desert petroleum inc.

John Rutherford Director Environmental Affairs CHAIS-8 MIN 19

August 4, 1994

Ms. Jennifer Eberle Alameda County Health Care Services Agency Department of Environmental Health 80 Swan Way, Rm #200 Oakland, CA 94621

RE: UST Removal

Former Desert Petroleum Location 4035 Park Blvd., Oakland, CA

Dear Ms. Eberle:

Please find enclosed our report from Western Geo-Engineers which outlines the procedures and findings of the removal of underground storage tanks at our closed location on 06/23/94.

Very truly yours,

John D. Rutherford

cc: Chron File

enclosure

ox com

DESERT PETROLEUM Station #793

WASTE OIL AND FUEL UST'S AND PRODUCT LINE REMOVAL SAMPLE REPORT.

LOCATED AT

4035 Park Boulevard OAKLAND, CALIFORNIA

July 23, 1994

BY

-WEGE-WESTERN GEO-ENGINEERS 1386 E. BEAMER STREET WOODLAND, CALIFORNIA 95776 (916) 668-5300

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

CALIF CONTRACTOR # 513857 A CORPORATION REGISTERED GEOLOGISTS

July 23, 1994

Mr. John Rutherford Desert Petroleum P.O. Box 1601 Oxnard, California 93032 (805) 644-5892 FAX (805) 654-0720

Dear Mr. Rutherford:

The following report represents our findings during the fuel and waste oil tanks removal at former Desert Petroleum Station 793, located at 4035 Park Blvd., Oakland, Alameda County, California 94602.

INTRODUCTION

Western Geo-Engineers (WEGE) obtained and documented the necessary samples during the underground storage tank (UST) removal/closure. Soil contaminated with very low amounts of gasoline range hydrocarbons was found beneath the pump end of the regular leaded gasoline tank (T1A = 2 mg/Kg) and beneath the waste oil tank (WO-1 = 3 mg/Kg. Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) were associated with all samples taken and ranged from detection limits of 0.005 mg/Kg to a high of 0.16 mg/Kg of Xylenes from sample T1A. Figure 3 and Table 1 represent sample locations and laboratory results. The following report documents the activities that have occurred at this site during the tank removals sampling which occurred on June 23, 1994.

LOCATION

Former Desert Petroleum #793 is an non-active station, located on the northwest corner of the intersection of Park Blvd. and Hampel at 4035 Park Blvd., Oakland, California, see Figure 1. Figure 2 is a portion of the U.S.G.S. Oakland East, photorevised 1980 7.5 minute quadrangle map and shows the site at an approximate elevation of 210 feet above mean sea level in projected section 32; T1S; R3W; MDB&M. Figure 3 represents the station conditions during tank removal and shows sample locations.

LOCAL GEOLOGY, HYDROGEOLOGY AND GEOMORPHOLOGY.

GEOMORPHOLOGY

The site is situated on the western slope of the Berkeley Hills, east of Redwood Peak (elev. 1619' amsl) and south of Indian Gulch at an elevation of approximately 210 feet amsl. The Berkeley Hills are a northwest-southeast trending range within the Coastal Range Province of California. Erosion of the Coastal Ranges has filled the valleys within and boardering the Coastal Range with sequences of gravels, silts, sands and clays.

STRATIGRAPHY AND GROUND WATER OCCURRENCE

The native soil that comprised the sidewalls and floor of the UST excavation cavity consists of dark brown silty clay to the thirteen foot depth, overlaying this clay was what is assummed to be imported fill of approximately one foot of brown clay with gravel and 6 inches of red gravel as base beneath 4 inches of asphalt. Beneath the dark brown clay is a light brown firm to stiff clay with occasional gravel size pebbles. These pebbles are subrounded to rounded and do not interconnect and appear to be of metavolcanic origin.

Ground water found in nearby monitoring wells is found approximately 14 to 15 feet below the surface.

The waste oil tank excavation cavity consisted of fill rock, red in color to the four foot depth below a 4 inch thickness of asphalt. Beneath the fill rock is a dark brown clay to the seven and one half foot depth.

UST REMOVAL

Manley and Sons excavated and removed three underground fuel storage tanks on June 23, 1994: These tanks are shown on Figure 3 and are designated T1, T2, and T3. Tank T1 was a eight thousand gallon capacity single steel walled tank that at one time stored leaded regular fuel. Tank T2 was a ten thousand gallon capacity single steel walled tank that at one time stored unleaded fuel and Tank T3 was a six thousand gallon capacity single walled fiberglass tank that at one time stored unleaded fuel. Tank T3 broke on removal, all fiberglass was removed from the excavation. Also at this time one 200 gallon single wall steel tank that was used for waste oil was removed. Prior to removal all fluids contained in the tanks (water utilized to conduct the last tank test) were removed by vacuum truck along with the triple rinse solution. WEGE using a GasTech LEL/O2 meter tested the tanks prior to and after placement of dry ice to inert the tanks. The readings were taken under the supervision of Mr. Larry James of the Oakland Fire Department. T1 and T2 tested below 5 % LEL both before and after dry ice, and O2 tested 20.75% before the dry ice and <1% after adding the dry

tud UST

ice. The waste oil tank did not show any vapor detection and the T3 broke apart during removal. These two tanks did not need to be inerted prior to removal. These site activities were witnessed by Ms. Jennifer Eberle, Hazardous Materials Specialist, Alameda County Health Agency, see Appendix A. UST's T1 and T2 were transpored by H & H for disposal under manifest #92218289 on June 23, 1994. The broken fiberglass and waste oil UST's and rinseate were transported for disposal by Manley and Sons Trucking on June 24, and June 22, 1994 respectively.

All samples of the native soil beneath the UST's were collected from the backhoe bucket and represents the fourteen foot depth in the the fuel tank cavity and the seven foot six inch depth of the waste oil tank cavity. The product line samples (PL-1 and PL-2) were obtained by digging six inches into fresh soil adjacent to the dispenser locations within the product line trench. These samples were obtained at the two and half foot depth, see Table 1 and Figure 3. A Western Geo-Engineers (WEGE) geologist working directly under California Registered Geologist #3037 obtained the samples as required in the August 10, 1990 TRI - REGIONAL BOARD STAFF RECOMMENDATIONS FOR PRELIMINARY EVALUATION AND INVESTIGATION OF UNDERGROUND TANK SITES, see Appendix B - field notes from tank removal and soil sampling.

UST SAMPLING AND RESULTS

Inspection of the T1, T2 and the Waste Oil tanks after removal showed the tanks to be in good condition, still had tar with no obvious corrosion. The fiberglass tank broke apart during removal, all fiberglass was removed from the excavation. During removal of the waste oil UST staining was noted just below the asphalt near the fill. After removal of the fuel UST's, odorous soil (hydrocarbon) was noted at the twelve foot depth, but became clean at the thirteen foot depth. All associated with the UST's and product dispensing system were removed. Field screening (UV fluorescence scope, with pentane extraction) was used to determine if over-excavation would be warranted, and to determine if petroleum hydrocarbons existed beneath the UST's. The UV screening favorably exploits petroleum hydrocarbon's fluorescing characteristics under ultraviolet A sample obtained with the original soil sample WO-1 (7 1/2 foot depth), had no fluorescence. Likewise samples obtained at the fourteen foot depth beneath the fuel UST's had no Field screening indicated that major overfluorescence. excavation was not necessary. Minor excavating continued until no (or trace amounts of) visible fluorescence was detected. that time samples were obtained from the base of the excavations and from the excavated soil. Sample results showed that the field screening technique worked well for the fuel and oil range hydrocarbons and was verified by the certified laboratory results, see Table 1 and Appendix A for certified laboratory results.

Other than the product line samples (PL-1 and PL-2) all samples were obtained from the bucket of the backhoe. The product line samples were obtained by hand digging six inches below the trench produced by removal of the product lines and filling a 2" X 6" clean brass sleeve with the native soil, approximately six inches into the native soil. All soil samples were placed into a 2" X 6" clean brass sleeves. The sleeves were completely filled with the soil (no air space), then the ends were covered with teflon wraps, capped with plastic end caps and sealed with duct tape. Each sleeved sample was then labeled with individual sample ID, time and date sampled and analysis to be performed. The sample was then placed into a zip lock baggie, sealed, placed on ice in a chest and cooled to 4°C for chain of custody delivery to MATRIX Environmental Laboratories Inc. 3017 Kilgore Road #100, Rancho Cordova, California 95742, (916) 635-3962, (DHS Certified Laboratory #1676), see Appendix C.

The sample obtained beneath the waste oil tank (WO-1) was collected from the 7'6" depth and analyzed for Total Petroleum Hydrocarbons as Gasoline and Diesel (TPHg-d) 8015 modified, Oil and Grease 5520E, Benzene-Toluene-Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds 8240, Semi Volatile Organic Compounds 8270, and CAM Metals TTLC (Cd, Cr, Pb, Ni & Zn).

All compounds tested for were below detection limits, with the exception of 3 mg/Kg of gasoline range hydrocarbons, trace amounts of BTEX and background amounts of the metals. Diesel range hydrocarbons, PCB's, Volatile Organic Compounds, and Cadmium were below detection limits.

The product line samples (PL-1 and PL-2) along with the fuel UST samples were analyzed Total Petroleum Hydrocarbons as Gasoline (TPHg) 8020 modified, and Benzene-Toluene-Ethylbenzene and Xylenes (BTEX). Samples T1A and T1B were also tested for CAM Metal TTLC Pb. All samples tested showed trace amounts of BTEX with only T1A testing positive for gasoline range hydrocarbons, 2 mg/Kg. The lead values from T1A and T1B are most likely representative of background levels for lead, 3 and 7.2 mg/Kg respectively. See Table 1 for complete laboratory results.

EXCAVATED SOIL HANDLING

Approximately 20 cubic yards of soil was removed from the waste oil tank excavation. And 180 cubic yards form the product line and UST's excavations. Seven soil samples that represented approximately 25 cubic yard increments were obtained from the excavated soil piles. With the exception of the soil generated from the waste oil cavity, the soil was then placed back into the respective excavation, with the approval of Alameda County Department of Environmental Health due to safety hazard and need to restore site visually and aesthetically. Due to the location of (behind lockable gates, and the minor amount of soil generated (approximately 20 cubic yards) the excavated soil from the waste oil tank cavity was left on the surface. It was agreed upon that

once excavated soil sample results were obtained a workplan would be developed for any future needs of treating/handling this soil.

HEALTH AND SAFETY

This site has been classified as Level D. Common sense and standard construction safety measures are to be maintained at all times. All WEGE personnel involved with this site have a current Certificate for OSHA-SARA Safety Training, as prescribed in 29CFR 1910.120.

SUMMARY

Upon removal of the underground storage tanks, gasoline range hydrocarbons were noted by odor at the twelve foot depth of the excavation. This soil was removed and native soil samples obtained at the fourteen foot depth. UV fluorescent screening of the soil successfully identified the impacted soil. After obtaining the necessary samples the excavations were backfilled with the material that was excavated from them, all but the waste oil excavation which was left open and the excavated soil left on the surface. Certified laboratory results indicate that the contaminated soil does not exceed 14 feet below the surface in the fuel UST cavity, the 7.5 foot depth at the waste oil UST cavity and the 2.5 foot depth at the product line cavity.

RECOMMENDATIONS

Excavated soil tainted with gasoline range hydrocarbons ranging from 68 mg/Kg to 200 mg/Kg was placed back into the fuel UST cavity. Excavated soil tainted with oil range hydrocarbons, at 1,100 mg/Kg was left on the surface near the waste oil UST cavity and secured by lockable gates.

Western Geo-Engineers (WEGE) recommends that the gasoline range hydrocarbon impacted soil placed into the fuel UST cavity be abated using vapor extraction. The native soil surrounding the excavation cavity has a very high clay content and should act as a barier to focus vapor extraction on the soil placed back into the excavation. This soil is a mixture of sand fill and clay and the reworking of the soil by the excavating and filling process should greatly increase permeability. Vapor extraction has proven to be a viable remedial option on other sites that WEGE is involved with.

The waste oil excavated soil is tainted with oil range hydrocarbons. Ex-situ bio-degradation utilizing the naturally occuring bacteria with nutrient enhancement should be looked at.

Ex-situ bioventing is utilizing vapor extraction to replace oxygen into the soil along with minor nutrient augmentation to

supply sufficient food sources to the natural occuring biopopulations that should exist in the soil. Near completion of this process a moderate strengh, 22%, pyroxide could be used to oxidize the remaining hydrocarbons and to enhance oxidation of the soil. The pyroxide nutrient mixture would be introduced as a drip system spread through the impacted excavated soil.

LIMITATIONS

This report is based upon the following:

A. The observations of field personnel.

B. The results of laboratory analyses performed by a state certified laboratory.

C. Referenced documents.

D. Our understanding of the regulations of the State of California, Alameda County and the City of Oakland.

The services performed by Western Geo-Engineers, a corporation, under California Registered Geologist #3037 and/or Contractors License #513857, have been 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 contamination of soil and/or ground water must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

ED GEO

JACK E. NAPPER No. 3037

Sincerely yours,

George L. Converse Project Geologist Jack E. Napper

Ca. Reg. Geologist #3037

cc: Ms. Jennifer Eberie, HMS, Alameda County Health (510)271-4530

TABLE 1
DESERT PETROLEUM #793
4035 PARK BLVD.
OAKLAND, CALIFORNIA 94602

EXCAVATIONS SOIL SAMPLE RESULTS

SAMPLE ID	AREA	DEPTH	DATE	EPA METH	OD 8015	5540 DEF		METHOD 80	20							METHOD 8240	METHOD 8270
		SAMPLE	D SAMPLED	GASOLINE	DIESEL	OIL/GREASE	BENZENE	TOLUENE	ETHYL	XYLENES	LEAD	CADMIUM	CHROMIUM	NICKEL	ZINC	CHLOROMETHANE	
		IN							BENZENE		TTLC	TTLC	TTLC	TTLC	TTLC		
		FEET		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	ug/Kg	ug/Kg
TIA	UST RL 8K	14	06/23/94	2	NA	NA	0.022	0.075	0.03	0.16	3	NA	NA	NA	NA	NA	NA
T1B	STEEL	14	06/23/94	<1	NA	NA	0.027	0.028	0.006	0.026	7.2	NA	NA	NA	NA	NA	NA
T2A	UST UL 10K	14	06/23/94	<1	NA	NA	0.022	0.027	0.005	0.022	NA	NA	NA	NA	NA	АИ	NA
T2B	STEEL	14	06/23/94	<1	NA	NA	0.017	0.025	0.005	0.02	NA	NA	NA	NA	NA	NA	NA
T3A	UST UL 6K	14	06/23/94	<1	ΝA	NA	0.013	0.012	<0.005	<0.015	NA	NA	NA	NA	NA	AN	278
T3B	FIBERGLASS	14	06/23/94	<1	NA	NA	0.013	0.011	<0.005	<0.015	NA	NA	NA	NA	NA.	NA NA	na Na
PL-1	PUMP ISLAND	2.5	06/23/94	<1	NA	NA	0.01	<0.005	<0.005	0.02	NA	NA	***				
PL-2	NEAR DISPENSERS		06/23/94	<1	NA	NA	0.01	0.031	0.0059	0.02	NA NA	NA NA	na Na	NA	NA	NA.	NA
			-			_				0.032	****	NO	MA	NA	NA.	NA	NA
WO-1	WASTE OIL TANK EXCAVATION	7.5	06/23/94	3	<1	<50	0.063	0.34	0.048	0.23	5.3	<0.1	26	61	32	10	NO

ND - BELOW LABORATORY DETECTION LIMITS

NA - NOT ANALYZED

TABLE 2
DESERT PETROLEUM #793
4035 PARK BLVD.
OAKLAND, CALIFORNIA 94602

EXCAVATED SOIL SAMPLE RESULTS

									_		
SAMPLE	ID	AREA	Depth	DATE	EPA METH	OD 8015	5540 D&F		METHOD 80	20	
			SAMPLED	SAMPLED	GASOLINE	DIESEL	OIL/GREASE	Benzene	TOLUENE	STHYL	XYLENES
			IN							BENZENE	
			FEET		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
SP1		UST EXCAVATED	2	06/23/94	110	NA	NA.	<0.05	0.46	0.46	4.9
SP2		SOIL	2 (06/23/94	200	NA	NA	<0.05	0.22	0.340	3.5
SP3			2 (06/23/94	170	NA	NA	<0.05	0.08	0.47	2.6
SP4			2 (06/23/94	68	NA	NA	<0.05	0.13	0.130	1.8
SP5			2 (06/23/94	110	NA.	NA	0.011	0.009	0.140	1.3
SP6		PUMP ISLAND EXCAVATED SOIL	2 (06/23/94	19	NA	NA	0,006	0.009	0.048	0.51
SP-W		WASTE OIL TANK EXCAVATION	2 (06/23/94	c1	<1	1100	0.009	0.008	<0.005	0.02

ND = BELOW LABORATORY DETECTION LIMITS

NA = NOT ANALYZED

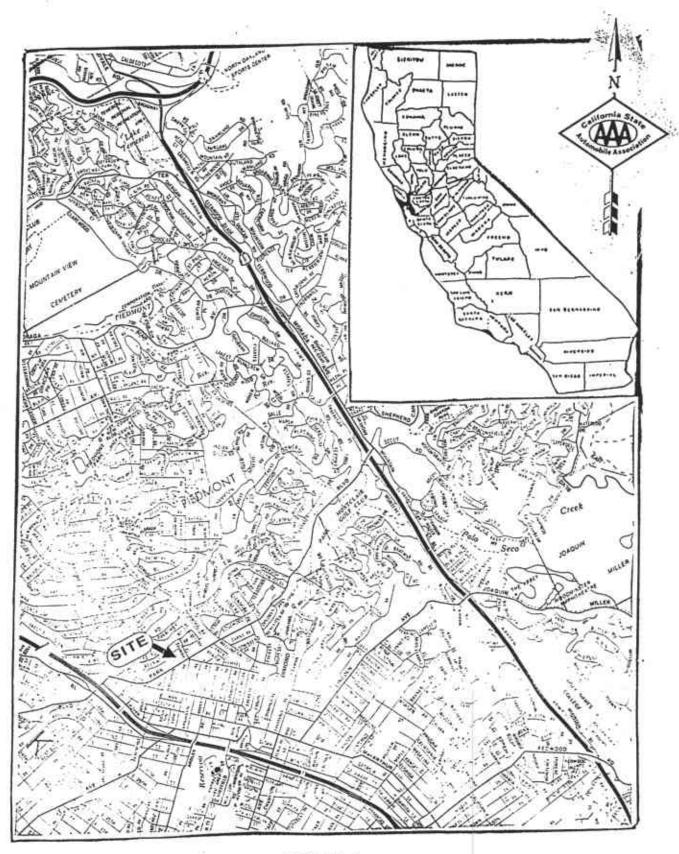


FIGURE 1
Location (AAA Map)



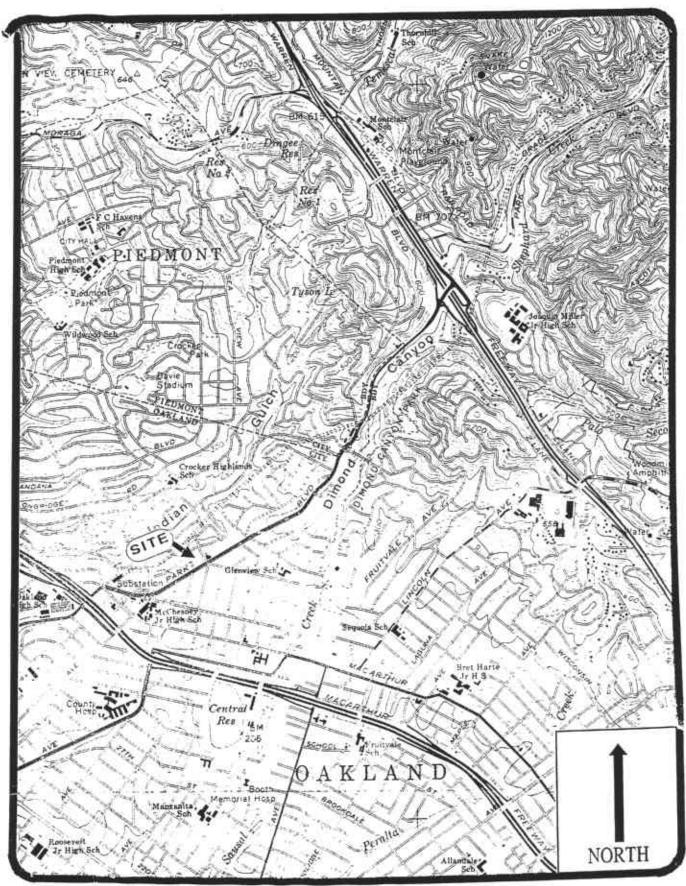
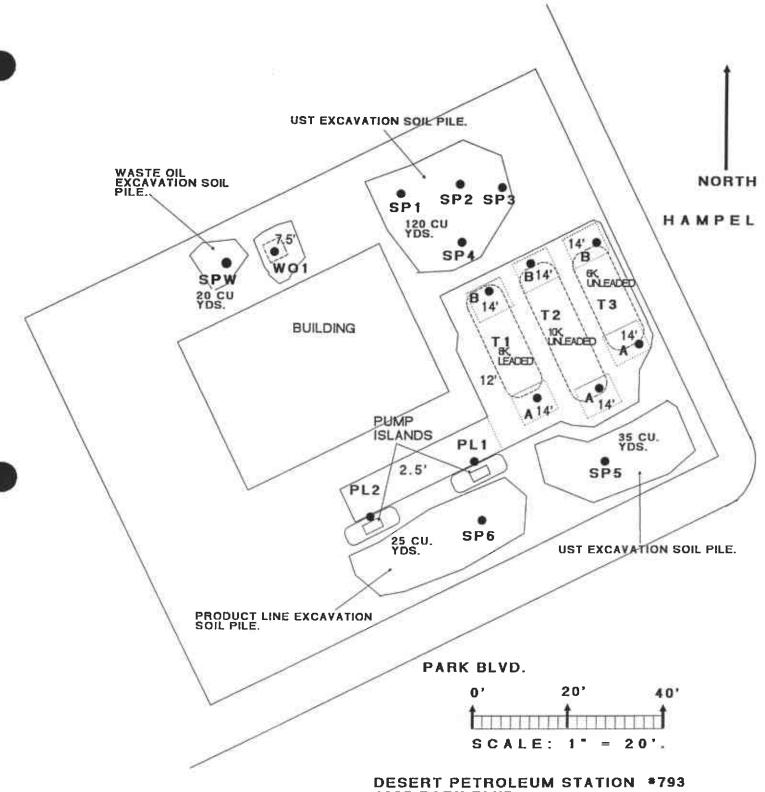


FIGURE 2,, USGS TOPOGRAPHIC MAP



DESERT PETROLEUM STATION *793 4035 PARK BLVD.. OAKLAND, CALIFORNIA 94602

EXPLANATION:

2.5'7.5' EXCAVATION AND/OR SAMPLE 12' 14' DEPTH BELOW SURFACE.

T 1

REMOVED TANK DESIGNATION.

A 14'

SAMPLE POINT AND ID *

FIGURE 1

UST AND PRODUCT LINE REMOVAL SAMPLING LOCATIONS

JUNE 23, 1994

Western GEO 1386 Beamer Street Woodland, Ca 95776 7/8/94

ATTN: George Converse

Re: Project: Desert - Oakland

Lab Reference Number: 4525
Date Samples Received: 6/24/94
No. Samples Received: 16

The samples were received by Matrix Environmental Laboratories intact and in good condition. Samples conformed to required sampling protocols for the requested analyses and were accompanied by required documentation.

Please call if we can be of further assistance.

Charles R. Todd,

Sincerely,

Laboratory Director

MATRIX CHAIN OF COUNTY NO. 4525 MATRIX ENVIRONMENTAL LA C. - LOG-IN ATORIES (916) 635-3962 FAX: (916) 635-9331 **ANALYSIS** PROJECT I.D. Descat - Challend NO. of CONTAINERS OSIN SAN CLIENT CHAIN OF CUSTODY # PAGE _ Samos! / A. DATE TIME **LAB I.D. #** SAMPLE I.D. MATRIX SAMPLED SAMPLED 6/23/4/1125 501 COMMENTS: 942014 942015 TIB 1137 Nermal 942016 T2 A Trans come (1120 115 942017 T2 B 8240/8270 malified 942018 T3 A 100 1615 942019 al DL as V 942026 WO-1 1/30 8010 for 1651 942021 8240 P1-2 942622 1700 942023 5P-W 17/0 942024 1711 17/2 942025 94/2026 503 1713 942627 504 1714 942028 595 1715 1716 942029 Date/Time Relinguished by: (Signature) Special Instructions Received by: (Signature) 9/24/4 0830 Report To: George Converse east Cenare Relinquished by: (Signature) Bill To: Western Ger-Engineers
1386 E. Bernon St
Woodkard, CA 95776 Date/Time Received by: (Signature)

6 Date/Time

Relinquished/by: (Signature)

Received for Laboratory by: (Signature)

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: N/A

Lab ID: Method Blank

Date Sampled: N/A

Date Received: N/A

Date Extracted: 6/27/94
Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	ND	0.005
TOLUENE	ND	0.005
ETHYLBENZENE	ND	0.005
TOTAL XYLENES	ND	0.015
SURROGATE RECOVERY	105%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: T 1 A

Lab ID: 942014

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.022	0.005
TOLUENE	0.075	0.005
ETHYLBENZENE	0.030	0.005
TOTAL XYLENES	0.16	0.015
SURROGATE RECOVERY	108%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: T 1 B

Lab ID: 942015

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.027	0.005
TOLUENE	0.028	0.005
ETHYLBENZENE	0.006	0.005
TOTAL XYLENES	0.026	0.015
SURROGATE RECOVERY	106%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: T 2 A

Lab ID: 942016

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.022	0.005
TOLUENE	0.027	0.005
ETHYLBENZENE	0.005	0.005
TOTAL XYLENES	0.022	0.015
SURROGATE RECOVERY	104%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: T 2 B

Lab ID: 942017

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.017	0.005
TOLUENE	0.025	0.005
ETHYLBENZENE	0.005	0.005
TOTAL XYLENES	0.020	0.015
SURROGATE RECOVERY	104%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: T 3 A

Lab ID: 942018

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.013	0.005
TOLUENE	0.012	0.005
ETHYLBENZENE	ИD	0.005
TOTAL XYLENES	ND	0.015
SURROGATE RECOVERY	103%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: T 3 B

Lab ID: 942019

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.013	0.005
TOLUENE	0.011	0.005
ETHYLBENZENE	ND	0.005
TOTAL XYLENES	ND	0.015
SURROGATE RECOVERY	101%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: W O - 1

Lab ID: 942020

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: 80IL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.063	0.005
TOLUENE	0.34	0.005
ETHYLBENZENE	0.048	0.005
TOTAL XYLENES	0.23	0.015
SURROGATE RECOVERY	103%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse Date Sampled: 6/23/94

COC No: 4525 Date Received: 6/24/94
Project No: Desert - Oakland Date Extracted: 6/27/94

Sample ID: P L- 1 Date of Analysis: 6/27/94

Lab ID: 942021 Matrix: SOIL

COMPOUND mg/kg REPORTING LIMIT (ppm) (ppm) BENZENE 0.010 0.005 TOLUENE ND 0.005 ETHYLBENZENE ND 0.005 TOTAL XYLENES 0.020 0.015 SURROGATE RECOVERY 103% ACCEPTABLE RANGE 70% TO 130%

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: P L- 2

Lab ID: 942022

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.010	0.005
TOLUENE	0.031	0.005
ETHYLBENZENE	0.0059	0.005
TOTAL XYLENES	0.032	0.015
SURROGATE RECOVERY	101%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: S P - W

Lab ID: 942023

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	0.009	0.005
TOLUENE	0.008	0.005
ETHYLBENZENE	ND	0.005
TOTAL XYLENES	0.020	0.015
SURROGATE RECOVERY	103%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: S P 1

Lab ID: 942024

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/28/94

Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	ND	0.05
TOLUENE	0.46	0.05
ETHYLBENZENE	0.46	0.05
TOTAL XYLENES	4.9	0.15
SURROGATE RECOVERY	108%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

(ND) NOT DETECTED AT OR ABOVE THE REPORTING LIMITS.

This sample was diluted to a 1: 10 ratio and the reporting limits adjusted accordingly.

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse Date Sampled: 6/23/94
COC No: 4525 Date Received: 6/24/94

Project No: Desert - Oakland Date Extracted: 6/27/94

Sample ID: S P 4 Date of Analysis: 6/28/94

Lab ID: 942027 Matrix: SOIL

COMPOUND	mg/kg (ppm)	REPORTING LIMIT (ppm)
BENZENE	ND	0.05
TOLUENE	0.13	0.05
ETHYLBENZENE	0.13	0.05
TOTAL XYLENES	1.8	0.15
SURROGATE RECOVERY	106%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

(ND) NOT DETECTED AT OR ABOVE THE REPORTING LIMITS.

This sample was diluted to a 1: 10 ratio and the reporting limits adjusted accordingly.

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: 8 P 5

Lab ID: 942028

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	mg/kg	REPORTING LIMIT (ppm)
BENZENE	0.011	0.005
TOLUENE	0.009	0.005
ETHYLBENZENE	0.14	0.005
TOTAL XYLENES	1.3	0.015
SURROGATE RECOVERY	100%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX, EPA 8020

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525 Project No: Desert - Oakland

Sample ID: S P 6

Lab ID: 942029

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	(ppm)	REPORTING LIMIT (ppm)
BENZENE	0.006	0.005
TOLUENE	0.013	0.005
ETHYLBENZENE	0.048	0.005
TOTAL XYLENES	0.51	0.015
SURROGATE RECOVERY	102%	ACCEPTABLE RANGE 70% TO 130%

NOTE:

ANALYSIS: BTEX SPIKE SUMMARY

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: N/A

Lab ID: LCS/LCSD

Date Sampled: N/A

Date Received: N/A

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	CONC SPIKED	CONC MEASURED		PERCEN RECOVE		
	mg/kg (ppm)	LCS	LCSD	LCS	LCSD	RPD
BENZENE	0.588	0.604	0.645	103%	110%	7%
TOLUENE	0.896	0.859	0.915	96%	102%	6%
ETHYLBENZENE	0.690	0.609	0.647	888	94%	6%
TOTAL XYLENES	1.76	1.54	1.63	87%	92%	6%

LCS=

LABORATORY CONTROL SPIKE

LCSD=

LABORATORY CONTROL SPIKE DUPLICATE

RPD=

RELATIVE PERCENT DIFFERENCE

CONC=

CONCENTRATION

3017 KILGORE ROAD #100 RANCHO CORDOVA, CA 95742

PHONE (916) 635-3962 FAX (916) 635-9331

ANALYSIS: TPH-GASOLINE by EPA 5030 PURGE-AND-TRAP

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Matrix: SOIL

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27-28/1994

	Sample ID	Lab ID		GASOLINE mg/kg (ppm)	REPORTING LIMIT mg/kg (ppm)	SURROGATE RECOVERY
	T 1 A	942014		2.0	1.0	117%
	T 1 B	942015		ND	1.0	115%
	T 2 A	942016		ND	1.0	113%
	T 2 B	942017		ND	1.0	112%
)	T 3 A	942018		ND	1.0	109%
	T 3 B	942019		ND	1.0	104%
	W O - 1	942020		3.0	1.0	103%
	P L - 1	942021		ND	1.0	98%
	P L - 2	942022		ND	1.0	97%
	SP-W	942023		ND	1.0	96%
	S P 1	942024	* *	110	10	114%
	S P 2	942025	* *	200	10	120%
	SP3	942026	* *	170	10	112%
	S P 4	942027	* *	68	10	109%
	S P 5	942028	* *	110	10	106%
	S P 6	942029		19	1.0	105%
	N/A	Method Blank		ND	1.0	107%

^{* *} These samples were analyzed at 1: 10 dilution and the reporting limits adjusted accordingly.

3017 KILGORE ROAD #100 RANCHO CORDOVA, CA 95742

PHONE (916) 635-3962 FAX (916) 635-9331

ANALYSIS: TPH-GASOLINE SPIKE SUMMARY

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: N/A

Lab ID: LCS/LCSD

Date Sampled: N/A

Date Received: N/A

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

COMPOUND	CONC SPIKED	CONC MEASURED		PERCENT RECOVERY		
	mg/kg (ppm)	LCS	LCSD	LCS	LCSD	RPD
GASOLINE	4.55	4.64	4.93	102%	108%	6%

LCS=

LABORATORY CONTROL SPIKE

LCSD=

LABORATORY CONTROL SPIKE DUPLICATE

RPD=

RELATIVE PERCENT DIFFERENCE

CONC=

CONCENTRATION

3017 KILGORE ROAD #100 RANCHO CORDOVA, CA 95742

PHONE (916) 635-3962 FAX (916) 635-9331

ANALYSIS: TPH-D, EPA 8015 mod.

Client: Western GEO

Contact: G. Converse

COC No: 4525

Project No: Desert - Oakland

Matrix: SOIL

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 7/1/94

Date of Analysis: 7/1/94

Lab ID	Sample ID	Diesel mg/Kg (ppm)	REPORTING LIMIT mg/Kg (ppm)
Method Blank	N/A	ND	1
942020	WO-1	ND	1.
942023	SP-W	ND	1.

3017 KILGORE ROAD #100 RANCHO CORDOVA, CA 95742

PHONE (916) 635-3962 FAX (916) 635-9331

ANALYSIS: TPH MATRIX SPIKE SUMMARY

Client: Western GEO

Contact: G. Converse

COC No: 4525

Project No: Desert - Oakland

Matrix: SOIL

Date Sampled: N/A

Date Received: N/A

Date Extracted: 7/1/94

Date of Analysis: 7/1/94

COMPOUND	CONC COMPOUND SPIKED		CONC MEASURED		PERCENT RECOVERY	
	(mg/L)	LCS	LCSD	LCS	LCSD	
DIESEL	100	98	103	98%	103%	5%

LCS= LCSD= LABORATORY CONTROL SPIKE

LABORATORY CONTROL SPIKE DUPLICATE

RELATIVE PERCENT DIFFERENCE

CONCENTRATION

ANALYSIS: Volatile Organic Analytes EPA Method M8240

CLIENT: Western GEO

CONTACT: G Converse Date Sampled: N/A COC No: 4525 Date Received: N/A

Project No: Desert - Oakland Date Extracted: 6/27/94
Sample ID: N/A Date of Analysis: 6/27/94

Lab ID: Method Blank Matrix: SOIL

File: **F2794MB.**

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REPORTING CONCENTRATION ANALYTES LIMIT(ppb) ug/Kg(ppb) 5 1,1,1-trichloroethane ND 5 1,1,2,2-tetrachloroethane ND 5 1,1,2-trichloroethane ND 5 1,1-dichloroethane ND 1,1-dichloroethene ND 5 5 ND 1,2-dichlorobenzene ND 5 1,2-dichloroethane 5 1,2-dichloropropane ND 5 1,3-dichlorobenzene ND 5 ND 1,4-dichlorobenzene 5 2-chloroethylvinyl ether ND 5 bromodichloromethane ND 10 bromomethane ND 5 carbon tetrachloride ND 5 chlorobenzene ND 10 chloroethane ND 5 chloroform ND 10 ND chloromethane 5 ND cis-1,3-dichloropropene 5 dibromochloromethane ND 10 tetrachloroethene ND 5 trans-1,2-dichloroethene ND 5 ND trans-1,3-dichloropropene 5 trichloroethene ND

ND = Not Detected at, or Above the Report Limit

vinyl chloride

trichlorofluoromethane

ND

ND

ANALYSIS: Volatile Organic Analytes EPA Method M8240

CLIENT: Western GEO

CONTACT: G Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: N/A

Lab ID: Method Blank

Date Sampled: N/A

Date Received: N/A

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

File: **F2794MB**.

SURROGATE RECOVERY

Surrogate	Amount	Spike	%Recov	
1,2-dichloroethane-d-4 (Surr)	59.7	50.0	119.4	
toluene-d8 (Surr)	45.7	50.0	91.5	
4-bromofluorobenzene (Surr)	47.2	50.0	94.5	

Surrogate Recovery Range = 50 - 150

ANALYSIS: Volatile Organic Analytes EPA Method M8240

CLIENT: Western GEO

CONTACT: G Converse Date Sampled: 6/23/94
COC No: 4525 Date Received: 6/24/94

Project No: **Desert - Oakland**Sample ID: **WO-1**Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Lab ID: 942020 Matrix: SOIL

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		File: 942020.D
ANALYTES	CONCENTRATION ug/Kg(ppb)	REPORTING LIMIT(ppb)
1,1,1-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
1,1,2-trichloroethane	ND	5
1, I-dichloroethane	ND	5
1,1-dichloroethene	ND	5
1,2-dichlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,2-dichloropropane	ND	5
1,3-dichlorobenzene	ND	5
1,4-dichlorobenzene	ND	5
2-chloroethylvinyl ether	ND	5
bromodichloromethane	ND	5
bromomethane	ND	10
carbon tetrachloride	ND	5
chlorobenzene	ND	5
chloroethane	ND	10
chloroform	ND	5
chloromethane	10	10
cis-1,3-dichloropropene	ND	5
dibromochloromethane	ND	5
tetrachloroethene	ND	10
trans-1,2-dichloroethene	ND	5
trans-1,3-dichloropropene	ND	5
trichloroethene	ND	5
trichlorofluoromethane	ND	10
vinyl chloride	ND	10

ND = Not Detected at, or Above the Report Limit

ANALYSIS: Volatile Organic Analytes EPA Method M8240

CLIENT: Western GEO

CONTACT: G Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: WO-1

Lab ID: 942020

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 6/27/94

Date of Analysis: 6/27/94

Matrix: SOIL

File: 942020.D

SURROGATE RECOVERY

Surrogate	Amount	Spike	%Recov	
1,2-dichloroethane-d-4 (Surr)	53.6	50.0	107.1	
toluene-d8 (Surr)	45.1	50.0	90.1	
4-bromofluorobenzene (Surr)	52.9	50.0	105.7	

Surrogate Recovery Range = 50 - 150

ANALYSIS: Volatile Organic Analytes EPA Method 8240

COC No: 4525 Lab ID: LCS/D Date of Analysis: 6/27/94

Matrix: SOIL

File: F2794LS.D

LABORATORY CONTROL SPIKE

COMPOUND	LEVEL ug/Kg (ppb)	LCS AMNT ug/Kg (ppb)	% RCVRY	LCSD AMNT ug/Kg (ppb)	% RCVRY	RPD
1,1-dichloroethene	50.0	50.1	100.2	49.1	98.2	2.0
benzene	50.0	52.3	104.6	51.8	103.6	1.0
chlorobenzene	50.0	53.6	107.2	52.0	104.0	3.0
toluene	50.0	52.4	104.8	50.2	100.4	4.3
trichloroethene	50.0	48.7	97.4	47.3	94.6	2.9

% RECOVERY RANGE = 50-150 RPD RANGE = 0-25

LCS = LABORATORY CONTROL SPIKE LCSD = LABORATORY CONTROL SPIKE DUPLICATE RPD = RELATIVE PERCENT DEVIATION

ANALYSIS: SemiVolatile Organic Analytes EPA Method 8270

CLIENT: WESTERN GEO

CONTACT: G Converse Date Sampled: N/A
COC No: 4525 Date Received: N/A

Project No: Desert - Oakland Date Extracted: 6/24/94

Sample ID: N/A Date of Analysis: 6/24/94

Lab ID: Method Blank Matrix: SOIL

File: **F2494MB.D**

ANALYTES	CONCENTRATION mg/Kg(ppm)	REPORTING LIMIT(ppm)
1,2,4-Trichlorobenzene	ND	0.30
1,2-Dichlorobenzene	ND	0.30
1,3-Dichlorobenzene	ND	0.30
1,4-Dichlorobenzene	ND	0.30
2,4,5-Trichlorophenol	ND	0.30
2,4,6-Trichlorophenol	ND	0.30
2,4-Dichlorophenol	ND	0.30
2,4-Dimethylphenol	ND	0.30
2,4-Dinitrophenol	ND	0.30
2,4-Dinitrotoluene	ND	0.30
2,6-Dinitrotoluene	ND	0.30
2-Chloronaphthalene	ND	0.30
2-Chlorophenol	ND	0.30
2-Methyl-4,6-dinitrophenol	ND	0.30
2-Methylnaphthalene	ND	0.30
2-Methylphenol	ND	0.30
2-Nitroaniline	ND	1,50
2-Nitrophenol	ND	0,30
3,3'-Dichlorobenzidene	ND	0.30
3-Nitroaniline	ND	1.50
4-Bromophenyl phenyl ether	ND	0.30
4-Chloro-3-methylphenol	ND	0.30
4-Chloroaniline	ND	0.60
4-Chlorophenyl phenyl ether	ND	0.30
4-Methylphenol	ND	0.30
4-Nitroaniline	ND	1.50
4-Nitrophenol	ND	0.30

ANALYSIS: SemiVolatile Organic Analytes EPA Method 8270

CLIENT: WESTERN GEO

CONTACT: G Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: N/A

Lab ID: Method Blank

Date Sampled: N/A

Date Received: N/A

Date Extracted: 6/24/94

Date of Analysis: 6/24/94

Matrix: **SOIL**

File: **F2494MB.D**

ANALYTES	CONCENTRATION mg/Kg(ppm)	REPORTING LIMIT(ppm)
Acenaphthene	ND	0.30
Acenaphthylene	ND	0.30
Anthracene	ND	0.30
Azobenzene	ND	0.30
Benz[a]anthracene	ND	0.30
Benzo[a]pyrene	ND	0.30
Benzo[b]fluoranthene	ND	0.30
Benzo[g,h,i]perylene	ND	0.30
Benzo[k]fluoranthene	ND	0.30
Benzoic acid	ND	0.30
Benzyl alcohol	ND	0.60
Bis(2-chloroethoxy)methane	ND	0.30
Bis(2-chloroethyl)ether	ND	0.30
Bis(2-chloroisopropyl)ether	ND	0.30
Bis(2-ethylhexyl)phthalate	ND	0.30
Butylbenzylphthalate	ND	0.30
Chrysene	ND	0.30
Di-n-Butylphthalate	ND	0.30
Di-n-octylphthalate	ND	0.30
Dibenzo[a,h]anthracene	ND	0.30
Dibenzofuran	ND	0.30
Diethylphthalate	ND	0.30
Dimethylphthalate	ND	0.30
Fluoranthene	ND	0.30
Fluorene	ND	0.30
Hexachlorobenzene	ND	0.30
Hexachlorobutadiene	ND	0.30

ANALYSIS: SemiVolatile Organic Analytes EPA Method 8270

CLIENT: WESTERN GEO

CONTACT: G Converse Date Sampled: N/A

COC No: 4525 Date Received: N/A

Project No: Desert - Oakland Date Extracted: 6/24/94

Sample ID: N/A Date of Analysis: 6/24/94

Lab ID: Method Blank Matrix: SOIL

File: F2494MB.D

ANALYTES	CONCENTRATION mg/Kg(ppm)	REPORTING LIMIT(ppm)
Hexachlorocyclopentadiene	ND	0.30
Hexachloroethane	ND	0.30
Indeno(1,2,3-c,d)pyrene	ND	0.30
Isophorone	ND	0.30
N-Nitrosodi-n-propyl amine	ND	0.30
N-Nitrosodimethyl amine	ND	0.30
N-Nitrosodiphenylamine	ND	0.30
Naphthalene	ND	0.30
Nitrobenzene	ND	0.30
Pentachlorophenol	ND	0.30
Phenanthrene	ND	0.30
Phenol	ND	0.30
Pyrene	ND	0.30

ND = Not Detected At or Above the Report Limit

SURROGATE RECOVERY

Surrogate	Amount	Spike	Recovery	Range	
2-Fluorobiphenyl	93.4	100	93.4	30-115	
2-Fluorophenol	76.9	200	38.4	25-121	
4-Terphenyl-D14	33.6	100	33.6	18-137	
Nitrobenzene-D5	66.8	100	66.8	23-120	
Phenol-D6	83.5	200	41.8	24-113	
Tribromophenol	208.0	200	104.0	19-122	

ANALYSIS: SemiVolatile Organic Analytes EPA Method 8270

CLIENT: WESTERN GEO

CONTACT: G Converse Date Sampled: 6/23/94

COC No: 4525 Date Received: 6/24/94
Project No: Desert - Oakland Date Extracted: 6/24/94

Sample ID: WO-1 Date of Analysis: 6/24/94

Lab ID: 942020 Matrix: SOIL

File: 942020.D

			16. 942020.10
	ANALYTES	CONCENTRATION mg/Kg(ppm)	REPORTING LIMIT(ppm)
	1,2,4-Trichlorobenzene	ND	0.30
	1,2-Dichlorobenzene	ND	0.30
	1,3-Dichlorobenzene	ND	0.30
	1,4-Dichlorobenzene	ND	0.30
	2,4,5-Trichlorophenol	ND	0.30
	2,4,6-Trichlorophenol	ND	0.30
	2,4-Dichlorophenol	ND	0.30
	2,4-Dimethylphenol	ND	0.30
	2,4-Dinitrophenol	ND	0.30
	2,4-Dinitrotoluene	ND	0.30
	2,6-Dinitrotoluene	ND	0.30
	2-Chloronaphthalene	ND	0.30
	2-Chlorophenol	ND	0.30
	2-Methyl-4,6-dinitrophenol	ND	0.30
	2-Methylnaphthalene	ND	0.30
	2-Methylphenol	ND	0.30
	2-Nitroaniline	ND	1.50
	2-Nitrophenol	ND	0.30
•	3,3'-Dichlorobenzidene	ND	0.30
	3-Nitroaniline	ND	1.50
	4-Bromophenyl phenyl ether	ND	0.30
	4-Chloro-3-methylphenol	ND	0.30
	4-Chloroaniline	ND	0.60
	4-Chlorophenyl phenyl ether	ND	0.30
	4-Methylphenol	ND	0.30
	4-Nitroaniline	ND	1.50
	4-Nitrophenol	ND	0.30

ANALYSIS: SemiVolatile Organic Analytes EPA Method 8270

CLIENT: WESTERN GEO

CONTACT: G Converse Date Sampled: 6/23/94

COC No: 4525

Project No: Desert - Oakland

Date Received: 6/24/94

Date Extracted: 6/24/94

Sample ID: WO-1 Date of Analysis: 6/24/94

Lab ID: 942020 Matrix: SOIL

File: 942020.D

-,·., 	ANALYTES	CONCENTRATION mg/Kg(ppm)	REPORTING LIMIT(ppm)
	Acenaphthene	ND	0,30
	Acenaphthylene	ND	0.30
	Anthracene	ND	0,30
	Azobenzene	ND	0.30
	Benz[a]anthracene	ND	0.30
	Benzo[a]pyrene	ND	0.30
	Benzo[b]fluoranthene	ND	0.30
	Benzo[g,h,i]perylene	ND	0.30
	Benzo[k]fluoranthene	ND	0.30
	Benzoic acid	ND	0.30
	Benzyl alcohol	ND	0.60
	Bis(2-chloroethoxy)methane	ND	0.30
	Bis(2-chloroethyl)ether	ND	0.30
	Bis(2-chloroisopropyl)ether	ND	0.30
	Bis(2-ethylhexyl)phthalate	ND	0.30
	Butylbenzylphthalate	ND	0.30
	Chrysene	ND	0.30
	Di-n-Butylphthalate	ND	0.30
	Di-n-octylphthalate	ND	0.30
	Dibenzo[a,h]anthracene	ND	0.30
	Dibenzofuran	ND	0.30
	Diethylphthalate	ND	0.30
	Dimethylphthalate	ND	0.30
	Fluoranthene	ND	0.30
	Fluorene	ND	0.30
	Hexachlorobenzene	ND	0.30
	Hexachlorobutadiene	ND	0.30

ANALYSIS: SemiVolatile Organic Analytes EPA Method 8270

CLIENT: WESTERN GEO

CONTACT: G Converse Date Sampled: 6/23/94

COC No: 4525 Date Received: 6/24/94
Project No: Desert - Oakland Date Extracted: 6/24/94

Sample ID: WO-1 Date of Analysis: 6/24/94

Lab ID: 942020 Matrix: SOIL

File: 942020.D

ANALYTES	CONCENTRATION mg/Kg(ppm)	REPORTING LIMIT(ppm)
Hexachlorocyclopentadiene	ND	0.30
Hexachloroethane	ND	0.30
Indeno(1,2,3-c,d)pyrene	ND	0.30
Isophorone	ND	0.30
N-Nitrosodi-n-propyl amine	ND	0.30
N-Nitrosodimethyl amine	ND	0.30
N-Nitrosodiphenylamine	ND	0.30
Naphthalene	ND	0.30
Nitrobenzene	ND	0.30
Pentachlorophenol	ND	0.30
Phenanthrene	ND	0.30
Phenol	ND	0.30
Pyrene	ND	0.30
=		

ND = Not Detected At or Above the Report Limit

SURROGATE RECOVERY

Surrogate	Amount	Spike	Recovery	Range	
2-Fluorobiphenyl	90.0	100	90.0	30-115	
2-Fluorophenol	71.7	200	35.9	25-121	
4-Terphenyl-D14	29.9	100	29.9	18-137	
Nitrobenzene-D5	62.3	100	62.3	23-120	
Phenol-D6	79.5	200	39.8	24-113	
Tribromophenol	187.4	200	93.7	19-122	

ANALYSIS: SemiVolatile Organics EPA Method 8270

COC No: 4525

Project No: Desert - Oakland Date Extracted: 6/24/94

Sample ID: N/A

Date of Analysis: 6/24/94

Lab ID: LCS/LCSD

Matrix: 80IL

File: F2494LS.D

LABORATORY CONTROL SPIKE

		LCS	%	LCSD	%	RECVRY	
COMPOUND	LEVEL	АМИТ	RECVRY	AMNT	RECVRY	RANGE	RPD
Phenol	200	120.4	60.2	109.4	54.7	5-112	9.5
2- Chlorophenol	200	132.1	66.0	117.2	58.6	23-134	11.9
4-Dichlorobenzene	100	63.0	63.0	54.6	54.6	20-124	14.3
N-Nitrosodi-n-propyl am	100	79.4	79.4	70.9	70.9	1-230	11.3
1,2,4-Trichlorobenzene	100	60.0	60.0	53.7	53.7	32-142	11.1
4-Chloro-3-methylphenol	200	134.9	67.5	119.2	59.6	22-147	12.3
Acenaphthene	100	68.5	68.5	64.1	64.1	30-145	6.7
4-Nitrophenol	200	128.7	64.3	134.8	67.4	1-132	4.7
2,4-Dinitrotoluene	100	82.0	82.0	77.8	77.8	20-139	5.2
Pentachlorophenol	200	52.4	26.2	48.7	24.3	14-176	7.4
Pyrene	100	83.1	83.1	80.6	80.6	32-145	3.1

RPD RANGE = 0-25

All concentrations are in mg/Kg (ppm)

LCS=LABORATORY CONTROL SPIKE LCSD=LABORATORY CONTROL SPIKE DUPLICATE RPD = RELATIVE PERCENT DEVIATION

ANALYSIS: EPA 418.1, OIL & GREASE by IR SPECTROPHOTOMETER

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: N/A

Lab ID: METHOD BLANK

Date Sampled: N/A

Date Received: N/A

Date Extracted: 7/1/94

Date of Analysis: 7/5/94

Matrix: SOIL

COMPOUND

(mg/Kg) (ppm) REPORTING LIMIT

(ppm)

OIL & GREASE

ND

50

NOTE: (ND) NOT DETECTED AT OR ABOVE REPORTING LIMITS.

ANALYSIS: EPA 418.1, OIL & GREASE by IR SPECTROPHOTOMETER

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: WO-1

Lab ID: 942020

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 7/1/94

Date of Analysis: 7/5/94

Matrix: SOIL

COMPOUND

(mg/Kg) (ppm) REPORTING LIMIT

(ppm)

OIL & GREASE

ND

50

NOTE: (ND) NOT DETECTED AT OR ABOVE REPORTING LIMITS.

ANALYSIS: EPA 418.1, OIL & GREASE by IR SPECTROPHOTOMETER

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: SP-W

Lab ID: 942023

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 7/1/94

Date of Analysis: 7/5/94

Matrix: SOIL

COMPOUND

(mg/Kg)
(ppm)

REPORTING LIMIT

(ppm)

OIL & GREASE

1,100

50

NOTE: (ND) NOT DETECTED AT OR ABOVE REPORTING LIMITS.

ANALYSIS: EPA 418.1; OIL & GREASE SPIKE SUMMARY

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert - Oakland

Sample ID: N/A

Lab ID: LCS/LCSD

Date Sampled: N/A

Date Received: N/A

Date Extracted: 7/1/94

Date of Analysis: 7/5/94

Matrix: SOIL

COMPOUND	CONC SPIKED	CONC MEASUR	ED	PERCENT RECOVERY		
		LCS	LCSD	LCS	LCSD	RPD
OIL & GREASE	500	400	493	80%	99%	21%

LCS=

LABORATORY CONTROL SPIKE

LCSD= LABORATORY CONTROL SPIKE DUPLICATE

RPD=

RELATIVE PERCENT DIFFERENCE

CONC=

CONCENTRATION

3017 KILGORE ROAD #100 RANCHO CORDOVA, CA 95742

PHONE (916) 635-3962 FAX (916) 635-9331

ANALYSIS: LEAD TTLC

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert-Oakland

Matrix: SOIL

Date Sampled: 6/23/94

Date Received: 6/24/94

Date Extracted: 7/6/94

Date of Analysis: 7/6/94

Lab ID	Sample ID	Lead mg/Kg (ppm)	REPORTING LIMIT mg/Kg (ppm)	Method
Method Blank	N/A	ND	.5	7420
942014	T1 A	3.	.5	7420
942015	T1 B	7.2	.5	7420

NOTE: (ND) =NOT DETECTED AT OR ABOVE THE REPORTING LIMITS.

3017 KILGORE ROAD #100 RANCHO CORDOVA, CA 95742

PHONE (916) 635-3962 FAX (916) 635-9331

ANALYSIS: LEAD MATRIX SPIKE SUMMARY

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert-Oakland

Matrix: SOIL

Date Sampled: N/A

Date Received: N/A

Date Extracted: 7/6/94

Date of Analysis: 7/6/94

COMPOUND	CONC SPIKED	CONC PERCENT MEASURED RECOVERY		RPD		
	(mg/L)	LCS	LCSD	LCS	LCSD	
LEAD	2.0	1.9	1.9	95%	95%	0%

LCS= LCSD= LABORATORY CONTROL SPIKE

LABORATORY CONTROL SPIKE DUPLICATE

RPD= RELATIVE PERCENT DIFFERENCE

CONCENTRATION

ANALYSIS: METALS CAM 5 TTLC

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert-Oakland

Sample ID: N/A

Lab ID: Method Blank

Date Sampled: N/A

Date Received: N/A

Date Extracted: 7/6/94

Date of Analysis: 7/6/94

Matrix: SOIL

COMPOUND	mg/Kg	REPORTING LIMIT mg/Kg (ppm)	Method
CADMIUM	ND	.1	7130
CHROMIUM	ND	.2	7190
LEAD	ND	. 5	7420
NICKEL	ND	.2	7520
ZINC	ND	.8	7920

NOTE:

(ND) NOT DETECTED AT OR ABOVE THE REPORTING LIMITS.

ANALYSIS: METALS CAM 5 TTLC

CLIENT: Western GEO

CONTACT: G. Converse Date Sampled: 6/23/94

Date Received: 6/24/94 COC No: 4525 Date Extracted: 7/6/94 Project No: Desert-Oakland

Date of Analysis: 7/6/94 Sample ID: WO-1 Lab ID: 942020 Matrix: SOIL

COMPOUND	mg/Kg (ppm)	REPORTING LIMIT mg/Kg (ppm)	Method
CADMIUM	ND	.1	7130
CHROMIUM	26.	.2	7190
LEAD	5.3	.5	7420
NICKEL	61.	.2	7520
ZINC	32.	.8	7920

NOTE:

(ND) NOT DETECTED AT OR ABOVE THE REPORTING LIMITS.

ANALYSIS: METALS LABORATORY CONTROL SPIKE SUMMARY

CLIENT: Western GEO

CONTACT: G. Converse

COC No: 4525

Project No: Desert-Oakland

Sample ID: N/A

Lab ID: LCS/LCSD

Date Sampled: N/A

Date Received: N/A

Date Extracted: 7/6/94

Date of Analysis: 7/6/94

Matrix: SOIL

COMPOUND	CONC SPIKED	CONC MEASU	RED	PERCENT RECOVERY	· • • • • • • • • • • • • • • • • • • •	RPD
	(PPM)	LCS	LCSD	LCS	LCSD	
CADMIUM	2	2.1	2.1	105%	105%	0%
CHROMIUM	2	1.7	1.7	85%	85%	0%
LEAD	2	2	2	100%	100%	0%
NICKEL	2	1.9	1.9	95%	95%	0%
ZINC	2	2.1	2.1	105%	105%	0%

LCS=

LABORATORY CONTROL SPIKE

LCSD= LABORATORY CONTROL SPIKE DUPLICATE

RPD= RELATIVE PERCENT DIFFERENCE

CONC=

CONCENTRATION

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ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

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

Hazardous Materials Inspection Form

			11,111
*	3	<u>.</u>	Site # Site Name Desert Petroleum Todays, 23,94
11.	A BUSINESS PLANS (Title 19) 1. Immediate Reporting 2. Bus. Plan Sids 3. RR Cars > 30 days	2703 25503(b) 25503.7	Site Address 4035 Park Blod.
	4_Inventory Information 5, Inventory Complete 6. Emergency Response	25504(a) 2730 25504(b)	City Dalland Zip 94602 Phone
		25504(c) 25505(a) 25505(b)	MAX AMT stored > 500 lbs, 55 gal., 200 cft.?
		25000,07	inspection Categories:
H.B	ACUTELY HAZ. MATLS 10. Registration Form Filed	25533(q)	I. Haz. Mat/Waste GENERATOR/TRANSPORTER & US \I. Business Plans. Acute Hazardous Materials
	11. Form Complete 12. RMPP Contents 13. Implement Sch. Regid? (Y/	25533(b) 25534(c)	III. Underground Tanks Nemoval of 10 K UST
	14. OffSite Conseq. Assess. 15. Probable Risk Assessment 16. Persons Responsible	25524(c) 25534(d) 25534(g)	* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)
		25534(f) 25536(b)	10:00 arrived onsite
	14. IIddə səciəl Requesiad?	25538	10:05 Removal of 8K steel regular gasoline
ıı.	UNDERGROUND TANKS: (Titl	e 23)	UST: tax-wrapped, no obvious holds
ā	1. Permit Application2. Pipeline Leak Detection3. Records Maintenance	25284 (H&S) 25292 (H&S)	10:25 Larry James of OFD arrived.
ů	4. Release Report 5. Closure Plans	2712 2651 2670	10.30 Removal of 10K steel 11L gas UST:
	6. Method 1) Monthly Test	. ,,	tar-mapped
	Daily Vadase Semi-annual gnowater One time sals		These of 1151s hauled by H+H under manifes
	 Daily Vactore One time sois 		Maria to the Kinstle transported in
g Tank	Annual tank test 4) Monthly Gnawater One time sots		tts him bac do lotte it 12797981.
Exising	5) Daily inventory Annual tank feeting Controloe leak det		There is a small and of uniter below 11STs.
Monitoring for	Vadose/gndwater mon, 6) Daily Inventory Annual tank testing	i	but it is probably not aw, based on
konilori	Contploe leak det 7) Weekly Tank Gauge	*	ow diaging below this + (Finding dry sort, w
-2	Annual tank titing 8) Annual Tank Testing Daily Inventiony	a .	no mater leaching in.
	7. Precis Tonk Test	_	11.15 beau sampling stil under tanks
	Date:	2643 2644	+1+12; see attached map. TI samples
	10. Ground Water,	2646 2647	will be analyzed for total lead. These
Tanks	11.Monitor Plan 12.Access. Secure 13.Plans Submit	2632 2634 2711	4 samples were taken ~ 14 bgs in clay w/
× ×	Date: 14, As Bullt Date:	2635	fravel brown, no oder. B samples, are
Rev 6		eft gite	The ena.
	rit by A	/ · · / · · · · · · · · · · · · · · · ·	Stained odorous (HC) soil.
	Contact:		To so I, III
	Title: <u>//</u>	18then (19- Fryineers Inspector: Suntes Eberle
	Signature:	Glow	L'amene Signature: X1/100

-env.health yellow -facility pink -files

Signature:

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200 Oakland, CA 94621

(415) 271-4320

	HC	azaraous Materiais inspection Form
·	******************	site ste Name Desert Patroleum Todays, 33,94
II.A BUSINESS PLANS (Title 19) 1. Immediate Reporting 2. Bus. Plan Stds. 3. RR Cars > 30 days 4. Inventory Information 5. Inventory Camplete 6. Emergency Response 7. Training 8. Deficiency 9. Modification	2703 25503(b) 25503.7 25504(d) 2730 25504(b) 25504(e) 25505(d) 25505(d)	Site Address 4035 Park Blod City Oak Zip 94 60 Phone
II.B ACUTELY HAZ. MATLS	25533(d) 25533(b) 25534(c) 25524(c) 25534(d) 25534(g) 25534(f)	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)
18. Exemption Request? (Y/N) 19. Trade Secret Requested? III. UNDERGROUND TANKS (Title	25536(b) 25538	8K Auger LL gas 115T + waste oil:
1. Permit Application 2. Pipeline Leak Defection 3. Records Maintenance 4. Release Report 5. Closure Plans	25284 (H&S) 25292 (H&S) 2712 2651 2670	4:10 Began sampling under T3 & 2 below the USIT, at a 14 bass. Soil samples have
6. Method 1) Monthly Test 2) Daily Vadose Sern-annud gnowater One time sals 3) Daily Vadose One time sals 4) Monthly Snowater Che time sals 5) Daily Inventory Annual tank testing Cont pipe leak det Vadose/gnowater man. 6) Daily Inventory Annual tank testing Cont pipe leak det 7) Weekly Tank Gauge Annual Tank testing 8) Annual Tank Testing Daily Inventory		Mo odor, are clayed who avel, + browned. 4:30 Sampled w.b. pit at 17/2 bgs. (Bottom of wo UST was a 6' bgs). (WO-1). Soil in bit looks clean, as hid sample WO-1: brown silty play. 4:50 Sample dispenses/pioins connection at ~2' bgs. 5:00 W.O. UST is mesty but has no obvious helps. 5:10 Stockpile samples taken. He. SP from Luel USTs is keing back-
9) Other	2643 2644 2646 2647 2632 2634 2711 2635	lilled thec. WRP has no # to offhant or Everex, b) safety hazard, + c) need to restore, site visually + esthetically. The 2 USTS will be offhanted tordorrow my Manley + Long. left site
Contact: _		
Title:		Inspector:

Signature:

DP 793 1 "=20" Califord, CA 94622 16 6-4 Tan PID Ale. 71/2 We-1 2506 FOO PIO 75P5 PIU UST Excus for Hampel 10:3e ISE LEL 102 4---4 ZAM Seel 3 /20-75 = 20led 5%/6/41 Chy 11 pour for st. El cel 2 120.75 antacked 46/12 14 close garet T3 Fipigles - buche - rannel all fiberbase ind Asphal 4" 0/21 Fill Kehldat Dry Tee 9: 35 Am chy dh bonn Text : = bo det

71/2

MATRIX NO. 4525 MATRIX ENVIRONMENTAL LA TORIES (916) 635-3962 FAX: (916) 635-9331 CHAIN OF CU L- LOG-IN PROJECT LD. ANALYSIS Desat - Ochland (DP793 NO. of CONTAINERS PAGE ___ CLIENT CHAIN OF CUSTODY # San San Orec Soume Con 476056 OC STATE OF THE PERSON OF THE LAB I.D. # SAMPLE I.D. DATE TIME MATRIX 8 SAMPLED SAMPLED 942014 TIA 6/23/4/1125 Seil COMMENTS: 942015 1137 Marma! 942016 T2 A 1120 Turn comment 942017 1115 942018 T3 A 1620 942019 73 B 1615 942020 WO-1 1630 w/ DL as 942021 PL-1 8010 for 1651 942022 PL-2 8240 1700 942023 SP-W 1710 942024 501 1711 942025 502 17/2 9412026 503 17/3 942027 504 1714 9412028 505 1715 942029 506 1716 Relinquished by: (Signature) Date/Time Received by: (Signature) Special Instructions 924/4 083 Comere Report To: George Concess Relinquished by: (Signature) Date/Time Received by: (Signature) Bill To: Western Ger-Engineers 1386 E. Bainot St Woodkind, CA 95776 6 /Date/Time Relinquished/by: (Signature) Received for Laboratory by: (Signature)

