General Services Agency

Darlene A. Smith, Director

July 5, 1995

Mr. Scott Seery, CHMM
Senior Hazardous Materials Specialist
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

SUBJECT: FINAL CASE CLOSURE FOR OLD GRAYSTONE (STID 4086)
SANTA RITA REHABILITATION CENTER, DUBLIN, CA

Dear Mr. Seery:

The County of Alameda General Service Agency (GSA) is pleased to submit the enclosed reports documenting well destruction work at UST 9 and at USTs 11, 12 & 12A. Well destruction work was performed under permits issued by Zone 7 - Alameda County Flood Control and Water Conservation District.

This concludes required actions at Old Graystone (STID 4086). Accordingly, GSA requests that a letter of "no further action" be issued.

Thank you for your assistance with this case closure.

Sincerely,

Rod Freitag, P.E.
Environmental Program Manager

Enclosures: Versar Report dated 6/30/95
ES&E Report dated 6/15/95

cc: Mr. Tom Peacock, Department of Environmental Health
Mr. Pat Cashman, Surplus Property Authority
Mr. Jim de Vos, Engineering and Environmental Management

RDF:rdf:g:\project\env\7058sr9\eh0630.doc

Engineering & Environmental Management Department
1401 Lakeside Drive, 11th Floor, Oakland, California 94612
Telephone (510) 208-9525 • FAX (510) 208-9530

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600 FAX (510) 462-3914

JUN 21 1995

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT OLD GRAYSTONE AREA
SANTA RITA CORRECTIONAL FACILITY
DUBLIN, CALIFORNIA

CLIENT
Name ALAMEDA COUNTY GENERAL SERVICES AGENCY
Address 1401 LAKESIDE DRIVE Phone (510) 208-9522
City OAKLAND Zip 94612

APPLICANT
Name ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
Address 4090 NELSON AVE, STE. J Phone (510) 685-4052
City CONCORD Zip 94520

TYPE OF PROJECT
Well Construction
Cathodic Protection ___
Water Supply ___
Monitoring ___
Geotechnical Investigation
General ___
Contamination ___
Well Destruction ✓

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger ✓
Cable ___ Other ___

DRILLER'S LICENSE NO. 484288 (C-57)

WELL PROJECTS * WILL ABANDON BY DRILLING OUT & GROUTING
Drill Hole Diameter 8 in. Maximum
Casing Diameter 4 in. Depth 30 ft.
Surface Seal Depth ___ ft. Number 4

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE MAY 4 1995
ESTIMATED COMPLETION DATE MAY 25, 1995

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

FOR OFFICE USE

PERMIT NUMBER 95264
LOCATION NUMBER 3S/1E 5H3 to 5H6

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

(E.) WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 28 Apr 95
Wyman Hong

Environmental
Science &
Engineering, Inc.
A GILCORP Company

JUN 21 1995

June 15, 1995

Mr. Rod Freitag, P.E.
Alameda County
General Services Agency
Engineering & Environmental Management
1401 Lakeside Drive
Oakland, CA 94612

SUBJECT: REPORT OF SITE ACTIVITIES
OLD GRAYSTONE FUELING AREA
SANTA RITA CORRECTIONAL FACILITY
DUBLIN, CALIFORNIA
ESE PROJECT NO. 65-95-058

Dear Mr. Freitag:

Pursuant to your request, Environmental Science & Engineering, Inc. (ESE) has prepared the following report to document the abandonment of four ground water monitoring wells at the subject site. This document presents the procedures used during the well abandonment activities.

SITE ACTIVITIES

On May 5, 1995, ESE supervised Exploration Geoservices of San Jose, California (a State Licensed C-57 drilling contractor) during the abandonment of monitoring wells OG-1, OG-2, OG-3, and OG-4. All well abandonments were performed in accordance with the guidelines of the State of California Department of Water Resources Water Well Standards (1981) and the Zone 7 Water Agency. A copy of the permit (from Alameda County Zone 7) for well closure is enclosed.

The polyvinyl chloride (PVC) casing of each well was drilled out using a Mobile B61 hollow-stem auger drill rig. The resultant borings were then backfilled to grade with neat cement grout using the hollow-stem auger as a tremie to place the grout beneath the occurrence of ground water. All soil cuttings generated during these well abandonment activities were spread on the ground surface at the site. All inert waste products, including well monuments and PVC casing, were hauled offsite for recycling/disposal.

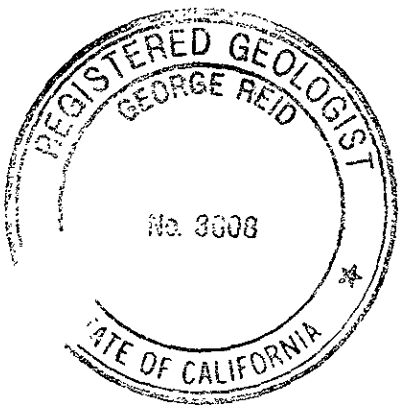
o o O o o

Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by other geologists and engineers practicing in this field. No other warranty, expressed or implied, is made as to the professional advice in this report. If you have any questions or comments regarding the contents of this letter report, please contact Bart Miller at (510) 685-4053.

Sincerely,
ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Bart S. Miller
Project Geologist

George Reid, R.G. 3608
Manager, Geosciences



ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

STID 4086

Alameda County CC4580
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda CA 94502-6577

February 21, 1995

Mr. Rod Freitag
Alameda County General Services Agency
Engineering & Environmental Management Dept.
1401 Lakeside Drive, 11th Floor
Oakland, CA 94612

RE: SANTA RITA - OLD GRAYSTONE CASE CLOSURE STATUS

Dear Mr. Freitag:

As you are aware, there have been two active underground storage tank (UST) investigations occurring within the Santa Rita - Old Graystone subsite. One such project, involving the assessment and subsequent limited remediation of the UST #11, 12, and 12A site, was successfully completed, receiving RWQCB concurrence on January 17, 1995. The remaining Old Graystone project is associated with UST #9. Based on data presented during this investigation to date, I anticipate the successful completion of this project in the near future.

I anticipate final *case closure* for the Old Graystone subsite to occur upon receipt of RWQCB concurrence for the UST #9 project. Please call me at 510/567-6783 should you have any further questions.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Agency Director
Tom Peacock, ACDEH
Rob Weston, ACDEH
Jim Ferdinand, Alameda County Fire Department

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

STID 4086

Alameda County CC4580
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda CA 94502-6577

February 21, 1995

Mr. Rod Freitag
Alameda County General Services Agency
Engineering & Environmental Management Dept.
1401 Lakeside Drive, 11th Floor
Oakland, CA 94612

RE: SANTA RITA - OLD GRAYSTONE, USTs #6, 7, 10

Dear Mr. Freitag:

This office has reviewed the December 11, 1990 Certified Environmental Consulting, Inc. (CEC) report documenting the closure of four of the underground storage tanks (UST) associated with the noted Santa Rita subsite, USTs #6, 7, 9, and 10. The subject USTs previously served the former county rehabilitation center.

The referenced report documents that no noteworthy releases of petroleum hydrocarbons from USTs #6, 7, and 10 have occurred. Consequently, no further environmental investigations are required for these UST sites. UST #9, the remaining tank of those referenced in the cited CEC report, is currently in the last stages of its post-closure investigation.

This department is satisfied that USTs #6, 7, and 10 have been closed in full compliance with the requirements of Title 23, California Code of Regulations.

Please contact me at 510/567-6783 should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Agency Director
Tom Peacock, ACDEH
Rob Weston, ACDEH
Jim Ferdinand, Alameda County Fire Department

AMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

ALAMEDA COUNTY ENV. HEALTH DEPT.
ENVIRONMENTAL PROTECTION DIVISION
1131 HARBOR BAY PKWY., #250
ALAMEDA CA 94502-6577
(510)567-6700

January 25, 1995

Mr. Andy Garcia
Alameda County General Services Agency
Engineering & Environmental Management Dept.
1401 Lakeside Drive, 11th Floor
Oakland, CA 94612

RE: SANTA RITA REHABILITATION CENTER - MADIGAN BUILDING, UST #5

Dear Mr. Garcia:

This office has reviewed the July 20, 1992 Environmental Science & Engineering, Inc. (ESE) report documenting the closure of a single underground storage tank (UST) at the noted Santa Rita subsite. The subject UST previously served the former Madigan Building.

The referenced report documents that no noteworthy release of petroleum hydrocarbons has occurred. Consequently, no further environmental investigation is required at the subject Santa Rita subsite. Therefore, this department is satisfied that the subject UST has been closed in full compliance with the requirements of Title 23, California Code of Regulations.

Please contact me at 510/567-6783 should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Agency Director
Tom Peacock, ACDEH
Rob Weston, ACDEH
Jim Ferdinand, Alameda County Fire Department

General Services Agency

Darlene A. Smith, Director

December 20, 1994

Mr. Scott Seery, CHMM
Senior Hazardous Materials Specialist
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

SUBJECT: SECOND QUARTER GROUNDWATER MONITORING REPORT FOR FORMER UNDERGROUND STORAGE TANK #9, SANTA RITA PROPERTY, SANTA RITA, CALIFORNIA

Dear Mr. Seery:

Enclosed for your review are two copies of the *November 29, 1994 Second Quarter Groundwater Monitoring Report for the Former Underground Storage Tank #9, Santa Rita Property, Santa Rita, California.* This report was prepared by Versar, Inc., environmental consultant.

Please note Versar's *Table 1, Summary of First and Second Quarterly Groundwater Sampling Analytical Results*, enclosed. Therein, the County of Alameda has demonstrated two consecutive quarters of groundwater monitoring at the UST #9 site. All the laboratory results for TPH-D and BTEX are well below the Maximum Contaminant Levels for drinking water. We plan to continue groundwater monitoring for two additional quarters. Assuming the results remain below the Maximum Contaminant Levels for drinking water, the County of Alameda will request site closure for UST #9 site.

Also, on September 8, 1994, Environmental Science & Engineering, Inc., environmental consultant, on behalf of the County of Alameda, requested **site closure** for Old Graystone Fueling Area, Santa Rita Correctional Facility, Dublin, California. Enclosed is a copy of their letter for your reference. The primary basis for this request is that the County of Alameda has demonstrated four consecutive quarters of groundwater monitoring. All the

Engineering & Environmental Management Department
1401 Lakeside Drive, 11th Floor, Oakland, California 94612
Telephone (510) 208-9525 • FAX (510) 208-9530

laboratory results for TPH-G, TPH-D, and BTEX are well below the Maximum Contaminant Levels for drinking water. These results are summarized in Environmental Science & Engineering's *Table 2, Analytical Results for Groundwater Samples Collected From Monitoring Wells*, enclosed.

I would appreciate it if you would place these two sites on the **highest, fastest priority level** possible. The County of Alameda has entered into a sales agreement with Homart Development Co. in which a portion of Alameda County's Santa Rita property along Interstate 580 will be developed. My understanding is that construction of a shopping center on the property, which includes the UST-9 and Old Graystone sites, will start as soon as March 1, 1995. Thus, obtaining site closures for these two sites as soon as possible, is my top priority. Any help, advice, suggestions, etc. that you can give me, are appreciated.

If you have any questions, please call me at (510) 208-9521. I appreciate your continued cooperation and prompt response to this letter. I look forward to our continued excellent working relationship. Have a *Merry Christmas* and a *Happy New Year*!

Sincerely,

Andrew B. Garcia

Andrew B. Garcia, REA
Environmental Project Manager

enclosure

cc: Mr. Tom Peacock, Department of Environmental Health
Mr. Jack Shepherd, Planning Department

ABG,abg; g\project\env\7058srj9\eh1220
File: Project #93-7058, Bldg. #2282

Versar INC.

TABLE 1

SUMMARY OF FIRST AND SECOND QUARTERLY GROUNDWATER SAMPLING ANALYTICAL RESULTS[1]

NOVEMBER 1994 *

SAMPLE DATE	TPH-D	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
14-JUN-94	ND[2]	ND	ND	ND	ND
30-SEP-94	ND	0.52	ND	ND	ND
MDL[3]	50	0.50	0.50	0.50	1.50
MCL[4]	NA	1.0	100[5]	680	1,750

Notes: 1. All results reported in micrograms per liter.

2. ND = constituent not detect at or above the analytical method detection limit.

3. MDL = method detection limit.

4. MCL = maximum contaminant level.

5. California Action Level (EPA, 1994).

* Taken from Versar, Inc. November 29, 1994 "Second Quarter Groundwater Monitoring Report for the Former Underground Storage Tank #9, Santa Rita, California".

Environmental
Science &
Engineering, Inc.
A CILCORP Company

September 8, 1994

Mr. Scott Seery
Sr. Hazardous Materials Specialist
Alameda County
Health Care Services Agency
1131 Harbor Bay Parkway,
Alameda, CA 94502

SUBJECT: OLD GRAYSTONE FUELING AREA, SANTA RITA CORRECTIONAL FACILITY, DUBLIN, CALIFORNIA

Dear Mr. Seery:

On behalf of the Alameda County General Services Agency (GSA), Environmental Science & Engineering, Inc. (ESE) respectfully requests that environmental site closure be granted by the Alameda County Health Care Services Agency (HCSA) for the subject former fueling area (site). This request is based on the following facts:

- All soil in the unsaturated zone at the site reported to be impacted with petroleum hydrocarbons was excavated during February-March, 1993;
- The excavation was backfilled with clean nonimpacted fill material;
- The excavated soil was aerated on site and, upon receipt of written approval from the HCSA, was spread as a thin layer (one to six inches in thickness) over a large area of the native sediments at the site;
- Ground water hydrology at the site has been characterized and indicates a consistant ground water gradient of 0.001 to 0.002 toward the southeast. Given this, the location of the site wells relative to the former excavation has provided good upgradient, crossgradient, and downgradient sample control ;
- No detectable concentrations of total petroleum hydrocarbons as diesel (TPH-D) and gasoline (TPH-G) have been reported in any of the ground water samples collected at the site during the past three quarters;
- Only one ground water sample collected from well OG2 during the first quarter of 1994 was reported to contain toluene, ethylbenzene, and total xylenes concentrations of 2.1, 0.51, and 3.5 micrograms per liter, respectively.

A detailed summary of these facts are presented in the enclosed quarterly monitoring report prepared by ESE.

The GSA will suspend all further monitoring activities at the site pending receipt of your response to this request. Please feel free to contact the undersigned at (510) 685-4053 with any questions or comments pertaining to this correspondence.

Sincerely,
ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Bart S. Miller
Project Geologist

Enclosure: (1) ESE Quarterly Monitoring Report

p.c. Jim de Vos - Alameda County GSA (with enclosure)

TABLE 2

ANALYTICAL RESULTS FOR GROUND WATER SAMPLES COLLECTED FROM MONITORING WELLS *

Sample No.	Date	TPH-G (µg/L)	TPH-D (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
OG1	11/05/93	ND	--	ND	ND	ND	ND
	2/10/94	ND	ND	ND	ND	ND	ND
	5/13/94	ND	ND	ND	ND	ND	ND
	8/12/94	ND	ND	ND	ND	ND	ND
OG2	11/05/93	ND	--	ND	ND	ND	ND
	2/10/94	ND	ND	ND	2.1	0.51	3.5
	5/13/94	ND	ND	ND	ND	ND	ND
	8/12/94	ND	ND	ND	ND	ND	ND
OG3	11/05/93	ND	75	ND	ND	ND	ND
	2/10/94	ND	ND	ND	ND	ND	ND
	5/13/94	ND	ND	ND	ND	ND	ND
	8/12/94	ND	ND	ND	ND	ND	ND
OG4	11/05/93	ND	--	ND	ND	ND	ND
	2/10/94	ND	ND	ND	ND	ND	ND
	5/13/94	ND	ND	ND	ND	ND	ND
	8/12/94	ND	ND	ND	ND	ND	ND

NOTES:
µg/L refers to micrograms per liter
TPH-G refers to Total Petroleum Hydrocarbons as Gasoline
TPH-D refers to Total Petroleum Hydrocarbons as Diesel
ND refers to not detected at analytical method detection limit

* Taken from Enviromental Science & Engineering, Inc. September 8, 1994 "Quarterly Monitoring Report, Third Quarter 1994, Old Graystone Fueling Area, Santa Rita Correctional Facility, Dublin, California."

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

STID 4086

May 24, 1994

Mr. Pete Kinney
Alameda County General Services Agency
4400 MacArthur Boulevard
Oakland, CA 94619

RE: SANTA RITA FACILITY, UST #9 LEAK ASSESSMENT

Dear Mr. Kinney:

I have completed review of the May 5, 1994 Versar, Inc. preliminary site assessment (PSA) work plan, as amended May 23, 1994. The cited work plan proposes the installation of a single ground water monitoring well to be located directly southeast of the former UST #9. Placement of this well is based on local topography and drainage patterns for the region, and the results of ground water flow direction calculations for the adjoining well network at the former "Old Graystone" fueling complex.

The cited Versar PSA work plan has been accepted for this stage of the investigation at this UST site.

Please contact me at 510/271-4530 when field work is slated to begin.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Assistant Agency Director
Gil Jensen, Alameda County District Attorney's Office
Ed Laudani, Alameda County Fire Department
John Russell, Versar, Inc., 1255 Harbor Bay Pkwy, Ste. 100
Alameda 94502

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

STID 4086

April 26, 1994

Mr. Pete Kinney
Alameda County General Services Agency
4400 MacArthur Boulevard
Oakland, CA 94619

RE: *SESOIL* LEACHABILITY MODELING ANALYSIS - OLD GRAYSTONE FUELING AREA, SANTA RITA CORRECTIONAL FACILITY

Dear Mr. Kinney:

I am in receipt of and have reviewed the January 6, 1994 Versar, Inc. (Versar) report documenting the SESOIL modeling analysis of previously-excavated, fuel-impacted soil. My review of the data presented in the cited Versar report was performed in context with the body of work completed at the referenced site to date.

In summary, reports documenting activities associated with the removal of underground storage tanks (UST) 11, 12, and 12A indicate approximately 6500 yds^3 of soil were excavated during this process. Of this total, approximately 5000 yds^3 were assumed impacted by fuel hydrocarbons, and 1500 yds^3 were not.

Impacted soil volume was subsequently recalculated and determined to be approximately 4235 yds^3. The soil was resampled and analyzed for gasoline constituents. Approximately 2885 yds^3 were found to exhibit <1 parts per million (ppm) of total petroleum hydrocarbons as gasoline (TPH-G). This soil was reportedly spread elsewhere on-site.

The remaining 1350 yds^3, found to contain >1 ppm of TPH-G, was placed into a bio/aeration cell for treatment. After several months of treatment, final sample results revealed a significant reduction in TPH-G (< 8 ppm), TPH-diesel concentrations of < 30 ppm, petroleum oil and grease concentrations between 90 and 190 ppm, and nondetectable benzene, semivolatile organic compounds (SVOC) and halogenated volatile organic compounds (HVOC).

The cited SESOIL analysis evaluated the leachability and vertical transport potential of the contaminants still present in the 1350 yds^3 of treated soil should this soil be reintroduced to the subject site. The SESOIL program required the input of parameters for climate, soil type, target chemicals and application data. Climate data were reportedly supplied with the SESOIL program. Soil parameters were derived from site-specific boring logs which reportedly identified four distinct lithologic groups underlying the site. Chemical parameters reportedly included biodegradability, molecular weight, and Henry's Constant.

Four separate model runs were conducted, each using diesel as a ligand. The four model runs were: 1) gasoline in diesel; 2) toluene in diesel; 3) ethylbenzene in diesel; and 4) xylenes in diesel. A conservative approach in performance of this program was reportedly exercised in that, of the confirmatory soil samples for which no detectable target compounds were found, it was assumed that said concentrations were equal to the reporting limit. These values were subsequently inserted into the program.

Versar reports that the result of the SESOIL simulations indicate the maximum depth of gasoline constituents after a 30 year period would be 1.81 meters with 90% of the initial mass having either been (bio)degraded or volatilized within the first 20 years. Significant contaminant migration retardation was reportedly expected from underlying clay strata. Further, high soil adsorption capacity was expected to limit latent oil and grease migration.

The results of the SESOIL analysis, as presented in the cited Versar report, indicate a low probability for remaining contaminants to leach into underlying ground water at this site. Therefore, the subject soil may be reintroduced **at grade** to the site of origin (Santa Rita facility).

Please call me at 510/271-4530 should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Assistant Agency Director
Gil Jensen, Alameda County District Attorney's Office
Rich Hiett, RWQCB
Ravi Arulanantham, Staff Toxicologist, ACDEH

Versar INC.

January 6, 1994

ALCO HAZMAT

94 JAN -7 PM 2:28

Mr. Scott Seery
Hazardous Materials Specialist
Alameda County Health Care Services Agency
UST Local Oversight Program
80 Swan Way, Room 200
Oakland, California 94621

SUBJECT: RESULTS OF SESOIL MODELING FOR SOIL STOCKPILES GENERATED DURING UNDERGROUND STORAGE TANK REMOVALS AT THE SANTA RITA FACILITY IN ALAMEDA COUNTY, CALIFORNIA.

Dear Mr. Seery,

Enclosed you will find a copy of the reports for each of the modeling exercises completed for the soil stockpiles generated during the removal of underground storage tanks located at the Old Graystone Fueling Area of the Santa Rita Facility.

The modeling for the Old Graystone site was performed for toluene, ethylbenzene, and xylenes in a diesel matrix. The results indicate that over the 30 year time period none of the hydrocarbon constituents modeled would have a vertical migration greater than eight feet below the ground surface. Furthermore, these constituents will degrade or volatize to below detectable levels within the first few years. Based on these results, and assuming that all of the defined input parameters for the model are accurate, it is our conclusion that there is a very low likelihood that the groundwater will be impacted by the petroleum hydrocarbons present in the soil stockpiles at the two above referenced locations.

Should you have any questions regarding the material presented in the reports, or require any clarifications regarding the modeling exercise, please contact Larry Kleinecke in our Sacramento office.

Sincerely,
Versar, Inc.

Robert White
Program Manager

cc: Peter Kinney, Alameda County General Services Agency
RWW/bmk

2244-94/2241-007/JAN6,94

107442

DATE 5/21/92 PAGE 1 OF 1

CHAIN OF CUSTODY RECORD

Environmental Science & Engineering, Inc.
4090 Nelson Avenue
Suite J
Concord, CA 94520
(415) 685-4053
Fax (415) 685-5323

PROJECT NAME A.C. Santa Rita
ADDRESS Santa Rita Jail
Dublin, CA
PROJECT NO. 6925351
SAMPLED BY Steve Willatts (RSW)
LAB NAME Curtis & Thompkins

	SAMPLE #	DATE	TIME	LOCATION	TPH-Diesel	TPH-Gas	Oil & Grease	BTEX	TEH	Total Lead					MATRIX	NUMBER OF CONTAINERS	REMARKS (CONTAINER, SIZE, ETC.)
-1	4BW	5/20/92	5:30pm	4th & Madigan	X		X	X	X						Soil	1	
-2	4BE	5/20/92	5:37pm	4th & Madigan	X		X	X	X						Soil	1	1 Brass Ring
-3	4AE	5/20/92	5:49pm	4th & Madigan	X		X		X						Soil	1	↓
-4	4E	5/20/92	6:03pm	4th & Madigan	X		X		X						Soil	1	↓
-5	12E	5/20/92	6:27pm	Old Greystone		X	X	X		X					Soil	1	↓
	12W	5/20/92	6:56pm	Old Greystone		X	X	X		X					Soil	1	↓
-7	12A	5/20/92	6:45pm	Old Greystone		X	X								Soil	1	↓

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	date	time
1. [signature] (RSW)	[signature: Michael May]	5-21-92	1300
2.			
3.			
4.			
5.			

7 TOTAL NUMBER OF CONTAINERS

REPORT RESULTS TO:

SPECIAL SHIPMENT REQUIREMENTS

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):
For TEH analysis look for Heavy Hydrocarbon (Extend Analysis Spectrum)
Also Note: Additional Test may be ordered on 12A at a later date, will let you know

SAMPLE RECEIPT
CHAIN OF CUSTODY SEALS
REC'D GOOD CONDTN/COLD
CONFORMS TO RECORD

Environmental
Science &
Engineering, Inc.

93 AUG 17 PM 1:15

August 13, 1993

Mr. Scott Seery
Senior Hazardous Materials Specialist
Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Room 350
Oakland, California 94621

SUBJECT: OLD GRAYSTONE FUELING AREA
SANTA RITA CORRECTIONAL FACILITY
ALAMEDA COUNTY GENERAL SERVICES AGENCY
DUBLIN, CALIFORNIA
ESE PROJECT #6-93-5077

Dear Mr. Seery,

Pursuant to your telephone request of earlier today, Environmental Science & Engineering, Inc. (ESE) will proceed on behalf of the Alameda County General Services Agency (GSA) to collect additional soil samples from a stockpile located at the subject site. The stockpiled soil was generated during the overexcavation of soil impacted by a release from an adjacent former underground storage tank (UST) cluster. The fuel products stored in these USTs included gasoline, diesel fuel, and waste oil. All overexcavation activities were documented in a Corrective Action Report (ESE, 1993a) and submitted to the Alameda County Health Care Services Agency (HCSA). The concentrations of gasoline constituents in the stockpiled soil as of July 28, 1993 were documented in a report dated August 9, 1993 and submitted to the HCSA (ESE, 1993b). Stockpiled soil impacted with gasoline constituents is presently being aerated by the GSA at the site under Bay Area Air Quality Management District guidelines. Following completion of aeration, the stockpiled soil will be used to backfill the excavation from a depth of approximately six feet below grade to present grade.

Due to the former presence of a waste oil UST at the subject site, the HCSA has requested that five soil samples be collected for analysis from the stockpiled soil. The HCSA has requested that three of the samples be collected at stockpile locations where impact with gasoline constituents has been reported to be most significant. The two remaining samples will be collected where recent findings indicate no detectable concentrations of gasoline constituents.

4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4053 Fax (510) 685-5323

An ESE geologist will collect the samples by driving a punch sampler (sampler), lined with a new, two by six inch thin-wall brass sleeve (sleeve) into the soil stockpile. The stockpile is currently approximately one-foot in thickness. The sample will be collected from a depth of approximately six-inches. The ends of the sleeve containing sampled soil will be covered with Teflon® sheeting, covered with plastic end caps and sealed with duct tape. Each of the samples will be labeled and placed in a cooler with ice for transport under chain of custody documentation to McCampbell Analytical of Pacheco, California (a State-certified laboratory). All sampling equipment will be washed using an Alconox® detergent and tap water rinse between each sample to prevent cross-contamination.

TOG
TPH-D
SVOC
metals
HVOC

Per your request, the five soil samples collected from the stockpile will be analyzed for total oil and grease (O&G) using EPA method 413.2, total petroleum hydrocarbons as diesel fuel (TPH-d) using EPA method 8015 modified, semivolatile organic compounds (SVOCs) using EPA analytical method 8270, metals including cadmium (Cd), chromium (Cr), nickel (Ni), lead (Pb), and zinc (Zn) using EPA 6010/700 series methods, and halogenated volatile organic compounds using EPA method 8010.

A letter documenting the sampling and results will be provided to your attention. ESE requests that the HCSA provide the GSA a written response concerning the analytical findings of these soil samples as it pertains to use of the stockpiled soil as backfill.

References

Environmental Science & Engineering, Inc. (ESE) 1993a, Corrective Action Report: prepared for HCSA, dated April 27, 1993.

_____, 1993b, Report of Stockpiled Soil Confirmation Sampling: prepared for HCSA, dated August 9, 1993.

Should you have any questions or comments pertaining to the contents of this correspondence, please feel free to contact the undersigned at (510) 685-4053.

Sincerely,
ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Susan Wickham for

Bart S. Miller
Senior Staff Geologist

F:\5077\081393.let

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

STID 4086

August 10, 1993

Mr. Jim de Vos
Alameda County General Services Agency
4400 Mac Arthur Boulevard
Oakland, CA 94619

RE: SANTA RITA FACILITY - OLD GREYSTONE FUELING AREA

Dear Mr. de Vos:

This office has completed review of the July 21, 1993 Environmental Science and Engineering, Inc. (ESE) work plan for the assessment of soil and ground water conditions associated with underground storage tank (UST) leaks at the subject site. The cited work plan has been accepted with the following additions and clarifications:

1) Soil and ground water samples collected from all downgradient borings/wells are to be analyzed for, in addition to the proposed target analytes, the following potential waste oil constituents: semi-volatile organic compounds (SVOC) - EPA Method 8270, halogenated volatile organic compounds (HVOC), total petroleum hydrocarbons as diesel (TPH-D), and metals. Subsequent ground water sampling analytes will be determined following review of data resulting from the first few rounds of sampling.

2) The selection of soil samples collected during boring advancement should also be based upon field screening techniques (e.g., observations, odors, instrument "hits," etc.).

3) The Site Health and Safety should reflect the location of the hospital in Pleasanton on the corner of West Las Positas and Santa Rita Road.

4) All well and ground water elevation measurements must be surveyed relative to mean sea level (MSL).

Please call me field work is slated to begin. I may be reached at 510/271-4530.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Assistant Agency Director
Gil Jensen, Alameda County District Attorney's Office
Jim Ferdinand, Alameda County Fire Department
Bart Miller, ESE
files

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

STID 4086

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR
DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

March 30, 1993

Mr. Jim de Vos
Alameda County General Services Agency
4400 Mac Arthur Boulevard
Oakland, CA 94619

RE: SANTA RITA FACILITY - MEETING TO DISCUSS SCHEDULE FOR UST LEAK SITE INVESTIGATIONS

Dear Mr. de Vos:

This office is in receipt of the recent FAX transmission from Mr. Pete Kinney of your staff which outlines the General Services Agency's (GSA) fiscal schedule for addressing the underground storage tank (UST) issues at the many GSA facilities in Alameda County. Missing from this schedule of planned activities, however, were several of the UST leak sites at the Santa Rita facility which have not been addressed to date.

Mr. Kinney and I have discussed on several occasions (the most recent of which was a meeting February 10) the need to assess and potentially remediate several of these leak sites. Assessment of and corrective action for leaking UST sites are required pursuant to Sections 2652 through 2655, inclusive, and Article 11, Section 2720 et seq., of Title 23, California Code of Regulations (CCR).

Following is a listing of those sites still required under 23CCR to be assessed and evaluated for corrective action:

TANK #	CLOSURE DATE	CONTAMINANT LEVELS
1, 2, 3	March 1988	15,500 ppm TPH-D 1,097 ppm TOG 195 ppm TPH-G no BTEX analysis
4, 4A, 4B	May 1992	15,000 ppm TPH-D 5,300 ppm TOG
9	November 1990	310 ppm TPH-D
23	May 1992	190 ppm TPH-D (1,400 ppm TPH-D found at depth during subsequent stage of assessment)

This office would like to meet with you to discuss the requisite assessments of the noted Santa Rita UST sites, and to determine how this office may best assist GSA in complying with the cited UST regulations. We plan to meet with you the week of April 11, 1993. A conference room has been set aside for the mornings of April 13, 14, 15, and 16 from 9:30 until 12 noon.

Please determine which day is most suitable for you, and contact Mr. Jeff Shapiro of this office no later than April 9 to confirm the date of this meeting. Jeff may be reached at 510/271-4320.

I will be away from the office from April 4 through 8. You may contact me the remainder of this week, however, should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Assistant Agency Director
Gil Jensen, Alameda County District Attorney's Office
John Jang, RWQCB
Ed Howell, ACDEH
Ariu Levi, ACDEH
Jeff Shapiro, ACDEH

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

STID 4086

February 16, 1993

Mr. Pete Kenney
Alameda County General Services Agency
4400 Mac Aurthur Boulevard
Oakland, CA 94619

RE: OLD GRAYSTONE FACILITY, SANTA RITA CORRECTIONAL FACILITY - (FORMER) UNDERGROUND STORAGE TANK SITES 11, 12, 12A

Dear Mr. Kenney:

The Department is in receipt and has completed review of the February 15, 1993 Environmental Science & Engineering, Inc. (ESE) addendum to the ESE Corrective Action Plan dated February 1, 1993. This addendum was developed following the February 10, 1993 meeting between Alameda County General Services Agency (GSA), ESE, as consultant to GSA, and this Department. The referenced corrective actioh plan (CAP) proposes work designed to remove soil and, to a certain extent, ground water impacted by motor vehicle fuel and waste oil constituents associated with past activities at former underground storage tank sites 11, 12, and 12A.

The scope of referenced February 1, 1993 CAP has been accepted as amended. The Department understands that field activities associated with implementation of the CAP are slated to begin tomorrow, February 17, 1993.

Please be advised that following completion of the current phase of work, a ground water investigation must be implemented to define the extent of any ground water problems associated with releases at this UST site. The ground water investigation phase should be initiated with the development and submittal of a viable work plan based on the Regional Water Quality Control Board's (RWQCB) Staff Recommendations for the Initial Evaluation and Investigation of Underground Tanks, the State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual, and Article 11 of Title 23, California Code of Regulations.

Please call me at 510/271-4320 should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Assistant Agency Director
Gil Jensen, Alameda County District Attorney's Office
Rich Hiett, RWQCB
Jim de Vos, GSA
Jeff Shapiro, ACDEH
Pat Galvin, ESE
Ed Howell - files

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER

4823186421

4823186421

RECIPIENT'S COPY

1 Date 1-27-93

From (Your Name) Please Print: LR G. BARTMILLER

Your Phone Number (Very Important): (510) 685 4053

Company: Environmental Science + Eng.

Department/Floor No.:

Street Address: 4090 Nelson Ave Ste J

City: Concord State: CA ZIP Required: 94520

2 To (Recipient's Name) Please Print: MR Jeff SHAPIRO

Recipient's Phone Number (Very Important): (510) 271 4530

Company: Alameda City Health Care Services

Department/Floor No.:

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 80 SWAN WAY # 350

City: OAKLAND State: CA ZIP Required: 94621

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice): 692 5454

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address:
City: State: ZIP Required:

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct No 3 [ ] Bill 3rd Party FedEx Acct No 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 [ ] YOUR PACKAGING
- 16 [ ] FEDEX LETTER*
- 12 [X] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon/No Saturday delivery†)
- 51 [ ] YOUR PACKAGING
- 56 [ ] FEDEX LETTER*
- 52 [ ] FEDEX PAK*
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day †)
- 30 [ ] ECONOMY

Government Overnight (Restricted for authorized users only)
- 46 [ ] GOV'T LETTER
- 41 [ ] GOV'T PACKAGE

Freight Service (for packages over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT**

†Delivery commitment may be later in some areas
*Declared Value Limit $500
**Call for delivery schedule

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [X] DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) [ ] (Not available to all locations)
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE ____ Lbs
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
Total	Total	Total

DIM SHIPMENT (Chargeable Weight) [ ] ____ lbs
L x W x H

Received At
1 [ ] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] B S C 5 [ ] Station

7 Release Signature

Emp. No. Date

- [ ] Cash Received
- [ ] Return Shipment
- [ ] Third Party [ ] Chg To Del [ ] Chg To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

Federal Express Use
- Base Charges
- Declared Value Charge
- Other 1
- Other 2
- Total Charges

REVISION DATE 2/92
PART #137205 GBFE
FORMAT #126
126

General Services Agency

Darlene Smith, Director

BUILDING MAINTENANCE DEPARTMENT
4400 MacArthur Boulevard
Oakland, California 94619
Telephone (510) 535-9660
FAX (510) 535-6245

Hilton T. Hunt
Deputy Director, GSA - BMD

DATE: October 13, 1992

TO: Ravi Arulanantham, Ph.D., CHMM

FROM: Peter Kinney, Environmental Engineer

SUBJECT: CLOSURE OF SANTA RITA UNDERGROUND STORAGE TANK NOS. FIVE AND NINE

Just a short note regarding the underground storage tanks at Santa Rita Jail. As per our conversation last week concerning the closure of tank numbers five and nine at SRJ, you have all necessary reports from ES&E to close the tanks. If there is anything else that you need, please feel free to give me a call on extension 36280.

If you agree with this letter, please initial and return a copy to me at QIC 21303 so I may close my files.

PK:je
c:\PK\UST

cc: Jim de Vos, Manager, Energy and Hazardous Materials

Tank #5

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

Hazardous Materials Inspection Form

II,III

Site ID # ____ Site Name (MADDIGAN) SANTA RITA Today's Date 5/18/92

Site Address OLD SANTA RITA Jail

City Dublin Zip 94 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
L III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

__	1. Immediate Reporting	2703
__	2. Bus. Plan Stds.	25503(b)
__	3. RR Cars > 30 days	25503.7
__	4. Inventory Information	25504(a)
__	5. Inventory Complete	2730
__	6. Emergency Response	25504(b)
__	7. Training	25504(c)
__	8. Deficiency	25505(a)
__	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

__	10. Registration Form Filed	25533(a)
__	11. Form Complete	25533(b)
__	12. RMPP Contents	25534(c)
__	13. Implement Sch. Req'd? (Y/N)	____
__	14. OffSite Conseq. Assess.	25524(c)
__	15. Probable Risk Assessment	25534(d)
__	16. Persons Responsible	25534(g)
__	17. Certification	25534(f)
__	18. Exemption Request? (Y/N)	25536(b)
__	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

__	1. Permit Application	25284 (H&S)
__	2. Pipeline Leak Detection	25292 (H&S)
__	3. Records Maintenance	2712
__	4. Release Report	2651
__	5. Closure Plans	2670

Monitoring for Existing Tanks

__ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily Inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tsting
8) Annual Tank Testing
Daily inventory
9) Other ____

__	7. Precis Tank Test Date: ____	2643
__	8. Inventory Rec.	2644
__	9. Soil Testing.	2646
__	10. Ground Water.	2647

New Tanks

__	11. Monitor Plan	2632
__	12. Access. Secure	2634
__	13. Plans Submit Date: ____	2711
__	14. As Built Date: ____	2635

Rev 6/88

Comments:
THIS is A UST Removal. (MADDIGAN Bldg.)
1-1,000 GAL DIESEL.
- NO PETROleum ODOR DETECTED FROM the P.I.T.
- NO VISUAL SIGNS OF Contamination in Soil w/i the P.I.T.
- No Visual Holes detected IN TANK.
- SAMPLES 5N [redacted]

[redacted] 5N

← PIT →

II, III

Contact: Patrick Galvin / ESE
Title: Sr. Engineer
Signature: [signature]

Inspector: JEFF SHAPIRO
Signature: [signature]

Tank 12A, 11, 12

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

Site ID # ____ Site Name OLD GRAYSTONE Today's Date 5/18/92

Site Address OLD SANTA RITA JAIL

City Dublin Zip 94 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
- ____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- ____ II. Business Plans, Acute Hazardous Materials
- ✓ III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	
___	14. OffSite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(f)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1. Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily Inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tstng
8) Annual Tank Testing
Daily Inventory
9) Other ____

___	7. Precis Tank Test Date: ____	2643
___	8. Inventory Rec.	2644
___	9. Soil Testing.	2646
___	10. Ground Water.	2647

New Tanks

___	11. Monitor Plan	2632
___	12. Access. Secure	2634
___	13. Plans Submit Date: ____	2711
___	14. As Built Date: ____	2635

Rev 6/88

Comments:

Tank Removal

(#12A) (12A)

1- 500 GAL WASTE OIL - Visual Contamination on EASTERN PORTION OF TANK AND IN THE PIT ON THE SOIL.

(12?) ≥ 11,000?

1- 6,000 GAL AST (- DIESEL TANK) - Minor gasoline Spillage ON THE GROUND IN FRONT OF THE TANK.

(11)

1- 10,000 GAL UNLEADED - Petroleum odor Detected SAMPLE. Fiber-Glass Tank. PURGE H_2O IN BOTTOM of Pit. THE SAMPLE TAKEN HAS ODORS OF Petroleum. Two Soil Samples Taken 11W - 11E

11W	11E

← Pit →

PURGED H_2O AT 15'. #11E SAMPLE HAS STRONG GAS ODORS FROM PIT.

1 TANK Remains. It will be removed on 5/20

II, III

Contact: Patrick Galvin / ESE

Title: Sr. Engineer

Signature: Patrick Galvin

Inspector: JEFF SHAPIRO

Signature: Jeff Shapiro

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

Site ID # ____ Site Name GRAY STONE AREA Today's Date 5/20/92

Site Address OLD SANTA RITA Jail

City Dublin Zip 94 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
- ____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- ____ II. Business Plans, Acute Hazardous Materials
- ✓ III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2 Bus Plan Stds	25503(b)
___	3. RR Cars > 30 days	25503 7
___	4 Inventory Information	25504(a)
___	5 Inventory Complete	2730
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___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

___	10. Registration Form Filed	25533(a)
___	11 Form Complete	25533(b)
___	12 RMPP Contents	25534(c)
___	13 Implement Sch. Req'd? (Y/N)	___
___	14 OffSite Conseq Assess.	25524(c)
___	15 Probable Risk Assessment	25534(d)
___	16 Persons Responsible	25534(g)
___	17. Certification	25534(f)
___	18 Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1 Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
- 1) Monthly Test
- 2) Daily Vadose
  - Semi-annual gndwater
  - One time soils
- 3) Daily Vadose
  - One time soils
  - Annual tank test
- 4) Monthly Gndwater
  - One time soils
- 5) Daily Inventory
  - Annual tank testing
  - Cont pipe leak det
  - Vadose/gndwater mon.
- 6) Daily Inventory
  - Annual tank testing
  - Cont pipe leak det
- 7) Weekly Tank Gauge
  - Annual tank tstng
- 8) Annual Tank Testing
  - Daily Inventory
- 9) Other ____

___	7. Precis Tank Test Date: ____	2643
___	8. Inventory Rec.	2644
___	9 Soil Testing.	2646
___	10. Ground Water.	2647

New Tanks

___	11.Monitor Plan	2632
___	12.Access. Secure	2634
___	13.Plans Submit Date: ____	2711
___	14. As Built Date: ____	2635

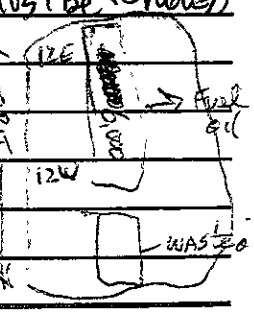
Rev 6/88

Comments:

FINAL TANK Removal FOR THIS SITE.
Hauler # FOR 4R + MADIGAN AND THIS SITE IS #205 701
POTential BALLASTS Containing PCB'S FOUND
ON THIS SITE w/i the Buildings.

PHOTO - THE BLACK COLOR APPEARS to be Coming
FROM THE TAR PAPER within IS lining the TANK.
THE TANK is lined w/ TAR. It may also be contamination
from a WASTE oil clarifier which may be next to the Pit.
PURGED H2O appears to be entering the Pit.
(12? 11,000?

1-6,000 GAL FUEL TANK THE SEAL ATTACHED to the TANK
Smells like either Kerosene or Fuel oil, not ~~leaded~~
leaded GASOLINE. ALL PIPING dispensing MUST BE removed
from the SITE w/i 7days.
SAMPLES ~~TAKEN~~ TAKEN @ 12E + 12W + 12A
#12E is HVY Contaminated, HVY Petroleum ODOR
#12A - Visual Signs of Contamination
#12W - Visual Signs of Contamination



II, III

Contact: R. Stephen Willetts
Title: Sr. Staff Engineer
Signature: R. Stephen Willetts

Inspector: JEFF SHARP
Signature: Jeff Sharp

Tank 11, 12

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED ? ☐ YES ☒ NO

REPORT DATE 11/19/92 CASE #

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I HAVE DISTRIBUTED THIS INFORMATION ACCORDING TO THE DISTRIBUTION SHOWN ON THE INSTRUCTION SHEET ON THE BACK PAGE OF THIS FORM.
SIGNED DATE

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: R. Stephen Willcutts, Agent for GSA | PHONE: (510) 685-4053 | SIGNATURE: [signature]

REPRESENTING ☒ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER | COMPANY OR AGENCY NAME: Environmental Science & Engineering, Inc.

ADDRESS (STREET): 4090 Nelson Avenue, Suite J | CITY: Concord | STATE: CA | ZIP: 94520

RESPONSIBLE PARTY

NAME: Alameda County General Services Agency (GSA) ☐ UNKNOWN | CONTACT PERSON: Jim de Vos | PHONE: (510) 535-6248

ADDRESS (STREET): 4400 MacArthur Boulevard | CITY: Oakland | STATE: CA | ZIP: 94619

SITE LOCATION

FACILITY NAME (IF APPLICABLE): Santa Rita Jail Facility, Old Graystone Area | OPERATOR: Alameda County, GSA | PHONE: (510) 535-6248

ADDRESS (STREET): Old Greystone Area, Old Santa Rita Jail, Dublin, | CITY: Alameda, | COUNTY | ZIP: 94568

CROSS STREET: Tassajara Road

IMPLEMENTING AGENCIES

LOCAL AGENCY / AGENCY NAME: Alameda County Health Care Svc. Agency | CONTACT PERSON: Ravi Arulanantham | PHONE: (510) 271-4530

REGIONAL BOARD: San Francisco Bay Regional Water Quality Control Board | Eddie So | PHONE: (415) 286-4366

SUBSTANCES INVOLVED

(1) NAME: Regular Gasoline | QUANTITY LOST (GALLONS): ☒ UNKNOWN

(2) Unleaded Gasoline ☒ UNKNOWN

DISCOVERY/ABATEMENT

DATE DISCOVERED: 05/18/92 | HOW DISCOVERED: ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☐ TANK REMOVAL ☒ OTHER Subsurface Investigation

DATE DISCHARGE BEGAN: ☒ UNKNOWN

HAS DISCHARGE BEEN STOPPED ? ☒ YES ☐ NO IF YES, DATE 05/18/92

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY)
☐ REMOVE CONTENTS ☐ CLOSE TANK & REMOVE ☐ REPAIR PIPING ☐ REPAIR TANK ☐ CLOSE TANK & FILL IN PLACE ☐ CHANGE PROCEDURE ☐ REPLACE TANK ☒ OTHER Tanks removed 5/18/92-5/20/92

SOURCE/CAUSE

SOURCE OF DISCHARGE: ☐ TANK LEAK ☒ UNKNOWN ☐ PIPING LEAK ☐ OTHER

CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☐ SPILL ☐ CORROSION ☒ UNKNOWN ☐ OTHER

CASE TYPE

CHECK ONE ONLY
☒ UNDETERMINED ☐ SOIL ONLY ☐ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS

CHECK ONE ONLY
☒ NO ACTION TAKEN ☐ PRELIMINARY SITE ASSESSMENT WORKPLAN SUBMITTED ☐ POLLUTION CHARACTERIZATION
☐ LEAK BEING CONFIRMED ☐ PRELIMINARY SITE ASSESSMENT UNDERWAY ☐ POST CLEANUP MONITORING IN PROGRESS
☐ REMEDIATION PLAN ☐ CASE CLOSED (CLEANUP COMPLETED OR UNNECESSARY) ☐ CLEANUP UNDERWAY

REMEDIAL ACTION

CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ EXCAVATE & DISPOSE (ED) ☐ REMOVE FREE PRODUCT (FP) ☐ ENHANCED BIO DEGRADATION (IT)
☐ CAP SITE (CD) ☐ EXCAVATE & TREAT (ET) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ REPLACE SUPPLY (RS)
☐ CONTAINMENT BARRIER (CB) ☐ NO ACTION REQUIRED (NA) ☐ TREATMENT AT HOOKUP (HU) ☐ VENT SOIL (VS)
☐ VACUUM EXTRACT (VE) ☒ OTHER (OT) Remedial action has not yet been initiated.

COMMENTS

This is form for tanks 11 and 12. Tank 12A, a waste oil tank, may also have contributed to the high concentration of TOG discovered in sample 11E, collected below the east end of tank 11.

205

HSC 05 (8/90)

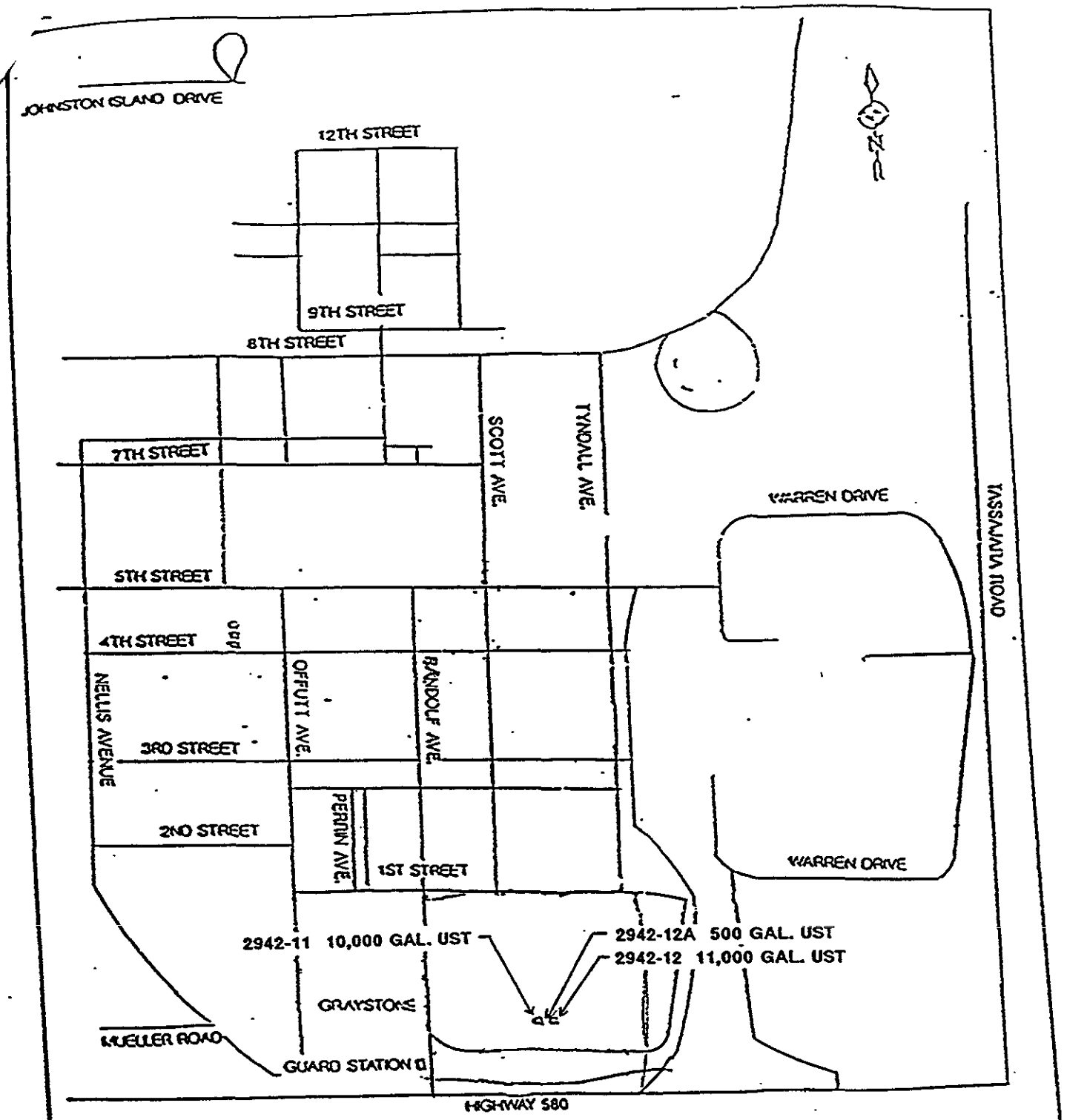


Figure 2 Site Map

LOCATION OF UST'S 2942-11, 2942-12 AND 2942-12A AT SANTA RITA JAIL FACILITY DUBLIN, CALIFORNIA

General Services Agency

90 DEC 28 PM 1:45

Darlene Smith, Director

BUILDING MAINTENANCE DEPARTMENT
4400 MacArthur Boulevard
Oakland, California 94619
Telephone (415) 530-9660

Hilton T. Hunt
Deputy Director, GSA - BMD

DATE: December 28, 1990

TO: Ravi Arulanantham, Ph.D.
Hazardous Materials Specialist
Alameda County Environmental Health Dept.

FROM: Jim de Vos, P.E.
Buildings Manager, Energy & Hazardous Materials

SUBJECT: SANTA RITA TANK REMOVALS

Just a short note to confirm our prior discussion regarding the four (4) tanks removed on November 20, 1990.

Soil tests from beneath tank No.'s 6, 7, and 10 indicate no further action required and thus none is planned.

Soil tests from beneath tank No. 9 near the Mess Hall show some contamination at the western end. Additional soil (approx. 3 ft x 3 ft x 3 ft) is to be excavated and then another test performed to determine extent. A plan for further action will be formulated based on the result of this additional testing.

Since the contamination found is not severe, and since various fire departments and personnel will be training in and around the Mess Hall during the coming months, it was agreed no additional excavation would take place until this training is complete. Current best guess for this is June 1, 1991.

Please call should you have additional questions or comment.

Regards,

Jim de Vos

Jdv/dls:3298B

cc: Don Ciriello, Plant Maintenance Manager, Santa Rita
Santa Rita File

Tank No 2942-5
Mattigan Bldg

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320

Project Specialist (print) Jerry Sharp

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 and 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.

Please give 5 day notice before tank removal. Jerry Sharp 4/28/92

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

1. **Business Name** Santa Rita Jail
   Business Owner Alameda County General Services Agency
2. **Site Address** 5325 Broder Boulevard
   City Dublin **Zip** 94568 **Phone** (510) 551-6674
3. **Mailing Address** Same
   City _____ **Zip** _____ **Phone** _____
4. **Land Owner** Alameda County General Services Agency
   Address 4400 MacArthur Blvd. **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 CAD 981397060

rev 12/90

6. Contractor Environmental Science & Engineering, Inc.

Address 4090 Nelson Avenue, Suite J

City Concord Phone (510) 685-4053

License Type General Engineering ID# 540544

7. Consultant Same as 6.

Address

City Phone

8. Contact Person for Investigation

Name R. Stephen Willcutts Title Senior Staff Engineer

Phone (510) 685-4053

9. Number of tanks being closed under this plan 1

Length of piping being removed under this plan 25

Total number of tanks at facility 8

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 Trucking, Inc. EPA I.D. No. CAD 009 466 392

Hauler License No. CA 019 License Exp. Date 05/92

Address 255 Parr Boulevard

City Richmond State CA Zip 94801

b) Product/Residual Sludge/Rinsate Disposal Site

Name Same as 10. a EPA I.D. No.

Address

City State Zip

rev 12/90

c) Tank and Piping Transporter

Name Erickson Trucking, Inc. EPA I.D. No. CAD 009 466 392

Hauler License No. CA 019 License Exp. Date 05/92

Address 255 Parr Boulevard

City Richmond State CA Zip 94801

d) Tank and Piping Disposal Site

Name Same as c EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

11. Experienced Sample Collector

Name R. Stephen Willcutts

Company Environmental Science & Engineering, Inc.

Address 4090 Nelson Avenue, Suite J

City Concord State CA Zip 94520 Phone (510) 685-4053

12. Laboratory

Name Curtis & Tompkins, LTD.

Address 2323 Fifth Street

City Berkeley State CA Zip 94710

State Certification No. 159

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

Additional of 15 pounds of dry ice for every 1,000 gallons tank capacity.

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 #5		Material to be sampled (tank contents, soil, groundwater, etc.)	Location and Depth of Samples
Capacity	Use History (see instructions)		
1,000 gallons	Currently inactive. Installation date is unknown. Product was diesel fuel oil.	Soil	2 Samples to be collected at two feet below tank invert, at each end of tank. (approx. 12 feet below ground surface)

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) 15 cy	Sampling Plan Collect one sample from soil stockpile and analyze as described in item 16.

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	GC FID (3550)	EPA 8015M	1 ppm
BTX&E	GC FID	EPA 8020	0.005 ppm
O&G	5520 D&F	Oil & Grease	50 ppm

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

18. Submit Worker's Compensation Certificate copy

Name of Insurer Planet Insurance Company

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) R. Stephen Willcutts, Environmental Science & Engineering, In

Signature R. Stephen Willcutts

Date 4/10/92

Signature of Site Owner or Operator

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

Signature Jim de Vos (for)

Date 4-10-92

rev 12/90

CERTIFICATE OF INSURANCE
SERVICE CONTRACTS

EXHIBIT C1
Page 1

NOTE: No other certificate forms will be accepted.

Please complete the following information:

CONTRACTOR: Environmental Science Engineering, Inc.

CONTRACT TERM: April 1, 1992 to June 15, 1992

General Services Agency
Alameda County Agency or Department

POLICY/BOND ENDORSEMENT REQUIREMENTS

Contractor's policies or bonds shall be endorsed as follows:

Name Alameda County, its Board of Supervisors, officers, agents and employees as Additional Insured/Obligees, but County is not liable to the insurance company for any premiums, costs or assessments in connection with Contractor's policy/bond, as a result of being an Additional Insured.

Provide County 30 days advance written notice of cancellation, non-renewal or reduction in limits or coverage including the name of the Contract, mailed to the following address:

GSA-BMD
County Department to Receive Notice(s)

4400 MacArthur Blvd.
Address

Subodh Chowdhry
Individual Coordinating Contracts

Oakland, CA 94619
City, State, Zip

State the Contractor's policy/bond is primary insurance to any other insurance available to County with respect to any claim arising out of this contract.

Contractor is responsible for payment of insurance deductibles.

Insurance companies must have an "A.M. Best" rating of B+, V or better.

REQUIRED COVERAGES - Where "X" Appears in Box	CERTIFICATES OF INSURANCE
[X] 1. Workers' Compensation a. Statutory Compensation coverage. b. Employer's liability insurance with limit not less than $100,000 per occurrence.	Planet Insurance Co. Insurance Company(s) NWA0102557700 - 3/16/92-3/16/93 Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Johnson & Higgins
Name

500 W. Madison, Suite 2100
Address

Chicago, IL 60661
City, State, Zip

REQUIRED COVERAGES - Where "X" Appears in Box

CERTIFICATES OF INSURANCE

[X] 2. Comprehensive General Liability

a. Minimum Limits of Liability: $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage.

b. Coverages:

- [X] Bodily Injury
- [X] Property Damage
- [X] Blanket Contractual
- [ ] Personal Injury
- [ ] Products/Completed Operations
- [ ] Broad Form Property Damage
- [ ] Fire Damage Legal Liability

c. Deductible not to exceed $5,000 per occurrence.

[X] d. Cross Liability or Severability of Interests Clause in policy

Commerce & Industry
Insurance Company(s)

GL3403771 3/16/92-3/16/93
Policy Number(s) Policy Period (dates)

Donald J. Price
Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Johnson & Higgins
Name
500 W. Madison, Suite 2100
Address
Chicago, IL 60661
City, State, Zip

e. Occurrence Form X Claims Made Form _____

f. If claims made, please complete the following:
Coverage for all prior acts? _____

If prior acts coverage is restricted, advise retroactive date of coverage:
_____

Extended discovery provision: If Insurance Company cancels, how long is period of extended discovery? _____

If Contractee cancels, how long is optional coverage for extended discovery?
_____

Percentage of annual premium cost to purchase the extended discovery?
_____

A Certified copy of the Claims Made form must be provided

It will be a requirement of this Contract that coverage for the period of the contract will be maintained for a period of no less than five years after the expiration of this contract. If coverage for five years is not available, a shorter term may be negotiated.

VOID

REQUIRED COVERAGES - Where "X" Appears in Box	CERTIFICATES OF INSURANCE

[X] 3. Comprehensive Automobile Liability

a. Minimum Limits of Liability: $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage.

Assigned risk insurance at available State financial responsibility limits.

b. Coverages:

[X] Owned Automobiles, if any
[X] Non-owned Automobiles
[X] Hired Automobiles
[X] Cross Liability or Severability of Interests clause in policy.

Planet Insurance Company
Insurance Company(s)
NKA010257800 3/16/92-3/16/93
Policy Number(s) Policy Period (dates)
Donald J. Price
Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.
Johnson & Higgins
Name
500 W. Madison, Suite 2100
Address
Chicago, IL 60661
City, State, Zip

[X] 4. Professional Liability

[X] 1. For professional employees licensed as a condition of employment at the beginning of contract term or hired during the contract terms, insuring against error or omission in rendering or failing to render professional services. Coverage shall continue for a minimum of five years.

a. Minimum Limits of Liability: $1,000,000 per claim

b. Deductible not to exceed $5,000 per claim

National Prof. Casualty Co.
Insurance Company(s)
A72961 2/16/92-2/16/93
Policy Number(s) Policy Period (dates)
Kathryn Burbee
Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements. (Except additional insured not required.)
Direct Placement
Name
330 Hamilton Blvd., Suite 300
Address
Peoria, IL 61602
City, State, Zip

c. If claims made, please complete the following:

Coverage for all prior acts? Yes X No ____

If prior acts coverage is restricted, advise retroactive date of coverage.
2-16-90

Extended discovery provisions: If Insurance Company cancels, how long is period of extended discovery? 365 Days

If Contractee cancels, how long is optional coverage for extendee discovery?
12 Months

Percentage of annual premium cost to purchase the extended discovery?
100%

REQUIRED COVERAGES - Where "X" Appears in Box | CERTIFICATES OF INSURANCE

4. Professional Liability (continued)

A Certified copy of the Claims Made form must be provided.

VOID

It will be a requirement of the County that Coverage for the period of the contract will be maintained for a period of no less than five after the expiration of the contract. If coverage for five years is not available, a shorter term may be negotiated.

5. Bonds/Crime Insurance

☐ 1. Fidelity Insurance Bond

a. Faithful Performance Coverage of all officials, agents, and employees with access to funds received by Contractor.

b. Limits shall at least be equal to maximum County funds in contractors possession or control during contract term.

Insurance Company(s)

Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Name

Address

City, State, Zip

☐ 2. Money and Securities Policy.

a. Insurance against the disapperance, destruction or wrongful abstraction of funds on and off premises contractor.

b. Limits shall at least be equal to maximum County funds in contractors possession or control during contract term.

Insurance Company(s)

Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Name

Address

City, State, Zip

6. Other (Describe below)

Insurance Company(s)

Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

REQUIRED COVERAGES - Where "X" Appears in Box | CERTIFICATES OF INSURANCE

6. Other (continued)

Name

Address

City, State, Zip

☐ 7. Self Insurance

Contractors self-insured for any risks shown in Sections above shall attach to contract evidence satisfactory to County of Contractor's financial ability (such as a current financial statement) to respond to losses in amounts shown above, for each risk self-insured. Contractor shall complete and sign the following statement and attach to contract.

The Contractor is self-insured for the following coverages with respect to this contract"

☐ Worker's Compensation

☐ Comprehensive General Liability to the limit of $ _____

☒ Bodily injury

☒ Property damage

☒ Blanket Contractual

☐ Personal injury

☐ Products/completed operations

☐ Broad Form property damage

☐ Fire damage legal liability

☐ Comprehensive Auto Liability to the limit of $ _____

☐ Owned Automobiles

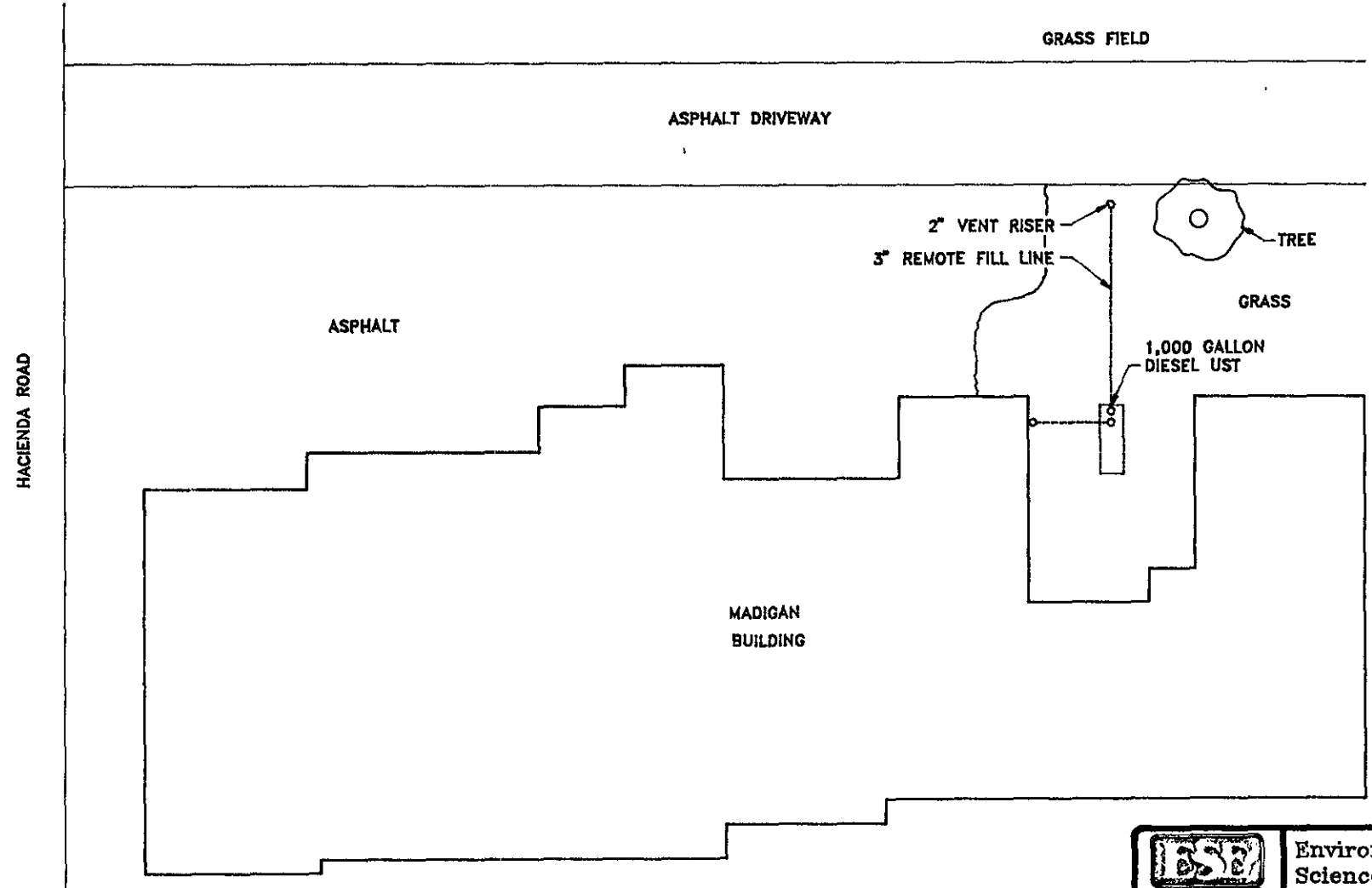
☐ Non-owned Automobiles

☐ Hired Automobiles

☐ Professional Liability to the limit of $ _____

Note: If excess insurance is needed to meet the limits required for insurances in Exhibit C, then the authorized representative of the excess insurance company(s) must sign the certificates in Exhibit C pertaining to the necessary coverages.

Signature of authorized representative of Contractor | Title | Date



DEPTH TO GROUND WATER: 30 FEET

SCALE

0 30 FEET

Environmental Science & Engineering, Inc.

A CH2M HILL COMPANY

ALAMEDA COUNTY GSA

SANTA RITA CORRECTIONAL FACILITY

TANK REMOVAL PLOT PLAN

TANK NO. 2942-5

DRAWN BY	APPROVED BY	REVISED
DWR		

DATE	FILE NAME	PROJ. NO.
4/92	TANK530	6-92-5351

HEALTH AND SAFETY PLAN
for
ALAMEDA COUNTY GENERAL SERVICES AGENCY
SANTA RITA CORRECTIONAL FACILITY
Dublin, California

TABLE OF CONTENTS

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. 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

APPENDIX B

MATERIAL
SAFETY DATA
SHEETS

ENVIRONMENTAL SCIENCE & ENGINEERING

SITE SPECIFIC INFORMATION

PROJECT NAME: Removal of UST at Santa Rita Correctional Facility, Tank Nos. 2942-5

PROJECT NUMBER: 6-92-5351

PROJECT MANAGER: R. Stephen Willcutts, Jr.

HEALTH AND SAFETY OFFICER: Lionel S. Reynolds, CIH

SITE SAFETY OFFICER (ALTERNATE): R. Stephen Willcutts Jr.

THIS HEALTH AND SAFETY PLAN HAS BEEN REVIEWED AND APPROVED BY:

Lionel S. Reynolds
CERTIFIED INDUSTRIAL HYGIENIST

DECLARATION OF UNDERSTANDING

I have read and understand the Health and Safety Plan and agree to abide by it.

NAME	EMPLOYEE NUMBER OR COMPANY NAME	SOCIAL SECURITY NUMBER	DATE

A. GENERAL PROJECT INFORMATION

SITE: Santa Rita Correctional Facility DATE PREPARED: 4-08-92

LOCATION: 5325 Broder Boulevard, Dublin, California

PREPARED BY: R. Stephen Willcutts Jr., ESE

OBJECTIVE (S) AND WORKPLAN: Removal of one 1,000 gallon Diesel Fuel Oil UST, and associated piping.

PROPOSED

DATE(S) OF ON-SITE WORK: March 23, 1992 - May 29, 1992 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__ CORROSIVE__ TOXIC x REACTIVE__

RADIOACTIVE__ VOLATILE__ UNKNOWN__ OTHER

FACILITY TYPE: Former Correctional Facility CLOSED__ OPEN x

FACILITY SIZE:

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

PRINCIPAL DISPOSAL METHOD AND LOCATION(S): The tank will be hauled off-site as hazardous waste by Erickson Trucking, Inc., to Erickson Environmental of Richmond, Califonia 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: On-site hazards include physical injuries due to the proximity of workers to engine-driven heavy equipment and tools, including backhoe or other excavator, loader, mechanical tamper, crane and trucks.

Chemical: Potential chemical hazards include skin and eye contact exposure to potentially toxic concentrations of Diesel Fuel Oil.

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.

Chemical: Skin contact: Wash skin with soap and water. Eye contact: Flush with eye wash for 15 minutes.

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._____

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

_____

MONITORING EQUIPMENT: PID__ FID___ TOXIC GAS___ OXYGEN___

DETECTOR TUBES___ EXPLOSIMETER___ PERSONAL MONITOR___

OTHER INSTRUMENTS: N/A

EQUIPMENT CALIBRATION: N/A

MONITORING STRATEGY: N/A_____

_____

_____

DECONTAMINATION PROCEDURES: If required, equipment and personnel 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 areas. 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 Manger. All disposable protective clothing will be put into plastic bags and disposed of in a proper manner. Excavated soils 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 surveyor's 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 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 tanks to prevent any spillage of residual hydrocarbons. No storage of removed product, rinsate or other hazardous fluids will be allowed. Fluids will be pumped from tanks 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. Ernie Hall, Facility Supervisor (510) 551-6674

CLIENT CONTACT: Mr. Jim de Vos, Alameda County GSA (510) 535-6248

F. EMERGENCY PRECAUTIONS

PRIMARY HOSPITAL/INFIRMARY:

Name: Valley Memorial Hospital

Address: 1111 East Stanely Blvd., Livermore, CA Telephone Number: (510) 447-7000 (emergency)

Directions from site to emergency unit: Take Tassajara Road (south) to Highway 580. Take Highway 580 west. Exit south on First Street (Highway 84). After junction with Railroad Avenue, turn left into driveway of hospital.

Remarks: See Figure A

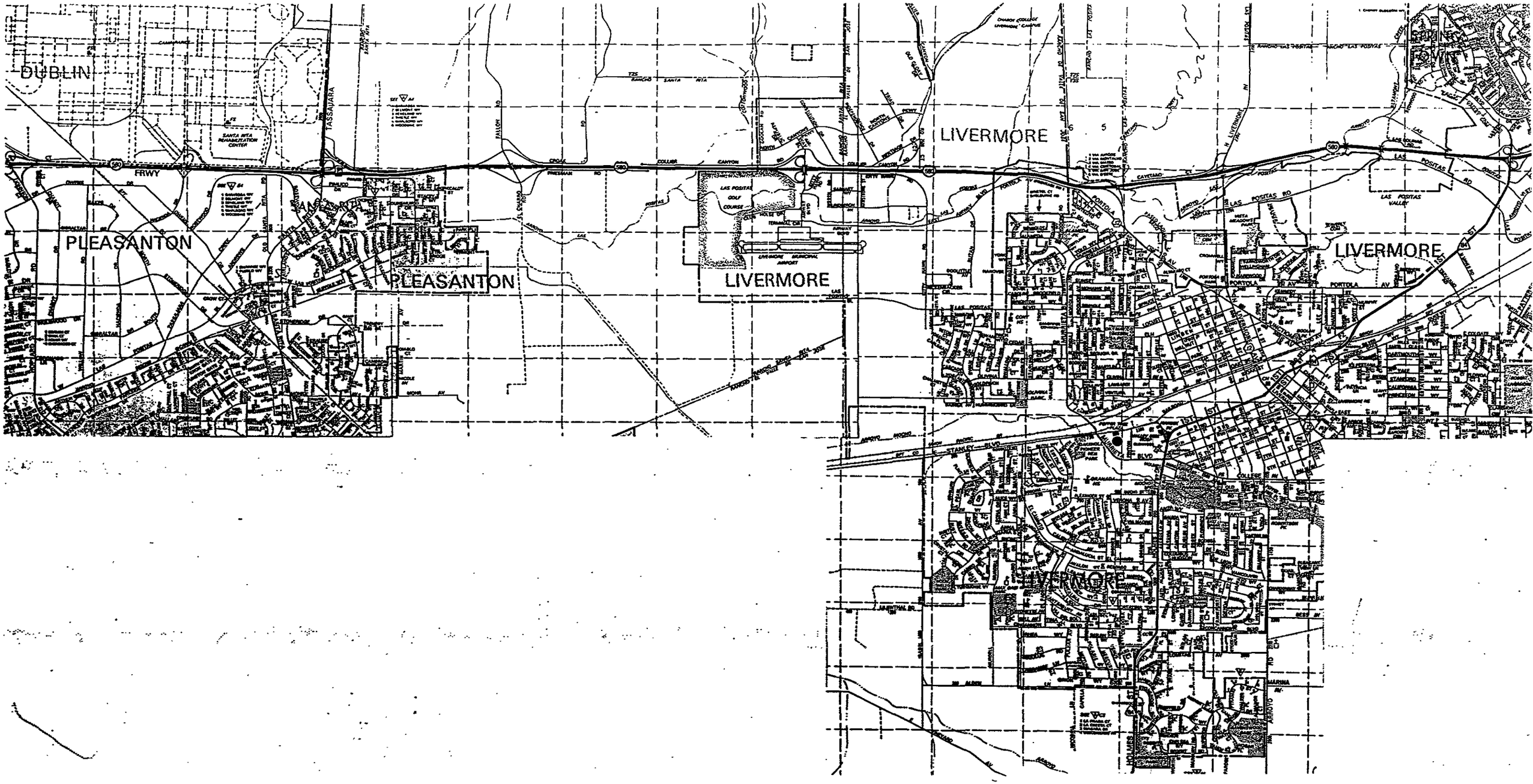

DUBLIN
FRWY
PLEASANTON
PLEASANTON
LIVERMORE
LIVERMORE
LIVERMORE
LIVERMORE

FIGURE A

APPENDIX B

MATERIAL
SAFETY DATA
SHEETS

MATERIAL SAFETY DATA SHEET

UNOCAL 76

Product Name: UNOCAL DIESEL #2
Product Code No: 01602

Issue Date: 05/09/90
Status: FINAL

Responsible Party:

UNOCAL REFINING & MARKETING DIVISION
UNION OIL COMPANY OF CALIFORNIA
1201 WEST 5TH STREET
LOS ANGELES, CALIFORNIA 90017

CONTACT FOR FURTHER INFORMATION:
MSDS COORDINATOR 213-977-7589

Transportation Emergencies:
CHEMTREC
(800) 424-9300 Cont. U.S.
(202) 483-7616 (Collect)
from Alaska & Hawaii
Health Emergencies:
Call LOS ANGELES POISON
INFORMATION CENTER (24 hrs)
(800) 356-3129

PRODUCT IDENTIFICATION

PRODUCT NAME: UNOCAL DIESEL #2

SYNONYMS: UNION DIESEL #2

GENERIC NAME: MID-DISTILLATE

CHEMICAL FAMILY: PETROLEUM HYDROCARBON

DOT PROPER SHIPPING NAME: COMBUSTIBLE LIQUID, N.O.S. (MID DISTILLATE)

ID NUMBER: NA1993

DOT HAZARD CLASSIFICATION: COMBUSTIBLE LIQUID

PRECAUTIONARY WARNING

WARNING
MAY CAUSE SEVERE SKIN IRRITATION AFTER PROLONGED OR REPEATED CONTACT. BREATHING DIESEL EXHAUST MAY CAUSE LUNG CANCER. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. COMBUSTIBLE. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID BREATHING EXHAUST FUMES. DO NOT TASTE OR SWALLOW. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINER CLOSED. USE WITH ADEQUATE VENTILATION. KEEP AWAY FROM HEAT, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS OR MECHANICAL/ELECTRICAL EQUIPMENT). DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, GRIND OR DRILL ON OR NEAR CONTAINER. "EMPTY" CONTAINER RETAINS RESIDUE (LIQUID AND/OR VAPOR) AND MAY EXPLODE IN HEAT OF A FIRE.

SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
HAZARDOUS COMPONENTS					
DIESEL OIL NO. 2 CAS #: 68476-34-6	>98	400.000	ppm	OSHA	TWA
BIPHENYL CAS #: 92-52-4	0.0 - 1.0	0.200	ppm	ACGIH	TWA
		0.200	ppm	MSHA	TWA
		0.200	ppm	OSHA	TWA
		0.200	ppm	CAL OSHA	TWA

UNION OIL CO.

Product Name: UNOCAL DIESEL #2
Product Code No: 01602

Issue Date: 05/09/90
Status: FINAL

SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
NAPHTHALENE CAS #: 91-20-3	0.0 - 1.0	10.000	ppm	ACGIH	TWA
		15.000	ppm	ACGIH	STEL
		10.000	ppm	MSHA	TWA
		10.000	ppm	OSHA	TWA
		15.000	ppm	OSHA	STEL
		10.000	ppm	CAL OSHA	TWA

OTHER COMPONENTS

--NONE--

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA 313 AND 40 CFR 372:	CAS NUMBER	WEIGHT %
BIPHENYL	92-52-4	0-1
NAPHTHALENE	91-20-3	0-1

SECTION II - EMERGENCY AND FIRST AID PROCEDURES ***EMERGENCY***
Have physician call LOS ANGELES POISON INFORMATION CENTER (24 hrs) (800) 356-3129

EYE CONTACT:

IF IRRITATION OR REDNESS DEVELOPS, MOVE VICTIM AWAY FROM EXPOSURE AND INTO FRESH AIR. FLUSH EYES WITH CLEAN WATER. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.

SKIN CONTACT:

WIPE MATERIAL FROM SKIN, REMOVE CONTAMINATED SHOES AND CLOTHING, AND FLUSH AFFECTED AREA(S) WITH LARGE AMOUNTS OF WATER. IF SKIN SURFACE IS DAMAGED, APPLY A CLEAN DRESSING AND SEEK MEDICAL ATTENTION. IF SKIN SURFACE IS NOT DAMAGED, CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH MILD SOAP AND WATER AND, IF NECESSARY, A WATERLESS SKIN CLEANSER. IF IRRITATION OR REDNESS DEVELOPS, SEEK MEDICAL ATTENTION.

INHALATION (BREATHING):

IF RESPIRATORY SYMPTOMS OR OTHER SYMPTOMS OF EXPOSURE DEVELOP, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF SYMPTOMS PERSIST, SEEK IMMEDIATE MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, IMMEDIATELY BEGIN ARTIFICIAL RESPIRATION. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SWALLOWING):

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROWSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE WITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

EYE CONTACT:

THIS MATERIAL MAY CAUSE MILD EYE IRRITATION. DIRECT CONTACT WITH THE LIQUID OR EXPOSURE TO VAPORS OR MISTS MAY CAUSE STINGING, TEARING AND REDNESS.

SKIN CONTACT:

THIS MATERIAL IS A SKIN IRRITANT. PROLONGED OR REPEATED CONTACT MAY CAUSE SEVERE IRRITATION INCLUDING REDNESS AND BURNING, DRYING AND CRACKING OF THE SKIN, AND SEVERE SKIN DAMAGE. NO HARMFUL EFFECTS ARE EXPECTED FROM SKIN ABSORPTION OF THIS MATERIAL.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

INHALATION (BREATHING):

WHILE THIS MATERIAL HAS A LOW DEGREE OF TOXICITY, BREATHING HIGH CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE IRRITATION OF THE NOSE AND THROAT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE).

INGESTION (SWALLOWING):

WHILE THIS MATERIAL HAS A LOW DEGREE OF TOXICITY, INGESTION OF EXCESSIVE QUANTITIES MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE.

COMMENTS:

DIESEL EXHAUST IS A PROBABLE HUMAN CANCER HAZARD, BUT IT HAS NOT BEEN IDENTIFIED AS A CARCINOGEN BY IARC, NTP OR OSHA.

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION:

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I), ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. WHERE EXPLOSIVE MIXTURES MAY BE PRESENT, ELECTRICAL SYSTEMS SAFE FOR SUCH LOCATIONS MUST BE USED.

RESPIRATORY PROTECTION:

THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). DEPENDING ON THE AIRBORNE CONCENTRATION, USE A RESPIRATOR OR GAS MASK WITH APPROPRIATE CARTRIDGES AND CANNISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

PROTECTIVE GLOVES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

EYE PROTECTION:

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN THE WORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED.

SECTION V - REACTIVITY DATA

REACTIVITY:

STABLE UNDER NORMAL CONDITIONS OF STORAGE AND HANDLING.

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Status: FINAL

SECTION V - REACTIVITY DATA

CONDITIONS AFFECTING REACTIVITY:

AVOID CONTACT WITH ANY SOURCE OF HEAT OR FLAME.

INCOMPATIBLE MATERIALS:

AVOID CONTACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

COMBUSTION MAY YIELD MAJOR AMOUNTS OF OXIDES OF CARBON AND MINOR AMOUNTS OF OXIDES OF SULFUR AND NITROGEN.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

NONE KNOWN

SECTION VI - SPILL AND LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS
Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL:

COMBUSTIBLE. KEEP ALL SOURCES OF IGNITION AWAY FROM SPILL/RELEASE. STAY UPWIND AND AWAY FROM SPILL/RELEASE. ISOLATE HAZARD AREA AND LIMIT ENTRY TO AUTHORIZED PERSONNEL. STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). PREVENT SPILLED MATERIAL FROM ENTERING SEWERS, STORM DRAINS, OTHER UNAUTHORIZED TREATMENT DRAINAGE SYSTEMS AND NATURAL WATERWAYS. DIKE FAR AHEAD OF SPILL FOR LATER RECOVERY OR DISPOSAL. SPILLED MATERIAL MAY BE ABSORBED INTO AN APPROPRIATE ABSORBENT MATERIAL. NOTIFY FIRE AUTHORITIES AND APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES. IMMEDIATE CLEANUP OF ANY SPILL IS RECOMMENDED. IF SPILL OF ANY AMOUNT IS MADE INTO OR UPON U.S. NAVIGABLE WATERS, THE CONTIGUOUS ZONE, OR ADJOINING SHORELINES, NOTIFY THE NATIONAL RESPONSE CENTER (PHONE NUMBER 800-424-8802).

WASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINER(S) TIGHTLY CLOSED. USE AND STORE THIS MATERIAL IN COOL, DRY, WELL VENTILATED AREAS AWAY FROM HEAT AND ALL SOURCES OF IGNITION. POST AREA "NO SMOKING OR OPEN FLAME." BOND AND GROUND ALL EQUIPMENT WHEN TRANSFERRING FROM ONE VESSEL TO ANOTHER. STORE ONLY IN APPROVED CONTAINERS. KEEP AWAY FROM ANY INCOMPATIBLE MATERIALS (SEE SECTION V). PROTECT CONTAINER(S) AGAINST PHYSICAL DAMAGE. THE USE OF EXPLOSION-PROOF EQUIPMENT IS RECOMMENDED AND MAY BE REQUIRED (SEE APPROPRIATE FIRE CODES). DO NOT ENTER CONFINED SPACES SUCH AS TANKS OR PITS WITHOUT FOLLOWING PROPER ENTRY PROCEDURES SUCH AS ASTM D-4276. OUTDOOR OR DETACHED STORAGE IS PREFERRED. INDOOR STORAGE SHOULD MEET OSHA STANDARDS AND APPROPRIATE FIRE CODES. THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED ANY ESTABLISHED EXPOSURE LIMITS (SEE SECTIONS I AND IV). WASH THOROUGHLY AFTER HANDLING. DO NOT WEAR CONTAMINATED CLOTHING OR SHOES. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY

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SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

			HAZARD RANKING	
NFPA	HEALTH HAZARD:	0	0 = LEAST	FLASH POINT
HAZARD	FLAMMABILITY:	2	1 = SLIGHT	
CLASS	REACTIVITY:	0	2 = MODERATE	140-190 F (PMCC)
	OTHER:		3 = HIGH	60-87 C
			4 = EXTREME	

EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, HALON, FOAM OR WATER SPRAY IS RECOMMENDED.

UNUSUAL FIRE & EXPLOSION HAZARDS:

THIS MATERIAL IS COMBUSTIBLE AND MAY BE IGNITED BY HEAT, SPARKS, FLAME OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS, MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY TRAVEL CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION WHERE THEY MAY IGNITE, FLASHBACK OR EXPLODE. VAPOR/AIR EXPLOSION HAZARD INDOORS/OUTDOORS OR IN SEWERS. VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE IN LOW AREAS. IF CONTAINER IS NOT PROPERLY COOLED, IT MAY EXPLODE IN THE HEAT OF A FIRE.

SPECIAL FIRE FIGHTING PROCEDURES:

WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. WATER SPRAY MAY BE USEFUL IN MINIMIZING OR DISPERSING VAPORS AND COOLING EQUIPMENT EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

***UNLESS OTHERWISE NOTED, VALUES ARE AT 20 C/68 F AND 760 mm Hg/1 atm.

APPROX BOILING POINT	(AIR = 1) VAPOR DENSITY	(N-BUTYL ACETATE = 1) EVAPORATION RATE	% VOLATILE
490-700 F / 232-271 C	>1	<1	98

% SOLUBILITY IN WATER

<0.1

SPECIFIC GRAVITY	APPROX. BULK DENSITY (LB/GAL)
0.85	7.0

APPEARANCE

CLEAR TO YELLOW LIQUID

ODOR

CHARACTERISTIC PETROLEUM

SECTION X - DOCUMENTARY INFORMATION

ISSUE DATE: 05/09/90 PRODUCT CODE NO. 01602

PREV. DATE: 12/18/89 PREV. PROD. CODE NO. N/A

MSDS NO: N/A PREV. MSDS NO: N/A

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information in this document is believed to be correct as of the date issued. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

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MATERIAL SAFETY DATA SHEET

UNOCAL 76

Product Name: UNOCAL PERFORMANCE PLUS 89
Product Code No: 00401

Issue Date: 05/04/90
Status: FINAL

Responsible Party:	Transportation Emergencies:
UNOCAL REFINING & MARKETING DIVISION UNION OIL COMPANY OF CALIFORNIA 1201 WEST 5TH STREET LOS ANGELES, CALIFORNIA 90017 CONTACT FOR FURTHER INFORMATION: MSDS COORDINATOR 213-977-7589	CHEMTREC (800) 424-9300 Cont. U.S. (202) 483-7616 (Collect) from Alaska & Hawaii Health Emergencies: Call LOS ANGELES POISON INFORMATION CENTER (24 hrs) (800) 356-3129

PRODUCT IDENTIFICATION

PRODUCT NAME: UNOCAL PERFORMANCE PLUS 89

GENERIC NAME: UNLEADED GASOLINE

CHEMICAL FAMILY: PETROLEUM HYDROCARBON MIXTURE

DOT PROPER SHIPPING NAME: GASOLINE

ID NUMBER: UN1203

DOT HAZARD CLASSIFICATION: FLAMMABLE LIQUID

PRECAUTIONARY WARNING

DANGER
EXTREMELY FLAMMABLE. VAPORS MAY EXPLODE. HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. POSSIBLE CANCER HAZARD BASED ON TESTS WITH LABORATORY ANIMALS. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. NO SMOKING OR OPEN FLAME. KEEP AWAY FROM HEAT, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS OR MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY BE IGNITED BY SPARK OR FLAME SOURCE MANY FEET AWAY. DO NOT OVERFILL TANK. USE ONLY WITH ADEQUATE VENTILATION. DO NOT TASTE OR SWALLOW. DO NOT BREATHE VAPOR OR MIST. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. WASH THOROUGHLY AFTER HANDLING. NEVER SIPHON BY MOUTH. FOR USE AS MOTOR FUEL ONLY. DO NOT USE FOR ANY OTHER PURPOSE. KEEP CONTAINER CLOSED. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, GRIND OR DRILL ON OR NEAR CONTAINER. "EMPTY" CONTAINER RETAINS RESIDUE (LIQUID AND/OR VAPOR) AND MAY EXPLODE IN HEAT OF A FIRE. KEEP OUT OF REACH OF CHILDREN. FAILURE TO USE CAUTION MAY CAUSE SERIOUS INJURY OR ILLNESS.

SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
HAZARDOUS COMPONENTS					
GASOLINE CAS #: 8006-61-9		300.000	ppm	ACGIH	TWA
		500.000	ppm	ACGIH	STEL
		300.000	ppm	OSHA	TWA
		500.000	ppm	OSHA	STEL
		300.000	ppm	CAL OSHA	TWA

UNION OIL CO.

Product Name: UNOCAL PERFORMANCE PLUS 89
Product Code No: 00401

Issue Date: 05/04/90
Status: FINAL

SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
BENZENE					
CAS #: 71-43-2	1.0 - 5.0	10.000	ppm	ACGIH	TWA
		25.000	ppm	MSHA	CEIL-SKIN
		1.000	ppm	OSHA	TWA
		5.000	ppm	OSHA	STEL
		50.000	ppm	CAL OSHA	CEIL
		25.000	ppm	CAL OSHA	EXCUR
		10.000	ppm	CAL OSHA	TWA-SKIN
TOLUENE					
CAS #: 108-88-3	1.0 - 9.0	100.000	ppm	ACGIH	TWA
		150.000	ppm	ACGIH	STEL
		100.000	ppm	MSHA	TWA
		100.000	ppm	OSHA	TWA
		150.000	ppm	OSHA	STEL
		200.000	ppm	CAL OSHA	EXCUR
		100.000	ppm	CAL OSHA	TWA-SKIN
		500.000	ppm	CAL OSHA	CEIL-SKIN
XYLENES					
CAS #: 1330-20-7	1.0 - 14.0	100.000	ppm	ACGIH	TWA
		150.000	ppm	ACGIH	STEL
		100.000	ppm	MSHA	TWA
		100.000	ppm	OSHA	TWA
		150.000	ppm	OSHA	STEL
		200.000	ppm	CAL OSHA	EXCUR
		100.000	ppm	CAL OSHA	TWA-SKIN
		300.000	ppm	CAL OSHA	CEIL-SKIN
N-HEXANE					
CAS #: 110-54-3		50.000	ppm	ACGIH	TWA
		500.000	ppm	MSHA	TWA
		50.000	ppm	OSHA	TWA
		50.000	ppm	CAL OSHA	TWA

OTHER COMPONENTS

--NONE--

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA 313 AND 40 CFR 372:	CAS NUMBER	WEIGHT %
BENZENE	71-43-2	1-5
TOLUENE	108-88-3	1-9
XYLENES	1330-20-7	1-14
ETHYLBENZENE	100-41-4	1-5
METHYL TERT-BUTYL ETHER	1634-04-4	0-10
1,2,4-TRIMETHYLBENZENE	95-63-6	1-5

NOTE: GASOLINE IS A COMPLEX COMBINATION OF HYDROCARBONS INCLUDING A SMALL QUANTITY OF BENZENE, TOLUENE, XYLENE AND N-HEXANE.

UNION OIL CO.

SECTION II - EMERGENCY AND FIRST AID PROCEDURES ***EMERGENCY***
Have physician call LOS ANGELES POISON INFORMATION CENTER (24 hrs) (800) 356-3129

EYE CONTACT:

IF IRRITATION OR REDNESS DEVELOPS, MOVE VICTIM AWAY FROM EXPOSURE AND INTO FRESH AIR. FLUSH EYES WITH CLEAN WATER. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.

SKIN CONTACT:

WIPE MATERIAL FROM SKIN AND REMOVE CONTAMINATED SHOES AND CLOTHING. CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH MILD SOAP AND WATER AND, IF NECESSARY, A WATERLESS SKIN CLEANSER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION (BREATHING):

IF RESPIRATORY SYMPTOMS OR OTHER SYMPTOMS OF EXPOSURE DEVELOP, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF SYMPTOMS PERSIST, SEEK IMMEDIATE MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, IMMEDIATELY BEGIN ARTIFICIAL RESPIRATION. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SWALLOWING):

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROWSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE WITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

COMMENTS:

NOTE TO PHYSICIANS: EXPOSURE TO HIGH CONCENTRATIONS OF THIS MATERIAL (e.g. IN ENCLOSED SPACES OR WITH DELIBERATE ABUSE) MAY BE ASSOCIATED WITH CARDIAC ARRHYTHMIAS. EPINEPHRINE AND OTHER SYMPATHOMIMETIC DRUGS MAY INITIATE CARDIAC ARRHYTHMIAS IN PERSONS EXPOSED TO THIS MATERIAL. OTHER DRUGS WITH LESS ARRHYTHMOGENIC POTENTIAL SHOULD BE CONSIDERED. IF SYMPATHOMIMETIC DRUGS ARE ADMINISTERED, OBSERVE FOR THE DEVELOPMENT OF CARDIAC ARRHYTHMIAS.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

EYE CONTACT:

THIS MATERIAL MAY CAUSE MILD EYE IRRITATION. DIRECT CONTACT WITH THE LIQUID OR EXPOSURE TO VAPORS OR MISTS MAY CAUSE STINGING, TEARING AND REDNESS.

SKIN CONTACT:

THIS MATERIAL MAY CAUSE MILD SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE REDNESS, BURNING, AND DRYING AND CRACKING OF THE SKIN. CONTACT MAY RESULT IN SKIN ABSORPTION BUT SYMPTOMS OF TOXICITY ARE NOT ANTICIPATED BY THIS ROUTE ALONE UNDER NORMAL CONDITIONS OF USE. PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

INHALATION (BREATHING):

WHILE THIS MATERIAL HAS A LOW DEGREE OF TOXICITY, BREATHING HIGH CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE FLUSHING, BLURRED VISION, NAUSEA AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION AND FATIGUE). EXPOSURE TO HIGH CONCENTRATIONS MAY CAUSE LOSS OF CONSCIOUSNESS, CONVULSIONS, RESPIRATORY COLLAPSE AND DEATH. RESPIRATORY SYMPTOMS ASSOCIATED WITH PRE-EXISTING LUNG DISORDERS (e.g. ASTHMA-LIKE CONDITIONS) MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL.

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SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

INGESTION (SWALLOWING):

ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE. INGESTION OF EXCESSIVE QUANTITIES OF THIS MATERIAL MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE).

COMMENTS:

GASOLINE IS A POSSIBLE CANCER HAZARD BASED ON ANIMAL DATA. FOLLOW-UP STUDIES SUGGEST THAT THIS MAY BE A UNIQUE EFFECT IN MALE RATS. UNLEADED GASOLINE HAS BEEN IDENTIFIED AS A POSSIBLE CARCINOGEN BY IARC. BENZENE, A COMPONENT OF THIS PRODUCT, IS A KNOWN CANCER (LEUKEMIA) HAZARD. RESULTS OF TESTS IN HUMANS HAVE SHOWN THAT EXPOSURE TO BENZENE CAN CAUSE IRREVERSIBLE CHANGES IN THE GENETIC MATERIAL (DNA) OF A CELL. THE HUMAN HEALTH CONSEQUENCES OF THESE CHANGES IS NOT FULLY UNDERSTOOD. BENZENE HAS BEEN IDENTIFIED AS A CARCINOGEN BY IARC, NTP AND OSHA. THERE IS INSUFFICIENT EVIDENCE TO SHOW THAT GASOLINE POSES ANY HAZARD RELATED TO ITS LOW BENZENE CONTENT. PERSONS WITH PRE-EXISTING HEART DISORDERS MAY BE MORE SUSCEPTIBLE TO IRREGULAR HEARTBEATS (ARRHYTHMIAS) IF EXPOSED TO HIGH CONCENTRATIONS OF THIS MATERIAL (SEE SECTION II - NOTE TO PHYSICIANS).

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION:

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I), ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. WHERE EXPLOSIVE MIXTURES MAY BE PRESENT, ELECTRICAL SYSTEMS SAFE FOR SUCH LOCATIONS MUST BE USED.

RESPIRATORY PROTECTION:

THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). DEPENDING ON THE AIRBORNE CONCENTRATION, USE A RESPIRATOR OR GAS MASK WITH APPROPRIATE CARTRIDGES AND CANNISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

PROTECTIVE GLOVES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

EYE PROTECTION:

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN THE WORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED.

SECTION V - REACTIVITY DATA

REACTIVITY:

STABLE UNDER NORMAL CONDITIONS OF STORAGE AND HANDLING.

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.

UNION OIL CO.

Product Name: UNOCAL PERFORMANCE PLUS 89
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SECTION V - REACTIVITY DATA

CONDITIONS AFFECTING REACTIVITY:

AVOID ALL POSSIBLE SOURCES OF IGNITION (SEE SECTIONS VII AND VIII).

INCOMPATIBLE MATERIALS:

STRONG OXIDIZING AGENTS SUCH AS CHLORINE, PERMANGANATES AND DICHROMATES MAY CAUSE FIRE OR EXPLOSION.

HAZARDOUS DECOMPOSITION PRODUCTS:

COMBUSTION MAY YIELD SIGNIFICANT AMOUNTS OF CARBON MONOXIDE AND SMALL AMOUNTS OF OXIDES OF SULFUR AND NITROGEN, BENZENE AND OTHER ORGANIC COMPOUNDS.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

NONE KNOWN

SECTION VI - SPILL AND LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS
Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL:

EXTREMELY FLAMMABLE. KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AWAY FROM SPILL/RELEASE. STAY UPWIND AND AWAY FROM SPILL/RELEASE. ISOLATE HAZARD AREA AND LIMIT ENTRY TO EMERGENCY CREW. STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). PREVENT SPILLED MATERIAL FROM ENTERING SEWERS, STORM DRAINS, OTHER UNAUTHORIZED TREATMENT DRAINAGE SYSTEMS AND NATURAL WATERWAYS. DIKE FAR AHEAD OF SPILL FOR LATER RECOVERY OR DISPOSAL. SPILLED MATERIAL MAY BE ABSORBED INTO AN APPROPRIATE ABSORBENT MATERIAL. NOTIFY FIRE AUTHORITIES AND APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES. IMMEDIATE CLEANUP OF ANY SPILL IS RECOMMENDED. IF SPILL OF ANY AMOUNT IS MADE INTO OR UPON U.S. NAVIGABLE WATERS, THE CONTIGUOUS ZONE, OR ADJOINING SHORELINES, NOTIFY THE NATIONAL RESPONSE CENTER (PHONE NUMBER 800-424-8802).

WASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINER(S) TIGHTLY CLOSED. USE AND STORE THIS MATERIAL IN COOL, DRY, WELL VENTILATED AREAS AWAY FROM HEAT, DIRECT SUNLIGHT, HOT METAL SURFACES AND ALL SOURCES OF IGNITION. POST AREA "NO SMOKING OR OPEN FLAME." BOND AND GROUND ALL EQUIPMENT WHEN TRANSFERRING FROM ONE VESSEL TO ANOTHER. STORE ONLY IN APPROVED CONTAINERS. KEEP AWAY FROM ANY INCOMPATIBLE MATERIALS (SEE SECTION V). PROTECT CONTAINER(S) AGAINST PHYSICAL DAMAGE. THE USE OF EXPLOSION-PROOF EQUIPMENT IS RECOMMENDED AND MAY BE REQUIRED (SEE APPROPRIATE FIRE CODES). DO NOT ENTER CONFINED SPACES SUCH AS TANKS OR PITS WITHOUT FOLLOWING PROPER ENTRY PROCEDURES SUCH AS ASTM D-4276. OUTDOOR OR DETACHED STORAGE IS PREFERRED. INDOOR STORAGE SHOULD MEET OSHA STANDARDS AND APPROPRIATE FIRE CODES. THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED ANY ESTABLISHED EXPOSURE LIMITS (SEE SECTIONS I AND IV). WASH THOROUGHLY AFTER HANDLING. DO NOT WEAR CONTAMINATED CLOTHING OR SHOES. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE

UNION OIL CO.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

			HAZARD RANKING	
NFPA	HEALTH HAZARD:	2	0 = LEAST	FLASH POINT
HAZARD	FLAMMABILITY:	3	1 = SLIGHT	
CLASS	REACTIVITY:	0	2 = MODERATE	-45 F (TCC)
	OTHER:		3 = HIGH	
			4 = EXTREME	

EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, HALON, FOAM OR WATER SPRAY IS RECOMMMENDED. WATER MAY BE INEFFECTIVE.

UNUSUAL FIRE & EXPLOSION HAZARDS:

THIS MATERIAL IS EXTREMELY FLAMMABLE AND MAY BE IGNITED BY HEAT, SPARKS, FLAME OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS, MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY TRAVEL CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION WHERE THEY MAY IGNITE, FLASHBACK OR EXPLODE. VAPOR/AIR EXPLOSION HAZARD INDOORS/OUTDOORS OR IN SEWERS. VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE IN LOW AREAS. IF CONTAINER IS NOT PROPERLY COOLED, IT MAY EXPLODE IN THE HEAT OF A FIRE.

SPECIAL FIRE FIGHTING PROCEDURES:

WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. WATER SPRAY MAY BE USEFUL IN MINIMIZING OR DISPERSING VAPORS AND COOLING EQUIPMENT EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

***UNLESS OTHERWISE NOTED, VALUES ARE AT 20 C/68 F AND 760 mm Hg/1 atm.

APPROX BOILING POINT	(AIR = 1) VAPOR DENSITY	(N-BUTYL ACETATE = 1) EVAPORATION RATE	% VOLATILE
85-430F / 29-221C	>1	<1	100

% SOLUBILITY IN WATER

NEGLIGIBLE

SPECIFIC GRAVITY

0.75

APPEARANCE

CLEAR LIQUID

ODOR

GASOLINE

UNION OIL CO.

Product Name: UNOCAL PERFORMANCE PLUS 89
Product Code No: 00401

Issue Date: 05/04/90
Status: FINAL

SECTION X - DOCUMENTARY INFORMATION

ISSUE DATE: 05/04/90 PRODUCT CODE NO. 00401

PREV. DATE: 10/20/89 PREV. PROD. CODE NO. N/A

MSDS NO: N/A PREV. MSDS NO: N/A

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information in this document is believed to be correct as of the date issued. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

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MATERIAL SAFETY DATA SHEET

UNOCAL 76

Product Name: UNOCAL 76 LEADED REGULAR GASOLINE
Product Code No: 00301

Issue Date: 05/04/90
Status: FINAL

Responsible Party:

UNOCAL REFINING & MARKETING DIVISION
UNION OIL COMPANY OF CALIFORNIA
1201 WEST 5TH STREET
LOS ANGELES, CALIFORNIA 90017

CONTACT FOR FURTHER INFORMATION:
MSDS COORDINATOR 213-977-7589

Transportation Emergencies:
CHEMTREC
(800) 424-9300 Cont. U.S.
(202) 483-7616 (Collect)
from Alaska & Hawaii
Health Emergencies:
Call LOS ANGELES POISON
INFORMATION CENTER (24 hrs)
(800) 356-3129

PRODUCT IDENTIFICATION

PRODUCT NAME: UNOCAL 76 LEADED REGULAR GASOLINE

SYNONYMS: UNION 76 LEADED REGULAR GASOLINE

GENERIC NAME: LEADED GASOLINE

CHEMICAL FAMILY: PETROLEUM HYDROCARBON MIXTURE

DOT PROPER SHIPPING NAME: GASOLINE

ID NUMBER: UN1203

DOT HAZARD CLASSIFICATION: FLAMMABLE LIQUID

PRECAUTIONARY WARNING

DANGER
EXTREMELY FLAMMABLE. VAPORS MAY EXPLODE. HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. POSSIBLE CANCER HAZARD BASED ON TESTS WITH LABORATORY ANIMALS. NO SMOKING OR OPEN FLAME. KEEP AWAY FROM HEAT, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS OR MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY BE IGNITED BY SPARK OR FLAME SOURCE MANY FEET AWAY. DO NOT OVERFILL TANK. USE ONLY WITH ADEQUATE VENTILATION. DO NOT TASTE OR SWALLOW. KEEP CONTAINER CLOSED. DO NOT BREATHE VAPOR OR MISTS. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. WASH THOROUGHLY AFTER HANDLING. NEVER SIPHON BY MOUTH. FOR USE AS MOTOR FUEL ONLY. DO NOT USE FOR ANY OTHER PURPOSE. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, GRIND OR DRILL ON OR NEAR CONTAINER. "EMPTY" CONTAINER RETAINS RESIDUE (LIQUID AND/OR VAPOR) AND MAY EXPLODE IN HEAT OF A FIRE. KEEP OUT OF REACH OF CHILDREN. FAILURE TO USE CAUTION MAY CAUSE SERIOUS INJURY OR ILLNESS.

SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
HAZARDOUS COMPONENTS					
GASOLINE CAS #: 8006-61-9		300.000	ppm	ACGIH	TWA
		500.000	ppm	ACGIH	STEL
		300.000	ppm	OSHA	TWA
		500.000	ppm	OSHA	STEL

UNION OIL CO.

Product Name: UNOCAL 76 LEADED REGULAR GASOLINE
Product Code No: 00301

Issue Date: 05/04/90
Status: FINAL

SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
		300.000	ppm	CAL OSHA	TWA
BENZENE					
CAS #: 71-43-2	1.0 - 5.0	10.000	ppm	ACGIH	TWA
		25.000	ppm	MSHA	CEIL-SKIN
		1.000	ppm	OSHA	TWA
		5.000	ppm	OSHA	STEL
		50.000	ppm	CAL OSHA	CEIL
		25.000	ppm	CAL OSHA	EXCUR
		10.000	ppm	CAL OSHA	TWA-SKIN
LEAD COMPOUND		NOT ESTABLISHED			
CAS #: NONE	0.1 GM/GAL				
TOLUENE					
CAS #: 108-88-3	1.0 - 15.0	100.000	ppm	ACGIH	TWA
		150.000	ppm	ACGIH	STEL
		100.000	ppm	MSHA	TWA
		100.000	ppm	OSHA	TWA
		150.000	ppm	OSHA	STEL
		200.000	ppm	CAL OSHA	EXCUR
		100.000	ppm	CAL OSHA	TWA-SKIN
		500.000	ppm	CAL OSHA	CEIL-SKIN
XYLENES					
CAS #: 1330-20-7	1.0 - 21.0	100.000	ppm	ACGIH	TWA
		150.000	ppm	ACGIH	STEL
		100.000	ppm	MSHA	TWA
		100.000	ppm	OSHA	TWA
		150.000	ppm	OSHA	STEL
		200.000	ppm	CAL OSHA	EXCUR
		100.000	ppm	CAL OSHA	TWA-SKIN
		300.000	ppm	CAL OSHA	CEIL-SKIN
N-HEXANE					
CAS #: 110-54-3		50.000	ppm	ACGIH	TWA
		500.000	ppm	MSHA	TWA
		50.000	ppm	OSHA	TWA
		50.000	ppm	CAL OSHA	TWA

OTHER COMPONENTS

--NONE--

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA 313 AND 40 CFR 372:	CAS NUMBER	WEIGHT %
BENZENE	71-43-2	1-5
LEAD COMPOUND	NONE	0.1 GM/GAL
TOLUENE	108-88-3	1-15
XYLENES	1330-20-7	1-21
ETHYLBENZENE	100-41-4	1-5
METHYL TERT-BUTYL ETHER	1634-04-4	0-11
1,2,4-TRIMETHYLBENZENE	95-63-6	1-5

NOTE: GASOLINE IS A COMPLEX COMBINATION OF HYDROCARBONS INCLUDING A SMALL QUANTITY OF BENZENE, TOLUENE, XYLENE AND N-HEXANE.

SECTION II - EMERGENCY AND FIRST AID PROCEDURES ***EMERGENCY***
Have physician call LOS ANGELES POISON INFORMATION CENTER (24 hrs) (800) 356-3129

EYE CONTACT:

IF IRRITATION OR REDNESS DEVELOPS, MOVE VICTIM AWAY FROM EXPOSURE AND INTO FRESH AIR. FLUSH EYES WITH CLEAN WATER. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.

SKIN CONTACT:

WIPE MATERIAL FROM SKIN AND REMOVE CONTAMINATED SHOES AND CLOTHING. CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH MILD SOAP AND WATER AND, IF NECESSARY, A WATERLESS SKIN CLEANSER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION (BREATHING):

IF RESPIRATORY SYMPTOMS OR OTHER SYMPTOMS OF EXPOSURE DEVELOP, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF SYMPTOMS PERSIST, SEEK IMMEDIATE MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, IMMEDIATELY BEGIN ARTIFICIAL RESPIRATION. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SWALLOWING):

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROWSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE WITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

COMMENTS:

NOTE TO PHYSICIANS: EXPOSURE TO HIGH CONCENTRATIONS OF THIS MATERIAL (e.g. IN ENCLOSED SPACES OR WITH DELIBERATE ABUSE) MAY BE ASSOCIATED WITH CARDIAC ARRHYTHMIAS. EPINEPHRINE AND OTHER SYMPATHOMIMETIC DRUGS MAY INITIATE CARDIAC ARRHYTHMIAS IN PERSONS EXPOSED TO THIS MATERIAL. OTHER DRUGS WITH LESS ARRHYTHMOGENIC POTENTIAL SHOULD BE CONSIDERED. IF SYMPATHOMIMETIC DRUGS ARE ADMINISTERED, OBSERVE FOR THE DEVELOPMENT OF CARDIAC ARRHYTHMIAS.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

EYE CONTACT:

THIS MATERIAL MAY CAUSE MILD EYE IRRITATION. DIRECT CONTACT WITH THE LIQUID OR EXPOSURE TO VAPORS OR MISTS MAY CAUSE STINGING, TEARING AND REDNESS.

SKIN CONTACT:

THIS MATERIAL MAY CAUSE MILD SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE REDNESS, BURNING, AND DRYING AND CRACKING OF THE SKIN. CONTACT MAY RESULT IN SKIN ABSORPTION BUT SYMPTOMS OF TOXICITY ARE NOT ANTICIPATED BY THIS ROUTE ALONE UNDER NORMAL CONDITIONS OF USE. PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

INHALATION (BREATHING):

WHILE THIS MATERIAL HAS A LOW DEGREE OF TOXICITY, BREATHING HIGH CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE FLUSHING, BLURRED VISION, NAUSEA AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION AND FATIGUE). EXPOSURE TO HIGH CONCENTRATIONS MAY CAUSE LOSS OF CONSCIOUSNESS, CONVULSIONS, RESPIRATORY COLLAPSE AND DEATH. RESPIRATORY SYMPTOMS ASSOCIATED WITH PRE-EXISTING LUNG DISORDERS (e.g. ASTHMA-LIKE CONDITIONS) MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

INGESTION (SWALLOWING):

ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE. INGESTION OF EXCESSIVE QUANTITIES OF THIS MATERIAL MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE).

COMMENTS:

GASOLINE IS A POSSIBLE CANCER HAZARD BASED ON ANIMAL DATA. FOLLOW-UP STUDIES SUGGEST THAT THIS MAY BE A UNIQUE EFFECT IN MALE RATS. UNLEADED GASOLINE HAS BEEN IDENTIFIED AS A POSSIBLE CARCINOGEN BY IARC. BENZENE, A COMPONENT OF THIS PRODUCT, IS A KNOWN CANCER (LEUKEMIA) HAZARD. RESULTS OF TESTS IN HUMANS HAVE SHOWN THAT EXPOSURE TO BENZENE CAN CAUSE IRREVERSIBLE CHANGES IN THE GENETIC MATERIAL (DNA) OF A CELL. THE HUMAN HEALTH CONSEQUENCES OF THESE CHANGES IS NOT FULLY UNDERSTOOD. BENZENE HAS BEEN IDENTIFIED AS A CARCINOGEN BY IARC, NTP AND OSHA. THERE IS INSUFFICIENT EVIDENCE TO SHOW THAT GASOLINE POSES ANY HAZARD RELATED TO ITS LOW BENZENE CONTENT. INTENTIONAL MISUSE BY DELIBERATE INHALATION OF LEADED GASOLINE MAY RESULT IN CHANGES IN BEHAVIOR CHARACTERIZED BY IRRITABILITY, AGGRESSIVENESS AND HALLUCINATIONS; MORE SEVERE OVEREXPOSURE MAY RESULT IN TREMORS AND SEIZURES. PERSONS WITH PRE-EXISTING HEART DISORDERS MAY BE MORE SUSCEPTIBLE TO IRREGULAR HEARTBEATS (ARRHYTHMIAS) IF EXPOSED TO HIGH CONCENTRATIONS OF THIS MATERIAL (SEE SECTION II - NOTE TO PHYSICIANS).

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION:

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I), ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. WHERE EXPLOSIVE MIXTURES MAY BE PRESENT, ELECTRICAL SYSTEMS SAFE FOR SUCH LOCATIONS MUST BE USED.

RESPIRATORY PROTECTION:

THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). DEPENDING ON THE AIRBORNE CONCENTRATION, USE A RESPIRATOR OR GAS MASK WITH APPROPRIATE CARTRIDGES AND CANNISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

PROTECTIVE GLOVES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

EYE PROTECTION:

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN THE WORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED.

SECTION V - REACTIVITY DATA

REACTIVITY:

STABLE UNDER NORMAL CONDITIONS OF STORAGE AND HANDLING.

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.

UNION OIL CO.

Product Name: UNOCAL 76 LEADED REGULAR GASOLINE
Product Code No: 00301

Issue Date: 05/04/90
Status: FINAL

SECTION V - REACTIVITY DATA

CONDITIONS AFFECTING REACTIVITY:

AVOID ALL POSSIBLE SOURCES OF IGNITION (SEE SECTIONS VII AND VIII).

INCOMPATIBLE MATERIALS:

STRONG OXIDIZING AGENTS SUCH AS CHLORINE, PERMANGANATES AND DICHROMATES MAY CAUSE FIRE OR EXPLOSION.

HAZARDOUS DECOMPOSITION PRODUCTS:

COMBUSTION MAY YIELD SIGNIFICANT AMOUNTS OF CARBON MONOXIDE AND SMALL AMOUNTS OF OXIDES OF SULFUR AND NITROGEN, BENZENE AND OTHER ORGANIC COMPOUNDS.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

NONE KNOWN

SECTION VI - SPILL AND LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS
Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL:

EXTREMELY FLAMMABLE. KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AWAY FROM SPILL/RELEASE. STAY UPWIND AND AWAY FROM SPILL/RELEASE. ISOLATE HAZARD AREA AND LIMIT ENTRY TO EMERGENCY CREW. STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). PREVENT SPILLED MATERIAL FROM ENTERING SEWERS, STORM DRAINS, OTHER UNAUTHORIZED TREATMENT DRAINAGE SYSTEMS AND NATURAL WATERWAYS. DIKE FAR AHEAD OF SPILL FOR LATER RECOVERY OR DISPOSAL. SPILLED MATERIAL MAY BE ABSORBED INTO AN APPROPRIATE ABSORBENT MATERIAL. NOTIFY FIRE AUTHORITIES AND APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES. IMMEDIATE CLEANUP OF ANY SPILL IS RECOMMENDED. IF SPILL OF ANY AMOUNT IS MADE INTO OR UPON U.S. NAVIGABLE WATERS, THE CONTIGUOUS ZONE, OR ADJOINING SHORELINES, NOTIFY THE NATIONAL RESPONSE CENTER (PHONE NUMBER 800-424-8802).

WASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINER(S) TIGHTLY CLOSED. USE AND STORE THIS MATERIAL IN COOL, DRY, WELL VENTILATED AREAS AWAY FROM HEAT, DIRECT SUNLIGHT, HOT METAL SURFACES AND ALL SOURCES OF IGNITION. POST AREA "NO SMOKING OR OPEN FLAME." BOND AND GROUND ALL EQUIPMENT WHEN TRANSFERRING FROM ONE VESSEL TO ANOTHER. STORE ONLY IN APPROVED CONTAINERS. KEEP AWAY FROM ANY INCOMPATIBLE MATERIALS (SEE SECTION V). PROTECT CONTAINER(S) AGAINST PHYSICAL DAMAGE. THE USE OF EXPLOSION-PROOF EQUIPMENT IS RECOMMENDED AND MAY BE REQUIRED (SEE APPROPRIATE FIRE CODES). DO NOT ENTER CONFINED SPACES SUCH AS TANKS OR PITS WITHOUT FOLLOWING PROPER ENTRY PROCEDURES SUCH AS ASTM D-4276. OUTDOOR OR DETACHED STORAGE IS PREFERRED. INDOOR STORAGE SHOULD MEET OSHA STANDARDS AND APPROPRIATE FIRE CODES. THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED ANY ESTABLISHED EXPOSURE LIMITS (SEE SECTIONS I AND IV). WASH THOROUGHLY AFTER HANDLING. DO NOT WEAR CONTAMINATED CLOTHING OR SHOES. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE

UNION OIL CO.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

NFPA HAZARD CLASS			HAZARD RANKING	FLASH POINT
	HEALTH HAZARD:	2	0 = LEAST	
	FLAMMABILITY:	3	1 = SLIGHT	
	REACTIVITY:	0	2 = MODERATE	-45 F (TCC)
	OTHER:		3 = HIGH	
			4 = EXTREME	

EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, HALON, FOAM OR WATER SPRAY IS RECOMMMENDED. WATER MAY BE INEFFECTIVE.

UNUSUAL FIRE & EXPLOSION HAZARDS:

THIS MATERIAL IS EXTREMELY FLAMMABLE AND MAY BE IGNITED BY HEAT, SPARKS, FLAME OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS, MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY TRAVEL CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION WHERE THEY MAY IGNITE, FLASHBACK OR EXPLODE. VAPOR/AIR EXPLOSION HAZARD INDOORS/OUTDOORS OR IN SEWERS. VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE IN LOW AREAS. IF CONTAINER IS NOT PROPERLY COOLED, IT MAY EXPLODE IN THE HEAT OF A FIRE.

SPECIAL FIRE FIGHTING PROCEDURES:

WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. WATER SPRAY MAY BE USEFUL IN MINIMIZING OR DISPERSING VAPORS AND COOLING EQUIPMENT EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

***UNLESS OTHERWISE NOTED, VALUES ARE AT 20 C/68 F AND 760 mm Hg/1 atm.

APPROX BOILING POINT	(AIR = 1) VAPOR DENSITY	(N-BUTYL ACETATE = 1) EVAPORATION RATE	% VOLATILE
85-430F / 29-221C	>1	<1	100

% SOLUBILITY IN WATER

NEGLIGIBLE

SPECIFIC GRAVITY

0.80

APPEARANCE

BRONZE COLORED LIQUID

ODOR

GASOLINE

UNION OIL CO.

SECTION X - DOCUMENTARY INFORMATION

ISSUE DATE: 05/04/90 PRODUCT CODE NO. 00301

PREV. DATE: 04/25/90 PREV. PROD. CODE NO. N/A

MSDS NO: N/A PREV. MSDS NO: N/A

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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Tank Nos 2942-11
2942-12 (12A)

Project Specialist (print) Jeff Shapiro

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320

ACCEPTED

DEPARTMENT OF ENVIRONMENTAL HEALTH
[illegible]

These plans have been reviewed and found to be acceptable and essentially meet the requirements of State and local health laws. Changes to these plans required 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 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 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.

please give 5 day notice before tank removal. Jeff Shapiro 7/28/92

UNDERGROUND TANK CLOSURE PLAN

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

1. **Business Name** Santa Rita Jail

   Business Owner Alameda County General Services Agency

2. **Site Address** 5325 Broder Boulevard

   City Dublin **Zip** 94568 **Phone** (510) 551-6674

3. **Mailing Address** Same

   City ______ **Zip** ______ **Phone** ______

4. **Land Owner** Alameda County General Services Agency

   Address 4400 MacArthur Blvd. **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 CAD 981397060

rev 12/90

6. Contractor Environmental Science & Engineering, Inc.

Address 4090 Nelson Avenue, Suite J

City Concord Phone (510) 685-4053

License Type General Engineering ID# 540544

7. Consultant Same as 6.

Address

City Phone

8. Contact Person for Investigation

Name R. Stephen Willcutts Title Senior Staff Engineer

Phone (510) 685-4053

9. Number of tanks being closed under this plan 2

Length of piping being removed under this plan 0

Total number of tanks at facility 8

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 Trucking, Inc. EPA I.D. No. CAD 009 466 392

Hauler License No. CA 019 License Exp. Date 05/92

Address 255 Parr Boulevard

City Richmond State CA Zip 94801

b) Product/Residual Sludge/Rinsate Disposal Site

Name Same as 10. a EPA I.D. No.

Address

City State Zip

c) Tank and Piping Transporter

Name Erickson Trucking, Inc. EPA I.D. No. CAD 009 466 392

Hauler License No. CA 019 License Exp. Date 05/92

Address 255 Parr Boulevard

City Richmond State CA Zip 94801

d) Tank and Piping Disposal Site

Name Same as c EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

11. Experienced Sample Collector

Name R. Stephen Willcutts

Company Environmental Science & Engineering, Inc.

Address 4090 Nelson Avenue, Suite J

City Concord State CA Zip 94520 Phone (510) 685-4053

12. Laboratory

Name Curtis & Tompkins, LTD.

Address 2323 Fifth Street

City Berkeley State CA Zip 94710

State Certification No. 159

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

Additional of 15 pounds of dry ice for every 1,000 gallons tank capacity.

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 #11, 12		Material to be sampled (tank contents, soil, groundwater, etc.)	Location and Depth of Samples
Capacity	Use History (see instructions)		
10K gallons	In use until January 1992. Installation date is unknown. Product was unleaded gasoline.	Soil	2 Samples to be collected at two feet below tank invert, at each end of tank. (approx. 16 feet below ground surface)
11K gallons	In use until January 1992. Installation date is unknown. Product was regular leaded gasoline.	Soil	3 Samples to be collected at two feet below tank invert, at each end of tank and middle of tank (approx. 16.5 feet below ground surface)

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) 75 cy	Sampling Plan Collect four samples from soil stockpile and analyze as described in item 16.

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-G	GC FID (5030)	EPA 8015M	1 ppm
BTX&E	GC FID	EPA 8020	0.005 ppm
Total Lead	AA		

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

18. Submit Worker's Compensation Certificate copy

Name of Insurer Planet Insurance Company

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) R. Stephen Willcutts, Environmental Science & Engineering, Ir

Signature R. Stephen Willcutts

Date

Signature of Site Owner or Operator

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

Signature Jim de Vos (PL)

Date 4-10-92

rev 12/90

CERTIFICATE OF INSURANCE
SERVICE CONTRACTS

EXHIBIT C1
Page 1

NOTE: No other certificate forms will be accepted.

Please complete the following information:

CONTRACTOR: Environmental Science Engineering, Inc.

CONTRACT TERM: April 1, 1992 to June 15, 1992

General Services Agency
Alameda County Agency or Department

POLICY/BOND ENDORSEMENT REQUIREMENTS

Contractor's policies or bonds shall be endorsed as follows:

Name Alameda County, its Board of Supervisors, officers, agents and employees as Additional Insured/Obligees, but County is not liable to the insurance company for any premiums, costs or assessments in connection with Contractor's policy/bond, as a result of being an Additional Insured.

Provide County 30 days advance written notice of cancellation, non-renewal or reduction in limits or coverage including the name of the Contract, mailed to the following address:

GSA-BMD
County Department to Receive Notice(s)

4400 MacArthur Blvd,
Address

Subodh Chowdhry
Individual Coordinating Contracts

Oakland, CA 94619
City, State, Zip

State the Contractor's policy/bond is primary insurance to any other insurance available to County with respect to any claim arising out of this contract.

Contractor is responsible for payment of insurance deductibles.

Insurance companies must have an "A.M. Best" rating of B+, V or better.

REQUIRED COVERAGES - Where "X" Appears in Box	CERTIFICATES OF INSURANCE
[X] 1. Workers' Compensation a. Statutory Compensation coverage. b. Employer's liability insurance with limit not less than $100,000 per occurrence.	Planet Insurance Co. Insurance Company(s) NWA0102557700 3/16/92-3/16/93 Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Johnson & Higgins
Name

500 W. Madison, Suite 2100
Address

Chicago, IL 60661
City, State, Zip

Service Contract

REQUIRED COVERAGES - Where "X" Appears in Box	CERTIFICATES OF INSURANCE

[X] 2. Comprehensive General Liability

a. Minimum Limits of Liability: $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage.

b. Coverages:

- [X] Bodily Injury
- [X] Property Damage
- [X] Blanket Contractual
- [ ] Personal Injury
- [ ] Products/Completed Operations
- [ ] Broad Form Property Damage
- [ ] Fire Damage Legal Liability

Commerce & Industry
Insurance Company(s)

GL3403771 3/16/92-3/16/93
Policy Number(s) Policy Period (dates)

Donald J. Price
Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Johnson & Higgins
Name
500 W. Madison, Suite 2100
Address
Chicago, IL 60661
City, State, Zip

c. Deductible not to exceed $5,000 per occurrence.

[X] d. Cross Liability or Severability of Interests Clause in policy

e. Occurrence Form X Claims Made Form _____

f. If claims made, please complete the following:
Coverage for all prior acts? _____

If prior acts coverage is restricted, advise retroactive date of coverage:
_____

Extended discovery provision: If Insurance Company cancels, how long is period of extended discovery? _____

If Contractee cancels, how long is optional coverage for extended discovery?
_____

Percentage of annual premium cost to purchase the extended discovery?
_____

A Certified copy of the Claims Made form must be provided

It will be a requirement of this Contract that coverage for the period of the contract will be maintained for a period of no less than five years after the expiration of the contract. If coverage for five years is not available, a shorter term may be negotiated.

VOID

REQUIRED COVERAGES - Where "X" Appears in Box	CERTIFICATES OF INSURANCE

[X] 3. Comprehensive Automobile Liability

a. Minimum Limits of Liability: $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage.

Assigned risk insurance at available State financial responsibility limits.

b. Coverages:

[X] Owned Automobiles, if any
[X] Non-owned Automobiles
[X] Hired Automobiles
[X] Cross Liability or Severability of Interests clause in policy.

Planet Insurance Company
Insurance Company(s)
NKA010257800 3/16/92-3/16/93
Policy Number(s) Policy Period (dates)
Donald J. Price
Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.
Johnson & Higgins
Name
500 W. Madison, Suite 2100
Address
Chicago, IL 60661
City, State, Zip

[X] 4. Professional Liability

[X] 1. For professional employees licensed as a condition of employment at the beginning of contract term or hired during the contract terms, insuring against error or omission in rendering or failing to render professional services. Coverage shall continue for a minimum of five years.

a. Minimum Limits of Liability: $1,000,000 per claim

b. Deductible not to exceed $5,000 per claim

National Prof. Casualty Co.
Insurance Company(s)
A72961 2/16/92-2/16/93
Policy Number(s) Policy Period (dates)
Kathryn Bricker
Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements. (Except additional insured not required.)
Direct Placement
Name
330 Hamilton Blvd., Suite 300
Address
Peoria, IL 61602
City, State, Zip

c. If claims made, please complete the following:

Coverage for all prior acts? Yes X No ____

If prior acts coverage is restricted, advise retroactive date of coverage.
2-16-90

Extended discovery provisions: If Insurance Company cancels, how long is period of extended discovery? 365 Days

If Contractee cancels, how long is optional coverage for extendee discovery?
12 Months

Percentage of annual premium cost to purchase the extended discovery?
100%

REQUIRED COVERAGES - Where "X" Appears in Box | CERTIFICATES OF INSURANCE

4. Professional Liability (continued)

A Certified copy of the Claims Made form must be provided.

VOID

It will be a requirement of the County that Coverage for the period of the contract will be maintained for a period of no less than five after the expiration of the contract. If coverage for five years is not available, a shorter term may be negotiated.

5. Bonds/Crime Insurance

☐ 1. Fidelity Insurance Bond

a. Faithful Performance Coverage of all officials, agents, and employees with access to funds received by Contractor.

b. Limits shall at least be equal to maximum County funds in contractors possession or control during contract term.

Insurance Company(s)

Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Name

Address

City, State, Zip

☐ 2. Money and Securities Policy.

a. Insurance against the disapperance, destruction or wrongful abstraction of funds on and off premises contractor.

b. Limits shall at least be equal to maximum County funds in contractors possession or control during contract term.

Insurance Company(s)

Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

Name

Address

City, State, Zip

6. Other (Describe below)

Insurance Company(s)

Policy Number(s) Policy Period (dates)

Signature of Individual authorized by Insurance Company to bind Company to coverage shown, and above endorsement requirements.

REQUIRED COVERAGES – Where "X" Appears in Box | CERTIFICATES OF INSURANCE

6. Other (continued)

Name

Address

City, State, Zip

☐ 7. Self Insurance

Contractors self-insured for any risks shown in Sections above shall attach to contract evidence satisfactory to County of Contractor's financial ability (such as a current financial statement) to respond to losses in amounts shown above, for each risk self-insured. Contractor shall complete and sign the following statement and attach to contract.

The Contractor is self-insured for the following coverages with respect to this contract"

☐ Worker's Compensation

☐ Comprehensive General Liability to the limit of $ _____

☒ Bodily injury

☒ Property damage

☒ Blanket Contractual

☐ Personal injury

☐ Products/completed operations

☐ Broad Form property damage

☐ Fire damage legal liability

☐ Comprehensive Auto Liability to the limit of $ _____

☐ Owned Automobiles

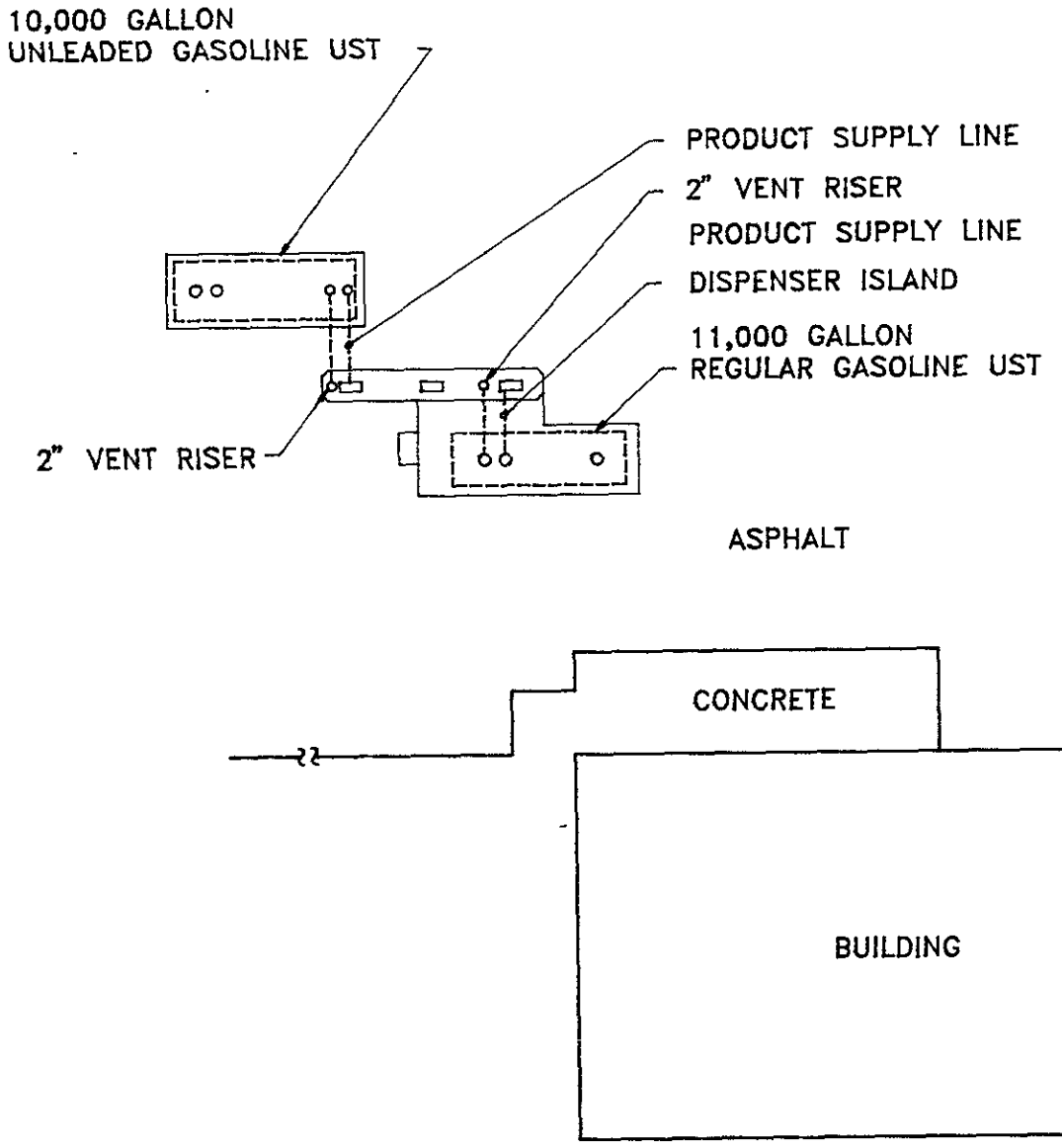
☐ Non-owned Automobiles

☐ Hired Automobiles

☐ Professional Liability to the limit of $ _____

Note: If excess insurance is needed to meet the limits required for insurances in Exhibit C, then the authorized representative of the excess insurance company(s) must sign the certificates in Exhibit C pertaining to the necessary coverages.

Signature of authorized representative of Contractor | Title | Date



SCALE

0 30 FEET

DEPTH TO GROUND WATER: 30 FEET

Environmental Science & Engineering, Inc.

ALAMEDA COUNTY GSA
SANTA RITA CORRECTIONAL FACILITY
TANK REMOVAL PLOT PLAN
TANK NOS. 2942-11, 2942-12

DRAWN BY	APPROVED BY	REVISED
DWR		

DATE	FILE NAME	PROJ. NO.
4/92	T111230	6-92-5351

HEALTH AND SAFETY PLAN
for
ALAMEDA COUNTY GENERAL SERVICES AGENCY
SANTA RITA CORRECTIONAL FACILITY
Dublin, California

TABLE OF CONTENTS

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. 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

ENVIRONMENTAL SCIENCE & ENGINEERING

SITE SPECIFIC INFORMATION

PROJECT NAME: Removal of USTs at Santa Rita Correctional Facility, Tank Nos. 2942-11, 2942-12

PROJECT NUMBER: 6-92-5351

PROJECT MANAGER: R. Stephen Willcutts, Jr.

HEALTH AND SAFETY OFFICER: Lionel S. Reynolds, CIH

SITE SAFETY OFFICER (ALTERNATE): R. Stephen Willcutts Jr.

THIS HEALTH AND SAFETY PLAN HAS BEEN REVIEWED AND APPROVED BY:

Lionel S. Reynolds
CERTIFIED INDUSTRIAL HYGIENIST

DECLARATION OF UNDERSTANDING

I have read and understand the Health and Safety Plan and agree to abide by it.

NAME	EMPLOYEE NUMBER OR COMPANY NAME	SOCIAL SECURITY NUMBER	DATE

A. GENERAL PROJECT INFORMATION

SITE: Santa Rita Correctional Facility DATE PREPARED: 4-08-92

LOCATION: 5325 Broder Boulevard, Dublin, California

PREPARED BY: R. Stephen Willcutts Jr., ESE

OBJECTIVE (S) AND WORKPLAN: Removal of one 10,000 gallon Unleaded Gasoline UST, and one 11,000 gallon Regular Gasoline UST, dispenser island, and associated piping.

PROPOSED DATE(S) OF ON-SITE WORK: March 23, 1992 - May 29, 1992

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: Former Correctional Facility CLOSED__ OPEN x

FACILITY SIZE:_____

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

PRINCIPAL DISPOSAL METHOD AND LOCATION(S): The two tanks will be hauled off-site as hazardous waste by Erickson Trucking, Inc., to Erickson Environmental of Richmond, Califonia 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: On-site hazards include physical injuries due to the proximity of workers to engine-driven heavy equipment and tools, including backhoe or other excavator, loader, mechanical tamper, crane and trucks.

Chemical: Potential chemical hazards include skin and eye contact or inhalation exposure to potentially toxic concentrations of hydrocarbon vapors.

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.

Chemical: Should breathing conditions exceed work action level during excavation/tank removal procedures, 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. 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 personnel 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 areas. 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 Manger. All disposable protective clothing (including respirator cartridges) will be put into plastic bags and disposed of in a proper manner. Excavated soils 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 surveyor's 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 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 tanks to prevent any spillage of residual hydrocarbons. No storage of removed product, rinsate or other hazardous fluids will be allowed. Fluids will be pumped from tanks 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. Ernie Hall, Facility Supervisor (510) 551-6674

CLIENT CONTACT: Mr. Jim de Vos, Alameda County GSA (510) 535-6248

F. EMERGENCY PRECAUTIONS

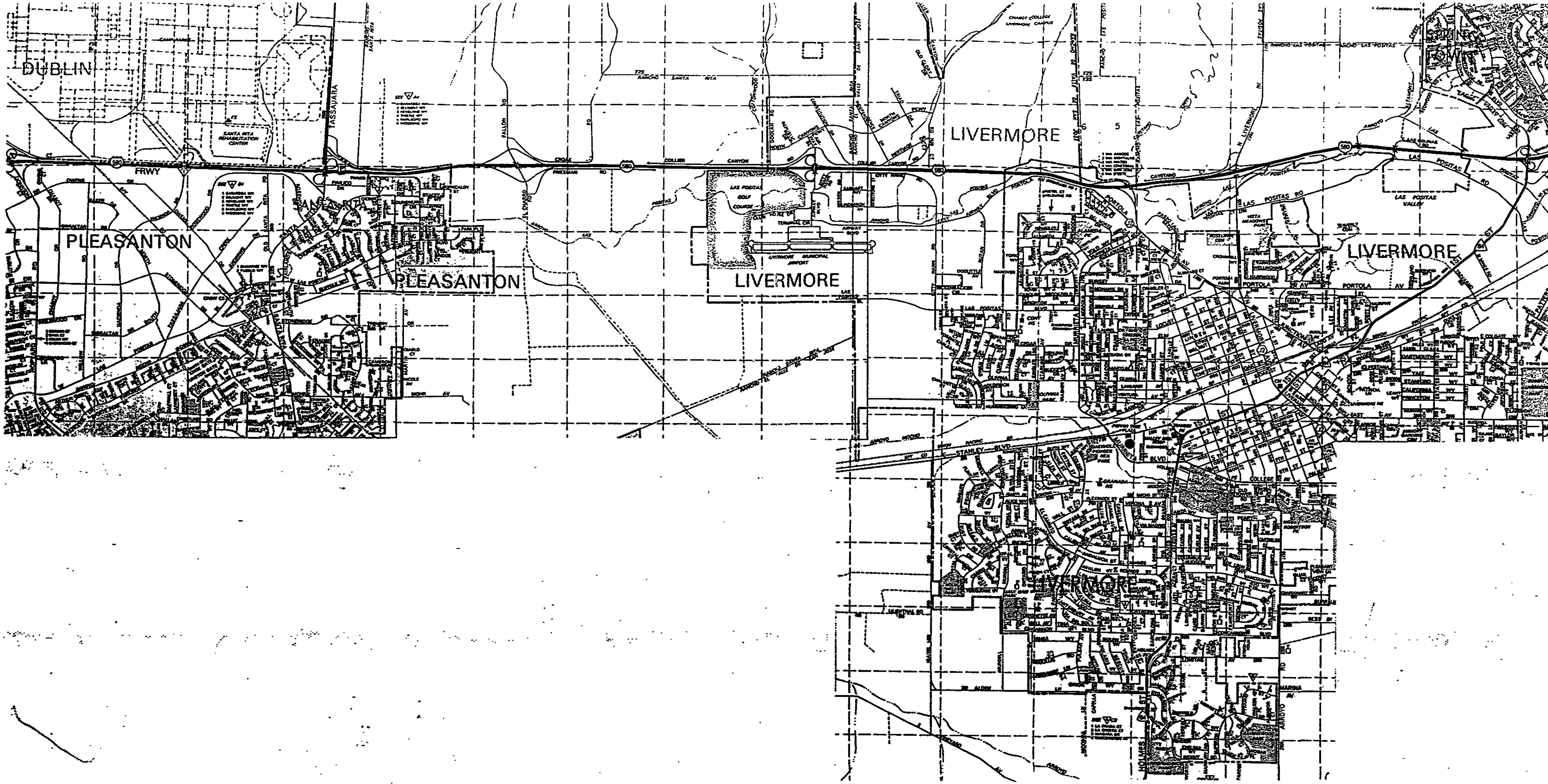
PRIMARY HOSPITAL/INFIRMARY:

Name: Valley Memorial Hospital

Address: 1111 East Stanely Blvd., Livermore, CA Telephone Number: (510) 447-7000 (emergency)

Directions from site to emergency unit: Take Tassajara Road (south) to Highway 580. Take Highway 580 west. Exit south on First Street (Highway 84). After junction with Railroad Avenue, turn left into driveway of hospital.

Remarks: See Figure A



DUBLIN
PLEASANTON
PLEASANTON
LIVERMORE
LIVERMORE
LIVERMORE
LIVERMORE

FIGURE A

SECTION V - REACTIVITY DATA

CONDITIONS AFFECTING REACTIVITY:

AVOID ALL POSSIBLE SOURCES OF IGNITION (SEE SECTIONS VII AND VIII).

INCOMPATIBLE MATERIALS:

STRONG OXIDIZING AGENTS SUCH AS CHLORINE, PERMANGANATES AND DICHROMATES MAY CAUSE FIRE OR EXPLOSION.

HAZARDOUS DECOMPOSITION PRODUCTS:

COMBUSTION MAY YIELD SIGNIFICANT AMOUNTS OF CARBON MONOXIDE AND SMALL AMOUNTS OF OXIDES OF SULFUR AND NITROGEN, BENZENE AND OTHER ORGANIC COMPOUNDS.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

NONE KNOWN

SECTION VI - SPILL AND LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS
Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL:

EXTREMELY FLAMMABLE. KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AWAY FROM SPILL/RELEASE. STAY UPWIND AND AWAY FROM SPILL/RELEASE. ISOLATE HAZARD AREA AND LIMIT ENTRY TO EMERGENCY CREW. STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). PREVENT SPILLED MATERIAL FROM ENTERING SEWERS, STORM DRAINS, OTHER UNAUTHORIZED TREATMENT DRAINAGE SYSTEMS AND NATURAL WATERWAYS. DIKE FAR AHEAD OF SPILL FOR LATER RECOVERY OR DISPOSAL. SPILLED MATERIAL MAY BE ABSORBED INTO AN APPROPRIATE ABSORBENT MATERIAL. NOTIFY FIRE AUTHORITIES AND APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES. IMMEDIATE CLEANUP OF ANY SPILL IS RECOMMENDED. IF SPILL OF ANY AMOUNT IS MADE INTO OR UPON U.S. NAVIGABLE WATERS, THE CONTIGUOUS ZONE, OR ADJOINING SHORELINES, NOTIFY THE NATIONAL RESPONSE CENTER (PHONE NUMBER 800-424-8802).

WASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINER(S) TIGHTLY CLOSED. USE AND STORE THIS MATERIAL IN COOL, DRY, WELL VENTILATED AREAS AWAY FROM HEAT, DIRECT SUNLIGHT, HOT METAL SURFACES AND ALL SOURCES OF IGNITION. POST AREA "NO SMOKING OR OPEN FLAME." BOND AND GROUND ALL EQUIPMENT WHEN TRANSFERRING FROM ONE VESSEL TO ANOTHER. STORE ONLY IN APPROVED CONTAINERS. KEEP AWAY FROM ANY INCOMPATIBLE MATERIALS (SEE SECTION V). PROTECT CONTAINER(S) AGAINST PHYSICAL DAMAGE. THE USE OF EXPLOSION-PROOF EQUIPMENT IS RECOMMENDED AND MAY BE REQUIRED (SEE APPROPRIATE FIRE CODES). DO NOT ENTER CONFINED SPACES SUCH AS TANKS OR PITS WITHOUT FOLLOWING PROPER ENTRY PROCEDURES SUCH AS ASTM D-4276. OUTDOOR OR DETACHED STORAGE IS PREFERRED. INDOOR STORAGE SHOULD MEET OSHA STANDARDS AND APPROPRIATE FIRE CODES. THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED ANY ESTABLISHED EXPOSURE LIMITS (SEE SECTIONS I AND IV). WASH THOROUGHLY AFTER HANDLING. DO NOT WEAR CONTAMINATED CLOTHING OR SHOES. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE

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Status: FINAL

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

			HAZARD RANKING	
NFPA HAZARD CLASS	HEALTH HAZARD:	2	0 = LEAST	FLASH POINT
	FLAMMABILITY:	3	1 = SLIGHT	
	REACTIVITY:	0	2 = MODERATE	-45 F (TCC)
	OTHER:		3 = HIGH	
			4 = EXTREME	

EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, HALON, FOAM OR WATER SPRAY IS RECOMMMENDED. WATER MAY BE INEFFECTIVE.

UNUSUAL FIRE & EXPLOSION HAZARDS:

THIS MATERIAL IS EXTREMELY FLAMMABLE AND MAY BE IGNITED BY HEAT, SPARKS, FLAME OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS, MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY TRAVEL CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION WHERE THEY MAY IGNITE, FLASHBACK OR EXPLODE. VAPOR/AIR EXPLOSION HAZARD INDOORS/OUTDOORS OR IN SEWERS. VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE IN LOW AREAS. IF CONTAINER IS NOT PROPERLY COOLED, IT MAY EXPLODE IN THE HEAT OF A FIRE.

SPECIAL FIRE FIGHTING PROCEDURES:

WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. WATER SPRAY MAY BE USEFUL IN MINIMIZING OR DISPERSING VAPORS AND COOLING EQUIPMENT EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

***UNLESS OTHERWISE NOTED, VALUES ARE AT 20 C/68 F AND 760 mm Hg/1 atm.

APPROX BOILING POINT	(AIR = 1) VAPOR DENSITY	(N-BUTYL ACETATE = 1) EVAPORATION RATE	% VOLATILE
85-430F / 29-221C	>1	<1	100

% SOLUBILITY IN WATER

NEGLIGIBLE

SPECIFIC GRAVITY

0.75

APPEARANCE

CLEAR LIQUID

ODOR

GASOLINE

UNION OIL CO.

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SECTION X - DOCUMENTARY INFORMATION

ISSUE DATE: 05/04/90 PRODUCT CODE NO. 00401

PREV. DATE: 10/20/89 PREV. PROD. CODE NO. N/A

MSDS NO: N/A PREV. MSDS NO: N/A

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MATERIAL SAFETY DATA SHEET

UNOCAL 76

Product Name: UNOCAL 76 LEADED REGULAR GASOLINE
Product Code No: 00301

Issue Date: 05/04/90
Status: FINAL

Responsible Party:

UNOCAL REFINING & MARKETING DIVISION
UNION OIL COMPANY OF CALIFORNIA
1201 WEST 5TH STREET
LOS ANGELES, CALIFORNIA 90017

CONTACT FOR FURTHER INFORMATION:
MSDS COORDINATOR 213-977-7589

Transportation Emergencies:
CHEMTREC
(800) 424-9300 Cont. U.S.
(202) 483-7616 (Collect)
from Alaska & Hawaii
Health Emergencies:
Call LOS ANGELES POISON
INFORMATION CENTER (24 hrs)
(800) 356-3129

PRODUCT IDENTIFICATION

PRODUCT NAME: UNOCAL 76 LEADED REGULAR GASOLINE

SYNONYMS: UNION 76 LEADED REGULAR GASOLINE

GENERIC NAME: LEADED GASOLINE

CHEMICAL FAMILY: PETROLEUM HYDROCARBON MIXTURE

DOT PROPER SHIPPING NAME: GASOLINE

ID NUMBER: UN1203

DOT HAZARD CLASSIFICATION: FLAMMABLE LIQUID

PRECAUTIONARY WARNING

DANGER
EXTREMELY FLAMMABLE. VAPORS MAY EXPLODE. HARMFUL OR FATAL IF SWALLOWED. VAPOR HARMFUL. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. POSSIBLE CANCER HAZARD BASED ON TESTS WITH LABORATORY ANIMALS. NO SMOKING OR OPEN FLAME. KEEP AWAY FROM HEAT, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS OR MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY BE IGNITED BY SPARK OR FLAME SOURCE MANY FEET AWAY. DO NOT OVERFILL TANK. USE ONLY WITH ADEQUATE VENTILATION. DO NOT TASTE OR SWALLOW. KEEP CONTAINER CLOSED. DO NOT BREATHE VAPOR OR MISTS. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. WASH THOROUGHLY AFTER HANDLING. NEVER SIPHON BY MOUTH. FOR USE AS MOTOR FUEL ONLY. DO NOT USE FOR ANY OTHER PURPOSE. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, GRIND OR DRILL ON OR NEAR CONTAINER. "EMPTY" CONTAINER RETAINS RESIDUE (LIQUID AND/OR VAPOR) AND MAY EXPLODE IN HEAT OF A FIRE. KEEP OUT OF REACH OF CHILDREN. FAILURE TO USE CAUTION MAY CAUSE SERIOUS INJURY OR ILLNESS.

SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
HAZARDOUS COMPONENTS					
GASOLINE CAS #: 8006-61-9		300.000	ppm	ACGIH	TWA
		500.000	ppm	ACGIH	STEL
		300.000	ppm	OSHA	TWA
		500.000	ppm	OSHA	STEL

UNION OIL CO.

Product Name: UNOCAL 76 LEADED REGULAR GASOLINE
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Issue Date: 05/04/90
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SECTION I - COMPONENTS	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
		300.000	ppm	CAL OSHA	TWA
BENZENE					
CAS #: 71-43-2	1.0 - 5.0	10.000	ppm	ACGIH	TWA
		25.000	ppm	MSHA	CEIL-SKIN
		1.000	ppm	OSHA	TWA
		5.000	ppm	OSHA	STEL
		50.000	ppm	CAL OSHA	CEIL
		25.000	ppm	CAL OSHA	EXCUR
		10.000	ppm	CAL OSHA	TWA-SKIN
LEAD COMPOUND				NOT ESTABLISHED	
CAS #: NONE	0.1 GM/GAL				
TOLUENE					
CAS #: 108-88-3	1.0 - 15.0	100.000	ppm	ACGIH	TWA
		150.000	ppm	ACGIH	STEL
		100.000	ppm	MSHA	TWA
		100.000	ppm	OSHA	TWA
		150.000	ppm	OSHA	STEL
		200.000	ppm	CAL OSHA	EXCUR
		100.000	ppm	CAL OSHA	TWA-SKIN
		500.000	ppm	CAL OSHA	CEIL-SKIN
XYLENES					
CAS #: 1330-20-7	1.0 - 21.0	100.000	ppm	ACGIH	TWA
		150.000	ppm	ACGIH	STEL
		100.000	ppm	MSHA	TWA
		100.000	ppm	OSHA	TWA
		150.000	ppm	OSHA	STEL
		200.000	ppm	CAL OSHA	EXCUR
		100.000	ppm	CAL OSHA	TWA-SKIN
		300.000	ppm	CAL OSHA	CEIL-SKIN
N-HEXANE					
CAS #: 110-54-3		50.000	ppm	ACGIH	TWA
		500.000	ppm	MSHA	TWA
		50.000	ppm	OSHA	TWA
		50.000	ppm	CAL OSHA	TWA

OTHER COMPONENTS

--NONE--

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA 313 AND 40 CFR 372:	CAS NUMBER	WEIGHT %
BENZENE	71-43-2	1-5
LEAD COMPOUND	NONE	0.1 GM/GAL
TOLUENE	108-88-3	1-15
XYLENES	1330-20-7	1-21
ETHYLBENZENE	100-41-4	1-5
METHYL TERT-BUTYL ETHER	1634-04-4	0-11
1,2,4-TRIMETHYLBENZENE	95-63-6	1-5

NOTE: GASOLINE IS A COMPLEX COMBINATION OF HYDROCARBONS INCLUDING A SMALL QUANTITY OF BENZENE, TOLUENE, XYLENE AND N-HEXANE.

SECTION II - EMERGENCY AND FIRST AID PROCEDURES ***EMERGENCY***
Have physician call LOS ANGELES POISON INFORMATION CENTER (24 hrs) (800) 356-3129

EYE CONTACT:

IF IRRITATION OR REDNESS DEVELOPS, MOVE VICTIM AWAY FROM EXPOSURE AND INTO FRESH AIR. FLUSH EYES WITH CLEAN WATER. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.

SKIN CONTACT:

WIPE MATERIAL FROM SKIN AND REMOVE CONTAMINATED SHOES AND CLOTHING. CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH MILD SOAP AND WATER AND, IF NECESSARY, A WATERLESS SKIN CLEANSER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION (BREATHING):

IF RESPIRATORY SYMPTOMS OR OTHER SYMPTOMS OF EXPOSURE DEVELOP, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF SYMPTOMS PERSIST, SEEK IMMEDIATE MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, IMMEDIATELY BEGIN ARTIFICIAL RESPIRATION. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SWALLOWING):

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROWSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE WITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

COMMENTS:

NOTE TO PHYSICIANS: EXPOSURE TO HIGH CONCENTRATIONS OF THIS MATERIAL (e.g. IN ENCLOSED SPACES OR WITH DELIBERATE ABUSE) MAY BE ASSOCIATED WITH CARDIAC ARRHYTHMIAS. EPINEPHRINE AND OTHER SYMPATHOMIMETIC DRUGS MAY INITIATE CARDIAC ARRHYTHMIAS IN PERSONS EXPOSED TO THIS MATERIAL. OTHER DRUGS WITH LESS ARRHYTHMOGENIC POTENTIAL SHOULD BE CONSIDERED. IF SYMPATHOMIMETIC DRUGS ARE ADMINISTERED, OBSERVE FOR THE DEVELOPMENT OF CARDIAC ARRHYTHMIAS.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

EYE CONTACT:

THIS MATERIAL MAY CAUSE MILD EYE IRRITATION. DIRECT CONTACT WITH THE LIQUID OR EXPOSURE TO VAPORS OR MISTS MAY CAUSE STINGING, TEARING AND REDNESS.

SKIN CONTACT:

THIS MATERIAL MAY CAUSE MILD SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE REDNESS, BURNING, AND DRYING AND CRACKING OF THE SKIN. CONTACT MAY RESULT IN SKIN ABSORPTION BUT SYMPTOMS OF TOXICITY ARE NOT ANTICIPATED BY THIS ROUTE ALONE UNDER NORMAL CONDITIONS OF USE. PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

INHALATION (BREATHING):

WHILE THIS MATERIAL HAS A LOW DEGREE OF TOXICITY, BREATHING HIGH CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE FLUSHING, BLURRED VISION, NAUSEA AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION AND FATIGUE). EXPOSURE TO HIGH CONCENTRATIONS MAY CAUSE LOSS OF CONSCIOUSNESS, CONVULSIONS, RESPIRATORY COLLAPSE AND DEATH. RESPIRATORY SYMPTOMS ASSOCIATED WITH PRE-EXISTING LUNG DISORDERS (e.g. ASTHMA-LIKE CONDITIONS) MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL.

UNION OIL CO.

Product Name: UNOCAL 76 LEADED REGULAR GASOLINE
Product Code No: 00301

Issue Date: 05/04/90
Status: FINAL

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

INGESTION (SWALLOWING):

ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE. INGESTION OF EXCESSIVE QUANTITIES OF THIS MATERIAL MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (e.g. HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE).

COMMENTS:

GASOLINE IS A POSSIBLE CANCER HAZARD BASED ON ANIMAL DATA. FOLLOW-UP STUDIES SUGGEST THAT THIS MAY BE A UNIQUE EFFECT IN MALE RATS. UNLEADED GASOLINE HAS BEEN IDENTIFIED AS A POSSIBLE CARCINOGEN BY IARC. BENZENE, A COMPONENT OF THIS PRODUCT, IS A KNOWN CANCER (LEUKEMIA) HAZARD. RESULTS OF TESTS IN HUMANS HAVE SHOWN THAT EXPOSURE TO BENZENE CAN CAUSE IRREVERSIBLE CHANGES IN THE GENETIC MATERIAL (DNA) OF A CELL. THE HUMAN HEALTH CONSEQUENCES OF THESE CHANGES IS NOT FULLY UNDERSTOOD. BENZENE HAS BEEN IDENTIFIED AS A CARCINOGEN BY IARC, NTP AND OSHA. THERE IS INSUFFICIENT EVIDENCE TO SHOW THAT GASOLINE POSES ANY HAZARD RELATED TO ITS LOW BENZENE CONTENT. INTENTIONAL MISUSE BY DELIBERATE INHALATION OF LEADED GASOLINE MAY RESULT IN CHANGES IN BEHAVIOR CHARACTERIZED BY IRRITABILITY, AGGRESSIVENESS AND HALLUCINATIONS; MORE SEVERE OVEREXPOSURE MAY RESULT IN TREMORS AND SEIZURES. PERSONS WITH PRE-EXISTING HEART DISORDERS MAY BE MORE SUSCEPTIBLE TO IRREGULAR HEARTBEATS (ARRHYTHMIAS) IF EXPOSED TO HIGH CONCENTRATIONS OF THIS MATERIAL (SEE SECTION II - NOTE TO PHYSICIANS).

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION:

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I), ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. WHERE EXPLOSIVE MIXTURES MAY BE PRESENT, ELECTRICAL SYSTEMS SAFE FOR SUCH LOCATIONS MUST BE USED.

RESPIRATORY PROTECTION:

THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). DEPENDING ON THE AIRBORNE CONCENTRATION, USE A RESPIRATOR OR GAS MASK WITH APPROPRIATE CARTRIDGES AND CANNISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

PROTECTIVE GLOVES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

EYE PROTECTION:

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN THE WORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED.

SECTION V - REACTIVITY DATA

REACTIVITY:

STABLE UNDER NORMAL CONDITIONS OF STORAGE AND HANDLING.

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.

SECTION V - REACTIVITY DATA

CONDITIONS AFFECTING REACTIVITY:

AVOID ALL POSSIBLE SOURCES OF IGNITION (SEE SECTIONS VII AND VIII).

INCOMPATIBLE MATERIALS:

STRONG OXIDIZING AGENTS SUCH AS CHLORINE, PERMANGANATES AND DICHROMATES MAY CAUSE FIRE OR EXPLOSION.

HAZARDOUS DECOMPOSITION PRODUCTS:

COMBUSTION MAY YIELD SIGNIFICANT AMOUNTS OF CARBON MONOXIDE AND SMALL AMOUNTS OF OXIDES OF SULFUR AND NITROGEN, BENZENE AND OTHER ORGANIC COMPOUNDS.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

NONE KNOWN

SECTION VI - SPILL AND LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS
Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL:

EXTREMELY FLAMMABLE. KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AWAY FROM SPILL/RELEASE. STAY UPWIND AND AWAY FROM SPILL/RELEASE. ISOLATE HAZARD AREA AND LIMIT ENTRY TO EMERGENCY CREW. STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). PREVENT SPILLED MATERIAL FROM ENTERING SEWERS, STORM DRAINS, OTHER UNAUTHORIZED TREATMENT DRAINAGE SYSTEMS AND NATURAL WATERWAYS. DIKE FAR AHEAD OF SPILL FOR LATER RECOVERY OR DISPOSAL. SPILLED MATERIAL MAY BE ABSORBED INTO AN APPROPRIATE ABSORBENT MATERIAL. NOTIFY FIRE AUTHORITIES AND APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES. IMMEDIATE CLEANUP OF ANY SPILL IS RECOMMENDED. IF SPILL OF ANY AMOUNT IS MADE INTO OR UPON U.S. NAVIGABLE WATERS, THE CONTIGUOUS ZONE, OR ADJOINING SHORELINES, NOTIFY THE NATIONAL RESPONSE CENTER (PHONE NUMBER 800-424-8802).

WASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINER(S) TIGHTLY CLOSED. USE AND STORE THIS MATERIAL IN COOL, DRY, WELL VENTILATED AREAS AWAY FROM HEAT, DIRECT SUNLIGHT, HOT METAL SURFACES AND ALL SOURCES OF IGNITION. POST AREA "NO SMOKING OR OPEN FLAME." BOND AND GROUND ALL EQUIPMENT WHEN TRANSFERRING FROM ONE VESSEL TO ANOTHER. STORE ONLY IN APPROVED CONTAINERS. KEEP AWAY FROM ANY INCOMPATIBLE MATERIALS (SEE SECTION V). PROTECT CONTAINER(S) AGAINST PHYSICAL DAMAGE. THE USE OF EXPLOSION-PROOF EQUIPMENT IS RECOMMENDED AND MAY BE REQUIRED (SEE APPROPRIATE FIRE CODES). DO NOT ENTER CONFINED SPACES SUCH AS TANKS OR PITS WITHOUT FOLLOWING PROPER ENTRY PROCEDURES SUCH AS ASTM D-4276. OUTDOOR OR DETACHED STORAGE IS PREFERRED. INDOOR STORAGE SHOULD MEET OSHA STANDARDS AND APPROPRIATE FIRE CODES. THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED ANY ESTABLISHED EXPOSURE LIMITS (SEE SECTIONS I AND IV). WASH THOROUGHLY AFTER HANDLING. DO NOT WEAR CONTAMINATED CLOTHING OR SHOES. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

			HAZARD RANKING	
NFPA HAZARD CLASS	HEALTH HAZARD:	2	0 = LEAST	FLASH POINT
	FLAMMABILITY:	3	1 = SLIGHT	
	REACTIVITY:	0	2 = MODERATE	-45 F (TCC)
	OTHER:		3 = HIGH	
			4 = EXTREME	

EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, HALON, FOAM OR WATER SPRAY IS RECOMMMENDED. WATER MAY BE INEFFECTIVE.

UNUSUAL FIRE & EXPLOSION HAZARDS:

THIS MATERIAL IS EXTREMELY FLAMMABLE AND MAY BE IGNITED BY HEAT, SPARKS, FLAME OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS, MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY TRAVEL CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION WHERE THEY MAY IGNITE, FLASHBACK OR EXPLODE. VAPOR/AIR EXPLOSION HAZARD INDOORS/OUTDOORS OR IN SEWERS. VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE IN LOW AREAS. IF CONTAINER IS NOT PROPERLY COOLED, IT MAY EXPLODE IN THE HEAT OF A FIRE.

SPECIAL FIRE FIGHTING PROCEDURES:

WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. WATER SPRAY MAY BE USEFUL IN MINIMIZING OR DISPERSING VAPORS AND COOLING EQUIPMENT EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

***UNLESS OTHERWISE NOTED, VALUES ARE AT 20 C/68 F AND 760 mm Hg/1 atm.

APPROX BOILING POINT	(AIR = 1) VAPOR DENSITY	(N-BUTYL ACETATE = 1) EVAPORATION RATE	% VOLATILE
85-430F / 29-221C	>1	<1	100

% SOLUBILITY IN WATER

NEGLIGIBLE

SPECIFIC GRAVITY

0.80

APPEARANCE

BRONZE COLORED LIQUID

ODOR

GASOLINE

UNION OIL CO.

Product Name: UNOCAL 76 LEADED REGULAR GASOLINE
Product Code No: 00301

Issue Date: 05/04/90
Status: FINAL

SECTION X - DOCUMENTARY INFORMATION

ISSUE DATE: 05/04/90 PRODUCT CODE NO. 00301

PREV. DATE: 04/25/90 PREV. PROD. CODE NO. N/A

MSDS NO: N/A PREV. MSDS NO: N/A

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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Tanks 6, 7, 8, 1

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1. Business Name County of Alameda
   Business Owner County of Alameda
2. Site Address 4847 Alta Mirano Road
   City Dublin Zip 94568 Phone (415) 551-6674
3. Mailing Address QIC 21303 - Attention: Jim deVos
   City _____ Zip _____ Phone X 36248
4. Land Owner County of Alameda
   Address QIC 21303 City, State _____ Zip _____
5. EPA I.D. No. CAD 981397060
6. Contractor Erickson, Inc.
   Address 255 Parr Boulevard
   City Richmond Phone (415) 235-1393
   License Type A ID# A-168067
7. Consultant Certified Environmental Consulting, Inc.
   Address 140 West Industrial Way
   City Benicia Phone (707) 745-0171

8. Contact Person for Investigation

Name Paul LeCheminant Title Environmental Engineer

Phone (707) 745 0171

9. Total No. of Tanks at facility 13 (underground only)

0. Have permit applications for all tanks been submitted to this office? Yes [X] No [ ]

1. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Tranporter

Name Erickson, Inc. EPA I.D. No. CAD009466392

Address 255 Parr Blvd

City Richmond State CA Zip 94811

b) Rinsate Transporter

Name NA EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

c) Tank Transporter

Name Erickson, Inc. EPA I.D. No. CAD009466392

Address 255 Parr Blvd.

City Richmond State CA Zip 94811

d) Tank Disposal Site

Name Erickson, Inc. EPA I.D. No. CAD009466392

Address 255 Parr Blvd

City Richmond State CA Zip 94811

e) Contaminated Soil Transporter

Name NA EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

12. Sample Collector

Name Paul LeCheminant

Company Certified Environmental Consulting, Inc.

Address 140 West Industrial Way

City Benicia State CA Zip 94510 Phone (707)745-0171

13. Sampling Information for each tank or area

Tank #5

	Tank or Area: Capacity	Tank or Area: Historic Contents (past 5 years)	Material sampled	Location & Depth
#9	1500 gallon	diesel	soil	Directly below tank ~6ft
#7	500 gallon	diesel	soil	Directly below tank ~6ft
#6	250 gallon	diesel	soil	Directly below tank ~6ft
#10	50 gallon (100 gallon)	diesel	soil	Directly below tank ~4ft

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

If yes, describe. Unknown

15. NFPA methods used for rendering tank inert? Yes [X] No [ ]

If yes, describe. Minimum of 30 lbs. dry ice per 1000 gallons of tank capacity

An explosion proof combustible gas meter shall be used to verify tank inertness.

16. Laboratories

Name Superior Analytical Laboratories, Inc.

Address 825 Arnold, Suite 114

City Martinez State CA Zip 94553

State Certification No. DOHS #319

17. Chemical Methods to be used for Analyzing Samples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
Total Petroleum Hydro-carbons		EPA 8015
Benzene, Toluene, Xylenes, Ethylbenzene		EPA 8020

18. Submit Site Safety Plan

19. Workman's Compensation: Yes [X] No [ ]

Copy of Certificate enclosed? Yes [ ] No [ ] On file at County

Name of Insurer _____

20. Plot Plan submitted? Yes [X] No [ ]

21. Deposit enclosed? Yes [ ] No [X]

22. Please forward to this office the following information within 60 days after receipt of sample results.

a) Chain of Custody Sheets

b) Original Signed Laboratory Reports

c) TSD to Generator copies of wastes shipped and received

d) Attachment A summarizing laboratory results

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 Saftey and Health Administration) requirements concerning personnel and safety.

I will notify the Department of Environmental Health at least two (2) working days (48 hours) after approval of this closure plan in advance to schedule any required inspections. 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.

Signature of Contractor

Name (please type) _____

Signature _____

Date _____

Signature of Site Owner or Operator

Name (please type) JIM P. de VOS

Signature Jim P. de Vos

Date 11/20/90

NOTES:

1. Any changes in this document must be approved by this Department.
2. Any leaks discovered must be submitted to this office on an underground storage tank unauthorized leak/contamination site report form within 5 days of its discovery.
3. Three (3) copies of this plan must be submitted to this Department. One copy must be at the construction site at all times.
4. After approval of plan, notification of at least two (2) working days (48 hours) must be given to this Department prior to removal of tank(s).
5. A copy of your approved plan must be sent to the landowner.
6. Triple rinse means that:
   a) Final rinse must contain less than 100 ppm of Gasoline (EPA method 8020 for soil, or EPA method 602 for water) or Diesel (EPA method 418.1). Other methods for halogenated volatile organics (EPA method 8010 for soil, EPA method 601 for water) may be required. The composition of the final rinse must be demonstrated by an original or facsimile report from a laboratory certified for the above analyses.
   b) Tank interior is shown to be free from deposits or residues upon a visual examination of tank interior.
   c) Tank should be labelled as "tripled rinsed; laboratory certified analysis available upon request" with the name and address of the contractor.

If all the above requirements cannot be met, the tank must be transported as a hazardous waste.

7. Any cutting into tanks requires local fire department approval.

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

ATTACHMENT A

SAMPLING RESULTS

Tank or Area	Contaminant	Location & Depth	Results (specify units)

INSTRUCTIONS

2. SITE ADDRESS
Address at which closure or modification is taking place.

5. EPA I.D. NO.
This number may be obtained from the State Department of Health Services, 916/324-1781.

6. CONTRACTOR
Prime contractor for the project.

7. OTHER
List professional consultants here.

12. SAMPLE COLLECTOR
Persons who are collecting samples.

13. SAMPLING INFORMATION
Historic contents - the principal product(s) used in the last 5 years.

Material sampled - i.e., water, oil, sludge, soil, etc.

16. LABORATORIES
Laboratories used for chemical and geotechnical analyses.

17. CHEMICAL METHODS:
All sample collection methods and analyses should conform to EPA or DHS methods.

Contaminant - Specify the chemical to be analyzed.

Sample Preparation Method Number - The means used to prepare the sample prior to analyses - i.e., digestion techniques, solvent extraction, etc. Specify number of method and reference if not an EPA or DHS method.

Analysis Method Number - The means used to analyze the sample - i.e., GC, GC-MS, AA, etc. Specify number of method and reference if not a DHS or EPA method.

NOTE:
Method Numbers are available from certified laboratories.

18. SITE SAFETY PLAN
A plan outlining protective equipment and additional specialized personnel in the event that significant amount of hazardous materials are found. The plan should consider the availability of respirators, respirator cartridges, self-contained breathing apparatus (SCBA) and industrial hygienists.

19. ATTACH COPY OF WORKMAN'S COMPENSATION

20. PLOT PLAN

The plan should consists of a scaled view of the facility at which the tank(s) are located and should include the following information:

a) Scale

b) North Arrow

c) Property Line

d) Location of all Structures

e) Location of all relevant existing equipment including tanks and piping to be removed

f) Streets

g) Underground conduits, sewers, water lines, utilities

h) Existing wells (drinking, monitoring, etc.)

i) Depth to ground water

j) All existing tanks in addition to the ones being pulled

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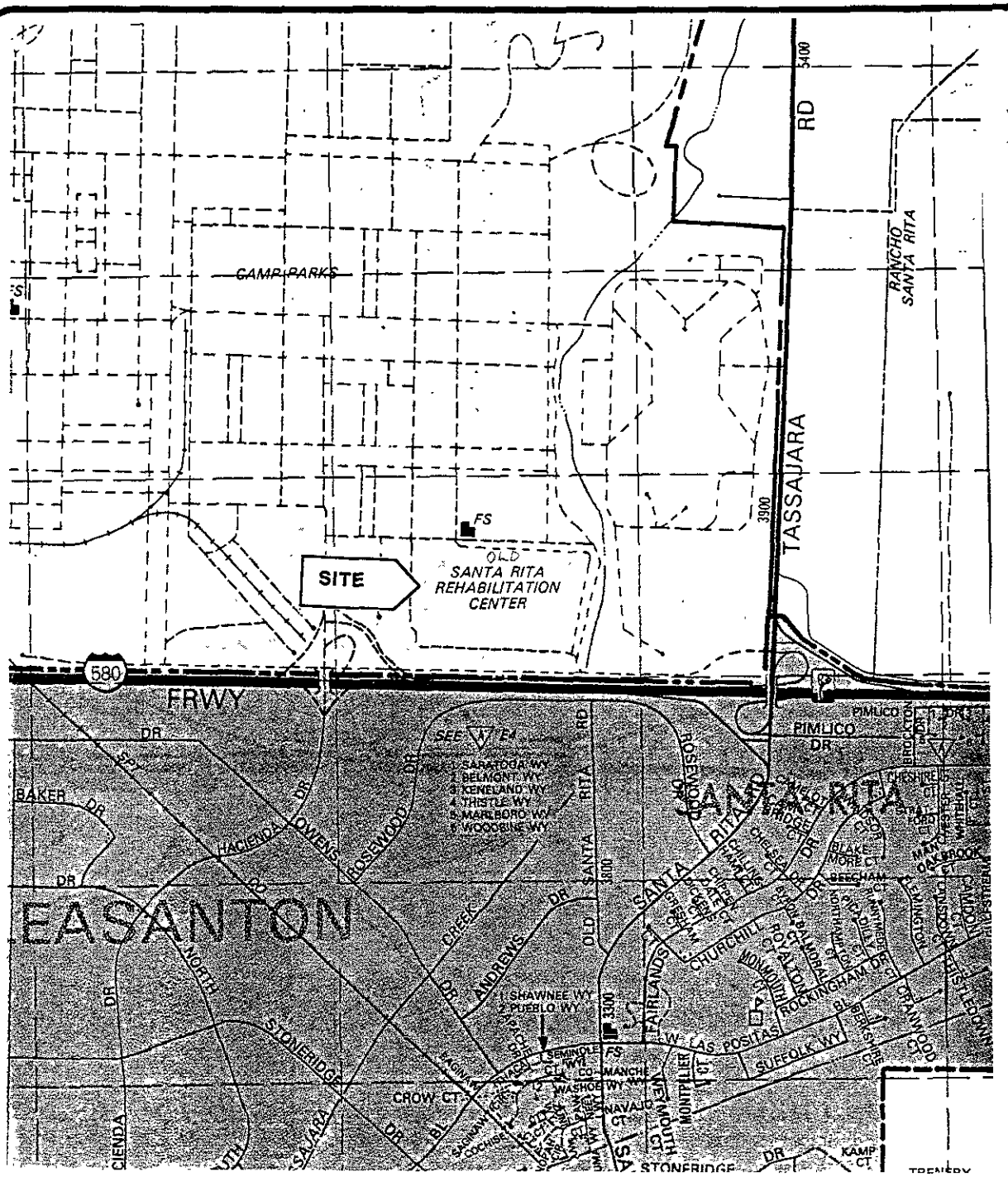
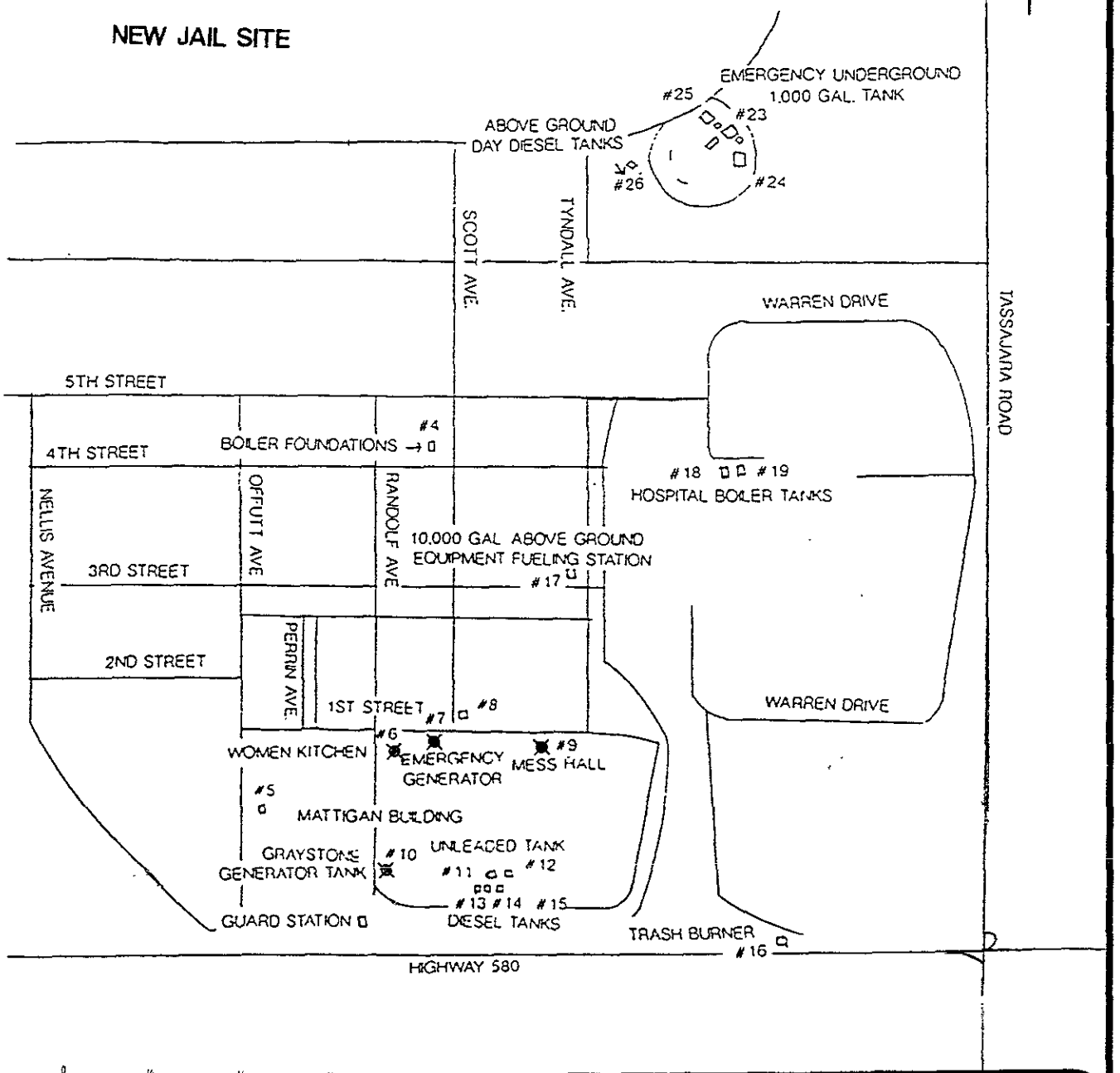


CERTIFIED

COUNTY OF ALAMEDA
OLD SANTA RITA JAIL

FIGURE 1
SITE LOCATION



CERTIFIED

COUNTY OF ALAMEDA
OLD SANTA RITA JAIL

FIGURE 2
SITE PLAN

NOTES: NUMBERS ARE NOT SEQUENTIAL.
SOME TANKS HAVE BEEN REMOVED.

ABOVE GROUND TANKS ARE ALSO SHOWN

✖ TANK TO BE REMOVED (#6,7,9 & 10)

SITE SPECIFIC
HEALTH AND SAFETY PLAN

I. Site: County of Alameda, Old Santa Rita Jail
4847 Alta Mirano Road, Dublin, California

II. Key Personnel and Project Assignment

PROJECT ASSIGNMENT	NAME	PHONE
Principal Investigator and Site Safety Officer	Paul LeCheminant	(707) 745-0171
Project Manager and Professional Engineer	Dr. Stanley L. Klemetson	(707) 745-0171

HEALTH AND SAFETY PLAN AND TREATMENT OF HAZARDOUS MATERIALS

Introduction

- All persons potentially exposed to site-specific contaminants during drilling and sampling are subject to this health and safety plan.

- This health and safety program shall be available to employees at the site, to their designated representatives, regulatory officials, and shall be provided to all subcontractors involved in the project. The program shall be designed to identify, evaluate, and control safety and health hazards, and provide for emergency response.

- All personnel shall be trained in the requirements of this health and safety plan in accordance with 29 CFR 1910.1200.

- All personnel required to wear respirators during work tasks shall be properly trained in the use of respirators, and shall have undergone qualitative fit testing.

- The site-specific plan is written to specify the objectives, job tasks, training, and personnel requirements of the site operations.

Responsibilities of Key Project Manager

The CEC Project Manager will ensure that all requirements of this health and safety plan are implemented and followed by all persons involved in the project.

Site-Specific Health and Safety Information

A site-specific health and safety plan has been developed and is included in this section. This plan will be available for all employees, their designated representatives, and regulatory personnel.

This site specific safety and health plan includes:

- Site History

- Names of key health and safety personnel

- Hazardous Assessment

- A safety and health risk analysis for each phase of the operation
- Project Organization
- Employee training requirements
- Work plan review
- PPE requirements
- Review of Site Safety Rules
- Medical surveillance requirements
- Emergency Response
- Monitoring requirements
- Site control measures
- Decontamination procedures
- Contingency plan for safe and effective emergency response

Site Characterization and Analysis

Site Evaluations A preliminary site evaluation shall be performed prior to site entry by a trained person to aid in the selection of appropriate employee protection methods prior to site entry. During site entry, a more detailed evaluation of the site-specific hazards shall be performed to further aid in the selection of appropriate engineering controls and PPE requirements. All immediately dangerous to life or health (IDLH) conditions shall be identified during the site evaluation. Such conditions are not expected for this job.

Site Information The following information shall be obtained prior to allowing employees to enter the site:

- Location and approximate size of site
- Description of job tasks and duration of planned activity
- Site topography and accessibility by air and roads
- Pathways for hazardous substance dispersion
- Hazardous substances and health hazards involved or expected at the site and their chemical and physical properties.

Initial Site Entry: Personal Protective Equipment (PPE) shall be provided and used during initial site entry according to the following guidelines:

- Based upon the results of the preliminary site evaluation, the appropriate PPE shall be selected by CEC and used during initial site entry to provide protection to a level of exposure below the PEL for known or suspected hazardous substances and health hazards and will provide protection against other known and suspected hazards identified during the preliminary site evaluation.
- Once the hazards of the site have been positively identified, the appropriate PPE shall be selected by CEC and used.

Initial Site Entry: Monitoring

If there is a potential for IDLH conditions, air monitoring will be conducted using a combustible gas indicator, an oxygen deficiency meter, toxic substance indicators, etc. as well as noting visual observations for IDLH conditions.

Communication of Site Hazards

1. Risks associated with the site-specific hazards shall be identified and communicated to employees.
2. Relevant information concerning the physical, chemical, toxicologic properties of each substance known or expected to be present at the site shall be communicated to employees prior to the start of the job.

Site Control

Safe Work Practices

a. At least one copy of this plan shall be available on-site.

b. Contaminated protective equipment (respirators, boots, etc.) shall not be removed from the regulated area until it has been cleaned, or properly packaged and labeled.

c. Legible and understandable precautionary labels shall be affixed to containers of contaminated scrap, waste, and clothing.

d. Removal of contaminated soil from protective clothing or equipment by blowing, shaking, or any other means that disperses contaminants into the air is prohibited.

e. No food or beverages shall be present or consumed in the regulated area.

f. No tobacco products shall be present or used, and cosmetics shall not be applied in the regulated area.

g. Contaminated materials shall be stored in tightly closed containers.

h. Emergency equipment shall be located outside the storage areas in readily accessible locations.

i. Unauthorized visitors shall not be allowed into the regulated areas.

j. Visual contact shall be maintained among personnel at all times and workers must observe each other for signs of toxic exposure, including:

- Changes in complexion and skin discoloration

- Changes in coordination
- Changes in demeanor
- Excessive salivation and pupillary response
- Changes in speech pattern

k. Employees shall inform each other of nonvisual effects of toxic exposure such as:

- Headaches
- Dizziness
- Nausea
- Blurred vision
- Cramps
- Irritation of eyes, skin, or respiratory tract

First Aid At least one person qualified to perform first aid will be present on site at all times during work activity. This person will have earned a certificate in first-aid training from the American Red Cross or will have received equivalent training.

Transportation To Emergency Treatment A vehicle will be available at all times for use in transporting personnel to the hospital. Hospital routes shall be discussed prior to on site activity.

Contingency Planning Prior to commencement of on site activities, field personnel will review safety considerations with the Site Safety Officer. The Site Safety Officer is responsible for adherence to the designated safety precautions and assumes the role of CERTIFIED's on-site coordinator with the client in an emergency response situation.

Potential Hazards

The potential hazards associated with hazardous waste site investigation include 1) accidents; 2) contact, inhalation or ingestion of hazardous materials; 3) explosion; and, 4) fire.

Accidents Accidents must be handled on a case by case basis. Minor cuts, bruises, muscle pulls, etc., will still allow the injured person to undergo reasonable normal decontamination procedures prior to receiving direct first aid. More serious injuries may not permit complete decontamination procedures to be undertaken, particularly if the nature of the injury is such that the victim should not be moved. The nature and degree of surface contamination at a site is generally low enough that emergency vehicles could reach the victim on-site without undue hazard. However, in the event that access on-site is limited, accident victims may be transported by CERTIFIED personnel trained for this response.

Contact and/or Ingestion of Hazardous Materials Properly prescribed and maintained protective clothing and adherence to established safety procedures are designed to minimize these hazards. However, it is still a possibility that contact or ingestion of materials may occur. One possibility for contamination is the puncture of a buried drum of liquid during drilling operations which might cause the random distribution of the drum contents. Standard first aid procedures should be followed. The drilling rig will have a tank of water which may be useful in some circumstances, particularly to flush off any exposed skin areas. Eye wash bottles will also be maintained at the site in case of emergencies. In cases of ingestion or other than minor contact with known substances, the Poison Control Center and local hospital should be contacted and the victim brought there immediately for further treatment and observation.

Explosion The drilling crew should be keenly aware of combustible gas meter readings and withdraw at an indication of imminently hazardous conditions. The detection of such conditions shall be reported to local agencies for potential execution of the evacuation plan should the situation be assessed as warranting such response.

Fire The combustible gas meter will also warn of imminent fire hazards at borings.

Heat Stress Heat stress may be a concern depending on the ambient temperature and the type of PPE used. Measures to help control heat stress include:

- Adequate liquids to replace lost body fluids must be provided.
- A work regimen providing adequate rest periods for cooling down.
- Cooling vests may be worn beneath protective garments.
- All breaks are to be taken in a shaded rest area.
- Employees shall remove impermeable protective clothing during rest periods.
- Employees shall not be assigned other tasks during rest periods.

Signs and symptoms of heat stress:

- Heat rash due to heat or humid air.
- Heat cramps caused by excessive sweating; symptoms include muscle spasms, and pain in the hands, feet, and abdomen.
- Heat exhaustion caused by increased stress on various body organs due to cardiovascular insufficiency or dehydration; symptoms include pale, cool, moist skin, heavy sweating, dizziness, nausea, fainting.
- Heat stroke is the most serious because temperature regulation fails and the body temperature can rise to critical levels. Immediate action must be taken to cool the body before serious injury occurs; symptoms include red, hot dry skin, lack of or reduced perspiration, nausea, dizziness and confusion, strong, rapid pulse, coma.

Evacuation Response Levels

Evacuation responses will occur at three levels: (1) withdraw from immediate work area (100+ feet upwind); (2) site evacuation; (3) evacuation of surrounding area. Anticipated conditions which might require these responses are described below:

Withdrawal Up-Wind (100 or more feet)

a. Sensing ambient air conditions as containing greater contaminant concentrations than guidelines allow for the type of respiratory protection being worn. The work party may return upon donning greater respiratory protection and/or assessing the situation as transient or past.

b. Breach in protective clothing or minor accident. The party may return when tear or other malfunction is repaired and first aid or decontamination has been administered.

c. Respirator malfunctions and must be replaced.

Site Evacuation

a. Sensing ambient air conditions as containing explosive and persistent levels of combustible gas or excessive levels of toxic gases, i.e., in excess of 100 ppm or 10% of LEL.

b. Fire or major accident

c. Imminent explosion or explosion

Surrounding Area Evacuation Persistent, unsuppressible release of toxic or explosive vapors from test pits and borings, (e.g., possible pressure release of punctured underground storage tank or drums). Air quality should be monitored at several distances downwind to assess danger to surrounding area before initiating this response.

Evacuation Processes

Withdrawal Upwind The field crew will note general wind directions while on-site. (A simple wind sock may be set up near the drilling site for visual determinations). Upon noting the conditions warranting movement away from the test pit or bore hole, the crew will move upwind a distance of approximately 100 feet or further as indicated by the PI meter. Donning SCBA and a safety harness and line, the Site Safety Officer or a member of the crew may return to the test pit or bore hole to determine if the condition noted was transient or persistent. If persistent, then an alarm should be raised to notify on-site personnel of the situation and the need to leave the site or don SCBA. An attempt should be made to plug the source to decrease emissions only if greater respiratory protection is donned. The Site Safety Officer and client will be notified of hazardous conditions. Considering access to the site, if this situation occurs the crew may be instructed to evacuate the site rather than move upwind.

Site Evacuation Upon determination of conditions warranting site evacuation, the work party will proceed upwind of the bore hole and notify the security force, Site Safety Officer and the field office of site conditions. If the decontamination area is upwind and greater than 500 feet from the bore hole, the crew will pass quickly through decontamination to remove contaminated outer suits. If the hazard is toxic gas, respirators will be retained. The crew will proceed to the field office to assess the situation. There the respirators may be removed (if the PI meter indicates an acceptable condition). As more facts are determined from the field crew, these will be relayed to the appropriate agencies.

Evacuation of Surrounding Area When the Site Manager determines that conditions warrant evacuation of downwind residences and commercial operations, the local agencies will be notified and assistance requested. Designated on site personnel will initiate evacuation of the immediate off-site area without delay.

Hazardous Waste Site Training

CERTIFIED employees must complete 40-hours of health and safety training prior to commencing work at sites where hazardous materials may be present. Each employee will be provided with 8-hours of follow up training on an annual basis. The 40-hour and 8-hour

Hazardous Waste Site Training Programs provided by CERTIFIED meet or exceed Federal OSHA requirements as presented in Federal Register Volume 51, Number 244 dated December 19, 1987. The training programs include instruction in the following topics:

a. Hazard Assessment

b. Levels of Protection

c. Limits and Use of Air Purifying Respirators

d. Federal OSHA Regulations

e. Toxicology

d. Emergency Response and Spill Contingencies

e. Site Control

f. Decontamination

g. Biological Monitoring Program

h. Air Monitoring Instrumentation

i. Review of General Chemical & Mechanical Dangers

j. Documentation and Record Keeping

In addition to instruction in the above, each trainee will receive certification for the American Red Cross in First Aid and Cardiopulmonary Resuscitation (CPR). The First Aid certification is repeated at 3-year intervals and each employee is certified in CPR on an annual basis.

Review of General Chemical & Mechanical Dangers

A set of standard on-site safety practices will be enforced during site activities to reduce the risks associated with handling contaminated materials and dangers inherent with working near heavy machinery. These safety practices are divided into three categories: personal precautions, rig safety, and general procedures and operations.

Personal Precautions

Any practice which increases the probability of hand-to-mouth transfer and ingestion of contaminated material will be prohibited in any area designated contaminated. Prohibited activities include eating, drinking, chewing gum or tobacco, and smoking. Hands and face will be thoroughly washed upon leaving the work area and before eating, drinking or any other activities.

Any excess facial hair which interferes with proper fit of the mask-to-face seal will be prohibited on personnel required to wear respirator protection. (While respirators are not typically required, work will be staged to upgrade to Level "C" protection requiring the use of respirators, if needed).

Unnecessary contact with contaminated or suspected contaminated surfaces will be avoided. Workers will be instructed to avoid walking through puddles, mud, or other discolored surfaces; kneeling on the ground; and leaning, sitting, or placing equipment on drums, containers, vehicles or the ground.

Medicine and alcohol can increase adverse effects from exposure to toxic chemicals. Therefore, prescribed medication will not be taken by personnel during field activities unless authorized by a physician. Also, alcoholic beverage intake will not be tolerated immediately before or during field work.

The effects of heat stress in all personnel will be monitored by the Health and Safety Officer. Appropriate measures will be taken to remove any potential victim of heat stress from the work area, provide cooling to the body and provide plenty of liquids to replace body fluids. Personal protective equipment, including the use of cool vests, will be made available, and work/rest regimes will be established as needed. Use of personal protective equipment includes hard hats, gloves, boots, and coveralls is site specific and will be directed by site project manager and safety officer.

General Procedures and Operations

Entrance and exit to the site will be planned and emergency escape routes will be determined. Before drilling begins a working phone will be located and the most expeditious route to a hospital established. Site-specific hazards will be discussed and the clients safety requirements will be adopted in addition to CERTIFIED policies. Personnel will practice any unfamiliar procedures prior to performing them in the field. The number of personnel and pieces of equipment in the work area will be minimized to the extent that it compromises the effectiveness of site operations. Procedures for leaving a contaminated work area will be established prior to going on site. Work areas and decontamination procedures will be established based on-site conditions.

Levels of Protection The level of personnel protective equipment required shall be determined by the type and levels of waste or spill material present at the site where project personnel may be exposed. In situations where the types of waste or spill material on-site are unknown or the hazards are not clearly established or the situation changes during on site activities, the Site Safety Officer must make a reasonable determination of the level of protection that will assure the safety of field personnel until the potential hazards have been determined precisely through monitoring, sampling, informational assessment, or other reliable methods. Once the hazards have been determined, protective levels commensurate with the hazards shall be employed. Protection levels will be continuously evaluated to reflect any new information acquired.

The levels of protection utilized by CERTIFIED are presented below:

Level A - Level A protection must be selected when the Site Safety Officer makes a reasonable determination that the highest available level of both respiratory and skin and eye contact protection is needed. It should be noted that while Level A provides maximum available protection, it does not protect against all possible hazards. Consideration of the heat stress that can arise from wearing Level A protection should also enter into the sub task leaders decision. (Comfort is not a decision factor, but heat stress will influence work rate, scheduling, and other work practices.)

Level B - The Site Safety Officer must select Level B protection when the highest level of respiratory protection is needed, but hazardous material exposure to the few unprotected areas of the body (i.e., the back of the neck) or permeation/breakthrough of chemicals through protective clothing and gloves is unlikely.

Level C - The Site Safety Officer may select Level C when the required level of respiratory protection is known, or reasonably assumed to be, not greater than the level of protection afforded by full face air purifying respirators; and hazardous materials exposure to the few unprotected areas of the body (i.e., the back of the neck) is unlikely. Level C may require carrying an emergency escape respirator. (A half mask respirator is acceptable when airborne contaminate level are lower than TWA action levels.

Level D - Level D is the basic work uniform. Investigators and response personnel must not be permitted to work in civilian clothes. An emergency escape respirator may be required.

Fit testing of safety equipment will be an important part of establishing adequate respiratory and dermal protection. Fit testing will be accomplished prior to site explorations and each individual will be assigned a fitted respirator for the duration of the project. These will be tagged for identification.

It should be recognized that most situations require a different combination of respiratory and dermal protective gear, e.g., where no splash protection is required but a high respiratory hazard is present. The Site Safety Officer may elect a modification of the above.

Engineering Controls and Personal Protective Equipment

Engineering controls shall be instituted to reduce and maintain employee exposure within permissible exposure limits whenever feasible. This will be accomplished by the use of dust suppression techniques, air dilution, or other work practice controls, coupled with protective clothing that is appropriate for the level of exposure. Whenever engineering controls are not feasible, PPE shall be used.

Personal Protective Equipment shall be selected according to site characterization and analysis information, job tasks, site hazards, intended use, and duration of potential employee exposures.

When respirator protection is required the following should be instituted:

Respiratory Protection

a. Only properly cleaned and maintained NIOSH/MSHA approved respirators shall be used on-site.

b. Respirator selection, as well as decisions regarding upgrading and downgrading, shall be made by CEC.

c. Used air purifying cartridges or canisters shall be replaced at the end of each shift or when load up (an increase in breathing resistance) or breakthrough occurs.

d. Only employees who are qualified to wear respirators and have had qualitative fit tests, and semiannual fit tests thereafter, shall be allowed to work in atmospheres where respirators are required.

e. Contact lenses shall not be worn on-site.

f. Excessive facial hear (beards) prohibits proper face fit and effectiveness of respirators. Persons required to wear full-face or half-face respirators must not have beards, wide mustaches, goatees, or extended sideburns. All personnel wearing full-face or half-face respirators shall be required to be clean shaven prior to each day's shift.

Exposure Records

The records will include at least the following information:

a. Date of measurement.

b. Description of operation being monitored.

c. Sampling and analytical methods, evidence of accuracy.

d. Number, duration, and results of samples collected.

e. Type of protective devices worn.

f. Name, social security number, and exposure levels of employee's represented.

If the exposure level was below the action level and no sampling was done, evidence to prove the lack of exposure will be recorded.

Monitoring equipment will be protected as much as possible from contamination by draping, masking or otherwise covering as much of the instruments as possible with plastic without hindering the operation of the unit. The OVA meter, for example, can be placed in a clear plastic bag which allows reading of the scale and operation of the knobs. The OVA sensor can be partially wrapped, keeping the sensor tip and discharge port clear.

The contaminated equipment will be taken from the drop area and the protective coverings removed and disposed of in the appropriate containers. Any dirt or obvious contamination will be brushed or wiped with a disposable paper wipe and the used wipers discarded. The units will then be taken inside in a clean plastic tub, wiped off with damp disposable wipes and dried. The units will be checked,

standardized and recharged as necessary for the next day's operation. They will then be covered with new protective coverings.

Respirators

a. Respirator Fit Tests

A summary of all test results for respirator fit tests will be maintained for 3 years. The record will include:

- Name of the test subject.
- Date of testing.
- Name of test conductor.
- Respirator selection, manufacturer, model, size, NIOSH approval number.
- Testing protocol.

Fit testing is to be repeated at least every 6 months at a minimum.

Qualitative Fit Test Protocol

Fitting will be done using Irritant Smoke.

The employee will put on the test respirator, secure the straps and perform a positive and negative pressure check for leaks.

If there are no leaks he will step under the fit test tent and a cloud of smoke will be blown around the mask using stannic chloride tubes, after the test subject has been instructed to close his eyes.

The tester will then be asked to:

a. Breathe deeply.

b. Turn their head side to side, and up and down while inhaling deep at the end of each directional movement.

c. Run in place.

d. Breathe normally.

The employee will then be asked to read the rainbow passage (see below) while the edges of the mask are being heavily smoked. (Note if a half mask respirator is being tested chemical goggles will be worn).

RAINBOW PASSAGE:

"When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow."

After testing the mask will be removed before existing the tent to ensure the employees sensitivity to the smoke.

Testing will not be done if there is any facial hair (even one days growth in the masks sealing surfaces).

Repeat test will be scheduled once every 6 months or :

- o if a loss of 20 or more pounds is realized
- o any significant scaring beneath the masks sealing surfaces
- o cosmetic surgery
- o or any other condition that would affect the masks ability to seal

Respirator Maintenance

Respirators will be decontaminated daily. Taken from the drop area, the masks will be disassembled, the cartridges set aside and the rest placed in a cleansing solution. (Parts will be pre-coded, e.g., #1 on all parts of mask #1). After an appropriate time within the solution, the parts will be removed and rinsed off with tap water. The old cartridges will be marked to indicate length of usage and will be discarded into the contaminated trash container for disposal when considered spent. In the morning the masks will be re-assembled and new cartridges installed if appropriate.

Personnel will inspect their own masks to be sure of proper readjustment of straps for proper fit.

Employers can change HEPA filters whenever the breathing resistance increases. Additional cartridges will be available in the clean room at any of the asbestos removal sites.

Employees who are feeling some irritation around their respirator may notify their supervisor so that they can exit the site to wash their face and respirators.

Monitoring

Air monitoring shall be used to identify and quantify airborne levels of hazardous substances in order to determine the appropriate level of employee protection required on-site.

The type and frequency of air and personal monitoring shall be designated by CEC based on the hazards identified at the site and the job tasks. CEC will be responsible for maintaining records of all monitoring.

As a minimum, the need for monitoring shall be evaluated when:

- Work begins on a different section of the site.
- A different type of operation is initiated.
- Contaminants other than those previously identified are being handled.
- Employees are handling leaking drums or containers.
- High risk employees (those closest to the source of containment generation) shall receive personal monitoring to characterize their exposure.

Handling Drums and Containers

Drums and containers used during clean-up shall meet the appropriate DOT, OSHA, and EPA regulations for the wastes they contain.

Decontamination

A decontamination procedure shall be developed, communicated to employees, and implemented before any employees or equipment may enter contaminated areas. Decontamination shall be performed in areas that will minimized the exposure of

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

Alameda County
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda CA 94502-6577

CC4580

STID 4086

June 7, 1995

Rod Freitag
Alameda County General Services Agency
Engineering and Environmental Management Dept.
1401 Lakeside Drive, 11th Floor
Oakland, CA 94612

RE: SANTA RITA REHABILITATION CENTER - "OLD GRAYSTONE"

Dear Mr. Freitag:

The Alameda County Environmental Health Department, Environmental Protection Division, has received concurrence from the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), for closure of the underground storage tank (UST) investigations at the referenced site. This case closure would encompass the UST investigations associated with the former fueling complex (USTs 11, 12, 12A) and mess hall (UST 9).

Prior to the issuance of a "no further action" letter by this office, the monitoring wells at the site must be properly destroyed under permit issued by Zone 7 - Alameda County Flood Control and Water Conservation District. When completed, please provide me with a copy of the final well destruction document produced by your consultant.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Agency Director
Kevin Graves, RWQCB
Craig Mayfield, Zone 7

uncontaminated employees/equipment to contaminated employees/equipment.

All equipment and solvents used for decontamination shall be collected and decontaminated or disposed of properly.

All employees leaving a contaminated area shall be properly decontaminated; all clothing and equipment leaving a contaminated area shall be properly disposed of or decontaminated.

CEC shall monitor the site decontamination procedures to establish their effectiveness.

Personal Protective Equipment Decontamination

a. PPE (clothing and equipment) shall be decontaminated, cleaned, laundered, maintained, or replaced as needed to maintain their effectiveness.

b. All reusable PPE shall be decontaminated and reconditioned in a designed area within the contamination reduction zone.

c. If protective clothing is removed from the contamination reduction zone for cleaning or laundering, it shall be bagged and appropriately labeled.

d. All disposable protective clothing shall be bagged and labeled to identify potential contaminants. These bags shall be treated as hazardous waste.

Personnel Decontamination Procedure

A decontamination procedure will be carried out by all personnel leaving hazardous waste sites. Under no circumstances (except emergency evacuation) will personnel be allowed to leave the site prior to decontamination. CEC will monitor the site decontamination procedure to evaluate their effectiveness. Procedures for removal of protective clothing are as follows:

- Drop tools, monitors, samples and trash at designated drop stations. These will be plastic containers or drop sheets.

- Step into designated shuffle pit area and scuff feet to remove gross amounts of dirt from outer boots. If necessary, wash boots down with clear water in designated wash pit area.