/11 07:26	PAB	(b) (4)
Total/NA	Analysis	7470A		1	84231	04/18/11 10:14	FCW	(b) (4)
total	Prep	Default Prep GenChem		1.00	11D0065_P	04/12/11 16:53	JLM	(b) (4)
total	Analysis	EPA 150.1		1.00	11D0065	04/12/11 17:01	JLM	(b) (4)

Certification Summary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

Laboratory	Authority	Program	EPA Region	Certification ID
(b) (4)		USDA		(b) (4)
(b) (4)	Florida	NELAC	4	(b) (4)
(b) (4)	Hawaii	State Program	9	
(b) (4)	L-A-B	DoD ELAP	0	(b) (4)
(b) (4)		USDA		(b) (4)
(b) (4)	Alaska	Alaska UST	10	(b) (4)
(b) (4)	California	NELAC Secondary AB	9	(b) (4)
(b) (4)	Florida	NELAC Secondary AB	4	(b) (4)
(b) (4)	L-A-B	DoD ELAP	0	(b) (4)
(b) (4)	L-A-B	ISO/IEC 17025	0	(b) (4)
(b) (4)	Louisiana	NELAC Secondary AB	6	(b) (4)
(b) (4)	Montana	MT DEQ UST	8	
(b) (4)	Oregon	NELAC Primary AB	10	(b) (4)
(b) (4)	Washington	State Program	10	(b) (4)

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method nmary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Demolition Project (2010-136)

(b) (4) Job ID: HUD0051

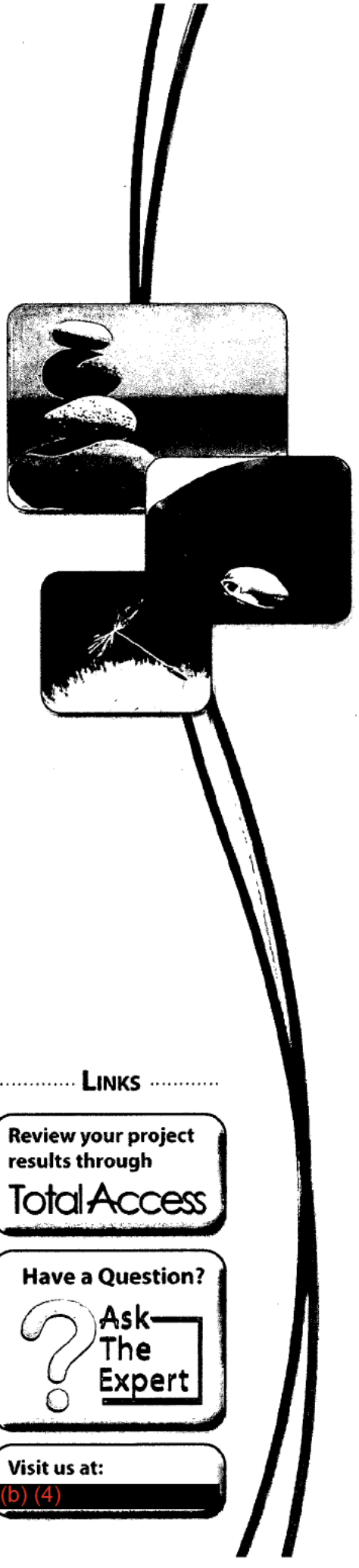
hod	Method Description	Protocol	Laboratory
EPA 8260	Gasoline Range Organics/BTEX/MTBE by EPA 8015/8260		(b) (4)
EPA 8015	Extractable Petroleum Hydrocarbons by 8015M		
6010B	Metals (ICP)	SW846	
7470A	Mercury (CVAA)	SW846	
EPA 150.1	General Chemistry Parameters		

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

(b) (4)



(b) (4)

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

(b) (4)

(b) (4) Job ID: 580-25598-1
Client Project/Site: HUD0051

For:
(b) (4)

(b) (4)

Attn: (b) (6)

(b) (6)

Authorized for release by:
04/20/2011 01:02:51 PM

(b) (6)
Project Manager I
(b) (6)@(b) (4)

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Table of Contents

Job ID: 580-25598-1

Laboratory: (b) (4)

Narrative

CASE NARRATIVE
Client: (b) (4) (b) (4)
Project: HUD0051
Report Number: 580-25598-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interfererences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 04/14/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.1 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

TOTAL RECOVERABLE METALS (ICP)
Samples HUD0051-01 (580-25598-1) and HUD0051-02 (580-25598-2) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared and analyzed on 04/15/2011.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples HUD0051-01 (580-25598-1) and HUD0051-02 (580-25598-2) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/18/2011.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

Client: (b) (4) (b) (4) (b) (4) Job ID: 580-25598-1
Project/Site: HUD0051

Client Sample ID: HUD0051-01

Lab Sample ID: 580-25598-1
Matrix: Water
Date Collected: 04/12/11 02:40
Date Received: 04/14/11 09:40

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014	U	0.060	0.0047	mg/L		04/15/11 11:55	04/15/11 21:46	1
Barium	**0.055**		0.010	0.00050	mg/L		04/15/11 11:55	04/15/11 21:46	1
Cadmium	0.0045	U	0.010	0.0015	mg/L		04/15/11 11:55	04/15/11 21:46	1
Chromium	0.0099	U	0.025	0.0033	mg/L		04/15/11 11:55	04/15/11 21:46	1
Lead	**0.012**	**J**	0.030	0.0021	mg/L		04/15/11 11:55	04/15/11 21:46	1
Selenium	**0.030**	**J**	0.10	0.0042	mg/L		04/15/11 11:55	04/15/11 21:46	1
Silver	0.0099	U	0.020	0.0085	mg/L		04/15/11 11:55	04/15/11 21:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	U	0.00020	0.000041	mg/L		04/18/11 10:26	04/18/11 14:05	1

Client Sample ID: HUD0051-02

Lab Sample ID: 580-25598-2
Matrix: Water
Date Collected: 04/12/11 02:42
Date Received: 04/14/11 09:40

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014	U	0.060	0.0047	mg/L		04/15/11 11:55	04/15/11 21:52	1
Barium	**0.065**		0.010	0.00050	mg/L		04/15/11 11:55	04/15/11 21:52	1
Cadmium	0.0045	U	0.010	0.0015	mg/L		04/15/11 11:55	04/15/11 21:52	1
Chromium	0.0099	U	0.025	0.0033	mg/L		04/15/11 11:55	04/15/11 21:52	1
Lead	**0.016**	**J**	0.030	0.0021	mg/L		04/15/11 11:55	04/15/11 21:52	1
Selenium	**0.034**	**J**	0.10	0.0042	mg/L		04/15/11 11:55	04/15/11 21:52	1
Silver	0.0099	U	0.020	0.0085	mg/L		04/15/11 11:55	04/15/11 21:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	U	0.00020	0.000041	mg/L		04/18/11 10:26	04/18/11 13:14	1

(b) (4)

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-84082/19-A
Matrix: Water
Analysis Batch: 84137

Client Sample ID: MB 580-84082/19-A
Prep Type: Total Recoverable
Prep Batch: 84082

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014	U	0.060	0.0047	mg/L		04/15/11 11:55	04/15/11 20:36	1
Barium	0.0010	U	0.010	0.00050	mg/L		04/15/11 11:55	04/15/11 20:36	1
Cadmium	0.0045	U	0.010	0.0015	mg/L		04/15/11 11:55	04/15/11 20:36	1
Chromium	0.0099	U	0.025	0.0033	mg/L		04/15/11 11:55	04/15/11 20:36	1
Lead	0.0050	U	0.030	0.0021	mg/L		04/15/11 11:55	04/15/11 20:36	1
Selenium	0.0058	U	0.10	0.0042	mg/L		04/15/11 11:55	04/15/11 20:36	1
Silver	0.0099	U	0.020	0.0085	mg/L		04/15/11 11:55	04/15/11 20:36	1

Lab Sample ID: LCS 580-84082/20-A
Matrix: Water
Analysis Batch: 84137

Client Sample ID: LCS 580-84082/20-A
Prep Type: Total Recoverable
Prep Batch: 84082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Arsenic	4.00	3.93		mg/L		98	80 - 120
Barium	4.00	3.90		mg/L		97	80 - 120
Cadmium	0.100	0.0961		mg/L		96	80 - 120
Chromium	0.400	0.403		mg/L		101	80 - 120
Lead	1.00	0.995		mg/L		100	80 - 120
Selenium	4.00	3.99		mg/L		100	80 - 120
Silver	0.600	0.604		mg/L		101	80 - 120

Lab Sample ID: LCSD 580-84082/21-A
Matrix: Water
Analysis Batch: 84137

Client Sample ID: LCSD 580-84082/21-A
Prep Type: Total Recoverable
Prep Batch: 84082

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Arsenic	4.00	4.08		mg/L		102	80 - 120	4	20
Barium	4.00	4.01		mg/L		100	80 - 120	3	20
Cadmium	0.100	0.0991		mg/L		99	80 - 120	3	20
Chromium	0.400	0.412		mg/L		103	80 - 120	2	20
Lead	1.00	1.02		mg/L		102	80 - 120	3	20
Selenium	4.00	4.12		mg/L		103	80 - 120	3	20
Silver	0.600	0.628		mg/L		105	80 - 120	4	20

Lab Sample ID: LCSSRM 580-84082/22-A
Matrix: Water
Analysis Batch: 84137

Client Sample ID: LCSSRM 580-84082/22-A
Prep Type: Total Recoverable
Prep Batch: 84082

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec. Limits
Arsenic	4.00	3.97		mg/L		99	80 - 120
Barium	4.00	3.96		mg/L		99	80 - 120
Cadmium	0.100	0.0961		mg/L		96	80 - 120
Chromium	0.400	0.402		mg/L		100	80 - 120
Lead	1.00	0.993		mg/L		99	80 - 120
Selenium	4.00	4.00		mg/L		100	80 - 120
Silver	0.600	0.609		mg/L		102	75 - 120

Quality Control Data

Client: (b) (4) (b) (4)
Project/Site: HUD0051

(b) (4) Job ID: 580-25598-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-84144/21-A
Matrix: Water
Analysis Batch: 84231

Client Sample ID: MB 580-84144/21-A
Prep Type: Total/NA
Prep Batch: 84144

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	U	0.00020	0.000041	mg/L		04/18/11 10:26	04/18/11 12:53	1

Lab Sample ID: LCS 580-84144/22-A
Matrix: Water
Analysis Batch: 84231

Client Sample ID: LCS 580-84144/22-A
Prep Type: Total/NA
Prep Batch: 84144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.00200	0.00212		mg/L		106	80 - 120

Lab Sample ID: LCSD 580-84144/23-A
Matrix: Water
Analysis Batch: 84231

Client Sample ID: LCSD 580-84144/23-A
Prep Type: Total/NA
Prep Batch: 84144

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00211		mg/L		105	80 - 120	1	20

Lab Sample ID: LCSSRM 580-84144/24-A
Matrix: Water
Analysis Batch: 84231

Client Sample ID: LCSSRM 580-84144/24-A
Prep Type: Total/NA
Prep Batch: 84144

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.00200	0.00212		mg/L		106	75 - 125

Lab Sample ID: 580-25598-1 MS
Matrix: Water
Analysis Batch: 84231

Client Sample ID: HUD0051-01
Prep Type: Total/NA
Prep Batch: 84144

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.00010	U	0.00200	0.00205		mg/L		103	80 - 120

Lab Sample ID: 580-25598-1 MSD
Matrix: Water
Analysis Batch: 84231

Client Sample ID: HUD0051-01
Prep Type: Total/NA
Prep Batch: 84144

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Mercury	0.00010	U	0.00200	0.00207		mg/L		104	80 - 120	1	20

Lab Sample ID: 580-25598-1 DU
Matrix: Water
Analysis Batch: 84231

Client Sample ID: HUD0051-01
Prep Type: Total/NA
Prep Batch: 84144

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.00010	U	0.00010	U	mg/L		NC	20

(b) (4)

Client: (b) (4) (b) (4)
Project/Site: HUD0051

(b) (4) Job ID: 580-25598-1

Client Sample ID: HUD0051-01
Date Collected: 04/12/11 02:40
Date Received: 04/14/11 09:40

Lab Sample ID: 580-25598-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			84082	04/15/11 11:55	PAB	(b) (4)
Total Recoverable	Analysis	6010B		1	84137	04/15/11 21:46	SP	(b) (4)
Total/NA	Prep	7470A			84144	04/18/11 10:26	PAB	(b) (4)
Total/NA	Analysis	7470A		1	84231	04/18/11 14:05	FCW	(b) (4)

Client Sample ID: HUD0051-02
Date Collected: 04/12/11 02:42
Date Received: 04/14/11 09:40

Lab Sample ID: 580-25598-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			84082	04/15/11 11:55	PAB	(b) (4)
Total Recoverable	Analysis	6010B		1	84137	04/15/11 21:52	SP	(b) (4)
Total/NA	Prep	7470A			84144	04/18/11 10:26	PAB	(b) (4)
Total/NA	Analysis	7470A		1	84231	04/18/11 13:14	FCW	(b) (4)

(b) (4)

Certification Summary

Client: (b) (4) (b) (4) (b) (4) Job ID: 580-25598-1
Project/Site: HUD0051

Laboratory	Authority	Program	EPA Region	Certification ID
(b) (4)		USDA		P330-08-00099
(b) (4)	Alaska	Alaska UST	10	UST-022
(b) (4)	California	NELAC Secondary AB	9	1115CA
(b) (4)	Florida	NELAC Secondary AB	4	E871074
(b) (4)	L-A-B	DoD ELAP	0	L2236
(b) (4)	L-A-B	ISO/IEC 17025	0	L2236
(b) (4)	Louisiana	NELAC Secondary AB	6	05016
(b) (4)	Montana	MT DEQ UST	8	
(b) (4)	Oregon	NELAC Primary AB	10	WA100007
(b) (4)	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

(b) (4)

Sample Summary

Client: (b) (4) (b) (4)
Project/Site: HUD0051

(b) (4) Job ID: 580-25598-1

Sample ID	Client Sample ID	Matrix	Collected	Received
580-25598-1	HUD0051-01	Water	04/12/11 02:40	04/14/11 09:40
580-25598-2	HUD0051-02	Water	04/12/11 02:42	04/14/11 09:40

(b) (4)

Subcontract Order - (b) (4) [redacted] (HUD0051)

25598

Please enter the following code into the Job PO Number field for automated UDZ transfer files: **Sub HON HUD0051**

SENDING LABORATORY:

(b) (4) [redacted]

Client: ERRG, Inc Honolulu

RECEIVING LABORATORY:

(b) (4) [redacted]

Project Location: Hawaii

Receipt Temperature:________ °C   Ice: Y / N

No MS/MSD needed for water samples per Task Order 006. Send Navy EDD with Level IV Data Package. First metal is $22.50, next metals costs $10. Mercury is $30.

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments

Sample ID: HUD0051-01 (RHPD-A - Water - NonPotable)   Sampled: **04/12/11 02:40**

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
DOD Arsenic Total 6010	ug/L	04/26/11	10/09/11 02:40	$22.50	0%	DOD
DOD Barium Total 6010	ug/L	04/26/11	10/09/11 02:40	$10.00	0%	DOD
DOD Cadmium Total 6010	ug/L	04/26/11	10/09/11 02:40	$10.00	0%	DOD
DOD Chromium Total 6010	ug/L	04/26/11	10/09/11 02:40	$10.00	0%	DOD
DOD Lead Total 6010	ug/L	04/26/11	10/09/11 02:40	$10.00	0%	DOD
DOD Mercury Total 7470	ug/L	04/26/11	05/10/11 02:40	$30.00	0%	DOD
DOD Selenium Total 6010	ug/L	04/26/11	10/09/11 02:40	$10.00	0%	DOD
DOD Silver Total 6010	ug/L	04/26/11	10/09/11 02:40	$10.00	0%	DOD

Containers Supplied:

250 mL Plastic HNO3 (C)

Sample ID: HUD0051-02 (RHPD-B - Water - NonPotable)   Sampled: **04/12/11 02:42**

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
DOD Arsenic Total 6010	ug/L	04/26/11	10/09/11 02:42	$22.50	0%	DOD
DOD Barium Total 6010	ug/L	04/26/11	10/09/11 02:42	$10.00	0%	DOD
DOD Cadmium Total 6010	ug/L	04/26/11	10/09/11 02:42	$10.00	0%	DOD
DOD Chromium Total 6010	ug/L	04/26/11	10/09/11 02:42	$10.00	0%	DOD
DOD Lead Total 6010	ug/L	04/26/11	10/09/11 02:42	$10.00	0%	DOD
DOD Mercury Total 7470	ug/L	04/26/11	05/10/11 02:42	$30.00	0%	DOD
DOD Selenium Total 6010	ug/L	04/26/11	10/09/11 02:42	$10.00	0%	DOD
DOD Silver Total 6010	ug/L	04/26/11	10/09/11 02:42	$10.00	0%	DOD

Containers Supplied:

250 mL Plastic HNO3 (C)

Cooler/TB Dig/IR cor 0.1 unc 0.1
Cooler Dsc BOX @ Lab 09:4
Wet/Packs Packing Bubble
Blue Frozen Wecs

(b) (6) [redacted] 4/13/11 1730 Date/Time   (b) (6) [redacted] 4/13/11 09:4 TSK

Released By   Date/Time   Received By   Date/Time

04/26/2011

10

Login Sample Receipt Checklist

nt: (b) (4) (b) (4)

Job Number: 580-25598-1

Login Number: 25598
List Number: 1
Creator: (b) (6)

List Source: (b) (4)

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Frozen packs, samples ok.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
ropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

(b) (4)

(b) (4)

THE LEADER IN ENVIRONMENTAL TESTING

(b) (4) (b) (4)

LABORATORY USE ONLY
LAB JOB NO. HUD0051
LOCATION
CONTAINERS

Chain of Custody / Analysis Request Form

Report to: (b) (6)
Company name: Engineering Remediation Resources Group
Address: 677 Ala Moana Blvd. Ste. 308
City: Honolulu State: HI ZIP: 96813
Phone: 808.533.6000 Fax: 808.533.6010
Samples in shipment: 2

Project identification
Job name: Red Hill Pipeline Demo
Job number: 2010-136
P.O. number: Task order #006
Contact email address: (b) (6) errg.com
Date results needed: @ 10 days

Indicate analyses requested: DRO, BTEX, PH, Metals, RCRA 8, HPCD (5)

Item no	Client sample ID	COMP	GRAB	Matrix: Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Preservation method	Sampling: Date	Time	No. of containers	DRO	BTEX	PH	Metals, RCRA 8	HPCD (5)	Laboratory ID no.
1	RHPD-A		X	X									Ice	4/12/11	2:40	7	✓	✓	✓	✓	✓	HUD0051-01
2	RHPD-B		X	X									Ice	4/12/11	2:42	7	✓	✓	✓	✓	✓	02
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
(b) (6)	4/12/11 1515	HAND	(b) (6)	TAL	4/12/11 1515	Cooler 102
	/				/	Lost
	/				/	

Comments:

Please check one:
- ☐ Dispose by lab
- ☐ Return to client
- ☐ Archive

COC REV 08/2008 Distribution: White - TestAmerica Yellow (b) (4) Pink - Client

Page _____ of _____

(b) (4) [redacted]

Rush TAT Confirmation (Initial/Date) _____

Sample Receipt Checklist

Client Name: Engineering Remediation Date/ Time Received: 4/12/11 1515

Received By: [illegible]

Matrices: Aq Carrier: Client Airbill# :

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Chain of Custody present?	Yes ☑	No ☐	☐
Chain of Custody Signed when relinquished and received?	Yes ☑	No ☐	
Chain of Custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sample containers on ice?	Yes ☑	No ☐	Type: Wet
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA Vials have Zero Headspace?	Yes ☐	No ☑	No VOA vials present: ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Checked: ☑ ea 4/12/11
pH Adjusted?	Yes ☐	No ☑	Final pH:
Encores / MI-VOC / 5035 Vials Present?	Yes ☐	No ☑	Location:
Sample Filtration Needed?	Yes ☐	No ☑	Filtered in Field: ☐
Dry Weight Corrected Results?	Yes ☐	No ☑	Take Action: ☐
DODQSM / QAPP Project?	Yes ☑ ea 4/12/11	No ☐ ea 4/12/11	Type:
Temperature Blank Present?	Yes ☐	No ☑	
Sample Container Temperature:	1.0 °C		

Comments/ Sampling Handling Notes:

VOAs have large headspace ea 4/12/11

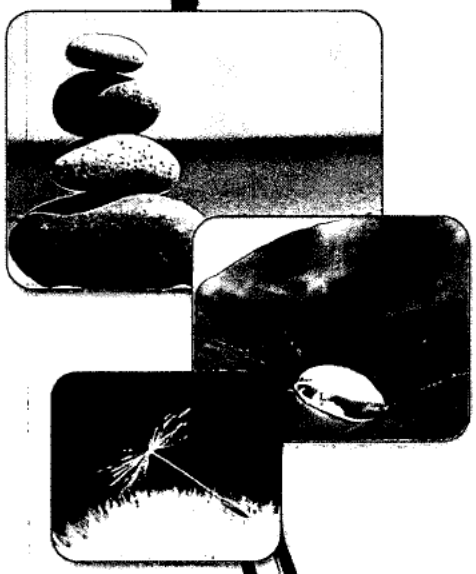
Kitpack Request Form

Kitpack Number: K0201

Requestor: (b) (6)
Company: ERRG
Project: Red Hill Pipeline Demolition
Client Phone: 808-533-6000
Author: MFP
Comments: cooler, COC, labels,

Request Date: 4/8/2011 14:44
Due Date: 4/12/2011 8:00
Kitpack Type: OTC
Delivery Address:

Analysis/Item	QTY	Matrix	Method	Container Type	Pres	Hold Time	# Containers per sample	QA/QC or Add't Containers	Container Total	Lab
DRO	2	WA	8015	1liter amber unpreserved	4 deg C	7d	2		4	TAH
BTEX	2	WA	8260	40ml VOA w/ HCl	HCl	14d	3		6	TAH
pH	2	WA	150.1	250ml plastic unpreserved	4 deg C	24hr	1		2	TAH
Metals, RCRA 8	2	WA	6010/7470	250ml plastic w/ HNO3	HNO3	28d	1		2	TAS
Temp blank										
Trip Blank										
							Total Containers		14	



(b) (4)

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

(b) (4) (b) (4)
(b) (4)
(b) (4)

(b) (4) Job ID: HUG0010
Client Project/Site: Red Hill Pipe Fuel Analysis
Client Project Description: Red Hill Pipe Fuel Analysis

For:
ERRG, Inc Honolulu
677 Ala Moana Blvd
Honolulu, HI 96813

Attn: (b) (6)
(b) (6)

Authorized for release by:
07/08/2011 09:55:13 AM

(b) (6)
Project Manager
(b) (6) @(b) (4)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

..... LINKS .....

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Have a Question? Ask The Expert

Visit us at: (b) (4)

Table of Contents

Job ID: HUG0010

Laboratory: (b) (4)

Narrative

Sample/cooler was received at 13 degrees C on ice and intact 7/5/2011 3:25:00 PM Samples were delivered to (b) (4) to be run according to the Department of Defense Quality Service Manual version 4.2 (DODQSM4.2).

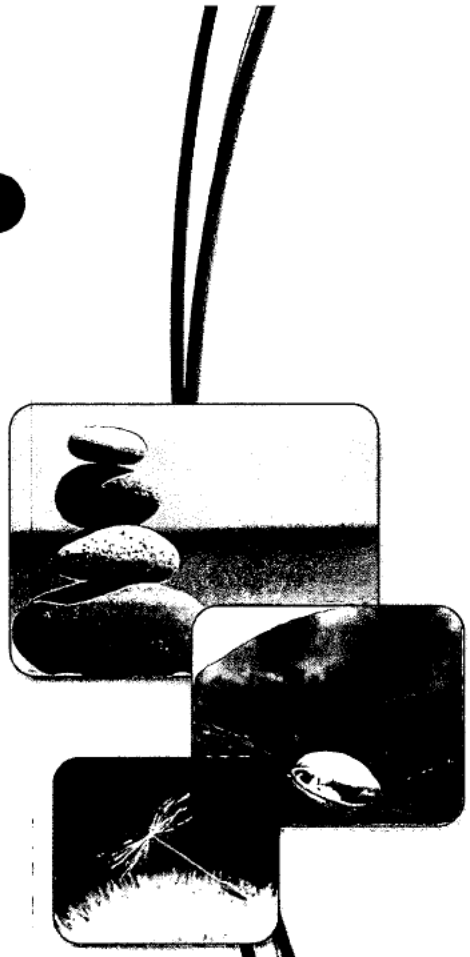
All analyses performed by (b) (4)

Sample Summary

Client: ERRG, Inc Honolulu
Project/Site: Red Hill Pipe Fuel Analysis

(b) (4) Job ID: HUG0010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HUG0010-01	RH-8	Oil	06/22/11 06:00	06/22/11 08:40
HUG0010-02	RH-16	Oil	06/22/11 06:05	06/22/11 08:40



(b) (4)

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

(b) (4) (b) (4)

(b) (4) Job ID: 580-27000-2
Client Project/Site: HUF0128

For:
(b) (4) (b) (4)

Attn: (b) (6)
(b) (6)

Authorized for release by:
07/08/2011 12:35:25 PM

(b) (6)
Project Manager I
(b) (6) @(b) (4)

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Job ID: 580-27000-2

Laboratory: (b) (4)

Narrative

CASE NARRATIVE

Client: (b) (4)
Project: HUF0128
Report Number: 580-27000-2

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the vidual sections below.

RECEIPT
The samples were received on 06/24/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.5 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

TCLP VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples HUF0128-01 (580-27000-1) and HUF0128-02 (580-27000-2) were analyzed for TCLP volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 1311/8260C. The samples were leached on 07/06/2011 and analyzed on 07/07/2011.

The BFB tune report associated with analytical batch 89774 shows the 14.83% relative abundance for m/z = 50 failing the 15 to 40% method criteria. This value meets method criteria and is the result of a rounding/significant figure precision error. The data have been reported.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: As the samples were oil products, the analyst prepared and analyzed an LCS/LCSD pair and accompanying sample duplicate in lieu of the usual LCS with MS/MSD pair.

The associated samples HUF0128-01 (580-27000-1) and HUF0128-02 (580-27000-2) were TCLP extracts and were analyzed at the 100 fold base TCLP dilution. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the TCLP volatiles analyses.

quality control parameters were within the acceptance limits.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

Client: (b) (4)
Project/Site: HUF0128

(b) (4) Job ID: 580-27000-2

Client Sample ID: HUF0128-01
Date Collected: 06/22/11 06:00
Date Received: 06/24/11 09:00

Lab Sample ID: 580-27000-1
Matrix: Waste

Method: 8260B/DoD - Volatile Organic Compounds (GC/MS) - TCLP - DL

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	260		100	15	ug/L			07/07/11 21:01	100

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorobenzene (Surr)	*101*		*80 - 120*		*07/07/11 21:01*	*100*
Toluene-d8 (Surr)	*100*		*85 - 120*		*07/07/11 21:01*	*100*
Ethylbenzene-d10	*100*		*80 - 120*		*07/07/11 21:01*	*100*
Trifluorotoluene (Surr)	*90*		*80 - 120*		*07/07/11 21:01*	*100*
4-Bromofluorobenzene (Surr)	*89*		*75 - 120*		*07/07/11 21:01*	*100*

Client Sample Results

Client: (b) (4)
Project/Site: HUF0128

(b) (4) Job ID: 580-27000-2

Client Sample ID: HUF0128-02
Date Collected: 06/22/11 06:05
Date Received: 06/24/11 09:00

Lab Sample ID: 580-27000-2
Matrix: Waste

Method: 8260B/DoD - Volatile Organic Compounds (GC/MS) - TCLP - DL

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	230		100	15	ug/L			07/07/11 21:52	100

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorobenzene (Surr)	*101*		*80 - 120*		*07/07/11 21:52*	*100*
Toluene-d8 (Surr)	*99*		*85 - 120*		*07/07/11 21:52*	*100*
Ethylbenzene-d10	*98*		*80 - 120*		*07/07/11 21:52*	*100*
Trifluorotoluene (Surr)	*83*		*80 - 120*		*07/07/11 21:52*	*100*
4-Bromofluorobenzene (Surr)	*88*		*75 - 120*		*07/07/11 21:52*	*100*

Method: 8260B/DoD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 580-89774/8 ^P
Matrix: Waste
Analysis Batch: 89774

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits		
Benzene			20.1	19.0		ug/L		95	80 - 120		

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
Fluorobenzene (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*99*		*85 - 120*
Ethylbenzene-d10	*101*		*80 - 120*
Trifluorotoluene (Surr)	*109*		*80 - 120*
4-Bromofluorobenzene (Surr)	*87*		*75 - 120*

Lab Sample ID: LCSD 580-89774/9 ^P
Matrix: Waste
Analysis Batch: 89774

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Benzene			20.1	20.5		ug/L		102	80 - 120	8	30

Surrogate	*LCSD % Recovery*	*LCSD Qualifier*	*Limits*
Fluorobenzene (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*98*		*85 - 120*
Ethylbenzene-d10	*100*		*80 - 120*
Trifluorotoluene (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*87*		*75 - 120*

Lab Sample ID: MB 580-89668/1-A
Matrix: Waste
Analysis Batch: 89774

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.45	U	1.0	0.15	ug/L			07/07/11 15:31	1

Surrogate	*MB % Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorobenzene (Surr)	*99*		*80 - 120*		*07/07/11 15:31*	*1*
Toluene-d8 (Surr)	*99*		*85 - 120*		*07/07/11 15:31*	*1*
Ethylbenzene-d10	*101*		*80 - 120*		*07/07/11 15:31*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*07/07/11 15:31*	*1*
4-Bromofluorobenzene (Surr)	*86*		*75 - 120*		*07/07/11 15:31*	*1*

Method: 8260B/DoD - Volatile Organic Compounds (GC/MS) - DL

Lab Sample ID: 580-27000-1 DU
Matrix: Waste
Analysis Batch: 89774

Client Sample ID: HUF0128-01
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Benzene - DL	260			249		ug/L				4	12

Surrogate	*DU % Recovery*	*DU Qualifier*	*Limits*
Fluorobenzene (Surr) - DL	*101*		*80 - 120*

Client: (b) (4)
Project/Site: HUF0128

(b) (4) Job ID: 580-27000-2

Method: 8260B/DoD - Volatile Organic Compounds (GC/MS) - DL (Continued)

Lab Sample ID: 580-27000-1 DU
Matrix: Waste
Analysis Batch: 89774

Client Sample ID: HUF0128-01
Prep Type: TCLP

Surrogate	DU % Recovery	DU Qualifier	Limits
Toluene-d8 (Surr) - DL	*99*		*85 - 120*
Ethylbenzene-d10 - DL	*100*		*80 - 120*
Trifluorotoluene (Surr) - DL	*87*		*80 - 120*
4-Bromofluorobenzene (Surr) - DL	*87*		*75 - 120*

Client: (b) (4)
Project/Site: HUF0128

(b) (4) Job ID: 580-27000-2

Client Sample ID: HUF0128-01
Lab Sample ID: 580-27000-1
Date Collected: 06/22/11 06:00
Matrix: Waste
Date Received: 06/24/11 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
TCLP	Leach	1311	DL		89668	07/06/11 12:50	RS	(b) (4)
TCLP	Analysis	8260B/DoD	DL	100	89774	07/07/11 21:01	SK	

Client Sample ID: HUF0128-02
Lab Sample ID: 580-27000-2
Date Collected: 06/22/11 06:05
Matrix: Waste
Date Received: 06/24/11 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
TCLP	Leach	1311	DL		89668	07/06/11 12:50	RS	(b) (4)
TCLP	Analysis	8260B/DoD	DL	100	89774	07/07/11 21:52	SK	

Laboratory References:
(b) (4)

Certification Summary

Client: (b) (4) (b) (4)
Project/Site: HUF0128

(b) (4) Job ID: 580-27000-2

Laboratory	Authority	Program	EPA Region	Certification ID
(b) (4)	Alaska	Alaska UST	10	(b) (4)
(b) (4)	Alaska	TA-Port Heiden Mobile Lab	10	
(b) (4)	California	NELAC	9	
(b) (4)	Florida	NELAC	4	
(b) (4)	L-A-B	DoD ELAP		
(b) (4)	L-A-B	ISO/IEC 17025		
(b) (4)	Louisiana	NELAC	6	
(b) (4)	Montana	MT DEQ UST	8	
(b) (4)	Oregon	NELAC	10	
(b) (4)	USDA	USDA		
(b) (4)	Washington	State Program	10	

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Sample Summary

Client: (b) (4) (b) (4)
Project/Site: HUF0128

(b) (4) Job ID: 580-27000-2

Sample ID	Client Sample ID	Matrix	Collected	Received
580-27000-1	HUF0128-01	Waste	06/22/11 06:00	06/24/11 09:00
580-27000-2	HUF0128-02	Waste	06/22/11 06:05	06/24/11 09:00

580-27000-2

Subcontract Order - (b) (4) (HUG0010)

Please enter the following code into the Job PO Number field for automated UDZ transfer files: **Sub HON HUG0010**

SENDING LABORATORY:

(b) (4)

Client: ERRG, Inc Honolulu

RECEIVING LABORATORY:

(b) (4)

Project Location: Hawaii

Receipt Temperature: _____ °C Ice: Y / N

Copy/Relog from HUF0128. Send Navy EDD and L2 report only. TA-Seattle to perform all analysis.

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: HUG0010-01 (RH-8 - Oil)			Sampled: 06/22/11 06:00			relog of HUF0128
8260B TCLP Benzene	mg/L	07/08/11	07/06/11 06:00	$67.50	60%	relog of HUF0128
TCLP Extraction - ZHE	%	07/08/11	07/06/11 06:00	$67.50	60%	relog of HUF0128
Containers Supplied:						
4 oz. Glass Jar (A)	4 oz. Glass Jar (B)	2 oz. Glass Jar (C)				
Sample ID: HUG0010-02 (RH-16 - Oil)			Sampled: 06/22/11 06:05			relog of HUF0128
8260B TCLP Benzene	mg/L	07/08/11	07/06/11 06:05	$67.50	60%	relog of HUF0128
TCLP Extraction - ZHE	%	07/08/11	07/06/11 06:05	$67.50	60%	relog of HUF0128
Containers Supplied:						
4 oz. Glass Jar (A)	4 oz. Glass Jar (B)	2 oz. Glass Jar (C)				

10

Released By	Date/Time	Received By	Date/Time
Released By	Date/Time	Received By	Date/Time

Page 1 of 1

(b) (4)	Work Sharing Agreement (Include with every sample shipment)		Exporting Lab	TAL Honolulu
			Project Name	Red Hill Pipe Fuel Analysis
Import Lab Information			**Export Lab Information**	
Lab Name	(b) (4)		PM Contact Name	(b) (6)
PM Contact Name	(b) (6)		Backup Contact Name	
Backup Contact Name			Agreement Date	
Pricing Information			**Project Information**	
QA/QC (i.e. MS/MSD) Billable?	No		Client Company Name	ERRG Inc, Honolulu
Raw Data Surcharge	0 %		Date First Samples to Arrive	06/24/11
EDD Surcharge	0 %		Est. Duration of Sampling Event	1 month
TAT Surcharges	60 %			
Penalty Terms	None			
Other Charges Not in Unit Price? (i.e. canisters, Level IV/III , shipping, bottles)	None		Quote or Contract Reference ID	HUG0010 (relog of HUF0128)

Project Details			
Non-Standard Work Product	No		
Quality Assurance Plan	No		
List Certifications Required			
Analyte/Cmpd. List with RLs Attached	No		
Results Dry-Weight Corrected	No		
Special Method Holding Times	None		
Internal Chain of Custody Required	Yes		
Known Hazards/High Analyte Level	No		
Saturday/Special Delivery Options	None		
Special Instructions	None		
Reporting Limit Value Convention	Report to MDL with "J" Values up to	DoD4.2 project "Non-Detect" Presentation Convention	U

Deliverable Requirements		Transmittal medium	Format Column	Date Due to Export Lab
Preliminary Report:	No	Email		
Final Report:	Yes	Email	II	7/8/2011
EDD:	Yes	Email	SEDD, Excel	7/8/2011
Total Access Reporting	No	NA	NA	
Custom Forms:	No	NA	Type Format Name	
"Other" Deliverable Definitions or Notes	Samples are JP-5 fuel			

Import and Export Lab Agreement

Import lab must acknowledge receipt of Agreement and samples *via E-Mail*

Analysis	Method	Matrix	# of Samples	Import Lab's Unit Price	Unit Price w/Surcharges	Extended Price
TCLP Benzene	8260	Other/Spec	2	$ 67.50	$ 108.00	$ 216.00
TCLP Extraction - ZHE	1311	Other/Spec	2	$ 67.50	$ 108.00	$ 216.00
					$ -	$ -
					$ -	$ -
					$ -	$ -
					Approximate Total Project Value	$ 432.00

Work Instruction No. CA-WI-010/C-01/11

Login Sample Receipt Checklist

Client: (b) (4)

Job Number: 580-27000-2

Login Number: 27000
List Number: 1
Creator: Gamble, Cathy

List Source: (b) (4)

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

New (Relogged) Workorder Number: HUG0010

REQUEST TO RELOG SAMPLES

(Please submit to sample control with a copy of the COC)

CLIENT: ERRG Inc, Honolulu MATRIX: Oil

PREVIOUSLY LOGGED SAMPLES

[X] TAT Change status to: Avaialable

Change status as of Day: 7/5/2011 Time: 3:34 PM

[ ] CHANGE ANALYSES

Add Analyses [X] Cancel Analyses [ ]

Project Work Order #: HUF0128

Sample Number	Analyses	New Sample Number
-01	8260 TCLP Benzene, TCLP Extraction-ZHE	HUG0010-01
-02	8260 TCLP Benzene, TCLP Extraction-ZHE	-02
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	

SAMPLES ON HOLD

Sample Description	Analyses	New Sample Number
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	

Client Authorization (Person/Date/Time): ERRG Inc, Honolulu Megan Meachum 7/5/2011 9:43 AM

Project Manager: Margie Pascua

(b) (4) [redacted]

THE LEADER IN ENVIRONMENTAL TESTING

(b) (4) [redacted]

LABORATORY USE ONLY
LAB JOB NO HUF0128
LOCATION
CONTAINERS

Chain of Custody / Analysis Request Form

(b) (6) [redacted]
Company name: ERRG
Address: 677 ALAKAINA #308 HI 96813
City: HONOLULU State: HI ZIP: 96813
Phone: 808-533-6000 Fax:
(b) (6) [redacted]
samples in shipment: 2

Project identification
Job name: RED HILL
Job number: 2010-136
P.O. number:
Contact email address: (b) (6) [redacted] errg.com
Date results needed: 6/28/11

Indicate analyses requested: GBTEX, DRO/RRO, IGNITABILITY, TCLP METALS RCRA 8

Item no.	Client sample ID	COMP	GRAB	Matrix: Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Preservation method	Sampling: Date	Time	No. of containers	Laboratory ID no.
1	RH-8		✓						✓				ICE	6/22/11	0600	3	HUF0128-01
2	RH-16		✓						✓				ICE	6/22/11	0605	3	-02
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
(b) (6) [redacted]	6/22 / 0804		(b) (6) [redacted]	TA-HON	06/22 / 0804	13°C, intact, ice
	/				/	
	/				/	

Comments:

Please check one:
☐ Dispose by lab
☐ Return to client
☐ Archive

COC REV 05/2006 Distribution: White - TestAmerica Yellow - TestAmerica Pink - Client

Page _____ of _____

(b) (4)

Rush TAT Confirmation (initial/Date) (b) (6) 06/22/11

HWF0128

Sample Receipt Checklist

Client Name: ERRG Date/ Time Received: 06/22/11 0804

Received By: (b) (6)

Matrices: Sol Carrier: Client Airbill# :

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Chain of Custody present?	Yes ☑	No ☐	☐
Chain of Custody Signed when relinquished and received?	Yes ☑	No ☐	
Chain of Custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sample containers on ice?	Yes ☑	No ☐	Type: gel
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA Vials have Zero Headspace?	Yes ☐	No ☐	No VOA vials present: ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Checked: ☑
pH Adjusted?	Yes ☐	No ☐	Final pH:
Encores / MI-VOC / 5035 Vials Present?	Yes ☐	No ☑	Location:
Sample Filtration Needed?	Yes ☐	No ☑	Filtered in Field: ☐
Dry Weight Corrected Results?	Yes ☐	No ☑	Take Action: ☐
DODQSM / QAPP Project?	Yes ☑	No ☐	Type: 4.2

Temperature Blank Present? Yes ☐ No ☑

Sample Container Temperature: 13 °C

Comments/ Sampling Handling Notes:

(b) (6)

From: (b) (6)
Sent: Tuesday, July 05, 2011 3:15 PM
To: (b) (6)
Subject: RE: Invoice: HUF0128

Hi (b) (6),

We can have the data by July 8th. Will that be okay?

Thank you!
(b) (6)

From: (b) (6) [mailto:(b) (6) @errg.com]
Sent: Tuesday, July 05, 2011 2:52 PM
To: (b) (6)
Subject: RE: Invoice: HUF0128

(b) (6),

How fast can you get them done? Yes, we will need both samples analyzed.

Thanks!

(b) (6) **PE**
ENGINEERING/REMEDIATION RESOURCES GROUP, INC.

From: (b) (6) [mailto:(b) (6) (b) (4)
Sent: Tuesday, July 05, 2011 1:06 PM
To: (b) (6)
Subject: RE: Invoice: HUF0128

Hi (b) (6),

How fast of a TAT do you need for this? Also, do you need both samples analyzed?

Thank you!
(b) (6)

From: (b) (6) [mailto:(b) (6) @errg.com]
Sent: Tuesday, July 05, 2011 9:43 AM
To: (b) (6)
Subject: RE: Invoice: HUF0128

(b) (6),

We saw high concentrations of benzene and would like to run a TCLP benzene analysis. Do you have enough sample left to do the test? Also, do you have time to rush it? Please let me know and provide a quote. Thank you!

(b) (6) PE
ENGINEERING/REMEDIATION RESOURCES GROUP, INC.

From: (b) (6) [mailto:(b) (6) (b) (4)
Sent: Thursday, June 30, 2011 9:43 AM
To: (b) (6)
Cc: (b) (6)
Subject: Invoice: HUF0128

Aloha,

Attached, please find the invoice for HUF0128.

Mahalo!

(b) (6)
Project Manager

(b) (4)

Please let us know if we met your expectations by rating the service you received from (b) (4) on this project by visiting our website at: Project Feedback

INDEPENDENCE DAY HOLIDAY REMINDER-(b) (4) lab will be closed on Monday, July 4, 2011 to observe Independence Day. Please contact your Project Manager in advance if you will need sampling supplies or to make alternative arrangements for sample submission.

Appendix B -
As-Built Drawings

Appendix B. As-Built Drawings

(b) (3) (A)

FILE NAME: N:\Graphics\2010\2010-136 NAVFAC Red Hill Pipe Demo\B-1.dwg LAYOUT NAME: B-1 PLOTTED: Monday, April 30, 2012 - 7:51am

- (b) (3) (A)

- (b) (3) (A)

- (b) (3) (A)

- (b) (3) (A)

(b) (3) (A)

- (b) (3) (A)

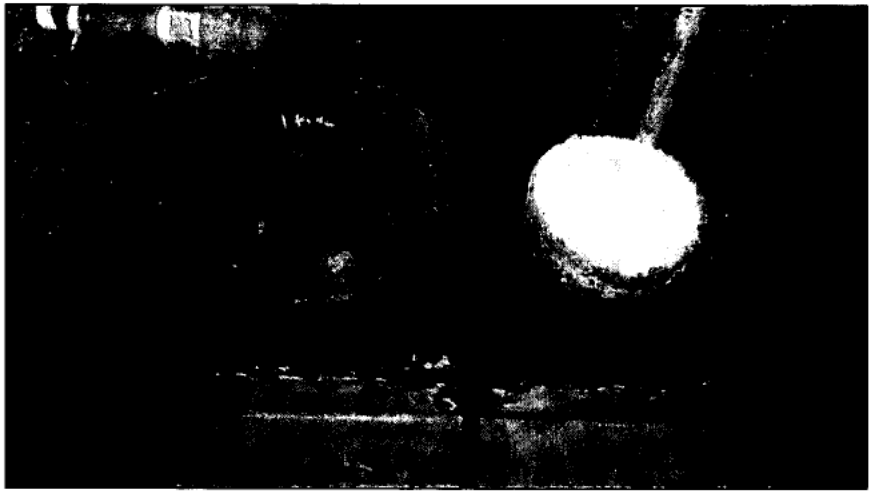
- (b) (3) (A)

- (b) (3) (A)

- (b) (3) (A)

- (b) (3) (A)

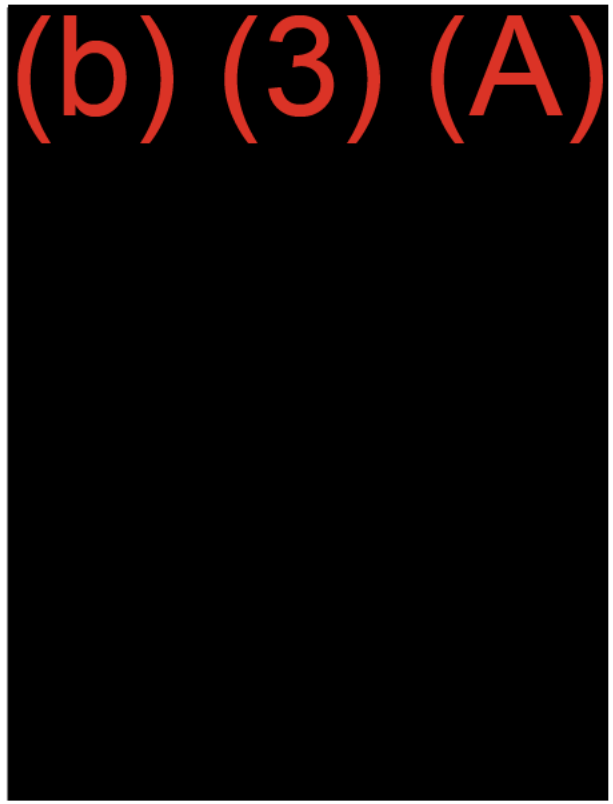
Appendix C. Photographic Logs



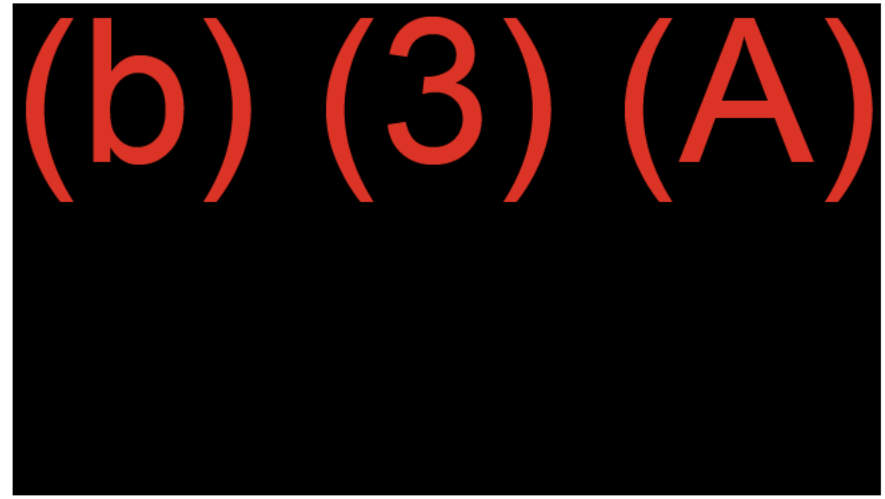
Photograph: 001
Date: 15 March 2012
Description: [redacted]-INCH WATER PIPELINE. The 140-foot-long, [redacted] inch water pipeline on the right of the picture was supported on beams attached to the ceiling and secured to the beam with u-bolts. The pipeline ran alongside the 450-foot-long, [redacted] inch pipeline. The beginning of the 140-foot-long, [redacted] inch pipeline was closed with a concrete plug, while the 450-foot-long, [redacted]-inch pipeline was closed with a blind flange. (b) (3) (A) [redacted]

Photograph: 002
Date: 15 March 2012
Description: [redacted]NCH WATER PIPELINE. The 140-foot-long, [redacted] inch pipeline ran overhead until it ended with an elliptical head cap (b) (3) (A) [redacted]. The 450-foot-long, [redacted] inch pipeline is also shown veering and extending down (b) (3) (A) [redacted]

NAVFAC	Project Title: Demolish Abandoned Tank Cleaning Water Piping and JP-5 Pipeline and Appurtenances	Date: June 2012
	Contract/Task Order: N62742-09-D-1959 / HC06	Pages: 1 of 4



Photograph: 003
Date: 15 March 2012
Description: [redacted]-INCH WATER PIPELINE. The 140-foot-long, [redacted]-inch pipe was cut with a pneumatic hacksaw and supported during cutting with a contractor lift. The pipeline ran overhead alongside the 450-foot-long, [redacted]-inch pipeline.
(b) (3) (A) [redacted]



Photograph: 004
Date: 26 March 2012
Description: [redacted]-INCH WATER PIPELINE. The 140-foot-long, [redacted]-inch pipeline was removed from the support beams.
(b) (3) (A) [redacted]

NAVFAC	Project Title: Demolish Abandoned Tank Cleaning Water Piping and JP-5 Pipeline and Appurtenances	Date: June 2012
	Contract/Task Order: N62742-09-D-1959 / HC06	Pages: 2 of 4

Photograph: 005
Date: 16 March 2012
Description: [redacted]-INCH WATER PIPELINE. The [redacted]-inch pipeline reduced down at a flange from the [redacted] inch water pipeline and ran along the wall (b) (3) (A) [redacted]

Photograph: 006
Date: 16 March 2012
Description: [redacted]-INCH WATER PIPELINE. The [redacted]-inch pipeline was supported by metal brackets, which were removed along with the pipeline. (b) (3) (A) [redacted]

NAVFAC	Project Title: Demolish Abandoned Tank Cleaning Water Piping and JP-5 Pipeline and Appurtenances	Date: June 2012
	Contract/Task Order: N62742-09-D-1959 / HC06	Pages: 3 of 4

Photograph: 007
Date: 16 March 2012
Description: [redacted]**INCH WATER PIPELINE.** The [redacted]-inch pipeline bent up toward an electrical panel (b) (3) (A) [redacted]

Photograph: 008
Date: 16 March 2012
Description: [redacted]**-INCH WATER PIPELINE.** The [redacted]-inch pipeline terminates open-ended, above an electrical panel in the Pearl Harbor Tunnel.

Appendix D -
Waste Disposal Documentation

Appendix D. Waste Disposal Documentation

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: HIR 000 050 401
2. Page 1 of: 3
3. Emergency Response Phone: 1-800-645-8265
4. Manifest Tracking Number: 007246004 JJK

5. Generator's Name and Mailing Address
COMNAVREG HAWAII, C/O NAVFAC ENGR COMMAND, CODE PRP 42
400 MARSHALL ROAD, ATTN: (b) (6)
PEARL HARBOR, HI 96860-3139
Generator's Phone: 808-471-5094

Generator's Site Address (if different than mailing address)
RED HILL PIPELINE
AIEA, HI 96701
HIC7147-03

6. Transporter 1 Company Name: PACIFIC COMMERCIAL SERVICES, LLC. 808-545-4599
U.S. EPA ID Number: H I R 0 0 0 0 9 7 8 2 4

7. Transporter 2 Company Name: MATSON NAVIGATION COMPANY 800-962-8766
U.S. EPA ID Number: C A D 0 0 6 9 1 2 6 2 0

8 Designated Facility Name and Site Address
CLEAN HARBORS SAN JOSE, LLC
1021 BERRYESSA ROAD
SAN JOSE, CA 95133
Facility's Phone: 408-451-5000
U.S. EPA ID Number: C A D 0 5 9 4 9 4 3 1 0

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3077, HAZARDOUS WASTE SOLID, N.O.S., (PAINT CHIP DEBRIS WITH LEAD) 9, PGIII	003	DM	00600	P			181 D008
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
9b1: HWSOLID CH#20792 55G 2008 9b1: 171 SEND COPY TO:
9b2: * ERG# 9b2: PCS LLC
9b3: * DO/JOE 9b3: P.O. BOX 235117
9b4: * 7147 9b4: HONOLULU, HI 96823

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgr
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generato

Generator's/Offeror's Printed/Typed Name: (b) (6) Signatur (b) (6) Month 8 Day 25 Year 11

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
(b) (6) (b) (6) Month 8 Day 25 Year 11
Month 9 Day 2 Year 11

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/T (b) (6) Month 9 Day 20 Year 11

EPA Form 87 TE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: HIR 000 050 401

22. Page: 2/3

23. Manifest Tracking Number: 007246004JJK

HIC7147-03

24. Generator's Name: COMNAVREG HAWAII, C/O NAVFAC ENGR COMMAND, CODE PRP 42

25. Transporter 3 Company Name: CLEAN HARBORS ENVIRONMENTAL SVC. U.S. EPA ID Number: MAD039322250

26. Transporter 4 Company Name: Clean Harbors Environmental Services U.S. EPA ID Number: MAD039322250

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		

32. Special Handling Instructions and Additional Information

GENERATOR

TRANSPORTER

33. Transporter 3 Printed/Typed Name: (b) (6) Month 9 Day 15 Year 11

34. Transporter 4 Printed/Typed Name: Month 9 Day 15 Year 11

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: HIR000050401

22. Page: 3 of 3

23. Manifest Tracking Number: 007246004 FLE

24. Generator's Name: COMNAVREG HAWAII

25. Transporter 5 Company Name: CLEAN HARBORS ENV SVC — U.S. EPA ID Number: MAD039322250

26. Transporter _____ Company Name — U.S. EPA ID Number:

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		

32. Special Handling Instructions and Additional Information

GENERATOR

TRANSPORTER

33. Transporter 5 Acknowledgement of Receipt of Materials

[redacted] Month: 09 Day: 20 Year: 11

Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH520792

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # *HIR000050401*
GENERATOR NAME: *COMNAVREG Hawaii c/o NAVFAC Engineer Command*
GENERATOR CODE (Assigned by Clean Harbors) *CO6485*
CITY *Aiea* STATE/PROVINCE *HI* ZIP/POSTAL CODE *96701*
ADDRESS *Red Hill*
PHONE: (808) 471-0703
CUSTOMER CODE (Assigned by Clean Harbors) *PA8891*
CUSTOMER NAME: *Pacific Commercial Services-DRMO*
ADDRESS *5 Sand Island Access Road Building 931, Kapala*
CITY *Honolulu* STATE/PROVINCE *HI* ZIP/POSTAL CODE *96819*

B. WASTE DESCRIPTION

WASTE DESCRIPTION: *Vacuum Bags of dust with lead*

PROCESS GENERATING WASTE: **Pipeline repair**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS
1 2 3
% BY VOLUME (Approx.)
TOP *0.00*
MIDDLE *0.00*
BOTTOM *0.00*

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR
VARIOUS

ODOR
- [ ] NONE
- [x] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON
- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- [x] 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- [x] 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
DUST	60.0000000	--	85.0000000	%
FABRIC DEBRIS	10.0000000	--	15.0000000	%
LEAD	0.0000000	--	240000.0000000	PPM

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. *G09* SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. *W002*

E. CONSTITUENTS

these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0		99.0000000	PPM	
D005	BARIUM	100.0		1999.0000000	PPM	
D006	CADMIUM	1.0		19.0000000	PPM	
D007	CHROMIUM	5.0		99.0000000	PPM	
D008	LEAD	5.0	12000.0000	240000.0000000	PPM	
D009	MERCURY	0.2		3.9000000	PPM	
D010	SELENIUM	1.0		19.0000000	PPM	
D011	SILVER	5.0		99.0000000	PPM	
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCE	EXPLOSIVE	FUMING	☑ OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	NONE OF THE ABOVE

F. REGULATORY STATUS

☑ YES NO USEPA HAZARDOUS WASTE?

D008

☑ YES NO DO ANY STATE WASTE CODES APPLY?

181

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

☑ YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***This is subject to LDR.***
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES ☑ NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES ☑ NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (PAINT CHIP DEBRIS WITH LEAD), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY ☑ QUARTERLY YEARLY OTHER ***Other***

☑ **CONTAINERIZED**

3-3 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***55***

CONTAINER TYPE:

CUBIC YARD BOX PALLET

TOTE TANK ☑ DRUM

OTHER:

DRUM SIZE: ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE NAME (PRINT) TITLE DATE

For Reference Only. Contact (b) (6) NAVFAC Environmental, for signed original.
For Reference Only. Contact (b) (6) NAVFAC Environmental, for signed original.

This waste profile has been submitted using Clean Harbors' electronic signature system.

(b) (4) [redacted]

Asbestos Waste Shipment Record

HIC7147-04

1. Worksite & Mailing Address Red Hill Pipeline, Aiea, HI 400 Marshall Road, Pearl Harbor, HI96860	Owner's Name COMNAVREG, HAWAII C/O NAVFAC	Owner's Phone No. 808-471-5094
2. Operator's Name & Address ERRG, 677 Ala Moana Blvd, Suite 308, HONOLULU, HI 96813		Operator's Phone No. 808-833-5000
3. Waste Disposal Site (WDS) Name, Mailing Address & Location PVT Land Company, Inc. 87-2020 Farrington Hwy. Nanakuli, HI 96792		WDS Phone No. (808) 668-4561
4. Name & Address of Responsible Agency Hawaii Department of Health - Clean Air Branch 919 Ala Moana Blvd. Honolulu, HI 96814		(808) 543-8200

5. Description of Materials		6. Containers		7. Total Quantity
		No.	Type	Cm (Cyd)
RACM				
Cat I ACM	ASBESTOS CONAINING GASKETS	001	DM	0.25 CYD
Cat II ACM				

8. Special Handling Instructions & Additional Information

9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Printed/Typed Name & Title	Signature	Mo / Day / Yr

10. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name & Title	Signature	Mo / Day / Yr

Company Name & Address	Phone Number
Pacific Commercial Services LLC, P.O. BOX 235117, HONOLULU, HI 96817	808-545-4599

11. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name & Title	Signature	Mo / Day / Yr

Company Name & Address	Phone Number

12. Discrepancy Indication Space

13. Waste Disposal Site Owner or Operator

Certification of receipt of asbestos materials covered by this manifest except as noted in item 12.

For Reference Only. Contact Dennis Masuyama, NAVFAC Environmental Division, for signed original.

Printed/Typed Name & Title	Sig e	Mo / Day / Yr

HTC 7147

PVT LAND COMPANY LTD.
87-2020 FARRINGTON HWY.
WAIANAE, HI 96792

Ticket #: 615826

Bill To: PACIFIC COMMERCIAL SERVICES LLC
Haul Acct/Veh #: PACICO /PACIC-V3
PO/Job #:
Date: 09/13/11 Time I/O:11:24 /11:31
Clr #: 74961 - Red Hill Pipe Line 400 Ma

Material: 2000 - Asbestos
Gross: 13960 Tare: 13480 Net: 480 lbs

0.24 Tons @	$80.00/tn	$ 90.00
Fees:HA-1		90.00
Tax		8.48

TOTAL $188.48

==========

COD Customer: 1 - 1 Not Specified
Notes:

STATE OF HAWAII CERTIFICATE OF MEASURES
DIVISION OF MEASUREMENT STANDARDS

This certifies to the accuracy and identity of the quantity & commodity shown, is suitable for all deliveries when sealed by a measuremaster.
STATE OF HAWAII MEASUREMASTER
NO.3348 Registered Intls MD

Pmnt Type: 1 - Charge (Invoice)
Fee codes: HA-Handling Fee (ASB)
<<< COVER YOUR LOAD >>>

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
HIR 000 050 401	2	1-800-535-5053	001468006 JJK

GENERATOR

5. Generator's Name and Mailing Address
COMNAVREG HAWAII, C/O NAVFAC HAWAII, CODE PRJ421
400 MARSHALL ROAD, ATTN: (b) (6)
JBPHH, HI 96860-3139
Generator's Phone: 808-471-4216

Generator's Site Address (if different than mailing address)
HIC7147-03
RED HILL TUNNEL, ADIT 3
AIEA, HI 96701

6. Transporter 1 Company Name: PACIFIC COMMERCIAL SERVICES, LLC. 808-545-4599 — U.S. EPA ID Number: HIR000097824

7. Transporter 2 Company Name: MATSON NAVIGATION COMPANY 800-962-8766 — U.S. EPA ID Number: CAD006912620

8. Designated Facility Name and Site Address
CLEAN HARBORS SAN JOSE, LLC
1021 BERRYESSA ROAD
SAN JOSE, CA 95133
Facility's Phone: 408-451-5000
U.S. EPA ID Number: CAD059494310

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3077, HAZARDOUS WASTE SOLID, N.O.S., (PAINT CHIP DEBRIS WITH LEAD) 9, PGIII	001	DM	140 ~~00650~~ 02	P			181 D008
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
9b1: HWSOLID CH520792
9b2: *
9b3: *
9b4: *
~~556~~ 02
2008 ERG# DO/JOE 7147
9b1: 171
9b2:
9b3:
9b4:
SEND COPY TO:
PCS LLC
P.O. BOX 235117
HONOLULU, HI 96823

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: (b) (6) Signature: (b) (6) Month 04 Day 11 Year 12

INT'L

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: (b) (6) Signature: (b) (6) Month 04 Day 17 Year 12
Transporter 2 Printed/Typed Name: Signature: Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name Signature Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

ESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: HIR 000 050 401

22. Page: 2

23. Manifest Tracking Number: 001468006JJK

HIC7147-03

24. Generator's Name: COMNAVREG HAWAII, C/O NAVFAC HAWAII, CODE PRJ421

25. Transporter 3 Company Name: CLEAN HARBORS ENVIRONMENTAL SVC. U.S. EPA ID Number: MAD039322250

26. Transporter 4 Company Name: SMITH SYSTEMS TRANSPORTATION U.S. EPA ID Number: NED986382133

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		

GENERATOR

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

34. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

WASTE MATERIA ROFILE SHEET

Clean Harbors Profile No. CH520792

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # *HIR000050401*
GENERATOR NAME: *COMNAVREG Hawaii c/o NAVFAC Engineer Command*
NERATOR CODE (Assigned by Clean Harbors) *CO6485*
CITY *Aiea* STATE/PROVINCE *HI* ZIP/POSTAL CODE *96701*
DDRESS *Red Hill*
PHONE: (808) 471-0703
CUSTOMER CODE (Assigned by Clean Harbors) *PA8891*
CUSTOMER NAME: *Pacific Commercial Services-DRMO*
ADDRESS *5 Sand Island Access Road Building 931, Kapala*
CITY *Honolulu* STATE/PROVINCE *HI* ZIP/POSTAL CODE *96819*

B. WASTE DESCRIPTION

WASTE DESCRIPTION: *Paint chip debris and dust with lead*

PROCESS GENERATING WASTE: Pipeline repair

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? No

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS
1 2 3
% BY VOLUME (Approx.)
TOP *0.00*
MIDDLE *0.00*
BOTTOM *0.00*

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR
VARIOUS

ODOR
- [ ] NONE
- [x] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON
- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- [x] 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- [x] 5.1 - 20.0
- > 20
- Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
DUST	15.0000000	--	35.0000000	%
LEAD	0.0000000	--	310000.0000000	PPM
PAINT CHIP DEBRIS	50.0000000	--	75.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. *G09* SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. *W002*

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0		*310000.0000000*	*PPM*	
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCE	EXPLOSIVE	FUMING	☑ OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	NONE OF THE ABOVE

REGULATORY STATUS

☑ YES NO USEPA HAZARDOUS WASTE?
D008

☑ YES NO DO ANY STATE WASTE CODES APPLY?
181
Texas Waste Code *OUTS319H*

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

☑ YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?
LDR CATEGORY: *This is subject to LDR.*
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES ☑ NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?
Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES ☑ NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? _____ Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (PAINT CHIP DEBRIS WITH LEAD), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER *Other*

☑ **CONTAINERIZED**
1-1 CONTAINERS/SHIPMENT
STORAGE CAPACITY:
CONTAINER TYPE:
CUBIC YARD BOX PALLET
TOTE TANK ☑ DRUM
OTHER:
DRUM SIZE: *55 gallon*

BULK LIQUID
GALLONS/SHIPMENT: *0 Min -0 Max* GAL.

BULK SOLID
SHIPMENT UOM: TON YARD
TONS/YARDS/SHIPMENT: *0 Min - 0 Max*

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

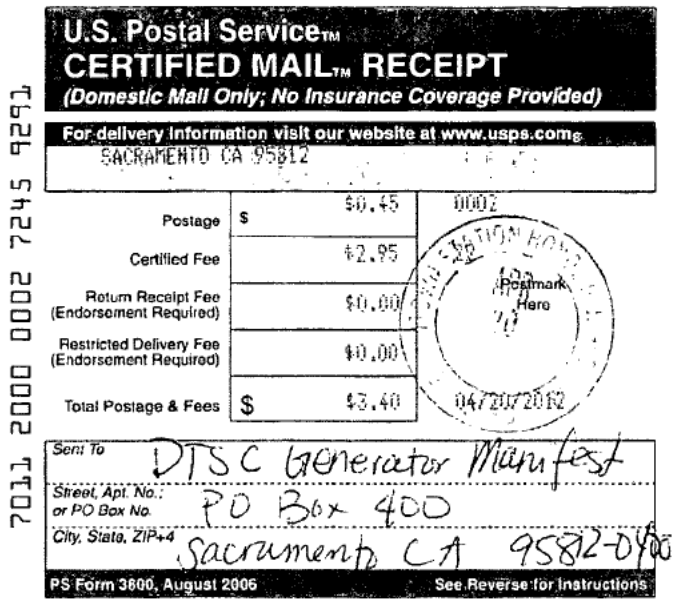
I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE NAME (PRINT) TITLE DATE

For Reference Only. Contact (b) (6) NAVFAC Environmental Division, for signed original.

For Reference Only. Contact (b) (6) NAVFAC Environmental Division, for signed original.

This waste profile has been submitted using Clean Harbors' electronic signature system.



U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
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For delivery information visit our website at www.usps.com®
SACRAMENTO CA 95812

Postage	$	$0.45
Certified Fee		$2.95
Return Receipt Fee (Endorsement Required)		$0.00
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$3.40

0002
Postmark Here
04/20/2012

Sent To DTSC Generator Manifest
Street, Apt. No.; or PO Box No. PO Box 400
City, State, ZIP+4 Sacramento CA 95812-0400

PS Form 3800, August 2006 See Reverse for Instructions

7011 2000 0002 7245 9291

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number HIR 000 050 401	2. Page 1 of 3 &	3. Emergency Response Phone 1-800-535-5053	4. Manifest Tracking Number 001468006 JJK

5. Generator's Name and Mailing Address
COMNAVREG HAWAII, C/O NAVFAC HAWAII, CODE PRJ421
400 MARSHALL ROAD, ATTN: ESTRELITA HIGA
JBPHH, HI 96860-3139
Generator's Phone: 808-471-4216

Generator's Site Address (If different than mailing address)
RED HILL TUNNEL, ADIT 3
AIEA, HI 96701
HIC7147-03

6. Transporter 1 Company Name: PACIFIC COMMERCIAL SERVICES, LLC. 808-545-4599
U.S. EPA ID Number: H I R 0 0 0 0 9 7 8 2 4

7. Transporter 2 Company Name: MATSON NAVIGATION COMPANY 800-962-8766
U.S. EPA ID Number: C A D 0 0 6 9 1 2 6 2 0

8. Designated Facility Name and Site Address
CLEAN HARBORS SAN JOSE, LLC
1021 BERRYESSA ROAD
SAN JOSE, CA 95133
Facility's Phone: 408-451-5000
U.S. EPA ID Number: C A D 0 5 9 4 9 4 3 1 0

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3077, HAZARDOUS WASTE SOLID, N.O.S., (PAINT CHIP DEBRIS WITH LEAD) 9, PGIII	001	DM	140 ~~00050~~ 02	P			181 / D008
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
9b1: HWSOLID CR520792 ~~557~~ 2008 9b1: 171 SEND COPY TO:
9b2: ERG# 9b2: PCS LLC
9b3: DO/JOE 9b3: P.O. BOX 235117
9b4: 7147 9b4: HONOLULU, HI 96823

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator signature: (b) (6) Month 04 Day 11 Year 12

16. International Shipments
Transporter signature (for exports only): Date leaving U.S.:

Transporter signature: (b) (6) Month 04 Day 11 Year 12

Month 04 Day 13 Year 12

Partial Rejection Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: (b) (6) Month 8 Day 7 Year 12

EPA Form ... ATE (IF REQUIRED)

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

[redacted]

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number	22. Page	23. Manifest Tracking Number
	HIR 000 050 401	2/3	001468006JJK

24. Generator's Name: COMNAVREG HAWAII, C/O NAVFAC HAWAII, CODE PRJ421

HIC7147-03

25. Transporter 3 Company Name: CLEAN HARBORS ENVIRONMENTAL SVC. U.S. EPA ID Number: MAD039322250

26. Transporter 4 Company Name: ~~SMITH SYSTEMS TRANSPORTATION~~ Clean Harbors Env. Services U.S. EPA ID Number: ~~NES000822123~~ MAD039322250

27a. HM	27b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

32. Special Handling Instructions and Additional Information

33. Transporter Printed/Typed Name: [redacted] Month 4 Day 30 Year 12

34. Transporter [redacted] Month 4 Day 30 Year 12

35. Discrepancy Indication Space

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

GENERATOR

TRANSPORTER

DESIGNATED FACILITY

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

[redacted]

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: HIR000050401

22. Page: 3B

23. Manifest Tracking Number: 001468006 JJK

24. Generator's Name: COMNAVREG HAWAII

25. Transporter 5 Company Name: CLEAN HARBORS ENV. SVC — U.S. EPA ID Number: MAD039322250

26. Transporter ____ Company Name — U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

32. Special Handling Instructions and Additional Information

TRANSPORTER

[redacted]

Month Day Year: 5 / 7 / 12

Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	HIR 000 050 401	1	1-800-645-8265	000016141

GENERATOR

5. Generator's Name and Mailing Address
COMNAVREG HAWAII, C/O NAVFAC ENGR COMMAND, CODE PRP 421
400 MARSHALL ROAD, ATTN: (b) (6)
PEARL HARBOR, HI 96860-3139
Generator's Phone: 808-471-5094

Generator's Site Address (if different than mailing address)
RED HILL PIPELINE
AIEA, HI 96701
HIC7141-01

6. Transporter 1 Company Name: PACIFIC COMMERCIAL SERVICES, LLC. 808-545-4599
U.S. EPA ID Number: H I R 0 0 0 0 9 7 8 2 4

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
PVT LAND COMPANY, LTD.
87-2020 FARRINGTON HIGHWAY
WAIANAE, HI 96792
Facility's Phone: 808-668-4561
U.S. EPA ID Number: NOT APPLICABLE

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
X	1. NA1993, COMBUSTIBLE LIQUID, N.O.S., (JP5 SLUDGE) PGIII FP>60°C	008	DM	03600	P	NON-RCRA
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
9b1: COMB LIQ
9b2: *
9b3: *
9b4: *

2008 9b1: 128
ERG# 9b2:
DO/JOE 9b3:
7141 9b4:

SEND COPY TO:
PCS LLC
P.O. BOX 235117
HONOLULU, HI 96823

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: For Reference Only. Signed Manifest can be provided upon request.
Signature
Month Day Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name
Signature
Month Day Year

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	HIR 000 050 401	1	1-800-645-8265	000016142

GENERATOR

5. Generator's Name and Mailing Address

COMNAVREG HAWAII, C/O NAVFAC ENGR COMMAND, CODE PRP 421
400 MARSHALL ROAD, ATTN: (b) (6)
PEARL HARBOR, HI 96860-3139
Generator's Phone: 808-471-5094

Generator's Site Address (If different than mailing address)

HIC7141-02
RED HILL PIPELINE
AIEA, HI 96701

6. Transporter 1 Company Name — U.S. EPA ID Number

PACIFIC COMMERCIAL SERVICES, LLC. — 808-545-4599 — HIR000097824

7. Transporter 2 Company Name — U.S. EPA ID Number

UNITEK SOLVENT SERVICES, INC.-OAHU — 808-682-8284 — HID982443715

8. Designated Facility Name and Site Address — U.S. EPA ID Number

UNITEK SOLVENT SERVICES, INC.
91-125 KAOMI LOOP
KAPOLEI, HI 96707
Facility's Phone: 808-682-8284

HID982443715

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	MATERIAL NOT REGULATED BY DOT (OILY WATER)	004	DM	00200	G	NON-RCRA
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

9b1: NR 2008 9b1: TOTAL HALOGEN:

GENERATOR'S CERTIFICATION: I HEREBY DECLARE THAT THE CONTENTS OF THIS CONSIGNMENT ARE FULLY AND ACCURATELY DESCRIBED ABOVE BY PROPER SHIPPING NAME (WHERE APPLICABLE) AND ARE CLASSIFIED, PACKED, MARKED , AND LABELED AND ARE IN ALL RESPECTS IN PROPER CONDITION FOR TRANSPORT BY HIGHWAY ACCORDING TO APPLICABLE GOVERNMENT REGULATIONS. I FURTHER CERTIFY THAT IF THIS IS USED OIL IT IS SUBJECT TO REGULATION UNDER 40 CFR PART 279; THAT IT DOES NOT CONTAIN PCBS GREATER THAN OR EQUAL TO 2 PPM; AND THAT IT HAS NOT BEEN CONTAMINATED WITH CARBURATOR CLEANERS, BRAKE SPRAY, FREON, HALOGENATED SOLVENTS, OR OTHER HAZARDOUS MATERIALS AND/OR HAZARDOUS WASTES.

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: For Reference Only. Signed Manifest can be provided upon request. — Signature — Month — Day — Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month — Day — Year

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 44094

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ~~FOSIL~~ ERRG

Address Red Hill

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

11740 lb	Gross
5082	Tare
6658	Net

TRUCK/CAR LICENSE NO.	CONTAINER #
	201

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Scrap Metal	6658	155/TN	
	3.33/TN		
		TOTAL	516.15

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES-DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER

I.D. 4, Type 11

DATE 4/15/11

TIME 12:43

Customer Signature

LENOX-PWC-3 (Rev 4/08) RON PEDERSEN & ASSOC. - (808) 845-9399

Container about 1/4 Full but called in

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 44721

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ERRG

Address Red Hill

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

9130 lb	Gross
5028	Tare
4102	Net

TRUCK/CAR LICENSE NO.	CONTAINER #
	206

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Steel Elbows	4102		
Shovel Parts	2.06/TN	155/TN	
		TOTAL	319.30

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES-DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER

I.D. 4, Type 11

DATE 4/20/11

TIME 7:31

Customer Signature

LENOX-PWC-3 (Rev 4/08) RON PEDERSEN & ASSOC. - (808) 845-9399

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 44924

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ERRG

Address Police Beach

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

6558 lb Gross
5226 Tare
1332 Net

TRUCK/CAR LICENSE NO.	CONTAINER #
	SHM 33

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Scrap Metal	.67 TN		
		TOTAL	

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER 6 / 14 / H

I.D. Type

DATE
TIME 11:18

Customer Signature

RON PEDERSEN & (808) 845-9399

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 44784

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ERRG.

Address Red Hill

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

20155 lb Gross
5308 Tare
14,447 Net

TRUCK/CAR LICENSE NO.	CONTAINER #
	54

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Steel Pipe	14847		
	7423/TN	135/TN	
		TOTAL	1001.62

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER 5 / 12 / H

I.D. Type

DATE
TIME 12:24

Customer Signature

LENOX-PWC-3 (Rev 4/08) RON PEDERSEN & ASSOC. • (808) 845-9399

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 45341

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ERRG

Address Waikele Bunkers

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

9230 lb Gross
3124 Tare
6106 Net

TRUCK/CAR LICENSE NO.	CONTAINER #
	108

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Steel Mix	6106		
Pipe & Structure	3.05 TN		
[illegible]			
		TOTAL	

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES-DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER

DATE 9 / 29 / I.D. Type
TIME 10:09

Customer Signature

LENOX-PWC-3 (Rev 4/08) RON PEDERSEN & ASSOC. • (8

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 4517

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ERRG

Address Red Hill

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

17355 lb Gross
5294 Tare
12,061 Net

TRUCK/CAR LICENSE NO.	CONTAINER #
	Blue 52

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Steel Pipe	12061		
?	6.03 TN		
[illegible]			
		TOTAL	

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES-DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER

DATE 4 / 12 / I.D. Type
TIME 2:13

Customer Signature

LENOX-PWC-3 (Rev 4/08) RON PEDERSEN & ASSOC. • (8 9399

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 142137 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	5/19/2011	5/19/2011	
Time:	7:26:58 AM	7:47:43 AM	OSM:21
ScaleOp:	AO	AO	Site:LW
	Pounds	Tons	
GrossWt	44,700	22.35	B Scale
Tare Wt	30,240	15.12	B Scale
Net Wt	14,460	7.23	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: RED HILL ERRG 51
Message:
Signature: (b) (6)

1120.65

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 143998 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	6/8/2011	6/8/2011	
Time:	1:48:12 PM	2:17:14 PM	OSM:29
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	45,060	22.53	B Scale
Tare Wt	29,760	14.88	B Scale
Net Wt	15,300	7.65	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: RED HILL ERRG 54
Message: HAVE A NICE DAY!
Signature: (b) (6)

1185.75

Lenox Metals, [redacted]
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 46266

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ERRG

Address Kapaa Fuel Facility

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

Gross	10515 lb
Tare	4940
Net	5575

TRUCK/CAR LICENSE NO.	CONTAINER #
	203

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Steel Pipe	5575		
		TOTAL	

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES-DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER

I.D. Type

DATE 2/12/25

TIME

Customer Signature

LENOX-PWC-3 (Rev 4/08) RON PEDERSEN & ASSOC. • (808) 845-9399

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 46258

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller ERRG

Address

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

Gross	17855 lb
Tare	4942
Net	12913

TRUCK/CAR LICENSE NO.	CONTAINER #
	205

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Steel Pipes	12913		
		TOTAL	

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES-DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII SCALE WEIGHTMASTER

I.D. Type

DATE 2/12/25

TIME

Customer Signature

LENOX-PWC-3 (Rev 4/08) RON PEDERSEN & ASSOC. • (808) 845-9399

Hawaiian Earth Products – Leeward Dir: IN

Transaction # 141661 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG – Leeward

	In	Out	
Date:	5/13/2011	5/13/2011	
Time:	9:14:50 AM	9:45:09 AM	OSM:30
ScaleOp:	AO	AO	Site:LW
	Pounds	Tons	
GrossWt	49,320	24.66	B Scale
Tare Wt	29,480	14.74	B Scale
Net Wt	19,840	9.92	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: FOPCO RED HILL 51
Message:
Signature: (b) (6)

Hawaiian Earth Products – Leeward Dir: IN

Transaction # 143465 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG – Leeward

	In	Out	
Date:	6/2/2011	6/2/2011	
Time:	11:00:53 AM	11:32:38 AM	OSM:32
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	49,540	24.77	B Scale
Tare Wt	29,840	14.92	B Scale
Net Wt	19,700	9.85	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: RED HILL FOPCO 203
Message:
Signature: (b) (6)

Hawaiian Earth Products – Leeward Dir: IN

Transaction # 143744 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG – Leeward

	In	Out	
Date:	6/6/2011	6/6/2011	
Time:	9:40:21 AM	10:11:15 AM	OSM:31
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	49,680	24.84 B	Scale
Tare Wt	29,960	14.98 B	Scale
Net Wt	19,720	9.86	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: FOPCO 51 RED HILL
Message:
Signature: [redacted]

Hawaiian Earth Products – Leeward Dir: IN

Transaction # 145609 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG – Leeward

	In	Out	
Date:	6/24/2011	6/24/2011	
Time:	7:20:40 AM	7:50:58 AM	OSM:30
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	49,780	24.89 B	Scale
Tare Wt	29,480	14.74 B	Scale
Net Wt	20,300	10.15	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: RED HILL FOPCO 203
Message:
Signature: [redacted]

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 146194 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	6/29/2011	6/29/2011	
Time:	10:17:54 AM	10:42:08 AM	OSM:24
ScaleOp:	AO	AO	Site:LW
	Pounds	Tons	
GrossWt	42,240	21.12	B Scale
Tare Wt	29,280	14.64	B Scale
Net Wt	12,960	6.48	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: RED HILL FOPCO 203 ATTIC + 6
Message: Eff[illegible] Price Increase on outgoing product.
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 147052 (101152)
Acct: LENOX METALS, LLC
Truck # 162TRT Trailer#
Fleet# 162TRT Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 18 Hawaiian Earth Prod.
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	7/7/2011	7/7/2011	
Time:	10:27:14 AM	10:40:09 AM	OSM:13
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	51,240	25.62	B Scale
Tare Wt	29,340	14.67	B Scale
Net Wt	21,900	10.95	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: FOPCO RED HILL
Message: Eff[illegible]y 1st- Price Increase on outgoing product.
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 136903 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	3/24/2011	3/24/2011	
Time:	12:06:37 PM	1:10:23 PM	OSM:64
ScaleOp:	A0	A0	Site:LW
	Pounds	Tons	
GrossWt	43,920	21.96	B Scale
Tare Wt	29,360	14.68	B Scale
Net Wt	14,560	7.28	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

Charge
Tend $ 0.00
Chge $ 0.00

Remark: 206 ~~ERRG~~ FOPCO (RED HILL)
Message:
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 136949 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	3/25/2011	3/25/2011	
Time:	7:30:49 AM	7:58:36 AM	OSM:28
ScaleOp:	A0	A0	Site:LW
	Pounds	Tons	
GrossWt	47,640	23.82	B Scale
Tare Wt	29,560	14.78	B Scale
Net Wt	18,080	9.04	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

Charge
Tend $ 0.00
Chge $ 0.00

Remark: FOPCO ~~ERRG~~ RED HILL FP
Message:
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 138537 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	4/7/2011	4/7/2011	
Time:	12:53:59 PM	2:00:11 PM	OSM:66
ScaleOp:	ES	ES	Site:LW
	Pounds	Tons	
GrossWt	52,000	26.00	B Scale
Tare Wt	29,880	14.94	B Scale
Net Wt	22,120	11.06	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: RED HILL FOPCO #52
Message:
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 138924 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	4/12/2011	4/12/2011	
Time:	9:14:28 AM	9:50:11 AM	OSM:36
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	46,540	23.27	B Scale
Tare Wt	28,840	14.42	B Scale
Net Wt	17,700	8.85	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Red Hill
Remark: FOPCO 206
Message:
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 139578 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	4/19/2011	4/19/2011	
Time:	7:43:40 AM	8:06:34 AM	OSM:23
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	50,880	25.44	B Scale
Tare Wt	29,720	14.86	B Scale
Net Wt	21,160	10.58	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: FOPCO REDHILL #54
Message:
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 140390 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	4/27/2011	4/27/2011	
Time:	11:48:13 AM	12:54:28 PM	OSM:66
ScaleOp:	SAS	SAS	Site:LW
	Pounds	Tons	
GrossWt	49,120	24.56	B Scale
Tare Wt	29,620	14.81	B Scale
Net Wt	19,500	9.75	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: REDHILL FOPCO 203
Message:
Signature: (b) (6)

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 141216 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	5/6/2011	5/6/2011	
Time:	3:12:35 PM	3:29:50 PM	OSM:17
ScaleOp:	AO	AO	Site:LW
	Pounds	Tons	
GrossWt	48,180	24.09 B	Scale
Tare Wt	29,380	14.69 B	Scale
Net Wt	18,800	9.40	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

---Charge---
Tend $ 0.00
Chge $ 0.00

Remark: POPCO RED HILL 203
Message:
Signature: [redacted] (g) (q)

Lenox Metals, LLC
91-185 Kalaeloa Blvd.
Kapolei, Hawaii 96707

No. 44002

PUBLIC WEIGHT CERTIFICATE

PHONE: (808) 682-5539

Seller FOPCO

Address Rid Hill

I the undersigned, is the lawful owner or agent of the before mentioned commodity and have the lawful right to sell or dispose of said scrap.

16300 lb Gross

5028 Tare

11,272 Net

TRUCK/CAR LICENSE NO.	CONTAINER #
	206

COMMODITY	LBS.	PRICE/LB.	AMOUNT
Metal Pipe	11,272		
	5.636/TN	155/TN	
		TOTAL	873.58

STATE OF HAWAII CERTIFICATE OF WEIGHTS AND MEASURES-DEPARTMENT OF AGRICULTURE WEIGHTS & MEASURES DIVISION. THIS IS TO CERTIFY THAT THE FOLLOWING MERCHANDISE WAS WEIGHED, MEASURED, OR COUNTED BY A LICENSED WEIGHTMASTER AND HIS SIGNATURE AND SEAL IS A RECOGNIZED AUTHORITY OF ACCURACY AS PRESCRIBED BY CHAPTER 486, HAWAII REVISED STATUTES AS AMENDED AND RULE 27.000/486.71.

NO. STATE OF HAWAII

SCALE WEIGHTMASTER

3 / 25 / 11 Type

DATE

TIME

Customer Signature

Hawaiian Earth Products - Leeward Dir: IN

Transaction # 153038 (101152)
Acct: LENOX METALS, LLC
Truck # 396TSD Trailer#
Fleet# 396TSD Tag#

Transac: 1 Truck #
Payment: 1 Charge
Vehicle: 20 Not Specified
Origin: 7 Campbell Ind. Park
Material:300WEIGH ONLY by FF
Destin: 1 MHG - Leeward

	In	Out	
Date:	9/2/2011	9/2/2011	
Time:	3:04:01 PM	3:21:55 PM	OSM:18
ScaleOp:	AO	AO	Site:LW
	Pounds	Tons	
GrossWt	47,340	23.67	B Scale
Tare Wt	29,340	14.67	B Scale
Net Wt	18,000	9.00	

Rate $	22.00 /FF	QTY 0
Tip $	22.00	
Spec $	0.00	
Tax $	1.04	
Total Fee $	23.04	

Charge
Tend $ 0.00
Chge $ 0.00

Remark: FOPCO RED UTIL 303
Message:
Signature: (b) (6)