



**RECEIVED**

1:38 pm, Jun 16, 2009

Alameda County  
Environmental Health

June 15, 2009  
Project No. 104484/WP

Mr. Jeff LeBow  
East Bay Regional Park District  
2950 Peralta Oaks Court  
Oakland, California 94605

**SUBJECT: Work Plan for Environmental Site Investigation of a Diesel Release from an Above Ground Storage Tank (AST) Located at the Lake Chabot Marine Maintenance Yard, 17930 Lake Chabot Road, Castro Valley, California**

Dear Mr. LeBow:

Kleinfelder is pleased to present East Bay Regional Park District (EBRPD) with this Work Plan for an investigation of a diesel release from an above ground storage tank (AST) located at 17930 Lake Chabot Road, in Castro Valley, California (the Site). A Site Vicinity Map (Plate 1) and a Site Plan (Plate 2) are attached. This Work Plan was prepared in accordance with our Proposal to you dated April 15, 2009, and in response to a letter from the Alameda County Health Department (ACEH) to you dated April 2, 2009 requesting a technical report.

## **BACKGROUND**

Kleinfelder understands that the EBRPD retained Decon Environmental Services to remove and dispose of one two-thousand gallon capacity diesel AST, and associated piping at the site. The AST was connected to the various buildings at the site through underground piping. The AST removal was permitted through the Alameda County Fire Department, Bureau of Fire Prevention. Three soil samples were collected using a hand auger from depths of two to three feet below ground surface (bgs) and the samples were analyzed for total petroleum hydrocarbons (TPH) as diesel (TPHd). Sample number 1, collected from beneath the tank valves had a concentration of 570 milligrams per kilogram (mg/kg) TPHd. Samples 2 and 3, which were collected along the underground pipe runs, had concentrations of 25 mg/kg and 67 mg/kg TPHd, respectively (Plate 2). The pipe trenches were reportedly immediately backfilled following removal.

A report documenting Decon's activities dated August 2, 2007, was submitted to the ACEH, the lead regulatory agency, and is attached to this Work Plan. The ACEH case worker, Mr. Steven Plunkett, has requested that a Work Plan for Soil and Groundwater Investigation be prepared for the assessment of the lateral and vertical extent of the TPHd concentrations detected at the site, and that the Work Plan be prepared by an appropriately registered or certified professional, in accordance with the California Business and Professional Code (Sections 6735, 6835, and 7835.1). This request is documented in a letter from Mr. Plunkett to you dated April 2, 2009. ACEH requested that the Work Plan for Soil and Groundwater Investigation be submitted by May 15, 2009. The due date for the Work Plan was extended until June 15, 2009, per an ACEH letter to you dated May 26, 2009.

## **SCOPE OF WORK**

Four soil borings will be advanced in the vicinity of the former AST to assess the extent of the TPHd concentrations. Kleinfelder will schedule the investigation activities with EBRPD personnel and will coordinate the field work with our subcontractors (e.g. analytical laboratory, and drilling subcontractor). We will obtain drilling permits from Alameda County Public Works for the soil borings.

Kleinfelder will notify Underground Service Alert (USA) of our soil boring locations at least 48 hours prior to the start of field work. We will also retain a private utility locating company to check for underground utilities in the vicinity of the soil boring locations. Kleinfelder will prepare a site-specific health and safety plan for the proposed Environmental Site Investigation.

The proposed soil boring locations are shown on the attached Site Plan (Plate 2). The actual locations of the proposed soil borings may be modified due to existing site conditions, such as overhead power lines, underground utilities, and accessibility of the drill rig to the proposed boring location due to sloping ground surface and existing site features.

## **SOIL AND GROUNDWATER SAMPLING**

Soil and groundwater samples will be collected utilizing truck-mounted Geoprobe (i.e., direct-push) sampling equipment. Based on the local conditions and setting (site located near a ridge top) it is likely that we will encounter bedrock at a shallow depth, and prior to encountering groundwater. Therefore the borings will be continuously cored to either the first encountered groundwater or bedrock, or to a depth not greater than 16 feet below ground surface (bgs). The samples will be screened using a photoionization detector (PID) and examined for visual and olfactory indications of contamination. A Kleinfelder representative working under the direction of a California Professional Geologist or Professional Engineer will oversee the sampling activities, and will prepare a log of the soils encountered in each boring. Samples will be

collected for chemical analyses at each location. The soil samples will be screened in the field using a photoionization detector (PID) to measure volatile organic compounds. In the event that signs of impacted soils are observed (i.e., visual staining, odor, etc), samples from the impacted soil interval will be collected. Sampling equipment will be decontaminated between sampling intervals. We anticipate that two soil samples will be collected for chemical analyses at each location. If there are no obvious signs of contamination, samples will be collected at approximately 4 and 8 feet bgs. If signs of contamination are observed, additional samples may be collected and held pending client authorization for analysis. Soil samples will be retained in butyrate sampling sleeves.

In the event that groundwater is encountered in one or more of the borings, the number of soil samples collected from those borings will be decreased to one, and a groundwater sample will also be collected, using either a temporary well, or Hydropunch™ (or similar direct-push) groundwater sampling equipment. Using a clean disposable bailer, a groundwater sample would be retrieved from each boring location with groundwater, and decanted into clean containers provided by the chemical testing laboratory.

Sampling equipment will be cleaned between sample intervals and locations. The samples will then be labeled with a unique sample number, logged onto a chain-of-custody form, and placed into sealable plastic bags. Kleinfelder will take field notes recording the locations of the samples collected.

Soil and groundwater samples to be chemically analyzed will be stored in a ice-chest chilled with water based ice and delivered to a state-certified chemical testing laboratory under chain-of-custody protocol for the chemical analyses.

## **SAMPLE ANALYSES**

Kleinfelder proposes to submit two soil samples, or one soil sample and one groundwater sample, from each boring for chemical analyses. The soil and groundwater samples will be submitted to a state-certified chemical testing laboratory under chain-of-custody protocol.

As currently envisioned, we anticipate that the soil and groundwater samples will be analyzed using the following analytical methods:

- Total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), and oil (TPHo) with Silica Gel cleanup, using EPA method 8015m (8 samples);
- Volatile organic compounds (VOCs), including fuel oxygenates, using EPA Method 8260 (8 samples);

The soil and groundwater samples will be analyzed on a normal, one to two week, turn-around time (TAT). Laboratory analysis can be completed on a rush turn-around time for an additional fee, if requested.

## **INVESTIGATION-DERIVED WASTE MANAGEMENT**

Investigation-Derived Waste (IDW), such as decontamination rinsate fluids, soil cuttings and discarded groundwater, will be separately drummed and temporarily held at the Site in a labeled, U.S. Department of Transportation-approved, 55-gallon steel drum for future characterization and possible disposal at an appropriate disposal facility. Soil and groundwater sample analytical results from the investigation will be used for characterization of the IDW.

## **REPORTING**

Kleinfelder will compile the chemical test results of the investigation and prepare data summary tables. We will compare the results to relevant regulatory criteria and guidance. The scope and results of the investigation will be incorporated into our report. The report will include a description of our field activities, conclusions, and recommendations regarding the presence or absence of the analyzed chemicals of concern. The report will also include a site plan showing current and previous sample locations, boring logs, data summary tables, and the laboratory analysis reports. If the data from the investigation indicates that the extent of the TPH concentrations in soil and groundwater are well defined, and the detected concentrations do not significantly exceed the San Francisco Bay Water Board's Environmental Screening Levels (ESLs), then we may recommend to the ACEH that no further action be taken at the site. The report will be prepared under the direction of, signed and stamped by a Professional Geologist or Professional Engineer.

## **LIMITATIONS**

Kleinfelder prepared this Work Plan in accordance with generally accepted standards of care that exist in the Bay Area at this time. This Work Plan may be used only by East Bay Regional Park District (Client) and only for the purposes stated, within a reasonable time from its issuance, but in no event later than one (1) year from the date of the Work Plan. All information gathered by Kleinfelder is considered confidential and will be released only upon written authorization of the Client or as required by law. Non-compliance with any of these requirements by the Client or anyone else, unless specifically agreed to in advance by Kleinfelder in writing, will release Kleinfelder from any liability resulting from the use of this Work Plan by any unauthorized party and the Client agrees to defend, indemnify, and hold harmless Kleinfelder from any claim or liability associated with such unauthorized use or non-compliance.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more-detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this Work Plan will indicate that the Client has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this Work Plan should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage, or treatment of hazardous materials within the meaning of any governmental statute, regulation, or order. The Client is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release, treatment, or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. The Client is responsible for directing all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

Regulations and professional standards applicable to Kleinfelder's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. As such, our services are intended to provide the Client with a source of professional advice, opinions, and recommendations. Our professional opinions and recommendations are based on our limited number of field observations and tests, collected, and performed in accordance with the generally accepted engineering practice that exists at the time and may depend on, and be qualified by, information gathered previously by others and provided to Kleinfelder by the Client. Consequently, no warranty or guarantee, expressed or implied, is intended or made.

**CLOSING REMARKS**

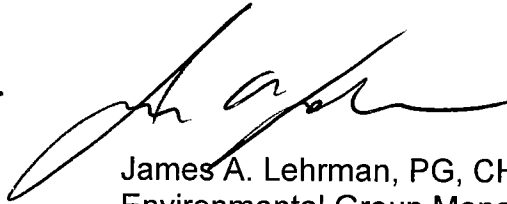
We appreciate the opportunity to work with you on this project. If you have any questions regarding this letter, or if Kleinfelder may be of further assistance with this project, please call Jim Lehrman at (925) 484-1700 ext 4520.

Sincerely,

**KLEINFELDER WEST, INC.**



Jeffrey A. Gravesen EIT  
Staff Engineer



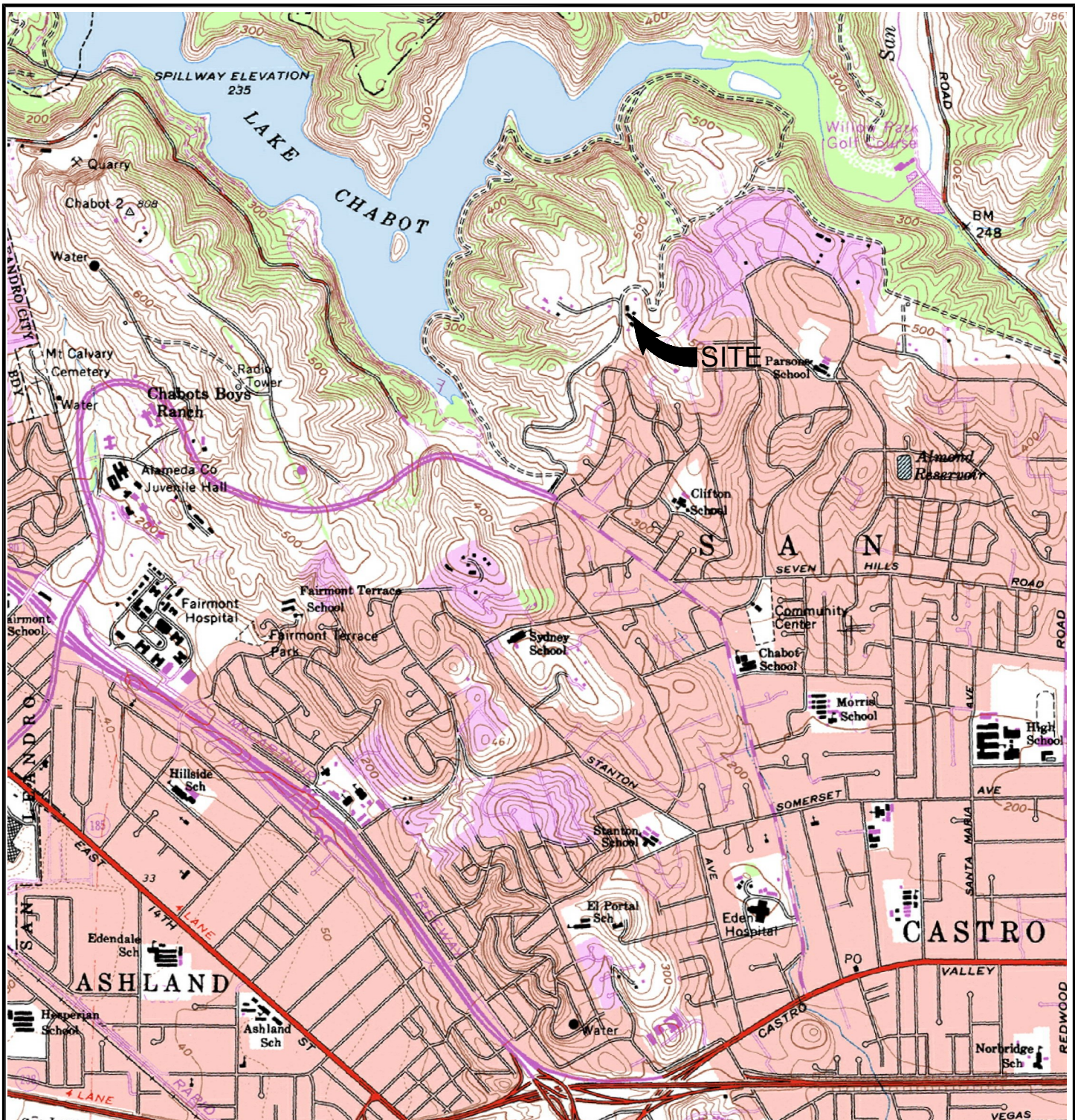
James A. Lehrman, PG, CHG  
Environmental Group Manager



Attachment: Plate 1 – Site Vicinity Map  
Plate 2 – Site Plan  
Decon Environmental Services. 2007. *Soil Sample Results, AST Removal.* August 2.

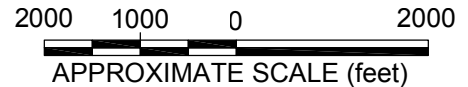
JAG/JAL/jmk

PLOTTED: 11 Jun 2009, 1:38pm, jsala



ATTACHED IMAGES: Images: SITE-VIC.jpg Images: SITEPLAN.jpg  
 ATTACHED XREFS: XRef: Eng-A\_8x11\_P\_StyleA  
 PLEASANTON, CA CAD FILE: D:\PROJECTS\104484\ LAYOUT: SITE-VIC

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REFERENCE:  
 USGS 7.5 Minute Series (Topographic) Hayward  
 Quadrangle, dated 1959 Photorevised 1980

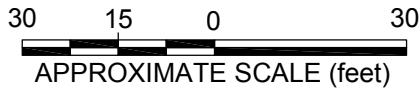
PROJECT NO.	104484
DRAWN:	JUNE 2009
DRAWN BY:	JDS
CHECKED BY:	JG
FILE NAME:	
VIC-PLAN.dwg	

**SITE VICINITY MAP**

EAST BAY REGIONAL PARK DISTRICT  
 LAKE CHABOT MARINE MAINTENANCE YARD  
 17930 LAKE CHABOT ROAD  
 CASTRO VALLEY, CALIFORNIA

PLATE  
**1**

PLOTTED: 11 Jun 2009, 1:38pm, jsala



REFERENCE:  
maps.google.com, 2006



LEGEND



SOIL SAMPLE LOCATION  
(By Decon, 7/07)



PROPOSED SOIL  
BORING LOCATION



FORMER PIPING



PROPANE PIPING

NOTE: Locations are approximate.

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ATTACHED IMAGES: Images: SITE-VIC.jpg Images: SITEPLAN.jpg  
 ATTACHED XREFS: XRef: Eng-A\_8x11\_P\_StyleA  
 PLEASANTON, CA CAD FILE: D:\PROJECTS\104484\ LAYOUT: SITEPLAN

PROJECT NO.	104484
DRAWN:	JUNE 2009
DRAWN BY:	JDS
CHECKED BY:	JG
FILE NAME:	VIC-PLAN.dwg

<b>SITE PLAN</b>
EAST BAY REGIONAL PARK DISTRICT LAKE CHABOT MARINE MAINTENANCE YARD 17930 LAKE CHABOT ROAD CASTRO VALLEY, CALIFORNIA

PLATE	<b>2</b>
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August 2, 2007

Mr. Robert Weston  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

Re: Soil Sample Results, AST Removal

Dear Mr. Weston:

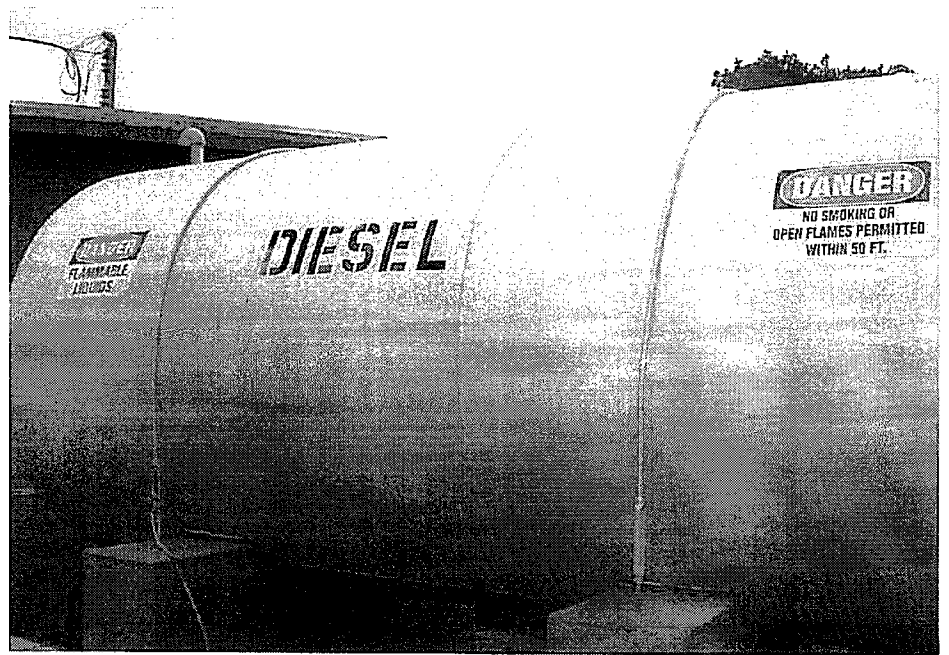
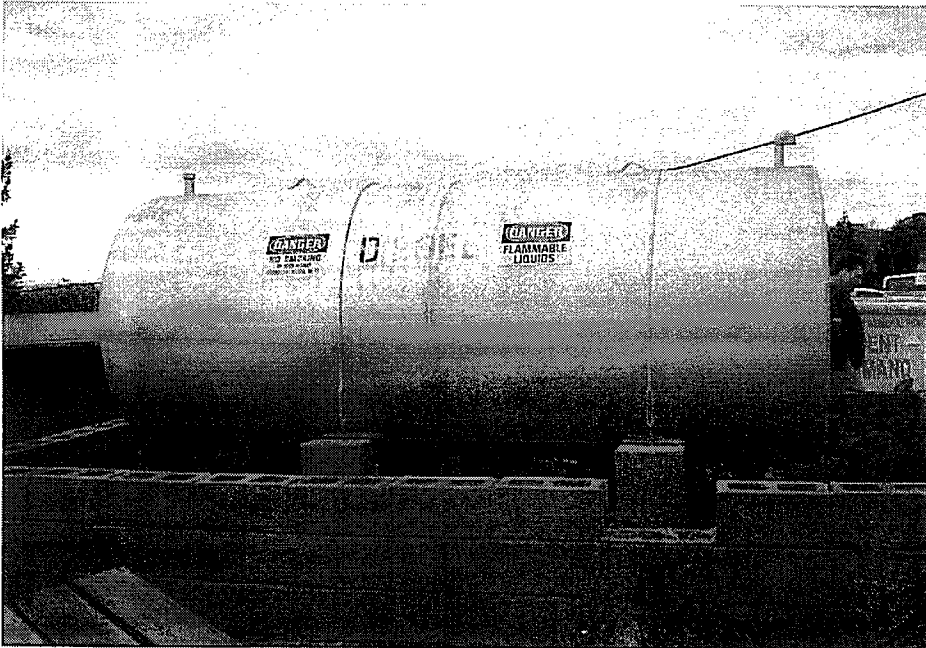
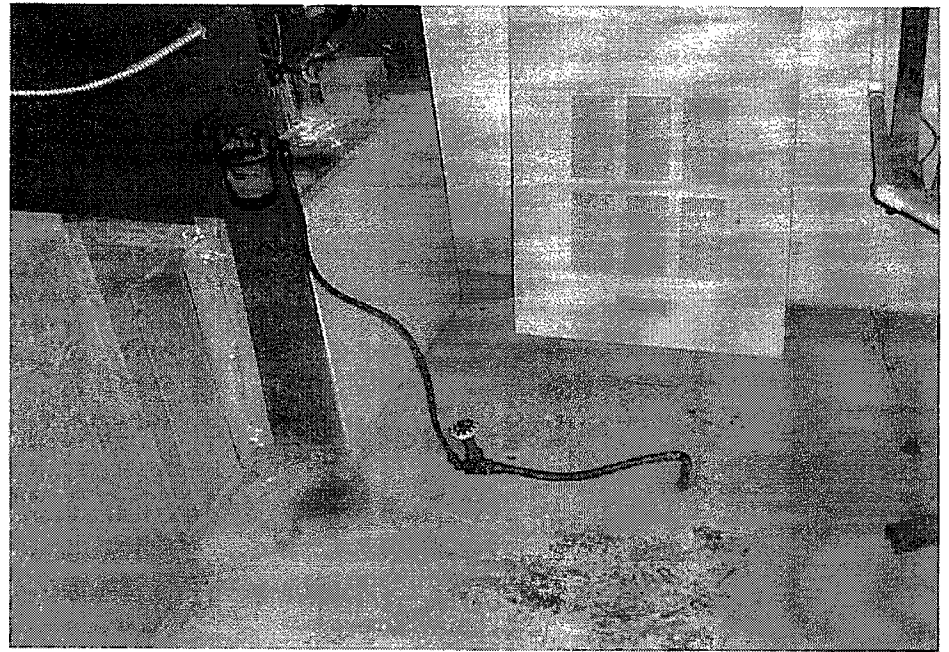
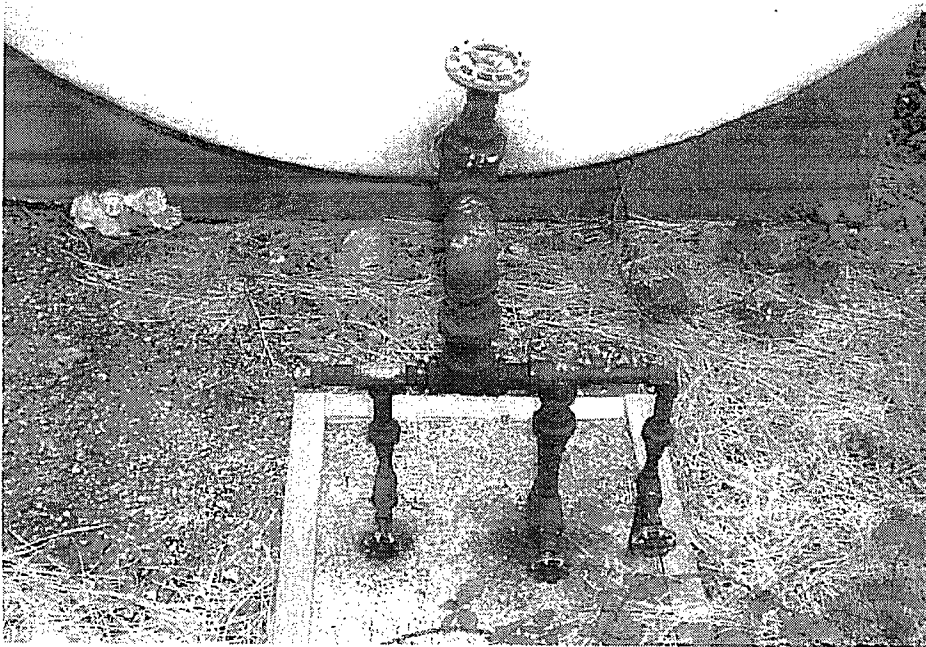
Decon Environmental Services, Inc. (DECON) was retained by the East Bay Regional Park District (EBRPD) to remove and dispose one (1) two thousand gallon capacity aboveground diesel storage tank, and associated underground piping, at the Lake Chabot Marine Maintenance Yard located at 17930 Lake Chabot Road in Castro Valley, California (see attached Site Plan, Location Plan, and Vicinity Map). The project was permitted through the Alameda County Fire Department, Bureau of fire Prevention.

Attached are the analytical results of soil samples taken from underneath the piping associated with the aboveground diesel tank. We collected three (3) soil samples, one from underneath the valve, and one every 20 ft of pipe (or shared trench) we removed. The sample (ID# 5199-01) we took from underneath the valves showed a level of 570 mg/kg diesel (photo #53). The sample taken from the shared trench of piping leading to the Police Headquarters (S200) and the Evidence Building (S203) is 25 mg/kg (photo #69). The sample collected from the pipe trench leading to the Chabot Service Yard Office (S202) is 67 mg/kg (photo #51). All samples were collected, using a hand auger, approximately 2 to 3 feet below ground surface level. The pipe trenches were immediately backfilled following removal.

Please feel free to contact me at (510) 732-6444 ext. 335 if you have any questions, or need additional information regarding this matter.

Sincerely,

Chris F. Pacis  
Project Manager/Estimator



# **Entech Analytical Labs, Inc.**

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Chris Pacis

Decon Environmental Services, Inc.

23490 Connecticut Street

Hayward, CA 94545

Lab Certificate Number: 56141

Issued: 07/05/2007

Project Number: 5199

Project Name: EBRPD

## Certificate of Analysis - Final Report

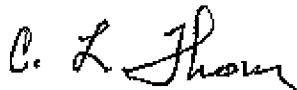
On June 28, 2007, samples were received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Solid	TPH-Extractable: EPA 3545A / EPA 8015B(M)

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



C. L. Thom  
Laboratory Director

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Decon Environmental Services, Inc.  
23490 Connecticut Street  
Hayward, CA 94545  
Attn: Chris Pacis

Project Number: 5199  
Project Name: EBRPD

## Certificate of Analysis - Data Report

Samples Received: 06/28/2007  
Sample Collected by: Client

**Lab # : 56141-001    Sample ID: 5199-01    Matrix: Solid    Sample Date: 6/28/2007    10:00 AM**

TPH-Extractable: EPA 3545A / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	570		10	50	mg/Kg	6/29/2007	SD070629B	7/2/2007	SD070629B
Atypical pattern (C12-C34).									

Surrogate	Surrogate Recovery	Control Limits (%)		Analyzed by: JHsiang
n-Hexacosane	77.9	50	- 150	Reviewed by: mtran

**Lab # : 56141-002    Sample ID: 5199-02    Matrix: Solid    Sample Date: 6/28/2007    10:00 AM**

TPH-Extractable: EPA 3545A / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	25		1.0	5.0	mg/Kg	6/29/2007	SD070629B	7/2/2007	SD070629B
Atypical pattern (C12-C26); 56 mg/Kg Motor Oil.									

Surrogate	Surrogate Recovery	Control Limits (%)		Analyzed by: JHsiang
n-Hexacosane	86.4	50	- 150	Reviewed by: mtran

**Lab # : 56141-003    Sample ID: 5199-03    Matrix: Solid    Sample Date: 6/28/2007    10:00 AM**

TPH-Extractable: EPA 3545A / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	67		1.0	5.0	mg/Kg	6/29/2007	SD070629B	7/2/2007	SD070629B
Atypical pattern (C12-C26); 45 mg/Kg Motor Oil.									

Surrogate	Surrogate Recovery	Control Limits (%)		Analyzed by: JHsiang
n-Hexacosane	92.1	50	- 150	Reviewed by: mtran

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Solid - TPH-Extractable: EPA 3545A / EPA 8015B(M)

QC/Prep Batch ID: SD070629B

Validated by: mtran - 07/03/07

QC/Prep Date: 6/29/2007

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	5.0	mg/Kg
Surrogate for Blank	% Recovery	Control Limits		
n-Hexacosane	114	50 - 150		

LCS / LCSD - Solid - TPH-Extractable: EPA 3545A / EPA 8015B(M)

QC Batch ID: SD070629B

Reviewed by: mtran - 07/03/07

QC/Prep Date: 6/29/2007

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<5.0	100	99.4	mg/Kg	99.4	45 - 140
TPH as Motor Oil	<10	100	95.6	mg/Kg	95.6	45 - 140
Surrogate	% Recovery	Control Limits				
n-Hexacosane	105	50 - 150				

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<5.0	100	101	mg/Kg	101	1.60	30.0	45 - 140
TPH as Motor Oil	<10	100	101	mg/Kg	101	5.20	30.0	45 - 140
Surrogate	% Recovery	Control Limits						
n-Hexacosane	113	50 - 150						

# Chain of Custody

DATE 6-28-07 PAGE 1 OF 1

PROJ. MGR Chris Paes  
 COMPANY Decon Env.  
 ADDRESS Exd 35  
(510) 732 6444  
 ANALYSTS (SIGNATURE) \_\_\_\_\_ (PHONE NO.) \_\_\_\_\_  
56141 (FAX NO.) \_\_\_\_\_

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	ANALYSIS REPORT													NUMBER OF CONTAINERS								
					TPH (EPA 8015, 8020) <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX DMTE	PURGEABLE AROMATICS BTEX (EPA 8020)	TPH-Diesel (EPA 8015M)	TEPE (EPA 8015M) <input type="checkbox"/> Field <input type="checkbox"/> M.O. <input type="checkbox"/> Other	PURGEABLE HALO CARBONS (HVCs) (EPA 8010)	VOLATILE ORGANICS (VOCs) (EPA 8260)	SEMIVOLATILES (EPA 8270)	TOTAL OIL AND GREASE (SM 5620 B+F, E+F)	<input type="checkbox"/> PESTICIDES (EPA 8080) <input type="checkbox"/> PCB'S (EPA 8080)	PNA's by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	<input type="checkbox"/> Spec. Cond. <input type="checkbox"/> TSS <input type="checkbox"/> TDS	LUFT METALS: Cd, Cr, Pb, Ni, Zn	CAM 17 METALS (EPA 8010/7470/7471)		TOTAL LEAD	<input type="checkbox"/> W.P.T. (STLC) <input type="checkbox"/> DTCLP	<input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24 hr hold time for H2O)					
5199-01	6-28	1000	S	001			✓																			
5199-02	6-28	1000	S	002			✓																			
5199-03	6-28	1000	S	003			✓																			

3 (2"x6") brass tubes.

PROJECT INFORMATION				SAMPLE RECEIPT				RELINQUISHED BY			RELINQUISHED BY			RELINQUISHED BY		
PROJECT NAME: <u>EBRPD</u>				TOTAL NO. OF CONTAINERS				SIGNATURE: <u>[Signature]</u>			SIGNATURE: <u>[Signature]</u>			SIGNATURE: _____		
PROJECT NUMBER: <u>5199</u>				HEAD SPACE				(TIME) <u>6/28/07</u>			(TIME) <u>6/28/07</u>			(TIME) _____		
I.D.# _____				TEMPERATURE				(DATE) <u>6/28/07</u>			(DATE) <u>6/28/07</u>			(DATE) _____		
TAT (STANDARD 5-DAY)				CONFORMS TO RECORD				(COMPANY) <u>DECON ENV.</u>			(COMPANY) <u>ENTECH</u>			(COMPANY) _____		
SPECIAL INSTRUCTIONS/COMMENTS: Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Electronic Report								RECEIVED BY 1. SIGNATURE: <u>[Signature]</u>			RECEIVED BY 2. SIGNATURE: <u>[Signature]</u>			RECEIVED BY (LABORATORY) 3. SIGNATURE: _____		
								(TIME) <u>1305</u>			(TIME) <u>1550</u>			(TIME) _____		
								(DATE) <u>6/28/07</u>			(DATE) <u>6/28/07</u>			(DATE) _____		
								(COMPANY) _____			(COMPANY) _____			(COMPANY) _____		
								(LAB) _____			(LAB) _____			(LAB) _____		