# UNDERGROUND STORAGE TANK REMOVAL 

209 Brush Street
Oakland, California

Prepared for:
Port of Oakland
530 Water Street
Oakland, California 94607

July 2003

Project No. 8207.001

July 30, 2003
Project 8207.001

Mr. Michael McMillan
Port of Oakland
530 Water Street, Second Floor
Oakland, California 94607
Subject: Underground Storage Tank Removal 209 Brush Street Oakland, California

Dear Mr. McMillan:
Geomatrix Consultants, Inc. (Geomatrix), has prepared this report on behalf of the Port of Oakland for documenting underground storage tank removal activities performed at the: 209 Brush Street Site. This work was performed in accordance with Geomatrix's April 17, 2003 Scope of Work and Cost Estimate.

Geomatrix is pleased to be of continuing service to the Port of Oakland. Please call either of the undersigned if you have questions.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.


Erin Zavarin
Staff Engineer

EZ/JLP/abr
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Jennifer L. Patterson, P.E.
Senior Engineer
cc: Susan M: Gallardo, Geomatrix Consultants, Inc.

# UNDERGROUND STORAGE TANK REMOVAL 209 Brush Street <br> Oakland, California 

Prepared for:
Port of Oakland
530 Water Street
Oakland, California 94607

Prepared by:
Geomatrix Consultants, Inc.
2101 Webster Street, 12thFloor
Oakland, California 94612
(510) 663-4100

July 2003

Project No. 8207.001

## TABLE OF CONTENTS

Page
1.0 INTRODUCTION .....  1
2.0 SITE CONDITIONS ..... 1
3.0 UNDERGROUND STORAGE TANK REMOVAL ..... 2
3.1 UST STABILIZATION AND REMOVAL ..... 2
3.2 Over-ExCavation OF SoIL ..... 3
3.3 SoIL and Groundwater Sampling ..... 3
3.4 RINSEATE AND UST DISPOSAL ..... 4
4.0 ANALYTICAL METHODS AND RESULTS ..... 4
4.1 ExCavation Soil Sample Results ..... 4
4.2 Grab Groundwater Sample Results ..... 5
4.3 Stockpile Soil Results ..... 5
5.0 EXCAVATION BACKFILLING ..... 5
6.0 SUMMARY ..... 6

## TABLES

Table 1 Soil Sample Analytical Results<br>Table 2 Groundwater Sample Analytical Results

## FIGURES

Figure 1 Site Location Map
Figure 2 Site Plan

## APPENDIXES

Appendix A Underground Storage Tank Removal Permit Appendix B Chain-of Custody Records and Analytical Laboratory Reports Appendix C Uniform Hazardous Waste Manifests and Certificates of Destruction Appendix D Backfill Analytical Laboratory and Geotechnical Testing Reports

UNDERGROUND STORAGE TANK REMOVAL 209 Brush Street<br>Oakland，California

### 1.0 INTRODUCTION

This report describes underground storage tank（UST）removal activities conducted at a Port of Oakland（Port）facility located at 209 Brush Street in Oakland，Califormia（Figure 1）．One 1,000 －gallon capacity diesel UST（Tank 1）and one 10，000－gallon capacity gasoline UST （Tank 2）were removed by Foss Environmental Services Company（Foss）of Alameda， California，a California－licensed contractor under contract to the Port．Geomatrix Consultants， Inc．（Geomatrix），observed tank removal，excavation，and backfilling activities and collected soil and groundwater samples for chemical analysis．UST removal and the associated soil and groundwater sampling activities were performed under the oversight of Mr．Keith Matthews of the Oakland Fire Services Agency（OFSA）．

Tank removal，soil and groundwater sampling，and chemical analytical procedures were performed in accordance with applicable guidelines contained in the August 1990 ＂Tri－ Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites＂（Tri－Regional），unless otherwise directed by the OFSA．UST removal，excavation，and backfilling activities，soil and groundwater sampling，and laboratory analytical results are described below．

## 2．0 SITE CONDITIONS

The site is located at 209 Brush Street in the city of Oakland，located in Alameda County， California．The USTs were installed at a maintenance facility adjacent to Market Street near the building shown on Figure 2 （both USTs were located within one excavation）．According to Mr．Michael McMillan of the Port，Tanks 1 and 2 originally were installed in 1987 and contained diesel and regular unleaded gasoline，respectively．Both tanks were upgraded in 1998．At the request of the OFSA，use of the USTs was discontinued on April 12， 2002 after failing the OFSA annual tank monitoring test；the tanks were disconnected from power and the contents were removed by Foss．

Three four-inch-diameter slotted polyvinyl chloride (PVC) pipes were present in the UST backfill at the perimeter of Tank 2. These pipes allowed monitoring the groundwater elevation and quality in the tank backfill. The pipe locations are shown on Figure 2.

### 3.0 UNDERGROUND STORAGE TANK REMOVAL

Prior to UST removal activities, Geomatrix obtained a removal permit from the OFSA (Tank Permit Number 23-03) for the Port. A copy of the permit issued by the OFSA is included in Appendix A. Foss performed UST removal and excavation activities June 2 through 5, 2003 and June 10, 2003. A Geomatrix field engineer observed removal of the USTs and collected excavation samples during the tank removal activities on June 5 and 10, 2003 and collected soil stockpile samples on June 17, 2003. The soil samples were submitted for chemical analysis. UST stabilization and removal, over-excavation of soil, soil and groundwater sampling, and waste disposal activities are discussed in the following sections.

### 3.1 UST STABILIZATION AND REMOVAL

Fuel dispensers, fuel piping, concrete, and soil overlying the USTs were removed to access and prepare the USTs for removal. During removal of the concrete and overburden soil, the tiedowns securing Tank 2 failed, allowing the tank to float on groundwater that had filled the bottom of the excavation. Tank 1 remained secured, and the top of the tank was encountered at approximately 4 feet below ground surface (bgs). Backfill material surrounding the USTs consisted of pea gravel. Native soil outside the excavation backfill consisted of silty sand. Excavated soil was stockpiled on plastic sheeting at the site. Stained soil was not observed in the excavation prior to UST removal.

Foss inserted approximately 50 and 500 pounds of dry ice into Tank 1 and Tank 2, respectively, to facilitate evacuation of oxygen and potentially explosive vapors. Immediately prior to removal of the USTs, Foss measured explosive vapor levels through the fill-pipe opening in the top of the USTs. The final vapor readings indicated that a non-explosive atmosphere (less than 10 percent oxygen and less than 10 percent of the lower explosive limit) existed inside the tanks. Mr. Matthews approved the readings and removal of the USTs.

A crane was used to lift the tanks from the excavation. The tanks were lowered to the ground surface for visual examination by the Geomatrix field engineer and Mr. Matthews. Tank 1 measured 5.3 feet in diameter and 10 feet in length, and Tank 2 measured 9.3 feet in diameter and 20.5 feet in length. Both tanks were composed of steel composite and were coated with fiberglass for cathodic protection. Holes were not observed in either tank.

The average dimensions of the cut concrete were approximately 39 feet long and 32 feet wide．． The UST excavation was rectangular in shape，with an average length and width of approximately 28 and 24 feet，respectively．Depth to groundwater following UST removal was approximately 7 feet bgs．Soil beneath the tanks appeared to be stained（gray－black in color）， and a strong hydrocarbon odor was observed．Product or sheen was not observed on the groundwater surface．Further excavation was not performed after the tanks were removed because of the proximity of the excavation to Market Street to the west and because additional concrete had not been cut to the west，north，and south．

## 3．2 OVER－EXCAVATION OF SOIL

Based on the analytical results from the soil samples collected during the UST removal （discussed in Section 4．0），Geomatrix，at the Port＇s request，directed Foss to remove additional soil from the east wall of the excavation．Excavation along the east wall continued until the cut concrete boundary was encountered or the volatile organic compound concentration，as measured using a photo－ionization detector，was less than 50 parts per million in the excavated soil vapor．The average dimensions of the final UST excavation were approximately 39 feet long and 24 feet wide（Figure 2）．

## 3．3 SOIL AND GROUNDWATER SAMPLING

Geomatrix collected samples from the site on June 5，10，and 17，2003．Excavation sample locations are shown on Figure 2.
－On June 5，2003，Geomatrix collected four soil samples from the sidewalls of the excavation and one grab groundwater sample from the pooled groundwater in the excavation as directed by Mr．Matthews．One soil sample（T1－060503）was collected at the soil／groundwater interface（approximately 7 feet bgs）near the east side of the former Tank 1．Three soil samples，T2－060503－N，T2－060503－S，and T2－060503－W，were collected at the soil／groundwater interface（approximately 7 feet bgs）near the north，south，and west sides，respectively，of the former Tank 2. One grab groundwater sample（GW－060503）was collected from pooled groundwater beneath the former Tank 1 location．Under the direction of Mr． Matthews，groundwater was not purged prior to sample collection．
－On June 10，2003，Geomatrix collected two soil samples from the sidewalls of the enlarged excavation．Soil samples P1－061003 and P2－061003 were collected from the southeastern and northeastern sidewalls，respectively，of the excavation．The samples were collected at depths of approximately 7 and 8 feet bgs．

- On June 17, 2003, Geomatrix collected two four-point samples (1-061703A,B,C,D and 2-061703A,B,C,D) from the approximately 90 cy of stockpiled soil at the site. The analytical laboratory composited each of the four samples into one sample for chemical analysis.

Soil samples were collected in clean, 4 -inch-long, 2 -inch-diameter brass tubes. The ends of the tubes were sealed with Teflon ${ }^{\circledR}$ sheets and plastic end-caps and were secured with silicon tape. The grab groundwater sample was collected by using a new, disposable bailer. The sample was decanted into laboratory-supplied bottles. All samples were labeled and stored in an ice-cooled chest until delivery under Geomatrix chain-of-custody procedures to Curtis \& Tompkins, Ltd. (Curtis \& Tompkins), of Berkeley, California, a California-certified analytical laboratory. Chain-of-custody documents are included in Appendix B.

### 3.4 RINSEATE AND UST DISPOSAL

Foss, a state-licensed liquid waste transporter, transported tank contents and rinseate to Seaport Environmental, of Redwood City, California. Ecology Control Industries (ECI) transported the tanks to their facility in Richmond, California. Copies of the Uniform Hazardous Waste Manifest and certificate of destruction are included in Appendix C.

### 4.0 ANALYTICAL METHODS AND RESULTS

Soil and groundwater samples were analyzed according to Tri-Regional and OFSA guidelines for total petroleum hydrocarbons quantified as gasoline ( TPHg ) and as diesel (TPHd) using U.S. Environmental Protection Agency (EPA) Method 8015B; benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX) and methyl tertiary butyl ether (MTBE) using EPA Method 8260B; and lead using EPA Method 6010B. Silica gel preparation (EPA Method 3630C) was performed on samples prior to TPHd analysis. The analytical results for the soil and groundwater samples are presented in Tables 1 and 2, respectively. Analytical data sheets are included in Appendix B.

### 4.1 EXCAVATION SOIL SAMPLE RESULTS

The following section summarizes the analytical results for excavation and stockpile soil samples. Analytical data for the soil samples are presented in Table 1.

- In general, lead concentrations were low in each of the soil samples and did not suggest an impact from the former USTs. MTBE, where detected, was present at concentrations up to 0.14 milligrams per kilogram ( $\mathrm{mg} / \mathrm{kg}$ ).
- TPHg and TPHd were detected at concentrations of $11,000 \mathrm{mg} / \mathrm{kg}$ and $620 \mathrm{mg} / \mathrm{kg}$, respectively, in soil sample T1-060503 (collected on the east sidewall of the excavation). BTEX were detected at concentrations ranging from $57 \mathrm{mg} / \mathrm{kg}$ to 1510 $\mathrm{mg} / \mathrm{kg}$. Based on these results, the excavation along the eastern face was extended, and additional sampling was performed.
- Significantly lower concentrations (less than $200 \mathrm{mg} / \mathrm{kg}$ ) of TPHg and TPHd were detected in samples P1-061003 and P2-061003, collected after over-excavating the eastern sidewall of the excavation. BTEX concentrations also were significantly lower and ranged from non-detect to $11 \mathrm{mg} / \mathrm{kg}$.
- Soil sample T2-060503-W (west sidewall of the excavation) did not contain TPHg , TPHd, or BTEX above laboratory reporting limits.
- Soil sample T2-060503-N (north sidewall of the excavation) contained low concentrations (less than $5 \mathrm{mg} / \mathrm{kg}$ ) of TPHg, TPHd, and benżene.
- Soil sample T2-060503-S (south sidewall of the excavation) contained TPHg and TPHd at concentrations of $2200 \mathrm{mg} / \mathrm{kg}$ and $720 \mathrm{mg} / \mathrm{kg}$, and benzene, ethylbenzene, and total xylenes were detected at concentrations of $0.92,23$, and $40.6 \mathrm{mg} / \mathrm{kg}$, respectively.


### 4.2 GRAB GROUNDWATER SAMPLE RESULTS

TPHg and TPHd were detected in the groundwater sample (GW-060503) at concentrations of 19,000 and 2,100 micrograms per liter ( $\mu \mathrm{g} / \mathrm{L}$ ), respectively. BTEX were detected in the groundwater sample at concentrations ranging from 610 to $3,430 \mu \mathrm{~g} / \mathrm{L}$. MTBE and lead also were detected at concentrations of $1200 \mu \mathrm{~g} / \mathrm{L}$ and $140 \mu \mathrm{~g} / \mathrm{L}$, respectively.

### 4.3 Stockpile Soil Results

Composite soil samples (1-061703 and 2-061703) collected from the stockpile of excavated soil contained TPHg and TPHd at concentrations of $340 \mathrm{mg} / \mathrm{kg}$ and $110 \mathrm{mg} / \mathrm{kg}$, respectively, and low concentrations ( $<1 \mathrm{mg} / \mathrm{kg}$ ) of ethylbenzene and total xylenes. Stockpiled soil was transported by Greg's Trucking to Forward Landfill in Manteca, California, for disposal.

### 5.0 EXCAVATION BACKFILLING.

Backfilling and compaction of the UST excavation was performed by Foss from June 26 through July 3, 2003. Geomatrix provided earthwork recommendations for backfilling to the Port in a letter dated May 8, 2003. During the backfilling, Geomatrix or our subcontractor, Construction Materials Testing, Inc., of Concord, California observed the placement methods and tested the compaction of the backfill material.

The total depth of the excavation varied from approximately 8 feet bgs around the edges to approximately 12 feet bgs in the center of the excavation．Groundwater was present in the excavation at the time of backfilling at approximately 7 feet bgs．Because of this， $1-1 / 2$ inch open－graded，crushed rock was placed through the water to above the water level．The 1－1／2 inch crushed rock varied in thickness from approximately 3 feet along the edges of the excavation to approximate 7 feet in the center（the immediate location of the removed tank）． After the crushed rock had been placed so that the bottom of the excavation was uniformly about 5 feet bgs，Foss compacted the crushed rock using a Bomag BW60HG，dual－drum， sheepsfoot compactor．A non－woven geotextile filter fabric（geotextile）was then placed over the compacted crushed rock．Above the geotextile，approximately 4 to 5 feet of approved fill． was used to backfill the remainder of the excavation．The approved fill was placed in approximately 8 －inch lifts and compacted using a vibratory plate attached to an excavator． After each lift was placed，density tests were performed according to ASTM Test Methods D 2922 （Density of Soil and Rock in Place by Nuclear Methods）and D3017（Water Content of Soil and Rock in Place by Nuclear Methods）．Our observations and the test results indicated that the overall compaction of the fill was generally above 90 percent of the maximum dry density determined in the laboratory by ASTM test method D 1557 （Moisture－Density Relations of Soils and Soil－Aggregate Mixtures Using 10－pound Rammer and 18－inch Drop）． It is our opinion that the backfill and compaction was accomplished in general accordance with the project recommendations．

The surface of the backfilled excavation will be covered with asphalt．Prior to backfilling the excavation，samples of the backfill were submitted to Curtis \＆Tompkins for chemical analysis and Cooper Testing Labs，Inc．，of Mountain View，California，for geotechnical analysis． The laboratory data sheets for the chemical and geotechnical analyses are included in Appendix D．

## 6．0 SUMMARY

A summary of the UST removal activities is presented below．
－One 1，000－gallon diesel UST and one 10，000－gallon unleaded gasoline UST were removed from the 209 Brush Street site in Oakland，California，on June 5， 2003. The tanks were removed under the supervision of Mr．Keith Matthews of the OFSA． Once the USTs were removed，they were visually inspected．The tank exteriors were intact and did not appear to contain holes．

- Staining was visible in the excavation sidewalls, and a hydrocarbon odor was observed.
- Groundwater was encountered at a depth of 7 feet bgs, and no product was observed on the groundwater surface within the excavation.
- Four soil samples were collected from the excavation at the soil/groundwater interface, as directed by the OFSA. TPHg, TPHd and BTEX constituents were detected in three of the four soil samples. Based on the analytical results for soil samples collected during the UST removal, additional soil was removed from the east side of the excavation on June 10, 2003. During excavation activities, two soil samples were collected from the east wall of the enlarged excavation. The two samples contained primarily TPHg and TPHd.
- One groundwater sample was collected from the excavation, as directed by the OFSA. TPHg, TPHd, BTEX, MTBE, and lead were detected in the sample.
- A total of approximately 90 cy of soil were removed from around the USTs and the excavation bottom. Two four-point composite samples were collected from the soil stockpile on June 17, 2003. TPHg, TPHd, BTEX constituents, and lead were detected in the two composite samples. The stockpiled soil was disposed of off site at Forward Landfill in Manteca, California.


## TABLES

## TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS ${ }^{1}$ 209 Brush Street Oakland, California
Concentrations in milligrams per kilograms ( $\mathrm{mg} / \mathrm{kg}$ ) .

|  |  |  |  |  |  |  | Constitue | Detected |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample $\mathrm{m}^{\mathbf{2}}$ | Sample <br> Location | Sample <br> Date | $\begin{gathered} \text { Depth } \\ \text { (ft bgs) }^{3} \end{gathered}$ | TPHg | TPHd | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | Lead |
| Excavation Samples |  |  |  |  |  |  |  |  |  |  |  |
| T1-060503 | East sidewall, excavated | 6/5/03 | 7 | 11,000 | 620 | 57 | 880 | 270 | 1,510 | $<25^{5}$ | 4.5 |
| T2-060503-N | North sidewall | 6/5/03 | 7 | 4.3 | 1.4 | 0.0055 | $<0.005$ | $<0.005$ | <0.005 | 0.0059 | 4.5 |
| T2-060503-W | West sidewall | 6/5/03 | 7 | $<1.1$ | $<1.0$ | $<0.0053$ | $<0.0053$ | $<0.0053$ | $<0.0053$ | 0.14 | 2.8 |
| T2-060503-S | South sidewall | 6/5/03 | 7 | 2,200 | 720 | 0.92 | $<0.71$ | 23 | 40.6 | $<0.71$ | 3.2 |
| P1-061003 | Southeastern sidewall | 6/10/03 | 7 | 33 | 1.3 | $<0.028$ | $<0.028$ | 0.23 | 0.82 | $<0.028$ | 3.8 |
| P2-061003 | Northeastern sidewall | 6/10/03 | 8 | 190 | 90 | 0.44 | $<0.36$ | 11 | 5.5 | <0.36 | 5.2 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 1-061703A, B, C, ${ }^{6}$ | Excavated soil stockpile | 6/17/03 | $N A^{7}$ | 340 | 180 | $<0.17$ | $<0.17$ | 0.27 | 4.7 | $<0.17$ | 6.9 |
| 2-061703A, B, C, D ${ }^{6}$ | Excavated soil stockpile | 6/17/03 | NA | 110 | 67 | $<0.13$ | $<0.13$ | <0.13 | 0.28 | $<0.13$ | 21 |

## TABLE 2

GROUNDWATER SAMPLE ANALYTICAL RESULTS ${ }^{1}$ 209 Brush Street

Oakland, California
Concentrations in micrograms per liter ( $\mu \mathrm{g} / \mathrm{I}$ )

| Sample ID | Sample <br> Date | Constituents Detected ${ }^{2}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | TPHg | TPHd | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | Lead |
| GW-060503 | 6/5/03 | 19,000 | 2,100 | 610 | 2,500 | 700 | 3,430 | 1,200 | 140 |

## FIGURES



Base map from The Thomas Guide, Alameda County 1999 Guide. Reproduced with permission granted by THOMAS BROS. MAPS. This map is copyrighted by THOMAS BROS. MAPS. It is unlawful to copy or
reproduce all or any part thereof, whether for personal use or resale, without permission. All rights reserved.
 .
$\square$ SITE LOCATION MAP
209 Brush Street 209 Brush Street Oakland, California

Project No.
8207.001

Figure
Figure


## APPENDIX A

## Underground Storage Tank Removal Permit



## CITY OF OAKLAND

FIRE PREVENTION BUREAU
250 Frank Ogawa Plaza, Suite 3341
Oakland, California 94612-2032
(510) 238-3851

## APPLICATION for PERMIT to INSTALL, REMOVE or REPAIR TANKS In the CITY OF OAKLAND

Request Submittal Date: $\qquad$ 003 Application is hereby made for permit to:

## PLEASE CIRLCE APPROPRIATE ACTIONS:

(a) Remove
(b) Install
(c) Repair
(d) Modify
(e) Abandon/Close in Place A
(a) Gasoline
(b) Fuel oil
(c) Diesel
(d) $\qquad$ $\operatorname{tank}(\mathrm{s})$ and excavate, commencing:
(a) four feet inside the curb line*; (b) inside the property line; (c) aboveground: (d) underground tank (s))
*inside curb line, please attach copy of sidewalk/excavation permit from PLANNING AND BUULDING
on the $\qquad$ side of Brush $\qquad$ St.)Ave. 100 feet Suit of $\qquad$ Site Address: 209 Brush, Street Present storage $\qquad$ Owner: Port of Oakland A Address 530 Water Strextrom Oakland CA 94607
-
 Phone (510)427-1406


PLEASE ATTACH/SUBMIT: (All applicants must have a City Business License Permit)
(2) Copies of.Closure Plans for underground tank removal (s)
(2) Sets of plans and (1) copy of specifications for above ground tank removal
(2) Sets of plans and (2) sets of application packets for underground tank installation/modifications
(2) Sets of plans for aboveground tank installation and specifications

- copy or prepare to show Planning and Building approval for aboveground tank removal and tank repair NOTE: FOR TANK INSTALLATION PLEASE SUBMIT THIS APPLICATION FORM ALONG WITH A APPLICATION FOR
PERMIT TO OPERATE, MAINTAIN OR STORE

FOR OFFICE USE ONLY

Permit No. 23-0 3

Copies to: Electrical Inspection

Amt. Recv'd 650
ck\# 054523
Receipt\# 857350

Date Issued: 5-29-03 Cash Recv'd by:

## City of Oakland, Fire Department, Office of Emergency Services Hazardous Materials Program APPLICATION FOR UNDERGROUND TANK REMOVAL



NAME Jennifer Patterson, Geonnatrix Consultants

MATING
ADDRESS $\qquad$
DAY PHONE NUMBER $\frac{510-663-4167}{\text { area code } \quad \text { phone \# }}$

SIGNATURE $\qquad$ $+\quad+$

DATE $4 / 30103$

# CITY OF OAKLAND 

Fire Department
Fire Prevention Bureau
Hazardous Materials Program

## 250 Frank H. Ogawa Plaza, Ste. 3341

Oakland, CA 94612-2032

## UNDERGROUND TANK CLOSURE PLAN

(Complete according to instructions)

1) Name of Business Port of Cakland

Business Owner of Contact Person (PRINT) Michae: McMillan
2) Site Address 209 Brush Strect
City Oakland Zip 94607 Phone_NA
3) Mailing Address 530 Water Street
City Oakland

Zip $94607 \quad$ Phone $510-627-1400$
4) Property Owner $\qquad$
Business Name (if applicable)
Address 530 Water Stret
City, State Cakland CA Zip 94607
5) Generator name under which tank will be manifested Port of Oakland

EPA ID Under which tank will be manifested CAL 000015571
6) Contractor Eos Environmental Services Company

Address $\qquad$
City Alameda $\qquad$ Phone $(510) 749.4139$

License Type $A, H A Z, H M, A S B$ IDS $\qquad$

Effective January 1, 1992, Business and Professional Code Section 7058.7 require contractors to also hold Hazardous Waste certification issued by the State Contractor License Board
7) Consultant (if applicable) Gcomatriv Consultants Inc

Address 2 io l webster St. $12^{\text {th }}$ Floor
City, State Oakland, CA Phone 510-663-4100
8) Main Contact Person for Investigation (if applicable)

Name Erin Zavain Title Staff Engignen
Company Gcomatrix Consultants, Inc
Phone ( 510 ) 663.4199
9) Number of underground tanks being closed with this plan $2 \quad$ (Confirmed with owner operator)
10) State Registered Hazardous Waste Transporters/Facilities (see instructions)

## **Underground storage tanks must be handled as hazardous waste **

a) Product/Residual Sludge/Rinsate Transporter Already emptied and chanced Name EPA ID. NO.

Hauler License No. License Exp. Date $\qquad$
Address
City $\qquad$ State $\qquad$ Zip $\qquad$
b) Product/Residual Sludge/Rinsate Disposal Site Done

Name $\qquad$ EPA ID No. $\qquad$
Address $\qquad$
City $\qquad$ State $\qquad$ Zip
c) Tank and Piping Transporter

Name Foss Envinonmuntas EPA I.D. No. CARO00030114
c) Hauler License No. 114013 License Exp. Date $3 \mid 31 / 04$.
Address 1605 Ferry Point
City Alameda._._____
State CA
Zip 94501
d) Tank and Piping Disposal Site

Name ECI EPA I.D. No. CADOO9466392

Address 255 Parr Bud.
City Rehmorid
State CA
Zip 94801 $\qquad$
11) Sample Collector

Name Erin Zavarin
Company Geomatriy Consultants, Inc
Address 2101 Webster Street, $12^{\text {th }}$ Flour
City Oakland State $\qquad$ Zip $946 / 2$

Phone 510-663-4199
12) Laboratory .

Name Curtis and Tompkins
Address $2323^{\text {th }}$ Street


State Certification No. 01107 CA
13) Have tanks or pipes leaked in the past Yes $\square \square$ Unknown $\square$

If yes, describe The tanks cecised operation on April 12, 2002 as a result of failing their annual tank monitoring test. The tanks were emptied of their contents.
14) Describe methods to be used for rendering tank (s): inert:

used
Before tanks are pumped out and inserted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be permanently plugged.

The Bay Area Air Quality Management District, 415/771-6000 must also be contacted for tank removal permit. The use of a combustible gas indicator to verify tank inertness is required. It is the contractor's responsibility to bring a working combustible gas indicator on-site to verify that the tank is inert. Note: you may be required to recalibrate the combustible gas indicator on site, to show that it is working properly.
15) Tank History and Sampling Information *** (see instructions) ***

| $\cdots$ | $\cdots$ Tank | Material to be sampled (tank | Location and Depth of Samples |
| :---: | :---: | :---: | :---: |
| Capacity | Ese History include date lastused (estimated) | contents, soil, groundwater) | gw = groundwater- |
| 10,000 | Installed in 1987, upgraded in 1998. Contained unleadeel gaso line. Takn out of service on 4/12/0?. |  | If gin not present; 2 samples belaw tank at kas! 2 feit intonativesoil@eoch end If gw present: One sampleat each end of tarik from Sidewail at ssil/gw interf |
|  |   <br>   | Groundwater | One sample from excauation after it has bum purged and allowed or refill |
| 1,000 . | Installed in 1987, upgradu. in 1998. Contained. diesel fuel. Takn out of service on $4 / 12 / 02$ | Sameias abore | Same as above. |

One soil sample must be collected for every 20 linear feet or piping that is removed. A ground water sample must be collected if any ground water is present in the excavation.

## EXCAVATED/STOCKPПED SOIL

Stockpiled Soil volume (estimated)

$$
150 \text { cubic yards }
$$

## Sampling Plan

One 4-pant canpoarte per 50 cubir yards: collecteat in clewm brass tubsis. Sealed wl Teflum shent plasticeudcaps, and siliwn tape.

Stockpiled soil must be placed on beamed plastic and must be completely covered by plastic sheeting
Will the excavated soil be returned to the excavation immediately after tank removal?

$\square$ unknown
If yes, explain reasoning

If unknown at this point in time, please be aware that excavated soil may no be returned to the excavation without prior approval from Fire Services Agency, Office of Emergency Services. This means that the contractor, consultant, or responsible party must communicate with the Hazardous Materials Inspector IN ADVANCE of backfilling operations.
16. Chemical methods and associated detection limits to be used for analyzing samples:

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed.
See attached Table 2.
17. Submit Site Health and Safety Plan (see Instructions)

| Contaminant <br> Sought | EPA or Other Sample Preparation Method Number | EPA or Other Analysis Method Number | Method Detection Limit |  |
| :---: | :---: | :---: | :---: | :---: |
| TPHg | Preparation Method Number |  | Soil | Water |
| TPHd | sitica | EPA 8015 Modified | 1.0 ppm | 50 ppb |
|  | slica gel preparation (gw) | EPA 8015 Modified | 1.0 ppm | 50 ppb |
| BTEX | - | EPA 8260 | . 005 ppm | 0,5 ppb |
|  | - | $\text { EPA } 8260$ | . 005 pm | 0.5 ppb |

18. Submit Workers Compensation Certificate copy

19. Submit Plot Plan ${ }^{* * *(B e ~ I n s t r u c t i o n s)}{ }^{* * *}$
20. Enclose Permit fee (See Instructions)
21. Report any leaks or contamination to this office within 5 days of discovery,

The written report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report, (ULR) form.
22. Submit a closure report to this office within 60 days of the tank removal. The report must contain all information listed in item 22 of the instructions.
23. Submit State (Underground storage Tank Permit Application) Forms A and B (one B form for each UST to be removed) (mark box 8 for tank removed in the upper right hand corner)

I declare that to, the best of my knowledge and belief that the statements and information provided above are correct and true.

I understand that information, in addition to that proved above, may be needed in order to obtain approval from the Hazardous Materials Division and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.
I understand that all work performed during this project will be done in compliance with all applicable OSHA. (Occupational Safety and health Administration) requirements concerning; personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his age and that this responsibility is not shared nor assumed by the City of Oakland.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Inspector at least three working days in advance of site-work, to schedule the required inspections.

## CONTRACTOR INFORMATION



## PROPERTY OWNER OR MOST RECENT TANK OPERATOR (Circle one)

Name of Business $\qquad$
Name of Individual Jeffrey $R$, Jones
Signature $\qquad$ Date_ 4/30/03

## General Instructions

- Three (3) copies of this plan plus attachments and permit must be submitted to this Department.
- Any cutting into tanks requires Fire Services Agency approval.
- One complete copy of your approved plan must be at the construction site at all times; a copy of your approved plan must also be sent to the landowner.
- State of California Permit Application Forms A and B are to submit to this office One Form A per site, one Form $B$ for each removed tank.


## Line Item Specific Instructions

## 2. SITE ADDRESS

Address at which closure is taking place.
5. EPA I.D. NO. - under which the tanks will be manifested

EPA I.D. numbers may be obtained from the State Department of Toxic Substances Control, 916/324-1781
6. CONTRACTOR

Prime contractor for the project.

## 10. STATE REGISTERED HAZARDOUS WASTE TRANSPORTERS/FACILITIES

a) All residual liquids and sludge are to be removed from tanks before tanks are inerted.
c) Tanks must be hauled as hazardous waste.
d) This is the place where tanks will be taken for cleaning.
15) TANK HISTORY AND SAMPLING INFORMATION

Use History - This information is essential and must be accurate. Include tank installation date, products stored in the tank, and the date when the tank was last used.
Material to be sampled - e.g. water, oil, sludge, soil, etc.
Location and depth of samples - e.g. beneath the tank a maximum of two feet below the native soil/backfill interface, side wall at the trig\} water mark, etc.
16) CHEMICAL METHODS AND ASSOCIATED DETECTION LIMITS

See attached Table 2.

## 17) SITE HEALTH AND SAFETY PLAN

A site specific Health and Safety plan must be submitted. We advocate the site health and safety plan include the following items, at a minimum:
a) The name and responsibilities of the site health and safety officer.
b) An outline of briefings to be held before work each day to appraise employees of site health and safety hazards;
c) Identification of health and safety hazards of each work task. Include potential fire, explosion, physical, and chemical hazards;

## SITE HEALTH AND SAFETY PLAN

d) For each hazard, identify the action levels (contaminant concentrations in air) or physical conditions;
e) Description of the work habit changes triggered by the above action levels or physical conditions;
f) Frequency and types of air and personnel monitoring - along with.the environmental sampling techniques and instrumentation - to be used to detect the above action levels. Include instrumentation maintenance and calibration methods and frequencies;
h) Confined space entry procedures-(if applicable);
g) Decontamination procedures;
I) Measures to be taken to secure the site, excavation and stockpiled soils during and after work hour (e.g. barricades, caution tape, fencing, trench plates, plastic sheeting, security guard, etc.);
j) Spill containment/emergency/contingency plan. Be sure to include emergency phone numbers, the location of the phone nearest the site, and directions to the hospital near the site;
k) Documentation that all site workers have received the appropriate ASIA approved training and participate medical surveillance per 29 CFR 1910.120;

1) A page for employees to sign acknowledging that they have read and will comply with the site health and safety plan.

The safety plan must be distributed to all employees and contractors working in hazardous waste operations on site. A complete copy of the site health and safety plan along with any standard operating procedures shall be on site and accessible at all times.

Hazardous Waste Operations and Emergency Response; Final Rule, March 6, 1989; Safety plans of certain underground tank sites may need to meet the complete requirements of this Rule.

## 19) PLOTPLAN

The plan should consist of a scaled view of the facility at which the tank(s) are located and should include the following information:
a) Scale;
b) North Arrow;
c) Property Lines;
d) Location of all structures;
e) Location of all relevant existing equipment including tanks and piping to be removed and dispensers;
f) Streets;
g) Underground conduits, sewers water lines utilities;
h) Existing wells; drinking monitoring, etc;
I) Depth to ground water, and
j) All existing $\operatorname{tank}(\mathrm{s})$ and piping in addition to the $\operatorname{tank}(\mathrm{s})$ being removed.
20) PERMIT FEE

A check payable to the City of Oakland for the amount indicated must accompany the plans.
21) Blank unauthorized Leak/Contamination Site Report forms may be obtained in limited quantities from this office or from the San Francisco Regional Water Quality Control Board (510) 286-1255. Larger-quantities may be directly from the State Water Resources Control Board at (916) 739-2421.
22) TANK CLOSURE REPORT

The Tank Closure reports: General description of the closure activities, indicate;
a) Description of tank, fittings and piping conditions. Size and former contents; note any corrosion, pitting, holes;
b) Description of the excavation itself. Include tank and excavation depth, a $\log$ of the stratigraphic units encountered within the excavation, a description of root holes or other potential pathways the depth to any observed ground water, locations of stained or odor-bearing oil, and descriptions of any observed free product or sheen;
c) Detailed description of sampling methods., i.e. - backhoe bucket, drive sampler, bailer, bottles (s), sleeves;
d) Description of any remedial measures conducted at the time of tank removal;
e) To-scale figures showing the excavation size and depth, nearby buildings, sample locations and depths, and tank and piping locations include a copy of the plot plan prepared for the Tank Closure-plan under item \#19;
f) Chain of custody records;
g) Copies of signed laboratory reports;
h) Copies of TSDF to Generator Manifests for all hazardous wastes hauled offsite (sludge, Rinsate, tanks. and piping, contaminated soil, etc), and
i) Documentation of the disposal of/and volume and final destination all non-manifested contaminated soil disposed offsite.

Tank Installation/Removal Processing
All Tank installation/removal plans and applications will be accepted in the Fire Prevention Bureau. Please provide verification/copy of your City Business License Permit (238-3704). An application to Install, Repair or Remove and the following are required for complete submittal:

| Permit Type | Closure Plans: | U.G.Tank InstallModify PänsApp | Tlans (2sets) | Specs | Qetter \& M, | Plot <br> Plan | Forms $\mathbf{A} ; \mathbf{B}$ | Forms $\mathrm{A}, \mathrm{~B}, \mathrm{C}$ | App For Permit to Operate, Maintain or Store |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Underground Tank Removal | X |  |  |  |  | X | X |  |  |
| Abandon/Close In Place | X |  |  |  |  | X . | X |  |  |
| Abovegroind Tank Removal* |  |  | X | X |  |  |  |  |  |
| Underground Tank Installation/Modificatiọn |  | X | X | X |  |  |  | X | X |
| Aboveground Tank Installation |  |  | X | X |  | $\cdots$ |  |  | X |
| Residential (liome lieating) | X |  |  |  |  | X |  |  |  |
| Capping Vent Piping work: |  |  |  | X | X | X |  |  |  |
| Underground piping | X |  | X |  |  |  |  |  |  |
| Residential (close ini place) |  |  |  |  | X | X |  |  |  |

*Planning \& Building Approval required for any Zoning issues or when routing piping into buildings. When sidewalk disturbance occurs you must provide us with a copy/verification of your excavation permit..

Residential home heating oil tanks under 1100 gal. are exempt from State requirements (Form A \& B not required), closure plans are required. ure in place MUST accompany a letter to the attention of the Fire Marshal, Jerry E. Blueford describing why, and how the closure will be done. In addition, a plot plan should be included with the application. Permit Fees: varies
been reviewed, you will receive your permit, by mail, within 1 to 5 days. You must schedule in adyance when you are prepared to do the work. Please call our office at least 48 hours in advance: (510)238-3851. Be prepared to give us your Permit number, indicated in the upper right corner of your permit. We will try to accomodate your request.

## Tank Permit Fees

| Type of Request | ```Permit: Processing/Plan Check Fee``` | Inspection: Fee | Total |
| :---: | :---: | :---: | :---: |
| Aboveground/Underground Removal (1 tank) | \$350.00 | \$190.00 | \$540.00* |
| Aboveground Installation (1 tank) | \$350.00 | \$380.00 | \$730.00* |
| Closure In Place (underground)(1 tank) | \$350.00 | \$190.00 | \$540.00* |
| Dispenser Replacement or Modifications of Aboveground Tanks | \$350.00 | \$190.00 | \$540.00 |
| Capping a Vent (underground tank) | \$100.00 | \$ 50.00 | \$150.00 |
| Alter \& Repair Monitoring System; Overfill containment installation. (aboveground/underground tanks) | \$100.00 | \$ 50.00 | \$150.00 |
| Modify, Remove, Repair and Replace Piping, Dispensers, Sumps of Underground Tanks | \$350.00 | \$190.00 | \$540.00* |


|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| \# of Tanks | Annual Fee | Permit Processing/Plan Check Fee | Inspection <br> Fee | Total <br> Payment |
| 1 | \$210 | \$350 | \$380 | \$ 940 |
| 2 | \$312 | \$ 450 | \$380 | \$1142 |
| 3 | \$415 | \$ 550 | \$380 | \$1345 |
| 4 | \$521 | \$ 650 | \$380 | \$1551 |
| 5 | \$603 | \$750 | \$380 | $\$ 1733$ |
| 6 | \$717 | \$850 | \$380 | \$1947 |
| 7 | \$811 | \$950 | \$380 | \$2141 |

Note:

* $\$ 110.00$ for each additional tank
- A separate permit will be issued for tank Removal, Installation etc.
- After hour inspections require additional fees at a rate of $\$ 95.00$ an hour rev: 09/00


## UNDERGROUND STORAGE TANKS - FACIIITY

one page per site) Page 1 of 5

TYPE OF ACTION I. NEW SITE PERMIT (Check one item only)
] 3. RENEWAL PERMTT
4. AMENDED PERMIT
5.CHANGE OR INFORMATION
ypecify change local use only 6.TEMPORARY SITE CLOSURE
7.PERMANENTLY CLOSED SITE
8. TANK REMOVED

400

## 1. FACILITY / SITE INFORMATION


U. TANK OWNER INFORMATION


## IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER


V. PETROLEUM UST FINANCLAL RESPONSIBLLITY


## V1. LEGAL NOTIFICATION AND MALLING ADDRESS

| Check one box to indicate which address should be used for logal netifications and mailing. Legal notifications and mailings win be sent to the tank owner unless box 1 or 2 is checked. | $\square$ 1.FACILITY $\square$ 2. PROPERTY OWNER A 3.TANK OWNER |  | 423 |
| :---: | :---: | :---: | :---: |
| VLI. APPLICANT SIGNATURE |  |  |  |
| Certification -I certify that the information provided herein is true and accurate to the best of my knowledge. |  |  |  |
| SIGNATURE OF APPLICANT | DATE $4-30103$ | $\begin{aligned} & \text { PHONE } \\ & 510-663-4167 \end{aligned}$ | 425 |
| NAME OF APELICANT (print) <br> Jeinifer Pattersin Geomatrix Consuttants | TITLE OF APPLICANT Semiur Enainer |  | 427 |
| STATE UST FACILITY NUMBER (For local unconty) ${ }^{428}$ | 1998 UPGRADE CERTIFICATE NUM | R (For local ume coly) | 429 |

## UNDERGROUND STORAGE TANKS - TANK PAGE 1


I. TANK DESCRIPTION (A scaled plot plan with the location of the UST system inciuding buildings and landmarks shall be submitted to the local agency.)

| TANK ID \# EF 16 | TANK MANUFACTURER Joor | COMPARTMENTAIIZED TANK $\square$ Yes $\mathbb{X}$ No <br> Tf "Ycan", complete one page for cach compartmeath. | 434 |
| :---: | :---: | :---: | :---: |
| DATE INSTALLED (YEAR/MO) 1987 | TANK CAPACITY IN GALLONS 1,000 | NUMBER OF COMPARTMENTS 1 | 437 |

TANK USE
II. TANK CONTENTS

| TANK USE <br> 1. MOTOR VEHICLE FUEL (If markxod complete Potrolomm Typo) 2. NON-FUEL PETROLEUM 3. CHEMICAL PRODUCT 4. HAZARDOUS WASTE <br> (Inciuden Used Oill) 95. UNKNOWN | PETROLEUM TYPE 1a. REGULAR UNLEADED 1b. PREMMUM UNLEADED ic. MIDGRADE UNLEADED |  | ET FUEL <br> VIATION FJE OTHER |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| III. TANK CONSTRUCTION |  |  |  |  |  |
| TYPE OF TANK $\square 1$. SINGLE WALL $\square$ 3. SINGLE WALL WITH $\square$ 5. SINGLE WALL WITH INTERNAL BLADDER SYSTEM <br> (Check oxc itan only) EXTERIOR MEMBRANE LINER $\square$ 95. UNKNOWN  <br>  E2. DOUBLE WALL   <br>  $\square$ 4. SIGNLE WALL IN VAULT $\square 99$. OTHER  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

IV. TANK LEAK DETECTION (A doscription of the monitoring program shall be nubmited to the local agorey.)


UNDERGROUND STORAGE TANKS - TANK PAGE 2


UNDERGROUND PIPING
SINGLE WALL PIPING
PRESSURTZED PIPING (Check all that enty):
$\square$ I. ELECTRONIC LINE LEAK DETECTOR 3.0 GPH TEST WITH AUTO PUMP SHUT OFF FOR LEAK, SYSTEM FAILURE, AND SYSTEM DISCONNECTION + AUDIBLE AND VISUAL ALARMS.

- 2. MONTHLY 0.2 GPH TEST

3. ANNUAL INTEGRITY TEST (0.1GPH)

CONVENTIONAL SUCTION SYSTEMS
 - INTEGRITY TEST (0.1 GPH)

SAFE SUCTION SYSTEMS (NO VALUES IN BELOW GROUNDPIPING):
7. SELF MONITORING

## GRAVITY FLOW

$\square$ 9. BIENNIAL NNTEGRITY TEST (0.1 GPH)

## SECONDARILY CONTAINED PIPING

PRESSURIZED PIPING (Chest all that appiy):
10. CONTINUOUS TURBINE SUMP SENSOR WITH AUDIBLE AND VISUAL ALARMS AND (Chect onc)
$\square$ a. AUTO PUMP SHTT ORF WHEN A LEAK OCCURS
b. AUTO PUMP SHUT OFF FOR LEAKS, SYSTEM FAILURE AND SYSTEM DISCONNECTION
$\square$ c. NO AUTO PUMP SHUT OFF

1. AUTOMATIC LINE LEAK DETECTOR (3.0 GPH TEST) WITH FLOW SHUT OFF OR RESTRICTION
2. ANNUAL INTEGRTY TEST ( 0.1 GPH ) •
.SUCTION/GRAVITY SYSTEM
3. CONTINUOUS SUMP SENSOR + AUDIBLE AND VISUAL ALARMS EMERGENCY GENERATORS ONLY (Check all that appiy)
$\square$ 14. CONTINUOUS SUMP SENSOR WIHOUT AUTO PUMP SHUT OFF * AUDIBLE AND VISUAL ALARMS
4. AUTOMATIC LINE LEAK DETECTOR (3.0 GPH TEST) WIHHOUT FLOW SHUT OFF OR RESTRICTION
$\square$ 16. ANNUAL INTEGRITY TEST ( 0.1 GPFI)
5. DAIIYVISUAL CHECK

SINGLE WALL PIPING 467
PRESSURIZED PIPING (Check all that apply):
$\square$ I. ELECTRONIC LINE LEAK DETECTOR 3.0 GPH TEST WITH AUTO PUMP SHUT OFP FOR LEAK, SYSTEM FAIIURE, AND SYSTEM DISCONNECTION + AUDIBLE AND VISUAL ALARMS.

- 2. MONTHLY 0.2 GPH TEST

3. ANNUAL INTEGRTY TEST (0.1GPH)
[ 4. DAILY VISUAL CHECK
CONVENTIONAL SUCTION SYSTEMS (Check all that amly)
$\square$ 5. DAILY VISUAL MONITORING OF PIPING AND PUMPING SYSTEM
4. TRIENNIAL INTEGRTY TEST ( 0.1 GPH)

SAFE SUCTION SYSTEMS (NO VALVES IN BELOW GROUND PIPING):

- 7. SELF MONIJORING

GRAVITY FLOW (Checic al that appiy):
8. DAILY VISUAL MONITORING
$\square$ 9. BIENNLAL INTEGRITY TEST ( 0.1 GPH )

## SECONDARILY CONTAINED PIPING

PRESSURIZED PIPING (Check all that apply):
10. CONTINUOUS TURBINE SUMP SENSOR WITH AUDIBLE AND VISUAL ALARMS AND (Cbeck ono)
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$\square$ b AUTO PUMP SHUT OFF FOR LEAKS, SYSTEM FAILURE AND SYSTEM DISCONNECTION
De NO AUTO PUMP SHUT OFF
$\square$ 11. AUTOMATIC LEAK DETECTOR
■ 12. ANNUAL INTEGRITY TEST ( 0.1 GPH)

## SUCTION/GRAYITY SYSTEM

$\square$ 13. CONTINJOUS SUMP SENSOR + AUDIBLE AND VISUAL ALARMS EMERGENCY GENERATORS ONLY (Check all that apply)
$\square$ 14. CONTINUOUS SUMP SENSOR WITHOUT AUTO PUMP SHUT OFP * AUDIBLE AND VISUAL ALARMS
[15. AUTOMATIC LINE LEAK DETECTOR (3.0 GPH TEST)
$\square$ 16. ANNUAL INTEGRITY TEST ( 0.1 GPH)
■ 17. DAILY VISUAL CHECK
VIII. DISPENSER CONTAINMENT



L TANK DESCRIPTION (A scaled plot plan with the location of the UST system inctuding boildings and landanarits shall be subraitted to the local agency.)




UNDERGROUND STORAGE TANKS - TANK PAGE 2
VL. PIPING CONSTRDCTION ictreck ull tat Emphn


- 1. ELECTRONC LINE LEAK DETECTOR 3.0 GPH TEST WITH AUTO PUMP SHLTT OFF FOR LEAR, SYSTEM FAIIURE, AND SYSTEM DISCONNECTION + AUDIBLE AND VISUAL ALARMS.
■ 2. MONTHLY 0.2 GPE TEST
[1] ANNUAL INTEGRTY TEST (0.1GPE)

CONVENTIONAL SUCTION SYSTEMS

- 5. DAILTVISUAL MONITORING OF PUMPING SYSTEM + TRIENNIAL PIPING PNTEGRITY JEST (0.1 GPH)
SAIIE SUTHTON SYSTEAS (NO VALUES INBELOW GKOUNDPIPING):
- 7. SELF MONITORING

GRAVITY KLOW
9. BIENNLAL INTEGRITY TEST (0.1 GPE)

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b. AUTO PUNP SEUT OFF FOR LEAKS, SYSTEM PAILURE AND SYSTEM DISCONNECTION
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SUCTION/GRAVITY SYSTEM
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■ 16. ANNUAL INTEGRITY TEST ( 0.1 GPH)
[17. DAILYVISUAI CHECK

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[D 2. MONTHLY 0.2 GPH TEST
[ 3.ANNLAL NTEGRITY TEST (0.1GPH)
[4. DAILY VISUAL CHECK
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5. DAILY VISUAL MONITORING OR PIPNGG AND PUMPING STSTEME
6. TRIENNLAL INTEGRITY TEST ( 0.1 GPE)

SAFE SUCTION SYSTEMS (NO VALVES IN BELOW GROUND PIPNNG):
7. SELF MONTIORING

GRAVITY FLOW (Chect all that apply):
© \& DAILYVISUAL MONITORING
■ 9. BIENNLAL INTEGRETYY TEST' (0.1 GPH) SECONDARITY CONTAINED PIPING
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b AUTO PUMP SHUT OFF FOR LEAKS, SYSTEM FAILURE AND SYSTEM
DISCONNECTION
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■ 11. AUTOMATIC LEAK DETECTOR
12. ANNUAL INTEGBITY TEST ( 0.1 GPH)

SUCTION/GRAVIJY SYSTEM
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EMIERGENCY GEFNERRATORS ONLY (Chock ell thet apply)
14. CONIINUOUS SUNP SENSOR WITHOUT AUTO PUMPP SFLT OFP *
AUDIBLE AND VISUAL ALARMS AUDIBLE AND VISUAL ALARMS
$\square$ 15. AUTOMATIC LINE LEAK DETECTOR (3.0 GPH TEST)
16. ANNUAL INTEGRTY TEST (0.1 GPE)

- 17. DAIIYVISUAL CHECK
VIII. DISPENSER CONTAINMENT




Marsh Risk \& Insurance Services
Califomia License No. 0437153
The Financial Center
1215 Fourth Avenue, Ste. 2300
Seattle, WA 98161
Attr: Merann Dickinson 206-613-2418
101093-ALAM-02-03
Foss Environmental Services Company
1605 Ferry Point
Alameda, CA 94501

## COMP NNY

H

CONTINUED FROM DESCRIPTION SECTION:
any other insurance available to the additional insured. MCS90 and CA9948 indiuded under the Automobile Liability. CG 2010 attached.

## PROJECT INFORMATION

Date(s) of Field Work: 5/5/03-5/9/03
Project Name: Port of Oakland
Client: Michael McMillan
Project Number: 8207:001
Site Address: 209 Brush Street, Oakland $\boxtimes$ Site Plan Attached
Scope of Work: Removal of underground storage tanks

| Approvals |  |  |
| :--- | :--- | :---: |
|  | Initials | Date |
| Prepared <br> By | EZ | $4 / 30 / 02$ |
| Approved <br> By |  |  |

Type of Project: $\triangle$ Environmental; $\square$ Geotechnical; $\square$ Industrial Process; $\square$ Other:
ХHAZWOPER Project: Training \& Medical Surveillance must conform to 29 CFR 1910.120 \& Geomatrix Guidelines. $\square$ Client Specific Requirements (Attached)

## KEY CONTACTS

Project Manager: Jennifer Patterson
Project H\&S Manager: Don Kubik
Site H\&S Manager: Erin Zavarin
Client Contact: Jeff Reuben
Client's Site Contact: Michael McMillan
Other: $\qquad$
Other: $\qquad$
Emergency Medical Facility: Alta Bates Summit Medical Center
Address: 350 Hawthorne Avenue
Phone Number (general): 510-655-4000
区Emergency Medical Facility Confirmed

Phone: 510-663-4167
Phone: 510-663-4115
Phone: 510-663-4199
Phone: $510-627-1134$
Phone: 510-627-1406
Phone: $\qquad$

Cell: 510-821-8925
Cell: 510-368-6433
Cell: 510-914-5165
Cell:
Cell:
Cell: $\qquad$

Police: 911 Fire: 911 Paramedic/Ambulance: 911
Poison Control Center: 800-222-1222

## EMERGENCY PROCEDURES

## Medical Emergencies

1. Remove injured or exposed person(s) from immediate danger if possible.
2. Evacuate other on-site personnel to a safe place in an upwind direction until it is safe for work to resume.
3. If serious injury or life-threatening condition exists, call 911 - Paramedics, fire department, police Hospital emergency room Clearly describe location, injury and conditions to dispatcher/hospital. Designate a person to direct emergency equipment to the injured person(s).
4. Provide first aid if necessary. Remove contaminated clothing only if this can be done without endangering the injured person.
5. Call the project manager and/or project health and safety officer.
6. Immediately implement steps to prevent recurrence of the accident.

## Accidental Release of Hazardous Materials or Wastes

1. Evacuate all on-site personnel to a safe place in an upwind direction until the PM or PHSO determines that it is safe for work to resume.
2. Immediately instruct a designated person to contact the PM or PHSO.
3. Contain spill, if it is possible and it can be done safely.
4. Initiate cleanup.

## General Emergencies

In the case of fire, flood, explosion, or other hazard, work shall be halted and the local police/ fire department shall be notified by calling 911 . All on-site personnel will be immediately evacuated to a safe place.

## Emergency Equipment Onsite

区First Aid Kit; $\triangle$ Fire Extinguisher; $\square$ Eye Wash; $\square$ Other: $\qquad$

## CHEMICAL HAZARDS

| CHEMICAL | EXPOSURE LIMITS |  | KNOWN/EXPECTED <br>  |  |
| :--- | :--- | :--- | :--- | :---: |
|  | ACGIH | HEALTH HAZARDS |  |  |
| Casoline | Pel: 300 ppm | TLV: 300 ppm | Unknown |  |
| Benzene | Pel: 1 ppm | TLV: 0.3 ppm | Unknown |  |
| Toluene | Pel: 50 ppm | TLV: 50 ppm | Unknown |  |
| Ethyl <br> Benzene | Pel: 100 pm | TLV: 100 ppm | Unknown |  |
| Xylenes | Pel: 100 pm | TLV: 100 ppm | Unknown |  |
| MTBE | Pel: none | TLV: 40 ppm | Unknown |  |
| Diesel | Pel: none | TLV: $100 \mathrm{mg} / \mathrm{m}^{3}$ | Unknown |  |

## PHYSICAL HAZARDS:



## BIOLOGICAL HAZARDS:

$\square \mathrm{Pa}$
$\square \mathrm{Pl}$
$\square \mathrm{O}$

Plants:


SITE CONTROLS: Site is a storage yard that is secured with fencing.

## PERSONAL DECONTAMINATION PROCEDURES: Remove disposable gloves and clothing and place in plastic bags. Wash hands before eating, drinking, or smoking and at end of day.

## PERSONAL PROTECTIVE EQUIPMENT - R = REQUIRED, A = HAVE AVAILABLE

$\underline{\boldsymbol{R}}$ Eye Protection: $\underline{\boldsymbol{R}}$ Safety Glasses; __ Splash Goggles; __ Face Shield; __Other:
$\underline{R}$ Hard Hat
$\underline{\boldsymbol{R}}$ Steel-Toed Boots
$\underline{\boldsymbol{R}}$ Traffic Safety Vest
A Hearing Protection:
Protective Clothing: $\square$ Tyvek $^{\oplus} ; \square$ Coated Tyvek $^{\oplus} ; \square$ Sarinex; $\square$ Other:
$\underline{\boldsymbol{R}}$ Gloves: $\triangle$ Nitrile; $\square$ PVC; $\square$ Neoprene; $\square$ cloth/leather; $\square$ Other $\qquad$
$\qquad$
$\underline{A}$ Respiratory: $\square$ Full-Face APR; $\boxtimes$ Half-Face APR
A Filter: 区Organic Vapor; $\square$ Acid Gas; $\triangle$ HEPA; $\square$ Other: $\qquad$
_ Other: $\qquad$ -.

If air monitoring in the workers' breathing zone exceeds $\underline{10 \mathrm{ppm}}$ for 60 seconds or longer, upgrade to Level C (APR) or vacate the immediate area.

MONITORING EQUIPMENT

[^0]Date:
Project Name:
Project Number:
Site Location:
Scope of Work for Day:
Lead By:

| Name (printed) | Signature |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |



6 Room Number


Gas Valve
Main Electrical Switch
Egress Route

Approximate

30 Fert
BASELINE

SAFE AREA AND SITE


## YAHOO! GetLocal

## Yahoo! Maps

Back to Directions
Starting from: 4209 Brush St, Oakland, CA 94607-3009
Arriving at:

A50 Hawthorne Ave, Oakland, CA 94609
(510) $869-6588$

Distance: 2.5 miles Approximate Travel Time: 6 mins


| Directions |  | Miles |  |
| :---: | :---: | :---: | :---: |
| 1. | Start on BRUSH ST | 0.1 | $\uparrow$ |
| 2. | Turn Right on 3RD ST | 0.4 | $\Gamma$ |
| 3. | Turn Left on BROADWAY | 0.7 | 7 |
| 4. | Continue on TELEGRAPH AVE | 1.1 | 5 |
| 5. | Turn Right on HAWTHORNE AVE | 0.2 |  |
| Distance: 2.5 miles Approximate Travel Time: 6 mins |  |  |  |
| When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning. |  |  |  |

# STATE OF CALIFORNA <br> STATE WATER RESOURCES CONTROL BOARD <br> UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM A 

COMPLETE THIS FORM FOR EACH FACILTYISTE

| MARK ONLY <br> ONE TEM | $\square$ | $\square$ | $\square$ NEW PERMIT | $\square$ INTERIM PERMIT | $\square$ |
| :---: | :---: | :---: | :---: | :---: | :---: |

1. FACILTTY/SITE INFORMATION \& ADDRESS • (MUST BE COMPLETED)


EMERGENCY CONTACT PERSON (PRIMARY)
EMERGENCY CONTACT PERSON (SECONDARY) - ootional

| DAYS: NAME (LAST. FIRST) HOGLJND, HOMER | $\begin{aligned} & \text { PHONE : WITH AREA CODE: } \\ & \text { (510) } 577-4045 \end{aligned}$ | DAYS: NAME (LAST, FIRST) | PHONE F WITH AREA CODE |
| :---: | :---: | :---: | :---: |
| NIGHTS: NAME (LAST, FIRST HOGLUND, EOMER | $\begin{aligned} & \text { PHONE F WITH AREA COOE } \\ & \text { (510) } 223-8847 \\ & \hline \end{aligned}$ | NIGHTS: NAME (LAST, FIRST) | PHONE E:WITH AREA COOE |

II. PROPERTY OWNER INFORMATION - (MUST BE COMPLETED)

| NAME PORT OF OAKLIAND | CAREOFAOORESS INFORMATIONNEIL WERNER, ENVIRONMENTAL COMPLIANCE |  |  |
| :---: | :---: | :---: | :---: |
| MALING OR STREET ADORESS 530 WATER STREET |  |  |  |
| CITY NAME OAKLAND | $\begin{aligned} & \text { STATE } \\ & \text { CA } \end{aligned}$ | $\begin{gathered} \mathrm{ZIP} \operatorname{CODE} \\ 94607 \end{gathered}$ | $\begin{aligned} & \text { PHONE : WITH AREA CODE } \\ & \text { (510) } 272-11.76 \end{aligned}$ |

III. TANK OWNER INFORMATION - (MUST BE COMPLETED)

| NAME OF OWNER <br> PORT OF OAKLATID | CARE OF ADORESS INFORMATIONNEIL WERNER, ENVIRONMENTAL COMPLIANCE |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| MAILING OR STREET ADORESS 530 HATER STREET | $\checkmark$ bor Eindicia $\square$ INOIVIOUAL <br> $\square$ CORPORATON  <br> $\square$ PARTNERSHIP |  | $\square$ LOCAL-AGENCY $\square$ STATE-AGENCY <br> $\square$ COUNTYAGENCY $\square$ FEDERAL-AGEMCY |  |
| CITY NAME OARLLAND | STATE CA | $\begin{gathered} \mathrm{ZIPCOOE} \\ 94607 \end{gathered}$ | $\begin{aligned} & \hline \text { PHONE } A \text { WITH } \\ & 510-272 \end{aligned}$ | $\begin{aligned} & A \operatorname{CODE} \\ & 176 \end{aligned}$ |

IV. BOARD OF EQUALIZATION UST STORAGE FEE ACCOUNT NUMBER - Call (916) 322-9669 if questions arise.

TY (TK) HQ | 4 | $4-$ | -0 | 0 | 0 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

V. PETROLEUM UST FINANCIAL RESPONSIBILITY - (MUST BE COMPLETED) - IDENTIFY THE METHOD(S) USED

| $\checkmark$ box bindicata | a self. INSURED <br> 5 LETTER OF CREAT | $\square$ 2 gUarantee 6 EXEMPTION | 1 IRSURANCE <br> $\square 9$ OTHER | $\square$ 4 SURETY COND. |
| :---: | :---: | :---: | :---: | :---: |

VI. LEGAL NOTIFICATION AND BILLING ADDRESS Legal notification and billing will be sent to the tank owner unless box 1 or 11 is checked.

CHECK ONE BOX INDICATING WHICH ABOVE ADOAESS SHOUL BE USED FOR LEGAL NOTIFICATIONS AND BILLING: I. $\square \quad$ II. $\square$
THIS FORM HAS BEEN COMPLETED UNDER PENALTY OF PERUURY, AND TO THE BEST OF MY KNOWLEDGE, IS TRUE AND COARECT



Alameda County Health Fare Services Agency
Department of Environmental Health
$\mathcal{P}^{\text {Permit }}$.
STID \#3968
This is to certify that - Port of Oakland
doing business as $\qquad$ Harbor Facilities Garage , is.permitied to operate a $\qquad$ Two Underground Storage Tanks
at 209 Brush St, Oakland, CA. 94607 (\$01-000-058430-000003)
This permit is not trans enable and is good until
March 19, 2002
 August

$$
19
$$ 96

> CITY OF OAKLAND
> FIRE PREVENTION BUREAU
> 421 14TH ST., IST FL.
> OAKLAND, CALIFORNIA 94612
> (510) $238-3851$

## APPLICATION for PERMIT to INSTALL, REMOVE or REPAIR TANKS In the CITY OF OAKLAND

Request Submittal Date: $\qquad$ 5-11-98
PLEASE CIRCLE APPROPRIATE ACTIONS: Application is hereby made for permit to:
(a) Remove
(b) Install
(c) Repair
(d) Modify
(e) Abandon/Close in Place
A
(a) Gasoline
(b) Fuel oil
(c) Diesel
(d) $\qquad$ tank (s) and excavate, commencing:
(a) four feet inside the curb line* (B) inside the property line
*inside curb line, please attach copy of sidewalkexcavation permit from PLANNING AND BUILDING
on the $\qquad$ side of $\qquad$ Si./Aye, $\qquad$ feet $\qquad$ of $\qquad$ St./Aye.

Site Address: 209 Brush sir Present storage $\qquad$
Owner: $\qquad$ Address $\qquad$ Phone 5/0-2721176

## Applicant: <br> $\square$ Address <br> $\qquad$ Phone 2721176


PLEASE ATTACH/SUBMIT: (All applicants must have a Cliff Business License Permit)

- (3) Coples of Closure Plans for underground tank removal (s)
- (3) Sets of plans and (1) copy of specifications for above ground tank removal
- (3) Sets of plans and (3) sets of application packets for underground tank installation/modifications
- (3) Sets of plans for aboveground tank installation
- copy or prepare to show Planning and Building approval for aboveground tank removal and tank repair
NOTE: FOR TANK INSTALLATION PLEASE SUBMIT THIS APPLICATION FORM ALONG WITH A APPLICATION FOR PERMIT TO OPERATE, MAINTAIN OR STORE


## FOR OFFICE USE ONLY

Permit No,
Copies to: Electrical Inspection
rev:02/98

Amt. Recy'd
Ck\# $\qquad$ Cash Recy'd by: $\qquad$

Date Issued: $\qquad$

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.
Z 3 RENEWAL PERMIT
$\square$
5 change of information
6 temporary tank closure


7 PSAMANENTLY CLOSED ON SITE 8 TANK FEMOVED
4 AMENDED PERMIT

## GARAGE

1. TANK DESCRIPTION COMPLETE ALL Items - specify if unknown

| A OWNER'S TANK 1.D. 4 EF16 | B. MANUFACTURED BY: JOOR |
| :---: | :---: |
| c. Date installed (modaymear) 1987 | D. Tank capacity in gallons: 1,000 |

II. TANK CONTENTS IF A-1IS MARKED. COMPLETE ITEM C.

III. TANK CONSTRUCTION MARK ONE item only in boxes a, b, and c, and all that applies in box o ande
 IV. PIPING INFORMATION CIRCLE A IF ABOVE GROUND OR 0 IF UNDERGROUND, BOTH IF APPLICABLE


## V. TANK LEAK DETECTION



## VI. TANK CLOSURE INFORMATION (PERMANENT CLOSUAE IN.PLACE)



STATE I.D.:\#


# STATE OF CALFORNIA <br> STATE WATER RESOURCES CONTROL BOARD <br> UNDERGROUND STORAGE TANK PERMIT APPLICATION - FORM B 

COMPLETE A SEPARATE FORM FOR EACH TANK SYSTEM.
$\qquad$ 3 RENEWAL PERMIT $\square 5$ Change of information
4 AMENOED PEAMIT


7 PERMANENTIY CLOSED ON SIT
8 TANK REMCVED

## dBa or facility name where tank is installed: Earbor Facilities garage

## 1. TANK DESCRIPTION COMPLETE ALLITEMS - SPECIFIIF UNKNOWN

| A OWNER'S TANK 1. O.* EF 15 | B. MANUFACTUAED BY: JOOR |
| :--- | :--- | :--- |
| C. DATE INSTALLED (MODAYMEAR) 1987 | D. TANK CAPACITY IN GALLONS: 10,000 |

## II. TANK CONTENTS IF A. IS MARKED, COMPLETE ITEM C.

|  | [ $\triangle$ ] MOTOR VEHICLE FUEL 2 PETHOLEUM $\square$ 3 CHEMICAL PRODUCT | $+0 \mathrm{IL}$ 80 EMPTY 95 UNKNOWN | B. 1 PrCOUCT 2 WASTE | c. | E | la REGULAR UNLEADED 16 PRERTUM UNLEHOED 16 MICGRNDE UNLEADED 2 LEADED |  |  | 3 DIESEL <br> GASAHOL <br> 5 JETFUEL <br> 99 OTHER (DES |  | 6 AVIATION GAS <br> 7 METHANOL <br> 8 M85 <br> IN ITEMO. BELOW |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

D. If (A, 1) IS nOT MARKED, enter name of substance stored
C. A. S. \#:
III. TANK CONSTRUCTION MARK ONEITEM ONLY IN BOXESA, B. AND C. AND ALL THAT APPLIES IN BOXO AND E

| A. TYPE OF SYSTEM | $\square$ ! DOUBLE WALL 2 SINGLE WALL | 3 SINGLE WALL WITH EXTERIOR UNEA 4 SINGLE WALL IN a Vault | 5 internal bladoea system $\square$ 95 UnkNown 99 OTHER |
| :---: | :---: | :---: | :---: |
| B. TANK MATERIAL (Primary Tank) | 1 BARE STEEL 5 CONCRETE 9 gRONZE | 2 STAINLESS STEEL 3 FIGERGLASS 6 POLYVINYL CHLORIDE 7 Aluminum 10 Galvanized steel 95 UNKNOWN | I \& STEEL CLAD WI FIBERGLASS REINFORCED PLASTIC a $100 \%$ METHANOL COMPATIELE W/FAP 99 OTHER $\qquad$ |
| C. INTERICR LUNING OR COATING | 1 RUBBER LINED $\square$ 5. GLASS LINING <br> is Luning material compatible | $\square$ $\square$ ALKYD LINING <br> $\square$ $\square$ EPOXY UNING <br> $\square$ $\square$ | $\triangle$ PHENOLIC LNING 99 OTHER $\qquad$ |
| D. EXTERIOR CORROSION PROTECTION | 1 POLYETHYLENE WRAP 5 CATHODIC PROTECTION | $\square 2$ COATING $\square 3$ YINYL WRAP <br> $\square 1$ NONE $\square 9$ UNKNOWN | 4 Fibenglass reinforced plastic <br> [ $X$ ) othenSteel Clud w/fiberglass |
|  |  |  |  |

IV. PIPING INFORMATION CIRCle a if above ground or $\theta$ if underground, both if applicable

VI. TANK CLOSURE INFORMATION (PERMANENT CLOSUAE in-pLace)

| 1. ESTIMATED DATE LAST USED (MOROAYMR) | 2. ESTIMATED OUANTITY OF. <br> SUBSTANCE REMAINING | J. WAS TANK FILLED WITH <br> INERT MATERIAL ? |
| :--- | ---: | ---: |

THIS FORM HAS EEEN COMPLETED UNDER PENALTY OF PERHUAY, ANO TO THE BEST OF MY KNOWLEDGE, IS TRUE AND CORRECT


LOCAL AGENCY USE ONLY THE STATE I.D. NUMEER IS COMPOSED OF THE FOUR NUMBERS BL.
STATE I.D.\# COUNTY NUAISDICTION

## SPILL CONTAINMENT MANHOLES

70 CD
Palented Des 319,883


SPALL CDATAMHAENT MANHOLE-Univgrsal 7DCD (5 gallon capacity) is desioned to contain fuel spilland during tarik filling. The drain system zlows gasy drainage of fuel spiagye back into the. underground tank. A llexible seal allows both vertical and engular movememt, for sasy instalation. All metal body, cast ring and cover for maxifium stienoth, Features a water-shedding cover which Includes an gasy-oper offist handle. Allows for tank tasting.

| Model ${ }^{\text {\% }}$ | Siza | Weight (lus.) | $\wedge$ | 8 | C |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C-1212 | $\times 12^{*}$ | 69.0 | 15\% ${ }^{\prime \prime}$ | 155\% ${ }^{\circ}$ | 121/4 |

NOTE: Scrows onto $4^{\prime \prime}$ riser.

## OPW 61SO－1000 and 6150－100C Grooved Tube

The OPW 6150－1000 and 61SO－100C Overall Prevention Vaives fearure a groaved nube design for use in two－pcint applications with lank gnuging probes．The $6150-100 \mathrm{C}$ is CARD approved．
These valves have a sloced secrion that runs throught tooch the tube and the ralve bocty to allow the installation of vint manuiacnurer＇s gauging syytems． 1．th only a neglisgible effect on product delivery time．


## Assembly

All OPW 6150 series valves are fur． rished with complefe lnstructions and all of the necessary hardware for field or shop assembly．
For complete usecmoly and installa－ dion inseructions，refer to C．3957－PA （OPW GISO and 615OM）or C－3634 PA（OPW 61SOC）of C－3687－PA （OPY 51SOP）or C $3792-\mathrm{M}$（OPW 61SOR），

Adatartal：
Vatra bentr：cest aluminuma
faot：miftion ruther，closed csll toom
Katre：alumiaum
Sexas：yiton
Uppro \＆lower Drap Tube：olvarifium
Mrytk parse Aentra
Hercturere：Strainlas She
Reppocament Paris

| Perto． | （exceisimen |
| :---: | :---: |
| 1504．000 | Floot X 令 |
| 6038994 | Tud ooint inter huos |
| C036324 | Copxislinet tua |

## Important

In ordex to prevent profuc spthlagy from the Underground Sarate Tank （UST），properly maincain fod detivery equipment and a proper prrection at the tight nll adaptor are effiortiol． Delivery permanel shouit be mansedd and crained to inspect dedyery erhow and hoses for daraxgen and missing pars．They should alway fonake cercain thers is a posiove comection berweer the adaptor and eilow．If elitery equipment is not properly fraantained or the elbow is not securety cpupled bo the adaptor－a senious spititury resul When the OPW $61 S O$ closts causing a hatard，and environmengle entamirea－ tion．
Nota：The OPW 6150 Orftill Preveacion Valve is inat to pe used in Pumping applications．Thed 6150 is designed only for dight fill｜erivity drop applications．

## Information

For additional usetul iuffmation on the apeciftestion，assembly，installanion and use of the OPW 6150，here to Technical Bulletin TB－6IS $\phi$ ：

OPW 6150 Overfill Prevarion
Yalves are covered under th forlowing patent：4，986320．Re 33，55 and
Canadian patert $1,287,546$ ．Dutar patents pending．

IMAORTANT：OPW Pmonte shousd berfeer in
 and regulations．Produts suievion trowlefs bund an physian rexifkviom and Imrioniorss an fcorderxitilisy
 OPM WAKES NO WAREANTY OF FT NEQ FOR A PARTMCULAR USE AII Mmentoprifna

 OPW reremet one righe mo make thongos any fine in
 discontime modeli wichay notike or coil pion．

## PW 6 ISO OVERFILL PREVEHIION VAIVES

## Typical Application Assembly

Insuatation schemsace typical；exact dimensions will vary with tank configuration


Onderieg Spedicatioas and Dimunstocis


| 1000 | poind | $60^{7}$ I $1 \times 3$ | $83^{3} 1246$ | 4. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6150.1000 | Crevedtron | $60^{\circ} \mathrm{n} 9$ | $13^{\circ}$ W21 |  | $53 x^{n}+114$ | \％ $6^{4} \cdot 2.24$ | $10^{3 / 27}$ |  |
| 6150.6 Ca | Caris，Growid theo | $6{ }^{6} \mathrm{CXS}$ | $83^{\circ} \mathrm{E}$ 约 | $1548{ }^{1} 939$ |  | 98＇ $8^{-2.4}$ | $107 \times 27$ | 1 |
| 61504000 | 4 \％op－xim | 60.15 | （3） $3^{2}$ 成 |  | 53\％ 11.4 | 9min | $107^{5} 27$ |  |
| $6150 \times 010$ | 4 mopent | 120 ${ }^{\text {che }}$ |  |  | 13\％ 29 | 125 ：377 | $126^{\prime \prime} 3$ |  |
| $6150400 \%$ | Cane f，moop |  | \％ $5^{\text {ck }}$ | $1544{ }^{\text {n }}$ | 33\％${ }^{\text {a }}$／， | 925 24 | $17^{7 \prime 2}$ |  |
| $6150-10<$ |  | $10^{2}$ at | $10^{2} \mathrm{~V}$ | $233 K^{\circ} \mathrm{F} 5$ | 13 ${ }^{\text {a }}$ ，29： | 12003 | $126^{6} 32$ |  |
| （1504－4129 | Wo－point mathand |  | 102 | 2331／ | 136＂29： | $120^{61} 3$ | $126^{7}$ ． 3.2 | 25 |
| A125 | Cuba，mopain | $120^{\circ} \mathrm{San}$ | 102 K2 | $233 \%^{16} 5$ | 113 ${ }^{10}$ 2\％： | $120^{\circ} 312$ |  |  |
|  | Croxida | $60^{\circ} 1 \times$ | $8 \mathrm{~S}^{1+5}$ | 134 ${ }^{\text {a }}$ | 51\％${ }^{4}$ ， 114 | $96^{6} 24$ | $107^{7 \prime} \cdot 27$ | 16 |
| $6150(40) 1$ | Gaxtiol | W ${ }^{2}$ | 102 ${ }^{3}$ | 233\％${ }^{3} 5$ | 1134\％ 2.28 | 126 \％ 11 | $126^{\prime \prime}{ }^{3}$ | 25.11 |
| 61598.4002 | Calf，mant cuaxid | $60^{\circ} \mathrm{H}$ | $8{ }^{3}$ |  | 33 ${ }^{6} \times 14$ | $96^{\circ}{ }^{\circ} 2^{3}$ |  | 20：9 |
| 618407012 | Cal | 101\％${ }^{\text {a }}$ | 107 |  | 17\％${ }^{\text {a }}$ |  | $176^{5} \cdot 3.3$ |  |
| 6150044000 | Coxita，mithorol | $1201{ }^{1 / 3}$ | 1020 |  | $1138^{4} \cdot 2 \%$ | $120^{5 \times}$ 3：${ }^{1}$ | $126^{7} \times 3$ | 25 III． |
| $6150-4815$ |  |  |  |  |  |  |  |  |
| $6150 \mathrm{C}-87$ |  |  |  |  | $\bigcirc$ | $6{ }^{6} 3$ |  |  |
| $6150 \mathrm{R}-400^{37}$ | Remota | $77^{4} \mathrm{H}$ | \％${ }^{+1}$ | $1667{ }^{\circ}{ }^{4} \times 12$ |  | $96^{4}+2{ }^{2}$ | $107^{\circ} 8$ | 19 19， |
| $6150 \mathrm{~N}=10600^{72}$ | Roman，matheral | \％ 72 | $102^{7}$ | $185 \%^{2} \times 2 \%$ |  | $120^{-182}$ | $126^{6} 33$ | 18.8 |

[^1]
## CITY OF OAKLAND

SO. - ! 4THSTREET•1OTHFLOOR•OAKIAND, CALIFORNIA Y4G12 Office of Budget \& Finance Customer Service Section

May 13, 1998

TO WHOM IT MAY CONCERN:
THE BUSINESS NAMED BELOW HAS BEEN ISSUED A BUSINESS TAX CERTIFICATE BY THIS OFFICE:

BUSINESS NAME: REDWINE-MANLEY TESTING SERVICES, INC.
BUSINESS ADDRESS: 3810 AMBERWOOD LANE, BAKERSFIELD, CA 93309
OWNER NAME: DENISE R. TURNER, PRESIDENT
BUSINESS TAX CERTIFICATE ACCOUNT NO:: 1682172
EXPIRATION DATE OF CERTIFICATE: DECEMBER 31, 1998

## BUSINESS CLASSIFICATION: MISCELLANEOUS TRADE CONTRACTORS

THE CERTIFICATE IS A BUSINESS TAX AND IS NOT REGULATORY, INFORMATION CONCERNING OWNERSHIP IS THAT GIVEN BY LICENSEE OR CERTIFICATE HOLDER.


> ROBERT L. MOORE
> TAX REPRESENTATIVE II CUSTOMER SERVICE SECTION

## APPENDIX B

## Chain-of Custody Records and Analytical Laboratory Reports

Curtis \& Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900, Fax (510) 486-0532

```
ANALYTICAL REPORT
                    Prepared for:
Geomatrix Consultants
    21.01 Webster Street
        12th Floor
    Oakland, CA 946.12
```

Date: 16-JUN-03
Lab Job Number: 165650
Project ID: 8207.001
Location: Port of Oakland

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.


This package may be reproduced only in its entirety.

Laboratory Number: 165650
Client: Geomatrix Consultants
Project\#: 8207.001
Location: Berth 23 Port of Oakland

## CASE NARRATIVE

This hardcopy data package contains sample and QC results for four water samples that were received on June 05,2003 . The samples were received cold and intact at 4.0 degrees Celsius.

## Total Volatile Hydrocarbons by EPA 8015B

High surrogate recoveries were observed in sample T2-060503-S (165650-004). This outlier can be attributed to hydrocarbons coeluting with the surrogate peaks. No othèr analytical problems were encountered.

## Total Extractable Hydrocarbons by EPA 8015B

The matrix spike sample, matrix spike and matrix spike duplicate of batch 82007 were analyzed at a dilution. This dilution caused the surrogate to be diluted out. Low spike recovery was observed in the matrix spike of sample CT\#165650-001 (not a sample from this site). The associated laboratory control sample met acceptance criteria. No other analytical problems were encountered.

## FTME, BTEX by EPA 8260B

No analytical problems were encountered.

## Lead by EPA 6010B

No analytical problems were encountered.


## COOLER RECEIPT CHECKLIST

Login\#: 165650
Date Received
Client:Geomatrix
$\qquad$ Number of Coolers: Project: 8207.001 - Port of Oakland
A. Preliminary Examination Phase' Date Opened: $\qquad$ By (print):
 (sign) $\qquad$

1. Did cooler come with a shipping slip (airbill, etc.)?
YES
If YES, enter carrier name and airbill number:
2. Were custody seals on outside of cooler? Seal date: $\qquad$ Seal name:
How many and where? $\qquad$ Seal date.3. Were custody seals unbroken and intact at the date and time of arrival?3. Were custody seals unbroken and intact at the date and time of arrival?YES NOYES NO
3. Were custody papers dry and intact when received? ..... YES NO
4. Were custody papers filled out properly (ink, signed, etc.) \%. ..... MESNE
6... Did you sign the custody papers in the appropriate place?. ..... NO
5. Was project identifiable from custody papers? ..... ABS NO
If YES, enter project name at the top of this form.
6. If required, was sufficient ice used? Samples should be 2-6 degrees $C$. ..... ES NO
Type of ice: wet.Temperature:
$\qquad$
B. Login Phase
Date Logged In: $\qquad$ By (print):
7. Describe type of packing in cooler: In ziploc type bay
8. Did all bottles arrive unbroken?.(E) NO
9. Were labels in good condition and complete (ID, date, time, signature, etc.)?
10. Were labels in good condition and complete (ID, date, time, signature, etc.)?4. Did bottle labels agree with custody papers?YES NO
11. Were appropriate containers used for the tests indicated? ..... YES NO
12. Were correct preservatives added to samples? ..... YES NO NA
13. Was sufficient amount of sample sent for tests indicated? ..... YES NO
14. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO N/A
15. Was the client contacted concerning this sample delivery? ..... YES NO
If YES, give details below.Who was called?
$\qquad$ By whom? $\qquad$ Date: $\qquad$
Additional Comments:


| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | 8015B |
| Matrix: | Soil | Batch\#: | 81928 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Sampled: | 06/05/03 |
| Basis: | as received | Received: | 06/05/03 |

Field ID:
,Type:
Lab ID:


| ! |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Field ID: T2-060503-N |  |  | Diln Fac: | 1.000 |
| Type: SAMPLE |  |  | Analyzed: | 06/06/03 |
| Lab ID: 165650-002 |  |  |  |  |
| 4n-4.4 4 |  | R Pesevive |  | R, |
| Gasoline C7-Cl2 |  | 4.3 |  | 1.1 |
| - |  |  |  |  |
|  | Shesek | TMmuts\% |  |  |
| Trifluorotoluene (FID) | 121 | 56-144 |  |  |
| Bromofluorobenzene (FID) | 114 | 51-142 |  |  |



[^2]
$\mathrm{Tl}-060503$

Sample 菏：a
Page 1 of 1
Date ：6／6／03 08：59 AM
Time of Injection：6／6／03 Low Point ：－29．83 mV
Plot Scale： 892.9 mV
02：11 AM

High Point ： 863.11 mV

Response［mV］


5-6.02 -


```
BROMOF
```

 ..... 14.34


```
                            Cl
```


$\qquad$


促$-4.51$



## 

| Lab \#: | 165650 | Location: | Fort of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | 8015B |
| Matrix: | Soil | Batch\#: | 81928 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Sampled: | 06/05/03 |
| Basis: | as received | Received: | 06/05/03 |


| Field ID: | T2-060503-S |
| :--- | :--- |
| Type: | SAMPLE |
| Lab ID: | $165650-004$ |

Diln Fac: $\quad 50.00$
Analyzed: 06/06/03

| Wanderes | Resugele | Re: |
| :---: | :---: | :---: |
| Gasoline C7-C12 | 2,200 | 50 |



| Type: | BLANK | Diln Fac: | 1.000 |
| :--- | :--- | :--- | :--- |
| Lab ID: | QC215466 | Analyzed: | $06 / 05 / 03$ |


| Ans.uvese: | R=SEMEL | N. |
| :---: | :---: | :---: |
| Gasoline C7-C12 | ND | 1.0 |



 Scale Factor: 1.0

## Gasoline

Sample $\#$ :
Page 1 of 1
Date : 6/5/03 10:31 AM
Time of Injection: 6/5/03 10:03 $\mathrm{AN}_{\mathrm{i}}$
Low Point : -27.80 mV High Point : 823.73 mV
Plot Scale: 851.5 mV

Response [mV]



| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | 8015B |
| Type: | LCS | Basis: | as received |
| Lab ID: | QC215468 | Diln Fac: | 1.000 |
| Matrix: | Soil | Batch\#: | 81928 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Analyzed: | 06/05/03 |


| Mravjp\% | Spe keedk | Resengike | 积 | \% |
| :---: | :---: | :---: | :---: | :---: |
| Gasoline C7-C12 | 10.00 | 9.942 | 99 | 80-120 |


| Suspegieke | -88ECN\% |  |  |
| :---: | :---: | :---: | :---: |
| Trifluorotoluene (FID) | 118 | 56-144 |  |
| Bromofluorobenzene (FID) | 111 | 51-142 |  |



| Type: . MS |  | Lab ID: | QC215599 |  | . |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \#menyese | MSEMEesuste | Sp, meso | Resumex |  | 4knuke\% |
| Gasoline C7-Cl2 | 0.1203 | 10.42 | 10.24 | 97 | 24-134 |
| Skukskemuse |  |  |  |  |  |
| Trifluorotoluene (FID) | 126 56-144 |  |  |  |  |
| Bromofluorobenzene (FID) | 117 51-142 |  |  |  |  |


| Type: MSD |  |  | QC215600 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \%in, 的) |  | Sbesked |  | S8PM, | K1, |  | 4.4 |
| Gasoline C7-C12 |  | 10.10 | 9.773 | 96 | 24-134 | 2 | 32 |
| Suswegasee |  | 4-1mase |  |  |  |  |  |
| Trifluorotoluene (FID) | 126 | 56-144 |  |  |  |  |  |
| Bromofluorobenzene (FID) | 118 | 51-142 |  |  |  |  |  |






| Sample Name : 165650-001sg, 81951 |  |  |  |
| :---: | :---: | :---: | :---: |
| FileName | G: \GC13 \CHB $\backslash 155 B 057$. RAW |  |  |
| Method | BTEH154. |  |  |
| Start Time | 0.00 min | End Time | 31.90 m |
| Scale Factor: | 0.0 | Plot Offset: | $-20 \mathrm{mv}$ |

Start Time : 0.00 min
Scale Factor: 0.0
T1-060503

Chromatogram


| Sample Name : 165650-004sg, 81951 |  |  |  |
| :---: | :---: | :---: | :---: |
| EileName | G: \GC13\CHB\155B060. RAW |  |  |
| Method | BTEH154.M |  |  |
| Start Time | 0.00 min | End Time | 31.90 min |
| Scale Factor: | 0.0 | Plot Offset: | -20 mV |
|  | $\because i c h$ |  |  |

Sample \#: 81951
Page 1 of 1
Date : 6/6/03 08:39 AM
Time of Injection: 6/6/03 05:21 AM
Low Point : -20.20 mV
Plot Scale: 1044.2 mv

Response [mV]


## Chromatogram




| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Analysis: | EPA 8015B |
| Project\#: | 8207.001 |  |  |
| Matrix: | Soil | Sampled: | 06/05/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Received: | 06/05/03 |
| Basis: | as received |  |  |


$=$ Lighter hydrocarbons contributed to the quantitation
Sample exhibits chromatographic pattern which does not resemble standard
Not Detected
Reporting Limit
ige 2 of 2


| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 3550 |
| Project\#: | 8207.001 | Analysis: | EPA 8015B |
| Type: | LCS | Diln Fac: | 1.000 |
| Lab ID: | QC215570 | Batch\#: | 81951 |
| Matrix: | Soil | Prepared: | 06/05/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ as received | Analyzed: | 06/06/03 |

Sleanup Method: EPA 3630C

|  | Spaused | Sesmuky |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Diesel Clo-C24 | 50.30 | 37.12 | 74 | 49-129 |


|  | \% PEC |  |
| :---: | :---: | :---: |
| Hexacosane | 70 | 36-141 |



| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | SHAKER TABLE |
| Project\#: | 8207.001 | Analysis: | EPA 8015B |
| Type: | LCS | Diln Fac: | 1.000 |
| Lab ID: | QC215792 | Batch\#: | 82007 |
| Matrix: | Soil | Prepared: | 06/07/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Analyzed: | 06/08/03 |
| Basis: | as received |  |  |

leanup Method: EPA 3630C

| 4, | Spmaked | R | 88P\% | Hivimikes |
| :---: | :---: | :---: | :---: | :---: |
| Diesel Cl0-C24 | 24.94 | 17.07 | 68 | 49-129 |



## 

| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| \|Client: | Geomatrix Consultants | Prep: | EPA 3550 |
| Project\#: | 8207.001 | Analysis: | EPA 8015B |
| Field ID: | ZZZZZZZZZZ | Batch\#: | 81951 |
| MSS Lab ID: | 165624-001 | Sampled: | 06/04/03 |
| -Matrix: | Soil | Received: | 06/05/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Prepared: | 06/05/03 |
| Basis: | as received | Analyzed: | 06/06/03 |
| Diln Fac: | 1.000 |  |  |

ype: MS Lab ID: QC215571

|  |  | 4, 4 , 8 ed | R* | \%psem | 4kImetem |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Diesel C10-C24 | 8.382 | 49.64 | 55.36 | 95 | 32-134 |


spe:
MSD
Lab ID:
QC2 15572

| Andentikus | Splarers | Ressuside |  |  | \%8P | 4 4 2m |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Diesel C10-C24 | 49.66 | 52.56 | 89 | 32-134 | 5 | 48 |


|  |  |
| :---: | :---: |
| Hexacosane | 78 36-141 |


ype: MS Lab ID: QC215793

|  |  | 82, 8 ¢ 4. | 8. | \%gere |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Diesel Cl0-C24 | 71.43 | 24:97 | 75.57 | 17 * | 32-134 |
| Susteregute |  |  |  |  |  |
| Fexacosane | DO 36-141 |  |  |  |  |

MSD
pe

```
*= Value outside of QC limits; see narrative
)= Diluted Out
J= Relative Percent Difference
ge 1 of 1
```


## 



ND $=$ Not Detected
RL= Reporting Limit
Page 1 of 1



| En-ustee |  | ¢4 |
| :---: | :---: | :---: |
| MTBE |  | 5.0 |
| Benzene |  | 5.0 |
| Toluene | ND | 5.0 |
| Ethylbenzene | ND. | 5.0 |
| m,p-Xylenes | ND. | 5.0 |
| o-XYlene | ND | 5.0 |



| ) |  |  | 正 $2=1$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Lab \#: | 165650 | Location: | Port of O |
|  | Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| ! | Project\#: | 8207.001 | Analysis: | EPA $8260 B$ |
| - | Field ID: | T2-060503-W | Diln Fac: | 1.064 |
|  | Lab ID: | 165650-003 | Batch\#: | 81974 |
|  | Matrix: | Soil | Sampled: | 06/05/03 |
| $\rightarrow$ | Units: | $\mathrm{ug} / \mathrm{Kg}$ | Received: | 06/05/03 |
|  | Basis: | as received | Analyzed: | 06/06/03 |




ND $=$ Not Detected
RL= Reporting Limit
Page 1 OE 1


| Manekeker | Resunge | \% |
| :---: | :---: | :---: |
| MTBE | ND | 710 |
| Benzene | 920 | 710 |
| Toluene | ND | 710 |
| Ethylbenzene | 23,000 | 710 |
| m,p-Xylenes | 34,000 | 710 |
| --Xylene | 6,600 | 710 |



ND = Not Detected
2L= Reporting Limit


| Lab \#: | 165650 | Location: | Port of Oakland |
| :--- | :--- | :--- | :--- |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Type: | LCS | Diln Fac: | 1.000 |
| Lab ID: | QC215662 | Batch\#: | 81977 |
| Matrix: | Water | Analyzed: | $06 / 06 / 03$ |
| Units: | ug/L |  |  |


|  | Spugikeak |  | Ssesc | H\% |
| :---: | :---: | :---: | :---: | :---: |
| Benzene | 50.00 | 48.99 | 98 | 78-120 |
| Toluene | 50.00 | 51.54 | 103 | 79-120 |
| Chlorobenzene | 50.00 | 49.46 | 99 | 80-120 |



## 

| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Type: | LCS | Basis: | as received |
| Lab ID: | QC215654 | Diln Fac: | 1.000 |
| Matrix: | Soil | Batch\#: | . 81974 |
| Units: | $\mathrm{ug} / \mathrm{Kg}$ | Analyzed: | 06/06/03 |


|  | Spersized |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Benzene | 50.00 | 49.71 | 99 | 78-120 |
| Toluene | 50.00 | 52.34 | 105 | 79-120 |
| Chlorobenzene | 50.00 | 52.22 | 104 | 80-120 |



## 

| Lab \#: | 165650 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260 B |
| Field ID: | T2-060503-W | Diln Fac: | 1.064 |
| MSS Lab ID: | 165650-003 | Batch\#: | 81974 |
| Matrix: | Soil | Sampled: | 06/05/03 |
| Units: | $\mathrm{ug} / \mathrm{Kg}$ | Received: | 06/05/03 |
| Basis: | as received | Analyzed: | 06/06/03 |




Type: MSD Lab ID: QC215723

| Anvevesee |  | SE, |  | 85xem |  | \% ${ }^{200}$ | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene |  | 53.19 | 51.67 | 97 | 55-121 | 0 | 20 |
| Toluene |  | 53.19 | 55.50 | 104 | 44-129 | 1 | 20 |
| Chlorobenzene |  | 53.19 | 53.85 | 101 | 48-121 | 1 | 20 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 1,2-Dichloroethane-d4 | 96 | 76-130 |  |  |  |  |  |
| Toluene-d8 | 105 | 80-120 |  |  |  |  |  |
| Bromofluorobenzene | 103 | 76-125 |  |  |  |  |  |


Type: MS Lab ID:

| Arminse | MSS.Reemes | Spised | Reswit | \%REC | \$mmike |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene | $<0.2800$ | 50.00 | 49.13 | 98 | 55-121 |
| Toluene | $=0.2200$ | 50.00 | 53.50 | 107 | 45-129 |
| Chlorobenzene | <0.2200 | 50.00 | 49.07 | 98 | 48-121 |


Type: MSD Lab ID: QC215704

| Arat | Spleses | शesulve | \%REC |  | R 2 S | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene | 50.00 | 49.99 | 100 | 55-121 | 2 | 20 |
| Toluene | 50.00 | 54.66 | 109 | 44-129 | 2 | 20 |
| Chlorobenzene | 50.00 | 51.28 | 103. | 48-121 | 4 | 20 |




$\mathrm{ND}=$ Not Detected
RL= Reporting Limit
Page 1 of 1


| \% |  | 1808 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BS | QC215602 | 100.0 | 85.50 | 86 | 71-120 |  |  |
| BSD | QC215603 | 100.0 | 88.50 | 89 | 71-120 | 3 | 20 |



```
ANAEYTICCAL_ REROR T
Prepared for:
Geomatrix Consumtants
2101 Webster Street
                                    12th FlOor
    Oakland, CA 94612
```

Date: 18-JUN-03
Lab Job Number: 165736
Project ID: 8207.001
Location: 1195 Maritime Berth 23

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.


This package may be reproduced only in its entirety.


## 



$H=$ Heavier hydrocarbons contributed to the quantitation
ND= Not Detected
kL= Reporting Limit
Page 1 of 1

## Chromatogram



## Chromatogram



## Chromatogram

Sample Name : CCV/LCS,QC216029,82067,03WS0819,2.5/5000
FileName: G:\GC05\DATA\161G002.raw Method tart Time Scale Factor: $\quad 1.0$ Gasoline

End Time : 25.00 min Plot Offset: 12 mV

Sample \#:
Page 1 Of 1
Date : 6/10/03 02:21 PM
Time of Injection: 6/10/03
Low Point : 12.00 mV Plot Scale: 59.5 mV

Response [mV]

8.79





| Lab \#: | 165736 | Location: | Port of Oakland |
| :--- | :--- | :--- | :--- |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | 8015 B |
| Type: | LCS | Basis: | as received |
| Lab ID: | QC216029. | Diln Fac: | 1.000 |
| Matrix: | Soil | Batch\#: | 82067 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Analyzed: | $06 / 10 / 03$ |


|  | Sj. |  | \%serse |  |
| :---: | :---: | :---: | :---: | :---: |
| Gasoline C7-C12 | 5.000 | 4.879 | 98 | 80-120 |





| Type: | MSD | Lab ID: $\quad \cdots$ QC |  | QC216102 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Anamereme | Spixked | respale | \%RES |  | RPఖ | ¢ |
|  | 7-C12 | 9.524 | 8.917 | 92 | 24-134 | 2 | 32 |




## Chromatogram



Sample \#: 82088
Page 1 of 1
Date : 6/11/03 02:56 PM
Time of Injection: 6/11/03 02:17 PM
Low Point : 9.06 mV High Point : 416.54.mV
Plot Scale: 407.5 mV

Response [mV]


Sample Name : 165736-002sg, 82088
FileName : G: \GC11\CHA\162A007. RAW
Method : ATEH158.MTH
Start Time : $0.00 \mathrm{~min} \quad$ End Time $: 31.90 \mathrm{~min}$
Scale Factor: 0.0

Plot Offset: -25 mV

Sample \#: 82088
Date: 6/11/03 03:33 PM
Time of Injection: 6/11/03 02:57 PM
Low Point : - 24.87 mV
Plot Scale: 1048.9 mV

Page 1 of 1

High Point : 1024.00 mV

Response [mV]

Sample \#: 500mg/L
Page 1 of 1
Time of Injection: 6/11/03 10:10 AM
Low Point : 19.23 mV High Point : 298.70 mV
Plot Scale: 279.5 mV
Response [mV]



| Lab \#: | 165736 | Location: | 1195 Maritime Berth 23 |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | SHAKER TABLE |
| Project\#: | 8207.001 | Analysis: | EPA 8015B |
| Type: | LCS | Diln Fac: | 1.000 |
| Lab ID: | QC216116 | Batch\#: | 82088 |
| -Matrix: | Soil | Prepared: | 06/10/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Analyzed: | 06/11/03 |
| Basis: | as received |  |  |

Cleanup Method: EPA 3630C

| \%\%, | Sp-3xes | Resusum | \%sene | Heresessm |
| :---: | :---: | :---: | :---: | :---: |
| Diesel C10-C24 | 50.43 | 39.54 | 78 | 49-129 |



## 



| ype: | MS |  |  |
| :--- | :--- | :--- | :--- |
| lab ID: | QC216117 | Cleanup Method: | EPA 3630 C |

就

ype: MSD Cleanup Method: EPA 3630C
Q ID: QC216118



## 

| Lab \#: | 165736 | Location: | 1195 Maritime Berth 23 |
| :--- | :--- | :--- | :--- |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Field ID: | Pl-061003 | Diln Fac: | 5.556 |
| Lab ID: | $165736-001$ | Batch\#: | 82057 |
| Matrix: | Soil | Sampled: | $06 / 10 / 03$ |
| Units: | ug/Kg | Received: | $06 / 10 / 03$ |
| Basis: | as received | Analyzed: | $06 / 10 / 03$ |


| Amay 3 ce | Ressung: | Sis: |  |
| :---: | :---: | :---: | :---: |
| MTBE | ND | 28 |  |
| Benzene | ND | 28 |  |
| Toluene | ND | 28 |  |
| Chlorobenzene | ND | 28 |  |
| Ethylbenzene | 230 | 28 |  |
| m,p-Xylenes | 610 | 28 |  |
| o-Xylene | 210 | 28 |  |
| 1,3-Dichlorobenzene | ND | 28 |  |
| 1,4-Dichlorobenzene | ND | 28 |  |
| 1,2-Dichlorobenzene | ND | 28 |  |


| SHusegenese |  | Hemmesk |  |
| :---: | :---: | :---: | :---: |
| 1,2-Dichloroethane-d4 | 104 | 76-130 |  |
| Toluene-d8 | 105 | 80-120 |  |
| Bromofluorobenzene | 109 | 76-125 |  |

```
\(\mathrm{D}=\) Not Detected
kL= Reporting Limit
Page 1 of 1
```


CNo
NTBE



| Lab \#: | l65736 | Location: | ll95 Maritime Berth 23 |
| :--- | :--- | :--- | :--- |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Type: | BLANK | Basis: | as received |
| Lab ID: | QC215991 | Diln Fac: | 1.000 |
| Matrix: | Soil | Batch\#: | 82057 |
| Units: | ug/Kg | Analyzed: | $06 / 10 / 03$ |


| Knay, | Resemuk | 2 ${ }^{\text {星 }}$ |
| :---: | :---: | :---: |
| MTBE | ND | 5.0 |
| Benzene | ND | 5.0 |
| Toluene | ND | 5.0 |
| Chlorobenzene | ND | 5.0 |
| Ethylbenzene | ND | 5.0 |
| m,p-Xylenes | ND | 5.0 |
| --Xylene | ND | 5.0 |
| 1,3-Dichlorobenzene | ND | 5.0 |
| 1,4-Dichlorobenzene | ND | 5.0 |
| 1,2-Dichlorobenzene | ND | 5.0 |



```
ND= Not Detected
RL= Reporting Limit
Page l of 1
```



| Lab \#: | 165736 | Location: | 1195 Maritime Berth 23 |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Type: | BLANK | Diln Fac: | 1.000 |
| Lab ID: | QC216157 | Batch\#: | 82099 |
| Matrix: | Water | Analyzed: | 06/11/03 |
| Units: | ug/L |  |  |





1

| N |
| :--- | :--- | :--- | :--- |



## 

| Lab \#: | 165736 | Location: | 1195 Maritime Berth 23 |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 820.7 .001 | Analysis: | EPA 8260B |
| Field ID: | ZZZZZZZZZZ | Diln Fac: | 1.020 |
| MSS Lab ID: | 165723-004 | Batch\#: | 82057 |
| Matrix: | Soil | Sampled: | 06/07/03 |
| Units: | $\mathrm{ug} / \mathrm{Kg}$ | Received: | 06/09/03 |
| Basis: | as received | Analyzed: | 06/10/03 |

Type: MS Lab ID: QC216079

|  | HSSjoresusie | Ejunves | 2essuke | SREC | 4-mimise |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene | $<0.08200$ | 51.02 | 44.57 | 87 | 55-121 |
| Toluene | -0.2000 | 51.02 | ¢4.03 | 86 | 11-129 |
| Chlorobenzene | $<0.1600$ | 51.02 | 36.32 | 71 | 48-121 |





| Sisesesesise | 8kEC. |  |  |
| :---: | :---: | :---: | :---: |
| 1,2-Dichloroethane-d4 | 87 | 76-130 |  |
| Toluene-d8 | 104 | 80-120 |  |
| Bromofluorobenzene | 96 | 76-125 |  |


TYpe: MS Lab ID: QC216220

| Mramee | MSS/Resmit | Spaned | Resmit | SREC | ymmite |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene | $<0.2300$ | 49.00 | 46.49 | 95 | 55-121 |
| Tn7uene | - 22200 | 49.00 | 17.95 | 98 | 12120 |
| Chlorobenzene | $<0.2300$ | 49.00 | 48.03 | 98 | 48-121 |



| Type: MSD |  | QC216221 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Araileme | Splered | Repmik | \%REC | WEIMEEs | Reple |  |
| Benzene | 49.00 | 46.80 | 96 | 55-121 | 1 | 20 |
| Toluene | 49.00 | 48.66 | 99 | 44-129 | 1 | 20 |
| Chlorobenzene | 49.00 | 48.82 | 100 | 48-121 | 2 | 20 |


| Sursogate | \%REC | \%MMus |  |
| :---: | :---: | :---: | :---: |
| 1,2-Dichloroethane-d4 | 89 | 76-130 |  |
| Toluene-d8 | 100 | 80-120 |  |
| Bromofluorobenzene | 97 | 76-125 |  |



## ANALYTICAL REPORT:

Prepared for:
Geomatrix Consultants
2101 Webster Street
12th Floor
Oakland, CA, 94612

Date: 26-JUN-03
Lab Job Number: 165890
Project ID: 8207.001
Location: Berth 23 Port of Oakland

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.


This package may be reproduced only in its entirety.


## COOLER RECEIPT CHECKLIST



## Additional Comments:




| Field ID: | COMP \#2A-\#2D | Lab ID: | $165890-010$ |
| :--- | :--- | :--- | :--- |
| Type: | SAMPLE | Diln Fac: | 5.000 |


|  | Kesuliv | 2ix: |
| :---: | :---: | :---: |
| Gasoline C7-C12 | 110 HY | 5.0 |


| Siskeggate |  | K1miks. |
| :---: | :---: | :---: |
| Trifluorotoluene (FID) | 99 | 56-144 |
| Bromofluorobenzene (FID) | 106 | 51-142 |

Type:
BL_ANK
Diln Fac:
1.000
Lab ID:
QC216857



$Y=$ Sample exhibits chromatographic pattern which does not resemble standard
JD $=$ Not Detected
2L= Reporting Limit
?age 1 of 1

## Chromatogram



Chromatogram




-
-
-


## Chromatogram



Type: BS Lab ID: QC216858

|  | Spximed | Resmile | SRee | Mamese |
| :---: | :---: | :---: | :---: | :---: |
| Gasoline C7-C12 | 10.00 | 10.12 | 101 | 80-120 |




## 



| Field ID: | COMP \#1A-\#1D | Analyzed: |
| :--- | :--- | :--- |
| Type: | SAMPLE | Cleanup Method: EPA 3630 C |
| Lab ID: | $165890-005$ |  |



H= Heavier hydrocarbons contributed to the quantitation
$L=$ Lighter hydrocarbons contributed to the quantitation
$Y=$ Sample exhibits chromatographic pattern which does not resemble standard
ND = Not Detected
RL= Reporting Limit
Page 1 of 1

## Chromatogram



Comp \#|A-\# ID

Sample \#: 82285
Date : 6/20/03 08:48 AM
Time of Injection: 6/20/03
Low Point : -18.86 mV
Plot Scale: 1042.9 mV

Page 1 of 1

02:03 AM
High Point : 1024.00 mV

Response [mV]
-



COMP \#2A-\#2D

Sample \#: 82285
Date : 6/20/03 08:49 AM
Time of Injection: 6/20/03 02:42 AM
Low Point : 22.80 mV High Point : 514.02 mV
Plot Scale: 491.2 mV
Response [mV]





|  |  | TosalलE. | मझल Mycuco | . s |
| :---: | :---: | :---: | :---: | :---: |
| Lab \# : | 165890 |  | Location: | Berth 23 |
| Client: | Geomatrix C | Consultants | Prep: | SHAKER TA |
| Project\#: | 8207.001 |  | Analysis: | EPA 8015B |
| Field ID: | ZZZZZZZZZZ |  | Batch\# | 82285 |
| MSS Lab ID: | 165655-001 |  | Sampled: | 06/04/03 |
| Matrix: | Soil |  | Received: | 06/04/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ |  | Prepared: | 06/17/03 |
| Basis: | as received |  | Analyzed: | 06/21/03 |
| Diln Fac: | 2.000 |  |  |  |


车
Hexacosane



| SMusesedese | 笙紬 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1,2-Dichloroethane-d4 | 101 | 76-130 |  | $\cdots$ |
| Toluene-d8 | 103 | 80-120 |  |  |
| Bromofluorobenzene | 103 | 76-125 |  |  |

iD = Not Detected
. L = Reporting Limit


| Lab \#: Client: Project\#: | ```1 6 5 8 9 0 Geomatrix Consultants 8207.001``` | Location: Prep: <br> Analysis: | Berth 23 Port of Oakland <br> EPA 5030B <br> EPA 8260B |
| :---: | :---: | :---: | :---: |
| Field ID: | COMP \#2A-\#2D | Diln Fac: | 25.00 |
| Lab ID: | 165890-010 | Batch\#: | 82297 |
| Matrix: | Soil | Sampled: | 06/17/03 |
| Units: | $\mathrm{ug} / \mathrm{Kg}$ | Received: | 06/17/03 |
| Basis: | as received | Analyzed: | 06/18/03 |


| Mnjusyese: | Ressuly | RY\# |
| :---: | :---: | :---: |
| M'TBE | ND | 130 |
| Benzene | ND | 130 |
| Toluene | ND | 130 |
| Ethylbenzene | ND | 130 |
| m,p-Xylenes | 150 | 130 |
| o-Xylene. | 130 | 130 |


| Sixuseoneder |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1,2-Dichloroethane-d4 | 99 | 76-130 |  |  |
| Toluene-d8 | 102 | 80-120 |  |  |
| Bromofluorobenzene | 105 | 76-125 |  |  |

## 

| Lab \#: | 165890 | Location: | Berth 23 Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260 B |
| Type: | BLANK | Diln Fac: | 1.000 |
| Lab ID: | QC216979 | Batch\#: | 82297 |
| Matrix: | Water | Analyzed: | 06/18/03 |
| Units: | ug/L |  |  |


|  | Tresesux | R |  |
| :---: | :---: | :---: | :---: |
| MTBE | ND | 5.0 |  |
| Benzene | ND | 5.0 |  |
| Toluene | ND | 5.0 |  |
| Ethylbenzene | ND | 5.0 |  |
| m,p-Xylenes | ND | 5.0 |  |
| o-Xylene | ND | 5.0 |  |



[^3]

| Lab \#: | 165890 | Location: | Berth 23 Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260 B |
| Type: | LCS | Diln Fac: | 1.000 |
| Lab ID: | QC216978 | Batch\#: | 82297 |
| Matrix: | Water | Analyzed: | 06/18/03 |
| Units: | ug/L |  |  |


| AM, \%.3. |  | 3 | \% P S |  |
| :---: | :---: | :---: | :---: | :---: |
| Benzene | 50.00 | 53.76 | 108 | 78-120 |
| Toluene | 50.00 | 53.70 | 107 | 79-120 |


purgenbile Aromatick by Gc/ ks


| STurevasume |  |  |  |
| :---: | :---: | :---: | :---: |
| 1,2-Dichloroethane-d4 | 97 | 76-130 |  |
| Toluene-d8 | 106 | 80-120 |  |
| Bromofluorobenzene | 110 | 76-125 |  |



 $\div 1$
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$+$
i

A. NA L, Y T CAL REPORT

Prepared for
Geomatrix Consultants 2101 Webster Street 12th Floor Oakland, CA 94612

Date: 18-JUN-03
Lab Job Number: 165651
Project ID: 8207.001
Location: Port of Oakland

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.


This package may be reproduced only in its entirety.


| Type: | SAMPLE | Diln Fac: | 5.000 |
| :--- | :--- | :--- | :--- |
| Lab ID: | l65651-001 | Analyzed: | $06 / 07 / 03$ |


| Analyte | Resalt | RI |
| :---: | :---: | :---: |
| Gasoline C7-Cl2 | 19,000 | 250 |
|  |  |  |
|  | Sirrogeto |  |
| Trifluorotoluene (FID) | 100 | $57-150$ |
| Bromofluorobenzene (FID) | 91 | $65-144$ |


| Type: | BLANK | Diln Fac: | 1.000 |
| :--- | :--- | :--- | :--- |
| Lab ID: | QC215673 | Analyzed: | $06 / 06 / 03$ |


| Anal |  | REV | \%: |
| :---: | :---: | :---: | :---: |
| Gasoline C7-Cl2 | ND | 50 |  |


| Surrogate, , , , \%REC Limits |  |  |
| :---: | :---: | :---: |
| Trifluorotoluene (FID) | 87 | 57-150 |
| Bromofluorobenzene (FID) | 80 | 65-144 |




| Type: MSD |  | Lab ID: | QC215711 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| W. ${ }^{\text {a }}$, Analyte | 4 | Splked, \% \% | Resulde | \%REC. | Tmuse | R. |  |
| Gasoline C7-C12 |  | 2,000 | 2,243 | 94 | 76-120 | 1 | 20 |
| (\%) \%, \%, Surrogete | \%REC. | Limists |  |  | . |  |  |
| Trifluorotoluene (FID) | 109 | 57-150 |  |  |  |  |  |
| Bromofluorobenzene (FID) | 107 | 65-144 |  |  |  |  |  |





*= Value outside of QC limits; see narrative
$I=$ Lighter hydrocarbons contributed to the quantitation
' $Y=$ Sample exhibits chromatographic pattern which does not resemble standard
${ }^{1} \mathrm{~b}=$ See narrative
ND = Not Detected
RL= Reporting Limit
LR = Response exceeds instrument's linear range
Page 1 of 1


$\underset{\text { 华 }}{\text { Hexacosane }}$
Cype:
دab ID


| Lab \#: | 165651 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Field ID: | GW-060503 | Batch\# : | 82221 |
| Lab.ID: | 165651-001 | Sampled: | 06/05/03 |
| - Matrix: | Water | Received: | $06 / 05 / 03$ |
| Units: | ug/L | Analyzed: | 06/17/03 |
| Diln Fac: | 16.67 |  |  |






## 

| Lab \#: | 165651 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Matrix: | Water. | Batch\#: | 82221 |
| Units: | ug/L | Analyzed: | 06/16/03 |
| Diln Fac: | 1.000 |  |  |

type: BS Lab ID: QC216677


Type:

|  |  | Seximed | Remume | \%RELC | H1muse | RP\% | प14] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MTBE |  | 50.00 | 52.86 | 106 | 69-124 | 1 | 20 |
| Benzene |  | 50.00 | 48.68 | 97 | 80-120 | 4 | 20 |
| Toluene |  | 50.00 | 50.71 | 101 | 80-120 | 2 | 20 |
| Ethylbenzene |  | 50.00 | 53.43 | 107 | 80-120 | 4 | 20 |
| $\mathrm{m}, \mathrm{p}$-Xylenes |  | 100.0 | 106.0 | 106 | 80-121 | 4 | 20 |
| 0-Xylene |  | 50.00 | 53.57 | 107 | 80-120 | 3 | 20 |
|  |  |  |  |  |  |  |  |
| K. | SREC | M13144 |  |  | \$.״ |  |  |
| 1,2-Dichloroethane-d4 | 105 | 77-129 |  |  |  |  |  |
| Toluene-d8 | 103 | 80-120 |  |  |  |  |  |
| Bromofluorobenzene | 1.01 | 80-123 |  |  |  |  |  |



## rem.

| Lab \#: | 165651 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 3010 |
| Project\#: | 8207.001 | Analysis: | EPA 6010B |
| Analyte: | Lead | Batch\#: | 82012 |
| Matrix: | Water | Prepared: | 06/09/03 |
| - Units: | ug/L | Analyzed: | 06/11/03 |
| Diln Fac: | 1.000 |  |  |


| Tapes | Habumo | Sp, myed | Respurve. | \%ene |  |  | 13n. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BS | QC215817 | 100.0 | 99.70 | 100 | 68-123 |  |  |
| BSD | QC215818 | 100.0 | 91.10 | 91 | 68-123 | 9 | 27 |


|  |  | Ieat |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lab \#: | 165651 | Location: | Port of Oakland |  |  |  |  |
| Client: | Geomatrix Consultants | Prep: | EPA 3010 |  |  |  |  |
| Project\#: | 8207.001 | Analysis: | EPA 6010B |  |  |  |  |
| Analyte: | Lead | Batch\#: | 82012 |  |  |  |  |
| Field ID: | ZZZZZZZZZZ | Sampled: | 06/04/03 |  |  |  |  |
| MSS Lab ID: | 165655-015 | Received: | 06/04/03 |  |  |  |  |
| Matrix: | Water | Prepared: | 06/09/03 |  |  |  |  |
| Units: | ug/L | Analyzed: | 06/11/03 |  |  |  |  |
| Diln Fac: | 1.000 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | MSS | Splyese | K | 3R-R ${ }^{\text {a }}$ | H.my | RP | Himm |
| MS $\quad$ QC215819 | $<1.700$ | 100.0 | 98.20 | 98 | 33-145 |  |  |
| MSD QC215820 |  | 100.0 | 95.00 | 95 | 33-145 | 3 | 43 |


| Sample Name : 165651-001,81980 |  |  |  | Sample \#: bl | Page 1 of 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FileName : | G: \GC05\DATA \157G047. raw |  |  | Date : 6/7/03 06:45 PM |  |
| Method | TVHBTXE |  |  | Time of Injection: 6/7/03 | 03:52 PM |
| Start Time : | 0.00 min | End Time : | 25.00 min | Low Point : -4.64 mV | High Point : 393.42 mV |
| Scale Factor: | 1.0 | Plot Offset: | -5 mV | Plot Scale: 398.1 mV |  |
| Cun | 0 Nos |  |  | Response [mV] |  |





Date : 6/6/03 01:49 PM
Time of Injection: 6/6/03 01:24 PM
Low Point : 11.61 mV

Resocnse [mV]

## at ai blabs

Chromatogram


Sample \#: 82043
Page 1 of 1
Date : 6/12/03 09:07 AM
Time of Injection: 6/12/03 02:05 AM
Low Point : 23.62 mV
High Point : 794.64 mV
Plot Scale: 771.0 mV

Response [mV]
$6 i \omega-660503$




# COOLER RECEIPT CHECKLIST 



A. Preliminary Examination Phase
Date Opened:
$\qquad$
By (print):

2. Were custody seals on outside of cooler? Seal name:
How many and where? $\qquad$ Seal date: $\qquad$
$\qquad$
3. Were custody seals unbroken and intact at the date and time of arrival? YES NO
4. Were custody papers dry and intact when received? XES NO
5. Were custody papers filled out properly (ink, signed, etc.)\%.............................CES NO
6. Did you sign the custody papers in the appropriate place?............................... \&ES NO
7. Was project identifiable from custody papers? \&ES NO If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ...........YES NO Type of ice: Wet._Temperature: $\qquad$
B. Login Phase

Date Logged In: $\qquad$ By (print): Temonornoron

1. Describe type of packing in cooler: In
2. Did all bottles arrive unbroken? ziploc type bags
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? AYES NO
4. Did bottle labels agree with custody papers? NO
5. Were appropriate containers used for the tests indicated? 4 NO
6. Were correct preservatives added to samples? YES NO7. Was sufficient amount of sample sent for tests indicated?(ES NO
EYES NO
7. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO9. Was the client contacted concerning this sample delivery?YES NO

If YES, give details below.
Who was called? $\qquad$ By whom? $\qquad$ Date: $\qquad$
Additional Comments:
8 - Sample -002 one voa w/ air bubble $\simeq$ Lcm in diameter

## APPENDIX C

## Uniform Hazardous Waste Manifests and Certificates of Destruction




99 South Austin Road/witiching location inteca, CA 95336
ndfill: (209) 982-4298 / wEGGLNG LOCATION source Recovery; (209) 982-4936 00157 ²
FOSS ENUIKONMENTAL
ERIAN ECKHUFF
1605 FERRY POINT
ALAMEDA; CA 94501
Contract: 1576悊
P.D. Box 6336

Stackton, CA 95206
Main Office: (z09) $466-4482$
Faz: (209) 465-0631


Gross Weight
6E, 140.00 LE
3Е,600.00 LB
$35,540.00$ LB 17.77 TN
Net Weight

Inbound - SCALE TICKET

CLAGS II SOIL







DRIVER'S SIGNATURE


-99 South Austin Road/weighinc location anteca, CA 95336
minili: (209) 982-4298 / WEICHING LOCATION
source Recovery: (209) 982-6936
001576
FOSS ENUIRONNEMTAL
BRIAN ECKHDFF
1605 FERRY POINT
ALAMEDA, EA 94501
Contract: 1576\#
P.O. Box 6336

Stacklon, CA 95206
Main Office; (209) 466-4482
Fax: (209) 465-0631


IMbound - SCALE TICKET

5torea Tare Weight $31,340.00$ LB
Net Weight 43, 240.00 LE 21. GE TN




MANIFEST \#00007






99 South Austim Road/WEiGHING LOCAMON
antera, CA 95336
ndfill: (209) 982-4298 / wEICHINC LOCATION
source Recovery: (209) 982-4936
$0015 \% 6$
FOSS ENUIFIUMMENTA!
BRIAN ECKHDFF
1 205 FERRY FOLNT
ALAMEDA, CA, 74501
ContraEt: 1576事
P.O. Box 6336

Stocktor,.CA 95206
Main Office: (209) 466-4482
Fax; (209) 465-0631





MANIFEST. \#000005

DRIVER'S SIGNATURE






FORWARD
INCORPORATED
? 39 South Austin Road/weighing Location nteca, CA 95336
idfill: (209) 982-4298 / WEIGHing Location bource Recovery; (209) 982-4936

101578
FOSS ENVIRONMENTAL
BKIAN ESKHOFF
1日OS FERRY POINT
ALAMEDA, CA 84501
contrect: 1576年
P.O. Box 6336

Stochtinn, CA 95206
Main Office: (209) 466-4482
Fax: (209) 465-0631


Gross Height. 73,300.00 Lg
Tare Height 32,100.00 LB
Net Height 4$\} ; 200.00$ LB 20.60. TN
Inbounio - SCALE.TICKET





MANIFEST \#OOOD2

DRIVER'S SIGNATURE




# CERTIFICATE CERTIFIED SERVICES COMPANY <br> 255 Parr Boulevard - Richmond, California 94801 

 (O)ACIANE, LOCATION: __ RICHMANDCA _DATE: _EAN2003- TIME: 12.27:38 VISUAL GASTECH/131A SMPN $\qquad$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
$1,00 \% \mathrm{GAL}$
CONDITION
SAFE FOR FIRE

REMARKS:
QXIGEN 20.SO LSAER EXPLOSivE LIMIT LESS THAN 0.1\% ECOLOGY CONTROLINDUSTRIES
HERbY CERTIfIES THAT THE ABOVE NUMbERED TANK HAS GrEEN CUT OPEN, PROCESSED.
AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY.
ECOLOGY CONTROL INDUSTRIES HAS THE APpROPRIATE PERmITS FOR, AND HAS ACCEPTED
THE TANK SHIPPED TOrUS FOR PADCESSHKG

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 30 designated (a) The oxygen content of the atmosphere ls at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible 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 ln 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 inserted, 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 condiybns and limpations under which it was issued.



# CERTIFIED SERVICES COMPANY 

255 Parr Boulevard - Richmond, Califormia 84801


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 w/th its assigned designation. This certificate is based on conditions existing at the time the inspection hereln set forth was completed and is issued subject to compliance with all qualifications and instructions.
$10,000 \mathrm{GAL}$
SAFE FOR FIRE
TARK SIZE
REMARKS: OXYGEA $20.8 \%$ LOMPR EXPLQSIME LIMIT LESS THAN $0.1 \%$ ECOLOGY CONTROL INDUSTRIES

THE TANK SHIPFED TO US FOR PROCESGING.

In the event of any physical or atmospherle 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 valld for 24 hours if no physical or atmospheric
changes ocour. .changes ocour.

## 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 residuas are not capable of producing toxic materials under existing atmospheric conditlone while maintained as directed on the Inspector's certificate.
SAFE FOR FIAE; 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 finspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and whlle malntained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have elther been cleaner sufficiently to provent the spread of fire, are satisfactorly Inemed, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representalive acknowledges recelpt of this certificate and understands yen condiflons and ligitations under
which it was issued.


TITLE








19. Discraponcy Indication Spaca


## APPENDIX D

## Backfill Analytical Laboratory and Geotechnical Testing Reports


R.EPPORT

## Prepared for:

Geomatrix consultants 2101 webster Street 4 Wh. Fleor बalland, CA. 94642

Date: 11-JUN-03
Lab Job Number: 165557 Project ID: 8207.001

Location: 1195 Maritime Berth 23

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.


This package may be reproduced only in its entirety.
$\qquad$





| Lab \#: | 165557 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | 8015B |
| Field ID: | ZZZZZZZZZZ | Diln Fac: | 1.000 |
| MSS Lab ID: | 165552-005 | Batch\#: | 81870 |
| Matrix: | Soil | Sampled: | 06/02/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$. | Received: | 06/02/03 |
| Basis: | as received | Analyzed: | 06/03/03 |


Type:
MSD
Lab ID:
QC215230


| Suspegaese |  |  |  |
| :---: | :---: | :---: | :---: |
| Trifluorotoluene (FID) | 125 | 56-144 |  |
| Bromofluorobenzene (FID) | 117 | 51-142 |  |




I= Heavier hydrocarbons contributed to the quantitation
$I=$ Sample exhibits chromatographic pattern which does not resemble standard
J= Not Detected
$j=$ Reporting Limit



Sample \#: 81951
Page 1 of 1
Date : 6/6/03 12:24 PM
Time of Injection: 6/6/03 11:49 AM
Low Point : 20.06 mV High Point : 185.59 mV
Plot Scale: 165.5 mV

Response [mV]



## Chromatogram




| Lab \#: | 165557 | Location: | Port of Oakland |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 3550 |
| Project\#: | 8207.001 | Analysis: | EPA 8015B |
| Type: | LCS | Diln Fac: | 1.000 |
| Lab ID: | QC215570 | Batch\#: | 81951 |
| -Matrix: | Soil | Prepared: | 06/05/03 |
| Units: | $\mathrm{mg} / \mathrm{Kg}$ | Analyzed: | 06/06/03 |
| Basis: | as received |  |  |

Cleanup Method: EPA 3630C

| A\%MEN\% | Spenees | Reepegex | 882e\% | Hinuskes |
| :---: | :---: | :---: | :---: | :---: |
| Diesel CIO-C24 | 50.30 | 37.12 | 74 | 49-129 |





| Lab \#: | 165557 | Location: | 1195 Maritime Berth 23 |
| :---: | :---: | :---: | :---: |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Field ID: | FILL-060303 | Diln Fac: | 0.9804 |
| Lab ID: | 165557-001 | Batch\#: | 81883 |
| Matrix: | Soil | Sampled: | 06/03/03 |
| Units: | ug/Kg | Received: | 06/03/03 |
| Basis: | as received | Analyzed: | 06/03/03 |



ND $=$ Not Detected
RL= Reporting Limit
Page 1 of 1

|  | P $4=8=4$ |  |  |
| :---: | :---: | :---: | :---: |
| Lab \#: | 165557 | Location: | 1195 Mariti |
| Client: | Geomatrix Consultants | Prep: | EPA 5030B |
| Project\#: | 8207.001 | Analysis: | EPA 8260B |
| Type: | BIANK | Basis: | as received |
| Lab ID: | QC215272 | Diln Fac: | 1.000 |
| Matrix: | Soil | Batch\#: | 81883 |
| Units: | $\mathrm{ug} / \mathrm{Kg}$ | Analyzed: | 06/03/03 |


|  |  |  |  |
| :---: | :---: | :---: | :---: |
| MTBE | ND | 5.0 |  |
| Benzene | ND | 5.0 |  |
| Toluene | ND | 5.0 |  |
| Ethylbenzene | ND | 5.0 |  |
| m, p-Xylenes | ND | 5.0 |  |
| o-xylene | ND | 5.0 |  |



## 

| Lab \#: <br> Client: <br> project\#: | ```165557 Geomatrix Consultants 8207.001``` | Location: <br> Prep: <br> Analysis: | ```I195 Maritime Berth 23 EPA 5030B. EPA 8260B``` |
| :---: | :---: | :---: | :---: |
| Type: | LCS | Basis: | as received |
| Lab ID: | QC215271 | Diln Fac: | 1.000 |
| Matrix: | Soil | Batch\#: | 81883 |
| Units: | $\mathrm{ug} / \mathrm{Kg}$ | Analyzed: | . $06 / 03 / 03$ |


| An, \#kyke | Sevakesedek |  | \%RES¢ |  |
| :---: | :---: | :---: | :---: | :---: |
| Benzene | 50.00 | 46.09 | 92 | 78-120 |
| Toluene | 50.00 | 47.98 | 96 | 79-120 |




тYpe: MS Lab ID: $\quad$ QC215274

| 4nemke | MSSN. F eserske | Spmaked | Kenekem | , ReRe |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene | $<0.07800$ | 48.08 | 41.14 | 86 | 55-121 |
| Toluene | $<0.1900$ | 48.08 | 39.73 | 83 | 44-125 |


Type: MSD Lab ID: QC215275

|  | \%, ${ }^{\text {a }}$, |  | R \% \% | \%2E\& |  | \%-8, |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene |  | 48.08 | 40.91 | 85 | 55-121 | 1 | 20 |
| Toluene |  | 48.08 | 40.54 | 84 | 44-129 | 2 | 20 |


|  | 解 |  |  |
| :---: | :---: | :---: | :---: |
| 1,2-Dichloroethane-d4 | 99 | 76-130 |  |
| Toluene-d8. | 103 | 80-120 |  |
| Bromofluorobenzene | 95 | 76-125 |  |



## COMPACTION TEST REPORT




[^0]:    区Photo Ionization Detector with $\qquad$ eV lamp
    $\square$ Combustible Gas Indicator
    $\square$ Detector Tube (Brand: $\qquad$ ) - Tubes: $\qquad$
    $\square$ Hydrogen Sulfide Meter
    $\square$ Passive Dosimeter
    Air Sampling Pump - Filter Media: $\qquad$
    $\square$ Flame Ionization Detector
    Oxygen Meter

    ØOther: Contractor will provide combustible gas indicator to monitor excavation and tanks. 031803 REVISION

[^1]:    

[^2]:    *= Value outside of QC limits; see narrative
    ND= Not Detected
    RL= Reporting Limit
    Page 1 of 2

[^3]:    ND $=$ Not Detected
    RL= Reporting Limit
    Page 1 of 1

