File No. 8-93-558-ST

PROPOSED WORK PLAN
FOR PRELIMINARY SITE ASSESSMENT
AT ZIMA CENTER CORPORATION
LOCATED AT 2951 HIGH STREET
OAKLAND, CALIFORNIA
MAY 12, 1994

PREPARED FOR:
MR. MOHAMMAD A. MASHHOON
ZIMA CENTER CORPORATION
2951 HIGH STREET
OAKLAND, CALIFORNIA 94619

BY:
SOIL TECH ENGINEERING, INC.
298 BROKAW ROAD
SANTA CLARA, CALIFORNIA 95050
Fax: 408 - 988 - 1032

SOIL TECH ENGINEERING, INC.

File No. 8-93-558-ST

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File No. 8-93-558-ST

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SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

May 12, 1994

File No. 8-93-558-ST

Mr. Mohammad A. Mashhoon
Zima Center Corporation
2951 High Street
Oakland, California 94619

SUBJECT: PROPOSED WORK PLAN FOR PRELIMINARY SITE ASSESSMENT AT ZIMA CENTER CORPORATION
Located at 2951 High Street, in
Oakland, California

Dear Mr. Mashhoon:

Attached is the proposed work plan for preliminary site assessment for the project property located 2951 High Street, , in Oakland, California. This proposal has been prepared to comply with Alameda County Health Care Services Agency--UST Local Oversight Program (ACHCSA--USTLOP) requirements to determine the extent of subsurface petroleum contamination at the subject site.

Please submit this proposed work plan to Alameda County Health Care Services Agency for approval and comments.

If you have any questions or require additional information, please feel free to contact our office at your convenience.

Sincerely,

SOIL TECH ENGINEERING, INC

FRANK HAMEDI-FARD
GENERAL MANAGER

LAWRENCE KOO
C. E. #34928

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE SHUI-BING KOO
C 34928
Exp. 9/30/95
CIVIL
STATE OF CALIFORNIA

File No. 8-93-558-ST

PROPOSED WORK PLAN
FOR PRELIMINARY SITE ASSESSMENT
AT ZIMA CENTER CORPORATION
LOCATED AT 2951 HIGH STREET
OAKLAND, CALIFORNIA
MAY 12, 1994

INTRODUCTION:

A work plan for a site investigation at Zima Center Corporation's property in Oakland was requested by the Alameda County Health Care Services--UST Local Oversight Program (ACHS-USTLOP) on January 13, 1994.

Based on the results of laboratory and field investigation during tank removal, there was evidence of dissolved petroleum hydrocarbons and low levels volatile organic compounds at the location of former waste oil tank area. Soil sampling was conducted by Soil Tech Engineering, Inc. (STE) in September 1993.

SCOPE OF SERVICES:

The proposed work plan described herein includes the following scope of services.

- Soil Investigation (2 borings).

- Groundwater investigation (2 monitoring wells).
- Preliminary site assessment report.

BACKGROUND:

The site is located at the intersection of Penniman Avenue and High Street, in Oakland, California. The site is currently used as a gasoline service station. In September 1993, Alpha Geo Services removed one 300 gallon waste oil tank which was properly manifested and transported to H&H Environmental Services Company in San Francisco. Soil Tech Engineering, Inc. (STE) was retained by Zima Center Corporation to conduct soil sampling below the former waste oil tank area. Two soil samples were collected, one from tank excavation at approximately 9 feet below grade, and the other from the excavated stockpiled soil. All sampling was conducted under the supervision of Alameda County Health Department inspector Mr. Barney Chan. Soil samples from the waste oil tank excavation did detect a moderate levels of Total Petroleum Hydrocarbons and very low levels of Trichloroethane and Tetrachloroethane. The detail of the soil sampling is described in the STE's report dated September 30, 1993.

In October 1993, STE excavated grossly contaminated soil from the former waste oil tank area and conducted additional soil sampling. The confirmatory soil samples taken after the excavation

indicated that most of the impacted soil was removed, and a residual TOG still remained along the north and east sidewalls of the excavation. The detail of excavation is described in the STE's report dated December 15, 1993.

STOCKPILED SOIL TREATMENT AND DISPOSAL:

On-site bio-remediation of excavated soil, involves the addition of nutrients and adequate moisture to stimulate biological degradation of the dissolved petroleum hydrocarbons present.

The stockpiled soil was treated on-site by adding nutrient amendments and was well mixed on a regular basis. On January 27, 1994, four grab soil samples were taken randomly from the stockpiled soil at various depth, using a hand auger and placed into a clean laboratory supplied brass tube. All grab samples were labeled and placed into a chilled cooler for transportation to the laboratory under strict chain-of-custody protocol.

LABORATORY ANALYSIS:

The four grab samples were composited into one sample in the state-certified laboratory. The composited sample was analyzed for STLC Antimony, Mercury & Vanadium, Total Thallium, CAM 17 Metals and Soluble Chromium & Nickel. The results of laboratory for soil sample are included in Appendix "C".

ANALYTICAL RESULTS:

STLC Antimony and Mercury were below laboratory detection limit, but STLC Vanadium was detected at 0.6 milligrams per kilogram (mg/Kg). Total Thallium was below laboratory detection limit. The only CAM 17 metals, that were detected, are Barium at 140 mg/Kg; Cobalt at 21 mg/Kg; Copper at 50 mg/Kg; Mercury at 0.14 mg/Kg and Vanadium at 59 mg/Kg. Soluble Chromium was below laboratory detection limit. However, low levels of Soluble Nickel was detected in the composited soil sample.

The treated soil (approximately 18 cubic yards) was hauled to an approved facility in Stockton, known as Forward, Inc. A copy of disposal and trucking are included in Appendix "D".

SITE DESCRIPTION:

A vicinity map showing the subject site is provided in Figure 1. Figure 2 shows the locations of the building, the former waste oil tank, proposed borings and monitoring wells.

SITE SAFETY PLAN:

A site safety plan has been prepared and will be available on-site at the time field work is conducted. The site safety plan is attached in Appendix "E".

METHODS AND PROCEDURES:

The methods and procedures for drilling, installation of monitoring wells, soil and groundwater sampling will be consistent with the (1) Regional Water Quality Control Board (RWQCB) "Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks" as revised August 10, 1990, (2) State of California "Leaking Underground Storage Tank Field (LUFT) Manual; Guidelines for Site Assessment, Cleanup and Under-ground Storage Tank Closure" and in accordance with ACHCSA--USTLOP Fuel Leak requirements.

PROPOSED SOIL AND GROUNDWATER INVESTIGATION:

Soil Borings:

The objectives of our soil investigation are to evaluate concentrations of dissolved hydrocarbons, Volatile Organic Compounds (VOC's) and Total Oil & Grease (TOG) in the vadose zone; and to evaluate the limits of detectable concentrations of these compounds in vadose zone.

We propose to drill two soil borings to depths of 30 feet, or to the top of the saturated zone, at locations shown on Figure 2. Soil samples will be collected at 5 feet interval.

The borings will be advanced using truck-mounted, 8-inch, hollow-stem augers, and using a 2½-inch inside diameter (I.D.), split-barrel sampler lined with 6-inch long brass tubes. Drilling

will be performed under the direction of an STE field engineer, who will log the borings in accordance with the Unified Soil Classification System. Soil samples will be screened in the field with a photoionization detector (PID), and measurements will be documented on the logs. PID readings indicate relative concentrations of Volatile Organic Compounds (VOC's) in soil.

Selected soil samples from borings near the former waste oil tank location will also be analyzed for TPH as waste oil (per EPA Method 8015). If results indicate that TPH as waste oil is present, the following additional parameters will be tested: TPH as diesel (EPA Method 3550); Total Oil & Grease (TOG) (EPA Method 503 D&E); Chlorinated Hydrocarbons (EPA Method 8010).

Sampling equipment will be washed with a trisodium phosphate (TSP) solution and rinsed with clean water between sampling intervals. All drilling equipment will be steam-cleaned before and after each boring.

The borings which are not used as a monitoring wells will be backfilled to the ground surface with cement-bentonite grout.

Groundwater Monitoring Well Installation:

Two monitoring wells will be installed to a depth of approximately 25 to 35 feet at proposed locations shown on Figure 2. The wells will be located to provide definition of the local hydraulic gradient and can be used to determine changes that may occur in the hydraulic gradient with time.

The monitoring well will be constructed of 2-inch diameter, clean flush-threaded, Schedule 40 PVC blank and screened (.020-inch slot size) casing and the required filter pack. The screened will start at 5 feet above the saturated zone and extend to the depth of 10 feet below the saturated zone.

Construction details for the monitoring wells will be presented in tabular form in the summary report and will include the borehole diameter and depth, casing size, screened interval, filter pack interval and surface seal interval. Drilling, soil sampling and construction of the groundwater monitoring wells will be in conformance with the Alameda County Water District and State Water Resources Control Board Standards, specifically as provided in the "Guidelines for Addressing Fuel Leaks" by the RWQCB.

Groundwater Monitoring Well Survey:

The top of each groundwater monitoring well casing will be surveyed with respect to mean sea level using standard surveying equipment. The groundwater elevation will be determined in each well, and the data will be used to evaluate hydraulic gradient and direction of groundwater flow at the site.

REPORT PREPARATION:

STE will prepare a report documenting the results of the field investigation. The report will include an analysis of data collected and conclusions pertaining to the following items:

- The character of the shallow hydrogeology beneath the site.
- The extent of any existing free product.
- The lateral extent of petroleum hydrocarbons in soil and groundwater.
- Recommendations for additional investigation or remediation.

File No. 8-93-558-ST

A P P E N D I X "A"

File No. 8-93-558-ST

TABLE 1
SUMMARY OF STOCKPILED SOIL ANALYSIS RESULTS
IN
MILLIGRAMS PER KILOGRAM (mg/Kg)

1. CAM 17 METALS ANALYTICAL RESULTS

Date	Parameter	ST-1,2,3,4	Detection Limit
1/27/94	Antimony	Not Detected	5.0
	Arsenic	Not Detected	1.0
	Barium	140	5.0
	Beryllium	Not Detected	0.5
	Cobalt	21	5.0
	Copper	50	5.0
	Mercury	0.14	0.05
	Molybdenum	Not Detected	5.0
	Selenium	Not Detected	1.0
	Silver	Not Detected	5.0
	Thallium	Not Detected	5.0
	Vanadium	59	5.0

TABLE 1 CONT'D
SUMMARY OF STOCKPILED SOIL ANALYSIS RESULTS
IN
MILLIGRAMS PER KILOGRAM (mg/Kg)

2. SOLUBLE CHROMIUM AND NICKEL ANALYTICAL RESULTS

Date	Analyzed	ST-1,2,3,4	Detection Limit
1/27/94	Soluble Chromium	Not Detected	0.5
	Soluble Nickel	2.3	0.5

3. STLC ANTIMONY, MERCURY & VANADIUM AND TOTAL THALLIUM RESULTS

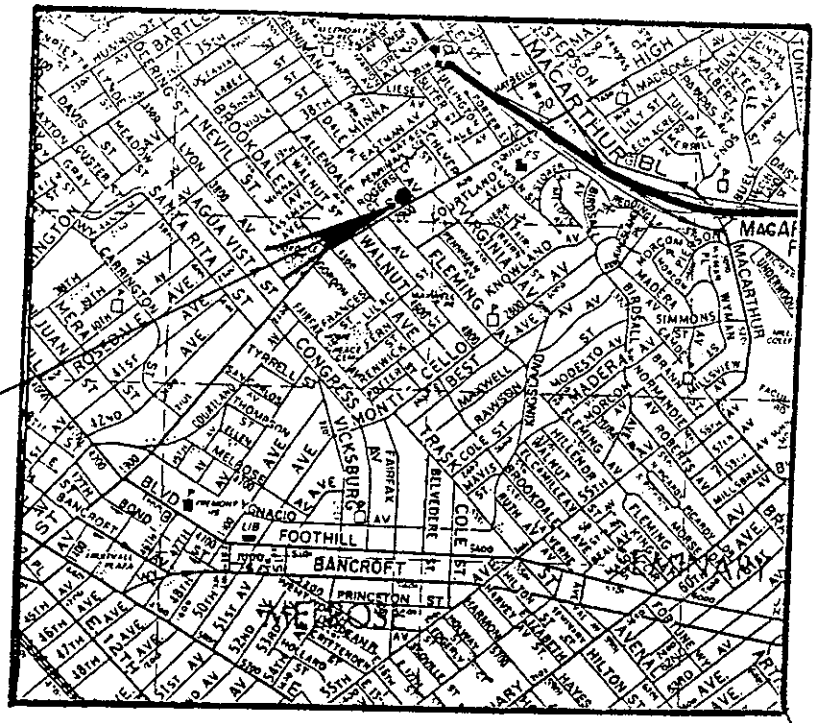
Date	Analyzed	ST-1,2,3,4	Detection Limit
1/27/94	STLC Antimony	Not Detected	0.2
	STLC Mercury	Not Detected	0.006
	STLC Vanadium	0.6	0.5
	Total Thallium	Not Detected	1.0

File No. 8-93-558-ST

A P P E N D I X "B"

SOIL TECH ENGINEERING, INC.

File No. 8-93-558-ST



Site Location

Thomas Brothers Map 1993 Edition
San Francisco, Alameda
and Contra Costa Counties

Page 12 C2

Figure 1

File No. 8-93-558-ST

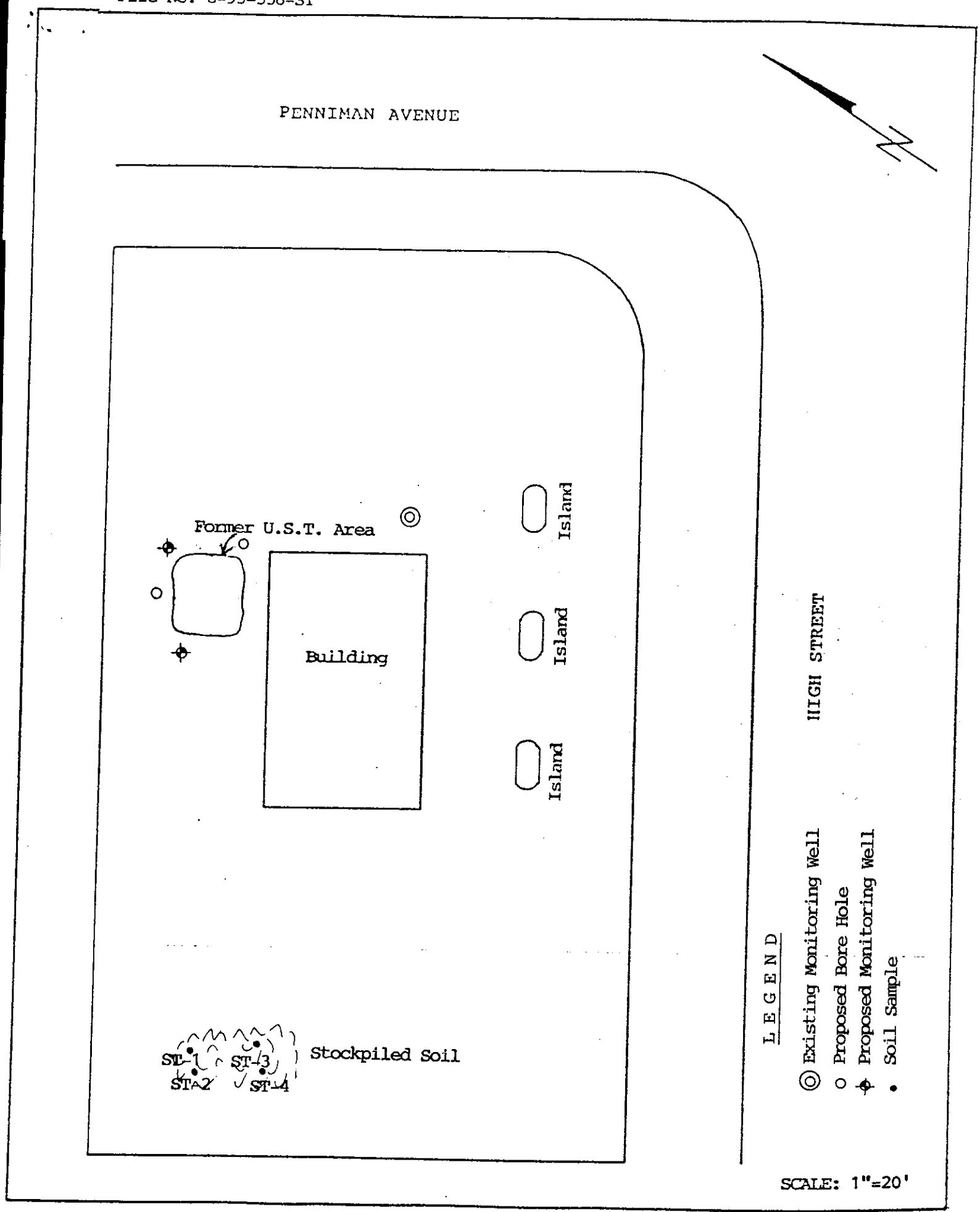


Figure 2

SOIL TECH ENGINEERING, INC.

M2

A P P E N D I X "C"

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

SOIL TECH ENGINEERING
Attn: FRANK HAMIDI

Project NONE
Reported 09-February-1994

ANALYSIS FOR CAM 17 METALS
California Administration Code Title 22, Paragraph 66700 & EPA Methods
SW-846 6010 & 7000 series.

Chronology

Laboratory Number 91057

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
ST-1,2,3,4	01/27/94	02/02/94	02/04/94	02/08/94		1

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SOIL TECH ENGINEERING
Attn: FRANK HAMIDI

Project NONE
Reported 09-February-1994

ANALYSIS FOR CAM 17 METALS

Laboratory Number	Sample Identification	Matrix
91057- 1	ST-1,2,3,4	Soil

RESULTS OF ANALYSIS

Laboratory Number: 91057- 1

Antimony	(Sb):	ND<5
Arsenic	(As):	ND<1
Barium	(Ba):	140
Beryllium	(Be):	ND<0.5
Cobalt	(Co):	21
Copper	(Cu):	50
Mercury	(Hg):	0.14
Molybdenum	(Mo):	ND<5
Selenium	(Se):	ND<1
Silver	(Ag):	ND<5
Thallium	(Tl):	ND<5
Vanadium	(V):	59

Concentration: mg/Kg

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

ANALYSIS FOR CAM 17 METALS
Quality Assurance and Control Data - Soil

Laboratory Number 91057

Compound		Method Blank (mg/Kg)	RL (mg/Kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Antimony	(Sb):	ND<5	5	101/96	75-125	5%
Arsenic	(As):	ND<1	1	110/106	75-125	4%
Barium	(Ba):	ND<5	5	102/107	75-125	5%
Beryllium	(Be):	ND<0.5	0.5	103/100	75-125	3%
Cobalt	(Co):	ND<5	5	102/101	75-125	1%
Copper	(Cu):	ND<5	5	105/105	75-125	0%
Mercury	(Hg):	ND<0.05	0.05	110/95	75-125	15%
Molybdenum	(Mo):	ND<5	5	99/100	75-125	1%
Selenium	(Se):	ND<1	1	103/86	75-125	18%
Silver	(Ag):	ND<5	5	103/101	75-125	2%
Thallium	(Tl):	ND<5	5	90/87	75-125	3%
Vanadium	(V):	ND<5	5	107/104	75-125	3%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/Kg = Parts per million (ppm)
QC File No. 91057

Senior Chemist
Account Manager

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SOIL TECH ENGINEERING
Attn: FRANK HAMIDI

Project NONE
Reported 09-February-1994

ANALYSIS FOR SOLUBLE CHROMIUM & NICKEL
by California Administrative Code Title 22 & SW-846 Method 6010

Chronology

Laboratory Number 91057

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
ST-1,2,3,4	01/27/94	02/02/94	02/07/94	02/09/94		1

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SOIL TECH ENGINEERING
Attn: FRANK HAMIDI

Project NONE
Reported 09-February-1994

ANALYSIS FOR SOLUBLE CHROMIUM & NICKEL

Laboratory Number	Sample Identification	Matrix
91057- 1	ST-1,2,3,4	Soil

RESULTS OF ANALYSIS

Laboratory Number: 91057- 1

Soluble Chromium	(Cr):	ND<0.5
Soluble Nickel	(Ni):	2.3

Concentration: mg/L

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

ANALYSIS FOR SOLUBLE CHROMIUM & NICKEL
Quality Assurance and Control Data - Extract

Laboratory Number 91057

Compound	Method Blank (mg/L)	RL (mg/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Soluble Chromium (Cr):	ND<0.5	0.5	101/99	75-125	2%
Soluble Nickel (Ni):	ND<0.5	0.5	91/93	75-125	2%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/L = Parts per million (ppm)
QC File No. 91057

Senior Chemist
Account Manager

CHAIN OF CUSTODY RECORD

PEL

PROJ. NO.	NAME
8-93-558-ST	2951 High st. OAKLAND

SAMPLERS: *(Signature)* ~~A. Amelio~~

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Ni	Cd	Cr	Zn	Pb	REMARKS
1	1/27/94	10^{35}	✓		ST-1	1	✓	✓				
2	1/27/94	10^{42}	✓		ST-2	1	✓	✓				
3	1/27/94	10^{48}	✓		ST-3	1	✓	✓				
4	1/27/94	10^{55}	✓		ST-4	1	✓	✓				

COMP. (rows 1–4)

Analyses Requested (2): Ni & Cr (STLC); CAM17 except (Ni, Cd, Cr, Zn, Pb)

COMP.

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Receive by: *(Signature)*
N. Amelio	2/1/94 10^14				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
	2/1/94 10^15	PEL			

SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 791-6406

Priority Environmental Labs
1764 Houret Court
Milpitas, CA 95035
(408) 946-9636
1764 Houret Ct. Milpitas,CA.95035 Tel:408-946-9636 Fax:408-946-9663

S [redacted]

91057

Chain of Custody

DATE: ____/____/____ PAGE: ____ OF: ____

PROJECT MGR.: _____
COMPANY: _____
ADDRESS: _____
PHONE: 408 946 9636 FAX: 408 946 9663
SIGNATURE: [signature]

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	TPH-Gasoline (EPA 5030.8015)	TPH-Gasoline(5030.8015) w/BTEX(EPA 602.8020)	TPH-Diesel (EPA 3510/3550.8015)	PURGEABLE AROMATICS BTEX (EPA 602.8020)	TOTAL OIL & GREASE (EPA 5520 E&F)	PESTICIDES/PCB (EPA 608.8080)	TOTAL RECOVERABLE HYDROCARBONS EPA 418.1		STLC Ni & Cu	TTLC CAM 17 EXCEPT Ni, Cu, Zn, Pb		NUMBER OF CONTAINERS
ST-1 2 3 4													✓	✓		01

Please read NOTE 1!

pH NO
N/A N/A
Sample was in a box

PROJECT INFORMATION	SAMPLE RECEIPT	RELINQUISHED BY: 1	RECEIVED BY: 1	RELINQUISHED BY: 2	RECEIVED BY: 2
PROJECT NAME:	TOTAL # OF CONTAINERS: 01	SIGNATURE: [signature] Date: 2/4/94	SIGNATURE: [signature] Date: 2/2/94	SIGNATURE: [signature] Date:	SIGNATURE: [signature] Date: 2/2/94
PROJECT NUMBER:	RECD. GOOD COND./COLD	NAME: DAVID DUNN Time: 9:40 AM	NAME: Sheri Ridgel Time: 9:40	NAME: Sheri Ridgel Time: 11:25	NAME: ONYI ANWOKA Time: 11:25
INSTRUCTIONS & COMMENTS: Please read Chain of Custody. Send report & INVOICE DIRECTLY to Mr. FIAZ HAMEDI SOIL TECH ENGINEERING (408) 496-0255 298 Brokaw road SANTA CLARA CA 95050		COMPANY: PEC	COMPANY: Aero	COMPANY: Aero	COMPANY: SUPERVISOR

Priority Environmental Labs
1764 Houret Court
Milpitas, CA 95035
(408) 946-9636
1764 Houret Ct. Milpitas,CA.95035 Tel:408-946-9636 Fax:408-946-9663

S

[redacted]

91057

Chain of Custody

DATE: / / PAGE: OF:

PROJECT MGR.:
COMPANY:
ADDRESS:
PHONE: 408 946 9636 FAX: 408 946 9663
SIGNATURE:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
ST-1 2 3 4				

ANALYSIS REPORT

TPH-Gasoline (EPA 5030,8015)	TPH-Gasoline(5030,8015) w/BTEX(EPA 602,8020)	TPH-Diesel (EPA 3510/3550,8015)	PURGEABLE AROMATICS BTEX (EPA 602,8020)	TOTAL OIL & GREASE (EPA 5520 E&F)	PESTICIDES/PCB (EPA 608,8080)	TOTAL RECOVERABLE HYDROCARBONS EPA 418.1	STLC Ni & Cu ✓	TTLC CAM17 EXCEPT Ni, Cu, Zn, Pb ✓	NUMBER OF CONTAINERS
									01

Please read NOTE 11

pH
NO
N/A
N/A
Sample with grease

PROJECT INFORMATION

PROJECT NAME::
PROJECT NUMBER:

SAMPLE RECEIPT

TOTAL # OF CONTAINERS: 01
RECD. GOOD COND./COLD:

INSTRUCTIONS & COMMENTS: Please read Chain of Custody. Send report & INVOICE DIRECTLY to Mr. ~~FRANK HAMEDI~~ SOIL TECH ENGINEERING (408) 496-0255 293 Bodeau road SANTA CLARA CA 95051

RELINQUISHED BY: 1	RECEIVED BY: 1	RELINQUISHED BY: 2	RECEIVED BY: 2
SIGNATURE: Date: 2/4/94	SIGNATURE: Date: 2/2/94	SIGNATURE: Date: 2-2-94	SIGNATURE: Date: 2/2/94
NAME: DAVID DUARTE Time: 9:40 AM	NAME: Sheri Ridge Time: 9:40	NAME: Sheri Ridge Time: 11:25	NAME: ONYI ANWUKA Time: 11:25
COMPANY: PEC	COMPANY: HERO	COMPANY: PEC	COMPANY: SUPERIOR SF

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

SOIL TECH ENGINEERING
Attn: NORI AMELI

Project 8-93-558-ST
Reported 03-March-1994

ANALYSIS FOR STLC ANTIMONY, MERCURY, & VANADIUM
by California Admin. Code Title 22 & SW-846 6010 & 7470

Chronology

Laboratory Number 91186

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
ST-1,2,3,4	01/27/94	02/24/94	02/07/94	03/02/94		1

Superior Precision Analytical, Inc.
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SOIL TECH ENGINEERING
Attn: NORI AMELI

Project 8-93-558-ST
Reported 03-March-1994

ANALYSIS FOR STLC ANTIMONY, MERCURY, & VANADIUM

Laboratory Number	Sample Identification	Matrix
91186- 1	ST-1,2,3,4	Soil

RESULTS OF ANALYSIS

Laboratory Number: 91186- 1

Antimony	(Sb):	ND<0.2
Mercury	(Hg):	ND<0.006
Vanadium	(V):	0.6

Concentration: mg/L

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

ANALYSIS FOR STLC ANTIMONY, MERCURY, & VANADIUM
Quality Assurance and Control Data - Extract

Laboratory Number 91186

Compound		Method Blank (mg/L)	RL (mg/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Antimony	(Sb):	ND<0.2	0.2	93/94	75-125	1%
Mercury	(Hg):	ND<0.006	0.006	100/93	75-125	7%
Vanadium	(V):	ND<0.5	0.5	99/97	75-125	2%

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/L = Parts per million (ppm)
QC File No. 91186

Ahsan A. Lal
Senior Chemist
Account Manager

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SOIL TECH ENGINEERING
Attn: NORI AMELI

Project 8-93-558-ST
Reported 03-March-1994

ANALYSIS FOR TOTAL THALLIUM
by EPA Method SW-846 7841

Chronology

Laboratory Number 91186

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
ST-1,2,3,4	01/27/94	02/24/94	02/25/94	03/01/94		1

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

SOIL TECH ENGINEERING
Attn: NORI AMELI

Project 8-93-558-ST
Reported 03-March-1994

ANALYSIS FOR TOTAL THALLIUM

Laboratory Number	Sample Identification	Matrix
91186- 1	ST-1,2,3,4	Soil

RESULTS OF ANALYSIS

Laboratory Number: 91186- 1

Thallium	(Tl):	ND<1
Concentration:		mg/Kg

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

ANALYSIS FOR TOTAL THALLIUM
Quality Assurance and Control Data - Soil

Laboratory Number 91186

Compound		Method Blank (mg/Kg)	RL (mg/Kg)	Spike Recovery (%)	Limits (%)	RPD (%)
Thallium	(Tl):	ND<1	1	102/102	75-125	0%

ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
mg/Kg = Parts per million (ppm)
QC File No. 91186

Senior Chemist
Account Manager

CHAIN OF CUSTODY RECORD

SUPERIOR

PROJ. NO.	NAME
8-93-558-ST	2951 High St. OAKLAND

SAMPLERS: *(Signature)*

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested (2) Hg & V (STLC)	REMARKS
1	1/27/94	10^{35}	✓		ST-1	1	✓	COMP.
2	1/27/94	10^{42}	✓		ST-2	1	✓	
3	1/27/94	10^{48}	✓		ST-3	1	✓	
4	1/27/94	10^{55}	✓		ST-4	1	✓	

COMP.

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Receive by: *(Signature)*
[signature]	2/24/94 9^{43}				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	

SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 791-6406

CHAIN OF CUSTODY RECORD

SUPERIOR

PROJ. NO.	NAME
8-93-558-ST	2951 High st. OAKLAND

SAMPLERS: (Signature)

91186

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested (2) Hg & V (STLC)	REMARKS
1	1/27/94	10:35	✓		ST-1	1	✓	COMP.
2	1/27/94	10:42	✓		ST-2	1	✓	
3	1/27/94	10:48	✓		ST-3	1	✓	
4	1/27/94	10:55	✓		ST-4	1	✓	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/24/94 9:43				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) R. Nguyen SPA MTL	Date / Time 02/24/94 14:30	Remarks	

SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 794-6400

File No. 8-93-558-ST

A P P E N D I X "D"

Zima Center Corporation
5 Admiral Dr., #301
Emeryville, Ca. 94608
(415) 420-8444 or 420-8945

BFI Vasco Road Sanitary Landfill
4001 Vasco Road
Livermore, California 94550

To Whom It May Concern:

To the best of my knowledge, there's no record of using Tetrachloroethylene, Bromomethane, Tetrachloroethane and Trichloroethane Solvents at the property located at 2951 High Street, in Oakland, California.

If you have any questions or require additional information, please feel free to contact me at (510) 436-4700.

Sincerely,

2/28/94

Mohammad A. Mashhoon
Property Owner

FORWARD, INC.
P. O. Box 6336,
Stockton, California 95206

WASTE CHARACTERIZATION FORM

SECTION A: GENERATOR/TRANSPORTER INFORMATION

Waste Generator: Zima Center Corporation
Contact Person: Mr Mohammad A. Mashhoon Phone: (510) 436-4700
Address: 2951 High Street
City: Oakland State: CA Zip: 94619
Transporter, Company Name: E. J. Pires Trucking
Contact Person: Dean Phone: (408) 279-8775
Consultant, Company Name: SoilTech Engineering, Inc.
Contact Person: Nasri Ameli Phone: (408) 496-0265

SECTION B: WASTE STREAM IDENTIFICATION

General Description of waste: SOIL FROM SERVICE STATION
Process generating waste: EXCAVATION AROUND WASTE OIL TANK.

SECTION C: PHYSICAL CHARACTERISTICS

Color: Br. Physical State: __ Solid __ Slurry __ Paste __ Powder Free Liquids: __ Yes ✓ No
pH: 6.9 Odor: __ Strong __ Mild ✓ None Soil Type (%): Sand 25 Silt 25 Clay 50

SECTION D: WASTE COMPOSITION (see SECTION E for asbestos)

Method	Constituent	Average	High	Units
3550/5520	TO&G	210	210.	PPM
3550	TPHD	<50=ND	45.0=ND	ppm
5030/8015/8020	TPHG	1.2	1.2	ppm
8010	Tetrachloroethylene	0.006	0.006	ppm

Element	TTLC		STLC		TCLP	
	High	Avg.	High	Avg.	High	Avg.
Cadmium	<.25=ND.	N/A				
Chrom. total	150	N/A				
Chrom. VI	—	N/A				
Nickel	310	N/A				
Zinc	88	N/A				
Other... LEAD	6.6	N/A				

SECTION E: ASBESTOS

Indicate containment for asbestos: __ bags __ cartons __ drums __ wrapping __ other

NOTE: All asbestos must be prepared for transportation to and disposal at the Forward Landfill in accordance with all applicable regulatory requirements.

SECTION F: SHIPPING INFORMATION

Method: __ bulk liquid ✓ bulk solid __ containerized (type):

Quantity: 30 ✓ cubic yards __ gallons Per: __ month __ year ✓ one time only __ other

NOTE: All shipments must be approved by the Forward, Inc. Environmental Compliance Officer.

SECTION G: CERTIFICATION/INDEMNIFICATION STATEMENT

THE BELOW-NAMED COMPANY WARRANTS THAT THE ABOVE AND ANY ATTACHED OR SUBMITTED WASTE CHARACTERIZATION IS COMPLETE AND ACCURATE AND THAT BASED UPON TESTING AND ANALYSIS PERFORMED ON THE WASTE MATERIALS, NONE OF THE WASTE MATERIALS ARE HAZARDOUS AS DEFINED BY 40 CFR, PART 261, AND THE CALIFORNIA CODE OF REGULATIONS, TITLE 22. WITH THE EXCEPTION OF ASBESTOS WHICH IS PROPERLY DESCRIBED IN SECTIONS E AND F ABOVE. IN THE EVENT THAT ANY PORTION OF THE WASTE MATERIALS (OTHER THAN ASBESTOS PROPERLY DESCRIBED IN SECTIONS E AND F ABOVE) IS DETERMINED TO BE HAZARDOUS ("HAZARDOUS MATERIALS") ACCORDING TO ANY OF THE ABOVE MENTIONED REGULATIONS, EACH PARTY SHALL NOTIFY THE OTHER IN WRITING IMMEDIATELY UPON LEARNING OF SUCH DETERMINATION. THE BELOW-NAMED COMPANY SHALL WITHIN TEN (10) DAYS AFTER RECEIVING SUCH WRITTEN NOTIFICATION REGARDING A HAZARDOUS DETERMINATION, AND AT THE BELOW-NAMED COMPANY'S SOLE EXPENSE, REMOVE THE HAZARDOUS MATERIAL FROM THE FORWARD LANDFILL AND PROPERLY DISPOSE OF THEM ELSEWHERE. THE BELOW-NAMED COMPANY WARRANTS THAT ANY ASBESTOS DELIVERED TO THE FORWARD LANDFILL HAS BEEN PROPERLY DESCRIBED IN SECTIONS E AND F ABOVE AND HAS BEEN PREPARED FOR TRANSPORTATION TO AND DISPOSAL AT THE FORWARD LANDFILL IN FULL COMPLIANCE WITH APPLICABLE REGULATORY REQUIREMENTS.

THE BELOW-NAMED COMPANY SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS FORWARD, INC., ITS AFFILIATES, THEIR OFFICERS, DIRECTORS, AGENTS, REPRESENTATIVES AND EMPLOYEES AND THEIR SUCCESSORS AND ASSIGNS FROM ANY LIABILITY, CLAIMS, LOSSES, DAMAGES, COSTS, LIENS, JUDGMENTS, ORDERS, GOVERNMENT DIRECTIVES, OR EXPENSES OF ANY KIND IN CONNECTION WITH THE HAZARDOUS MATERIALS AND/OR NON-CONFORMING WASTE AND IN CONNECTION WITH ANY BREACH OF THE BELOW-NAMED COMPANY'S WARRANTIES GIVEN OR THE BELOW-NAMED COMPANY'S OBLIGATIONS UNDERTAKEN HEREIN.

THE BELOW-NAMED COMPANY AGREES THAT, IN THE EVENT THAT IT LEARNS THAT THE WASTE CONSTITUENTS VARY FROM THOSE SET FORTH ABOVE OR ON ANY ATTACHED OR SUBMITTED DOCUMENTS, IT WILL IMMEDIATELY SUBMIT A CORRECTED WASTE CHARACTERIZATION FORM.

COMPANY: Soil Tech Engineering Inc.

BY: (Print Name) Naoni Amli TITLE: PROJECT ENGINEER

SIGNATURE: N Amli DATE: 3/4/94

FORWARD INC.

NON-HAZARDOUS WASTE MANIFEST
WASTE TREATMENT AND DISPOSAL FACILITY

JOB ACCEPTANCE NO. 51 SHR - 0797

TO BE COMPLETED BY THE GENERATOR

GENERATOR
ZIMA CENTER CORPORATION
MAILING ADDRESS
2951 HIGH STREET
CITY, STATE, ZIP
OAKLAND, CALIFORNIA 94619
PHONE
510 - 436-4700
CONTACT PERSON
MOHAMMAD A. MASHHOON
SIGNATURE OF AUTHORIZED AGENT / TITLE *
DATE 4/28/94

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☒ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☐ OTHER

SPECIAL HANDLING PROCEDURES:

WASTE TYPE
☑ TREATMENT SOIL
☒ DISPOSAL SOIL
☐ CONSTRUCTION SOIL
☐ SLUDGE
☐ NON-FRIABLE ASBESTOS
☐ WOOD
☐ ASH
☒ OTHER

GENERATING FACILITY
HIGH STREET GASS STATION

RECEIVING FACILITY
FORWARD INC. LANDFILL
9999 SOUTH AUSTIN ROAD
MANTECA, CALIFORNIA 95336
(209) 982-4298 PHONE
(209) 982-1009 FAX

TRANSPORTER HAULER MUST COMPLETE

NAME E.J. PIRES TRUCKING
ZIMA CENTER CORPORATION
ADDRESS 259 LEDWARD
~~2951 HIGH STREET~~
CITY, STATE, ZIP SAN JOSE, CA
~~OAKLAND, CALIFORNIA 94619~~
PHONE 279-8775
SIGNATURE OF AUTHORIZED AGENT OR DRIVER *
DATE 4/29/94

NOTES

TRUCK NUMBER T-90

☐ END DUMP ☐ BOTTOM DUMP ☒ TRANSFER
☐ ROLL-OFF(S) ☐ FLAT-BED ☐ VAN ☐ DRUMS

FACILITY REQUIREMENTS

FORWARD INC. LANDFILL

Forward shall have no obligation to accept the waste if weather or other conditions impair the safe and effective disposal of the waste or if the waste impairs the safe and effective operation of the Landfill. Forward shall use reasonable efforts to promptly notify Disposer of its inability to accept the waste for any reason. If Forward's refusal to accept the waste is based on weather or other site conditions, Forward shall notify the Disposer when site conditions are expected to change such that Forward will be able to accept the waste.

REMARKS 80006

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT * C. Campbell
DATE 4-29-94

CUBIC YARDS 18

DISPOSAL METHOD: (TO BE COMPLETED BY FORWARD)

	DISPOSE	BIO	AERATE	STOCKPILE	OTHER
☒ SOIL					
☐ SLUDGE					
☐ NON-FRIABLE ASBESTOS					
☐ WOOD					
☐ ASH					
☐ OTHER					

SCHEDULING MUST BE MADE PRIOR TO 4:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE. TO SCHEDULE CALL (209) 982-4298

MANIFEST # 31904

TRANSPORTER COPY

File No. 8-93-558-ST

A P P E N D I X "E"

File No. 8-93-558-ST

HEALTH AND SAFETY PLAN
FOR THE PROPERTY
LOCATED AT 2951 HIGH STREET
OAKLAND, CALIFORNIA

General:

This Health and Safety Plan (HSP) contains the minimum requirements for the subject site field work. The field activities include drilling, soil sampling and water sampling. All personnel and contractors will be required to strictly adhere with this HSP requirements.

The objective of the HSP plan is to describe procedures and actions to protect the worker, as well as unauthorized person, from inhalation and ingestion of, and direct skin contact with potentially hazardous materials that may be encountered at the site. The plan describes (1) personnel responsibilities and (2) protective equipment to be used as deemed when working on the site. At a minimum, all personnel working at the site must read and understand the requirements of this HSP. A copy of this HSP will be on-site, easily accessible to all staff and government field representative.

Hazard Assessment:

The major contaminants expected to be encountered on the project are gasoline and its hydrocarbon constituents. The

anticipated contaminants and their exposure standards are listed in Table 1. It is not anticipated that the potential levels of exposure will reach the permissible exposure limits (PEL) or threshold limit values (TLV). Inhalation and dermal contact are the potential exposure pathways. Protective clothing will be mandatory for field personnel specified in this Plan. In addition, respiratory protective devices are required to be worn by each person on-site or to be within easy reach should irritating odors be detected or irritation of the respiratory tract occur.

TABLE 1
EXPOSURE LIMITS OF ANTICIPATED CHEMICAL CONTAMINANTS IN PARTS PER MILLION (ppm)

Contaminant	PEL	EL	ED	CL	TWA	STEL
Benzene* [skin] & [carc]	1	---	--------	---	10	5
Ethylbenzene	100	---	--------	---	100	125
Toluene [skin]	100	200	10 min per 8 hours	500	100	150
Xylene (o, m, & p isomers) [skin]	100	200	30 min per 8 hours	300	100	150

PEL - permissible exposure limit: 8 hours, time-weighted average, California Occupational Safety and Health Administration Standard (CAL-OSHA).

EL - excursion limit: maximum concentration of an airborne contaminant to which an employee may be exposed without regard to duration provided the 8 hours time-weighted average for PEL is not exceeded (CAL-OSHA).

ED - excursion duration: maximum time period permitted for an exposure above the excursion limit but not exceeding the ceiling limit (CAL-OSHA).

CL - Ceiling limit: maximum concentration of airborne contaminant which employees may be exposed permitted (CAL-OSHA).

TWA - time-weighted average: 8 hours, [same as threshold limit value (TLV)], American Conference of Governmental Industrial Hygienists (ACGIH).

STEL - short-term exposure limit: 15 minutes time-weighted average (ACGIH).

[carc] - substance identified as a suspected or confirmed carcinogen.

[skin] - substance may be absorbed into the bloodstream through the skin, mucous membranes or eyes.

* - Federal OSHA benzene limits given for PEL and STEL; STEL has a 50 minutes duration limit.

A brief description of the physical characteristics, incompatibilities, toxic effects, routes of entry and target organs has been summarized from the NIOSH Pocket Guide to Chemical Hazards for the contaminants anticipated to be encountered. This information is used in on-site safety meetings to alert personnel to the hazards associated with the expected contaminants.

Benzene:

Benzene is a colorless, aromatic liquid. Benzene may create an explosion hazard. Benzene is incompatible with strong oxidizers, chlorine, and bromine with iron. Benzene is irritating to the eyes, nose and respiratory system. Prolonged exposure may result in giddiness, headache, nausea, staggering gait, fatigue, bone marrow depression or abdominal pain. Routes of entry include inhalation, absorption, ingestion and skin or eye contact. The target organs are blood, the central nervous system (CNS), skin, bone marrow, eyes and respiratory system. Benzene is carcinogenic.

Ethylbenzene:

Ethylbenzene is a colorless, aromatic liquid. Ethylbenzene may create an explosion hazard. Ethylbenzene is incompatible with strong oxidizers. Ethylbenzene is irritating to the eyes and mucous membranes. Prolonged exposure may result in headache, dermatitis, narcosis or coma. Routes of entry include inhalation, ingestion and skin or eye contact. The target organs are the eyes, upper respiratory system, skin and the CNS.

Toluene:

Toluene is a colorless, aromatic liquid. Toluene may create an explosion hazard. Toluene is incompatible with strong oxidizers. Prolonged exposure may result in fatigue, confusion, euphoria, dizziness, headache, dilation of pupils, lacrimation, insomnia,

dermatitis or photophobia. Routes of entry are inhalation, absorption, ingestion and skin or eye contact. The target organs are the CNS, liver, kidneys and skin.

Xylene Isomers:

Xylene is a colorless, aromatic liquid. Xylene may create an explosion hazard. Xylene is incompatible with strong oxidizers. Xylene is irritating to the eyes, nose and throat. Prolonged exposure may result in dizziness, excitement, drowsiness, staggering gait, corneal vacuolization, vomiting, abdominal pain or dermatitis. Routes of entry are inhalation, absorption, ingestion and skin or eye contact. The target organs are the CNS, eyes, gastrointestinal tract, blood, liver, kidneys and skin.

General Project Safety Responsibilities:

Key personnel directly involved in the investigation will be responsible for monitoring the implementation of safe work practices and the provisions of this plan are (1) the drilling project supervisor and (2) Soil Tech Engineering, Inc. (STE) project field engineer. These personnel are responsible for knowing the provisions of the plan, communicating plan requirements to workers under their supervision and regulatory agencies inspectors and for enforcing the plan.

The personnel-protective equipment will be selected to prevent field personnel from exposure to fuel hydrocarbons that may be present at the site. To prevent direct skin contact, the following protective clothing will be worn as appropriate while working at the site:

1. Tyvek coveralls.
2. Butyl rubber or disposable vinyl gloves.
3. Hard hat with optional face shield.
4. Steel toe boots.
5. Goggles or safety glasses.

The type of gloves used will be determined by the type of work being performed. Drilling personnel will be required to wear butyl rubber gloves because they may have long duration contact with the subsurface materials. STE sampling staff will wear disposable gloves when handling any sample. These gloves will be charged between each sample.

Personnel protective equipment shall be put on before entering the immediate work area. The sleeves of the overalls shall be outside of the cuffs of the gloves to facilitate removal of clothing with the least potential contamination of personnel. If at any time protective clothing (coveralls, boots or gloves) become torn, wet or excessively soiled, it will be replaced immediately.

Total organic vapors will be monitored at the site with a portable PID. Should the total organic vapor content approach that of the threshold limit value (TLV) for any of the substances listed in Table 1, appropriate safety measures will be implemented under the supervision of the site project engineer. These precautions include, but are not limited to, the following: (1) Donning of respirators (with appropriate cartridges) by site personnel, (2) forced ventilation of the site, (3) shutdown of work until such time as appropriate safety measures sufficient to insure the health and safety of site personnel can be implemented.

No eating, drinking or smoking will be allowed in the vicinity of the drilling operations. STE will designate a separate area on site for eating and drinking. Smoking will not allowed at the vicinity of the site except in designated areas. No contact lenses will be worn by field personnel.

WORK ZONES AND SECURITY MEASURES:

The Project Engineer will call Underground Service Alert (USA) and the utilities will be marked before any drilling is conducted on-site, and the borings will be drilled at safe distances from the utilities. The client will also be advised to have a representative on-site to advise us in selecting locations of borings with respect to utilities or underground structures. Soil Tech Engineering, Inc. assumes no responsibility to utilities not so located. The first 5 feet will be hand augered before any drilling equipment is operated.

Each of the areas where the borings will be drilled will be designated as Exclusion Zones. Only essential personnel will be allowed into an Exclusion Zone. When it is practical and local topography allows, approximately 25 to 75 feet of space surrounding those Exclusion Zones will be designated as Contamination Reduction Zones.

Cones, wooden barricades or a suitable alternative will be used to deny public access to these Contamination Reduction Zones. The general public will not be allowed close to the work area under any conditions. If for any reason the safety of a member of the public (e.g. motorist or pedestrian) may be endangered, work will cease until the situation is remedied. Cones and warning signs will be used when necessary to redirect motorists or pedestrians.

Location and Phone Numbers of Emergency Facilities:

For emergency reasons, the closest facilities addresses and phone numbers are listed below:

City of Oakland Fire Department	911
Highland General Hospital 1411 East 31st Street, Oakland, CA	(510) 634-8055

Additional Contingency Telephone Numbers:

Poison Control Center . . . . . (800) 523-2222

File No. 8-93-558-ST

Soil Tech Engineering Administrative Office . . . . (408) 496-0265

CHEMTREC . . . . . (800) 424-9300

Note: Only call CHEMTREC stands for Chemical Transportation Emergency Center, a public service of the Chemical Manufacturer's Association. CHEMTREC can usually provide hazard information, warnings and guidance when given the identification number or the name of the product and the nature of the problem. CHEMTREC can also contact the appropriate experts.

This Site Safety Plan has been reviewed by the project engineer, STE field personnel and all subcontractors.

Amendments or modifications to this Plan may be written on a separate page and attached to this Plan. Any amendments or modifications must be reviewed and approved by the personnel name above.