



General Services Agency

Darlene A. Smith, Director

4400 MacArthur Boulevard
Oakland, California 94619
Telephone (510) 535-6209
FAX (510) 535-6225

April 4, 1994

Mr. Jay Carpenter
Environmental Science & Engineering, Inc.
4090 Nelson Avenue, Suite J
Concord, California 94520

SUBJECT: STAPLES RANCH UNDERGROUND TANK CLOSURE PLAN

Dear Jay:

Enclose is the signed Staples Ranch Underground Tank Closure Plan that you requested. Please note that the correct Generator EPA I.D. No. (Item 5) for Staples Ranch is CAL 000115950.

Thank you for your quick response in preparing these documents.

Sincerely,

ENGINEERING & ENVIRONMENTAL
MANAGEMENT DEPARTMENT

Andrew B. Garcia (pvk)

Andrew B. Garcia, REA
Environmental Project Manager

ABC:pvk:HZM00470
93-7057 Bldg. #1262

enclosure



Environmental
Science &
Engineering, Inc.

TO: Alameda County Health Care Services
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

DATE: April 12, 1994

ATTN: Ms. Eva Chu

JOB NUMBER: 6-94-5288

SUBJECT: Staples Ranch, El Charro Road, Pleasanton

WE ARE TRANSMITTING THE FOLLOWING:

Three (3) Copies of Underground Tank Closure Plan

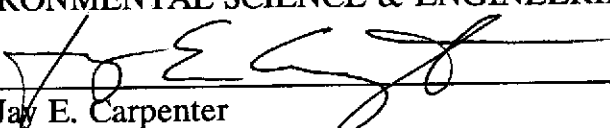
ALCO
HAZMAT

94 APR 14 PM 2:08

DIST:
LB
FILE
ORIGINATOR

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

BY


Jay E. Carpenter
Construction Manager

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 510/271-4320

Office Copy

Esachu

Isadun 4/18/94
Note changed address in RED

ACCEPTED
DEPARTMENT OF ENVIRONMENTAL HEALTH
470 - 27th Street, Third Floor
Oakland, CA 94612
Telephone: (415) 874-7237

These plans have been reviewed and found to be acceptable and essentially meet the requirements of State and local health laws. Changes to your 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. One copy of these accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.

Any change 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 48 hours prior to the following required inspections:

- Removal of Tank and Piping
- Sampling
- Final Inspection

Issuance of a permit to operate is dependent on compliance with accepted plans and all applicable laws and regulations.

THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

UNDERGROUND TANK CLOSURE PLAN

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

1. Business Name Staples Ranch
Business Owner Alameda County General Services Agency
2. Site Address El Charro Road
City Pleasanton Zip _____ Phone _____
3. Mailing Address 4400 MacArthur Boulevard
City Oakland, CA Zip 94619 Phone (510) 535-6280
4. Land Owner Alameda County General Services Agency
Address 4400 MacArthur City, State Oakland, CA Zip 94619
5. Generator name under which tank will be manifested _____
Alameda County General Services Agency
EPA I.D. No. under which tank will be manifested CAL 000115950

6. Contractor Environmental Science & Engineering, Inc.
Address 4090 Nelson Avenue, Suite J
City Concord, CA 94520 Phone (510) 685-4053
License Type* General A ID# 658022

*Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Waste Certification issued by the State Contractors License Board. Indicate that the certificate has been received, in addition, to holding the appropriate contractors license type.

7. Consultant Environmental Science & Engineering, Inc.
Address 4090 Nelson Avenue, Suite J
City Concord, CA 94520 Phone (510) 685-4053

8. Contact Person for Investigation
Name Jay Carpenter Title Construction Manager
Phone (510) 685-4053

9. Number of tanks being closed under this plan 3
Length of piping being removed under this plan 0
Total number of tanks at facility 4

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

** Underground tanks are hazardous waste and must be handled **
as hazardous waste

a) Product/Residual Sludge/Rinsate Transporter

Name Erickson Environmental EPA I.D. No. CAD009466392
Hauler License No. CA019 License Exp. Date 5/31/94
Address 255 Parr Boulevard
City Richmond State CA Zip 94801

b) Product/Residual Sludge/Rinsate Disposal Site

Name Erickson Environmental EPA I.D. No. CAD0009466392
Address 255 Parr Boulevard
City Richmond State CA Zip 94801

c) Tank and Piping Transporter

Name Erickson Environmental EPA I.D. No. CAD009466392
Hauler License No. CA019 License Exp. Date 5/31/94
Address 255 Parr Boulevard
City Richmond State CA Zip 94801

d) Tank and Piping Disposal Site

Name Erickson Environmental EPA I.D. No. CAD009466392
Address 255 Parr Boulevard
City Richmond State CA Zip 94801

11. Experienced Sample Collector

Name Jay Carpenter
Company Environmental Science & Engineering, Inc.
Address 4090 Nelson Avenue, Suite J
City Concord, State CA Zip 94520 Phone (510) 685-4053

12. Laboratory

Name McC Campbell Analytical, Inc.
Address 110 2nd Avenue South, Suite #D-7
City Pacheco State CA Zip 94553
State Certification No. 1644

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

If yes, describe. _____

14. Describe methods to be used for rendering tank inert

Addition of 50 lbs of dry ice

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

The Bay Area Air Quality Management District (771-6000), along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of explosion proof combustible gas meters to verify tank inertness. It is the contractor's responsibility to bring a working combustible gas meter on site to verify tank inertness.

15. Tank History and Sampling Information

Tank		Material to be sampled (tank contents, soil, ground-water, etc.)	Location and Depth of Samples
Capacity	Use History (see instructions)		
500 gal.	Underground storage tank used for vehicle fueling currently out of service. Installation date unknown. Product was diesel fuel.	Soil	Collect one soil sample from below each tank. Approx. two feet below invert on UST and directly below AST in soil.
250 gal.	Aboveground storage tank used for heating fuel. Currently out of service. Installation date unknown. Product was diesel fuel.	Soil	
250 gal.	Same as Above.	Soil	

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

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated) 10 cubic yards	Sampling Plan Collect one sample from soil stockpile and analyze as described in item 16. Sampling schedule based upon disposition of soil. One discrete sample every 20 CY for soil returned to excavation. One discrete sample every 50 CY for off site disposal.

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

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

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
TPH-D	GLFID (5030)	8015 modified	1 ppm (TPH-D)
BTEX	EPA 5030	8020	.005 ppm

17. Submit Site Health and Safety Plan (See Instructions)

18. Submit Worker's Compensation Certificate copy

Name of Insurer Johnson & Higgins Planet Ins Co. ←

19. Submit Plot Plan (See Instructions)

20. Enclose Deposit (See Instructions)

21. Report any leaks or contamination to this office within 5 days of discovery. The report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report form. (see Instructions)

22. Submit a closure report to this office within 60 days of the tank removal. This report must contain all the information listed in item 22 of the instructions.

I declare that to the best of my knowledge and belief 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 an approval from the Department of Environmental Health 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.

Signature of Contractor

Name (please type) Jay E. Carpenter, Environmental Science & Engineering, Inc.

Signature _____

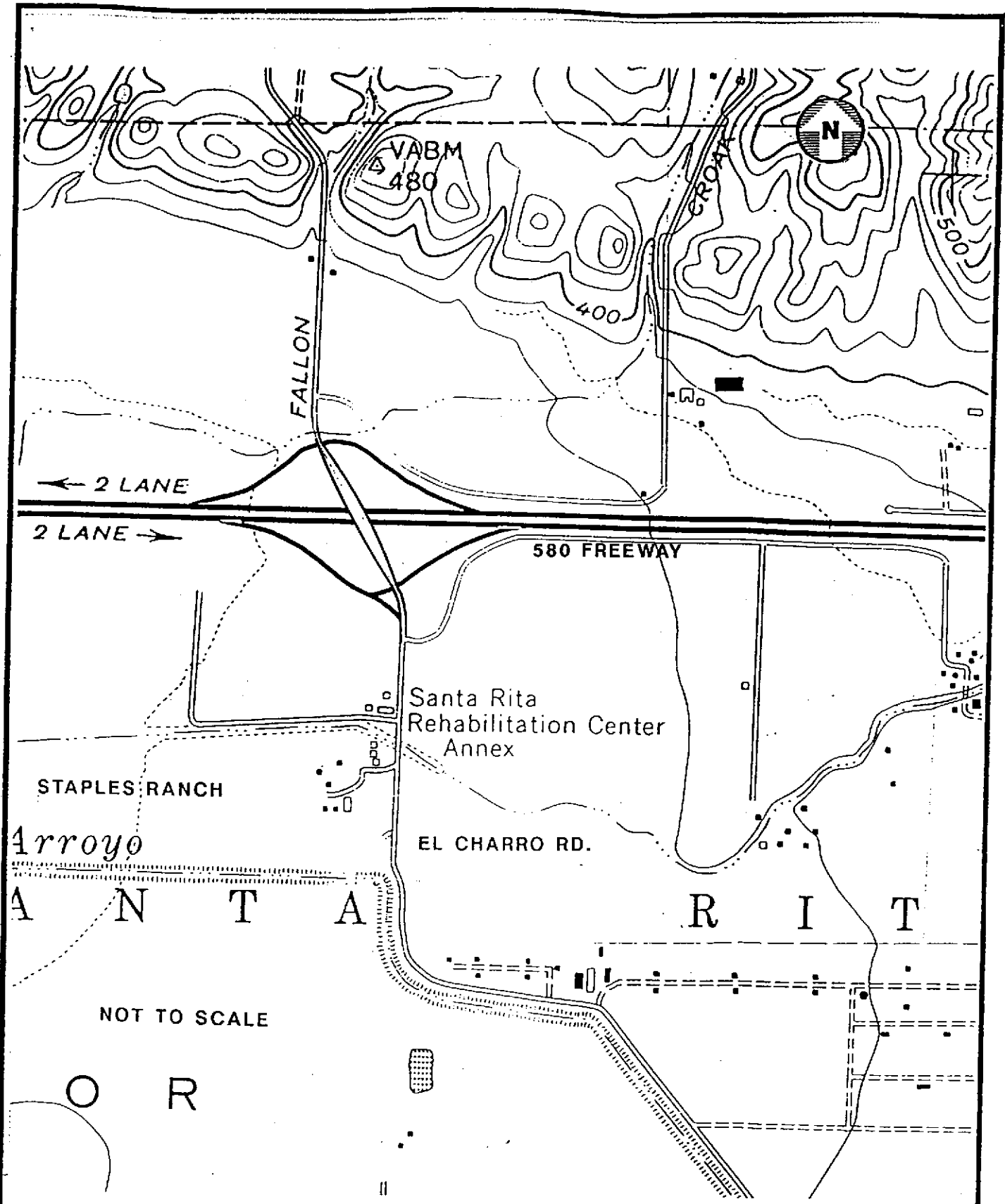
Date _____

Signature of Site Owner or Operator


Name (please type) Jim de Vos, Alameda County General Services Agency

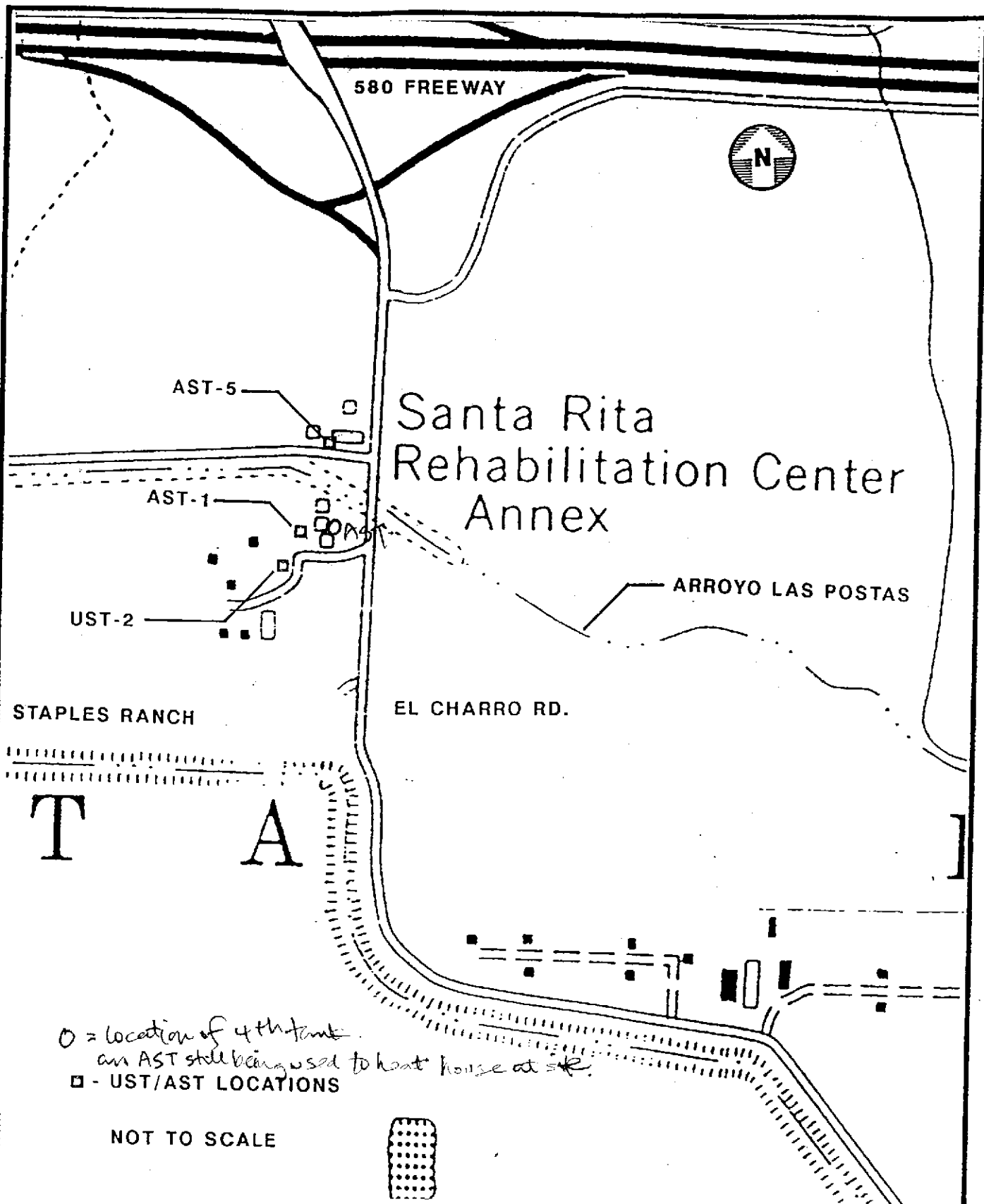
Signature [Signature]

Date 3/30/94



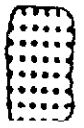
Adapted From USGS 7.5 Minute Dublin and Livermore Topographic Quadrangles (1980)

 <p>Environmental Science & Engineering, Inc. A CILCORP Company</p>	<p>DATE 3/29/94</p>	<p>PROJ. NO. 6-94-5228</p>	<p>ALAMEDA COUNTY GENERAL SERVICE AGENCY STAPLES RANCH PLEASANTON, CALIFORNIA</p>	
	<p>DRAWN BY CVS</p>	<p>CAD FILE</p>		<p>FIGURE 1 LOCATION MAP</p>
	<p>APPROVED BY</p>	<p>REVISED</p>		
<p>4090 NELSON AVENUE, SUITE J CONCORD, CA 94520</p>				




*O = location of 4th tank
 an AST still being used to heat house at site.*
 □ - UST/AST LOCATIONS

NOT TO SCALE



Adapted From USGS 7.5 Minute Dublin and Livermore Topographic Quadrangles (1980)

 Environmental Science & Engineering, Inc. <small>A CILCORP Company</small>	DATE 3/29/94	PROJ. NO. 6-94-5228	ALAMEDA COUNTY GENERAL SERVICE AGENCY STAPLES RANCH PLEASANTON, CALIFORNIA
	DRAWN BY CVS	CAD FILE	
4090 NELSON AVENUE, SUITE J CONCORD, CA 94520	APPROVED BY	REVISED	FIGURE 2 SITE MAP

ACORD**CERTIFICATE OF INSURANCE**

ISSUE DATE (MM/DD/YY)

3/17/94

PRODUCER
JOHNSON & HIGGINS
 500 WEST MADISON, SUITE 2100
 CHICAGO, IL 60661-2595

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A	ILLINOIS NATIONAL INS CO
COMPANY LETTER B	NATIONAL UNION FIRE INS CO (PA)
COMPANY LETTER C	PLANET INS CO
COMPANY LETTER D	
COMPANY LETTER E	

(312) 648-4200
 INSURED
 ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
 ATT KAREN JENSEN
 300 HAMILTON BLVD, STE 330
 PEORIA, IL 61602

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY	GL3404599	3/16/94	4/01/95	GENERAL AGGREGATE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OP AGG. \$ 1,000,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR.				PERSONAL & ADV. INJURY \$ 1,000,000
	<input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT.				EACH OCCURRENCE \$ 1,000,000
					FIRE DAMAGE (Any one fire) \$ 50,000
					MED. EXPENSE (Any one person) \$ 5,000
B	AUTOMOBILE LIABILITY	CA1188525	3/16/94	4/01/95	COMBINED SINGLE LIMIT \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE \$
	<input checked="" type="checkbox"/> HIRED AUTOS				
	<input checked="" type="checkbox"/> NON-OWNED AUTOS				
	GARAGE LIABILITY				
	EXCESS LIABILITY				EACH OCCURRENCE \$
	<input type="checkbox"/> UMBRELLA FORM				AGGREGATE \$
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM				
C	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY	NNA010263802 CA	3/16/94	4/01/95	<input checked="" type="checkbox"/> STATUTORY LIMITS
					EACH ACCIDENT \$ 500,000
					DISEASE-POLICY LIMIT \$ 500,000
					DISEASE-EACH EMPLOYEE \$ 500,000
	OTHER				

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / SPECIAL ITEMS
 Alameda County General Services Agency is Additional Insured as respects UST Compliance Monitoring, UST Removal, Replacement and subsurface Investigations.

CERTIFICATE HOLDER

Alameda County General Services Agency
 Building Maintenance Dept.
 4400 Macarthur Blvd.
 Oakland CA 94619

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Donald Peuce

ACORD. CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)
02/23/94

PRODUCER

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER	A	NAT'L PROF. CASUALTY CO.
COMPANY LETTER	B	
COMPANY LETTER	C	
COMPANY LETTER	D	
COMPANY LETTER	E	

INSURED

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
ATT KAREN JENSEN
300 HAMILTON BLVD., STE. 330
PEORIA, IL 61602

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR <input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT.				GENERAL AGGREGATE \$ PRODUCTS-COMP/OP AGG. \$ PERSONAL & ADV. INJURY \$ EACH OCCURRENCE \$ FIRE DAMAGE (Any one fire) \$ MED. EXPENSE (Any one person) \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY				COMBINED SINGLE LIMIT \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$
	EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM				EACH OCCURRENCE \$ AGGREGATE \$
	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY LIMITS EACH ACCIDENT \$ DISEASE-POLICY LIMIT \$ DISEASE-EACH EMPLOYEE \$
A	OTHER PROFESSIONAL/POLLUTION LIABILITY	C72981	2/23/94	4/01/95	\$3,000,000 EACH CLAIM \$3,000,000 AGGREGATE

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS RE: UST COMPLIANCE MONITORING, UST REMOVAL, REPLACEMENT AND SUBSURFACE INVESTIGATIONS.

CERTIFICATE HOLDER

ALAMEDA COUNTY GENERAL SERVICES AGENCY
BUILDING MAINT. DEPT.
4400 MACARTHUR BLVD.
OAKLAND, CA 94619

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Kathryn M. Parker

HEALTH AND SAFETY PLAN
for
ALAMEDA COUNTY GENERAL SERVICES AGENCY
STAPLES RANCH
Pleasanton, California

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APPENDICES

- A. SITE SPECIFIC HEALTH AND SAFETY INFORMATION
- B. MATERIAL SAFETY DATA SHEETS (Optional)

TABLES

- 2-1 Medical Examination--Monitoring Program
- 5-1 Windchill Index

1.0 GENERAL INFORMATION

1.1 INTRODUCTION

This Health and Safety Plan shall provide the safety and health requirements for general site work taking place under a contract with Alameda County General Services Agency (GSA). This Plan provides the structure for a Site-Specific Health and Safety Plan, and provides information which will apply to all Environmental Science & Engineering, Inc. (ESE) projects. Together, they comprise the Site Health and Safety Plan (HASP). This HASP will be considered complete only with an associated Site-Specific HASP.

The purpose of this HASP is to protect individuals, those working at the site, visitors, and the surrounding populace, and the environment during on site sampling and site characterization activities at petroleum hydrocarbon impacted sites. This plan includes preventive and protective measures against health hazards, fire and explosion hazards, and mechanical hazards which may exist or occur during field activities.

1.2 SITE INFORMATION

The General Information section of each Site-Specific Health and Safety Plan will provide the following information:

1. Name and Location of the Site;
2. Name of Individual Preparing the Plan, and Date of Preparation;
3. Brief Site History;
4. Investigative Objective and Work Plan;
5. Proposed Dates of Investigation; and
6. Assessment of Overall Worker and Public Health Hazards.

1.3 REGULATORY REQUIREMENTS:

Occupational Safety and Health Administration (OSHA) standards 29 Code of Federal Regulations (CFR) 1910 and 1926 apply to work under this site-specific HASP. Title 8 of California Code of Regulations (General Construction Safety Orders and General Safety Orders) must be complied with at California sites. Additional requirements are contained in Code of Federal Regulations title 40, Protection of the Environment.

2.0 PERSONNEL REQUIREMENTS

2.1 ORGANIZATION

The overall project organization as described in this document will be shown in the Site-Specific Health and Safety Plan, and will identify and show responsibilities for all key personnel, employees, and subcontractors.

2.2 ESE HEALTH AND SAFETY POLICY AND RESPONSIBILITY

It is the policy of the management of ESE and also a contract requirement that a safety plan be implemented at hazardous material contamination sites to protect individuals and the environment. All ESE personnel involved in work on these sites will conform and comply with all aspects of this safety program. Each and every individual is, and therefore must regard and conduct him/herself as, a member of the safety team and adhere to the prescribed site safety plan to ensure his/her own safety as well as that of fellow workers, visitors, and the public.

2.3 PERSONNEL RESPONSIBILITIES

For each site, the responsibilities of the Project Manager include:

1. Preparing an effective site safety plan for the project;
2. Categorizing and identifying for the project staff the levels of potential exposure and dangerous levels of hazardous materials possibly encountered on site;
3. Ensuring that adequate and appropriate safety training and equipment are available for project personnel; and
4. Arranging for medical examinations for specified project personnel.
5. Ensuring a qualified on-site field person is designated Site Safety Officer (SSO) and is present when work is in progress. Alternates may also be designated as needed, however, the project manager must ensure the designated (SSO) is familiar with the safety plan and his/her responsibilities.
6. Ensuring any subcontractors (i.e. drillers, excavators) get an advance copy of the Health and Safety Plan and a start-up safety briefing is scheduled.
7. Determining appropriate level of protection and exposure monitoring strategy for the project by task or phase.

Overall responsibility for safety during the site investigative activities rests with the Project Manager. To assist the Project Manager, a qualified Site Safety Officer will be appointed for each site.

The Site Safety Officer's (SSO's) responsibilities include:

1. Implementing all safety procedures and operations on site.
2. Conducting start-up safety briefing with project personnel and subcontractors. Ensure all necessary equipment and procedures are in place before start-up. Addressing any substandard conditions requiring correction prior to start up.
3. Updating equipment or procedures based upon new information gathered during the site inspection.
4. Upgrading or downgrading the levels of personal protection based upon site observations and/or measurements.
5. Determining and posting locations and routes to medical facilities and arranging emergency transportation to medical facilities (as required).
6. Controlling site entry and notifying (as required) local public emergency officers (i.e., police and fire departments) of the nature of the team's operations and making emergency telephone numbers available to all team members.
7. Ensuring that at least one member of the field team is available to stay behind and notify emergency services if the Site Safety Officer must enter an area of maximum hazard or entering this area only after notifying emergency services (police department).
8. Observing work party members for symptoms of on-site exposure or stress.
9. Arranging for the availability of on-site emergency medical care and first aid, as necessary.
10. Documenting field activities and incidents. Keeping Project Manager informed. Consulting with Health and Safety Officer as needed.

The Health and Safety Officer (HSO) is responsible for:

1. Assisting Project Manager with development of the site specific Health and Safety Plan.
2. Providing technical support during normal operations and upsets for hazard assessment, exposure monitoring, level of protection changes.
3. Reviewing and approving the site specific safety plan.

The responsibilities of all other on site personnel include:

1. Complying with all aspects of the project Safety plan, including strict adherence to the buddy system.
2. Obeying the orders of the Site Safety Officer.
3. Notifying the Site Safety Officer of hazardous or potentially hazardous incidents or working situations.

Subcontractors and other non-ESE site personnel are, also responsible for complying with this plan and all applicable federal, state and local safety and environmental regulations and codes.

2.4 TRAINING

All ESE site personnel working on the hazardous material contamination site investigations will have completed a safety and health training course for hazardous waste site work meeting the requirements of 29CFR1910.120 and have worked at least 3 days of supervised on the job training. The course consists of an initial 40-hour session and annual refreshers of 8 hours. Subcontractors and visitors are required to provide proof of equivalent training. The field team leader will have completed an additional 8 hours of waste site supervisory training. For each location, specific training is given by the Project Manager or Site Safety Officer to inform employees of site-specific hazards. Additionally, at least one field team member will be trained to perform cardiopulmonary resuscitation (CPR) and first aid.

2.5 MEDICAL MONITORING PROGRAM

All ESE on site personnel, subcontractors, and visitors for this project will be required to have the medical examination outlined in Table 1. This examination is given annually and more often if specified by the attending physician. All medical examinations include certification by the physician of the employee's ability to wear a negative-pressure respirator and to perform strenuous work. If a person sustains an injury or contracts an illness related to work on site that results in lost work time, he must obtain written approval from a physician to regain access to the site.

2.6 RECORDS DOCUMENTATION

Air monitoring data generated during the project will become part of the written record. Both medical and air monitoring data will be retained for the time period required by OSHA in various standards [29 CFR 1910.20(D)(i), 1910.20(D)(ii), 1910.1018, 1910.1025]. Training records are maintained in project files and on ESE's personal identification cards and are available for inspection at all times. Subcontractors are required to have similar documents available for inspection as required.

All personnel associated with work at a site will be required to sign a statement indicating that they have read, and will comply with the site safety plan. This signature page will also include information on their training and medical surveillance status.

Table 2.1

Medical Examination--Monitoring Program

Basic physical exam

Heart status and functions (EKG) baseline only except if >40

Chest X-ray (Roentgenogram posterior-anterior)

Pulmonary function--forced vital capacity, forced expiratory volume at 1 second and reserve volume

Blood--full SMAC Series

Hemoglobin--cell counts, protein levels

Liver function--full enzyme profile

Renal function--BUN, Creatinine, Creatine/Creatinine ratio, lipoprotein count and differential, uric acid

Urinalysis

Audiometry--audio spectrum response of ear

Eye--physical condition, visual acuity

Other laboratory tests may be ordered depending on actual or expected exposures and physician recommendations.

The individuals listed in the Site-Specific Plan organization chart will be certified to wear respirator protection in accordance with criteria from the ANSI Z88.2 and 29 CFR 1910.134.

3.0 HAZARD EVALUATION

3.1 CHEMICAL CONTAMINANTS

Potential site contaminants at petroleum contamination sites include gasoline, gasohol, motor oil, fuel oils (including kerosene, diesel fuel), and aviation grade gasoline. These materials may exist as free product in soil or on groundwater, and/or as contaminants to soil and water, and/or in tanks, piping, and systems. Fuel products include materials in and around storage tanks, such as gasoline, kerosene, diesel, and their derivatives, xylene, toluene, benzene, tetraethyl lead (TEL), and chlorinated solvents. The chlorinated solvents include trichloroethylene and tetrachloroethylene.

3.2 PHYSICAL AND MECHANICAL HAZARDS

Activities on site may include site visits, soil gas sampling, headspace sampling, installation and sampling from monitor wells, installation of free product recovery systems, installation of groundwater recovery systems, installation of soil venting systems, installation of biological treatment systems, installation of air strippers, installation of carbon absorption units, removal of tanks, piping, and systems, and removal of contaminated soil.

Hazards associated with these activities are varied and include vehicle/pedestrian collisions, fire, collapse of excavation and trenching, handling of heavy materials and equipment operations resulting in contact and crushing type injuries, and use of air- and electrically-powered tools which may result in abrasions, contusions, lacerations, etc.

3.3 JOB HAZARD ANALYSIS AND RISK ASSESSMENT

The chemical contaminants which may be present and the hazardous activities which may be performed at the site will be identified through preliminary site assessment activities, such as site visits or records search. Based on this preliminary information, initial risk assessments will be made by the Site Safety Officer, in consultation with an ESE Regional Health and Safety Officer, defining hazards (both chemical and physical) to workers and other on site personnel, the surrounding populace, and the environment.

The identities of potential hazards and resultant initial risk assessments will be included in the Hazard Evaluation section of the Site-Specific Plan, will be reviewed daily, and will be updated as necessary by the Site Safety Officer. Updated information will be communicated to all other on site personnel immediately.

3.4 AIR MONITORING

An air monitoring program is fundamental to the safety of on site and off site personnel. Total organic vapor (TOV) levels associated with on site activities will be monitored with a Photoionization Detection (PID) instrument (Photovac® TIP or HNU PI-101). This instrument will be the primary source of information for upgrading personal protection. Calibration and maintenance of monitoring equipment will be in accordance with manufacturer recommendations.

The Site Safety Officer, or designee, will establish daily a background TOV prior to initiating on site activities. Under most circumstances, this level can be determined by taking multiple readings at representative locations along the perimeter of the site and averaging the results of sustained measurements. (A sustained measurement is defined as the arithmetic average of six readings taken at 10-second intervals.) If, due to site conditions, it appears that perimeter readings will not yield a truly representative background level, the Site Safety Officer or an ESE Regional Health and Safety Officer will be consulted for guidance.

Decisions to upgrade personal protection will be based on sustained breathing zone TOV that exceeds background levels. Breathing zone refers to the area from the top of the shoulders to the top of the head.

Explosivity levels associated with on site activities will be monitored with an explosimeter or combustible gas meter. This will be the primary source of information for determining the potential hazard due to explosion or fire in confined spaces and other enclosed areas with little or no ventilation.

Prior to entry of any area which may contain an explosive or flammable atmosphere, the Site Safety Officer or designee will take representative readings of the suspect area. Representative readings include readings from top, middle, and lower levels of the area, and at various points at each level in larger areas. Areas in which any one reading exceeds 20% of the lower flammable limit will be considered potentially explosive, and will be vented to below 20% of the lower flammable limit before the introduction of any personnel or non-explosion proof powered equipment.

4.0 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment to be used at petroleum contamination sites will consist of several components. These components will protect the respiratory system, eyes and face, hands, feet, body, and head from a variety of chemical and physical hazards. Levels of personal protection will be categorized in accordance with the criteria described in accordance with the guidelines given in Section 3, Air Monitoring. Additional guidance for personal protective equipment can be found in the ESE Corporate Respiratory Protection Program, or can be obtained from an ESE Regional Health and Safety Officer.

Action levels for upgrading to the various protective levels and levels of personal protection required for the various tasks to be performed on each site, as well as any special site requirements, will be given in the Personal Protective Equipment section of the Site-Specific Plan.

PERSONAL PROTECTIVE EQUIPMENT--LEVEL A

1. Open-circuit, pressure-demand, self-contained breathing apparatus (SCBA);
2. Totally encapsulated suit;
3. Gloves, inner (surgical type);
4. Gloves, outer, chemical protective;
5. Boots, chemical protective, steel toe and shank; and
6. Booties, chemical protective.

CRITERIA

1. Sites known to contain hazards which:
 - a. Require the highest level of respiratory protection (as previously stated),
 - b. Will cause illness as a result of personal exposure,
 - c. Permit a reasonable determination that personal exposure could occur to any part of the body; or
2. Sites for which the Project Manager and/or Site Safety Officer make a reasonable determination that, based on the lack of information to the contrary, the site may be described as previously stated.

PERSONAL PROTECTIVE EQUIPMENT--LEVEL B

1. Open-circuit, pressure-demand SCBA;
2. Chemical protective
 - a. Overalls and long-sleeved jacket, or
 - b. Coveralls;
3. Gloves, inner (surgical type);
4. Gloves, outer, chemical protective;
5. Boots, chemical protective, steel toe and shank;
and
6. Booties, chemical protective.

CRITERIA

1. Sites known to contain hazards which:
 - a. Require the highest level of respiratory protection (as previously stated),
 - b. Will cause illness as a result of personal exposure,
 - c. Permit a reasonable determination that personal exposure to areas of the body not covered by Level B protective clothing is unlikely; and
2. Sites for which the Project Manager and/or Site Safety Officer make a reasonable determination that, based on the lack of information to the contrary, the site may be described as previously stated.

PERSONAL PROTECTIVE EQUIPMENT--LEVEL C

1. Full face-piece, air-purifying respirator (high-efficiency particulate/organic vapor cartridges);
2. Emergency escape oxygen pack (carried);
3. Chemical protective (Tyvek® is the minimum protection)
 - a. Overalls and long-sleeved jacket, or
 - b. Coveralls, or
 - c. Apron;
4. Gloves, inner (surgical type) (Latex);
5. Gloves, outer, chemical protective (Nitrile);
6. Boots, chemical protective (neoprene or NBR), steel toe and shank; and
7. Booties, chemical protective (Latex).

CRITERIA

1. Sites known to contain hazards which:
 - a. Do not require a level of respiratory protection greater than the level afforded by air-purifying respirators (nominal protection of 10), as previously stated;
 - b. Will cause illness as a result of personal exposure; or
 - c. Permit a reasonable determination that personal exposure to areas of the body not covered by Level C protective clothing is unlikely; and
2. Sites for which the Project Manager and/or Site Safety Officer make a reasonable determination that, based on the lack of information to the contrary, the site may be described as previously stated.

PERSONAL PROTECTIVE EQUIPMENT--LEVEL D

1. Coveralls, cotton;
2. Boots/shoes, safety;
3. Safety glasses;
4. Hard hat with optional face shield (where overhead hazards exist); and
5. Air-purifying respirator (readily available).

CRITERIA

Sites where the Project Manager and/or Site Safety Officer make a reasonable determination that hazards due to exposure to hazardous materials are unlikely.

ADDITIONAL PERSONAL PROTECTION

In addition to personal protective equipment, field personnel having duties on or near the hazard site should have ready access to:

1. A fully stocked industrial-size first-aid kit;
2. An eyewash kit; and
3. At least 6 gallons of potable water in a pressurized container to permit decontamination in event of accidental skin or eye contact with chemicals.

5.0 STANDARD WORK PRACTICES

5.1 GENERAL SAFETY RULES:

In addition to the specific requirements of the Site-Specific Plan, common sense should prevail at all times.

The following general safety rules and practices will be in effect at the site.

1. The site will be suitably marked or barricaded as necessary to prevent unauthorized visitors, but will not hinder emergency services if needed.
2. All open holes, trenches, and obstacles will be properly barricaded in accordance with local site needs. These needs will be determined by proximity to traffic ways, both pedestrian and vehicular, and site of the hole, trench, or obstacle. If holes are required to be left open during nonworking hours, they will be adequately decked over or barricaded and sufficiently lighted.
3. Prior to conducting any digging or boring operations, underground utility locations will be identified. The site representative and local utility authorities will be contacted to provide locations of underground utility lines and product piping. All boring, excavation, and other site work will be planned and performed with consideration for underground lines.
4. Smoking and ignition sources in the vicinity of flammable or contaminated material is prohibited.
5. Drilling, boring, movement and use of cranes and drilling rigs, erection of towers, movement of vehicles and equipment, and other activities will be planned and performed with consideration for the location, height, and relative position of aboveground utilities and fixtures, including signs, lights, canopies, buildings, and other structures and construction, and natural features such as trees, boulders, bodies of water, and terrain.
6. When working in areas where flammable vapors may be present, particular care must be exercised with tools and equipment that may be sources of ignition. All tools and equipment so provided must be properly bonded and/or grounded.
7. Approved and appropriate safety equipment, as specified in this site-specific HASP, such as eye protection, hard hats, foot protection, and respirators, must be worn in areas where required by the site-specific HASP. In addition, eye protection must be worn when handling free product, contaminated soil or water, or fill dirt.
8. Beards that interfere with respirator fit are not allowed within the site boundaries. This is necessary because all site personnel may be called upon to use respirator protection in some situations, and beards do not allow for proper respirator fit.
9. No smoking, eating, or drinking will be allowed in the contaminated areas.
10. Tools and hands must be kept away from the face.
11. Personnel must shower at the end of the shift or as soon as possible after leaving the site.
12. Each sample must be treated and handled as though it were extremely toxic.
13. Tank pit excavations must be sampled cautiously, using a remote sampling device or securing samples from excavated soil, and the pit should be entered only as a last resort and only if it is properly shored or sloped. The pit may meet the criteria for a confined space, in which case any entry must be made in accordance with NIOSH recommended Confined Space Entry Procedures. No confined space entry except by written procedure approved by the Health and Safety Officer.
14. Persons with long hair and/or loose-fitting clothing that could become entangled in power equipment are not permitted in the work area.
15. Horseplay is prohibited in the work area.
16. Working while under the influence of intoxicants, narcotics, or controlled substances is prohibited.

5.2 WORK LIMITATIONS:

HOURS

Work shall be limited to daylight hours and during normal weather conditions. Extremes in temperature and weather condition (i.e., wind and lightning) will restrict working hours.

HEAT STRESS

For monitoring the body's recuperative ability toward excess heat, the following techniques will be used as a screening mechanism. Monitoring of personnel wearing protective clothing will commence when the ambient temperature is 70 degrees Fahrenheit (°F) or above. When temperatures exceed 85°F, workers will be monitored after every work period. Monitoring will include visual observations for signs of heat stress and measurement of radial pulse rate for 30 seconds at the beginning of each rest period. If the heart rate exceeds 110 beats per minute (beats/min) at the beginning of a rest period, the next work period will be shortened by 10 minutes, and the rest period stays the same. If the pulse rate is 100 beats/min at the beginning of the next rest period, the following work cycle will be shortened another 10 minutes.

Also, good hygienic standards must be maintained by frequent change of clothing and daily showering. Clothing should be permitted to dry during rest periods. If skin problems occur, consult medical personnel.

COLD STRESS

The human body "senses" cold as a result of two factors, the air temperature and the wind velocity. Cooling of the flesh increases rapidly as wind velocity goes up. Frostbite can occur at relatively mild temperatures if wind penetrates the body insulation. For example, when the air temperature is 40°F and the wind velocity is 30 miles per hour (mph), the exposed skin would perceive an equivalent still air temperature of 13°F. Table 5-1 illustrates windchill indices and the associated hazards to exposed flesh. Precautions will be taken to minimize exposed flesh, and layered clothing will be provided, as appropriate.

Table 5-1.

Windchill Index

Windspeed (mph)	Actual Thermometer Reading (°F)										
	50	40	30	20	10	0	-10	-20	-30	-40	
Calm	50	40	30	20	10	0	-10	-20	-30	-40	
5		48	37	27	16	6	-5	-15	-26	-36	-47
10		40	28	16	4	-9	-21	-33	-46	-58	-70
15		36	22	9	-5	-18	-36	-45	-58	-72	-85
20		32	18	4	-10	-25	-39	-53	-67	-82	-96
25		30	16	0	-15	-29	-44	-59	-74	-88	-104
30		28	13	-2	-18	-33	-48	-63	-79	-94	-109
35		27	11	-4	-20	-35	-49	-67	-82	-98	-113
40		26	10	-6	-21	-37	-53	-69	-85	-100	-116

Source: National Safety Council, 1982.

5.3 ACCIDENT PREVENTION PLAN/ACCIDENT REPORTING:

The purpose of the Safety Plan is to prevent accidents and minimize the impact of an accident if one should occur.

All accidents must be reported to the Site Safety Officer immediately. Prompt reporting is essential to the prevention of future incidents in addition to the well-being of the affected individual or individuals. The Site Safety Officer will notify the Project Manager of any serious accidents. The Site Safety Officer or other key members of the field team will be trained in first aid and CPR. First aid will be administered to affected personnel under the direction of the Site Safety Officer. For serious accidents, the nearest ambulance service will be contacted for transport of injured personnel to the nearest medical facility (see Section 6.0). The Site Safety Officer will have established contact and liaison with medical authorities (see Section 6.0) whose personnel will be knowledgeable of the activities of the field team. Telephone numbers and addresses of ambulance and medical services will be posted on site.

A formal report of any OSHA-recordable accident will be filed with ESE. All reports must be received within 2 working days.

5.4 WORK ZONES AND DECONTAMINATION PROCEDURES:

Work zones will be established in accordance with guidance provided in Figure 5-1. These zones may be modified to fit applicable field conditions; however, proposed modifications must be approved by the Project Manager and Site Safety Officer prior to being implemented in the field.

Personnel decontamination will be initiated on site. Disposable clothing will be removed and stored in designated containers. If additional decontamination is necessary, based on preliminary or subsequent risk assessment by the Site Safety Officer in consultation with ESE Regional Safety and Health Officer, additional decontamination procedures will be implemented. Site specific decontamination procedures will be listed in the Site-Specific Plan.

All heavy equipment will be decontaminated on site. Water in the form of steam cleaning and/or pressure washing may be used to remove any visual contamination from drilling equipment and backhoe.

5.5 SITE SECURITY AND ENTRY:

Site security measures, including barricading, fencing, and lighting, and any special site entry procedures will be described in the Section 5 of the Site-Specific Plan.

6.0 EMERGENCY INFORMATION AND CONTINGENCY PLANS

All emergency information, including phone numbers, site resources, and routes to emergency medical care, will be maintained on site in the Site-Specific Plan by each field team.

The phone list will include the following numbers:

AMBULANCE:

FIRE DEPARTMENT:

HOSPITAL (primary):

HOSPITAL (secondary):

POISON CONTROL CENTER:

POLICE:

TOXIC WASTE AND OIL SPILL:

CLIENT CONTACT:

AGENCY CONTACT:

PROJECT MANAGER:

CORPORATE SAFETY AND HEALTH OFFICER:

The list of site resources will include fire extinguishers, first aid equipment, eyewash units, communications (telephone), emergency personal protective equipment, spill containment equipment and materials, and any other special equipment, supplies or resources.

6.1 INJURY CONTINGENCY PLAN

First aid equipment will be kept on site during all site activities. Additionally, one member of the field team will be trained in first aid. Emergency telephone numbers for ambulance and poison control will be maintained on site in a readily accessible location. Names, addresses, and routes to two emergency medical care providers (hospitals or emergency clinics) will be verified prior to any site activity, and will be listed in the Site-Specific Plan. Maps showing the location of the site, the emergency medical care providers, and hotels and restaurants (if any) used by the field team should be provided in each vehicle. In the event of an injury that cannot be treated on site, the injured person will be immediately transported to the medical provider either by support vehicle or ambulance on determination by the Site Safety Officer, Project Manager, and/or first aid provider.

6.2 FIRE CONTROL AND CONTINGENCY PLAN

No smoking will be allowed during field activities. Fire extinguishers will be available at sites for use on small fires. All samples must be treated as flammable or explosive. The Site Safety Officer will have available the telephone number of the nearest fire station and local law enforcement agencies in case of a major fire emergency.

6.3 SPILL CONTROL AND CONTINGENCY PLAN

In the event of a spill, the Site Safety Officer will be notified immediately. The important factors are that no personnel are overexposed to vapors, gases, or mists and that the liquid does not ignite. Waste spillage must not be allowed to contaminate any local water source. Small dikes will be erected to contain spills, if necessary, until proper disposal can be completed. Subsequent to cleanup activities, the Site Safety Officer will survey the area to ensure that no toxic or explosive vapors remain.

6.4 OFF SITE INCIDENT CONTINGENCY PLAN

The Site Safety Officer will provide field team members with emergency medical care information similar to that kept on site in event of an off site emergency, such as a motor vehicle accident, food poisoning, or other injury sustained off the site.

6.5 COMMUNITY THREAT CONTINGENCY PLAN

The potential for exposure to the surrounding community will be assessed in conjunction with the preliminary site assessment.

The Site Safety Officer will consult with a representative of the local emergency services agency (police or fire department, in accordance with local governmental procedures), and will outline procedures in the Site-Specific Plan to be followed in the event of an emergency threat to the surrounding populace. Situations requiring specified procedures include fire, explosion, accidental ingestion, large spills consisting of free product, and accumulation of potentially explosive vapors off site.

The Site-Specific Plan will identify individuals who will respond to reports of non-emergency community threats arising from site activities. This non-emergency response will include sampling of air, wells and ground water, and soil. Situations requiring specified procedures include small spills and presence of existing concentrations of potentially explosive vapors on site.

APPENDIX A

**SITE-SPECIFIC
HEALTH & SAFETY
INFORMATION**

A. GENERAL PROJECT INFORMATION

SITE: Staples Ranch DATE PREPARED: 03-29-94

LOCATION: El Charro Road, Pleasanton, California

PREPARED BY: Jay Carpenter

OBJECTIVE (S) AND WORKPLAN: Removal of one 500-gallon capacity diesel fuel underground storage tank and two 250-gallon capacity diesel fuel aboveground storage tanks

PROPOSED DATE(S) OF ON-SITE WORK: April 18, 1994 - May 20, 1994
BRIEFING DATE(S): _____ BACKGROUND REVIEW:

COMPLETE: x

PRELIMINARY: —

-----PROJECT H.A.S.P. SUMMARY-----

LEVEL(S) OF PROTECTION: A B C D x MIXED MODIFIED x

OVERALL HAZARD ESTIMATE: HIGH MODERATE LOW x UNKNOWN

ADDITIONAL DOCUMENTATION: TLV TABLE FULL HASP x METHODS

OTHER

B. SITE/MATERIAL CHARACTERISTICS

MATERIAL/WASTE TYPE(S): LIQUID x SOLID GAS SLUDGE

MATERIAL PRESENT IN: DRUMS TANKS x OPEN OTHER

CHARACTERISTICS: IGNITABLE x CORROSIVE TOXIC x REACTIVE

RADIOACTIVE VOLATILE x UNKNOWN OTHER

FACILITY TYPE: Agriculture/Farming CLOSED x OPEN

FACILITY SIZE: _____

TOPOGRAPHY: Relatively flat, at approximately 350-feet above mean sea level.

PRINCIPAL DISPOSAL METHOD AND LOCATION(S): The tanks will be hauled off-site as hazardous waste by Erickson Trucking, Inc. to Erickson Environmental of Richmond, California where they will be cleaned and scrapped.

C. HAZARD EVALUATION

INSTRUCTIONS: Evaluate principal hazards expected at this site. Be specific; complete all entries.

HAZARDS

Physical: Excavation equipment can be a hazard to workers. Trucks may drive by at all times. May be fire and explosivity hazards associated with tank removal.

Chemical: The soil samples collected from below the tanks may contain petroleum hydrocarbons and/or toxic fumes which can be hazardous to an individual breathing them.

Biological: None anticipated.

CORRECTIVE ACTIONS

Physical: Site will be inspected at start up. Identified safety hazards will be discussed at start up safety meeting and mitigated to extent feasible before start-up. Tank atmosphere to be inerted using the appropriate volume of dry ice. If percent lower explosivity level (LEL) of tanks exceeds 10 percent as monitored using an oxygen/LEL then the tank atmosphere will be reinerted with more dry ice. A fire extinguisher will be available during the removal of all tanks.

Chemical: Should breathing conditions exceed work action level while excavating, then all workers within the 25-foot exclusion zone will be required to wear a respirator (half-face mask). If a worker becomes sick, he should leave the work area immediately, breathe fresh air and seek medical attention if needed. Contact the HSO as soon as possible. All work will stop and will not resume until investigation and testing has been completed and corrective actions (as appropriate) have been taken to ensure adequate protection of personnel.

Recommended work Action Level = 5 ppm in workers' breathing zone for 3 minutes (sustained).

Biological: None Anticipated

D. WORK PLAN INSTRUCTIONS

PERSONAL PROTECTION REQUIRED:

Level of protection: A ___ B ___ C ___ D X MIXED ___ MODIFICATIONS ___

For MIXED levels of protection describe areas and levels: _____

For MODIFICATIONS identify action levels: This site will involve D level protection which includes a hard hat, gloves, steel-toe boots. Respirator for 5 ppm or greater.

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT (PPE): Goggles, respirator, etc. should be available and ready for use.

MONITORING EQUIPMENT: PID X FID ___ TOXIC GAS ___ OXYGEN ___

DETECTOR TUBES ___ EXPLOSIMETER ___ PERSONAL MONITOR ___

OTHER INSTRUMENTS: N/A

EQUIPMENT CALIBRATION: PID instrument will be calibrated each day.

MONITORING STRATEGY: Measurements of area and breathing zone levels will be taken at 15 minute intervals at start up of each phase of work. If levels are below 5 ppm at breathing zone frequency will be decreased to hourly unless conditions change (odor levels, etc.).

DECONTAMINATION PROCEDURES: If required, equipment and personal decontamination areas will be designated by the Project Manager at the start of the project. All tools will be cleaned adequately prior to final removal from the work zone, to prevent the transfer of contamination from the work site into clean area. Protective clothing such as Tyvek coveralls, latex gloves, boot covers, etc. will be changed on a daily basis or at the discretion of the Project Manager. All disposable protective clothing (including respirator cartridges) will be put into plastic bags and disposed of in a proper manner. Excavated soil will be stockpiled in an area designated by the Project Manager, until chemical analysis has been performed on representative samples.

SITE CONTROL MEASURES: Set up 25-foot perimeter with traffic cones or caution tape. Visitors within perimeter to read and sign H&S plan and abide by directions of site H&S officer.

SPILL CONTAINMENT PROCEDURES: All pumpable fluids will be removed from the tanks and hauled off-site as hazardous waste. Care will be taken when draining and rinsing associated tank piping. Care will be taken while rinsing the tank to prevent and spillage of residual hydrocarbons. No storage of removed product, rinsate, or other hazardous fluids will be allowed. Fluids will be pumped from the tank into vacuum trucks and immediately hauled off-site.

NOTES: N/A

E. EMERGENCY PROCEDURES

FIRE OR EXPLOSION: Evacuate the area and call the Fire Department at 911 immediately. All burn victims should seek medical attention immediately.

INJURY: Call 911 and administer first aid to victims who have severe injuries. Ensure all injured are transported to the nearest medical facility doctor.

WEATHER: Avoid extremes in temperature (i.e. very cold or very hot conditions).

OTHER:

CHEMICAL EXPOSURE ACTIONS:

(See Appendix B for Optional Material Safety Data Sheets)

EMERGENCY TELEPHONE NUMBERS

POLICE/FIRE/AMBULANCE: 911

POISON CONTROL: (800) 523-2222

ESE CONCORD OFFICE: (510) 685-4053

CHEMTREC: (800) 424-9300

UNDERGROUND SERVICE ALERT: (800) 642-2444

PROJECT CONTACTS

AGENCY CONTACT: Alameda County Health Care Services Agency (510) 271-4320

SITE CONTACT: Mr. Andrew Garcia, ACGSA (510) 535-6277

CLIENT CONTACT: Mr. Andrew Garcia, ACGSA (510) 535-6277

F. EMERGENCY PRECAUTIONS

PRIMARY HOSPITAL/INFIRMARY:

Name: VALLEY CARE MEDICAL CENTER

Address: 5555 West Las Positas Blvd., Pleasanton Telephone Number: (510) 847-3000(emergency)

Directions from site to emergency unit: Take El Charro Road north to the 580 interstate freeway west, exit the 580 at Tassajara Road go south over the 580. Tassajara Road turns into Santa Rita Road on the south side of the 580. Proceed south on Santa Rita Road till West Las Positas Boulevard, go right and then make an immediate right into the hospital.

Remarks: See Figure A

HOSPITAL LOCATION: VALLEY MEDICAL CENTER
5555 WEST LAS POSITAS BLVD.
PLEASANTON, CA 94588



APPENDIX B

**MATERIAL
SAFETY DATA
SHEETS**



MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶

52,303-3

PAGE 1

97367 (4-85)

24 HOUR EMERGENCY ASSISTANCE		GENERAL MSDS ASSISTANCE		
SHELL: 713-473-9461 CHEMTREC: 800-424-9300		SHELL: 713-241-4819		
ACUTE HEALTH 2	FIRE 2	REACTIVITY 0	HAZARD RATING ▶ LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4	

*For acute and chronic health effects refer to the discussion in Section III

SECTION I	NAME
PRODUCT ▶	SHELL AUTO DIESEL
CHEMICAL NAME ▶	DIESEL OIL
CHEMICAL FAMILY ▶	PETROLEUM HYDROCARBON
SHELL CODE ▶	31100

SECTION II-A		PRODUCT/INGREDIENT	
NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL AUTO DIESEL	68334-30-5	100

SECTION II-B				ACUTE TOXICITY DATA		
NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50			
P	NOT AVAILABLE					

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT

BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING LIQUID IS PRACTICALLY NONIRRITATING TO THE EYES.

SKIN CONTACT

BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING LIQUID IS PRESUMED TO BE MODERATELY IRRITATING TO THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SEVERE IRRITATION AND DERMATITIS. MAY CAUSE MILD SKIN SENSITIZATION. RELEASE DURING HIGH PRESSURE USAGE MAY RESULT IN INJECTION OF OIL INTO THE SKIN CAUSING LOCAL NECROSIS.

INHALATION

INHALATION OF VAPORS OR MIST MAY CAUSE MILD IRRITATION TO THE UPPER RESPIRATORY TRACT. HIGH CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM DEPRESSION. INHALATION OF HIGH LEVELS OF MIST MAY RESULT IN CHEMICAL PNEUMONITIS.

INGESTION

INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

SIGNS AND SYMPTOMS

IRRITATION AS NOTED ABOVE. SKIN SENSITIZATION (ALLERGY) MAY BE EVIDENCED BY RASHES, ESPECIALLY HIVES. EARLY TO MODERATE CNS (CENTRAL NERVOUS SYSTEM) DEPRESSION MAY BE EVIDENCED BY GIDDINESS.

HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. LOCAL NECROSIS IS EVIDENCED BY DELAYED ONSET OF PAIN AND TISSUE DAMAGE A FEW HOURS FOLLOWING INJECTION. ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR.

AGGRAVATED MEDICAL CONDITIONS

PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. PREEXISTING SKIN OR LUNG ALLERGIES MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS FROM EXPOSURE TO THIS PRODUCT.

OTHER HEALTH EFFECTS

KIDNEY DAMAGE MAY RESULT FOLLOWING ASPIRATION PNEUMONITIS. THE RESULTS OF ANIMAL BIOASSAYS ON MIDDLE DISTILLATE FUELS SHOW THAT PROLONGED DERMAL CONTACT PRODUCES A WEAK TO MODERATE CARCINOGENIC ACTIVITY.

SEE SECTION VI FOR ADDITIONAL HEALTH INFORMATION.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

NO.	OSHA PEL/TWA	OSHA PEL/CEILING	TLV/TWA	ACGIH TLV/STEL	OTHER
P	*				

* NO OSHA PEL OR ACGIH TLV HAS BEEN ESTABLISHED.

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

FLUSH EYES WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

SKIN CONTACT

REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED. IF MATERIAL IS INJECTED UNDER THE SKIN, GET MEDICAL ATTENTION PROMPTLY TO PREVENT SERIOUS DAMAGE; DO NOT WAIT FOR SYMPTOMS TO DEVELOP.

INHALATION

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN

IF MORE THAN 2.0 ML PER KG HAS BEEN INGESTED AND VOMITING HAS NOT OCCURRED, EMESIS SHOULD BE INDUCED WITH SUPERVISION. KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE USING A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED.

SECTION VI SUPPLEMENTAL HEALTH INFORMATION

REPEATED DERMAL APPLICATION OF HIGH LEVELS OF MIDDLE DISTILLATE FUELS IN EXPERIMENTAL ANIMALS HAS PRODUCED EXTREMELY SEVERE IRRITATION TO CORROSIVE ACTION ON THE SKIN. VARYING DEGREES OF LIVER AND KIDNEY DAMAGE WERE NOTED IN THESE STUDIES, INCLUDING CONGESTION, ENLARGEMENT, MOTTLING, AND MULTIFOCAL NECROSIS.

MIDDLE DISTILLATE FUELS HAVE BEEN DEMONSTRATED TO CAUSE CHROMOSOME DAMAGE IN THE IN VIVO RAT BONE MARROW CYTOGENETICS ASSAY, AND MUTAGENIC IN THE L5178Y MOUSE LYMPHOMA ASSAY. BASED ON AN INCREASED INCIDENCE OF VARIOUS TUMORS IN STUDIES WITH LABORATORY ANIMALS, THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) REGARDS WHOLE DIESEL EXHAUST AS A POTENTIAL OCCUPATIONAL CARCINOGEN.

SECTION VII

PHYSICAL DATA

BOILING POINT: 450 (APPROX.)
(DEG F)SPECIFIC GRAVITY: 0.8762
(H2O=1)VAPOR PRESSURE: NOT AVAILABLE
(MM HG)MELTING POINT: NOT AVAILABLE
(DEG F)SOLUBILITY: NEGLIGIBLE
(IN WATER)VAPOR DENSITY: >1
(AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE

APPEARANCE AND ODOR:
YELLOW LIQUID; STRONG HYDROCARBON ODOR.

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
130 DEG F (PMCC) MIN.FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: N/AV UPPER: N/AV

EXTINGUISHING MEDIA

USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

CAUTION. COMBUSTIBLE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER. IN THE CASE OF LARGE FIRES, ALSO COOL SURROUNDING EQUIPMENT AND STRUCTURES WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION IX

REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS

THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

USE A NIOSH-APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134, USE EITHER A FULL-FACE, ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING

NO SPECIAL EYE PROTECTION IS ROUTINELY NECESSARY. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT.

ADDITIONAL PROTECTIVE MEASURES

USE EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

CAUTION. COMBUSTIBLE. *** LARGE SPILLS *** ELIMINATE POTENTIAL SOURCES OF IGNITION. WEAR APPROPRIATE RESPIRATOR AND OTHER PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS AND SEAL TIGHTLY FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLUSH SOLUTION AS ABOVE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL.

SECTION XII SPECIAL PRECAUTIONS

KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHTS, CIGARETTES AND TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE; FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE (ONLY) WITH ADEQUATE VENTILATION. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE.

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SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
COMBUSTIBLE LIQUID

D.O.T. PROPER SHIPPING NAME:
FUEL OIL, NA 1993

SECTION XIV OTHER REGULATORY CONTROLS

THIS PRODUCT IS LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE EDS SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV SPECIAL NOTES

THIS REVISION INCORPORATES THE FINDINGS OF DIESEL EXHAUST CARCINOGENICITY INTO SECTION VI.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT
HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE
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USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: NOVEMBER 06, 1989

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

J. C. WILLETT

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