JET KAYO OIL COMPANY
1221 East Main Street Chattanooga, TN 37408-1696
(615) 755-9330

B3

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
MAY 11 1987
6B2

May 8, 1987

Mr. James Ferdinand
Battalion-Chief
Eden Consolidated Fire Protection District
427 Paseo Grande
San Lorenzo, CA 94580

RE: KATO
Econo Gas Station
44 Lewelling Boulevard
San Lorenzo, CA

B3
6B2
5/14/87

Dear Mr. Ferdinand:

Enclosed for your records is a brief report from Applied GeoSystems presenting observations and laboratory analysis of soil samples taken in connection with the replacement of the underground storage tanks at the referenced site.

As the report states, Kayo authorized additional excavation in the area of sample S-3 because the laboratory analysis result exceeded 1000 ppm. On the recommendation of Applied GeoSystems and in accordance with the Bay Area Regional Water Quality Control Board Guidelines For Addressing Fuel Leaks, Kayo will, at a mimimum, install a monitoring well to assess any impact to the site's groundwater. Your office will be kept up to date on progress towards this goal.

Also enclosed is your copy of the Unauthorized Release Report. Kayo is viewing the contamination at this site as a result of 20 plus years of overspillage to the tanks and feels that a large portion of the contamination has been mitigated by the removal of the old backfill.

If I can provide you with further information, please contact me at our Lodi Office.

Respectfully,

Paul F. Taylor

Lodi Office: 900 S Cherokee Lane
Lodi, CA 95240

Phone: 209/368-2731
800/692-3722

Paul F. Taylor
Coordinator - Environmental Affairs

PFT/wml

Enclosures

cc: Mr. Greg Zentner, Bay Area RWQCB ✓

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

EMERGENCY: [ ] YES [X] NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? [ ] YES [X] NO

STATE TANK ID #:

REPORT DATE: M [illegible] M D [illegible] D [illegible] Y 7 Y

LOCAL CASE #:

REGIONAL BOARD CASE #:

US EPA ID #:

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: [illegible] TAYLOR

PHONE: ([illegible]) [illegible]92-37[illegible]

SIGNATURE: [signature]

REPRESENTING: [ ] LOCAL AGENCY [ ] OTHER [X] OWNER/OPERATOR [ ] REGIONAL BOARD

COMPANY OR AGENCY NAME: [illegible] COMPANY

ADDRESS: 900 S. [illegible] LANE (STREET) LOD[illegible] (CITY) CA. (STATE) 95240 (ZIP)

RESPONSIBLE PARTY

NAME: [illegible]AYO OIL COMPANY [ ] UNKNOWN

CONTACT PERSON: [illegible]

PHONE: (800) 692-3722

ADDRESS: 1221 EAST MAIN ST. (STREET) CHATTANOOGA (CITY) TN. (STATE) 3740[illegible] (ZIP)

SITE LOCATION

FACILITY NAME (IF APPLICABLE): [illegible]

OPERATOR: KAYO OIL CO.

PHONE: (415) 276-98[illegible]

ADDRESS: 41 [illegible] BLVD. (STREET) SAN LORENZO (CITY) ~~KEEK~~ ALAMEDA (COUNTY) 9458[illegible] (ZIP)

CROSS STREET:

TYPE OF AREA: [X] COMMERCIAL [ ] INDUSTRIAL [ ] RESIDENTIAL [ ] RURAL [ ] OTHER ____

TYPE OF BUSINESS: [X] RETAIL FUEL STATION [ ] UNKNOWN [ ] OTHER ____

IMPLEMENTING AGENCIES

	AGENCY NAME	CONTACT PERSON	PHONE
LOCAL AGENCY	San Lorenzo Fire Dept.	James Ferdinand	(415) 670-58[illegible]
REGIONAL BOARD	Bay Area RWQCB	Peter Johnson	(415) 464-12[illegible]
TSCD	Sacramento		( )

SUBSTANCES INVOLVED

	CAS # (ATTACH EXTRA SHEET IF NEEDED)	NAME	QUANTITY LOST (GALLONS)
(1)	[illegible]	GASOLINE	[X] UNKNOWN
(2)			[ ] UNKNOWN

DISCOVERY/ABATEMENT

DATE DISCOVERED: M [illegible] M 3 D 0 D 8 Y 7 Y

HOW DISCOVERED: [ ] INVENTORY CONTROL [ ] SUBSURFACE MONITORING [ ] ROUTINE MONITORING [X] TANK REMOVAL [ ] NUISANCE CONDITIONS [ ] OTHER: ____

DATE DISCHARGE BEGAN: M M D D Y Y [X] UNKNOWN

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): [ ] REMOVE CONTENTS [X] REPLACE TANK [ ] CLOSE TANK [ ] REPAIR TANK [ ] REPAIR PIPING [ ] CHANGE PROCEDURES [ ] OTHER ____

HAS DISCHARGE BEEN STOPPED? [X] YES [ ] NO IF YES, DATE 0 M 3 M 30 D 0 D 8 Y 7 Y

SOURCE/CAUSE

SOURCE(S) OF DISCHARGE: [ ] TANK LEAK [ ] UNKNOWN [ ] PIPING LEAK [X] OTHER (SPECIFY) OVERSPILL

TANKS ONLY/CAPACITY: 2/10000 1/7500 GAL

AGE: 24 YRS. [ ] UNKNOWN

MATERIAL: [X] STEEL [ ] FIBERGLASS [ ] OTHER ____

CAUSE(S): [X] OVERFILL [ ] CORROSION [ ] RUPTURE/FAILURE [ ] SPILL [ ] UNKNOWN [ ] OTHER ____

RESOURCES AFFECTED/AT RISK

RESOURCES AFFECTED	YES	NO	THREATENED	UNKNOWN
AIR (VAPOR)	[ ]	[X]	[ ]	[ ]
SOIL (VADOSE ZONE)	[X]	[ ]	[ ]	[ ]
GROUNDWATER	[ ]	[ ]	[X]	[ ]
SURFACE WATER OR STORM DRAIN	[ ]	[X]	[ ]	[ ]
BUILDING OR UTILITY VAULT	[ ]	[X]	[ ]	[ ]
OTHER (SPECIFY)	[ ]	[ ]	[ ]	[ ]

WATER SUPPLIES AFFECTED	YES	NO	THREATENED	UNKNOWN	# OF WELLS
PUBLIC DRINKING WATER	[ ]	[X]	[ ]	[ ]	____
PRIVATE DRINKING WATER	[ ]	[X]	[ ]	[ ]	____
INDUSTRIAL	[ ]	[X]	[ ]	[ ]	____
AGRICULTURAL	[ ]	[X]	[ ]	[ ]	____
OTHER (SPECIFY)	[ ]	[ ]	[ ]	[ ]	____

GROUNDWATER BASIN NAME: [X] UNKNOWN

COMMENTS

COMMENTS: [illegible] SOIL SAMPLE [illegible] AT [illegible] OF [illegible] GAL TANK CAME BACK 1100 PPM [illegible]. [illegible] FROM BELOW THIS POINT. [illegible] BACKFILL WAS AT THE FILL END.

COMPLETE AND ATTACH A CLEANUP TRACKING REPORT IF ANY CLEANUP WORK OR PLANNING HAS STARTED

HSC 05 (10/85)

Applied GeoSystems 43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

May 5, 1987
87044-1

Mr. Paul Taylor
Kayo Oil Company
900 South Cherokee Lane
Lodi, California 95240

Subject: Transmittal of letter report No.87044-1 on tank inspection and laboratory analyses of soil samples collected beneath gasoline storage tanks at the Econo gasoline station, 44 Lewelling Boulevard, San Lorenzo, California

Mr. Taylor:

A geologist from our office was present at the above-referenced site to visually inspect the underground storage tanks upon their removal and to collect soil samples from beneath the tanks. The location of the site is shown on the Site Vicinity Map, Plate P-1. It is our understanding, based on information provided by personnel of Kayo Oil Company, that the three tanks present at the site were used to store gasoline product. Two tanks have 10,000-gallon capacities and the third tank a 7,500-gallon capacity. According to Kayo Oil Company personnel, a waste oil tank was not present at the site. Locations of the tanks and site structures are shown on the Generalized Site Plan, Plate P-2.

Visual inspection of the three tanks was performed after the tanks were placed on the ground surface near the tank pit. Mr. James Ferdinand of the Eden Consolidated Fire Protection District was present at the site during tank inspections and soil sampling. After removing the tanks from the tank cavity by hoptoe, the hoptoe operator, contracted by Kayo Oil Company, rolled the tanks on their sides for inspection. The outer surfaces of the tanks were inspected by an Applied GeoSystems' field geologist for signs of product leakage, holes, pitting, or areas of weakness. The sides and ends of the tank were scraped and particular attention was paid to seams and points directly below both the fill port and submersible pump port of each of the tanks.

TANK INSPECTION OBSERVATIONS

Western Tank (7,500-gallon):
This tank had no apparent through-going holes but had some heavy pitting on the underside. Seams were intact but often preferentially corroded. The tank's tar coating was intact in isolated areas. The tank surfaces had slight corrosion.

Middle Tank (10,000-gallon):
This tank had no apparent through-going holes but had some deep pitting, especially under the fill port side. A majority of the tank's tar coating appeared intact. Minimal tank surface and seam corrosion was detected.

Eastern Tank (10,000-gallon):
This tank had no apparent through-going holes but had some pitting. The tar coating was almost entirely intact. Minimal corrosion was detected on tank surfaces and seams.

SOIL SAMPLE COLLECTION AND ANALYSIS

The samples were collected from soil at a depth of approximately 14 feet (approximately 4 to 5 feet below the tank bottom). Sample locations are shown on the enclosed Generalized Site Plan. One sample was collected under each end of the three tanks. The six samples were collected by driving laboratory-cleaned brass sleeves into the hoptoe bucket of soil. The sample sleeves were immediately sealed with aluminum foil, plastic caps, and air-tight tape, labeled and placed in iced storage for transport to the analytical laboratory for testing. The Chain Of Custody form for the samples' transferral is included with this letter report.

The results of the soils analyses are presented on the Table 1 and on the laboratory Record Of Analysis form included with this report.

TABLE 1
LABORATORY ANALYSES ON SOIL SAMPLES
Collected at the Econo Gasoline Station
San Lorenzo, California

Identifier	TVH	B	E	T	X	Detection Limit
S-1	329	12	14	2	63	1.0
S-2	663	22	26	136	179	1.0
S-3	1136	52	43	158	288	1.0
S-4	510	16	19	8	116	1.0
S-5	1.64	ND	ND	ND	ND	0.05
S-6	4.22	0.41	0.21	0.08	0.31	0.05

Note: All results in parts per million (ppm)
TVH: Total Volatile Hydrocarbons
BETX: Benzene, Ethylbenzene, Toluene, and Xylenes
ND: Non-detectable

Laboratory analyses on the soil samples collected show the presence of hydrocarbon contamination. The level of contamination is moderately high in samples S-1, S-2, and S-3, relatively high on sample S-3 and relatively low on samples S-5 and S-6. Because sample S-3 showed a total volatile hydrocarbon concentration greater than 1000 parts per million, Applied GeoSystems recommended further excavation and sampling of the tank pit in the vicinity of sample S-3. This course of action complies with the California Regional Water Quality Control Board (CRWQCB), San Francisco Bay Region's Guidelines for Addressing Fuel Leaks.

With the authorization of Kayo Oil Company, a field geologist from Applied GeoSystems returned to the site on April 30, 1987 to observe further excavation in the vicinity of sample S-3 (northwest corner of the tank pit). Soil in the vicinity of sample S-3 was excavated down to the saturated zone. At the interface of the vadose and saturated zone (approximately 17 feet) a sample was collected using the sampling protocol previously described in this letter report. The result of the analysis of sample, S-17-NW, shows total volatile hydrocarbon levels below the 1000 parts per million threshold. Results are presented in Table 2 and on the laboratory Record of Analysis included with this report. Chain of Custody documentation for this additional sample is also included in this report.

TABLE 2
ADDITIONAL LABORATORY ANALYSES
Econo Gasoline Station
San Lorenzo, California

Identifier	TVH	B	E	T	X	Detection Limit
S-17-NW	6.98	1.37	0.40	1.06	1.18	0.05

Note: All results in parts per million (ppm)
TVH: Total Volatile Hydrocarbons
BETX: Benzene, Ethylbenzene, Toluene, and Xylenes
ND: Non-detectable

These data show that the greater than 1000 parts per million hydrocarbon contamination in the vicinity of sample S-3 has been mitigated. Soil excavated prior to collection of sample S-17-NW was piled on the station platform and remains the responsibility of Kayo Oil Company. With the consent of the Eden Consolidated Fire Department, new tank placement can begin and the tank cavity can be backfilled.

However, because hydrocarbon contamination greater than 100 parts per million was found in soil collected from the tank pit, a ground water monitoring well is recommended at the site to assess ground water impact. The monitoring well will meet the minimum requirements stated in the CRWQCB guidelines. Additionally, we recommend that an unauthorized release report be filed with the CRWQCB.

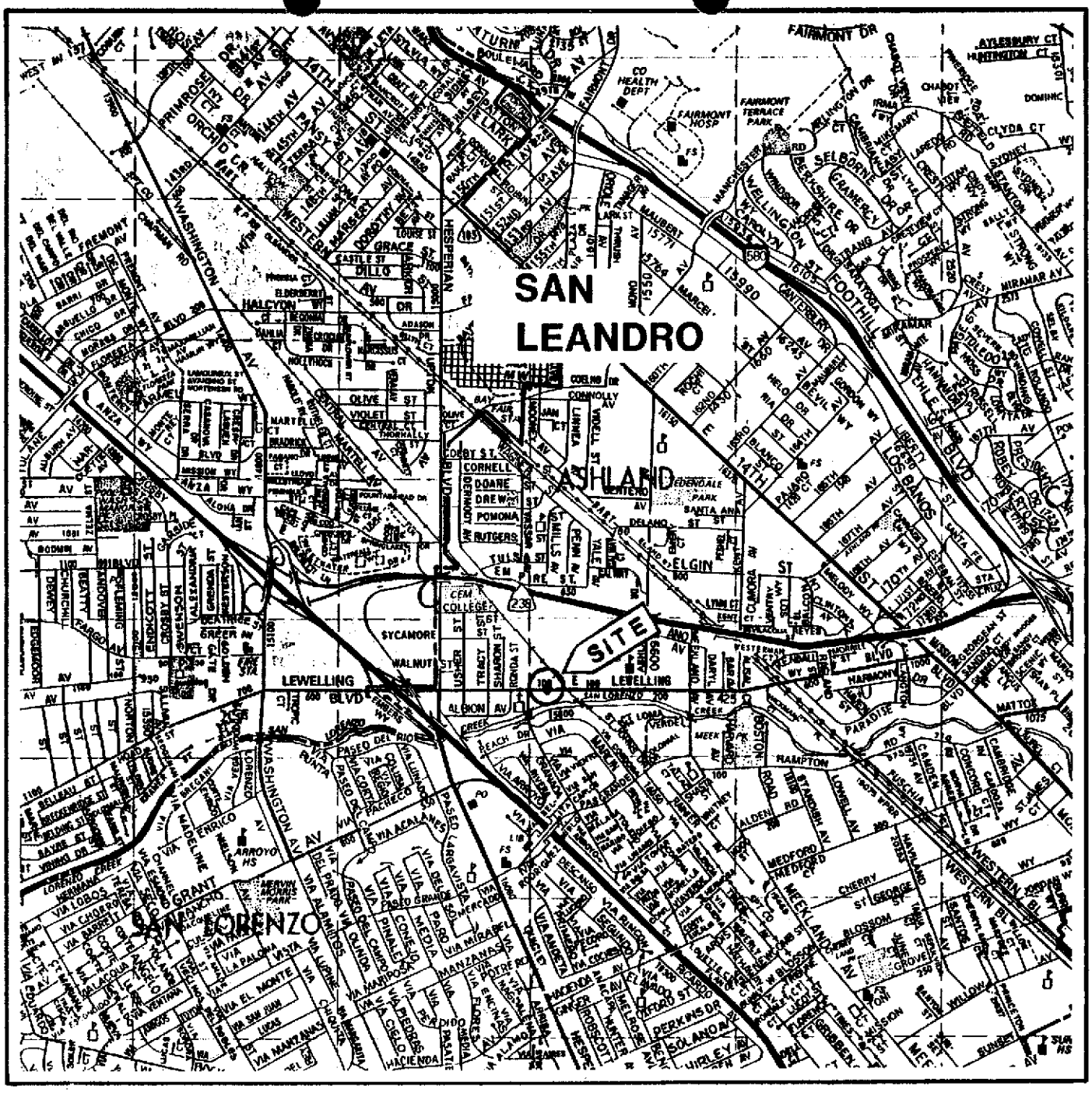
Copies of this letter, and accompanying laboratory documents, should be forwarded to Mr. James Ferdinand, Battalion-Chief, Eden Consolidated Fire Protection District, 427 Paseo Grande, San Lorenzo, California 94580 and Mr. Greg Zentner of the CRWQCB, 1111 Jackson Street, Room 6040, Oakland, California 94607. If you have any questions concerning the information presented in this report, please do not hesitate to call.

Sincerely,
Applied GeoSystems

Glenn R. Dembroff
Project Geologist

Michael N. Clark
C.E.G. 1264

Attachments: Generalized Site Plan
Chain Of Custody
Record of Analysis



Source: Thomas Brothers Guide
Alameda/Contra Costa
Counties (1985)

Approximate Scale

2200 1100 0 2200 4400

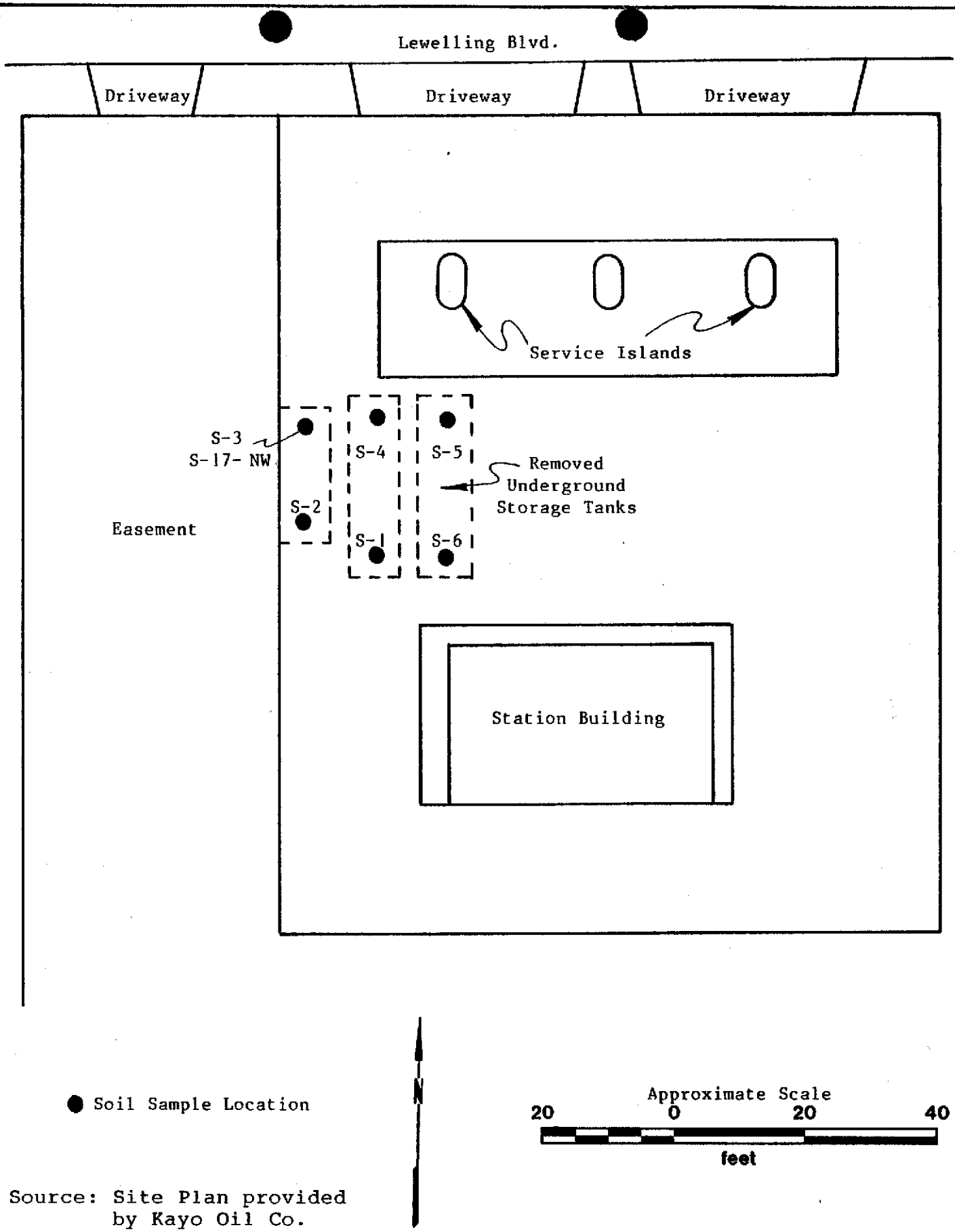
feet

Applied GeoSystems
43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

PROJECT NO. 87044-1

SITE VICINITY MAP
Econo Gas Station
San Leandro, California

PLATE
P-1



Source: Site Plan provided by Kayo Oil Co.

Applied GeoSystems
43215 Mission Blvd Suite B Fremont, CA 94539 (415) 651-1906

PROJECT NO. 87044-1

GENERALIZED SITE PLAN
Econo Gas Station
San Lorenzo, California

PLATE
P-2

CHAIN OF CUSTODY RECORD

Applied GeoSystems

[illegible] Mission Blvd Suite B Fremont [illegible] 94539 (415) 651-19

SAMPLER (signature): Tim O'Brien

Phone: 415 651 1906

LABORATORY: Applied GeoSystems

TURNAROUND TIME: 24 hours

Attention: Glenn Dembroff

Phone No. 415 651 1906

SHIPPING INFORMATION:

Shipper _____

Address _____

Date Shipped _____

Service Used _____

Airbill No. _____ Cooler No. _____

Relinquished by: (signatures)	Received by: (signatures)	Date	Time
Tim O'Brien		4-28-87	5:00
	Received for laboratory by: [signature]	4-28-87	7:00PM

LABORATORY SHOULD SIGN UPON RECEIPT AND RETURN A COPY OF THIS FORM WITH THE LABORATORY RESULTS

Sample No.	Site Identification	Date Sampled	Analyses Requested	Sample Condition Upon Receipt
S-1	870441	4-28-87	BETX + TVH	iced
S-2				
S-3				
S-4				
S-5				
S-6				

Applied GeoSystems 43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

RECORD OF ANALYSIS

Date 5-1-87

Applied GeoSystems
43255 Mission Blvd.
Fremont, CA. 94539

Attention: Glenn R. Dembroff

Date Received: 4-28-87 Laboratory# 8704S066
Date Analyzed: 4-28-87

Procedure:

The soil samples referenced on the attached Chain-of-Custody were analyzed for the presence and concentration of Benzene, Ethyl-Benzene, Toluene, and Xylenes (BETX) and for Total Volatile Hydrocarbons (TVH) by EPA method 8020. The samples were concentrated on a Tekmar LSC-2 and ALS automatic sampler prior to injection into a 5890 Hewlett Packard gas chromatograph fitted with a Photo-Ionization detector (PID) and a Flame Ionization detector (FID). The limit of detection for these samples is 1.0 milligram/kilogram (parts per million = ppm).

The results are presented in the table below:

SAMPLE	SITE	BENZENE	ETHYL BENZENE	TOLUENE	TOTAL XYLENES	TVH
S1	87044-1	12	14	2	63	329
S2	87044-1	22	26	136	179	663
S3	87044-1	52	43	158	288	1136
S4	87044-1	16	19	8	116	510

Results in milligrams/kilogram (parts per million = ppm).

Tia Tran, Chemist

Applied GeoSystems is a State of California, Department of Health Services Certified Hazardous Waste Testing Laboratory (No. 153).

Applied GeoSystems 43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

RECORD OF ANALYSIS

Date 5-1-87

Applied GeoSystems
43255 Mission Blvd.
Fremont, CA. 94539

Attention: Glenn R. Dembroff

Date Received: 4-28-87 Laboratory# 8704S070
Date Analyzed: 4-28-87

Procedure:

The soil samples referenced on the attached Chain-of-Custody were analyzed for the presence and concentration of Benzene, Ethyl-Benzene, Toluene, and Xylenes (BETX) and for Total Volatile Hydrocarbons (TVH) by EPA method 8020. The samples were concentrated on a Tekmar LSC-2 and ALS automatic sampler prior to injection into a 5890 Hewlett Packard gas chromatograph fitted with a Photo-Ionization detector (PID) and a Flame Ionization detector (FID). The limit of detection for these samples is 0.05 milligrams/kilogram (parts per million = ppm).

The results are presented in the table below:

SAMPLE	SITE	BENZENE	ETHYL BENZENE	TOLUENE	TOTAL XYLENES	TVH
S5	87044-1	ND	ND	ND	ND	1.64
S6	87044-1	0.41	0.21	0.08	0.31	4.22

Results in milligrams/kilogram (parts per million = ppm).
ND=Non Detectable - Less than 0.05 milligrams/liter (ppm).

Tia Tran, Chemist

Applied GeoSystems is a State of California, Department of Health Services Certified Hazardous Waste Testing Laboratory (No. 153).

CHAIN OF CUSTODY RECORD

Applied GeoSystems

43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

SAMPLER (signature): Tim O'Brien

Phone: 415 651 1906

LABORATORY: Applied GeoSystems

TURNAROUND TIME: 24 hours

Attention: Glenn Dembroff

Phone No. 415 651 1906

SHIPPING INFORMATION:

Shipper

Address

Date Shipped

Service Used

Airbill No. Cooler No.

Relinquished by: (signatures)	Received by: (signatures)	Date	Time
Tim O'Brien		4.30.87	12:00
	Received for laboratory by: [signature]	4-30-87	14:00

LABORATORY SHOULD SIGN UPON RECEIPT AND RETURN A COPY OF THIS FORM WITH THE LABORATORY RESULTS

Sample No.	Site Identification	Date Sampled	Analyses Requested	Sample Condition Upon Receipt
5-17-NW	87044-1	4-30-87	TVH & BETX	iced

Applied GeoSystems 43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

RECORD OF ANALYSIS

Date 5-1-87

Applied GeoSystems
43255 Mission Blvd.
Fremont, CA. 94539

Attention: Glenn R. Dembroff

Date Received: 4-30-87 Laboratory# 8704S082
Date Analyzed: 4-30-87

Procedure:

The soil sample referenced on the attached Chain-of-Custody was analyzed for the presence and concentration of Benzene, Ethyl-Benzene, Toluene, and Xylenes (BETX) and for Total Volatile Hydrocarbons (TVH) by EPA method 8020. The sample was concentrated on a Tekmar LSC-2 and ALS automatic sampler prior to injection into a 5890 Hewlett Packard gas chromatograph fitted with a Photo-Ionization detector (PID) and a Flame Ionization detector (FID). The limit of detection for this sample is 0.05 milligrams/kilogram (parts per million = ppm).

The results are presented in the table below:

SAMPLE	SITE	BENZENE	ETHYL BENZENE	TOLUENE	TOTAL XYLENES	TVH
S-17-NW	87044-1	1.37	0.40	1.06	1.18	6.98

Results in milligrams/kilogram (parts per million = ppm).

Tia Tran, Chemist

Applied GeoSystems is a State of California, Department of Health Services Certified Hazardous Waste Testing Laboratory (No. 153).