SUMMARY REPORT
SOIL BORING INSTALLATION

ALAMEDA COUNTY FIRE DEPARTMENT

20336 San Miguel Ave, Castro Valley

6901 Villa Real, Castro Valley

Submitted By:
Frye Environmental
8020 Starr Road
Windsor, CA 95492

1-800-854-9110

March, 2003

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1.0 INTRODUCTION AND OBJECTIVES

R.L. Stevens Co. contracted **Frye Environmental Inc. (FEI)** to perform a limited soil investigation at investigation for two sites located at 20336 San Miguel Avenue, Castro Valley, California and 6901 Villa Real, Castro Valley, California. Both properties are used as Alameda County Fire Departments.

As shown in Plate 1, both sites are located in Alameda County, north of Interstate 580.

This present report documents the tasks performed, methodology and investigative findings for the installation of the borings, including the data collected during the boring installation.

2.0 SCOPE OF WORK

All work was conducted under permit by the Alameda County Division of Hazardous Materials. The permits for 20336 San Miguel Avenue and 6901 Villa Real are included in this Summary Report as Appendixes A and B respectively.

The scope of work included the following:

- Install soil borings adjacent to existing Underground Storage Tanks (UST) and collect samples.
- Perform a chemical analysis on the samples
- Generate a Summary Report documenting the findings.

3.0 HEALTH AND SAFETY

The separate Site Health and Safety Plan submitted to and approved by Alameda County Division of Hazardous Materials. Each Site Health and Safety Plan was reviewed prior to the commencement of field activities at each property and signed by all field personnel. The Health and Safety Plan for 20336 San Miguel Avenue and 6901 Villa Real are included in this Summary Report as Appendixes C and D respectively.

4.0 INVESTIGATION METHODOLOGY

After the Work Plan and Health and Safety Plan were approved, permits were obtained from the County of Alameda and the proposed boring locations were cleared by Underground Service Alert (USA). The USA # for 20336 San Miguel Avenue and 6901 Villa Real were 48830 and 48843 respectively.

8020 Starr Road, Windsor, California 95492 • 707-837-2809

4.1 Soil Boring Locations

The soil boring locations were placed adjacent to each UST and advanced to a depth of approximately 1-3 feet below the measured depth of the UST.

4.2 Waste Disposal

The soil cuttings were placed back into each boring.

5.0 LABORATORY METHODOLOGY

The soil samples were analyzed by Analytical Sciences, a state-certified laboratory in Petaluma, California, in accordance with State and Federal methodologies. Specifics of the analytical methods, procedures and the QA/QC parameters of accuracy and precision and limitations on sample retention information are available from the laboratory.

5.1 Laboratory Chemical Analysis, Groundwater Samples, Soil Borings

Based on a site meeting with Alameda County personnel, soil samples collected from the borings were analyzed for the following compounds:

- Total Petroleum Hydrocarbons Scan (gasoline and diesel) by EPA Methods - Modified 8015.
- BTEX (Benzene, Toluene, Ethyl benzene, m,p-xylene, o-xylene) and oxygenated gasoline additives using EPA Method 8260B.

The laboratory reports, including chain-of-custody documentation for the groundwater samples collected from the borings are included as Appendix E.

6.0 ANALYTICAL RESULTS FOR SOIL SAMPLES

6.1 20336 San Miguel Avenue

Soil samples collected from each boring and analyzed by Analytical Sciences, Petaluma California for constituents of concern listed in Section 5.1. Table 1 summarizes the analytical results that are discussed below.

TPH as gasoline was detected at 330 mg/kg and TPH as diesel was detected at 90 mg/kg, although the laboratory noted that *"The sample chromatogram does not exhibit a pattern characteristic of diesel. Higher boiling point constituents of weathered gasoline are present in the early boiling point range associated with diesel."*

BTEX components and oxygenated gasoline additives were not detected above their respective detection limits at this site.

6.2 6901 Villa Real

Soil samples collected from each boring and analyzed by Analytical Sciences, Petaluma California for constituents of concern listed in Section 5.1. Table 1 summarizes the analytical results that are discussed below.

TPH as gasoline, TPH as diesel, BTEX components and oxygenated gasoline additives were not detected above their respective detection limits at this site.

Table 1 Analytical Results, Alameda County Fire Department, February 13, 2003

SAMPLE ID	TPHg	TPHd	B	T	E	X	TBA	MtBE	DIPE	ETBE	TAME
	mg/kg										
San Miguel	330	90	<500	<500	<500	<500	<10,000	<500	<500	<500	<500
Villa Real	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0	<1.0	<1.0	<1.0

7.0 LIMITATIONS

This report was prepared solely for the use of the client. The content and conclusions provided by FEI in this assessment are based on information collected during our investigation, which may include, but not limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals: review of available public information at the time of preparation of the document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing similar services of a similar nature. Frye Environmental Inc. is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon the findings identified in this report and interpretation of such data based upon our experience and background, and no warranty expressed or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

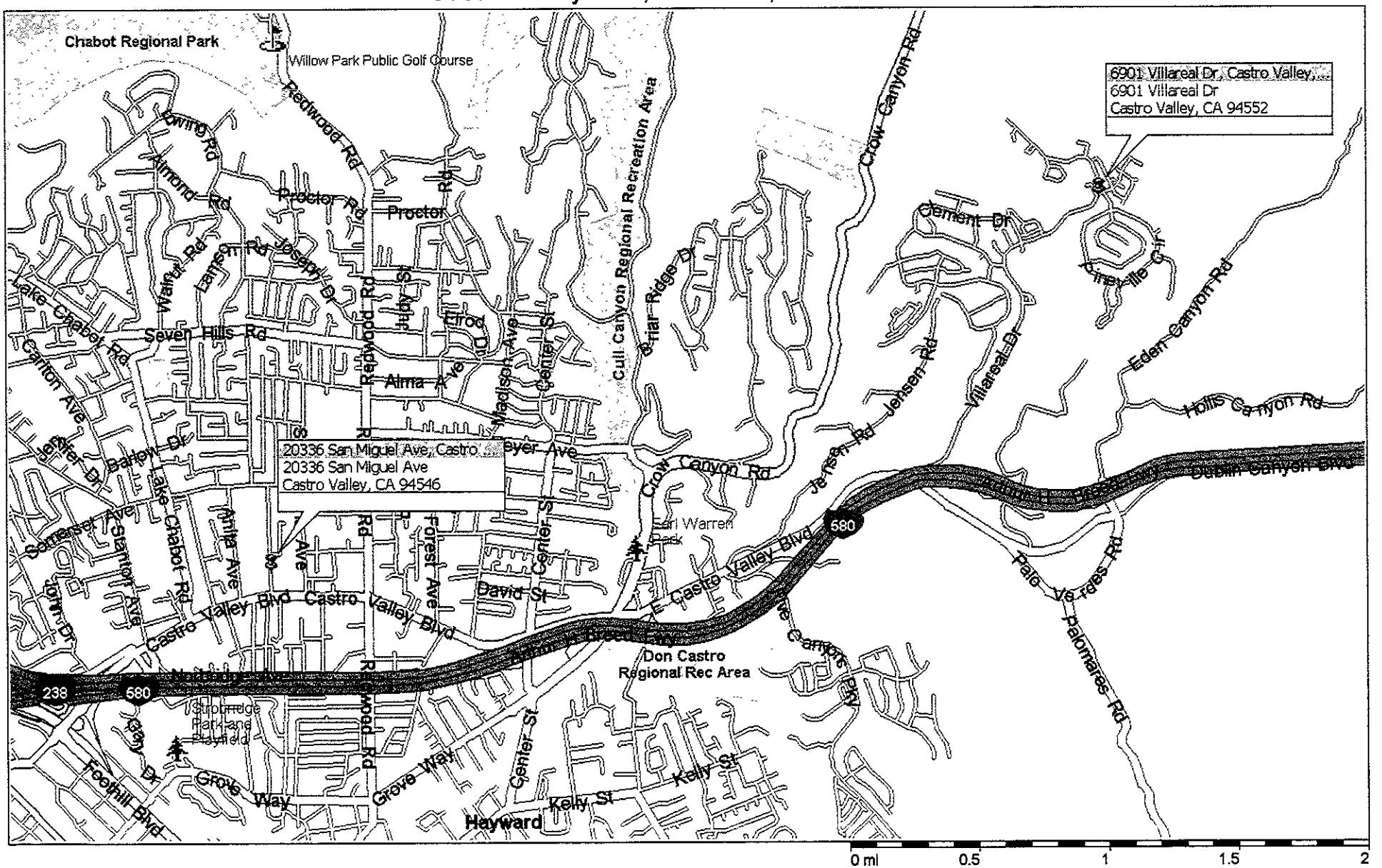
Submitted By:

_____

Christopher G. Frye, Principal Engineer

License Number

Castro Valley area, California, United States



ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
ENVIRONMENTAL HEALTH SERVICES
1131 HARBOR BAY PARKWAY, RM 250
ALAMEDA, CA 94502-6577
PHONE # 510/567-6700

ACCEPTED
Underground Storage Tank Closure Permit Application
Alameda County Division of Hazardous Materials
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

These closure/removal plans have been received and found to be acceptable and essentially meet the requirements of State and Local Health Laws. Changes to your closure plans indicated by this Department are to assure compliance with State and local laws. The project proposed herein is now released for issuance of any required building permits for construction/demolition.
One copy of the accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.
Any changes or alterations of these plans and specifications must be submitted to the this Department and to the Fire and Building Inspections Department to determine if such changes meet the requirements of State and local laws.
Notify this Department at least 72 hours prior to the following required inspections:
CLOSURE
Removal of Tank(s) and Piping
Sampling
Final Inspection

Issuance of a) permit to operate, b) permanent site closure, is dependent on compliance with accepted plans and all applicable laws and regulations.

THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS

Contact Specialist: Robert Weston 1-23-03

Closure in Place
See letter dated 1-22-03.
1. Include EPA ID # prior to work on site.
2. Site Safety Plan required on job site

UNDERGROUND TANK CLOSURE PLAN
* * * Complete plan according to attached instructions * * *

1. Name of Business ALAMEDA County Fire Dept
   Business Owner or Contact Person (PRINT) Robert Swedgruss
2. Site Address 20336 San Miguel Ave.
   City Castro Valley, Ca. Zip 94546 Phone
3. Mailing Address
   City Zip Phone
4. Property Owner ALAMEDA County Fire Dept
   Business Name (if applicable)
   Address 835 East 14th. St.
   City, State San Leandro, Ca. Zip 94577
5. Generator name under which tank will be manifested
   ALAMEDA County Fire Dept
   EPA ID# under which tank will be manifested C A

SL0003864

6. Contractor Chris Frye Contracting
Address 8020 Starr Rd
City Windsor CA 95492 Phone (707) 837-2809
License Type A W-Hazmat ID# 797498

7. Consultant (if applicable) Frye Environmental, Inc.
Address 8020 Starr Rd
City, State Windsor CA 95492 Phone (707) 837-2809

8. Main Contact Person for Investigation (if applicable)
Name Chris Frye Title Principal
Company Frye Environmental, Inc.
Phone (707) 837-2809

9. Number of underground tanks being closed with this plan two
Length of piping being removed under this plan N/A
Total number of underground tanks at this facility (**confirmed with owner or operator) 2

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

a) Product/Residual Sludge/Rinsate Transporter
Name ECI EPA I.D. No. CAD 982030173
Hauler License No. 1533 License Exp. Date 12/2/04
Address 255 PARR BLVD
City Richmond State CA Zip 94801

b) Product/Residual Sludge/Rinsate Disposal Site
Name SEAPORT DISPOSAL EPA ID# _____
Address 675 SEAPORT BLVD
City REDWOOD CITY State CA Zip 94063

c) Tank and Piping Transporter

Name N/A EPA I.D. No. _____

Hauler License No. _____ License Exp. Date _____

Address _____

City _____ State _____ Zip _____

d) Tank and Piping Disposal Site

Name N/A EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

11. Sample Collector

Name CHRIS FRYE

Company FRYE ENVIRONMENTAL

Address 8020 STARR Rd.

City WINDSOR State CA. Zip 95492 Phone 707-837-2809

12. Laboratory

Name ANALYTICAL SCIENCES

Address 110 Liberty ST

City Petaluma State Ca. Zip 94952

State Certification No. _____

13. Have tanks or pipes leaked in the past? Yes( ) No(X) Unknown ( ).

If yes, describe. N/A

14. Describe methods to be used for rendering tank(s) inert:

Tripple Rinse

Before tanks are pumped out and inerted, all associated piping must be flushed back into the tank(s). All accessible piping must then be removed. Inaccessible piping must be permanently plugged using grout.

The Bay Area Air Quality Management District, 415/771-6000, along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of a combustible gas indicator to verify tank inertness. It is the contractor's responsibility to have a functional combustible gas indicator on-site to verify that the tank(s) is inerted.

15. Tank History and Sampling Information *** (see instructions) ***

Tank		Material to be sampled (tank contents, soil, groundwater)	Location and Depth of Sample
Capacity	Use History include date last used (estimated)		
1,000	Using To Date.	Soil at The Fill END OF The TANK Approx. 3' below bottom of TANK Approx. 10' Deep (1-only)	1-at Fill END OF TANK approx 10' Deep

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

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (estimated) N/A	Sampling Plan N/A

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

N/A

Will the excavated soil be returned to the excavation immediately after tank removal? [ ] yes [ ] no [ ] unknown

If yes, explain reasoning N/A

If unknown at this point in time, please be aware that excavated soil may not be returned to the excavation without prior approval from this office. This means that the contractor, consultant, or responsible party must communicate with the Specialist IN ADVANCE of backfilling activities.

N/A

16. Chemical methods and associated detection limits to be used for analyzing samples:

N/A

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 Sought	EPA or Other Sample Preparation Method Number	EPA or Other Analysis Method Number	Method Detection Limit
	SEE TRACE 2		

18. Submit Worker's Compensation Certificate copy

Name of Insurer _____

19. Submit Plot Plan ***(See Instructions)***

20. Enclose Deposit (See Instructions)

21. Report all 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 provided above, may be needed in order to obtain approval from the Environmental Protection 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 agent and that this responsibility is not shared nor assumed by the County of Alameda.

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

CONTRACTOR INFORMATION

Name of Business Chris Frye Contracting

Name of Individual Chris Frye

Signature [signature] Date 2/4/03

PROPERTY OWNER OR MOST RECENT TANK OPERATOR (Circle one)

Name of Business Alameda County Fire Department

Name of Individual Robert Snodgrass (Fire Inspector

Signature [signature] Date 2/4/03

rev. 11/01/00
UST closure plan

RECOMMENDED MINIMUM VERIFICATION ANALYSES FOR UNDERGROUND TANK LEAKS

For Use by Unidocs Member Agencies or where approved by your Local Jurisdiction

TABLE #2
REVISED 1 MARCH 1999

HYDROCARBON LEAK	SOIL ANALYSIS (SW-846 METHOD)		WATER ANALYSIS (Water/Waste Water Method)	
Gasoline (Leaded and Unleaded)	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
	TOTAL LEAD	AA	TOTAL LEAD	AA
		--Optional--		
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT
Unknown Fuel	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
	TOTAL LEAD	AA	TOTAL LEAD	AA
		--Optional--		
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT
Diesel, Jet Fuel, Kerosene, and Fuel/Heating Oil	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
Chlorinated Solvents	CL HC	8260	CL HC	524.2/624 (8260)
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or 502.2/602 (8021)
Nonchlorinated Solvents	TPHD	8015M or 8260	TPHD	8015M or 524 2/624 (8260)
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or 502.2/602 (8021)
Waste, Used, or Unknown Oil	TPHG	8015M or 8260	TPHG	8015M or 524 2/624 (8260)
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	O&G	9070	O&G	418.1
	BTEX	8260	BTEX	524.2/624 (8260)
	CL HC	8260	CL HC	524 2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
	METALS (Cd, Cr, Pb, Ni, Zn) by ICAP or AA for soil water			
	PCB*, PCP*, PNA, CREOSOTE by 8270 for soil and 524/625 (8270) for water			
	If found, analyze for dibenzofurans (PCBs) or dioxins (PCP)			

NOTES:

1. 8021 replaces old methods 8020 and 8010
2. 8260 replaces old method 8240
3. Reference: Table B-1 in Appendix B of "Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators" (EPA 510-B-97-001).

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
ENVIRONMENTAL HEALTH SERVICES
1131 HARBOR BAY PARKWAY, RM 250
ALAMEDA, CA 94502-6577
PHONE # 510/567-6700

ACCEPTED

Underground Storage Tank Closure Permit Application
Alameda County Division of Hazardous Materials
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

These plans/specifications have been reviewed and found to be acceptable and essentially meet the requirements of State and Local Health Laws. Changes to your closure plans indicated by the Department are to assure compliance with State and local laws. The project proposed herein is now released for issuance of any required building permits for construction/demolition.

One copy of the accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.

Any changes or alterations of these plans and specifications must be submitted to this Department and to the Fire and Building inspection Department to determine if such changes meet the requirements of State and local laws.

Notify this Department at least 72 hours prior to the following required inspections:

X Closure / Removal of tank(s) and Piping
X Sampling
X Final inspection

Issuance of a) permit to operate, b) permanent site closure, is dependent on compliance with accepted plans and all applicable laws and regulations.

THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

Contact Specialist: Robert Weston 2/5/03

Site Safety Plan Required at Job Site

UNDERGROUND TANK CLOSURE PLAN

* * * Complete plan according to attached instructions * * *

1. Name of Business ALAMEDA County Fire Dept
   Business Owner or Contact Person (PRINT) Robert Snodgrass
2. Site Address 6901 Villa Real
   City CASTRO Valley, Ca Zip 94546 Phone
3. Mailing Address
   City Zip Phone
4. Property Owner ALAMEDA County Fire Dept
   Business Name (if applicable)
   Address 835 E. 14th. ST
   City, State San Leandro, Ca Zip 94577
5. Generator name under which tank will be manifested
   ALAMEDA County Fire Dept
   EPA ID# under which tank will be manifested C A

6. Contractor Chris Frye Contracting
Address 8020 Starr Rd
City Windsor CA 95492 Phone (707) 837-2809
License Type A-W-Hazmat ID# 792492

7. Consultant (if applicable) Frye Environmental, Inc.
Address 8020 Starr Rd
City, State Windsor CA 95492 Phone (707) 837-2809

8. Main Contact Person for Investigation (if applicable)
Name Chris Frye Title Principal
Company Frye Environmental, Inc
Phone (707) 837-2809

9. Number of underground tanks being cloned with this plan two
Length of piping being removed under this plan N/A
Total number of underground tanks at this facility (**confirmed with owner or operator) 2

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

a) Product/Residual Sludge/Rinsate Transporter
Name ECI EPA I.D No. CAD 982030173
Hauler License No. 1533 License Exp. Date 12/2/04
Address 255 PARR BLVD
City Richmond State CA Zip 94801

b) Product/Residual Sludge/Rinsate Disposal Site
Name SEAPORT DISPOSAL EPA ID#
Address 675 SEAPORT BLVD
City REDWOOD CITY State CA Zip 94063

c) Tank and Piping Transporter

Name N/A EPA I.D. No. _____

Hauler License No. N/A License Exp. Date _____

Address N/A

City N/A State _____ Zip _____

d) Tank and Piping Disposal Site

Name N/A EPA I.D. No. _____

Address N/A

City N/A State _____ Zip _____

11. Sample Collector

Name Frye Environmental Chris Frye

Company Frye Environmental

Address 8020 Starr Rd.

City Windsor State Cal. Zip 95492 Phone 707-837-2809

12. Laboratory

Name Analytical Sciences

Address 110 Liberty St.

City Petaluma, Ca State Ca. Zip 94952

State Certification No. _____

13. Have tanks or pipes leaked in the past? Yes[ ] No[X] Unknown[ ]

If yes, describe. N/A

14. Describe methods to be used for rendering tank(s) inert:

Triple Rinse

Before tanks are pumped out and inerted, all associated piping must be flushed back into the tank(s). All accessible piping must then be removed. Inaccessible piping must be permanently plugged using grout.

The Bay Area Air Quality Management District, 415/771-6000, along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of a combustible gas indicator to verify tank inertness. It is the contractor's responsibility to have a functional combustible gas indicator on-site to verify that the tank(s) is inerted.

15. Tank History and Sampling Information *** (see instructions) ***

Tank		Material to be sampled (tank contents, soil, groundwater)	Location and Depth of Samples
Capacity	Use History include date last used (estimated)		
550	USING TO DATE	SOIL AT THE FILL END OF THE TANK Approx 3' below bottom of TANK Approx. 10' Deep (1-ONLY)	1-AT FILL END OF TANK Approx 10' Deep

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

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (estimated) N/A	Sampling Plan N/A

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting. N/A

Will the excavated soil be returned to the excavation immediately after tank removal? [ ] yes [ ] no [ ] unknown

If yes, explain reasoning N/A

If unknown at this point in time, please be aware that excavated soil may not be returned to the excavation without prior approval from this office. This means that the contractor, consultant, or responsible party must communicate with the Specialist IN ADVANCE of backfilling activities.

N/A

16. Chemical methods and associated detection limits to be used for analyzing samples:

N/A

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 Sought	EPA or Other Sample Preparation Method Number	EPA or Other Analysis Method Number	Method Detection Limit
	See TABLE 2		

18. Submit Worker's Compensation Certificate copy

Name of Insurer _____

19. Submit Plot Plan ***(See Instructions)***

20. Enclose Deposit (See Instructions)

21. **Report all 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 provided above, may be needed in order to obtain approval from the Environmental Protection 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 agent and that this responsibility is not shared nor assumed by the County of Alameda.

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

CONTRACTOR INFORMATION

Name of Business Chris Frye Contracting

Name of Individual Chris Frye

Signature [signature] Date 2/4/03

PROPERTY OWNER OR MOST RECENT TANK OPERATOR (Circle one)

Name of Business Alameda County Fire Department

Name of Individual Robert Snodgrass (Fire Inspector

Signature [signature] Date 2/4/03

FROM : R L STEVENS CO FAX NO. : 5108890179 Jan. 23 2003 06:30PM P2

David B. Stevens
D.B.A.
R.L. Stevens Company
♦♦♦
♦ P O Box 361 ♦ San Leandro, CA. 94577 ♦
Phone 510 - 889 - 0908 ♦ Fax 510 - 889 - 0179 ♦ Email: RLSCompany@aol.com

Jan. 22, 2003

Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
ATTN.: Robert Weston

REF: Alameda County Fire Dept.
6901 Villa Real.
Castro Valley, CA

As requested, and to become part of the permit application for the permanent closure of the existing 500 gallon underground storage tank in place. The drilling for the soil sample will be completed by
Gregg Drilling Service
950 Howle Rd.
Martinez, CA.
Phone # 925-313-5800.
There will be one core drilling near the fill end of the tank to a depth of the excavation. The soil sample will be analyzed per analysis method table 2.
Based on the approval of the sample by The Alameda County Health Agency. If the sample is negative we will proceed to concrete slurry of the tank in place. We will notify the County Agency 48 hours prior to the drilling, and 48 hours prior to the tank slurry.
Hoping this will meet with your approval

R.L. Stevens Co.

Robert L. Stevens

RECOMMENDED MINIMUM VERIFICATION ANALYSES FOR UNDERGROUND TANK LEAKS

For Use by Unidocs Member Agencies or where approved by your Local Jurisdiction

TABLE #2
REVISED 1 MARCH 1999

HYDROCARBON LEAK	SOIL ANALYSIS (SW-846 METHOD)		WATER ANALYSIS (Water/Waste Water Method)	
Gasoline (Leaded and Unleaded)	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
	TOTAL LEAD	AA	TOTAL LEAD	AA
		–Optional–		
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT
Unknown Fuel	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
	TOTAL LEAD	AA	TOTAL LEAD	AA
		–Optional–		
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT
Diesel, Jet Fuel, Kerosene, and Fuel/Heating Oil	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
Chlorinated Solvents	CL HC	8260	CL HC	524.2/624 (8260)
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or 502.2/602 (8021)
Nonchlorinated Solvents	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or 502.2/602 (8021)
Waste, Used, or Unknown Oil	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	O&G	9070	O&G	418.1
	BTEX	8260	BTEX	524.2/624 (8260)
	CL HC	8260	CL HC	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, and TBA by 8260 for soil and 524.2/624 (8260) for water			
	METALS (Cd, Cr, Pb, Ni, Zn) by ICAP or AA for soil water			
	PCB*, PCP*, PNA, CREOSOTE by 8270 for soil and 524/625 (8270) for water			
	If found, analyze for dibenzofurans (PCBs) or dioxins (PCP)			

NOTES:

1. 8021 replaces old methods 8020 and 8010
2. 8260 replaces old method 8240
3. *Reference:* Table B-1 in Appendix B of "Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators" (EPA 510-B-97-001).

HEALTH AND SAFETY PLAN

FOR

Alameda County Fire Department

SITE ADDRESS

20336 San Miguel Avenue
Castro Valley, California

HEALTH AND SAFETY PLAN

1.0 INTRODUCTION

Personnel involved in Field Investigations and Remediation at sites where Hazardous wastes may be present are potentially exposed to a variety of hazards including:

* Inhalation of toxic airborne contaminants.
* Skin contact with contaminated soil and water.
* Presence of flammable / combustible vapors.
* Oxygen-Deficient atmospheres.
* Heat stress due to protective clothing and environmental conditions.
* Physical standards inherent to field operation (e.g., working near heavy equipment or at remote locations.)

Adequate planning is needed prior to performing work at these sites to minimize the risk of employee injury or illness.

1.1 Purpose

The purpose of the Health and Safety Plan for this particular site, is to provide personnel protection standards and mandatory safety practices, procedures, and contingencies while performing the tasks outlined in the Scope of Work. This Health and Safety Plan addresses the following regulations and guidance:

* Occupational Safety and Health Administration (OSHA) Standards for General Industry. 29 CFR (especially 29CFR 1910. 120 "Hazardous Waste Operations and Emergency Response.")
* OSHA Standards for Construction Industry, 29 CFR 1926.
* National Institute of Occupational Safety and Health (NIOSH), OSHA, U.S. Environmental Protection Agency (EPA), and the U.S. Coast Guard "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," October 1985.

1.2 Responsibilities

The chain of communication and for safety and health-related issues during investigations, remediation, and tank removal activities at the site is delineated below. Frye Environmental, Inc. is to be in overall control of the Health and Safety activities at the site.

Property owner and Frye Environmental, Inc must approve any modification in this Health and Safety Plan.

All Frye Environmental Inc and subcontractor personnel must follow the requirements of this Health and Safety Plan. Any unsafe conditions must be promptly reported to the Site Safety and Health Officer (SSHO), who will be Bryan Musco, or his appointed, qualified person.

FRYE ENVIRONMENTAL, INC. SITE SAFETY and HEALTH OFFICER (SSHO)

The SSHO responsibilities include:

* Reviewing and confirming any changes in personal protective clothing or respiratory protective requirements.
* Reviewing all Health and Safety Documentation.
* Reviewing all on-site ambient air monitoring results.
* Providing site-specific training, as required, to all personnel assigned to work at the site.
* Stopping work when unacceptable Health Safety Risk exists.
* Providing a Health and Safety briefing to all site visitors.
* Supervising decontamination to ensure complete decontamination of all personnel, tools and equipment.
* Supervising the distribution, use, maintenance, and disposal of personnel protective clothing and equipment.

1.3 LIST OF PERSONNEL WITH 40-HOUR OSHA, 29 CFR FOR THIS PROJECT
Certified 40 Hour OSHA, 29 CFR 1910. 120 Hazardous Waste Operations:

Catherine Frye
Chris Frye

2.0 RISK ANALYSIS

This section assesses the chemical and physical hazards that are known to exist at the site and those that may be created by the remediation efforts. Table 2 summarizes the hazards associated with each of these tasks. The hazard analysis has been divided into three critical areas:

* Exposure: Expected frequency of exposure to a hazard;
* Probability: Likelihood of an injury upon exposure to a hazard;
* Consequence: Probable degree of injury or effect an injury will have on the effectiveness of a team member.

An explanation of the letters denoting the degrees of exposure, and consequence is provided at the end of the table.

Contaminants most likely to become encountered during field operations at the site are the Petroleum Hydrocarbons and Metals listed in Table 1. A list of the occupational exposure limits and signs and symptoms of exposure is also listed in Table 1.

Most work required in this project might potentially expose personnel to materials that may contain any or all of these contaminants. Any personnel entering the site shall be informed of all hazards associated with these contaminants.

The physical hazards expected to be present during site investigation activities include:

* Saw Cutting
* Snapping Cables, Slings and Rope
* Drilling Equipment
* Moving Equipment
* Heavy Equipment
* Sharp Objects
* Loose Foundations
* Open Pits or Ditches
* Excessive Noise
* Fire/Explosions
* Buried Utility Lines
* Energized Overhead and Underground Power Lines
* Heat Stress

3.0 PROCEDURES TO MITIGATE HAZARDS

This section describes those procedures to be followed in order to ensure the avoidance of operational hazards, as discussed previously. These hazards include mechanical, electrical, chemical, acoustical, biological, and temperature hazards. Those hazards associated with confined spaces are not anticipated to occur, and are not discussed.

3.1 Mechanical Hazards

The following procedures shall be followed during all phases of the operation to reduce those risks associated with mechanical equipment:

* Stay well clear of drill rods and augers while they are rotating and being hoisted. Extreme care is to be exercised when steel cables are being used to lift the drilling apparatus from the ground.

- Stand clear of the operating circle of excavators, backhoes, etc.

    * Equipment maintenance schedules are the responsibility of each individual contractor. Equipment is to be checked daily. Any equipment deemed by a Frye Environmental Inc. employee to be in an unsafe state of repairs, or operated in an unsafe manner shall be shut down until corrective action is taken. Equipment safety features, such as back-up alarms, shall be checked daily.

3.2 Electrical Hazards

The following procedures shall be followed during all phases of operation, in order to reduce those risks associated with electrical hazards:

* Underground Service Alert (1-800-422-4133) will be contacted prior to site activities to locate the presence of underground cables, utility lines, pipes, and storage vessels at the proposed sites where soils borings will be placed.

* The local power company shall be contacted, in order to verify the minimum allowable clearance from high-voltage power lines. Under no circumstances will any person, piece of equipment, or phase of operation come within 10 feet of overhead power lines.
* If the work area is unavoidably close to buried or overhead power lines. the power shall be turned off, with the circuit breaker locked and tagged out.
* All electrical equipment is to be properly grounded, and under no circumstances are any modifications to be made to any piece of electrical equipment. All electrical equipment is to be inspected daily for damaged leads or plugs. Any piece of equipment that is damaged shall not be used on the site, and shall, in fact, be removed from the site for disposal or repair.
* If splicing wires must connect electrical equipment, the source shall be de-energized first, the breaker box locked out and appropriately tagged by the person who is to perform the splicing operation. All connections are to be appropriately taped. Once the splicing operation is complete, the person who performed the splice shall bring the source back into operation.
* Each person that has cause or need to use a piece of electrical equipment shall ensure that he/she is fully familiar with the equipment's operation and features.

3.3 CHEMICAL HAZARDS

To reduce the possibility of injury due to chemical hazards, personnel shall wear those pieces of Personal Protective equipment as specified by the task, in section 5.0 (Personal Protective Equipment.) Air monitoring shall be conducted to evaluate respiratory and explosion hazards. The instruments and action levels to be used are listed in Table 3. The Frye Environmental Inc. employee conducting each field task shall be responsible for performing the specified air monitoring. In order to ensure the protection of off-site public health, site perimeter air monitoring for volatile organic will be performed (see Section 6.0, Perimeter Monitoring.) If airborne levels of contaminants consistently exceed 5ppm background levels at the perimeter of the site, the work will be stopped, the suspected source of the contamination will be covered to eliminate emissions. A decision will then be made as to how to proceed with the work and how to more fully characterize and reduce the airborne emissions.

3.4 Acoustical Hazards

In order to prevent hearing impairment, the use of earplugs or earmuffs shall be required for all personnel when heavy equipment is in use at the site. However, should any personnel develop pain in the ear due to work-site noise, they shall immediately don a set of earplugs or muffs.
Noise levels will also be controlled to conform to local ordinances.

3.5 Biological Hazards

In order to reduce the risk of biological contamination, Personal Protective Equipment, described in Section 5.0, shall be worn for each specific task. This protective equipment shall be removed, and hands and face washed prior to contact with the mouth, by the hands, for such purposes as eating, drinking, or smoking. Smoking shall only be permitted in those areas designated by SSHO.

3.6 Heat Stress

All personnel entering the work area should be familiar with the signs and symptoms of heat stress. These include:

* Heat Exhaustion--Dizziness, light-headedness, slurred speech, rapid pulse, confusion, fainting, fatigue, copious perspiration, cool skin that is sometimes pale and clammy, and nausea.
* Heat Stress--Hot, dry, flushed skin; delirium, and comma (in some cases.)

Resting frequently in a shaded area and consuming large quantities of fresh, potable water can prevent heat stress. If heat exhaustion symptoms are observed, the person will be required to rest in a shaded area and consume liquids. If symptoms are widespread and observed frequently, an appropriate work/rest regimen will be instituted. This may involve limiting the work period so that after one minute of rest, a person's heart rate (HR) does not exceed 110 beats per minute.

If the HR is higher than110 beats per minute, the next work period should be shortened by 33 percent, while the length of the rest period stays the same. If the HR is 110 beats per minute at the beginning of the next rest period, the following work cycle should be shortened by 33 percent. Resting HR should be determined prior to start of on site activities. A healthy individual's resting HR is usually 60 to70 beats per minute. If symptoms of heat stress are observed, the victim will be transported to the nearest hospital immediately. Workers should not hesitate to seek medical attention if heat stress is suspected.

3.7 Confined Space Hazards

When work is to be done in an area where the natural circulation of fresh air or the ability to readily escape the site is restricted, that site shall be considered a confined space, and the following guidelines shall be followed:

* Personnel shall monitor the levels of oxygen, combustible gasses, and organic vapors prior to entering. Under no circumstances shall the space be metered if the following levels are exceeded:
    1. Oxygen content is less than 19.5%
    2. Combustible gas level is greater than 3% of the LEL.
    3. Total hydrocarbons are greater than the action levels defined in Table 3 of this section, if all air contaminants have not been identified.
* Personnel shall monitor the levels of oxygen, combustible gasses, and organic vapors continuously while inside the confined space. If the values stated in the above are exceeded, the space shall be evacuated immediately.
* At least one additional person, who shall be present for the express purpose of monitoring the personnel in the space, shall be within sight and call of those personnel within the space, while remaining outside of the space proper. This person shall have, readily available to him, all rescue equipment necessary to remove personnel who may require extraction from the space and the site. This equipment shall include, but not be limited to, respiration equipment of the same level as those used by the personnel in the space, first aid equipment, including compresses, harness, and all the extraction equipment.
* Portable fans or blowers shall be used to introduce fresh air into the confined space. These fans or blowers shall be located on the upwind side of the space. The space shall not be entered until values of oxygen, organic vapors, and combustible gasses are brought below and measured below their respective action levels.
* No personnel shall enter any unshored or unsupported excavation with a depth greater than 5 feet, or with unstable geological conditions.

4.0 TRAINING

4.1 Site Workers

All personnel who will perform on site tasks shall be trained by U.S. Department of Labor, Occupational Safety and Health Administration (OHSA) standard, 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response. Training will include:

- A minimum of 40 hours initial instruction off site is required for those personnel conducting invasive fieldwork at the site. Proof of training shall be required to be present at the site.

* A minimum of 3 days of actual field experience under the direct supervision of a trained, experienced supervisor.
* Regulatory officials at the site shall be required to have completed at least 24 hours of initial instructions, and shall present training certification as requested.
* A minimum of 8 hours of refresher training annually.
* First Aid and CPR training.
* Additional training, which addresses any unique or special hazards.

All personnel entering the site shall be requested to present proof of current training. Failure to present such certification shall result in removal from the site.

4.2 On Site Management and Supervisors

On site management and supervisors shall receive at least 8 additional hours of specialized training on managing such operations.

4.3 Pre-entry Orientation Session

Prior to entering the site, personnel shall attend a daily pre-entry orientation session presented by the SSHO, which addresses the following issues. All personnel shall verify attendance of this daily meeting by signing the Safety and Health Plan Review Record. Appendix A.

4.3.1 Degree and Nature of Potential Health and Safety Hazards

The health effects and hazards of the chemicals identified or suspected to be on the site shall be discussed. The physical and chemical properties of the contaminants. The most likely route of exposure, and possible adverse consequences of working on the site if proper safety procedures are not observed or if protective fails or is improperly worn shall be reviewed. Other hazards, which are unique to site operations, shall be presented.

4.3.2 Personal Protective Equipment

Personnel shall be instructed in the use, care, maintenance, limitations, and fitting of personnel protective equipment. Respirator training shall conform to ANSI Z88.2 (1980) and OSHA 29 CFR 1910.134. Personnel shall not be fit tested or issued a respirator if facial hair interferes with the face-to-face piece seal of the respirator.

Qualitative fit testing shall be performed annually. Records of the fit testing shall be maintained. Positive/negative fit testing shall be performed by the user each time a respirator is donned.

4.3.3 Decontamination Procedures

The procedures, materials, equipment, and facilities specific to the site will be discussed during the morning briefing by the SSHO.

4.3.4 Accepted Practices

Specific safe work practices, which must be adhered to during the site operations will be discussed. This will include procedures for entering and exiting the site, and accepted and unaccepted practices within the personnel decontamination area.

4.3.5 Emergency Procedures

Procedures for responding to emergencies as specified in the Emergency Response Plan shall be covered.

4.3.6 Medical Requirements

The medical requirements for all personnel assigned to perform work at the site shall be presented.

5.0 PERSONAL PROTECTIVE EQUIPMENT

All respiratory protective equipment must be approved by the National Institute for Occupational Safety and Health (NIOSH) /Mine Safety and Health Administration (MSHA.) The minimum protective equipment requirements for each site task shall be Level D. However, should airborne monitoring indicate organic vapors consistently in excess of 1-2 ppm, the level of protection shall be upgraded to Level C1. If monitoring indicates organic vapors consistently in excess of 5 ppm, the level of protection shall be up graded to Level C2.

5.1 Levels of Protection

5.1.1 Level D Protection

The following personal protection equipment is required to be worn by all on-site personnel:

* Poly/cotton reusable coveralls or long sleeve shirts and long pants
* Steel toe boot/shoes
* Earplugs or muffs
* Hardhat
* Nitrile gloves (if contact with potentially contaminated soil or water is expected)
* Safety glasses
* Neoprene or butyl rubber boots or latex boot covers (if contact with potentially contaminated soil or water is expected)

5.1.2 Level C1 Protection

* One-half or full face respirator with high efficiency organic vapor cartridges with dust filter

5.1.3 Level C Protection

* Cloth coveralls
* Steel-toed boots with waterproof covers, or steel-toed rubber boots
* Hardhat
* Ear plugs or ear muffs
* Nitrile gloves
* Safety glasses
* Full-face respirator with high efficiency organic vapor cartridges with dust filter

5.2 Maintenance and In-Use Inspection of Protective Equipment

Effective use of protective equipment requires that the equipment be properly used, maintained, and inspected periodically during the day. Procedures will be presented during pre-entry training.

5.2.1 Gloves/Body coverings

Gloves and coveralls will be regularly inspected and replaced if torn. Coveralls will be laundered daily at a minimum. Reusable gloves will be decontaminated whenever exiting work areas.

5.2.2 Respirators

Site conditions are not anticipated to require respiratory protection, therefore, no respirators are expected to be necessary. However, respirators shall be inspected and checked daily for leaks both visually and with negative and positive pressure checks on the wearer. Respirator cartridges will be replaced daily or more frequently if excessive resistance develops. All respirator maintenance will be performed by the SSHO. The type of respirators used will be equipped with high efficiency organic vapor cartridges and dust filters.

Respirator exterior will be wet-wiped whenever exiting work areas, as specified in Section 8. Respirators will be rinsed with a solution containing a sanitizer recommended by the respirator manufacturer. Respirators will be hung to drip dry and, if not used daily, will be placed inside plastic bags for protection against dust.

6.0 ENVIRONMENTAL MONITORING

6.1 Real Time Air Monitoring

A total volatile organics instrument shall be used to periodically monitor airborne concentrations of contaminants on site. A photo ionization detector (PID) (e.g., hNu or OVM) or equivalent and explosimeter/oxygen meter will be used to screen excavated soils for volatile organic compound contamination. The PID will also be used to measure and record employee breathing zone levels of organic vapors and gasses.

The monitoring program may be increased, reduced, or modified by the SSHO, based on site conditions and monitoring results. All monitoring will be accomplished under the direction of the SSHO, who will interpret the results.

The air-monitoring program will include sufficient monitoring of air quality in work zones and other on-site areas to assess levels of employee exposure, determine that the work zone designations are valid, and verify that the respiratory protection being worn by personnel is adequate. The air-monitoring program is also designed to ensure that contaminants are not migrating off site to minimize exposure of near by populations and/or workers. Air monitoring shall be conducted at 15 minute intervals, unless it is determined that air monitoring may occur at less frequent intervals. These less frequent intervals would be the result of ambient air movement (wind,) or through the reduction of the air threat through verification monitoring. Such changes to plan will be logged.

Monitoring shall be conducted:

* When work begins on a different portion of the site.
* When contaminants other than those previously identified are being handled.
* When a different type of operation is initiated.
* If a sufficient reasonable interval has passed so that exposures may have significantly increased.

Measurements shall be taken at the anticipated source and in the breathing zone of site personnel.

Instruments shall only be used by employees who have been trained in the proper operation, use limitation, and calibration of the monitoring instrument and who have demonstrated the skills necessary to operate the instrument.

6.1.2 Perimeter Monitoring

If field conditions warrant, air monitoring will be conducted. If necessary, monitoring shall be conducted at least two times each day, with a total volatile organics direct-reading instrument, at location upwind and downwind at the perimeter of the site. Measurements shall also be taken periodically downwind of each active sampling site to assess the potential for off-site migration. If airborne levels of contamination exceed background levels for a sustained period of time at the perimeter of the site, the work area shall be expanded to encompass all area subjected to the elevated levels. If airborne levels of contaminants exceed background levels by 5 ppm at the perimeter of the site, the work will be stopped, the suspected source of the contamination (borehole or production well) will be covered to eliminate emissions.

If airborne levels of contaminants exceed background levels, a decision will then be made as to how to proceed with the work and how to more fully characterize the airborne emissions.

6.2.2 Field Instruments

Two types of PID vapor analyzers are available for on-site screening during field operations: hNu Model PI 101 and/or Thermo Environmental Instruments 580A or 580B.

The Gastech Flammable Gas Detector shall be used to measure explosion/oxygen levels. Equivalent instruments may be used.

Calibration of instruments will be performed prior to field use on a daily basis. Calibration methods as specified in manufacturers-supplied manuals for each instrument will be followed. A two-point calibration is performed on portable

gas analyzers using hydrocarbon-free air as the zero point and a manufactured calibration gas as the high point. A gas-analyzed instrument is considered to be accurate if readings of the standards are within 20 percent of the actual concentration of standard gas.

6.2.3 Record Keeping Requirements

The result of air monitoring readings shall be recorded on standard air monitoring data forms. A calibration and maintenance log for each instrument shall also be maintained. Records shall also be kept of all significant events, addendum's, or changes to level of protection.

6.3 Heat Stress Monitoring

Ambient temperatures at the site combined with the requirements for PPE use may contribute to heat stress. When ambient temperatures reach or exceed 70 degrees Fahrenheit, body temperatures will be monitored using fever strips or oral thermometers and heart rates will be monitored when heat stress conditions may occur. Work-rest regimens will be adjusted accordingly. (see Section 3.6)

7.0 SITE CONTROL

A check-in and checkout system will be used to control and record each employee and piece of equipment inside the site boundaries. Only personnel identified as "authorized" will be permitted to enter the site. A Master list of authorized personnel will be available and will only include personnel who have received the appropriate training and certification required by this Health and Safety Plan and OSHA requirements.

7.1 Work Zones

Work zones are designated to prevent employees, visitors, and the surrounding environment from exposure to contamination during all aspects of site remediation activities. All work zones and support areas will be established by Frye Environmental Inc. Movement of personnel and equipment between zones and on and off site will be controlled by means of designated access points. Minimum personnel protective equipment for work in each zone is described in Section 5.0.

7.1.1 Work Areas

The work areas encompass the surface areas around the boundary of the property. It is anticipated that this will be a Level D area and be utilized during invasive operations.

7.2 Safe Work Practices

Safe work practices, which must be followed by all site workers, include:

* Eating, drinking, chewing gum or tobacco, and smoking are prohibited in the work and decontamination areas.
* Do not sit or kneel in areas of obvious contamination.
* Hands and face must be thoroughly washed upon leaving the work area.
* Repair or replace immediately any defective PPE.
* Personnel must not take prescription drugs unless specifically approved by a qualified physician.
* If respirators are required, facial hair that interferes with the face-to-face piece fit of the respirator will not be permitted.
* Contact lenses will not be permitted to be worn when the potential for chemical splash exists or when full face-piece respirators are required.
* Personnel on the site must use the buddy system; visual contact must be maintained between team members at all times.

7.2.2 Daily Start-Up and Shutdown Procedures

The following protocols will be followed daily prior to start of work activities:

* The SSHO will review site conditions to determine if modification of work and safety plans are needed.
* Personnel will be briefed and updated on any new safety procedures.
* All safety equipment will be checked for proper function.
* The SSHO will ensure that first aid equipment is readily available.

* The SSHO will indicate appropriate air monitoring.

The following protocol will be followed at the end of daily operations and before breaks:

* All personnel will proceed through appropriate decontamination procedure and facilities.

8.0 DECONTAMINATION

8.1 General

Employees will be trained in decontamination procedures that will be implemented when employees, or equipment enter work or decontamination areas. Decontamination will be performed to minimize potential contamination of the equipment and the spread of contamination from one zone to another.

8.2 Personnel

If it becomes necessary to upgrade the level of protection from Level D to Level C or above, no worker, except under emergency situations, will leave the work area without going through the proper decontamination sequences.

Before leaving the work area, personnel will wash boots and outer gloves at the decontamination area. The wash solution will be a simple detergent and water solution. Outer disposable clothing will be removed and placed in 6-mil plastic bags for disposal. Exterior surfaces of respirators will be wet-wiped, then respirators will be removed and placed in a plastic bag for temporary storage and cleaning.

8.3 Respirator Decontamination

When required, respirators will be cleaned daily by the individuals to whom they have been assigned. Each individual will be responsible for cleaning and maintaining his/her own respirator.

A washbasin or sink, with solution containing sanitizer recommended by the manufacturer, will be provided in the decontamination area for final rinsing of respirators at the end of the day. Respirators will then be hung to drip dry and, if not used daily, will be placed inside plastic bags for protection against contamination. Respirator cartridges will be changed at least daily of more frequently if sampling data indicate potential saturation concentrations exist or breathing resistance becomes difficult. The SSHO will also spot check respirators to ensure that they all remain clean and are properly maintained and stored.

8.4 Equipment Decontamination

If in Level C or above, all equipment being used in the work area will be subject to complete decontamination procedures before the equipment is removed from these areas. Equipment and vehicles which contact potentially contaminated soil will be decontaminated using a steam cleaner or hot water pressure washer. Wastewater will be contained in all holding tank or drums for further disposal at an appropriate facility. All contaminated items will be carefully inspected and/or decontaminated to the satisfaction of the SSHO before being taken off site.

9.0 EMERGENCY RESPONSE PLAN

On site emergencies will ultimately be handled by off site emergency support personnel. Initial response and first aid treatment, however, will be available on site.

In case of a hazardous material emergency, the senior supervisor on site will assume full control and direction of the emergency response as the Incident Commander. The Incident Commander will work with the SSHO to identify and evaluate hazards. All emergency responders and communications will be coordinated and controlled through the Incident Commander.

9.1 Emergency Equipment

Emergency equipment for the work areas will be kept in the decontamination area. The equipment will include:

* Portable emergency eye wash with a capacity for providing clean water at a rate of at least 0.4 gallons per minute for a 15-minute period.

* Two 20-lb multipurpose (ABC-rated) fire extinguishers.
* An adequately stocked first aid kit.

Another adequately stocked first-aid kit and an emergency siren will be available in the support area.

9.2 Pre-Emergency Planning

Prior to start of work, Frye Environmental Inc. will contact local authorities to inform them of the start date and anticipated scope of work. First aid kits at least one Frye Environmental Inc employee trained in first aid and cardiopulmonary Resuscitation (CPR) will be on site at all times during remedial activities.

9.3 Emergency Recognition and Prevention

Emergency conditions that may be anticipated at the site include:

* Medical emergency
* Heavy equipment accident
* Discovery of unanticipated buried hazards
* Poisonous snakes and spiders
* Overexposure of personnel to on site contaminants
* Heat Stress

To ensure that hazard recognition and accident prevention protocols are being maintained, personnel must follow the requirements of the Heath and Safety Plan.

9.4 Operations Shutdown

Operations shutdown may be mandated by on recommendation from the SSHO or by the emergency response Incident Commander. Conditions warranting work stoppage will include:

* Uncontrolled fire
* Uncovering potentially dangerous buried material
* Any condition immediately dangerous to life and health or the environment
* Heat stress illness exhibited by the crew
* Air contaminant concentrations in excess of the protection factors afforded by the respirators in use.

When any of these conditions exist, operations will be stopped and the site secured. All personnel will leave the work area until the Incident Commander has determined that operations may resume.

9.5 Fire and Explosion Response Procedures

Fire on site can be started by natural events, work activities, or the activities of others. There shall be a multipurpose (ABC-rated) fire extinguisher on hand at all times. Personnel will be instructed in the use of these fire extinguishers and to attempt control of only very small fires. The procedure for using a fire extinguisher is to pull the safety pin, point at the base of the flames, and discharge the extinguisher by sweeping the flames from a distance of about 6 feet. The extinguisher operator should move in as the flames are being put out. Frye Environmental Inc. will inform the local fire district immediately in case of any fire when its support will be required.

9.6 Evacuation From Work Areas

If an on-site emergency occurs, the Incident Commander will sound the site emergency alarm. All workers will meet at a predesignated area located in the support area. An Employee head-count will be performed to ensure all workers are accounted for.

In case of an emergency, evacuated employees may be decontaminated rapidly by removing exterior clothing. If the worker is critically injured in the work area, the worker may be removed immediately from the area--DO NOT take the time to decontaminate the injured worker; seek medical attention immediately.

9.7 Emergency Medical Treatment and First Aid
Only minor injuries will be treated on site. They will be treated with the first-aid kit available on site.

For major injuries, contact 911. The phone number for the hospital, fire, and ambulance is 911. A complete list of emergency telephone numbers and route to nearest hospital is provided in Appendix B.

This Health and Safety Plan has been prepared by:

FRYE ENVIRONMENTAL, INC.

_____ President Date April 17, 2002
Title

APPENDIX A

SITE SAFETY AND HEALTH PLAN REVIEW RECORD

SITE: 20336 San Miguel Avenue, California

I have read the Health and Safety Plan for this site and I have been briefed on the nature, level, and degree of exposure likely as a result of participation in this project. I agree to conform to all the requirements of this Plan.

Name	Signature	Affiliation	Date
Chris Frye		FBI	2-13-03
Dave Pearson		G.D.T	2-13-03
Robert Steven			2-13-03

Appendix B

EMERGENCY TELEPHONE NUMBERS

Ambulance 911

Poison Control Center 1-800-523-2222

Fire Department 911

Explosive Unit 911

FRYE ENVIRONMENTAL, INC.

Owner: Chris Frye (Office) (707)837-2809
(Mobil Phone) (707)495-3746

Regulatory Content

California Regional Water Quality Control Board, San Francisco Bay Region, (RWQCB), 1515 Clay Street, Oakland, Suite 1400 CA 94612 (510)-622-2000

CAL OSHA District Office, 1515 Clay Street, Oakland, Suite 1301 CA 94612 (510)-622-2916

Alameda County Fire Department, 20336 San Miguel Avenue, Castro Valley, California (510) 618-3490 or 911

Hospitals

Eden Hospital, 20103 Lake Chabot Road, Castro Valley, CA 510-537-1234

Directions to Hospital: (MAP ATTACHED)

TABLE 1

CHEMICAL CONTAMINANTS

MATERIAL	LEL/UEL (%)	TLV_TWA (ppm)	Odor Threshold (ppm)	ACUTE EXPOSURE SYSMPTOM
Benzene	0.339/7.1	1	4.68	Fever-Convulsions–confusion-dizziness–drowsiness–headache-nausea–respiratory system irritation-skin irritation-tremors-vomiting-weakness
Ethylbenzene	0.0/6.7	100	0.25-200.00	Fever-abdominal pain-dizziness-drowsy-headache-nausea-respiratory system irritation-skin irritation-unconsciousness-vomiting-weakness
Toluene	1.3/7.1	100	0.17-40	Confusion-dizziness-drowsiness-headache-nausea-respiratory system irritation-skin irritation-tremors-unconscious-vomiting-weakness-fever
Xylene	1.1/7.0	100	0.5-200	Dizziness-drowsy-headache-nausea-respiratory system irritation-skin irritation-unconscious-vomiting-fever
Lead	Explosions of dust in confined areas can occur	50 UG/M3	N/A	Convulsions-pains in abdominal area-dizziness-diarrhea-tremors-weakness-fever
Gasoline	1.4/7.6	300	<1	Confusion-dizziness-drowsiness-fever-headache-nausea-respiratory system irritation – skin irritation-unconsciousness
Methylene Chloride	12/NA	50	25-320	Fever-headache-nausea-respiratory system irritation-skin irritation-weakness

TABLE 2

HAZARD ANALYSIS

Job Hazard	Exposure	Probability	Consequence
Drilling			
Drill Rig	A	C	A-D
Mechanical	A	C	E
Noise			
Buried Utilities Electrical	C	C	A-D
Chemical Exposure	A	B	A-E
Fire and Explosion	D	D	A-D
Dust	B	D	D-E
Tank Removal/Excavation			
Heavy Equipment, Including Crane Excavator, Loader, Backhoe			
Mechanical	A	C	A-D
Noise	C	C	E
Chemical Exposure	A	B	A-E
Biological Exposure	D	D	A-D
Fire and Explosion	D	D	A-D
Dust	B	D	D-E
Saw Cutting	C	D	A-E
Tank Lifting	C	D	A-D
Soil Slope Failure	D	D	A-D
Soil and Ground Water Sampling			
Chemical Exposure	A	B-D	A-E
Biological Exposure	D	D	B-D
Decontamination			
Steam Cleaner			
Mechanical	B	D	B-D
Electrical	B	D	A-D
Generator			
Mechanical	C	D	C-D
Electrical	B	D	A-D
Chemical Exposure	B	D	A-E
Biological Exposure	D	D	A-D

EXPLANATIONS

Exposure: The frequency of exposure to the hazard event.

A = Continuously
B = Frequently
C = Occasionally
D = Seldom

Probability: The likelihood that an injury will occur upon exposure to the hazard event.

A = Certain or almost certain
B = Likely, not unusual, 50/50 chance of occurring
C = Unusual, would generally occur less than 50% of the time
D = Improbable, very low chance of occurrence

Consequence: The degree of injury resulting from exposure to the hazard event of significant enough degree to cause an injury.

A = Fatality
B = Serious injury, including chemical exposure, requiring hospitalization
C = Moderate injury, including chemical exposure, requiring on-site first aid treatment
D = Minor injury, including chemical exposure, requiring on-site first aid treatment
E = Chemical, acoustical, or other exposure above the Threshold Limit Value (TLV) or other recommended standard that may not produce immediate acute effects, especially for chronic toxicants

TABLE 3

AIR MONITORING INSTRUMENTATION AND ACTION LEVELS

Hazard	Instrument	Reading	Location	Action
Respiratory	PID/Draeger Tube (Modified D)	1-2 ppm	Breathing	Don Respirator
Respiratory	PID/Draeger Tube (Protection)	5ppm	Breathing	Don Level C
Respiratory	PID/Draeger Tube	10 ppm	Breathing	Leave Area
Explosion	Combust. Gas Meter	10% LEL	Ambient Air	Vent Area
Explosion	Combust. Gas Meter	20% LEL	Ambient Air	Leave Area
Oxygen Deficiency	Oxygen Meter Air	19.5% Oxygen	Ambient	Leave Area

Apparent exposure level above the background ambient air concentration. Background levels may change due to factors such as weather and location of work site.

High efficiency organic vapor cartridges with dust filters shall be used.

As each chemical constituent is identified through soil and surface water testing, specific action levels will be determined. These site-specific action levels and any modifications to safety procedures presented in this plan shall be incorporated in future revisions. It is presently anticipated that chemical hazards will warrant the division of the work site into work, decontamination area prior to entering the support area. The support and decontamination area will be upwind of the work site. No visitors shall be allowed to approach the work site unless they are properly trained and under the supervision of delegated Frye Environmental, Inc. personnel.

HEALTH AND SAFETY PLAN

FOR

Alameda County Fire Department

SITE ADDRESS

6901 Villa Real
Castro Valley, California

HEALTH AND SAFETY PLAN

1.0 INTRODUCTION

Personnel involved in Field Investigations and Remediation at sites where Hazardous wastes may be present are potentially exposed to a variety of hazards including·

* Inhalation of toxic airborne contaminants.
* Skin contact with contaminated soil and water.
* Presence of flammable / combustible vapors.
* *Oxygen-Deficient atmospheres.*
* Heat stress due to protective clothing and environmental conditions.
* Physical standards inherent to field operation (e.g., working near heavy equipment or at remote locations.)

Adequate planning is needed prior to performing work at these sites to minimize the risk of employee injury or illness.

1.1 Purpose

The purpose of the Health and Safety Plan for this particular site, is to provide personnel protection standards and mandatory safety practices, procedures, and contingencies while performing the tasks outlined in the Scope of Work. This Health and Safety Plan addresses the following regulations and guidance:

* Occupational Safety and Health Administration (OSHA) Standards for General Industry. 29 CFR (especially 29CFR 1910. 120 "Hazardous Waste Operations and Emergency Response.")
* OSHA Standards for Construction Industry, 29 CFR 1926.
* National Institute of Occupational Safety and Health (NIOSH), OSHA, U.S. Environmental Protection Agency (EPA), and the U.S. Coast Guard "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," October 1985.

1.2 Responsibilities

The chain of communication and for safety and health-related issues during investigations, remediation, and tank removal activities at the site is delineated below. Frye Environmental, Inc. is to be in overall control of the Health and Safety activities at the site.

Property owner and Frye Environmental, Inc must approve any modification in this Health and Safety Plan.

All Frye Environmental Inc and subcontractor personnel must follow the requirements of this Health and Safety Plan. Any unsafe conditions must be promptly reported to the Site Safety and Health Officer (SSHO), who will be Bryan Musco, or his appointed, qualified person.

FRYE ENVIRONMENTAL, INC. SITE SAFETY and HEALTH OFFICER (SSHO)

The SSHO responsibilities include:

* Reviewing and confirming any changes in personal protective clothing or respiratory protective requirements.
* Reviewing all Health and Safety Documentation.
* Reviewing all on-site ambient air monitoring results.
* Providing site-specific training, as required, to all personnel assigned to work at the site.
* Stopping work when unacceptable Health Safety Risk exists.
* Providing a Health and Safety briefing to all site visitors.
* Supervising decontamination to ensure complete decontamination of all personnel, tools and equipment.
* Supervising the distribution, use, maintenance, and disposal of personnel protective clothing and equipment.

1.3 LIST OF PERSONNEL WITH 40-HOUR OSHA, 29 CFR FOR THIS PROJECT
Certified 40 Hour OSHA, 29 CFR 1910. 120 Hazardous Waste Operations:

Catherine Frye
Chris Frye

2.0 RISK ANALYSIS

This section assesses the chemical and physical hazards that are known to exist at the site and those that may be created by the remediation efforts. Table 2 summarizes the hazards associated with each of these tasks. The hazard analysis has been divided into three critical areas:

* Exposure: Expected frequency of exposure to a hazard;
* Probability: Likelihood of an injury upon exposure to a hazard;
* Consequence: Probable degree of injury or effect an injury will have on the effectiveness of a team member.

An explanation of the letters denoting the degrees of exposure, and consequence is provided at the end of the table.

Contaminants most likely to become encountered during field operations at the site are the Petroleum Hydrocarbons and Metals listed in Table 1. A list of the occupational exposure limits and signs and symptoms of exposure is also listed in Table 1.

Most work required in this project might potentially expose personnel to materials that may contain any or all of these contaminants. Any personnel entering the site shall be informed of all hazards associated with these contaminants.

The physical hazards expected to be present during site investigation activities include:

* Saw Cutting
* Snapping Cables, Slings and Rope
* Drilling Equipment
* Moving Equipment
* Heavy Equipment
* Sharp Objects
* Loose Foundations
* Open Pits or Ditches
* Excessive Noise
* Fire/Explosions
* Buried Utility Lines
* Energized Overhead and Underground Power Lines
* Heat Stress

3.0 PROCEDURES TO MITIGATE HAZARDS

This section describes those procedures to be followed in order to ensure the avoidance of operational hazards, as discussed previously. These hazards include mechanical, electrical, chemical, acoustical, biological, and temperature hazards. Those hazards associated with confined spaces are not anticipated to occur, and are not discussed.

3.1 Mechanical Hazards

The following procedures shall be followed during all phases of the operation to reduce those risks associated with mechanical equipment:

* Stay well clear of drill rods and augers while they are rotating and being hoisted. Extreme care is to be exercised when steel cables are being used to lift the drilling apparatus from the ground.

- Stand clear of the operating circle of excavators, backhoes, etc.

    * Equipment maintenance schedules are the responsibility of each individual contractor. Equipment is to be checked daily. Any equipment deemed by a Frye Environmental Inc. employee to be in an unsafe state of repairs, or operated in an unsafe manner shall be shut down until corrective action is taken. Equipment safety features, such as back-up alarms, shall be checked daily.

3.2 Electrical Hazards

The following procedures shall be followed during all phases of operation, in order to reduce those risks associated with electrical hazards:

* *Underground Service Alert (1-800-422-4133) will be contacted prior to site activities to locate the* presence of underground cables, utility lines, pipes, and storage vessels at the proposed sites where soils borings will be placed.

* The local power company shall be contacted, in order to verify the minimum allowable clearance from high-voltage power lines. Under no circumstances will any person, piece of equipment, or phase of operation come within 10 feet of overhead power lines.
* If the work area is unavoidably close to buried or overhead power lines, the power shall be turned off, with the circuit breaker locked and tagged out.
* All electrical equipment is to be properly grounded, and under no circumstances are any modifications to be made to any piece of electrical equipment. All electrical equipment is to be inspected daily for damaged leads or plugs. Any piece of equipment that is damaged shall not be used on the site, and shall, in fact, be removed from the site for disposal or repair.
* If splicing wires must connect electrical equipment, the source shall be de-energized first, the breaker box locked out and appropriately tagged by the person who is to perform the splicing operation. All connections are to be appropriately taped. Once the splicing operation is complete, the person who performed the splice shall bring the source back into operation.
* Each person that has cause or need to use a piece of electrical equipment shall ensure that he/she is fully familiar with the equipment's operation and features.

3.3 CHEMICAL HAZARDS

To reduce the possibility of injury due to chemical hazards, personnel shall wear those pieces of Personal Protective equipment as specified by the task, in section 5.0 (Personal Protective Equipment.) Air monitoring shall be conducted to evaluate respiratory and explosion hazards. The instruments and action levels to be used are listed in Table 3. The Frye Environmental Inc. employee conducting each field task shall be responsible for performing the specified air monitoring. In order to ensure the protection of off-site public health, site perimeter air monitoring for volatile organic will be performed (see Section 6.0, Perimeter Monitoring.) If airborne levels of contaminants consistently exceed 5ppm background levels at the perimeter of the site, the work will be stopped, the suspected source of the contamination will be covered to eliminate emissions. A decision will then be made as to how to proceed with the work and how to more fully characterize and reduce the airborne emissions.

3.4 Acoustical Hazards

In order to prevent hearing impairment, the use of earplugs or earmuffs shall be required for all personnel when heavy equipment is in use at the site. However, should any personnel develop pain in the ear due to work-site noise, they shall immediately don a set of earplugs or muffs.
Noise levels will also be controlled to conform to local ordinances.

3.5 Biological Hazards

In order to reduce the risk of biological contamination, Personal Protective Equipment, described in Section 5.0, shall be worn for each specific task. This protective equipment shall be removed, and hands and face washed prior to contact with the mouth, by the hands, for such purposes as eating, drinking, or smoking. Smoking shall only be permitted in those areas designated by SSHO.

3.6 Heat Stress

All personnel entering the work area should be familiar with the signs and symptoms of heat stress. These include:

* Heat Exhaustion--Dizziness, light-headedness, slurred speech, rapid pulse, confusion, fainting, fatigue, copious perspiration, cool skin that is sometimes pale and clammy, and nausea.
* Heat Stress--Hot, dry, flushed skin; delirium, and comma (in some cases.)

Resting frequently in a shaded area and consuming large quantities of fresh, potable water can prevent heat stress. If heat exhaustion symptoms are observed, the person will be required to rest in a shaded area and consume liquids. If symptoms are widespread and observed frequently, an appropriate work/rest regimen will be instituted. This may involve limiting the work period so that after one minute of rest, a person's heart rate (HR) does not exceed 110 beats per minute.

If the HR is higher than110 beats per minute, the next work period should be shortened by 33 percent, while the length of the rest period stays the same. If the HR is 110 beats per minute at the beginning of the next rest period, the following work cycle should be shortened by 33 percent. Resting HR should be determined prior to start of on site activities. A healthy individual's resting HR is usually 60 to70 beats per minute. If symptoms of heat stress are observed, the victim will be transported to the nearest hospital immediately. Workers should not hesitate to seek medical attention if heat stress is suspected.

3.7 Confined Space Hazards

When work is to be done in an area where the natural circulation of fresh air or the ability to readily escape the site is restricted, that site shall be considered a confined space, and the following guidelines shall be followed:

* Personnel shall monitor the levels of oxygen, combustible gasses, and organic vapors prior to entering. Under no circumstances shall the space be metered if the following levels are exceeded:
    1. Oxygen content is less than 19.5%
    2. Combustible gas level is greater than 3% of the LEL.
    3. Total hydrocarbons are greater than the action levels defined in Table 3 of this section, if all air contaminants have not been identified.
* Personnel shall monitor the levels of oxygen, combustible gasses, and organic vapors continuously while inside the confined space. If the values stated in the above are exceeded, the space shall be evacuated immediately.
* At least one additional person, who shall be present for the express purpose of monitoring the personnel in the space, shall be within sight and call of those personnel within the space, while remaining outside of the space proper. This person shall have, readily available to him, all rescue equipment necessary to remove personnel who may require extraction from the space and the site. This equipment shall include, but not be limited to, respiration equipment of the same level as those used by the personnel in the space, first aid equipment, including compresses, harness, and all the extraction equipment.
* Portable fans or blowers shall be used to introduce fresh air into the confined space. These fans or blowers shall be located on the upwind side of the space. The space shall not be entered until values of oxygen, organic vapors, and combustible gasses are brought below and measured below their respective action levels.
* No personnel shall enter any unshored or unsupported excavation with a depth greater than 5 feet, or with unstable geological conditions.

4.0 TRAINING

4.1 Site Workers

All personnel who will perform on site tasks shall be trained by U.S. Department of Labor, Occupational Safety and Health Administration (OHSA) standard, 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response. Training will include:

- A minimum of 40 hours initial instruction off site is required for those personnel conducting invasive fieldwork at the site. Proof of training shall be required to be present at the site.

* A minimum of 3 days of actual field experience under the direct supervision of a trained, experienced supervisor.
* Regulatory officials at the site shall be required to have completed at least 24 hours of initial instructions, and shall present training certification as requested.
* A minimum of 8 hours of refresher training annually.
* First Aid and CPR training.
* Additional training, which addresses any unique or special hazards.

All personnel entering the site shall be requested to present proof of current training. Failure to present such certification shall result in removal from the site.

4.2 On Site Management and Supervisors

On site management and supervisors shall receive at least 8 additional hours of specialized training on managing such operations.

4.3 Pre-entry Orientation Session

Prior to entering the site, personnel shall attend a daily pre-entry orientation session presented by the SSHO, which addresses the following issues. All personnel shall verify attendance of this daily meeting by signing the Safety and Health Plan Review Record. Appendix A.

4.3.1 Degree and Nature of Potential Health and Safety Hazards

The health effects and hazards of the chemicals identified or suspected to be on the site shall be discussed. The physical and chemical properties of the contaminants. The most likely route of exposure, and possible adverse consequences of working on the site if proper safety procedures are not observed or if protective fails or is improperly worn shall be reviewed. Other hazards, which are unique to site operations, shall be presented.

4.3.2 Personal Protective Equipment

Personnel shall be instructed in the use, care, maintenance, limitations, and fitting of personnel protective equipment. Respirator training shall conform to ANSI Z88.2 (1980) and OSHA 29 CFR 1910.134. Personnel shall not be fit tested or issued a respirator if facial hair interferes with the face-to-face piece seal of the respirator.

Qualitative fit testing shall be performed annually. Records of the fit testing shall be maintained. Positive/negative fit testing shall be performed by the user each time a respirator is donned.

4.3.3 Decontamination Procedures

The procedures, materials, equipment, and facilities specific to the site will be discussed during the morning briefing by the SSHO.

4.3.4 Accepted Practices

Specific safe work practices, which must be adhered to during the site operations will be discussed. This will include procedures for entering and exiting the site, and accepted and unaccepted practices within the personnel decontamination area.

4.3.5 Emergency Procedures

Procedures for responding to emergencies as specified in the Emergency Response Plan shall be covered.

4.3.6 Medical Requirements

The medical requirements for all personnel assigned to perform work at the site shall be presented.

5.0 PERSONAL PROTECTIVE EQUIPMENT

All respiratory protective equipment must be approved by the National Institute for Occupational Safety and Health (NIOSH) /Mine Safety and Health Administration (MSHA.) The minimum protective equipment requirements for each site task shall be Level D. However, should airborne monitoring indicate organic vapors consistently in excess of 1-2 ppm, the level of protection shall be upgraded to Level C1. If monitoring indicates organic vapors consistently in excess of 5 ppm, the level of protection shall be up graded to Level C2.

5.1 Levels of Protection

5.1.1 Level D Protection

The following personal protection equipment is required to be worn by all on-site personnel:

* Poly/cotton reusable coveralls or long sleeve shirts and long pants
* Steel toe boot/shoes
* Earplugs or muffs
* Hardhat
* Nitrile gloves (if contact with potentially contaminated soil or water is expected)
* Safety glasses
* Neoprene or butyl rubber boots or latex boot covers (if contact with potentially contaminated soil or water is expected)

5.1.2 Level C1 Protection

* One-half or full face respirator with high efficiency organic vapor cartridges with dust filter

5.1.3 Level C Protection

* Cloth coveralls
* Steel-toed boots with waterproof covers, or steel-toed rubber boots
* Hardhat
* Ear plugs or ear muffs
* Nitrile gloves
* Safety glasses
* Full-face respirator with high efficiency organic vapor cartridges with dust filter

5.2 Maintenance and In-Use Inspection of Protective Equipment

Effective use of protective equipment requires that the equipment be properly used, maintained, and inspected periodically during the day. Procedures will be presented during pre-entry training.

5.2.1 Gloves/Body coverings

Gloves and coveralls will be regularly inspected and replaced if torn. Coveralls will be laundered daily at a minimum. Reusable gloves will be decontaminated whenever exiting work areas.

5.2.2 Respirators

Site conditions are not anticipated to require respiratory protection, therefore, no respirators are expected to be necessary. However, respirators shall be inspected and checked daily for leaks both visually and with negative and positive pressure checks on the wearer. Respirator cartridges will be replaced daily or more frequently if excessive resistance develops. All respirator maintenance will be performed by the SSHO. The type of respirators used will be equipped with high efficiency organic vapor cartridges and dust filters.

Respirator exterior will be wet-wiped whenever exiting work areas, as specified in Section 8. Respirators will be rinsed with a solution containing a sanitizer recommended by the respirator manufacturer. Respirators will be hung to drip dry and, if not used daily, will be placed inside plastic bags for protection against dust.

6.0 ENVIRONMENTAL MONITORING

6.1 Real Time Air Monitoring

A total volatile organics instrument shall be used to periodically monitor airborne concentrations of contaminants on site. A photo ionization detector (PID) (e.g., hNu or OVM) or equivalent and explosimeter/oxygen meter will be used to screen excavated soils for volatile organic compound contamination. The PID will also be used to measure and record employee breathing zone levels of organic vapors and gasses.

The monitoring program may be increased, reduced, or modified by the SSHO, based on site conditions and monitoring results. All monitoring will be accomplished under the direction of the SSHO, who will interpret the results.

The air-monitoring program will include sufficient monitoring of air quality in work zones and other on-site areas to assess levels of employee exposure, determine that the work zone designations are valid, and verify that the respiratory protection being worn by personnel is adequate. The air-monitoring program is also designed to ensure that contaminants are not migrating off site to minimize exposure of near by populations and/or workers. Air monitoring shall be conducted at 15 minute intervals, unless it is determined that air monitoring may occur at less frequent intervals. These less frequent intervals would be the result of ambient air movement (wind,) or through the reduction of the air threat through verification monitoring. Such changes to plan will be logged.

Monitoring shall be conducted:

* When work begins on a different portion of the site.
* When contaminants other than those previously identified are being handled.
* When a different type of operation is initiated.
* If a sufficient reasonable interval has passed so that exposures may have significantly increased.

Measurements shall be taken at the anticipated source and in the breathing zone of site personnel.

Instruments shall only be used by employees who have been trained in the proper operation, use limitation, and calibration of the monitoring instrument and who have demonstrated the skills necessary to operate the instrument.

6.1.2 Perimeter Monitoring

If field conditions warrant, air monitoring will be conducted. If necessary, monitoring shall be conducted at least two times each day, with a total volatile organics direct-reading instrument, at location upwind and downwind at the perimeter of the site. Measurements shall also be taken periodically downwind of each active sampling site to assess the potential for off-site migration. If airborne levels of contamination exceed background levels for a sustained period of time at the perimeter of the site, the work area shall be expanded to encompass all area subjected to the elevated levels. If airborne levels of contaminants exceed background levels by 5 ppm at the perimeter of the site, the work will be stopped, the suspected source of the contamination (borehole or production well) will be covered to eliminate emissions.

If airborne levels of contaminants exceed background levels, a decision will then be made as to how to proceed with the work and how to more fully characterize the airborne emissions.

6.2.2 Field Instruments

Two types of PID vapor analyzers are available for on-site screening during field operations: hNu Model PI 101 and/or Thermo Environmental Instruments 580A or 580B.

The Gastech Flammable Gas Detector shall be used to measure explosion/oxygen levels. Equivalent instruments may be used.

Calibration of instruments will be performed prior to field use on a daily basis. Calibration methods as specified in manufacturers-supplied manuals for each instrument will be followed. A two-point calibration is performed on portable

gas analyzers using hydrocarbon-free air as the zero point and a manufactured calibration gas as the high point. A gas-analyzed instrument is considered to be accurate if readings of the standards are within 20 percent of the actual concentration of standard gas.

6.2.3 Record Keeping Requirements

The result of air monitoring readings shall be recorded on standard air monitoring data forms. A calibration and maintenance log for each instrument shall also be maintained. Records shall also be kept of all significant events, addendum's, or changes to level of protection.

6.3 Heat Stress Monitoring

Ambient temperatures at the site combined with the requirements for PPE use may contribute to heat stress. When ambient temperatures reach or exceed 70 degrees Fahrenheit, body temperatures will be monitored using fever strips or oral thermometers and heart rates will be monitored when heat stress conditions may occur. Work-rest regimens will be adjusted accordingly. (see Section 3.6)

7.0 SITE CONTROL

A check-in and checkout system will be used to control and record each employee and piece of equipment inside the site boundaries. Only personnel identified as "authorized" will be permitted to enter the site. A Master list of authorized personnel will be available and will only include personnel who have received the appropriate training and certification required by this Health and Safety Plan and OSHA requirements.

7.1 Work Zones

Work zones are designated to prevent employees, visitors, and the surrounding environment from exposure to contamination during all aspects of site remediation activities. All work zones and support areas will be established by Frye Environmental Inc. Movement of personnel and equipment between zones and on and off site will be controlled by means of designated access points. Minimum personnel protective equipment for work in each zone is described in Section 5.0.

7.1.1 Work Areas

The work areas encompass the surface areas around the boundary of the property. It is anticipated that this will be a Level D area and be utilized during invasive operations.

7.2 Safe Work Practices

Safe work practices, which must be followed by all site workers, include:

* Eating, drinking, chewing gum or tobacco, and smoking are prohibited in the work and decontamination areas.
* Do not sit or kneel in areas of obvious contamination.
* Hands and face must be thoroughly washed upon leaving the work area.
* Repair or replace immediately any defective PPE.
* Personnel must not take prescription drugs unless specifically approved by a qualified physician
* If respirators are required, facial hair that interferes with the face-to-face piece fit of the respirator will not be permitted.
* Contact lenses will not be permitted to be worn when the potential for chemical splash exists or when full face-piece respirators are required.
* Personnel on the site must use the buddy system; visual contact must be maintained between team members at all times.

7.2.2 Daily Start-Up and Shutdown Procedures

The following protocols will be followed daily prior to start of work activities:

* The SSHO will review site conditions to determine if modification of work and safety plans are needed.
* Personnel will be briefed and updated on any new safety procedures.
* All safety equipment will be checked for proper function.
* The SSHO will ensure that first aid equipment is readily available.

* The SSHO will indicate appropriate air monitoring.

The following protocol will be followed at the end of daily operations and before breaks:

* All personnel will proceed through appropriate decontamination procedure and facilities.

8.0 DECONTAMINATION

8.1 General

Employees will be trained in decontamination procedures that will be implemented when employees, or equipment enter work or decontamination areas. Decontamination will be performed to minimize potential contamination of the equipment and the spread of contamination from one zone to another.

8.2 Personnel

If it becomes necessary to upgrade the level of protection from Level D to Level C or above, no worker, except under emergency situations, will leave the work area without going through the proper decontamination sequences.

Before leaving the work area, personnel will wash boots and outer gloves at the decontamination area. The wash solution will be a simple detergent and water solution. Outer disposable clothing will be removed and placed in 6-mil plastic bags for disposal. Exterior surfaces of respirators will be wet-wiped, then respirators will be removed and placed in a plastic bag for temporary storage and cleaning.

8.3 Respirator Decontamination

When required, respirators will be cleaned daily by the individuals to whom they have been assigned. Each individual will be responsible for cleaning and maintaining his/her own respirator.

A washbasin or sink, with solution containing sanitizer recommended by the manufacturer, will be provided in the decontamination area for final rinsing of respirators at the end of the day. Respirators will then be hung to drip dry and, if not used daily, will be placed inside plastic bags for protection against contamination. Respirator cartridges will be changed at least daily of more frequently if sampling data indicate potential saturation concentrations exist or breathing resistance becomes difficult. The SSHO will also spot check respirators to ensure that they all remain clean and are properly maintained and stored.

8.4 Equipment Decontamination

If in Level C or above, all equipment being used in the work area will be subject to complete decontamination procedures before the equipment is removed from these areas. Equipment and vehicles which contact potentially contaminated soil will be decontaminated using a steam cleaner or hot water pressure washer. Wastewater will be contained in all holding tank or drums for further disposal at an appropriate facility. All contaminated items will be carefully inspected and/or decontaminated to the satisfaction of the SSHO before being taken off site.

9.0 EMERGENCY RESPONSE PLAN

On site emergencies will ultimately be handled by off site emergency support personnel. Initial response and first aid treatment, however, will be available on site.

In case of a hazardous material emergency, the senior supervisor on site will assume full control and direction of the emergency response as the Incident Commander. The Incident Commander will work with the SSHO to identify and evaluate hazards. All emergency responders and communications will be coordinated and controlled through the Incident Commander.

9.1 Emergency Equipment

Emergency equipment for the work areas will be kept in the decontamination area. The equipment will include:

* Portable emergency eye wash with a capacity for providing clean water at a rate of at least 0.4 gallons per minute for a 15-minute period.

* Two 20-lb multipurpose (ABC-rated) fire extinguishers.
* An adequately stocked first aid kit.

Another adequately stocked first-aid kit and an emergency siren will be available in the support area.

9.2 Pre-Emergency Planning

Prior to start of work. Frye Environmental Inc. will contact local authorities to inform them of the start date and anticipated scope of work. First aid kits at least one Frye Environmental Inc employee trained in first aid and cardiopulmonary Resuscitation (CPR) will be on site at all times during remedial activities.

9.3 Emergency Recognition and Prevention

Emergency conditions that may be anticipated at the site include:

* Medical emergency
* Heavy equipment accident
* Discovery of unanticipated buried hazards
* Poisonous snakes and spiders
* Overexposure of personnel to on site contaminants
* Heat Stress

To ensure that hazard recognition and accident prevention protocols are being maintained, personnel must follow the requirements of the Heath and Safety Plan.

9.4 Operations Shutdown

Operations shutdown may be mandated by on recommendation from the SSHO or by the emergency response Incident Commander. Conditions warranting work stoppage will include:

* Uncontrolled fire
* Uncovering potentially dangerous buried material
* Any condition immediately dangerous to life and health or the environment
* Heat stress illness exhibited by the crew
* Air contaminant concentrations in excess of the protection factors afforded by the respirators in use.

When any of these conditions exist, operations will be stopped and the site secured. All personnel will leave the work area until the Incident Commander has determined that operations may resume.

9.5 Fire and Explosion Response Procedures

Fire on site can be started by natural events, work activities, or the activities of others. There shall be a multipurpose (ABC-rated) fire extinguisher on hand at all times. Personnel will be instructed in the use of these fire extinguishers and to attempt control of only very small fires. The procedure for using a fire extinguisher is to pull the safety pin, point at the base of the flames, and discharge the extinguisher by sweeping the flames from a distance of about 6 feet. The extinguisher operator should move in as the flames are being put out. Frye Environmental Inc. will inform the local fire district immediately in case of any fire when its support will be required.

9.6 Evacuation From Work Areas

If an on-site emergency occurs, the Incident Commander will sound the site emergency alarm. All workers will meet at a predesignated area located in the support area. An Employee head-count will be performed to ensure all workers are accounted for.

In case of an emergency, evacuated employees may be decontaminated rapidly by removing exterior clothing. If the worker is critically injured in the work area, the worker may be removed immediately from the area--DO NOT take the time to decontaminate the injured worker: seek medical attention immediately

9.7 Emergency Medical Treatment and First Aid
Only minor injuries will be treated on site. They will be treated with the first-aid kit available on site.

For major injuries, contact 911. The phone number for the hospital, fire, and ambulance is 911. A complete list of emergency telephone numbers and route to nearest hospital is provided in Appendix B.

This Health and Safety Plan has been prepared by:

FRYE ENVIRONMENTAL, INC.

_____ President Date April 17, 2002
Title

APPENDIX A

SITE SAFETY AND HEALTH PLAN REVIEW RECORD

SITE: 6901 Villa Real, Castro Valley, California

I have read the Health and Safety Plan for this site and I have been briefed on the nature, level, and degree of exposure likely as a result of participation in this project. I agree to conform to all the requirements of this Plan.

Name	Signature	Affiliation	Date
Chris Frye		PEI	2-13-03
Robert Steele		RCS	2-13-03
Don Pearson		CDF	2-13-03

Appendix B

EMERGENCY TELEPHONE NUMBERS

Ambulance 911

Poison Control Center 1-800-523-2222

Fire Department 911

Explosive Unit 911

FRYE ENVIRONMENTAL, INC.

Owner: Chris Frye (Office) (707)837-2809
(Mobil Phone) (707)495-3746

Regulatory Content

California Regional Water Quality Control Board, San Francisco Bay Region, (RWQCB), 1515 Clay Street, Oakland, Suite 1400 CA 94612 (510)-622-2000

CAL OSHA District Office, 1515 Clay Street, Oakland, Suite 1301 CA 94612 (510)-622-2916

Alameda County Fire Department, 6901 Villa Real, Castro Valley, California (510) 618-3490 or 911

Hospitals

Eden Hospital, 20103 Lake Chabot Road, Castro Valley, CA 510-537-1234

Directions to Hospital: (MAP ATTACHED)

TABLE 1

CHEMICAL CONTAMINANTS

MATERIAL	LEL/UEL (%)	TLV_TWA (ppm)	Odor Threshold (ppm)	ACUTE EXPOSURE SYSMPTOM
Benzene	0.339/7.1	1	4.68	Fever-Convulsions–confusion-dizziness–drowsiness–headache-nausea–respiratory system irritation-skin irritation-tremors-vomiting-weakness
Ethylbenzene	0.0/6.7	100	0.25-200.00	Fever-abdominal pain-dizziness-drowsy-headache-nausea-respiratory system irritation-skin irritation-unconsciousness-vomiting-weakness
Toluene	1.3/7.1	100	0.17-40	Confusion-dizziness-drowsiness-headache-nausea-respiratory system irritation-skin irritation-tremors-unconscious-vomiting-weakness-fever
Xylene	1.1/7.0	100	0.5-200	Dizziness-drowsy-headache-nausea-respiratory system irritation-skin irritation-unconscious-vomiting-fever
Lead	Explosions of dust in confined areas can occur	50 UG/M3	N/A	Convulsions-pains in abdominal area-dizziness-diarrhea-tremors-weakness-fever
Gasoline	1.4/7.6	300	<1	Confusion-dizziness-drowsiness-fever-headache-nausea-respiratory system irritation – skin irritation-unconsciousness
Methylene Chloride	12/NA	50	25-320	Fever-headache-nausea-respiratory system irritation-skin irritation-weakness

TABLE 2

HAZARD ANALYSIS

Job Hazard	Exposure	Probability	Consequence
Drilling			
Drill Rig	A	C	A-D
Mechanical	A	C	E
Noise			
Buried Utilities Electrical	C	C	A-D
Chemical Exposure	A	B	A-E
Fire and Explosion	D	D	A-D
Dust	B	D	D-E
Tank Removal/Excavation			
Heavy Equipment, Including Crane Excavator, Loader, Backhoe			
Mechanical	A	C	A-D
Noise	C	C	E
Chemical Exposure	A	B	A-E
Biological Exposure	D	D	A-D
Fire and Explosion	D	D	A-D
Dust	B	D	D-E
Saw Cutting	C	D	A-E
Tank Lifting	C	D	A-D
Soil Slope Failure	D	D	A-D
Soil and Ground Water Sampling			
Chemical Exposure	A	B-D	A-E
Biological Exposure	D	D	B-D
Decontamination			
Steam Cleaner			
Mechanical	B	D	B-D
Electrical	B	D	A-D
Generator			
Mechanical	C	D	C-D
Electrical	B	D	A-D
Chemical Exposure	B	D	A-E
Biological Exposure	D	D	A-D

EXPLANATIONS

Exposure. The frequency of exposure to the hazard event.

A = Continuously
B = Frequently
C = Occasionally
D = Seldom

Probability: The likelihood that an injury will occur upon exposure to the hazard event.

A = Certain or almost certain
B = Likely, not unusual, 50/50 chance of occurring
C = Unusual, would generally occur less than 50% of the time
D = Improbable, very low chance of occurrence

Consequence: The degree of injury resulting from exposure to the hazard event of significant enough degree to cause an injury.

A = Fatality
B = Serious injury, including chemical exposure, requiring hospitalization
C = Moderate injury, including chemical exposure, requiring on-site first aid treatment
D = Minor injury, including chemical exposure, requiring on-site first aid treatment
E = Chemical, acoustical, or other exposure above the Threshold Limit Value (TLV) or other recommended standard that may not produce immediate acute effects, especially for chronic toxicants

TABLE 3

AIR MONITORING INSTRUMENTATION AND ACTION LEVELS

Hazard	Instrument	Reading	Location	Action
Respiratory	PID/Draeger Tube (Modified D)	1-2 ppm	Breathing	Don Respirator
Respiratory	PID/Draeger Tube (Protection)	5ppm	Breathing	Don Level C
Respiratory	PID/Draeger Tube	10 ppm	Breathing	Leave Area
Explosion	Combust. Gas Meter	10% LEL	Ambient Air	Vent Area
Explosion	Combust. Gas Meter	20% LEL	Ambient Air	Leave Area
Oxygen Deficiency	Oxygen Meter Air	19.5% Oxygen	Ambient	Leave Area

Apparent exposure level above the background ambient air concentration. Background levels may change due to factors such as weather and location of work site.

High efficiency organic vapor cartridges with dust filters shall be used.

As each chemical constituent is identified through soil and surface water testing, specific action levels will be determined. These site-specific action levels and any modifications to safety procedures presented in this plan shall be incorporated in future revisions. It is presently anticipated that chemical hazards will warrant the division of the work site into work, decontamination area prior to entering the support area. The support and decontamination area will be upwind of the work site. No visitors shall be allowed to approach the work site unless they are properly trained and under the supervision of delegated Frye Environmental, Inc. personnel.

NOTES:

Analytical Sciences

FAX TRANSMITTAL COVER SHEET

DATE: **February 26, 2003**

TO: Chris Frye
Frye Environmental

FAX #: **838-0417**

FROM: Mark Valentini **FAX #:** (707) 769-8093

TOTAL NUMBER OF PAGES (EXCLUDING THIS COVER SHEET): 8

COMMENTS:

Attached are the analytical results for your Alameda C. F.D. – 2330 project.

IF YOU HAVE QUESTIONS REGARDING THIS FAX PLEASE CONTACT

ANALYTICAL SCIENCES
(707) 769-3128

Analytical Sciences

Report Date: February 26, 2003

Frye Environmental
8020 Starr Road
Windsor, CA 95492
ATTN: Chris Frye

LABORATORY REPORT

Project Name: **Alameda Co. F.D. 2330**

Lab Project Number: **3021302**

This 7 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.
Laboratory Director

PO Box 750336
Petaluma, CA 94975-0336
Telephone: (707) 769-3128

110 Liberty Street
Petaluma, CA 94952
Fax: (707) 769-8093

TPH Gasoline in Soil

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
12062	San Miguel	TPH/Gasoline	330	50

Date Sampled: 02/13/03
Date Received: 02/13/02
Date Analyzed: 02/14/03
Method: EPA 8015M
QC Batch #: 3224

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
12063	Villa Real	TPH/Gasoline	ND	1.0

Date Sampled: 02/13/03
Date Received: 02/13/02
Date Analyzed: 02/14/03
Method: EPA 8015M
QC Batch #: 3224

TPH Diesel in Soil

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
12062	San Miguel	TPH/Diesel	90 ①	5.0

Date Sampled: 02/13/03
Date Received: 02/13/03
Date Extracted: 02/13/03
Date Analyzed: 02/14/03
QC Batch #: 3218
Method: EPA 3550/8015M

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
12063	Villa Real	TPH/Diesel	ND	5.0

Date Sampled: 02/13/03
Date Received: 02/13/03
Date Extracted: 02/13/03
Date Analyzed: 02/14/03
QC Batch #: 3218
Method: EPA 3550/8015M

① The sample chromatogram does not exhibit a pattern characteristic of diesel. Higher boiling point constituents of weathered gasoline are present in the early boiling point range associated with diesel.

Lab Project #: 3021302

CA Lab Accreditation #: 2303

Volatile Hydrocarbons by GC/MS in Water

Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
12062	San Miguel	benzene	ND ②	500
		toluene	ND	500
		ethyl benzene	ND	500
		m,p-xylene	ND	500
		o-xylene	ND	500
		Oxygenated Gasoline Additives		
		tert-butyl alcohol (TBA)	ND	10,000
		methyl tert-butyl ether (MTBE)	ND	500
		di-isopropyl ether (DIPE)	ND	500
		ethyl tert-butyl ether (ETBE)	ND	500
		tert-amyl methyl ether (TAME)	ND	500

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	19.2	96.0	70 – 130
toluene-d_8 (20)	19.6	98.0	70 – 130
4-bromofluorobenzene (20)	20.4	102	70 – 130

Date Sampled: 02/13/03
Date Received: 02/13/03
Date Analyzed: 02/14/03
Method: EPA 8260B
QC Batch #: 3214

② A dilution was necessary due to the presence of significant amounts of non-target hydrocarbons.

Lab Project #: 3021302

CA Lab Accreditation #: 2303

Lab #	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
12063	**Villa Real**	**benzene**	**ND**	1.0
		toluene	**ND**	1.0
		ethyl benzene	**ND**	1.0
		m,p-xylene	**ND**	1.0
		o-xylene	**ND**	1.0
		Oxygenated Gasoline Additives		
		tert-butyl alcohol (TBA)	**ND**	25
		methyl tert-butyl ether (MTBE)	**ND**	1.0
		di-isopropyl ether (DIPE)	**ND**	1.0
		ethyl tert-butyl ether (ETBE)	**ND**	1.0
		tert-amyl methyl ether (TAME)	**ND**	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	19.4	97.0	70 – 130
toluene-d_8 (20)	19.7	98.5	70 – 130
4-bromofluorobenzene (20)	19.8	99.0	70 – 130

Date Sampled: 02/13/03
Date Received: 02/13/03
Date Analyzed: 02/14/03
Method: EPA 8260B
QC Batch #: 3214

Lab Project #: 3021302

CA Lab Accreditation #: 2303

LABORATORY QUALITY ASSURANCE REPORT

QC Batch #: 3224 **Lab Project #:** 3021302

Sample ID	Compound	Result (mg/kg)
MB	TPH/Gas	ND
MB	MTBE	ND
MB	Benzene	ND
MB	Toluene	ND
MB	Ethyl Benzene	ND
MB	Xylenes	ND

Sample ID	Compound	Result (mg/kg)	Spike Level	% Recv.
LCS	TPH/Gas		NS	
LCS	Benzene	0/105	0.100	105
LCS	Toluene	0.106	0.100	106
LCS	Ethyl Benzene	0.107	0.100	107
LCS	Xylenes	0.324	0.300	108

Sample ID	Compound	Result (mg/kg)	Spike Level	% Recv.	RPD
LCSD	TPH/Gas		NS		
LCSD	Benzene	0/103	0.100	103	1.9
LCSD	Toluene	0.106	0.100	106	0.0
LCSD	Ethyl Benzene	0.108	0.100	108	0.93
LCSD	Xylenes	0.324	0.300	108	0.0

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range

QC Batch #: 3218 **Lab Project #:** 3021302

Sample ID	Compound	Result (mg/kg)
MB	TPH/Diesel	ND

Sample ID	Compound	Result (mg/kg)	Spike Level	% Recv.
LCS	TPH/Diesel	245	246	99.7

Sample ID	Compound	Result (mg/kg)	Spike Level	% Recv.	RPD
LCSD	TPH/Diesel	243	246	98.8	0.8

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range

QC Batch #: 3214 **Lab Project #:** 3021302

Sample ID	Compound Name	Result (ug/kg)
MB	1,1-dichloroethene	ND
MB	benzene	ND
MB	trichloroethene	ND
MB	toluene	ND
MB	chlorobenzene	ND

Surrogates	Result (ug/kg)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	18.6	93.0	70 – 130
toluene-d_8 (20)	19.6	98.0	70 – 130
4-bromofluorobenzene (20)	20.6	103	70 – 130

Sample ID	Compound Name	Result (ug/kg)	Spike Level	% Recv.
LCS	1,1-dichloroethene	30.1	25.0	120
LCS	benzene	27.1	25.0	108
LCS	trichloroethene	24.0	25.0	96.0
LCS	toluene	26.5	25.0	106
LCS	chlorobenzene	26.5	25.0	106

Surrogates	Result (ug/kg)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	18.2	91.0	70 – 130
toluene-d_8 (20)	19.4	97.0	70 – 130
4-bromofluorobenzene (20)	20.7	103	70 – 130

Sample ID	Compound Name	Result (ug/kg)	Spike Level	% Recv.	RPD
LCSD	1,1-dichloroethene	30.1	25.0	120	0.0
LCSD	benzene	26.9	25.0	108	0.74
LCSD	trichloroethene	24.7	25.0	98.8	2.9
LCSD	toluene	26.3	25.0	105	0.76
LCSD	chlorobenzene	25.9	25.0	104	2.3

Surrogates	Result (ug/kg)	% Recovery	Acceptance Range (%)
dibromofluoromethane (20)	19.3	96.5	70 – 130
toluene-d_8 (20)	20.1	100	70 – 130
4-bromofluorobenzene (20)	20.4	102	70 – 130

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range

Lab Project #: 3021302

CA Lab Accreditation #: 2303

Analytical Sciences
P.O. Box 750336, Petaluma, CA 94975-0336
110 Liberty Street, Petaluma, CA 94952
(707) 769-3128
Fax (707) 769-8093

CHAIN OF CUSTODY

LAB PROJECT NUMBER: 3021302
FRYE ENVIRONMENTAL PROJECT NAME: Alameda Co. F.D.
FRYE ENVIRONMENTAL PROJECT NUMBER: 2330

CLIENT INFORMATION

COMPANY NAME: FRYE ENVIRONMENTAL
ADDRESS: 8020 STARR ROAD
WINDSOR, CA 95492
CONTACT: CHRIS FRYE
PHONE#: (707) 837-2809
FAX #: (707) 838-0417

TURNAROUND TIME (check one)

MOBILE LAB ____
SAME DAY ____ 24 HOURS ____
48 HOURS ____ 72 HOURS ____
5 DAYS ____ NORMAL X

GEOTRACKER EDF: ___ Y ___ N
GLOBAL ID: ____

COOLER TEMPERATURE: Cool. °C

COC
PAGE 1 OF 1

ANALYSIS

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	~~TPH(GAS)/BTEX & MTBE~~ EPA 8015M/8020	TPH DIESEL / WATER OIL EPA 8015M	VOLATILE HYDROCARBONS EPA 8260B (FULL LIST)	~~BTEX & OXYGENATES + PEROXYENES~~ EPA 8260B	OXYGENATED FUEL ADDITIVES EPA 8260M	CHLORINATED SOLVENTS EPA 8010 / EPA 8260B	SEMI-VOLATILE HYDROCARBONS EPA 8270	TRPH / TOG SM 5520F / EPA 418.1M	PESTICIDES / PCB'S EPA 8081 / 8141 / 8082	CAM 17 METALS / 6 LUFT METALS	TOTAL LEAD			COMMENTS	LAB SAMPLE #
1	San Miguel	2/13/03	0855	S	1	N	X	X		X											12062
2	Villa Real	2/13/03	0920	S	1	N	X	X		X											12063
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					

SIGNATURES

SAMPLED BY:

RELINQUISHED BY: _____ SIGNATURE
2/13/03 DATE 2:27 TIME

RECEIVED BY LABORATORY: Mah A. Valentin SIGNATURE
2/13/03 DATE 2:27 TIME