

WEECO

ENVIRONMENTAL SUBCONTRACTOR

TO

COMPLETE PLANT MAINTENANCE, INC.

&

HEALY TIBBITTS BUILDERS, INC.
GENERAL CONTRACTOR

UST REMOVAL

CLOSURE REPORT


VC- PROJECT

TWO 5000 GAL UST's

AT

PEARL HARBOR, HAWAII

CNR OF (b) (3) (A) 

REPAIR VALVE CHAMBER  & POL PIPELINE
MODIFICATION
TO

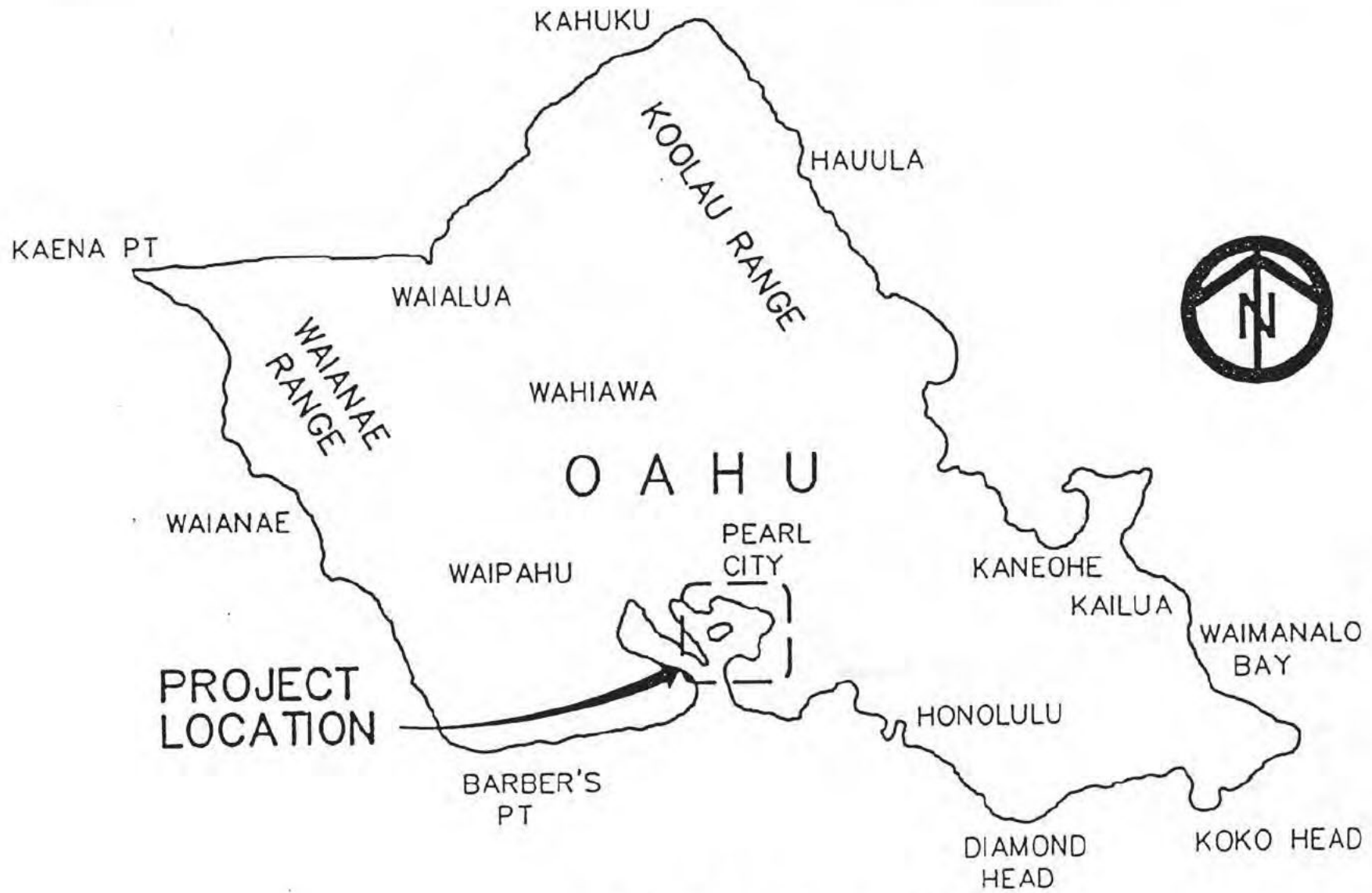
CONTRACT N62471-89-C-2349

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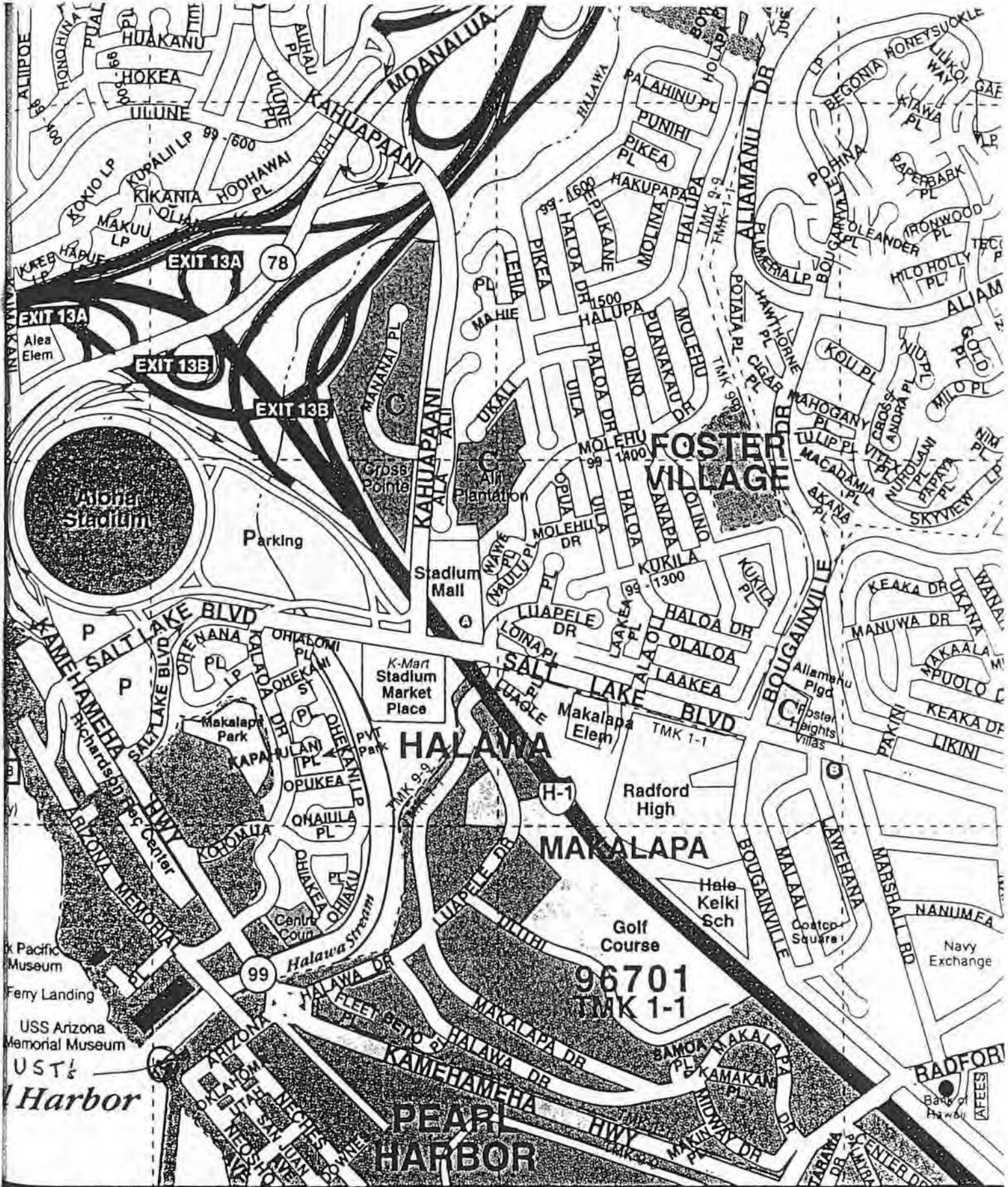
TABLE OF CONTENTS	PAGE NUMBERS
1. PROJECT LOCATION	PG 2
2. TANK LOCATION	PG 4
3. NOTIFICATIONS	
a) State DOH UST Section	PG 7
b) Demolition & Renovation Notice	PG 8
4. WORK PLAN	PG 9
5. SPEC SECTION 3.18.1 EXCAVATION PROCEDURES	PG 16
6. PACNAVFACENGC.COM LETTER REFERENCED IN VC- 018 SPEC Authorization to redeposit contaminated soil back into excavation.	PG 17
7. SPEC SECTION 3.6.1 WATER REMOVAL & DISPOSAL	PG 19
8. SPEC SECTION 3.6.5 WASH WATER & DETERGENT	PG 20
9. SITE STATISTICS Description of site conditions and material quantities.	PG 21
10. LABORATORY RESULTS	PG 22
a) Liquid in tanks before removal.	
b) Liquid surrounding tanks before removal.	
c) Contaminated soil stock piled at site after excavation.	
d) Rinsate residue collected and stored.	
11. QUALIFICATIONS OF CIH	PG 77
12. TANK INSPECTION & CLEARANCE CERTIFICATES	PG 79
13. CERTIFICATE OF DISPOSAL	PG 81
14. PHOTOGRAPHS OF TANKS & REMOVAL PROCESS	PG 82



LOCATION MAP

NOT TO SCALE

(b) (3) (A)



↓ SEE MAP 65 ↓ 2 **MAP 54** 3 ↓ SEE MAP 66 ↓

(b) (3) (A)

(b) (3) (A)

WEECO

2240 METCALF STREET, HONOLULU, HAWAII 96822 808 955 1261 Fax 949 5132

April 2, 1997

State of Hawaii
Health Department
Underground Storage Tank Section
Room 212,
919 Ala Moana Blvd.
Honolulu, Hawaii 96814

Re: UST Removal, US Naval Complex, Fleet & Industrial Supply Center, Pearl Harbor.

Gentlemen,
Please be advised that the Navy has contracted, Healy Tibbitts Builders, Inc. as General Contractor and WEECO Environmental Subcontractor to remove two UST's at the FISC facility known as Valve Chamber ^{(b) (3)} [REDACTED]. This facility is adjacent to the intersection of (b) (3) (A) [REDACTED] with access by the Halawa Gate off Kam Hgway. See location map attached.

The two subject tanks are abandoned. They each have 5,000 gallons capacity and the last known product was JP 5 fuel.

They are not listed on the State Of Hawaii DOHS Tank Registry. They were installed in 1943 and identified as Tank # H6-1A, and H6-2A.

The removal is scheduled to commence the first week of May. A copy of the Tank Closure Report and Disposal Records will be forwarded to your office on completion.

If you require any further information please call Kenneth Harper, Project Manager at 371 5720 or fax 422 4976.

(b) (6)

Kenneth Harper.

State of Hawaii
DEPARTMENT OF HEALTH

For Office Use Only
Record No.

NOTIFICATION OF DEMOLITION AND RENOVATION

Ref: Title 40 CFR 61
National Emission Standards for Hazardous Air Pollutants
Asbestos NESHAP Revision; Final Rule, November 20, 1990

MAIL ORIGINAL #1 TO:
CLEAN AIR BRANCH
State Dept. of Health
P.O. Box 3378
Honolulu, HI 96801-9984
Phone: (808) 586-4200

COPY #2 TO:
Asbestos Notification EPA
NESHAP Region IX
75 Hawthorne St., A-3-3
San Francisco, CA 94105
Phone: (415) 744-1253

COPY #3:
Contractor's Copy

OFFICE USE ONLY: Operator Project # _____ Postmark Date _____ Date Received _____
Notification/Record # _____ Date Entered/Initials _____

I. NOTIFICATION TYPE: O - Original *R - Revised C - Cancelled: _____
*If R (Revision), please complete Sections III and V in full as shown on your original and make changes only where applicable on this form.

II. OPERATIONS: D - Demo O - Ordered Demo R - Renovation E - Emer. Renovation: D - Demolition

III. FACILITY INFORMATION: (Owner, Removal Contractor, Other Operator)

A. OWNER NAME: Navy Public Works Center, Pearl Harbor, Hawaii

Address Building A-4, 2nd Floor City Honolulu
State HI Zip 96860-5470 Contact Darren Lee, PWC Code 423 Telephone (808) 474-3837

B. REMOVAL CONTRACTOR:

Address _____ City _____
State _____ Zip _____ Contact _____ Telephone (____) _____

C. OTHER OPERATOR:

Address _____ City _____
State _____ Zip _____ Contact _____ Telephone (____) _____

IV. IS ASBESTOS PRESENT? (YES/NO) Yes - on fuel piping

V. FACILITY DESCRIPTION: (Including building name, number, floor and/or room number)

Building Name: Building 498 and Valve Chamber No. ¹⁰⁰Fuel Piping
Address Intersection of (b) (3) (A) Pearl Harbor, Hawaii
City Honolulu State Hawaii County City and County of Honolulu
Site Location: Valve Chamber No. ¹
Building Size: (Sq. ft.) 100 (No. of Floors) 1 Age in Years: 45
Present Use: Unoccupied, SCADA link Prior Use: Flow Meter Structure

VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL: Polarized Light Microscopy

VII. APPROXIMATE AMOUNT OF ASBESTOS, INCLUDING:

1. Regulated ACM to be removed
2. Category I ACM not removed
3. Category II ACM not removed

	RACM To Be Removed	Nonfriable Asbestos Material To Be Removed		Indicated Unit of Measurement Below	
		CAT I	CAT II	Unit	
Pipes			1,101 LF	Ln Ft:	Ln m:
Surface Area				Sq Ft:	Sq m:
Vol RACM off Facility Component				Cu Ft:	Cu m:

Nature of materials: (e.g. VAT, roofing, etc.) Asphalt pipe wrap on buried fuel lines 4"-32"

VIII. SCHEDULED DATES ASBESTOS REMOVAL: (MM/DD/YY) Start: _____ Complete _____

IX. SCHEDULED DATES DEMO/RENOVATION: (MM/DD/YY) Start: _____ Complete _____

**WEECO
ENVIRONMENTAL SUBCONTRACTOR**

**TO
COMPLETE PLANT MAINTENANCE, INC.
&
HEALY TIBBITTS BUILDERS, INC.
GENERAL CONTRACTOR**

WORK PLAN

FOR

**U S T REMOVAL & DISPOSAL
SECTIONS:- 02115 & 13219**

REPAIR VALVE CHAMBER AND POL PIPELINE

PEARL HARBOR, HAWAII

N62471-89-C-2349

APRIL 1997

U S T REMOVAL
TABLE OF CONTENTS

- 1.0 INTRODUCTION
 - 1.1 GENERAL
 - 1.2 PURPOSE AND SCOPE
 - 1.3 APPLICABILITY OF SITE HEALTH AND SAFETY PLAN

- 2.0 HAZARD ANALYSIS
 - 2.1 DESCRIPTION OF POTENTIAL HAZARDS
 - 2.2 START UP AND DAILY SAFETY MEETINGS
 - 2.3 PERSONAL PROTECTION
 - 2.4 AIR MONITORING
 - 2.5 SITE CONTROL
 - 2.6 SAFE WORKING PRACTICES

- 3.0 U S T REMOVAL
 - 3.1 EQUIPMENT
 - 3.2 MATERIALS
 - 3.3 PERSONNEL
 - 3.4 PROTECTIVE CLOTHING AND SAFETY EQUIPMENT
 - 3.5 PREPARATORY PHASE
 - 3.5.1 REMOVAL OF FOREIGN MATERIAL
 - 3.5.2 SAMPLING AND ANALYSIS - SLUDGE AND OILY WATER
 - 3.6 EXCAVATION
 - 3.6.1 EXCAVATION
 - 3.6.2 HIGH PRESSURE WASHING
 - 3.6.3 SCRUBBING, CHIPPING AND REMOVAL OF ADHERING MATERIAL
 - 3.6.4 FINAL RINSING
 - 3.6.5 LIQUID DISPOSAL
 - 3.6.6 TANK DISPOSAL

- 4.0 RECORD KEEPING
 - 4.1 DAILY LOG
 - 4.2 MANIFESTS TRANSPORTATION AND DISPOSAL
 - 4.3 SITE CLOSURE REPORT

- 5.0 TRAINING & EXPERIENCE
 - 5.1 WEECO; STATEMENT OF CURRENT EXPERIENCE
 - 5.2 PERSONNEL TRAINING QUALIFICATIONS
 - 5.3 NOTIFICATIONS

INTRODUCTION

1. GENERAL DISCRPTION

This UST REMOVAL & DISPOSAL WORK PLAN responds to the requirements of Sections 02115 and 13219 of the specification, Contract Number N62471-89-C-2349.

The two underground storage tanks, each with 5000 gallon capacity and dimensions of 22ft long x 74" diameter are located 12 feet below grade and have concrete valve vaults extending from the top of tanks to approximately 21" above grade. The drawing C-9 depicts the general layout of the tanks and appurtenances.

1.2 PURPOSE AND SCOPE

The purpose and scope of this WORK PLAN is to fully describe the methods, procedures and management that have been established to demolish appurtenances, excavate, remove and thoroughly clean, test and dispose the underground storage tank as defined in Sections 02115 and 13219 of the specification.

Written permission by the Contracts Officer for each entry into the underground storage tank is deemed to have been previously given to the Contractor as part of the fuel line demolition and Marine Chemist certification. Note this procedure does not require tank entry until after the tanks have been removed, cleaned and vented and is restricted to the final rinsing phase and inspection if requested by the CIH.

1.3 APPLICABILITY OF SITE HEALTH AND SAFETY PLAN

The Contractors SITE HEALTH and SAFETY PLAN governs all work procedures, personnel activity, equipment use and practices of the subcontractor WEECO and its subcontractors, consultants and vendors.

2.0 HAZARD ANALYSIS

2.1 DESCRIPTION OF POTENTIAL HAZARDS

The following MATRIX provides a characterization of POTENTIAL SITE HAZARDS

<u>APPARENT HAZARD</u>	<u>TYPE OF FACILITY</u>	<u>STATUS OF FACILITY</u>
Serious	Building	Active
Moderate X	Enclosed X	Inactive X
Low	Open	Underground X
None	Other X UST's	Unknown
Unknown		

<u>WASTE TYPES</u>	<u>WASTE CHARACTERISTICS</u>	<u>TYPE/Form OF HAZARD</u>
Gas X	Toxic	Dust X
Liquid X	Corrosive	Liquid X
Sludge X	Ignitable X	Fumes X
Solid X	Volatile X	Vapors X
Unknown X	Radioactive	Contact X
Jet Fuel X	Unknown	Other X
Marine Diesel X		

2.2 START UP AND DAILY SAFETY MEETINGS

All WEECO personnel, subcontractors, vendors, and visitors will attend all Site Safety Meetings. WEECO will appoint a Site Safety Officer and introduce the Contractors Site Safety Officer at a Start up Site Safety Meeting.

All meetings will have an attendance log.

All present will sign and acknowledge that they have read, understood and will follow the requirements of all Site Safety Plans in force on the project.

All meetings will have minutes.

The Site Safety Officer will complete the minutes and provide them to the Contractor SSO on a weekly basis.

2.3 PERSONNEL PROTECTION

All personnel will abide by the general requirements of the Site H&SP and use the designated level of protective clothing and equipment for the task being performed or entering any location defined as requiring special protection.

All personnel are to be familiar with the definitions of levels of protection and be experienced in its selection and use.

NOTE: All areas within the VC site fenced location is designated as an Exclusion Zone. Permission to enter must be obtained from the SSO or the Project Manager before entering.

2.4 AIR MONITORING

Air monitoring will be performed before cleaning or cutting the underground storage tank are made. The LEL and oxygen levels will be logged for each tank internal and during any excavation.

Background air samples for Lead and Asbestos will be taken when ever working conditions indicate the potential presence of these materials.

2.5 SITE CONTROL

All WEECO personnel, subcontractors, consultants, vendors, and visitors must respect the authority of the Contractors SSO. The SSO controls the site as an Exclusion Zone and has the authority to stop all work or request removal of any person on the site not having the appropriate PPE and or training certifications.

The BUDDY system is to be used in all confined space work. Two people must be within reach of one another at all times. Each person will nominate who they are directly responsible for and must remain in eye sight of one another at all times. Any vertical entry must be made with proper safety harness and ladder with safety attendant present.

Communication and signals are to be worked out and understood by all involved in a particular operation or with in a defined work area. Newcomers are to be briefed before they can enter or participate in the activity.

2.6 SAFE WORKING PRACTICES

All persons working on the project shall read and sign the Contractor Health and Safety Plan HSP. The master copy with signature sheet will be with the SSO.

Consult the SSO for MSDS sheets if there is any question regarding the use or presence of any material that may be hazardous, following all precautionary measures.

There is to be no smoking, eating, chewing gum, chewing tobacco, drinking, taking medicines on the site. There will be designated eating and drinking zones. There is to be no activities which require hand to mouth/face actions within the Exclusion Zone.

All WEECO and subcontractor personnel shall bring to the attention of the SSO any unsafe condition or practices associated with site activities.

Project personnel are to be aware of the location of first aid equipment and persons trained in its use.

3.0 UNDERGROUND STORAGE TANK REMOVAL

3.1 EQUIPMENT

Grounding cables, stingers, funnel extractors, couplings and fittings.

Pressure washer, 3000psi, 3gpm, 100ft high pressure hose, 3/8" extension wands, straight and 45 degree fan nozzles.

400ft 3/4" water hose.

2 - 4" transfer pumps, 100ft 4" hose. (Dewatering)

Hand scrapers, steel blade 12" x 3" with 8' handles

Step ladders.

Fire extinguishers, 20lb ABC (2 units)

1 excavator

1 hoe ram

1 back hoe

Air compressor, 185cfm, 100' 1/4" hoses.

3.2 MATERIALS

Water, mains supply

3.3 PERSONNEL

1 - Pressure washer

2 - Equipment operators

1 - Laborer

1 - Monitoring technician

3.4 PROTECTIVE CLOTHING AND SAFETY EQUIPMENT

Steel toe rubber boots.

Tyvek overalls.

Hard hats.

Safety goggles or face masks.

Half face cartridge respirators.

First aid kit with eye wash kit.

3.5 PREPATORY PHASE

3.5.1 REMOVAL OF FOREIGN MATERIAL AND FREE LIQUID

The Contractor is to remove all foreign material, metal structures, abandoned equipment and piping where necessary to render the site safe to proceed with the removal and cleaning.

3.5.2 SAMPLING AND ANALYSIS - SLUDGE AND OILY WATER

The tank contents are to be sampled for laboratory analysis. Separate samples are to be taken for oily water from each tank. Additional samples are to be taken from the liquid covering the tanks in the valve vaults over each tank.

3.6 EXCAVATION

The tanks will be uncovered by excavator to expose the top surface of the tank. All piping is to be washed down and removed. The tank excavation pit is to be used to dispose of the liquid produced by this operation. The tanks are below the water table and will float free once all of the fill and structures from above and the contents are removed.

Each tank will be exposed to the bottom by excavating on all sides. Once free, it will be lifted out of the excavation site and be positioned so that its contents can drain back into the pit.

The tank will be tested for vapor content. If the internal LEL is below 10% for HC. It will have a cleaning access hole cut into it to allow internal cleaning and inspection to be carried out. No entry is allowed in this phase.

A composite sample of the oil and water contents of each tank and each vault is to be analyzed for B,T,X & E, HC as diesel, HC as gasoline and 8 metals; As, Ba, Cd, Cr, Pb, Se, Ag, Hg.

All results will be submitted to the Contracts Officer.

3.6.2 HIGH PRESSURE WASHING

The primary cleaning process used is high pressure washing with water. It is to be applied by pump, 3000psi and up to 3 gallons per minute delivery. The pump is fitted with an extension wand 8' long and has a selection of nozzles that range from pinpoint to fan shaped distribution. The washing process is to be systematic; starting at the far end of the elevated tank. Commence washing with the high pressure water, holding the tip of the nozzle no more than 2 inches from the surface and wash with a too and fro horizontal motion while working down from top to bottom of the tank. As the rust, scale and residue accumulate on the bottom, work it towards the lowest point in the tank. Repeat this operation several times until the internal surface can pass the wipe test. Wipe the tips of your fingers over the washed surface and observe if any smudging occurs. Cut a drain hole at the low point and wash all of the residue and sediment out of the tank. Section 13219 3.6.5.c calls for onsite disposal of this material back into the excavation.

3.6.3 SCRUBBING, CHIPPING, AND REMOVAL OF ADHERING MATERIAL

The outside of the tank is coated with a bituminous mastic that will be removed by the high pressure washing process. Where necessary this material may be chipped off. As a non hazardous material it may be disposed of on site with the internal rust, scale and residue.

3.6.4 FINAL RINSING

After internal and external surfaces have been cleaned it will be given a final high pressure rinse. The underground storage tank will be made available to the CIH for inspection and certification as clean and suitable for disposal as scrap metal.

The CIH will issue a Tank Clearance Certificate for each tank. A copy of this certificate is to accompany each tank during transportation to the recycling and disposal facility.

Each tank will be labeled by painting the following notice on the side of the tank.

TANK NUMBER; CAPACITY - GAL.
TANK CONTAINED LEADED FUEL. NOT VAPOR FREE
NOT SUITABLE FOR STORAGE OF FOOD OR LIQUIDS
INTENDED FOR HUMAN OR ANIMAL CONSUMPTION.
DATE REMOVED-

3.6.5 LIQUID DISPOSAL

The liquids generated in the cleaning process will remain in the excavation.

3.6.6 TANK DISPOSAL

The tanks will be loaded and transported by truck to HMR (Hawaii Metal Recycling) facility for disposal as scrap steel. All piping and appurtenances will be loaded into the tanks for disposal.

4.0 RECORD KEEPING

4.1 DAILY LOG

A daily report on all construction activity, health and safety, personnel and work progress will be maintained and submitted to the Contractor on a daily basis.

4.2 MANIFESTS, TRANSPORTATION AND DISPOSAL

4.3 All material of RCRA and Non-RCRA nature that leaves the facility will be manifested and transported to the appropriate disposal facility. Two copies of each manifest will be provided to the Contractor together with supporting profiles, analyses and facility receipts.

Chain of custody documents for all samples and laboratory analysis will be supplied to the Contractor on their return from the testing facility together with the analysis reports.

4.3 CLOSURE REPORT

A Site Closure Report in compliance with Section 02115 3.24 and the State of Hawaii Revised Statutes DOHS UST Removal Guidelines is to be prepared upon the completion of the removal and receipt of all disposal documents, manifests and laboratory reports. A copy of this report is to be sent to the Contracting Officer and another to the State:

State of Hawaii
Health Department
Underground Storage Tank Section, Room 212
919 Ala Moana Blvd.
Honolulu, Hawaii 96814

3.16.1 Table of Tank History

Tank Number	Tank Location	Tank Capacity	Date Constructed	Type of Lining (If Applicable)	Type of Fuel	Remarks From the Last Inspection
H6-1A	VC-01	5,000 g	1943	Asphalt Covered Felt	JP-5	None
H6-2A	VC-02	5,000 g	1943	Asphalt Covered Felt	JP-5	None

* Note tanks are wrapped in felt material which may contain asbestos.

SECTION 02115 PAGE 7

3.18.1 Excavation Procedures

Excavate as required to remove tanks and piping. Place soil removed from the excavation in a temporary containment area as shown on the construction plans. By reference PACNAVFACENCOM ltr. 5090.II ser. 182/5862 contaminated soil may be used for backfill in the same area and depth from which it was excavated if it is otherwise suitable for backfill material as specified in Section 02302 "Excavation Backfill and Compaction for Utilities and Structures". Contaminated soil shall be capped with at least 2 feet of clean compacted soil. Collect and dispose of runoff water from stockpiled soil in a temporary dispersion pit located on the project site. The tank excavation may be used as a dispersion pit. Runoff water from stockpiled soil shall not be allowed to leave the project site. Any soil, water or hazardous waste which is transported off the site shall be disposed of in accordance with Local, State, and Federal regulations.

SECTION 02115 PAGE 9



DEPARTMENT OF THE NAVY

COMMANDER
 NAVAL BASE PEARL HARBOR
 BOX 110
 PEARL HARBOR, HAWAII 96860-6020

IN REPLY REFER TO:

5090.II
 Ser 182/5862
 16 January 1996

From: Commander, Naval Base, Pearl Harbor
 Subj: EXCAVATION AND DEWATERING IN THE PEARL HARBOR NAVAL COMPLEX
 Ref: (a) PACNAVFACENGCOM ltr 5090.II Ser 1822/8192 of 14 Dec 94

1. This letter supersedes draft guidelines for the management of petroleum contaminated soil and ground water in the Pearl Harbor Naval Complex previously provided by PACNAVFACENGCOM in reference (a). This policy applies to Military Construction, minor construction and operations and maintenance projects, and not to environmental projects involving the closure of underground storage tanks or the cleanup of contaminated sites.

2. The Pearl Harbor Naval Complex (includes Pearl City Peninsula, Waipio Peninsula, West Loch Branch of NAVMAG Lualualei and Ford Island) has been placed on the National Priorities List. The entire complex is considered to be a CERCLA site and all petroleum contaminated soil and ground water encountered during construction activities should be handled as follows:

a. Soil. Petroleum contaminated soil may be redeposited into the excavation provided that the contamination did not result from current operations, and is part of an area-wide contamination. Before any redeposition is initiated, the Class 1 Property Owner shall submit a letter to PACNAVFACENGCOM (Code 1821) stating that the contamination did not result from current operations and is area-wide, and requesting inclusion into the Installation Restoration Program (IRP). After concurrence of IRP eligibility is received from PACNAVFACENGCOM, the excavation may be backfilled with the petroleum contaminated soil using the following guidelines:

- Clean and contaminated soil will not be mixed.
- Contaminated soil will be redeposited in the same area and as much as possible, at the same depth that it was originally encountered.
- The top two feet of the excavation should be filled with clean material to minimize human contact with the contamination.

Cleanup of soil contaminated from current operations is the responsibility of the Property Owner. Excess contaminated soil that will be transported off-site for disposal must be sampled and tested to ensure compliance with State of Hawaii Department of Health (SODOH) and disposal facility guidelines and permit requirements. Petroleum contaminated soil disposed of at a SODOH permitted facility also requires generator certification that the soil is not a hazardous waste.

OPTIONAL FORM 86 (7-90)

FAX TRANSMITTAL

of pages: 2

To: Lt. S. Lantieri (b) (6)

(b) (6) Phone: 474-5445

Fax: 474-447602 Fax: 474-5449

Subj: EXCAVATION AND DEWATERING IN THE PEARL HARBOR NAVAL COMPLEX

b. Dewater.. Dewater may be discharged back into the ground in close proximity of the construction site as long as any portion of the dewater does not enter a storm drain, discharge to surface waters, or discharge to a pit where the depth is greater than its width. When the dewater has visible oil, the oil should be removed as much as practical before the dewater is discharged into the ground. The ROICC or Class I Property Owner should immediately report the finding of any subsurface oil to PACNAVFACENGC0M (Code 1821).

3. Should you have any questions, please contact Mr. Leighton G. M. Wong of the PACNAVFACENGC0M Environmental Restoration Branch at 471-0701.

(b) (6)

M. D. CLAUSSEN
By Direction

Distribution:
FISC Pearl Harbor
NAVMAG Lualualei
NAVSHIPYD Pearl Harbor
NAVSTA Pearl Harbor
PHC Pearl Harbor
SUBASE Pearl Harbor
ROICC Midpac

Copy to:
PACNAVFACENGC0M

3.6.1 Water Removal and Disposal

Pump or otherwise remove water from the tank. Ensure that the sludge and sediment are not pumped out or mixed with the water. Water can be disposed of into the dispersion pit located on the site if it is determined to be non-hazardous.

3.6.5 Wash Water, Detergent Solution, and Sediment Removal

During the washing process, operate a portable pump continuously with suction hose extended to the tank bottom to remove water, detergent, dirt, oil, or other loose materials washed off. Following the final rinse, pump, squeegee, and mop the tank dry.

- a. Prior to discharge or disposal, test the wash water, sediment, and sludge in accordance with paragraph titled "Water, Sediment, and Sludge Analysis." The Contractor shall furnish temporary tanks to hold water and detergent solution until testing is completed.
- b. If the wash water is determined to be nonhazardous it can be disposed of in the berm area. Hazardous wastes shall be handled in accordance with paragraph titled "Water, Sediment, and Sludge Analysis."
- c. For bidding purposes, assume that the sediment is nonhazardous and can be disposed of in an on-site dispersion pit.

SITE STATISTICS

Description of Site Conditions and Material Quantities.

Tank Removal Date Week of MAY 5, 1997

Excavation 20' X 30' 12' 266 Cubic yards

Contaminated soil removed and stock piled at site
132 Cubic yards - returned as fill.

Concrete ballast removed 16 cubic yards - Landfill.

Clean backfill used on top of contaminated soil returned to excavation 140 cubic yards

Pulverized coal left in place - not removed from excavation.

Detergent was not used in any cleaning operation.

Tank exterior coated with bitumous coating approx. 40 - 60mils thick. No filler, fabric or reinforcement evident. Coating had disintegrated and peeled off 60 - 70% of tank surfaces. Balance removed with high pressure washer.

Tank interior coated with uniform rust scale, no sludge or adhering deposits present.

*NOTE

No rinsate, rinsate residue or contaminated soil were removed from site. All were accepted after laboratory testing back into excavation.

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

May 28, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Total Petroleum Hydrocarbons (Diesel) by EPA Method 3550/8015 Modified.

Results are given in mg/kg (ppm). Sample results are given on a dry weight basis.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970429

May 30, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Total Petroleum Hydrocarbons by TPH-418.1 Modified Method. Results are given in mg/kg (ppm).

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. TPH (D) 01

Lab Ref. No. 01

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Diesel	11	Tank contents, sample through fill tube (JP5-1A)

Sample No. TPH (D) 02

Lab Ref. No. 02

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Diesel	33	External liquid in vault (JP5-1B)

Sample No. TPH (D) 03

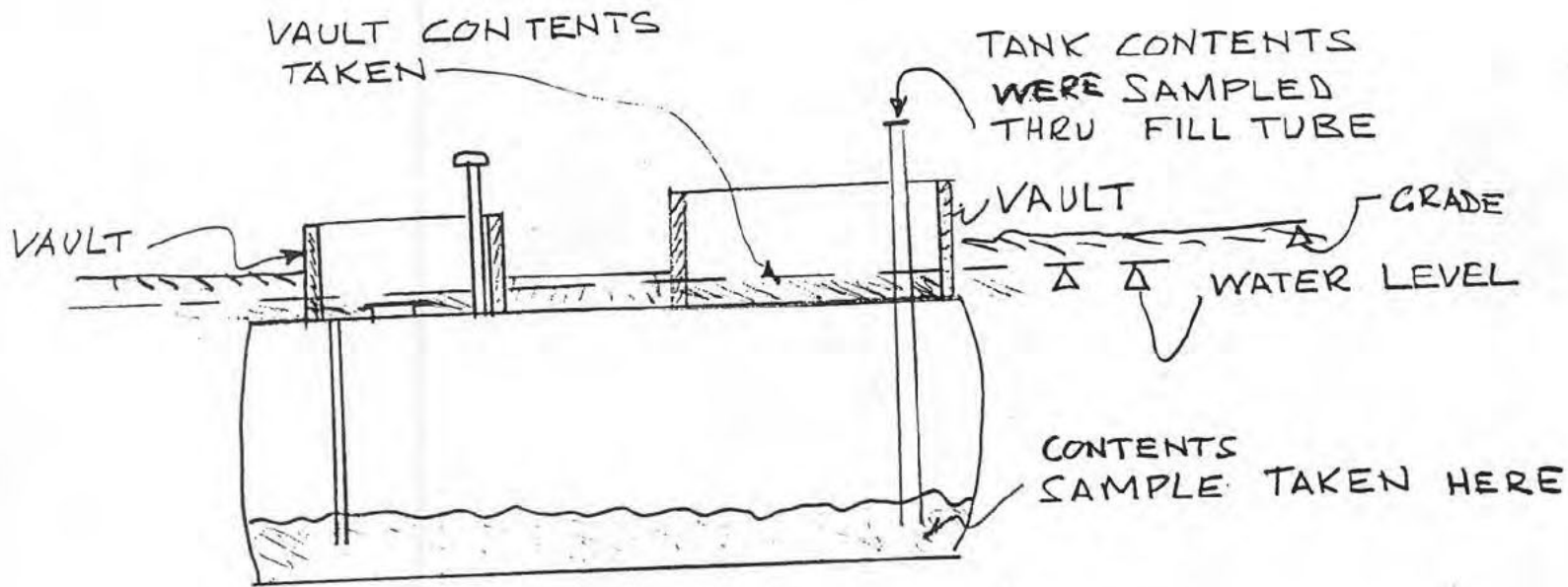
Lab Ref. No. 03

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Diesel	710	Tank contents, sample through fill tube (JP5-2A)

Sample No. TPH (D) 04

Lab Ref. No. 04

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Diesel	490000	External liquid in vault (JP5-2B)



TANK NO JP-S 1A = H6-1A
 JP-S 2A = H6-2A

SECTION 13219: Para Ref No 1.2.4

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970429

May 30, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Total Petroleum Hydrocarbons by TPH-418.1 Modified Method. Results are given in mg/kg (ppm).

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. TPH (G) 01

Lab Ref. No. 01

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Gasoline	ND	Tank contents, sample through fill tube (JP5-1A)

Sample No. TPH (G) 02

Lab Ref. No. 02

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Gasoline	ND	External liquid in vault (JP5-1B)

Sample No. TPH (G) 03

Lab Ref. No. 03

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Gasoline	0.27	Tank contents, sample through fill tube (JP5-2A)

Sample No. TPH (G) 04

Lab Ref. No. 04

<u>Parameter</u>	<u>Result</u>	<u>Location</u>
TPH Gasoline	0.85	External liquid in vault (JP5-2B)

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970429

May 30, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Toxicity Characteristic Leaching Procedure (TCLP). This procedure simulates, under controlled laboratory conditions, what can be expected to occur should the sample(s) be interred in a landfill. TCLP is performed by the following methods:

Inductively Coupled Plasma (ICP) Spectrometric analysis, EPA Method 1311/6010 (for all metals other than mercury), and Cold Hydride Generation analysis, EPA Method 1311/7470 (for mercury).

The following table gives heavy-metal leachate information for the sample(s). All information is given in mg/L units unless otherwise specified.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel according to ASTM protocol.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. TCLP01

Lab Ref. No. 01

Location: Tank contents, sample through fill tube (JP5-1A)

<u>Parameter</u>	<u>Result</u>	<u>MCL</u>
Arsenic (As)	ND	5.0
Barium (Ba)	0.010	100.0
Cadmium (Cd)	ND	1.0
Chromium (Cr)	ND	5.0
Lead (Pb)	ND	5.0
Selenium (Se)	ND	1.0
Silver (Ag)	ND	5.0
Mercury (Hg)	ND	0.2

Sample No. TCLP02

Lab Ref. No. 02

Location: External liquid in vault (JP5-1B)

<u>Parameter</u>	<u>Result</u>	<u>MCL</u>
Arsenic (As)	ND	5.0
Barium (Ba)	0.011	100.0
Cadmium (Cd)	ND	1.0
Chromium (Cr)	ND	5.0
Lead (Pb)	ND	5.0
Selenium (Se)	ND	1.0
Silver (Ag)	ND	5.0
Mercury (Hg)	ND	0.2

Sample No. TCLP03

Lab Ref. No. 03

Location: Tank contents, sample through fill tube (JP5-2A)

<u>Parameter</u>	<u>Result</u>	<u>MCL</u>
Arsenic (As)	ND	5.0
Barium (Ba)	0.015	100.0
Cadmium (Cd)	ND	1.0
Chromium (Cr)	ND	5.0
Lead (Pb)	ND	5.0
Selenium (Se)	ND	1.0
Silver (Ag)	ND	5.0
Mercury (Hg)	ND	0.2

Sample No. TCLP04

Lab Ref. No. 04

Location: External liquid in vault (JP5-2B)

<u>Parameter</u>	<u>Result</u>	<u>MCL</u>
Arsenic (As)	ND	5.0
Barium (Ba)	0.019	100.0
Cadmium (Cd)	ND	1.0
Chromium (Cr)	ND	5.0
Lead (Pb)	ND	5.0
Selenium (Se)	ND	1.0
Silver (Ag)	ND	5.0
Mercury (Hg)	ND	0.2

ISLAND ENVIRONMENTAL, INC.

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LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970429

May 30, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Benzene Toluene Ethylbenzene and Total Xylenes by EPA Method 8020. Sample results are on a dry weight basis and are given in mg/kg (ppm).

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. BTEX01

Lab Ref. No. 01

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	Tank JP5-1, Vault (JP5-1A)
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

Sample No. BTEX02

Lab Ref. No. 02

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	Tank JP5-1, Tank (JP5-1B) Contents
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

Sample No. BTEX03

Lab Ref. No. 03

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	Tank JP5-1, Vault (JP5-2A)
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

Sample No. BTEX04

Lab Ref. No. 04

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	Tank JP5-1, Tank (JP5-2B) Contents
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Benzene, Toluene, Ethylbenzene, and Total Xylenes by EPA Method 8020.

Sample results are on a dry weight basis and are given in mg/kg (ppm).

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. [REDACTED]

Sample No. BTEX02

Lab Ref. No. 01

Location: Tank excavation, soil composites taken from between tanks #HS-1A, #HS-2A and surrounding tanks .

<u>Analyte</u>	<u>Result</u>	<u>PQL</u>
Benzene	ND	0.047
Toulene	ND	0.047
Ethylbenzene	0.12	0.047
Total Xylenes	0.32	0.094

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY SUMMARY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. (b)(3)

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected and analyzed by Island Environmental, Inc. (IEI) for the following analysis:

ICP: EPA Method 6010, for determination of total Cadmium content in soil.
Results are given in mg/kg.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel according to ASTM protocol.

Sample digestates prepared by the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Laboratory Manager
Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. [REDACTED]

Sample No.	IEI Lab Ref. No.	Location	Matrix	Date Collected	Date Analyzed	Cadmium (mg/kg)	Method Reporting Limit (mg/kg)
CAD02	02	Tank excavation, soil composites taken from between tanks #HS-1A, #HS-2A and surrounding tanks	Soil	05/05/97	05/12/97	Non Detected	5.0

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY SUMMARY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected and analyzed by Island Environmental, Inc. (IEI) for the following analysis:

ICP: EPA Method 6010, for determination of total Chromium content in soil. Results are given in mg/kg.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel according to ASTM protocol.

Sample digestates prepared by the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. 018

Sample No.	IEI Lab Ref. No.	Location	Matrix	Date Collected	Date Analyzed	Chromium (mg/kg)	Method Reporting Limit (mg/kg)
CR02	03	Tank excavation, soil composites taken from between tanks #HS-1A, #HS_2A and surrounding tanks	Soil	5/5/97	5/12/97	Non Detected	4.8

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LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper:

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Flash Point (Seta °F) by EPA Method 1020.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received by the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete Bacchetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. 2

Sample No. I04

Lab Ref. No. 06

Location: Tank excavation, soil composites taken from between tanks HS-1A, HS-2A, and surrounding tanks

<u>Parameter</u>	<u>Result</u>
Flash Point	>200

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LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Halogenated Hydrocarbons by USEPA Method 8260. Sample results are on a dry weight basis and are given in ug/kg.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. █

Sample No. HVO04

Lab Ref. No. 05

Location: Tank excavation, soil composites taken from between tanks #HS-1A, #HS-2A, and surrounding tanks.

Analyte	Result (ug/kg)	PQL
Chloromethane	ND	420
Bromomethane	ND	420
Vinyl Chloride	ND	420
Chloroethane	ND	420
Trichlorofluoromethane	ND	420
1,1-Dichloroethene	ND	420
Methylene Chloride	ND	420
trans-1,2-Dichloroethene	ND	420
1,1 Dichloroethene	ND	420
cis-1,2-Dichloroethene	ND	420
Chloroform	ND	420
1,1,1-Trichloroethane	ND	420
Carbon Tetrachloride	ND	420
1,2-Dichloroethane	ND	420
Trichloroethene	ND	420
1,2-Dichloropropane	ND	420
Bromodichloromethane	ND	420
2-Chloroethyl Vinyl Ether	ND	420
cis-1,3-Dichloropropene	ND	420
trans-1,3-Dichloropropene	ND	420
1,1,2-Trichloroethane	ND	420
Tetrachloroethene	ND	420
Dibromochloromethane	ND	420
Chlorobenzene	ND	420
Bromoform	ND	420
1,1,2,2-Tetrachloroethane	ND	420
1,3-Dichlorobenzene	ND	420
1,4-Dichlorobenzene	ND	420
1,2-Dichlorobenzene	ND	420

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY SUMMARY REPORT

IEI Project No. 9711144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. ■

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected and analyzed by Island Environmental, Inc. (IEI) for the following analysis:

ICP EPA Method 6010, for determination of total Lead content in soil. The EPA and HUD defined limits for total Lead content in soil are as follows:

400 mg/kg (ppm) for soil to which children are likely to be exposed.

2,000 mg/kg (ppm) for soil to which children are not likely to be exposed.

5,000 mg/kg (ppm) for covered soil (with turf, concrete, etc).

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel according to ASTM protocol.

Sample digestates prepared by the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete Baççetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. █

Sample No.	IEI Lab Ref. No.	Location	Matrix	Date Collected	Date Analyzed	Total Lead (mg/kg)	Reporting Limit (mg/kg)
LS02	07	Tank excavation, soil composites taken from between tanks #HS-1A, #HS-2A and surrounding tanks	Soil	5/5/97	5/12/97	Non Detected	5.3

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LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

General Chemistry, Oil & Grease by EPA Method 413.1.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti
Laboratory Manager
Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. 1

General Chemistry

Units: mg/L

Sample No. TPH (O&G)04

Lab Ref. No. 14

Location: Tank excavation, soil composites taken from between tanks #HS_1A, #HS-2A and surrounding tanks

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>
Oil and Grease	16,000	5

ISLAND ENVIRONMENTAL, INC.

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LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Poly Chlorinated Biphenyl by EPA Method 8080. Results are given in mg/kg (ppm).

Sample(s) will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. [REDACTED]

Sample No. P04

Lab Ref. No. 08

Location: Tank excavation, soil composites taken from between tanks #HS-1A, #HS-2A, and surrounding tanks

<u>Analyte</u>	<u>Result</u>	<u>PQL</u>
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	2.1	0.1
Aroclor 1262	ND	0.1
Aroclor 1268	ND	0.1

ISLAND ENVIRONMENTAL, INC.

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LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. █

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Corrosivity (pH) by EPA Method 9045.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. █

Sample No. COR04

Lab Ref. No. 04

Location: Tank excavation, soil composites taken from between tanks #HS-1A, #HS-2A, and surrounding tanks

<u>Parameter</u>	<u>Result</u>
pH	8.67

ISLAND ENVIRONMENTAL, INC.

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LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

General Chemistry for Reactivity: Cyanide and Sulfide by EPA Method SW846.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. 3

Sample No. R04

Lab Ref. No. 10

Location: Tank excavation, soil composite taken from between tanks #HS-1A, #HS-2A and surrounding tanks

Parameter	Method	Result	PQL
Cyanide	7.3.3.2	ND	20
Sulfide	7.3.4.1	ND	20

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. 3

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Toxicity Characteristic Leaching Procedure (TCLP). This procedure simulates, under controlled laboratory conditions, what can be expected to occur should the sample(s) be interred in a landfill. TCLP is performed by the following methods:

ICP by EPA Method 1311/6010, and Mercury by Cold Vapor AA
by EPA Method 1311/7470.

The following table gives heavy-metal leachate information for the sample(s). All information is given in mg/L units unless otherwise specified.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel according to ASTM protocol.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. 3

Location: Tank excavation, composite soil taken from between tan HS-1A, HS-2A and surrounding tanks.

Sample No. TCLP02

Lab Ref. No. 11

<u>Parameter</u>	<u>Result</u>	<u>MCL</u>
Arsenic (As)	ND	5.0
Barium (Ba)	0.041	100.0
Cadmium (Cd)	ND	1.0
Chromium (Cr)	ND	5.0
Lead (Pb)	ND	5.0
Selenium (Se)	ND	1.0
Silver (Ag)	0.06	5.0
Mercury (Hg)	ND	0.2

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO
2240 Matcalf Street
Honolulu, Hawaii 96822

PROJECT

Pearl Harbor
Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Total Petroleum Hydrocarbons as diesel by EPA Method 3550/8015 Modified.
Results are given in mg/kg. Sample results are given on a dry weight basis.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti
Laboratory Manager
Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. 2

Sample No. TPH(D)04

Lab Ref. No. 12

Location: Tank excavation, soil composite taken from between tanks #HS-1A, #HS-2A,
and surrounding tanks

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>
Diesel	9800	110

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Total Petroleum Hydrocarbons as gasoline by EPA Method 5030/8015 Modified.

Results are given in mg/kg. Sample results are given on a dry weight basis.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baccetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. █

Sample No. TPH(G)04

Lab Ref. No. 13

Location: Tank excavation , soil composites taken from between tanks #HS-1A, #HS-2A,
and surrounding tanks

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>
Gasoline	310	9.6

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971144

IEI Lab ID No. 970506

June 10, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

Valve Chamber No. [REDACTED]

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Semivolatile Organics by USEPA Method 8270. Sample results are given in ug/kg.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Pete J. Baecetti

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, Valve Chamber No. **09**

Sample No. PAH04

Lab Ref. No. 09

Location: Tank excavation, soil composites taken from between #HS-1A, #HS-2A, and surrounding tanks

Analyte	Result	PQL
Naphthalene	250	180
2-Methylnaphthalene	390	150
2-Chloronaphthalene	ND	73
Acenaphthylene	370	77
Acenaphthene	1100	93
Fluorene	2500	100
Phenanthrene	9400	160
Anthracene	3300	140
Fluoranthene	2700	1100
Pyrene	4000	1400
Benzo(a)fluoranthene	1500	1000
Chrysene	1600	850
Benzo(b)fluoranthene	990	2400
Benzo(k)fluoranthene	580	190
Benzo(a)pyrene	980	1100
Indeno(1,2,3-cd)pyrene	430	710
Dibenz(a,h)anthracene	ND	120
Benzo(g,h,i)perylene	350	1600

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

June 11, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

V.C. [REDACTED]

UST Removal

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Benzene Toluene Ethylbenzene and Total Xylenes by EPA Method 8020. Sample results are on a dry weight basis and are given in mg/kg (ppm).

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, V.C. [REDACTED] UST Removal

Sample No. BTEX05

Lab Ref. No. 05

Location: Collected from tank cleaning rinsate residue, composite tanks HS-1A (JP5-1)
HS-2A (JP5-2)

<u>Analyte</u>	<u>Result</u>	<u>PQL</u>
Benzene	ND	0.11
Toulene	ND	0.11
Ethylbenzene	ND	0.11
Total Xylenes	ND	0.22

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

June 11, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

V.C. █

UST Removal

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

General Chemistry, Corrosivity (pH) by EPA Method 9045.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, V.C. UST Removal

Sample No. pH01

Lab Ref. No. 01

Location: Collected from tank cleaning rinsate residue, composite tanks HS-1A (JP5-1)
HS-2A (JP5-2)

<u>Parameter</u>	<u>Result</u>
pH	7.58

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

June 11, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

V.C. █

UST Removal

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Total Petroleum Hydrocarbons (Diesel) by EPA Method 3550/8015 Modified.

Results are given in mg/kg (ppm). Sample results are given on a dry weight basis.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.


Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, V.C. , UST Removal

Sample No. TPH (D) 05

Lab Ref. No. 05

Location: Collected from tank cleaning rinsate residue, composite tanks HS-1A (JP5-1)
HS-2A (JP5-2)

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>
TPH-Diesel	53000	2600

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

June 11, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

V.C. [REDACTED]

UST Removal

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Toxicity Characteristic Leaching Procedure (TCLP). This procedure simulates, under controlled laboratory conditions, what can be expected to occur should the sample(s) be interred in a landfill. TCLP is performed by the following methods:

Inductively Coupled Plasma (ICP) Spectrometric analysis, EPA Method 1311/6010 (for all metals other than mercury), and Cold Hydride Generation analysis, EPA Method 1311/7470 (for mercury).

The following table gives heavy-metal leachate information for the sample(s). All information is given in mg/L units unless otherwise specified.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel according to ASTM protocol.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, V.C. █, UST Removal

Location: Collected from tank cleaning rinsate residue, composite tanks HS-1A (JP5-1) HS-2A (JP5-2).

Sample No. TCLP05

Lab Ref. No. 05

<u>Parameter</u>	<u>Result</u>	<u>MCL</u>
Arsenic (As)	ND	5.0
Barium (Ba)	0.23	100.0
Cadmium (Cd)	ND	1.0
Chromium (Cr)	ND	5.0
Lead (Pb)	0.20	5.0
Selenium (Se)	ND	1.0
Silver (Ag)	0.10	5.0
Mercury (Hg)	ND	0.2

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

May 23, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

General Chemistry, Corrosivity (pH) by EPA Method 9045.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

May 23, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Benzene Toluene Ethylbenzene and Total Xylenes by EPA Method 8020. Sample results are on a dry weight basis and are given in mg/kg (ppm).

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel and analyzed by Sound Analytical Services.

Sample(s) received in the laboratory will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. BTEX05

Lab Ref. No. 05

Location: Collected from tank cleaning rinsate residue, composite tanks HS-1A (JP5-1)
HS-2A (JP5-2)

<u>Analyte</u>	<u>Result</u>	<u>PQL</u>
Benzene	ND	0.11
Toulene	ND	0.11
Ethylbenzene	ND	0.11
Total Xylenes	ND	0.22

ISLAND ENVIRONMENTAL, INC.

544 Ohohia Street, Suite 4 • Honolulu, Hawaii 96819 • (808) 834-7770

LABORATORY REPORT

IEI Project No. 971096

IEI Lab ID No. 970513

May 28, 1997

CLIENT

WEECO

2240 Matcalf Street

Honolulu, Hawaii 96822

PROJECT

Pearl Harbor

H Pier

Dear Mr. Harper,

Enclosed, please find the laboratory report for sample(s) collected by Island Environmental, Inc. (IEI) for the following analysis:

Toxicity Characteristic Leaching Procedure (TCLP). This procedure simulates, under controlled laboratory conditions, what can be expected to occur should the sample(s) be interred in a landfill. TCLP is performed by the following methods:

Inductively Coupled Plasma (ICP) Spectrometric analysis, EPA Method 1311/6010 (for all metals other than mercury), and Cold Hydride Generation analysis, EPA Method 1311/7470 (for mercury).

The following table gives heavy-metal leachate information for the sample(s). All information is given in mg/L units unless otherwise specified.

The enclosed test results are valid only for the item(s) tested. Sample(s) were collected by IEI accredited personnel according to ASTM protocol.

Sample digestates prepared by the laboratory will be discarded after one week. Sample not used in the extraction procedure will be discarded after 30 days, unless other arrangements are made with the laboratory manager at IEI.

Thank you for using our laboratory services.

(b) (6)

Susan R. Perkins

Laboratory Manager

Island Environmental, Inc.

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. TCLP05

Lab Ref. No. 05

Location: Collected from tank cleaning rinsate residue, composite tanks HS-1A (JP5-1)
HS-2A (JP5-2)

<u>Parameter</u>	<u>Result</u>	<u>MCL</u>
Arsenic (As)	ND	5.0
Barium (Ba)	0.23	100.0
Cadmium (Cd)	ND	1.0
Chromium (Cr)	ND	5.0
Lead (Pb)	0.20	5.0
Selenium (Se)	ND	1.0
Silver (Ag)	0.10	5.0
Mercury (Hg)	ND	0.2

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. BTEX01

Lab Ref. No. 01

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	Tank contents sample through fill tube (JP5-1A)
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

Sample No. BTEX02

Lab Ref. No. 02

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	External liquid in vault (JP5-1B)
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

Sample No. BTEX03

Lab Ref. No. 03

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	Tank contents sample through fill tube (JP5-2A)
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

Sample No. BTEX04

Lab Ref. No. 04

<u>Analyte</u>	<u>Result</u>	<u>Location</u>
Benzene	ND	External liquid in vault (JP5-2B)
Toulene	ND	
Ethylbenzene	ND	
Total Xylenes	ND	

SAMPLE INFORMATION FOR PROJECT: Pearl Harbor, H Pier

Sample No. TPH (D) 05

Lab Ref. No. 05

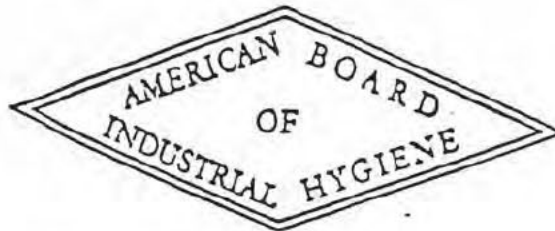
Location: Collected from tank cleaning rinsate residue, composite tanks HS-1A (JP5-1)
HS-2A (JP5-2)

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>
TPH-Diesel	53000	2600

1.2.3.2 Qualifications of Certified Industrial Hygienist (CIH)

Submit name, address, and telephone number of the CIH selected to perform responsibilities in paragraph titled "CIH Responsibilities." Provide previous experience of the CIH. Submit proper documentation that the Industrial Hygienist is certified by the American Board of Industrial Hygiene in comprehensive practice, including certification number and date of certification/recertification. The CIH shall be familiar with the hazards involved in fuel systems work.

THE AMERICAN BOARD OF INDUSTRIAL HYGIENE
INCORPORATED



Organized to improve the practice and educational standards
of the profession of Industrial Hygiene.

This is to certify that

MASAYOSHI OGATA

has met the requirements of this Board through his education, experience,
and professional ability, and is hereby certified in the

COMPREHENSIVE PRACTICE

of

INDUSTRIAL HYGIENE

Date **May 14, 1972**

Certificate Number **720**

William A. ...
Chairman of the
Board of Directors
Secretary



TANK CLEARANCE CERTIFICATE

Date: 5/10/97 Time: 0930
Tank Owner: FLEET & INDUSTRIAL SUPPLY CENTER
PEARL HARBOR.
Project Name: VALVE CHAMBER REPAIR
Location: CNR. [REDACTED]

Tank I.D.:
Serial No. or DOH ID No. Tank # H6-1A
Age: 54 yrs Capacity: 5000 G Dimensions: 22' L x 74" DIA.
Material: Metal (); Plastic (); Concrete (); Other:
Double wall (); Single wall (); Last leak test: N/A Pass(); Fail()
Last contents: JPS Previous contents: Gas, Marine Diesel

Describe Tank cleaning / purging / inerting:
Cleaning material: H₂O Water Purging material: air
Inerting material: N/A
Quantity sludge/cleaning material remaining: None
Other: _____

Describe Tank monitoring: Date: 5-7-97 Time: 0700
Equipment/instrument: GASTECH MODEL 1314 Conc.: START LEL 17%
SERIAL # 9314131 AFTER AIR PURGE & FREE
LIQUID REMOVAL LEL <3%

Calibration Gases and conc. N/A
Other: _____

Tank Appurtenances:
Vent pipe: 2" x 8' Fill pipe: 6" x 5'6"
Supply: 4" φ
Return: 4" φ
Other: 2 x 4" φ

Clearance approved for: Fire ; (yes) () Personnel; () (no)
Approval expires: Date 5/12/97 Time 1600

(b) (6)

Masayoshi Ogata, CIH #720

TANK CLEARANCE CERTIFICATE

Date: 5/10/97 Time: 0930
Tank Owner: FLEET & INDUSTRIAL SUPPLY CENTER
PEARL HARBOR
Project Name: VALVE CHAMBER ^{(b) (3) (A)} REPAIR
Location: CNR ^{(b) (3) (A)}

Tank I.D.:

Serial No. or DOH ID No. Tank #2 HG-2A
Age: 54 YRS Capacity: 5,000 GAL Dimensions: 22' L X 74" DIA.
Material: Metal (); Plastic (); Concrete (); Other: _____
Double wall (); Single wall (); Last leak test: NA Pass(); Fail()
Last contents: JPS Previous contents: AVGAS, Motor Oil

Describe Tank cleaning / purging / inerting:

Cleaning material: H.P. Water Purging material: air
Inerting material: NA
Quantity sludge/cleaning material remaining: none
Other: _____

Describe Tank monitoring: Date: 5-7-97 Time: 0730
Equipment/instrument: GASTECH MODEL 1314 Conc.: LEL 10%
SERIAL # 9314131 AFTER PURGE &
CAL VALID TO 12.18.97 FREE LIQUID REMOVAL
Calibration Gases and conc. N/A. N.D.
Other: _____

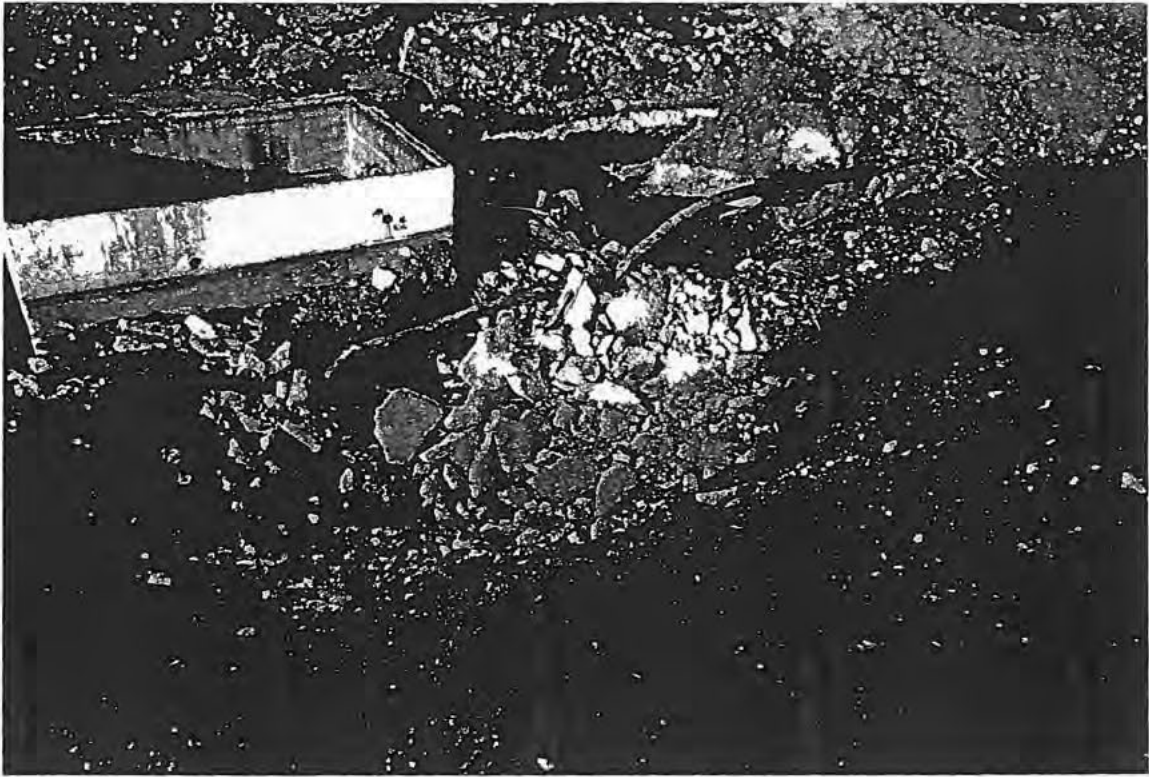
Tank Appurtenances:

Vent pipe: _____ Fill pipe: 6" x 5'6"
Supply: _____
Return: _____
Other: 2 x 4" ϕ

Clearance approved for: Fire ; (yes) () Personnel; (~~yes~~) (no) ()
Approval expires: Date 5/12/97 Time 1600

(b) (6)

Masayoshi Ogata, CIH #720



CONCRETE ABOVE GROUND VAULT OVER EACH TANK



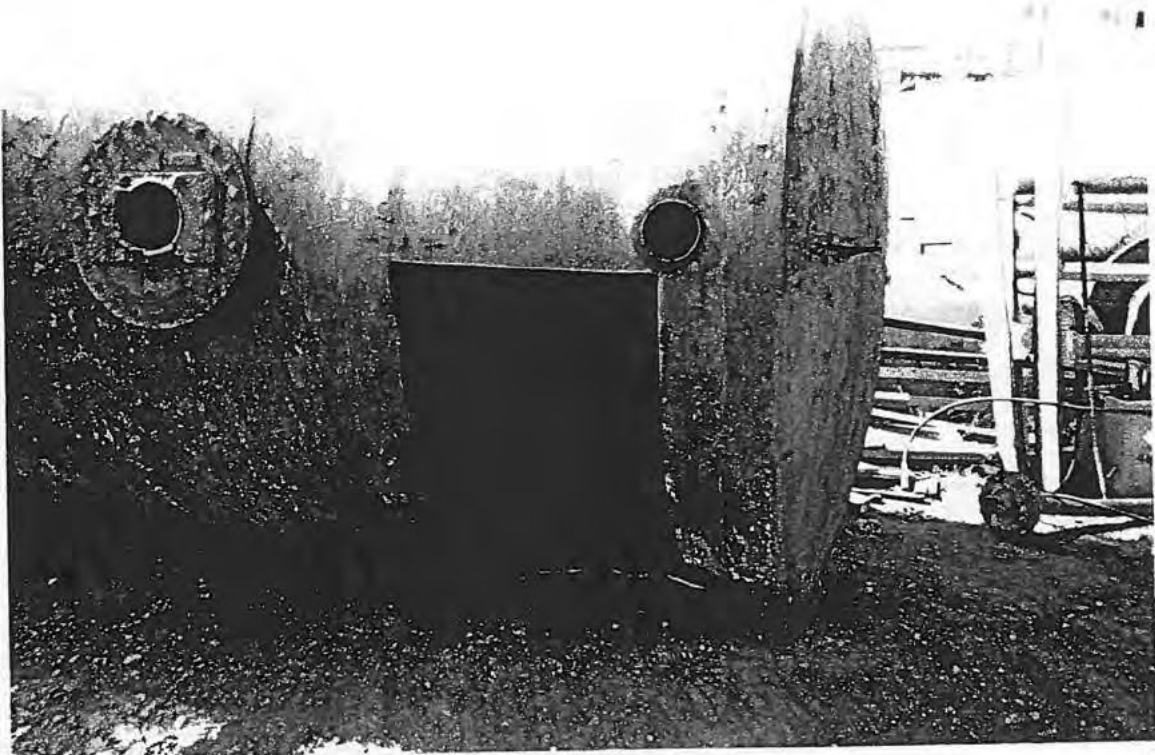
7 CUBIC YARDS CONCRETE BALLAST BLOCK ATTACHED TO VAULT
AND ON TOP OF EACH TANK



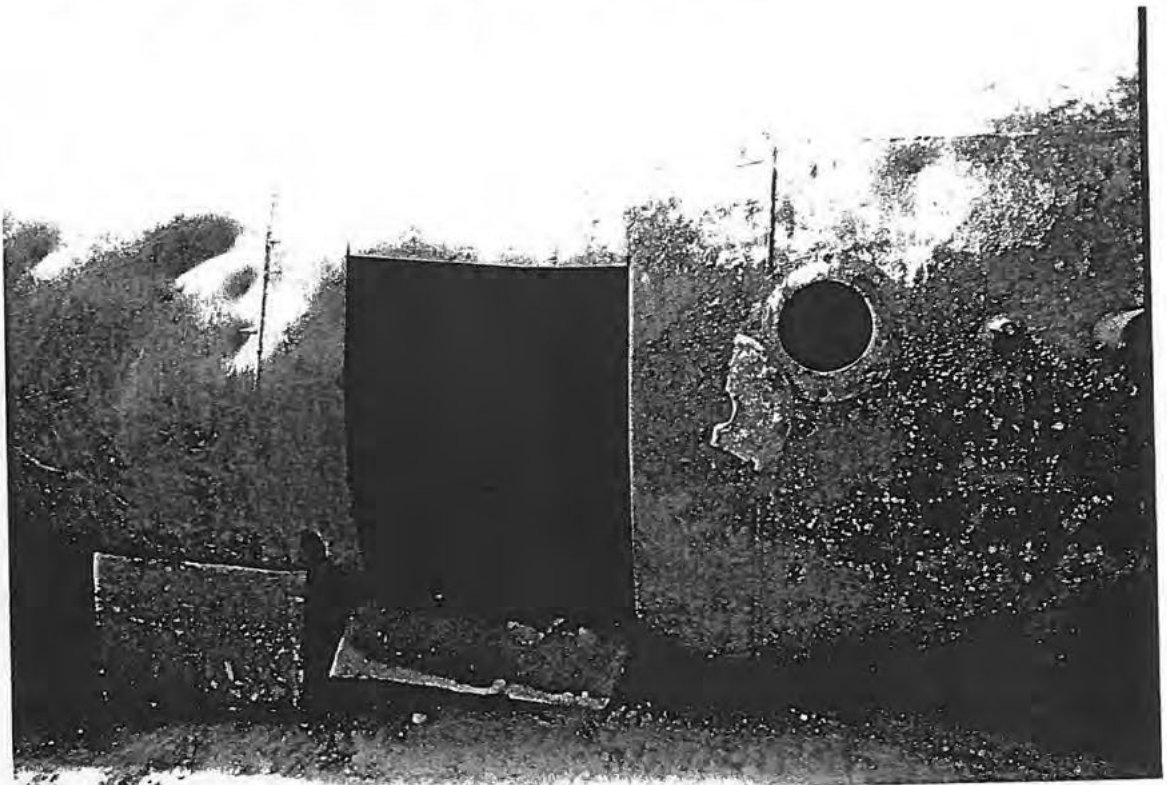
TANK EXPOSED AND CONTENTS BEING DRAINED. NOTE EXTENSIVE PULVERIZED COAL USED AS TANK AND PIPE BEDDING MATERIAL. FREE LIQUID IS TIDAL WATER TABLE



INTERNAL CLEANING RINSATE RESIDUE COLLECTED FOR LABORATORY ANALYSIS



TANK #1, H6 - 1A
CLEANED AND INSPECTION OPENING FOR CIH CERTIFICATION



TANK #2, H6 - 2A
CLEANED AND INSPECTION OPENING FOR CIH CERTIFICATION



TANK #1, H6 - 1A
LABELED AND READY FOR DISPOSAL



TANK #2, H6 - 2A
LABELED AND READY FOR DISPOSAL