WESTERN GEO-ENGINEERS
CALIF CONTRACTOR # 513857 A CORPORATION
REGISTERED GEOLOGISTS

1386 EAST BEAMER STREET
WOODLAND, CA 95776-6003
FAX (916) 662-0273
(916) 668-5300

From: Vern Bennett Date: 8/11/94

Please give me your direct #

To: Eva Chu FAX#: (510) 337-2864

RE: USA Stk. #57
10700 MacArthur Blvd.,
Oakland, CA

Total Pages Including This Page 18

-- Final-Hardcopy in mail

Eva as you have discussed w/ Mr. Srikanth Dasappa about limited overexcavation in, I am Faxing to you the Documentin Workplan/LETTER.

I will be overseeing the over-excavation + sampling on Wed. Aug 17, 1994

Joe Madison will be preparing the site for me on Tues. the 16th.

Note
A Table of Tank Pull results + Field map is enclosed

Report will follow soonest.

Thank you, in this matter

If you have any questions, please call (916) 668-5300 Srikanth (818) or 865-9200

Vern

WEGE WESTERN GEO-ENGINEERS
CALIF CONTRACTOR # 513857 A CORPORATION
REGISTERED GEOLOGISTS

1386 EAST BEAMER STREET
WOODLAND, CA 95776-6003
FAX (916) 662-0273
(916) 668-5300

94 AUG 12 PM 4:25

Mr. Srikanth Dasappa
USA Gasoline Corporation
30101 Agoura Court, Ste. 200
Agoura Hills, California 91301
(818) 865-9200
Fax (818) 865-0092

August 11, 1994

① send letter to approve overex and sampling
② O.S. overexcavated P.I. 2

RE: USA Station #57 Limited Overexcavation, Oakland, Alameda County, CA on 8/16/94 for USA Gasoline Corporation.

LOCATION

The site, USA Gasoline Corporation Station #57 is located at 10700 MacArthur Boulevard, Oakland, Alameda County, California and lies in projected Sec. 24; T2S; R3W; MDB&M at an elevation of approximately 65 feet above mean sea level. This station is currently being demolished. Four 12,000 gallon gasoline UST's and one 8000 gallon diesel UST were removed on July 19, 1994.

PURPOSE & SCOPE

The most prudent and cost effective next step course in remediation of this site will be to conduct a limited soil overexcavation. An open (and fenced) excavation from the 'Tank removal operation' offers easy access to overexcavate contaminated soil at this time. The soil sample results from the UST and Product Line removal operation on July 19, 1994 indicate that the soil contamination source may have been localized and that a limited overexcavation could abate and/or entirely remove the contamination.

Two ground water monitor wells (S-1 and S-2) exist at this site (see Figure 3). These wells currently have an average depth to ground water of 17.3 feet (BGS). USA Gasoline Corporation proposes to overexcavate within a foot of the local ground water, while extending the perimeter of the existing tank cavity 2 to 3 feet in all directions. This activity will most likely capture a large majority if not all remaining soil contamination from the tank field. The dispenser islands are going to be removed during this overexcavating effort. In concurrence with the UST overexcavation, initial soil sampling to document the pump island areas will take place. If field observations warrant then overexcavating these areas will occur.

12:45 - 1:05

PROCEDURE FOR OVEREXCAVATION

The overexcavation will be accomplished by utilizing an extend-a-hoe tractor and/or track layer tractor with an excavation reach of 16-17 feet. Soil screening with the use of a hand held photo-ionizing detector (PID), visual (soil staining) and olfactory senses will be the determining tool to guide the excavating. It is anticipated that 16 feet will be the maximum depth attained due to the shallow ground water on the site. The product line and dispenser island areas will be excavated at this time (see Figure 3).

Joe Madison will be the contractor for this overexcavation (same contractor that performed the UST's removal on July 19, 1994).

The excavating may progress in close proximity to S1 and S2 (but will not endanger the integrity of the monitor wells). The removed soil, from the excavation, will be stored/stockpiled on the asphalt surface of the USA station parking lot and will be placed on and covered with visquine to prevent runoff &/or leaching. This soil pile will be sampled and treated and/or removed at a later date.

The overexcavation will be fenced and secured to ensure a maximum safeguard to the area.

SOIL SAMPLES

This work plan proposes that representative soil samples be taken from the sidewalls of the overexcavation just above ground water level and from the base of the excavation (unless ground water is encountered). The number of samples will be dependent upon the final size of the overexcavation. The sampling will occur from the bucket of the excavator.

The relatively undisturbed soil samples will be collected in 2"X6" clean brass sleeves. Each sample will be preserved by wrapping the sleeve ends with aluminum foil and then capping them with plastic caps which are secured to the sleeve with duct tape. Each sleeve is labeled with the time, date, location number, depth, analyses to be run, site name and initials of the geologist. Each sample is then placed in a zip lock bag and deposited in an ice chest with enough ice to preserve the samples at 4^{o} for chain-of-custody delivery to a California State Certified Laboratory.

The certified analyses of the samples will distinguish the known contaminant, unleaded and leaded gasoline, and diesel (in the area of the diesel tank). The proposed analyses for these samples are for Total Petroleum Fuel Hydrocarbons (TPH, Gasoline and Diesel) w/ BTEX Distinction, utilizing EPA Methods 8015 & 8020 and Total Threshold Limit Concentration (TTLC) for Lead.

SUMMARY

The overexcavation sampling report will follow in a timely manner indicating the results and site activity from the overexcavating effort. This overexcavation effort will occur on or about August 16, 1994.

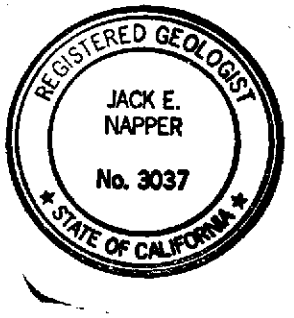
The services performed by Western Geo-Engineers, a corporation, under California Registered Geologist #3037 and/or Contractors License #513857, will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the State of California and the Oakland area. Our work and/or supervision of remediation and/or abatement operations, active or preliminary, at this site is in no way meant to imply that we are owners or operators of this site. Please note that known soil and/or ground water contamination must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

Sincerely,

Vern A. Bennett
Project Geologist

Jack E. Napper
Registered Geologist #3037

encl: Health and Safety Plan
Map & Table of Tank Pull Soil Sample Results



WESTERN GEO-ENGINEERS

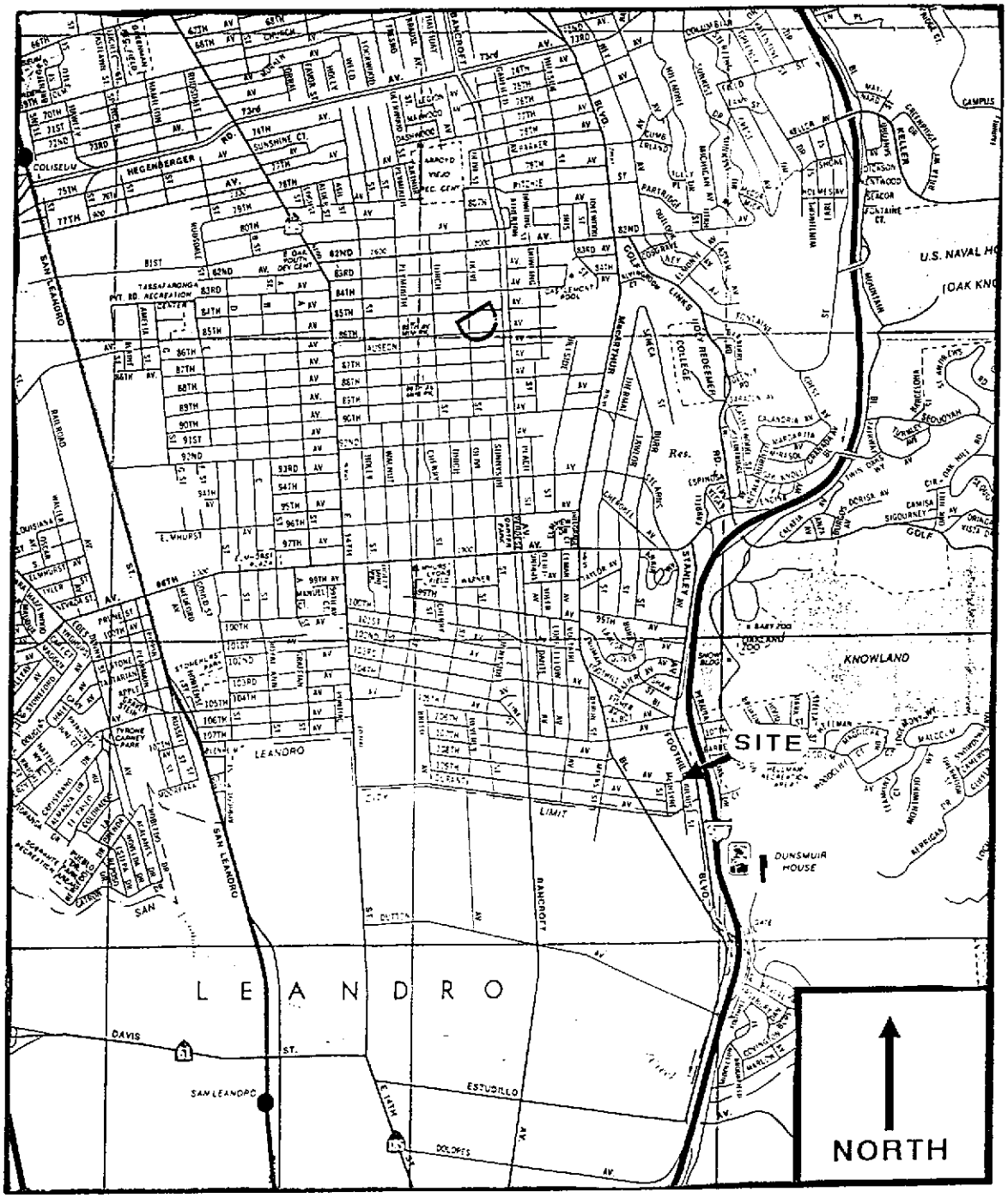


FIGURE 1, AAA, SITE LOCATION MAP

WESTERN GEO-ENGINEERS

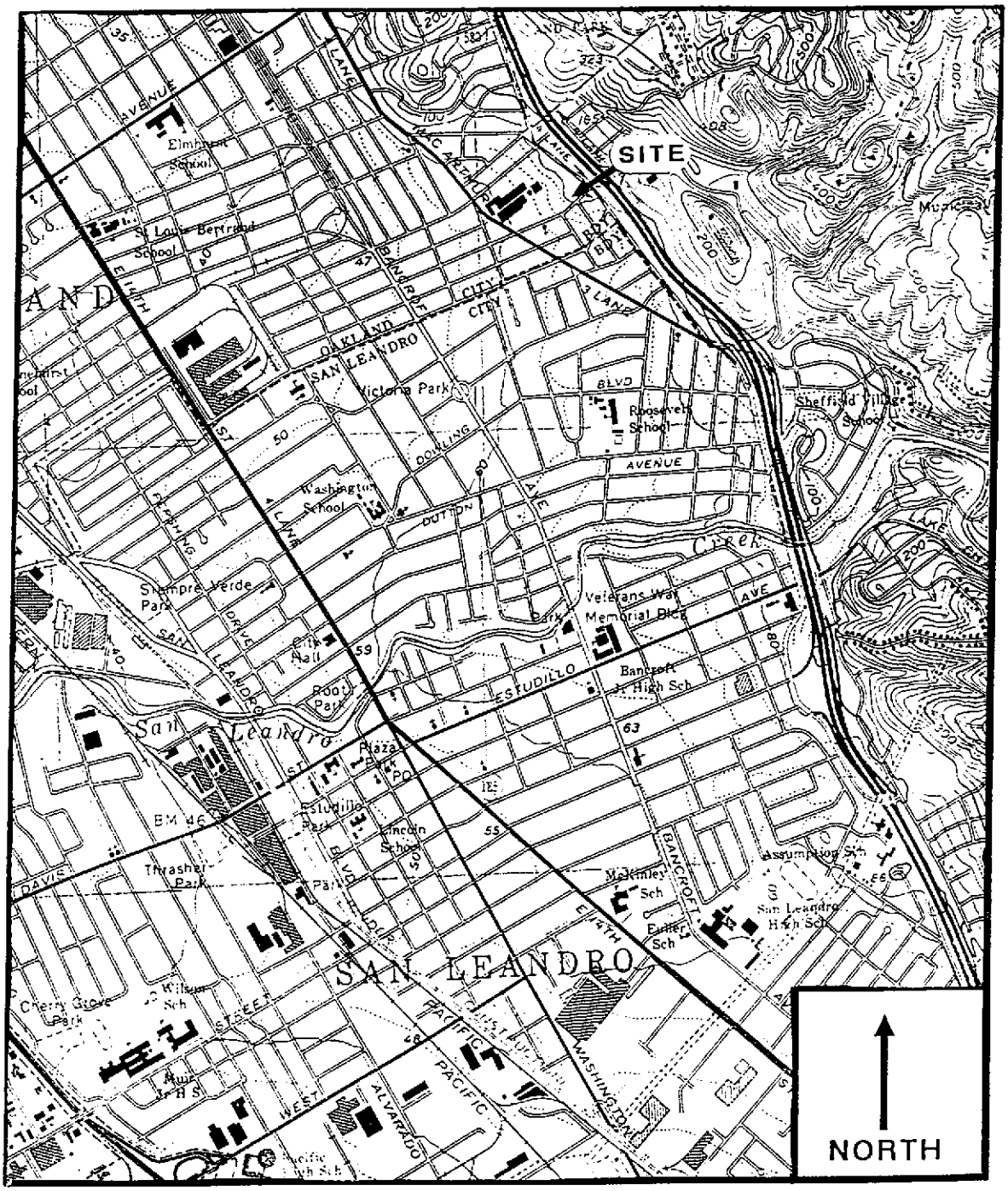
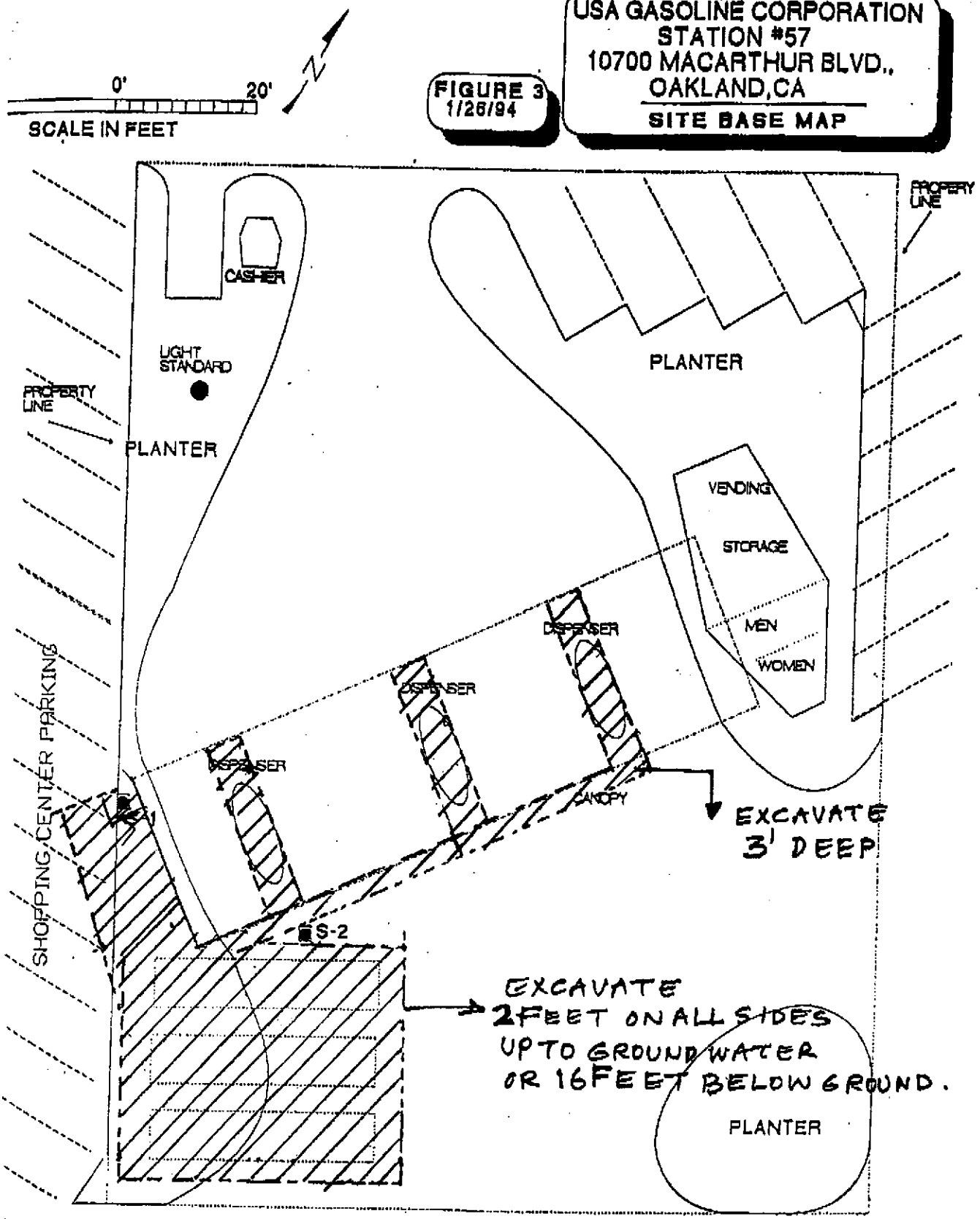


FIGURE 2. USGS TOPO SHEET SITE LOCATION MAP


USA GASOLINE CORPORATION
STATION #57
10700 MACARTHUR BLVD.,
OAKLAND,CA
SITE BASE MAP
FIGURE 3
1/26/94
0'
20'
SCALE IN FEET
N
CASHIER
LIGHT STANDARD
PROPERTY LINE
PLANTER
PLANTER
PROPERTY LINE
VENDING
STORAGE
MEN
WOMEN
DISPENSER
DISPENSER
DISPENSER
CANOPY
EXCAVATE 3' DEEP
SHOPPING CENTER PARKING
S-2
EXCAVATE 2 FEET ON ALL SIDES UP TO GROUND WATER OR 16 FEET BELOW GROUND.
PLANTER

APPENDIX A

TANK PULL - FIELD NOTES, FIELD PLAT MAP, SAMPLING 5/19/94 and TABLE OF SOIL RESULTS

SITE SAFTEY PLAN

USA GASOLINE CORPORATION
STATION #57
10700 MACARTHUR BLVD.,
OAKLAND, CA.

WEGE WESTERN GEO-ENGINEERS
1386 EAST BEAMER
WOODLAND, CALIFORNIA 95695
(916) 668-5300, FAX (916) 662-0273

proj.

SEC. 24; T 2 S; R 3 W; MDB&M
JOB DESCRIPTION Tank Pull + Product Line Soil Sampling
LOCATION USA Gasoline Corp. Sta. #67
ADDRESS 10700 MacArthur Blvd.
CITY Oakland STATE CA
COUNTY Alameda
CLIENT USA Gasoline Corp.
ADDRESS 30101 Agoura Court, Ste. 200
CITY Agoura Hills STATE CA ZIP 91301
PHONE (818) 865-9200 FAX (818) 865-0092
CLIENT REP. Srikanth Dasappa

WORK PERFORMED BY Vern Bennett
DATE 7/19/94
LEAVE OFFICE 9:30 AM (½ hr off time)
ARRIVE SITE 11:00 AM
MILEAGE
LEAVE SITE 6:30
ARRIVE OFFICE mob to another site
MILEAGE mob to another site
#SOIL SAMP. 12
#WATER SAMP. N/A
LABORATORY AEN
WEGE TO PAY LAB (YES) (NO)

SITE MAP

see Figure 3

APPROX. SCALE

GOV. AGENCY	REP. NAME	ADDRESS	PHONE	FAX
Alameda Co. Environ. Health	Ms. Eva Chu	1131 Harbor Bay Pkwy Alameda, CA 94502	(510) 337-9335	(510) 337-28 64

SITE ACTIVITY LOG	NOTES:
9:30 - 11:00	Mob to site
11:00 - 12:00	Recon site w/ Srikanth D., map excavations
12:00 - 12:30	Lunch w/ USA
12:30 - 1:30	H+H Vacuum Tanks Don Madison - contractor - Dry Ice Tanks
1:30 - 2:45	1:00 Alameda Co. - Eva Chu arrives - Sample pump Island pipe
	Rep. owners - Env. consultant - Take duplicates of soil samples
2:45 - 5:30	Pull Tanks / H+H del O2 meter - Fire Dept. oversees
	pull 1, 8K Diesel UST, 3 12K Gasoline UST
	Take soil samples of Tank Field by Direction
	of Alameda Co. Rep. - Ms Eva Chu
	Pulled middle Gas. UST ⅛" hole bottom of Fill side
	all other USTs - appear tight - inert
	some water in excavation, Purged for Recharge by H+H
	GW in MW's 5, + S2 @ 16-18' BGS - water in pit, perched
5:30 - 6:00	— sample PIs

SAMPLE DATA

	ID	LOCATION	DEPTH	TYPE	TIME	TIP
PI-E	PI 1	0.5 E Island	3.5'	SILT	1:30	0 PPM
Product Line Trench	PI 2	Mid of mid Island	3.5	silty SILT	1:45	300 ppm
	PI 3	Mid Island	3.5	SILT	2:15	0 PPM
	PI 4	West Island	4.0	clayey silt	2:35	0 PPM
	PI 5	West of West Island	3.5	1"	5:45	0 PPM
Tank Field	TP 1	Diesel Tank N	12.5	sdy SILT	3:15	0 PPM
	TP 2	Diesel Tank S	12.5	clayey silt	3:25	0 PPM
	TP 3	mid Gas Tank N	13	clayey silt	4:45	16 ppm
	TP 4	S-Gas Tank W	13	silty SILT-fine	4:50	360 ppm
	TP 5	S-Gas Tank E	13	silty SILT	5:00	126 ppm
	TP 6	M-Gas Tank E	13	SILT	5:10	0
	TP 7	N-Gas Tank E	13	silty SILT	5:15	0

LABORATORY RESULTS

see Table 1 - Soil Results

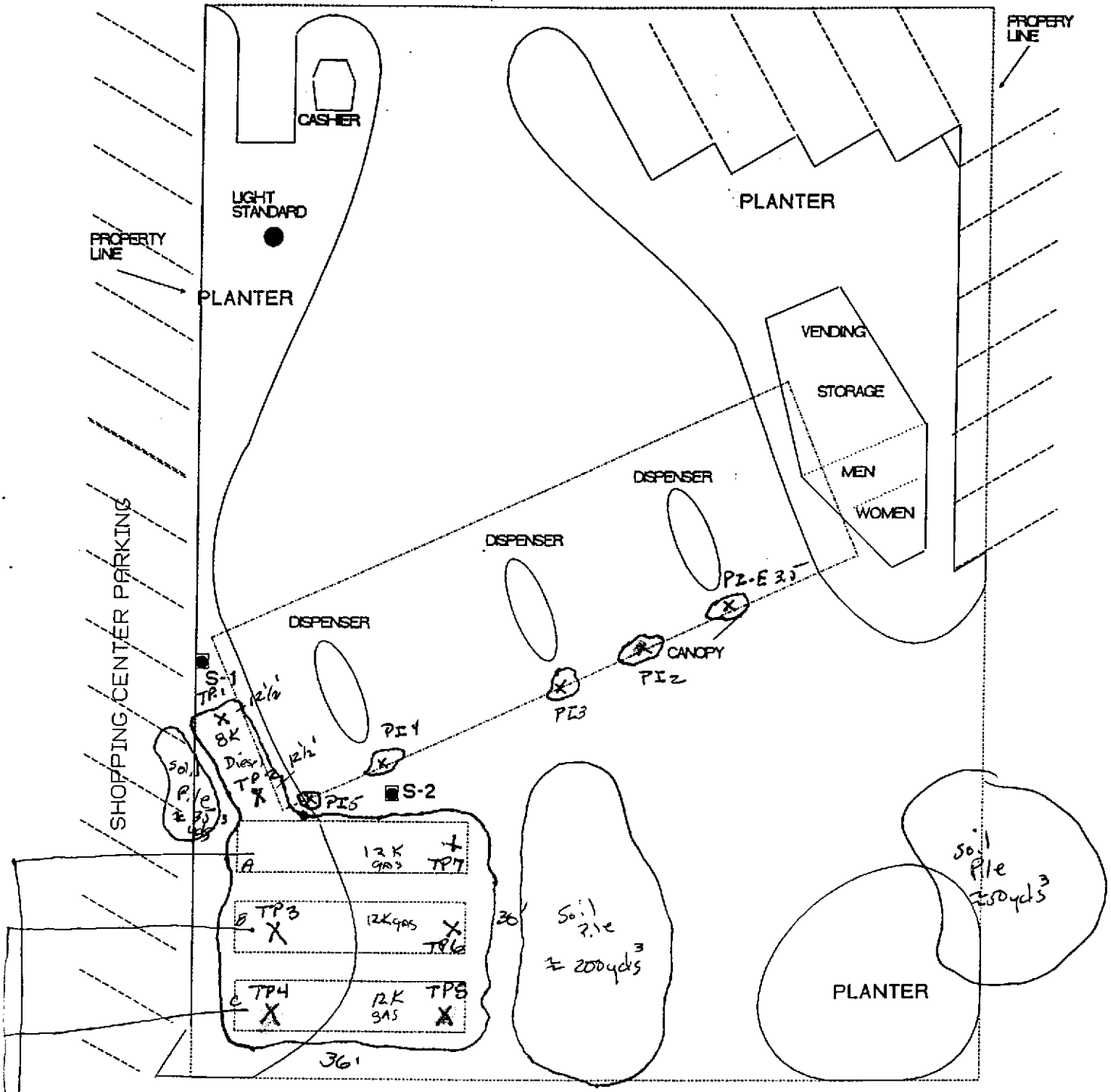
7/19/94

USA GASOLINE CORPORATION
STATION #57
10700 MACARTHUR BLVD., OAKLAND, CA

FIGURE 3
1/26/94

SITE BASE MAP

20' 0' 20'
SCALE IN FEET



A pulled, clean interior - no holes
B pulled, ⅛" hole (fill side bottom) - leaking water
C pulled, no holes, interior

used H+H LEL/O_2 meter to pull tanks
perched water on site ≈ 10½' GW S_1 - 16'
S_2 - 17'

Analysis direction by Alameda Co. Ms. Eva Chu
TP_1, TP_2 TPH,D - BTEX B220 PNA's
TP_3 - TP_7 TPH G/BTEX Pb
PI 1 - PI 5 TPH G+D BTEX Pb

WEGE: TABLE 1

USA PETROLEUM CORPORATION
10700 MACARTHUR BLVD.,
OAKLAND, CALIFORNIA

SOIL SAMPLE LABORATORY RESULTS

SAMPLE LOCATION	SAMPLE ID	DATE SAMPLED	DEPTH SAMPLED IN FEET	SAMPLING COMPANY	LAB	TPH,G ppm	TPH,D	BENZENE ppm	TOLUENE ppm	ETHYL BENZENE ppm	XYLENE ppm	TTLC LEAD ppm	PNA's by M8270 ppm
P_L TRNCH	PI-E	3.5 07/19/94	3.5	WEGE	AEN	<0.2	<1.0	<.005	<.005	<.005	<.005	7	
P_L TRNCH	PI-2	07/19/94	3.5	WEGE	AEN	4500	<50	<1.0	6	60	440	4	
P_L TRNCH	PI-3	07/19/94	3.5	WEGE	AEN	<0.2	<1.0	<.005	<.005	<.005	<.005	5	
P_L TRNCH	PI-4	07/19/94	4	WEGE	AEN	<0.2	<1.0	<.005	<.005	<.005	<.005	6	
P_L TRNCH	PI-5	07/19/94	3.5	WEGE	AEN	<1.0	<1.0	<.005	<.005	<.005	<.005	7	
TNK FIELD	TP1	07/19/94	12.5	WEGE	AEN		60	<.005	0.015	0.007	0.008		<0.2
TNK FIELD	TP2	07/19/94	12.5	WEGE	AEN		230	<1.0	0.79	2.2	0.7		* 0.77
TNK FIELD	TP3	07/19/94	13	WEGE	AEN	94		0.18	0.25	1	5.9	3	
TNK FIELD	TP4	07/19/94	13	WEGE	AEN	1400		1.9	3.5	12	150	4	
TNK FIELD	TP5	07/19/94	13	WEGE	AEN	300		<.5	0.74	4.8	20	3	
TNK FIELD	TP6	07/19/94	13	WEGE	AEN	0.7		<.005	<.005	0.006	<.005	3	
TNK FIELD	TP7	07/19/94	13	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005	3	

ppm= PARTS PER MILLION (mg/kg)
TPH= TOTAL FUEL HYDROCARBONS (GASOLINE)
TTLC=TOTAL THRESHOLD LIMIT CONCENTRATION
EPA METHOD 5030 USED FOR TPH,GASOLINE
EPA METHOD 3550 FOR TPH,DIESEL
EPA METHOD 8020 USED FOR (BTEX); BENZENE, TOLUENE, ETHYL BENZENE. XYLENE
EPA METHOD 7420 USED FOR TTLC (LEAD)
EPA METHOD 8270 FOR PNA'S

WEGE= WESTERN GEO-ENGINEERS
AEN= AMERICAN ENVIRONMENTAL NETWORK (DHS #1172)
* PNA's by M8270, note Naphthalene is only PNA above detection limit.
BLANK &/or " ", sample not taken or analyzed.

* unknown cpd - had to dilute sample ∴ high detect limit

SITE SAFETY PLAN

FACILITY BACKGROUND

Owners Name: USA Gasoline Corporation
Station #57

Site Address: 10700 MacArthur Blvd.,
Oakland, California

Other Information: Located in Proj. Section 24; T2S; R3W; MDB&M.

Previous, ground water monitoring wells on site indicated petroleum hydrocarbon contamination. In order to determine the extent of down gradient contamination of the site, an expanded off-site survey is initiated by constructing 3 ground water monitoring wells.

KEY PERSONNEL AND RESPONSIBILITIES

Consultant on Site: Western Geo-Engineers
1386 E. Beamer Street
Woodland, CA 95695
(916) 668-5300

Project Supervisor: Jack Napper, Registered Geologist

Project Geologist: Vern Bennett

Site Safety Officer: Vern Bennett

ENTRY OBJECTIVES

Type of Facility: Inacctive service station

Site Activities: Soil Sampling, Limited overexcavation on-site

JOB HAZARD ANALYSES

Hazardous Substance (Name/CAS#): Gasoline and Diesel range hydrocarbons

Expected Concentration: <20 ppm

Health Affects: See attached Hazard Analysis/TLV

Physical Hazards

Noise	Yes
Traffic	No
Underground Hazards	No
Overhead Hazards	Yes
Excavations/Trenches	Yes, open and fenced excavation-tank field.
Mechanical Equipment	Yes

Level of Protective Equipment

A B C **D** (D is the only level of protection anticipated at this site)

Personal Protective Equipment Required

Hard Hat	Yes
Safety Boots	Yes
Orange Vests	Yes
Hearing Protection	Yes
Tyvek Coveralls	No
Safety Eyewear	Yes Type Safety goggles/glasses
Respirator	Level C air purifying respirators will be available if it is deemed necessary
Filter	Organic vapor cartridges/filters will be available if it is found that Level C respirators are necessary
Gloves	Yes Type PVC for sampling, work gloves for excavating

MONITORING EQUIPMENT ON SITE

Organic Vapor Analyzer	Yes	PID
Oxygen Meter/LEL	No	
Combustible Gas Meter	No	
PID w/lamp of 10.2 eV	Yes	
Air Sampling Pump	Yes	via PID

RISK ASSESSMENT

The primary safety goal during the contamination analysis is to protect the drilling team and support staff while they collect representative samples and monitor air quality. Due to the unconfined nature of the project site, vapors released during operations will be sufficiently diluted by ambient air so that the surrounding community will not be exposed to petroleum vapors. In order to assure that vapor dispersal is adequate, a portable photo ionizing (PID) detector will be used to monitor vapor concentrations. If at any time the PID registers 50 ppm or greater vapor in ambient air, the drilling activity will cease until an on-site evaluation is made to proceed or discontinue the excavation process.

EXCAVATING ACTIVITY

Due to the inherent physical danger or working in the vicinity of mechanical equipment, all personnel will wear hardhats, steel toed footwear, and safety goggles/glasses at all times.

Work at this site will require working with and around an excavating tractor. This unit operates under high pressure hydraulics. All the personnel shall use caution while working with and around the tractor rig, due to the vast number of moving parts in the rig itself. Correct lifting procedures with heavy equipment should be observed at all times. Common sense practice should always be enforced.

Underground and above ground utilities can be hazardous if precautions are not taken to accurately locate (Underground Service Alert, site utility plot) in advance to drilling activities. To be handled by the excavating contractor.

It should be noted that summertime heat may initiate weather stress-related problems and decrease productivity on the job site. Frequent work breaks may be necessary. Anticipated temperatures should not pose any problem in and around the Napa area during this time of the year. Personnel exposures to excessive job-related hazards are expected to be minimal using these safeguards.

EXPOSURE MONITORING PLAN

Environmental exposure will be monitored periodically using a hand held PID. Personal exposure monitoring (in addition to the required annual check-up) will not be conducted.

WORK ZONES AND SECURITY MEASURES

Site access will be restricted using cones and caution tape surrounding the work site. This job entails working on private property (former USA station, 108th Street & MacArthur); foremost precaution to working in these environs is to always be aware of traffic.

DECONTAMINATION MEASURES

At the end of each work day all WEGE personnel (and sub contractors) will thoroughly wash their hands, face, and footwear before leaving the site. In the event that personal protective equipment is necessary, all disposable items will be deposited into a steel drum container on site and all reusable items will be washed with TSP detergent and rinsed with clean water. Residual liquid will be placed in a steel drum container on site. Personnel will not be allowed to leave the contaminated area without completing the decontamination process. All waste material will be placed in environmental drums or tanks and stored at the site. All containers will be properly labeled as per current city, county, and state regulations.

GENERAL SAFE WORK PRACTICES

All personnel performing sampling will wear disposable gloves to prevent contamination of their hands and body. Anyone entering the site without authorization will be asked to leave and escorted out of the control area. Due to the rapid movement of internal parts on the excavator rig, all operating personnel will wear safety gloves.

All WEGE personnel have completed current OSHA 29 CFR 1910.120 training.

MEDICAL CONTINGENCY PLAN

Hospital/Clinic: San Leandro Hospital Ph: (510) 357-6500

Hospital Address: 13855 E. 14th St., San Leandro, CA
138th Ave. & E,. 14th Street.

Paramedic: 911 Fire Department: 911 Police Department: 911
Non-emergency number: (510) 357-6500

Any personnel at the site who are injured must notify the Site Safety Officer. Paramedics can be at the site location within 10 minutes for extreme emergencies. If any chemical exposures are exceeded, a medical exam will be required.

Site Hazard Information Provided By:

Signature: _____ Phone Number: (916) 668-5300

Date:

I have read and fully understand the information and safety requirements in this Site Safety Plan.

Signature

_____ _____

_____ _____

JOB HAZARD ANALYSIS
GASOLINE AND DIESEL RANGE HYDROCARBONS

The main compound of interest is petroleum range hydrocarbons. Gasoline and its constituents pose health hazards in two major classifications: Explosivity and toxicity. The extreme flammability of gasoline is commonly known. The lower explosion limit (LEL) of gasoline vapor is 1.3 percent in air If the concentration of gasoline vapor in air exceeds 1.3 percent (13,000 ppm) and sufficient quantities of oxygen are present, then the introduction of sufficient heat, spark or flame will result in an explosion.

A lesser known health hazard resulting from exposure to gasoline is toxicity. Several common constituents of gasoline have been linked to various health problems. The constituents of gasoline that have been shown to cause serious health problems resulting from relatively minor exposures include Benzene, Toluene, meta, para and ortho xylenes, Ethyl benzene, and Tetraethyl lead.

Typical percentages (by weight) of these constituents in gasoline are: Benzene - 0.12-3.50%, Toluene - 2.73-21.80%, meta xylene - 1.77-3.87%, para xylene - 0.77-1.58%, ortho xylene - 0.68-3.686%, and Ethyl benzene - 0.36-2.86%. typical percentage of Tetraethyl lead is not available.

Units used to describe occupational exposures to hazardous substances include: Exposure limit, also known as "Threshold Limit Value" (TLV), Ceiling Limit, and the concentration level that is "Immediately Dangerous to Life and Health" (IDLH). The EXPOSURE LIMIT defines the maximum concentration of a substance to which one can be exposed during an 8 hour period without suffering significant health effects. The CEILING LIMIT is the concentration level that cannot be exceeded at any time. A suitable respirator and/or other suitable breathing apparatus and body protective equipment must be worn if concentration values reach or exceed the ceiling limit. the IDLH LEVEL represents a maximum concentration from which one could escape within 30 minutes of respirator failure without experiencing escape-impairment or irreversible health damage. The notation "Ca" appears in the IDLH column for all substances that NIOSH considers to be potential human carcinogens.

EXPOSURE TABLE

SUBSTANCE	TLV-TWA	TLV-STEL	TLV-CEILING	IDLH
Benzene	.01 ppm	N/A	N/A	3000 ppm (Ca)
Toluene	100 ppm	150 ppm	N/A	2000 ppm
Xylene	100 ppm	150 ppm	N/A	1000 ppm
Ethyl benzene	100 ppm	125 ppm	N/A	2000 ppm

Prolonged exposures to concentrations above the limits noted may affect the Central Nervous System, Cardiovascular System, Respiratory System, eyes, skin, kidneys, bones and bone marrow. Research has shown that Benzene and some of the heavy metals are suspected or known carcinogens.

Immediate symptoms of over-exposure include: Eye irritation, nose and throat irritation, headache, nausea, dizziness, drowsiness, weakness, confusion, euphoria, excitement, staggered gait, abdominal pain, respiratory difficulties, muscle fatigue, and coma.

It should be noted that summertime heat may initiate weather stress-related problems and decrease productivity on the job site. All WEGE personnel will monitor for heat stress and take adequate precautions against it.

Symptoms of heat stress include: Heat rash, heat cramps, muscle spasms, pain in the hands and feet, heavy sweating, dizziness, nausea, fainting.