



gettler — ryan inc.

general contractors

June 21, 1990

Alameda County Health Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Attention: Mr. Barney Chan

Reference: Unocal Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California 94610

Gentlemen:

Enclosed is a preliminary report presenting the results of the soil sampling and analyses conducted at the above referenced location. The soil samples were collected from the bottom and sidewalls of the underground storage tank excavation on June 20, 1990. The soil samples were analyzed on-site using a mobile laboratory provided by NET Pacific, Inc. A copy of the Hazardous Waste Testing Laboratory Certification List for the mobile laboratory is attached.

The soil analytical results presented in the enclosed report indicate that soil contaminated with TPH-Gasoline has been removed from the excavation where the new gasoline storage tanks are to be installed. Gettler-Ryan Inc. requests your authorization to install the new gasoline storage tanks.

The new waste oil tank will not be installed until the removal of contaminated soil detected in sidewall sample UX-14 has been completed and verified by additional sampling and analysis.

A final report presenting the results of the soil sampling and analyses will be submitted to Alameda County Environmental Health upon the completion of the tank replacement project.

Please do not hesitate to call should you have any questions or comments.

Sincerely,

John P. Werfal
Project Manager

JPW/ch

enclosure

cc: Mr. Ron Bock, Unocal Corporation



GeoStrategies Inc.

PRELIMINARY SOIL SAMPLING ANALYTICAL RESULTS

UNOCAL Service Station #5325
3220 Lakeshore Avenue
Oakland, California

Report No. 7814-2

June 21, 1990

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JUN 21 1990

GETTLER-RYAN INC.
GENERAL CONTRACTORS

(415) 352-4800



GeoStrategies Inc.

2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545

June 21, 1990

Gettler-Ryan Inc.
2150 West Winton Avenue
Hayward, California 94545

Attn: Mr. John Werfal

Re: PRELIMINARY SOIL SAMPLING ANALYTICAL RESULTS
UNOCAL Service Station #5325
3220 Lakeshore Avenue
Oakland, California

Gentlemen:

This letter presents the preliminary chemical analytical results and soil sampling methods for samples collected from the sidewalls and bottom of the underground storage tank excavation at the above referenced location (Plate 1). The site is located near Lake Merritt, and is underlain by clayey soil.

SOIL SAMPLING AND ANALYSIS

The samples were collected on June 20, 1990, and analyzed in a National Environmental Testing (NET) Pacific mobile laboratory, a State-certified environmental laboratory. The soil samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline) according to EPA Method 8015 (Modified) and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) according to EPA Method 8020. Preliminary results obtained from the laboratory on June 20, 1990 are attached.

Soil samples were collected from the UGST excavation using a drive-hammer hand-sampler fitted with pre-cleaned brass tube liners. Some samples were collected by excavating soil and collecting a sample directly from the excavator bucket. The soil samples were covered on both ends with aluminum foil, sealed with plastic end caps, labeled, entered onto a chain-of-custody form, and placed in a cooler with blue ice until they were analyzed. Plate 2 illustrates the approximate locations in the excavation where soil samples were collected. Table 1 summarizes sample depths and the analytical results.

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GeoStrategies Inc.

Gettler-Ryan Inc.
June 21, 1990
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DISCUSSION

The analytical results indicate that samples UX-5 through UX-9 did not contain detectable concentrations of TPH-Gasoline. Several samples contained low detectable concentrations of several BTEX compounds in parts per billion (ppb). The vertical extent of the contamination has been excavated to low levels of BTEX compounds. TPH-Gasoline was not detected in any of the soil samples from the bottom of the excavation (UX-6, UX-7, UX-9, and UX-12).

Sample UX-10 was collected from the excavation sidewall prior to completion of the excavation. The analyses identified TPH-Gasoline at a concentration of 1,300 ppm. Upon receipt of these results, the excavation was extended three feet and the sidewall was sampled again (UX-13). TPH-Gasoline was not detected in UX-13.

Excavation sidewall sample UX-14, collected near the former waste oil tank location, contained 2,800 ppm of TPH-Gasoline (Plates 2 and 3). Additional excavation to remove the observed petroleum hydrocarbons in this area is scheduled for June 21, 1990. Additional soil samples will be collected to ascertain contaminant presence and removal of that source.

In our opinion, the current and scheduled excavations have removed the TPH-Gasoline and BTEX contaminants. While very low concentrations of BTEX have been sporadically observed in samples collected from the excavation floor, we feel these represent very modest residual levels. Given the clayey soil in which the excavation occurs, and source removal, further vertical excavation is not warranted prior to placing the new underground gasoline storage tanks.

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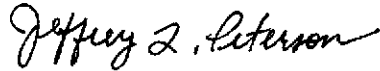
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If you have any questions, please call.

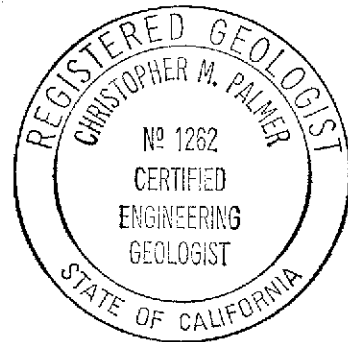
GeoStrategies Inc. by,



Matthew J. Janowiak
Geologist



Jeffrey L. Peterson
Senior Hydrogeologist
R.E.A. 1021



Christopher M. Palmer
C.E.G. 1262, R.E.A. 285

MJJ/JLP/kjj

Attachments: Table 1. Soil Analysis Results
Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Soil Sample Location Map
NET Pacific preliminary results

EXHIBIT III
HAZARDOUS WASTE TESTING LABORATORY CERTIFICATION LIST
 Hazardous Materials Laboratory Section, California Department of Health Services, 2151 Berkeley Way, Berkeley, CA 94704

NET Pacific, Inc/Mobila Lab.
 435 Tesconi Circle
 Santa Rosa, CA 95401

PHONE: (707)526-7200
 Vehicle License No. 2V16319

LABORATORY CATEGORY: Commercial
 CERTIFICATE NUMBER: 334

ORGANIC CHEMICAL TESTING	METHOD NUMBER (DATE CERTIFIED)	(Y = CERTIFIED; N = NOT CERTIFIED)
1.1 Halogenated Volatile Organics	-----8010(05-01-89)-----	Y
1.2 Non-Halogenated Volatile Organics	-----8015(05-01-89)-----	Y
1.3 Aromatic Volatile Organics	-----8020(05-01-89)-----	Y
1.4 Acrolein, Acrylonitrile, Acetonitrile	-----	N
1.5 Phenols	-----	N
1.6 Phthalate Esters	-----	N
1.7 Organochlorine Pesticides	-----	N
1.8 Polychlorinated Biphenyls (PCBs)	-----	N
1.9 Nitroaromatics and Cyclic Ketones	-----	N
1.10 Polynuclear Aromatic Hydrocarbons	-----	N
1.11 Chlorinated Hydrocarbons	-----	N
1.12 Organophosphorus Pesticides	-----	N
1.13 Chlorinated Herbicides	-----	N
1.14 Carbamates	-----	N
1.15 GC/MS Method for Volatile Organics	-----	N
1.16 GC/MS Method for Semivolatile Organics	-----	N

INORGANIC CHEMICAL TESTING	METHOD NUMBER (DATE CERTIFIED)	(Y = CERTIFIED; N = NOT CERTIFIED)
2.1 Antimony	-----	N
2.2 Arsenic	-----	N
2.3 Barium	-----	N
2.4 Beryllium	-----	N
2.5 Cadmium	-----	N
2.6 Chromium(VI)	-----	N
2.7 Chromium(total)	-----	N
2.8 Cobalt	-----	N
2.9 Copper	-----	N
2.10 Lead	-----	N
2.11 Mercury	-----	N
2.12 Molybdenum	-----	N
2.13 Nickel	-----	N
2.14 Selenium	-----	N
2.15 Silver	-----	N
2.16 Thallium	-----	N
2.17 Vanadium	-----	N
2.18 Zinc	-----	N
2.19 Cyanide	-----	N
2.20 Fluoride	-----	N
2.21 Sulfide	-----	N

OTHER	METHOD NUMBER (DATE CERTIFIED)	(Y = CERTIFIED; N = NOT CERTIFIED)
3.0 California Waste Extraction Test	-----	N
4.0 Physical Property Testing	-----	N
5.0 Aquatic Toxicity Testing	-----	N
5.0 Bulk Asbestos Testing	-----	N
7.0 Total Organic Lead	-----	N
3.0 Total Petroleum Hydrocarbons	-----8015(05-01-89)-----	Y



TABLE 1

SOIL ANALYSES DATA

SAMPLE NO	DEPTH (FEET)	SAMPLE DATE	ANALYZED DATE	TPH (PPM)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
UX-5	8	20-Jun-90	20-Jun-90	ND	ND	ND	ND	ND
UX-6	14	20-Jun-90	20-Jun-90	ND	ND	ND	ND	13
UX-7	7	20-Jun-90	20-Jun-90	ND	8	ND	6	16
UX-8	12	20-Jun-90	20-Jun-90	ND	ND	ND	ND	22
UX-9	14	20-Jun-90	20-Jun-90	ND	ND	ND	ND	ND
UX-10	7	20-Jun-90	20-Jun-90	1300	1700	2100	26000	100000
UX-11	6	20-Jun-90	20-Jun-90	ND	ND	ND	ND	ND
UX-12	14	20-Jun-90	20-Jun-90	ND	44	ND	8	10
UX-13	8	20-Jun-90	20-Jun-90	ND	21	ND	ND	ND
UX-14	7	20-Jun-90	20-Jun-90	2800	11000	11000	63000	320000

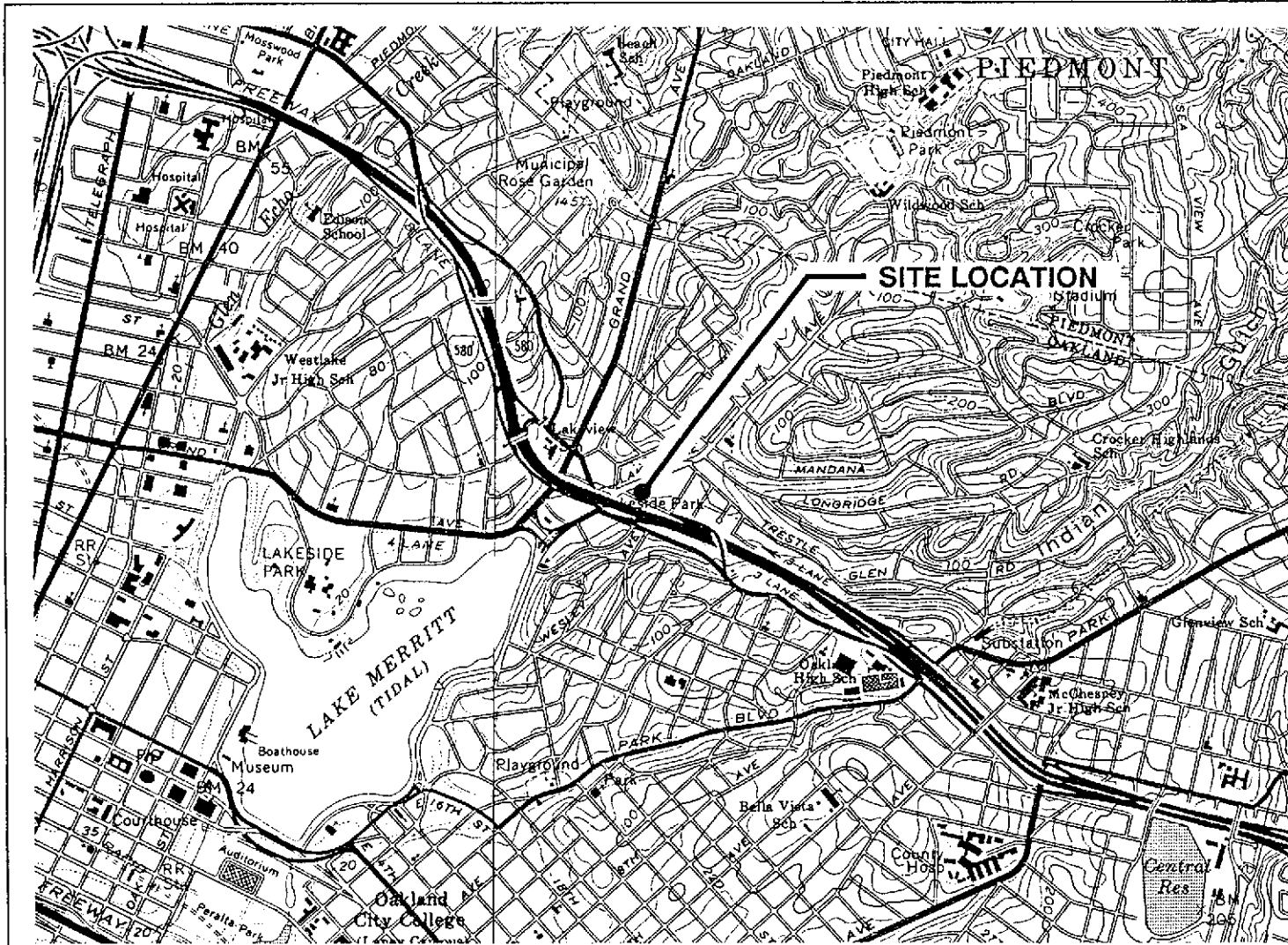
TENTATIVE DETECTION LIMITS

Benzene 0.5 ppb Xylenes 1.0 ppb Ethylbenzene 0.50 ppb Toluene 0.50 ppb TPH 1.0 ppm

TPH = Total Petroleum Hydrocarbons as Gasoline

PPM = Parts Per Million

PPB = Parts Per Billion



Base Map: USGS Topographic Map

Approximate Scale: 1" = 2000'



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Vicinity Map
 UNOCAL Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

PLATE

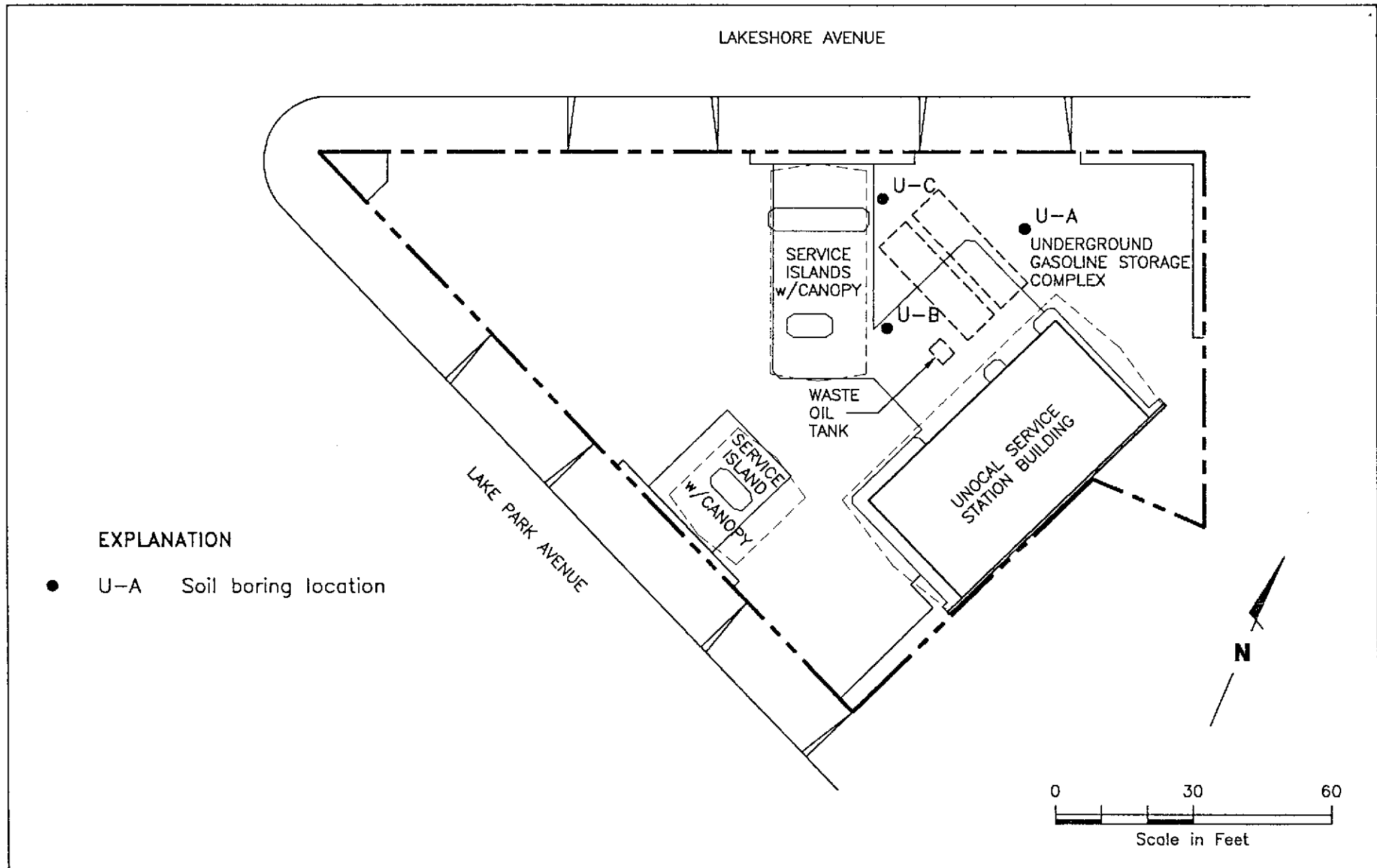
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JOB NUMBER
7814

REVIEWED BY RG/CEG

DATE
6/90

REVISED DATE



GeoStrategies Inc.

Site Plan
 UNOCAL Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

PLATE

2

JOB NUMBER
7814

REVIEWED BY RG/CEG

DATE
6/90

REVISED DATE

6/28/90

6/25/90

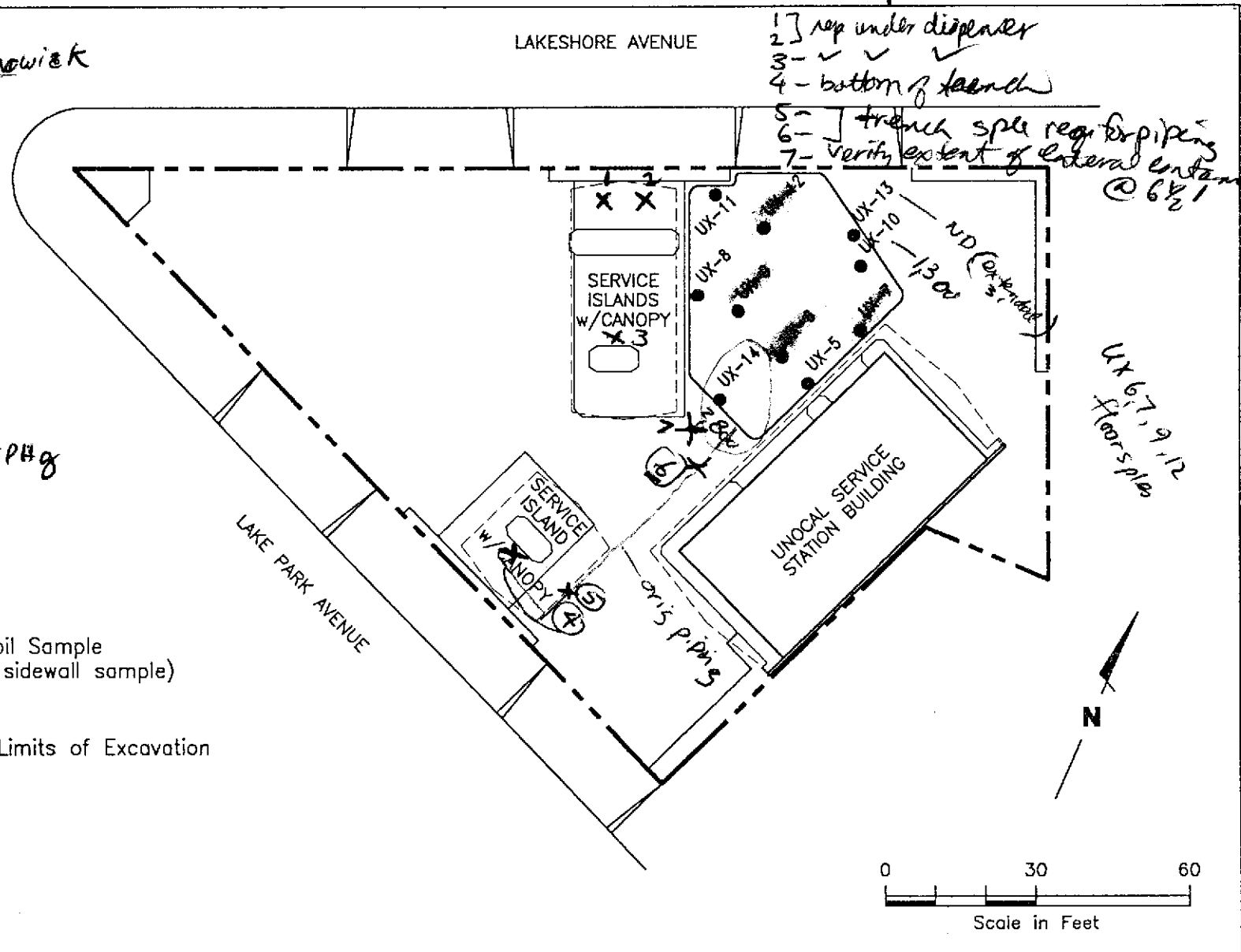
X additional soil sples

Verbal TPH(s)
Results from M. Janowick

1	UT4	TPH 60
2	UT5	28
3	UT6	12
4	UT7	ND
5	UT8	ND
6	UT9	14
7	6 1/2' UX15	12 ppm TPHg

EXPLANATION

- UX-12 Excavation Soil Sample (bottom and sidewall sample)
- Approximate Limits of Excavation (6/20/90)



1] rep under dispenser
 2- ✓ ✓ ✓
 3- ✓ ✓ ✓
 4- bottom of trench
 5-
 6- trench sples req. for piping
 7- Verify extent of lateral contamination @ 6 1/2'

UX 6, 7, 9, 12 floor sples



GeoStrategies Inc.

SOIL SAMPLE LOCATION MAP
 UNOCAL Service Station #5325
 3220 Lakeshore Avenue
 Oakland, California

PLATE

3

JOB NUMBER
7814

REVIEWED BY RG/CEG
UMP CEG 1202

DATE
6/90

REVISED DATE



NATIONAL ENVIRONMENTAL TESTING, INC.

DATE 6/30/90

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ANALYST ALP

GASOLINE/BTEX CALCULATION FORM

RUN # SAMPLE R.T CONC.

6	UX-5	2.1 - 2.2	2.0866 / 1.4407 (0.1 g)	ND	GASOLINE
	DF: 1		0 / 9.167 (0.00 kg)	ND	BENZENE
1.53g			0 / 9.167	ND	TOLUENE
201325		6.44	1.725 / 1.2286	ND	ETH. BENZENE
soil		7.35	6.3154 / 1.4108	ND	TOT. XYLENES
			0		
					SURROGATE
7	UX-6		6.3766	ND	GASOLINE
	DF: 1	2.67	2.965	ND	BENZENE
2.36g		5.03	6.265	ND	TOLUENE
201326		6.43	8.465	ND	ETH. BENZENE
soil		7.35	3.5666	13	TOT. XYLENES
		7.84	8.465		
					SURROGATE
5	UX-7		6.5866	ND	GASOLINE
	DF: 1	2.66	1.3766	8	BENZENE
1.80g		5.03	2.865	ND	TOLUENE
201327		6.43	1.4266	6	ETH. BENZENE
soil		7.35	3.3766	16	TOT. XYLENES
		7.84	8.565		
					SURROGATE



NATIONAL ENVIRONMENTAL TESTING, INC.

DATE 6/20/80

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ANALYST 111

GASOLINE/BTEX CALCULATION FORM

RUN # SAMPLE R.T CONC.

RUN #	SAMPLE	R.T	CONC.	
8	VX-8		9.24E6	
	DF: 1			ND ^{mg/kg}
	3.14g 201328 soil	2.67	7.2E5	ND ^{mg/kg}
		5.04	1.1E6	ND ^{mg/kg}
		6.92	1.55E6	ND ^{mg/kg}
		7.34	7.28E6	22 ^{mg/kg}
		7.83	2.41E6	
				SURROGATE
9	VX-9		5.47E6	
	DF: 1			ND
	3.71g 201329 soil	2.64	3.9E5	ND
		5.04	2.9E5	ND
		6.94	3.1E5	ND
		7.36	1.45E6	ND
		7.85	4.6E5	
				SURROGATE
13	VX-10		9.79E7	
	DF: 428			1300
	224g in 3ml, 7ml 201330 soil	2.64	2.24E6	1700
		5.04	9.9E5	2100
		6.92	1.65E7	26,000
		7.33	5.69E7	100,000
		7.83	1.77E7	
				SURROGATE



NATIONAL ENVIRONMENTAL TESTING, INC.

DATE 5/20/90

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ANALYST JCP

GASOLINE/BTEX CALCULATION FORM

RUN # SAMPLE R.T CONC.

RUN #	SAMPLE	R.T	CONC.	
10	UX-11		2.78E6	ND mg/kg
	DF: 1	-		ND mg/kg
2.98g	201331 Soil	-		ND mg/kg
		6.91	3.3E5	ND mg/kg
		7.33	1.55E6	ND mg/kg
		7.81	5.1E5	
				SURROGATE
11	UX-12		1.22E7	ND
	DF: 1	2.64	5.30E6	44
1.32g	201332 Soil	-		ND
		6.89	1.24E6	8
		7.30	1.42E6	10
		7.79	4.3E5	
				SURROGATE
12	UX-13		2.54E6	ND
	DF: 1	2.64	3.50E6	21
1.84g	201333 Soil	-		ND
		6.90	2.3E5	ND
		7.32	9.9E5	ND
				SURROGATE



NATIONAL ENVIRONMENTAL TESTING, INC.

DATE 6/20/90

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ANALYST J.P.Y.

GASOLINE/BTEX
QC FORM

RUN # SAMPLE R.T. CONC.

RUN #	SAMPLE	R.T.	CONC.	ANALYTES
	BLANK			GASOLINE
	DF:			BENZENE
				TOLUENE
				ETH. BENZENE
				TOT. XYLENES
				SURROGATE
14	UX-14		8.82E7	2800 mg/kg GASOLINE
	DF: 750	2.64	2.24E6	11,000 mg/kg BENZENE
	1.65g in 3ml, 4ml	5.07	2.25E6	11,000 mg/kg TOLUENE
		6.91	1.73E7	63,000 mg/kg ETH. BENZENE
	201334	7.32	6.80E7	320,000 mg/kg TOT. XYLENES