Pacific States
ENVIRONMENTAL CONTRACTORS, INC.
California Contractor License #723241 A-HAZ

11/02/98

Larry Seto
Alameda County Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Closure Report for the Underground Storage Tank Removal Activities at the Monarch Airport, 8638 Patterson Pass Road, Livermore, CA

Dear Mr. Seto:

Pacific States Environmental Contractors, Inc. (PSEC) is pleased to present results from the removal of three underground storage tanks (UST's) at the subject property. Previous investigations of the site (Kleinfelder, 1997) indicated that three underground storage tanks are located on the property. **One tank had a capacity of 1,000 gallons and the other two had a capacity of 550 gallons.** The three tanks rested next to each other buried in a horizontal position. The bottom of the 1,000-gallon tank was approximately eight feet below existing grade. The bottom of the two 550 gallon tanks was approximately six and one-half feet below grade. **The two 550 gallon UST's were extremely corroded and contained no liquid or sludge. The 1,000-gallon tank did not have any visible holes and contained no liquid or sludge.**

PSEC rinsed and removed all three UST's on August 31, 1998. Each tank had 1½" steel lines that were connected to the UST's leading to a fuel pump adjacent to an existing structure located on the property (see Attachment 1). These **lines were corroded and were removed during excavation activities.** Each pipeline had a maximum length of ten feet and was buried approximately one foot below existing grade. **The lines were free of any product and were disposed with the** UST's. After rinsing each tank, fifteen pounds of dry ice was added for every 1,000 gallons of tank volume. The tanks were verified to have oxygen content below 20.9% and a Lower Explosive Limit (LEL) of zero. Each tank was removed from the excavation and loaded directly on a forty-foot flatbed truck for transportation to ECI in Richmond, CA; the tank processing facility. Rinsate generated from the cleaning activities, was collected by NG Chemical by use of a vacuum truck. The rinsate was transported to Seaport Environmental in Redwood City for disposal. See Attachments 2 and 3 for copies of the Waste Manifests and the Certificate of Destruction for the UST. The tank removal activities and sampling were supervised by the Alameda County Health Services - Environmental Protection Department. The Alameda County Fire Department was notified but not able to attend the removal activities.

A soil sample was taken in native soil directly under each of the 550-gallon tanks (sample numbers 3A and 4A). Two soil samples were taken underneath the 1,000-gallon tank (sample numbers 1A and 2A). The soil samples were collected in 3" brass sleeves driven into the contents of a backhoe bucket. One four point composite sample was collected from the stockpile associated with the excavation (1B, 2B, 3B, and 4B). These soil samples were collected in 3" brass sleeves driven directly into various points of the stockpile. One sample (1C) was collected (near the associated fuel pump) in native soil approximately six inches below existing grade. **There were no odors during excavation/sampling activities and the soil samples exhibited no discoloration.**

After collection of each sample, the ends were covered with Teflon tape and plastic end caps. Each sample was labeled with identifying information and placed in a chilled ice chest. The soil samples were delivered to Chromolab Inc., a state certified analytical laboratory, located in Pleasanton, CA. A copy of each Chain of Custody and laboratory results are presented in Attachment 4.

Results of the soil sampling analysis are presented in Table 1. All soil samples showed non-detect levels of aviation gasoline, benzene, toluene, ethyl-benzene, and xylene (BTEX) compounds, and methyl-tert-butyl-ether (MTBE). One soil sample (1C) exceeded detection limits for lead (PB) at 77 mg/kg. This sample was collected at a depth of six inches below grade near the fuel pump adjacent to the remaining structure of the property. The structure is coated with white paint that is believed to contain lead. The paint is chipping and peeling away from the existing facility. PSEC believes the lead content in the soil is associated with the paint from the existing structure. The property owner intends to remove this structure under all applicable health and safety laws regarding lead based paint.

Excavated soils were stockpiled on plastic and covered. The excavation area was backfilled on September 11, 1998. The excavated area was backfilled using the native stockpile and sixteen cubic yards of 2" minus screened overburden received from the Dumbarton Quarry Associates. The soil density and optimum moisture contents were measured and recorded at four depths by Berlogar Geotechnical Consultants of Pleasanton, CA. A summary of this report is presented in Attachment 5.

There are no drinking water wells onsite which are located down gradient from the former underground tank storage area. The nearest receiving waters are located on the southern boundary of the property (Arroyo Del Valle). During the initial investigation (Kleinfelder, 1997), all groundwater samples taken at the site (except one - 20 ug/l benzene at MWT-2) showed contaminant levels below the Maximum Contaminant Levels (MCL) referenced from the California Department of Health Services. Based on the sample results from the recent UST removal, a decreasing trend in contaminant levels seems to be occurring near the UST storage area at the Monarch Airport.

Therefore, due the decreasing trend of contaminant levels, PSEC believes that the contamination on this property does not pose a threat to any beneficial reuses of the former Monarch Airport located at 8638 Patterson Pass Road, Livermore, CA.

This report should conclude the requirements for the tank removal activities at the Monarch Airport located at 8638 Patterson Pass Road, Livermore, CA. When complete, please forward PSEC an official Tank Closure Certification.

Please note that an additional original Form B is attached for one 550 gallon UST that was not included in the original permit application.

If your office should have any questions, please contact me at 925-803-4333.

Respectfully.

Jason Gray- Project Engineer
Pacific States Environmental Contractors, Inc.

Attachment 1 - Boring Location Map (showing UST locations)
Attachment 2 - Uniform Hazardous Waste Manifests for the three USTs and UST Rinsate
Attachment 3 - Certified Services Company forms (three) for each UST
Attachment 4 - Laboratory Results from Chromolab, Inc.
Attachment 5 - Density Testing Results from Berlogar Geotechnical
Attachment 6 - One Underground Storage Tank Permit Application - Form B for Third UST

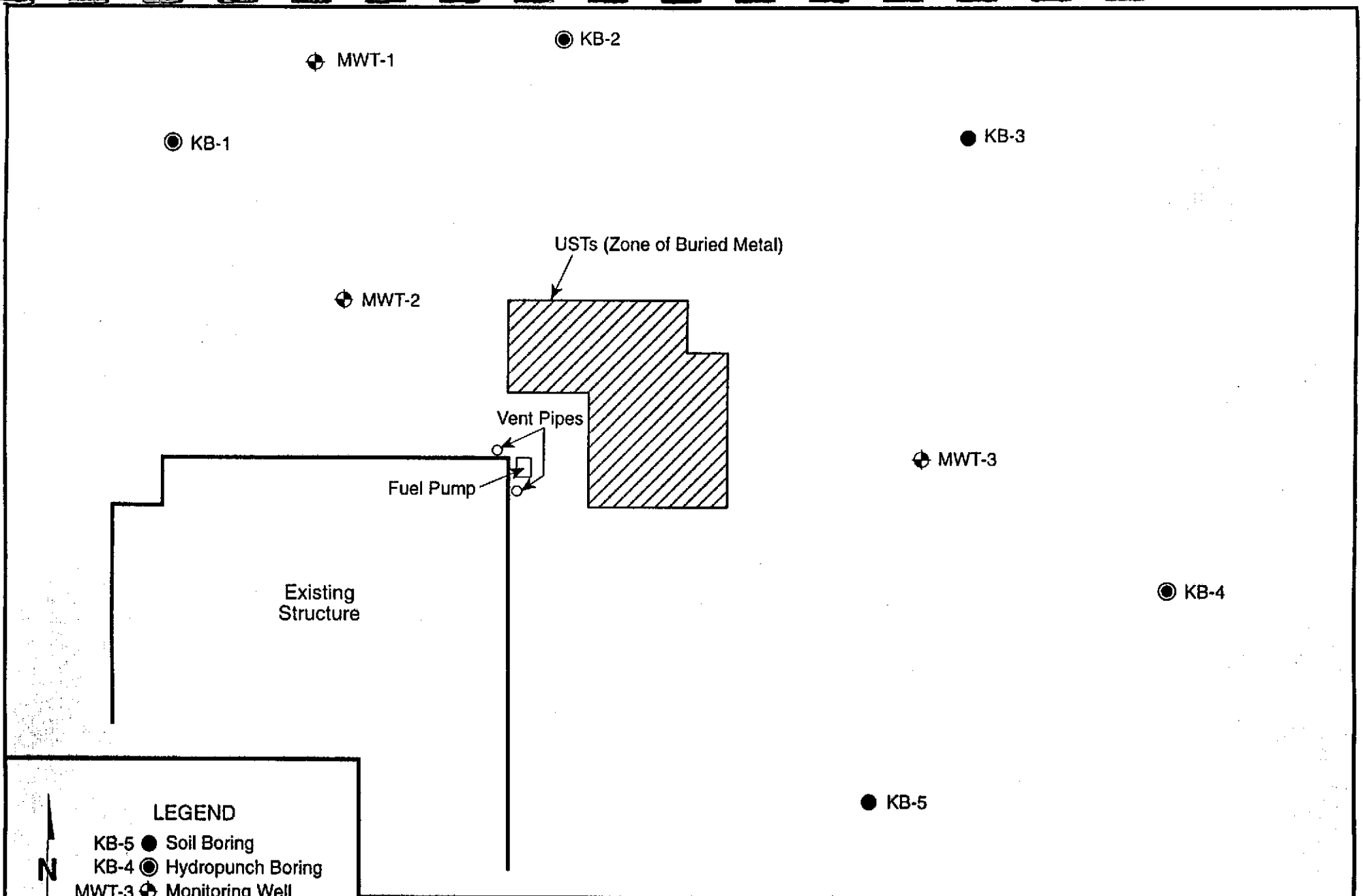
cc: Pete Timmerman – Pacific States Environmental

(Kleinfelder, 1997) Preliminary Findings, Former Hummingbird Haven Glider Airport, 8638 Patterson Pass Road (at Greenville Road), Livermore, CA; Kleinfelder. April 14, 1997.

Table 1
Analytical Results
UST Removal Soil Samples - Monarch Airport - Livermore, CA (8/31/98)

Sample	Location	Results						
		Aviation Gas (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylene (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
1A	1,000 gallon tank	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2A	1,000 gallon tank	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
3A	500 gallon tank	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4A	500 gallon tank	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1B, 2B, 3B, 4	Stockpile Composite	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1C	Piping under fuel pump near existing struture	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	77.0

Attachment 1
Boring Location Map (showing UST locations)



KLEINFELDER

Drawn By: M. Bussanich
Project No. 23-482965-ESA
Date: 4-14-97
Filename: 1105A

BORING LOCATION MAP

LIVERMORE PROPERTY
8638 PATTERSON PASS ROAD
LIVERMORE, CALIFORNIA

PLATE
2

Attachment 2
Uniform Hazardous Waste Manifests for the three USTs and UST Rinsate

(California—Environmental Protection Agency)
(Approved) OMB No. 2050-0039 (Expires 9-30-96)
(Print) or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6. 973067

Department of Toxic Substances Control
Sacramento, California

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802: WITHIN CALIFORNIA, CALL 1-800-852-7550

95997822

UNIFORM HAZARDOUS WASTE MANIFEST

GENERATOR

1. Generator's US EPA ID No. / Manifest Document No.: CAC001408752 / 97822
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 95997822

B. State Generator's ID

3. Generator's Name and Mailing Address: Kathryn DeSilva 1995 Trust & David DeSilva 1995 Trust, 11555 Dublin Blvd., Dublin, CA 94568

4. Generator's Phone: (925) 828-7999

5. Transporter 1 Company Name: ECOLOGY CONTROL INDUSTRIES

6. US EPA ID Number: CAD982030173

C. State Transporter's ID

D. Transporter's Phone: 510 235 1393

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: ERICKSON, INC, 255 PARR BLVD, RICHMOND

10. US EPA ID Number: CAD009466392

G. State Facility's ID: CAD009466392

H. Facility's Phone: 510-235-1393

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. WASTE EMPTY STORAGE TANK NON-RCRA hazardous waste solid	3	TP	2000	P	State 512; EPA/Other NONE
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above: QTY 3 Empty storage tanks # 23797 23718 23719. TANKS HAVE BEEN INERTED WITH 15 lb DRY ICE PER 1000 gallons tank capacity

K. Handling Codes for Wastes Listed Above: a. 01 b. c. d.

15. Special Handling Instructions and Additional Information:
Wear appropriate clothing when handling
24 hour emergency contact # 925-829-7999
24 hour emergency contact: Ernie Lampkin
ERG 171

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
ERNEST O. LAMPKIN, TRUSTEE	Ernest O. Lampkin	08	31	98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
JAMES Greely	James Greely	08	31	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
DAVID SATO	DAVE SATO	08	31	98

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (1/95)
EPA 8700—22

White: TSDF SENDS THIS COPY TO DTSC WITHIN 30 DAYS.
To: P.O. Box 3000, Sacramento, CA 95812

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-96)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back a ge 6.

Department of Toxic Substances Control
Sacramento, California

95997821

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CA 9 0 1 4 0 8 7 5 2 9 7 8 2 1
Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
4. Generator's Phone
A. Manifest Document Number 95997821
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone

5. Transporter 1 Company Name
6. US EPA ID Number
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
10. US EPA ID Number

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a.					State EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. b.
c. d.

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (1/95)
EPA 8700—22

Yellow: GENERATOR RETAINS

Attachment 3
Certified Services Company forms (three) for each UST

NIGHT
PHONE
235-1393

CERTIFICATE

CERTIFIED SERVICES COMPANY

255 Parr Boulevard • Richmond, California 94801

NO. 28882

CUSTOMER

JOB NO. 973067
PACIFIC STATES ENV.

FOR: ERICKSON, INC. TANK NO. 23747

LOCATION: RICHMOND, CA DATE: 9/12/98 TIME: 3:17:37 PM

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT LG

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 1,000 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1% ERICKSON, INC. HERBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN CUT OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY.

ERICKSON, INC. HAS THE APROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissable concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

Patricia Ellis — REPRESENTATIVE

TITLE

Dave Sato — INSPECTOR

CP5995

NIGHT
PHONE
235-1393

CERTIFICATE

CERTIFIED SERVICES COMPANY

255 Parr Boulevard • Richmond, California 94801

NO. 28880

CUSTOMER	
JOB NO.	973067 PACIFIC STATES ENV.

FOR: ~~ERICKSON, INC.~~ TANK NO. ~~23718~~

LOCATION: ~~RICHMOND, CA~~ DATE: ~~8/31/98~~ TIME: ~~3:15:16 PM~~

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT LG

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 600 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1% ERICKSON, INC. HERBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN CUT OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY.

ERICKSON, INC. HAS THE APROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks; or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissable concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

Patricia Collie — REPRESENTATIVE

TITLE

Dave Soto — INSPECTOR

CP5996

DAY OR NIGHT
TELEPHONE
(510) 235-1393

CERTIFICATE

CERTIFIED SERVICES COMPANY

255 Parr Boulevard • Richmond, California 94801

NO. 28881

CUSTOMER

JOB NO. 973067
PACIFIC STATES ENV.

FOR: ERICKSON, INC TANK NO. 23719

LOCATION: RICHMOND, CA DATE: 8/31/98 TIME: 3:16:50 PM

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT LG

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 600 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1% ERICKSON, INC. HERBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN CUT OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY.

ERICKSON, INC. HAS THE APROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissable concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

Lance Collins — Dave Soto

REPRESENTATIVE TITLE INSPECTOR

CR500

Attachment 4
Laboratory Results from Chromolab, Inc.

CHROMALAB, INC.

Environmental Services (SDB)

September 8, 1998 *Submission #:* 9808454

PACIFIC STATES ENVIRONMENTAL

Atten: JASON GRAY

Project: MONARCH *Project#:* 8010
Received: September 19, 1989

re: 5 samples for Lead analysis.
Method: *EPA 3050A/7420A*

Matrix: SOIL *Extracted:* September 2, 1998
Sampled: August 31, 1998 *Run#:* 14666 *Analyzed:* September 3, 1998

Spl#	CLIENT SPL ID	LEAD (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
203821	1A	N.D.	5.0	N.D.	98.8	1
203822	2A	N.D.	5.0	N.D.	98.8	1
203823	3A	N.D.	5.0	N.D.	98.8	1
203824	4A	N.D.	5.0	N.D.	98.8	1
203825	1B,2B,3B,4B	N.D.	5.0	N.D.	98.8	1

Shafi Barekzai
Analyst

Michael Verona
Operations Manager

925-803-4334 GC 09/08

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALA

Environmental S

September 8, 1998

PACIFIC STATES ENV1

Atten: JASON GR/

Project: MONARCH
Received: September

re: One sampl
Method: SW846 802

Client Sample ID: 2
Spl#: 203822
Sampled: August 31

ANALYTE
AVIATION GASOLINE
MTBE
BENZENE
TOLUENE
ETHYL BENZENE
XYLENES

Note: *Quantitat*
Gasoline.

Vincent Vancil
Analyst

925-803-4334

CHROMALAB, INC.

Environmental Services (SDB)

September 8, 1998

Submission

PACIFIC STATES ENVIRONMENTAL

Atten: JASON GRAY

Project: MONARCH
Received: September 19, 1989

Project#: 8010

re: One sample for Aviation Gasoline BTEX MTBE analy
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **1A**
Spl#: 203821
Sampled: August 31, 1998

Matrix: SOIL
*Run#:*14714

Analyzed

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)
AVIATION GASOLINE	N.D.	1.0	N.D.
MTBE	N.D.	0.0050	N.D.
BENZENE	N.D.	0.0050	N.D.
TOLUENE	N.D.	0.0050	N.D.
ETHYL BENZENE	N.D.	0.0050	N.D.
XYLENES	N.D.	0.0050	N.D.

Note: *Quantitation for Aviation Gas is based on the response*
Gasoline.

Vincent Vancil
Analyst

Michael Ve
Operations

925-803-4334

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

September 8, 1998 *Submission #:* 9808454

PACIFIC STATES ENVIRONMENTAL

Atten: JASON GRAY

Project: MONARCH *Project#:* 8010
Received: September 19, 1989

re: One sample for Aviation Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **3A**
Spl#: 203823 *Matrix:* SOIL
Sampled: August 31, 1998 *Run#:*14714 *Analyzed:* September 3, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AVIATION GASOLINE	N.D.	1.0	N.D.	--	1
MTBE	N.D.	0.0050	N.D.	109	1
BENZENE	N.D.	0.0050	N.D.	107	1
TOLUENE	N.D.	0.0050	N.D.	105	1
ETHYL BENZENE	N.D.	0.0050	N.D.	105	1
XYLENES	N.D.	0.0050	N.D.	105	1

Note: Quantitation for Aviation Gas is based on the reponse factor for Gasoline.

Vincent Vancil
Analyst

Michael Verona
Operations Manager

925-803-4334

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

September 8, 1998 *Submission #:* 9808454

PACIFIC STATES ENVIRONMENTAL

Atten: JASON GRAY

Project: MONARCH *Project#:* 8010
Received: September 19, 1989

re: One sample for Aviation Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **4A**
Spl#: 203824 *Matrix:* SOIL
Sampled: August 31, 1998 *Run#:*14678 *Analyzed:* September 3, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AVIATION GASOLINE	N.D.	1.0	N.D.	--	1
MTBE	N.D.	0.0050	N.D.	112	1
BENZENE	N.D.	0.0050	N.D.	103	1
TOLUENE	N.D.	0.0050	N.D.	101	1
ETHYL BENZENE	N.D.	0.0050	N.D.	101	1
XYLENES	N.D.	0.0050	N.D.	101	1

Note: Quantitation for Aviation Gas is based on the response factor for Gasoline.

Vincent Vancil
Analyst

Michael Verona
Operations Manager

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

September 8, 1998 *Submission #:* 9808454

PACIFIC STATES ENVIRONMENTAL

Atten: JASON GRAY

Project: MONARCH *Project#:* 8010
Received: September 19, 1989

re: One sample for Aviation Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **1B,2B,3B,4B**
Spl#: 203825 *Matrix:* SOIL
Sampled: August 31, 1998 *Run#:*14713 *Analyzed:* September 3, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AVIATION GASOLINE	N.D.	1.0	N.D.	--	1
MTBE	N.D.	0.0050	N.D.	116	1
BENZENE	N.D.	0.0050	N.D.	107	1
TOLUENE	N.D.	0.0050	N.D.	103	1
ETHYL BENZENE	N.D.	0.0050	N.D.	105	1
XYLENES	N.D.	0.0050	N.D.	103	1

Note: Quantitation for Aviation Gas is based on the response factor for Gasoline.

Vincent Vancil
Analyst

Michael Verona
Operations Manager

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

September 8, 1998 *Submission #:* 9809007

PACIFIC STATES ENVIRONMENTAL

Atten: JASON GRAY

Project: MONARCH *Project#:* 8010
Received: September 2, 1998

re: 1 sample for Lead analysis.
Method: *EPA 3050A/7420A*

Matrix: SOIL *Extracted:* September 2, 1998
Sampled: September 2, 1998 *Run#:* 14665 *Analyzed:* September 3, 1998

Spl#	CLIENT SPL ID	LEAD (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
204001	IC	77	5.0	N.D.	100	1

Shafi Barekzai
Analyst

Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

September 8, 1998 *Submission #:* 9809007

PACIFIC STATES ENVIRONMENTAL

Atten: JASON GRAY

Project: MONARCH *Project#:* 8010
Received: September 2, 1998

re: One sample for Aviation Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **IC**
Spl#: 204001 *Matrix:* SOIL
Sampled: September 2, 1998 *Run#:*14677 *Analyzed:* September 3, 1998

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
AVIATION GASOLINE	N.D.	1.0	N.D.	--	1
MTBE	N.D.	0.0050	N.D.	123	1
BENZENE	N.D.	0.0050	N.D.	103	1
TOLUENE	N.D.	0.0050	N.D.	99	1
ETHYL BENZENE	N.D.	0.0050	N.D.	101	1
XYLENES	N.D.	0.0050	N.D.	99	1

Note: Quantitation for Aviation Gas is based on the response factor for Gasoline.

Vincent Vancil
Analyst

Michael Verona
Operations Manager

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

1808454 203821-825

SUBM #: 9808454 REP: CC
CLIENT: PACSTEMV
DUE: 09/07/98
REF: 1724

4/1724

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

Chain of Custody

DATE 8/31/98 PAGE 1 OF 1

PROJ. MGR	Jason Gray
COMPANY	Pacific States Environmental
ADDRESS	P.O. Box 11557
	Pleasanton, CA 94588
SAMPLERS (SIGNATURE)	(PHONE NO.) 925-803-4333
	(FAX NO.) 925-803-4334

9995-415-6916

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (As Avgas) (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020) MTBE	TPH - Diesel, TEPH (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	Composite			NUMBER OF CONTAINERS
1A	8/31/98	1545	SOIL	ICE	X	X														X					1
2A																									1
3A																									1
4A																									1
1B→4B		1600																				X			4

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT NAME:	Monarch	TOTAL NO. OF CONTAINERS	
PROJECT NUMBER	8010	HEAD SPACE	
P.O. #		REC'D GOOD CONDITION/COLD	
		CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
Add MTBE to BTEX

RELINQUISHED BY 1	RELINQUISHED BY 2.	RELINQUISHED BY 3.
(SIGNATURE) (TIME) 1900	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
Jason Gray 9/1/98	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(PRINTED NAME) (DATE)	(COMPANY)	(COMPANY)
PG&E		
(COMPANY)		
RECEIVED BY 1	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3**
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME) 1059
(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	Alexander Paredes 9/1/98
(COMPANY)	(COMPANY)	(PRINTED NAME) (DATE)
		Chroma Lab
		(LAB)

9808/9007/202001

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

11741

Chain of Custody

DATE 9/2/98 PAGE 1 OF 1

PROJ. MGR Jason Gray
COMPANY Pacific States Environmental (PSE)
ADDRESS P.O Box 11357
Pleasanton, CA 94588

SAMPLERS (SIGNATURE) Jason Gray
(PHONE NO.) 925-803-4333
(FAX NO.) 925-803-4334

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (As Avgas) (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020) MTBE	TPH - Diesel, TEPH (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
IC	9/2/98		SOIL	ICE	X	X														X					

PUSH

PROJECT INFORMATION

PROJECT NAME: Monarch
PROJECT NUMBER: 8010
P.O. #:

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS	
HEAD SPACE	
REC'D GOOD CONDITION/COLD	
CONFORMS TO RECORD	

TAT	STANDARD 5-DAY			24	48	72	OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
ADD MTBE TO BTEX

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3
(SIGNATURE) Jason Gray (TIME) 1115	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
(PRINTED NAME) Jason Gray (DATE) 9/2/98	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY) PSEC	(COMPANY)	(COMPANY)
RECEIVED BY 1.	**RECEIVED BY 2.**	**RECEIVED BY (LABORATORY) 3**
(SIGNATURE) T. Cassidy (TIME) 11:15	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
(PRINTED NAME) C. Cassidy (DATE) 9-2-98	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
(COMPANY) CL	(COMPANY)	(LAB)

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: **PACIFIC STATES ENVIRONMENTAL** Date/Time Received: **09/19/89** | 10:59

Reference/Submis: **41724** | **9808454** Received by: A.P.

Checklist completed by: C Cassidy 9-3-98 Reviewed by: AP 9/3/98
Signature | Date | Initials | Date

Matrix: soil Carrier name: (Client) C/L _____

Shipping container/cooler in good condition?	Yes ✓	No ___	Not Present ___
Custody seals intact on shipping container/cooler?	Yes ___	No ___	Not Present ✓
Custody seals intact on sample bottles?	Yes ___	No ___	Not Present ✓
Chain of custody present?	Yes ✓	No ___	
Chain of custody signed when relinquished and received?	Yes ✓	No ___	
Chain of custody agrees with sample labels?	Yes ✓	No ___	
Samples in proper container/bottle?	Yes ✓	No ___	
Sample containers intact?	Yes ✓	No ___	
Sufficient sample volume for indicated test?	Yes ✓	No ___	
All samples received within holding time?	Yes ✓	No ___	
Container/Temp Blank temperature in compliance?	Temp: 10.7 °C Yes ___	No ✓	
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes ___	No ___
Water - pH acceptable upon ~~receipt~~? ___	Adjusted? ___	Checked by ___ (chemist for VOAs)	

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ **Date contacted:** _____ **Person contacted:** _____

Contacted by: _____ **Regarding:** _____

Comments: Samples received out of standard Temperature range of 2-6 °C.

Corrective Action: _____

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: **PACIFIC STATES ENVIRONMENTAL** Date/Time Received: **09/02/98** | 11:15

Reference/Submis: **41741** | **9809007** Received by: CMC

Checklist completed by: P Canedy 9.3.98 Reviewed by: AP 9/3/98
Signature | Date | Initials | Date

Matrix: Soil Carrier name: Client C/L _____

Shipping container/cooler in good condition?	Yes ✓	No ___	Not Present ___
Custody seals intact on shipping container/cooler?	Yes ___	No ___	Not Present ✓
Custody seals intact on sample bottles?	Yes ___	No ___	Not Present ✓
Chain of custody present?	Yes ✓	No ___	
Chain of custody signed when relinquished and received?	Yes ✓	No ___	
Chain of custody agrees with sample labels?	Yes ✓	No ___	
Samples in proper container/bottle?	Yes ✓	No ___	
Sample containers intact?	Yes ✓	No ___	
Sufficient sample volume for indicated test?	Yes ✓	No ___	
All samples received within holding time?	Yes ✓	No ___	
Container/Temp Blank temperature in compliance?	Temp: 5.9 °C Yes ✓	No ___	
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes ___	No ___
Water - pH acceptable upon receipt? ___	Adjusted? ___	Checked by _____ chemist for VOAs	

Any No and/or NA (not applicable) response must be detailed in the comments section below.

==========

Client contacted: _____ **Date contacted:** _____ **Person contacted:** _____

Contacted by: _____ **Regarding:** _____

Comments: _____

Corrective Action: _____

Attachment 5
Density Testing Results from Berlogar Geotechnical

BGC
BERLOGAR
GEOTECHNICAL
CONSULTANTS

Via Facsimile and Mail

October 22, 1998 (Revised)
Job No. 2294.300

Pacific State Environmental
P.O. Box 11357
Pleasanton, California 94588

Attention: Mr. Jason Gray

Subject: Revised
Density Testing Services
During Tank Backfill
8638 Patterson Pass Road
Livermore, California

Gentlemen:

INTRODUCTION

This report contains the results of our density testing on the tank backfill at of the above-captioned project on September 11, 1998.

SUMMARY OF SERVICES

Our services consisted of density testing only. Field density test locations were selected at random. We did not observe soil conditions exposed during construction or the grading operations. Field density testing was performed in accordance with ASTM Test Designation D2922-91 ("Test Methods for Density of Soil and Soil-Aggregate In-place by Nuclear Methods [Shallow Depth]"); and the results are presented in the attached Table A. Relative compaction refers to the in-place dry density of the material, expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM D1557-91 laboratory dry density procedures. The results of the laboratory compaction test results are presented in Table B.

Test locations and elevations were determined by pacing and hand level measurements from existing structures. These locations and elevations should be considered accurate only to the degree implied by the methods used.

LIMITATIONS

It should be recognized that there are variations in the accuracy and statistical repeatability of the tests and methods used to monitor the earthwork construction and materials. Our services

were performed in accordance with generally accepted standards of geotechnical engineering practice; no other warranty is expressed or implied.

Respectfully submitted,

BERLOGAR GEOTECHNICAL CONSULTANTS

Miles M. Hunter
Senior Construction Engineer
CE 45810, Exp. 12/31/98

Philip Tse
Principal Engineer

MMH/PT:pv

Attachments:
Table A - Compaction Test Results
Table B - Laboratory Compaction Test Results

Copies: Addressee (3)

wp51/const/6893

Job No. 2294.300
8638 Patterson Pass Road
Livermore, California

TABLE A
FIELD COMPACTION TEST RESULTS
Pit Backfill

Test No.	Date of Test	Road	Depth Below F.G. (feet)	Max Dry Density (pcf)	Test Dry Density (pcf)	Moisture Content (%)	Relative Compaction (%)	Retest No.
1998								
1	09/04	A	4	119.0	115.4	12.3	97	
2	09/04	A	2½	127.5	116.1	13.3	91	
3	09/04	A	1½	127.5	115.1	12.3	90	
4	09/04	A	½	127.5	115.6	13.3	91	

KEY
ROAD
A = 15' X 20' Tank Excavation

Job No. 2294.300
8638 Patterson Pass Road
Livermore, California

TABLE B
LABORATORY COMPACTION TEST RESULTS

Description of materials and corresponding laboratory compaction data, per ASTM Designation D1557-91, are listed below:

Sample Description	Optimum Moisture Content (%)	Maximum Dry Density (pcf)
Brown Gravelly Sand	11.2	119.0
Light Brown Sand with Gravel (Quarry Fine)	9.5	127.5

Attachment 6
One Underground Storage Tank Permit Application - Form B for Third UST