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RESNA
Working to Restore Nature

42501 Albrae Street
Fremont, California 94538
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# TRANSMITTAL

TO: Ms. Susan Hugo
Alameda County Health
Care Services Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

DATE: June 2, 1994
PROJECT NUMBER: 62028.11
SUBJECT: ARCO Station 6113
785 East Stanley Boulevard, Livermore
California

FROM: David Peterson
TITLE: Staff Engineer

WE ARE SENDING YOU:

| COPIES | DATED | NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 05/25/94 | 69028.11 | Results of Vapor Well Installation for the above subject site. |

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REMARKS:

Copies: Mr. Mike Whelan, ARCO Products Company
Mr. Eddy So, CRWQCB, SF Bay Region
Ms. Danielle Stefani, City of Livermore Fire Department
1 to RESNA project file no. 69028.11

David Peterson, Staff Engineer

RESNA
Working to Restore Nature

42501 Albrae Street, Suite 100
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Phone: (510) 440-3300
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May 25, 1994

Mr. Mike Whelan
ARCO Products Company
P.O. Box 5811
San Mateo, California 94402

Subject: Results of Vapor Well Installation
ARCO Station 6113
785 East Stanley Boulevard in Livermore, California

Mr. Whelan:

At the request of ARCO Products Company (ARCO), RESNA Industries Inc. (RESNA) installed two additional vapor extraction wells at ARCO Station 6113, located at 785 East Stanley Boulevard in Livermore, California. The additional vapor extraction wells were installed for use with the interim soil remediation system as agreed upon in the May 19, 1993, meeting with Ms. Susan Hugo, and Ms. Eva Chu of the Alameda County Health Care Services Agency (ACHCSA), Ms. Valli Voruganti, Mr. John Young, and Mr. Greg Barclay of RESNA, and Mr. Michael Whelan of ARCO.

The work performed for this investigation included drilling three soil borings (B-13 through B-15); collecting and describing soil samples from the borings; installing vapor extraction wells (VW-3 and VW-4) in borings B-13 and B-14, respectively; submitting selected soil samples for laboratory analyses; and preparing this letter report presenting results.

ARCO Service Station 6113 is an operating retail gasoline service station and AM/PM mini-mart located at the southwestern corner of the intersection of East Stanley Boulevard and Murrieta Boulevard in Livermore, California, as shown on Plate 1, Site Vicinity Map. The site is located in an area of commercial and residential development, and is a predominantly asphalt- and concrete-covered lot at an elevation of approximately 457 feet above mean sea level. The site is bounded by East Stanley Boulevard to the north, Murrieta Boulevard to

the east, and the Arroyo Mocho Creek to the south and west. An operating Shell Service Station is located on the southeastern corner of East Stanley Boulevard and Murrieta Boulevard. Results of previous environmental investigations at the site are summarized in the reports listed in the References section.

## Field Work

On June 16, 1993, three soil borings (B-13 through B-15) were drilled at the subject site to depths between 24 and 31½ feet. Boring B-13 was drilled in the northern-central portion of the site near existing monitoring well MW-5, and boring B-14 was drilled in the northeastern portion of the site near existing monitoring well MW-7 (Plate 2). Borings B-13 and B-14 were completed as vapor extraction wells to be used with the interim vapor extraction system currently under construction at the site. Boring B-15 was drilled in the east-central portion of the site near existing monitoring well MW-4, but was not completed as a vapor extraction well since no hydrocarbon-impacted soil was encountered to the bottom of the boring at a depth of approximately 30 feet below grade.

Seventeen soil samples were collected from borings B-13 through B-15 for description using the Unified Soil Classification System (Plate 3) and possible laboratory analyses. Complete descriptions of the soil encountered in the borings is presented on the Logs of Borings, Plates 4 through 6. Field monitoring of organic vapor concentrations in soil samples was performed during drilling using an organic vapor meter (OVM). Field OVM readings are considered order of magnitude readings only.

Following completion of drilling on June 16, 1994, four soil samples were collected from the soil stockpile and submitted to the laboratory for compositing and analyses.

## Laboratory Methods

Soil samples collected from borings B-13 through B-15 were analyzed by Sequoia Analytical Laboratories, Inc., of Redwood City, California (California Hazardous Waste Testing Laboratory Certification #1210) for the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPHg) using Environmental Protection Agency (EPA) Methods 5030/8020/8015. The soil samples collected from the soil stockpile were composited in the laboratory and analyzed for BTEX and TPHg using EPA Method 5030/8020/8015.

## Results of Soil Samples

The analytical results of soil samples are summarized in Table 1, Cumulative Results of Laboratory Analyses of Soil Samples. Certified Laboratory Analytical Reports and Chain of Custody Records for soil samples are included in Appendix A.

Laboratory analytical results of soil samples collected from borings B-13 and B-14 indicated concentrations of TPHg ranged from 2.9 parts per million (ppm) to 1,100 ppm, and benzene ranged from not detected at the laboratory method detection limit (MDL) of 0.0050 ppm to 14 ppm.

Laboratory analytical results of soil samples collected from boring B-15 indicated TPHg and benzene were not detected at the laboratory MDLs of 1.0 ppm and 0.0050 ppm, respectively.

It is recommended that copies of this report be forwarded to:

Ms. Susan Hugo
Alameda County Health Care Services Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Mr. Eddy So
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

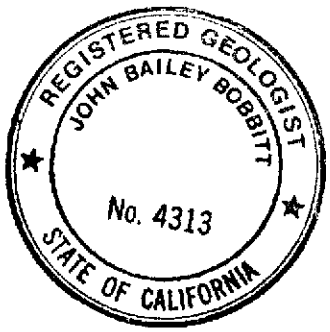
Ms. Danielle Stefani
City of Livermore Fire Department
4550 East Avenue
Livermore, California 94550

If you have any questions or comments, please call us at (408) 264-7723.

Sincerely,
RESNA Industries Inc.

Erin D. Krueger
Staff Geologist

John B. Bobbitt, R.G. 4313
Senior Geologist




John C. Young
Project Manager

Enclosures: References

Plate 1, Site Vicinity Map
Plate 2, Generalized Site Plan
Plate 3, Unified Soil Classification System and Symbol Key
Plates 4 through 6, Logs of Borings

Table 1, Cumulative Results of Laboratory Analyses of Soil Samples

Appendix A: Certified Laboratory Analytical Reports and Chain of Custody Records

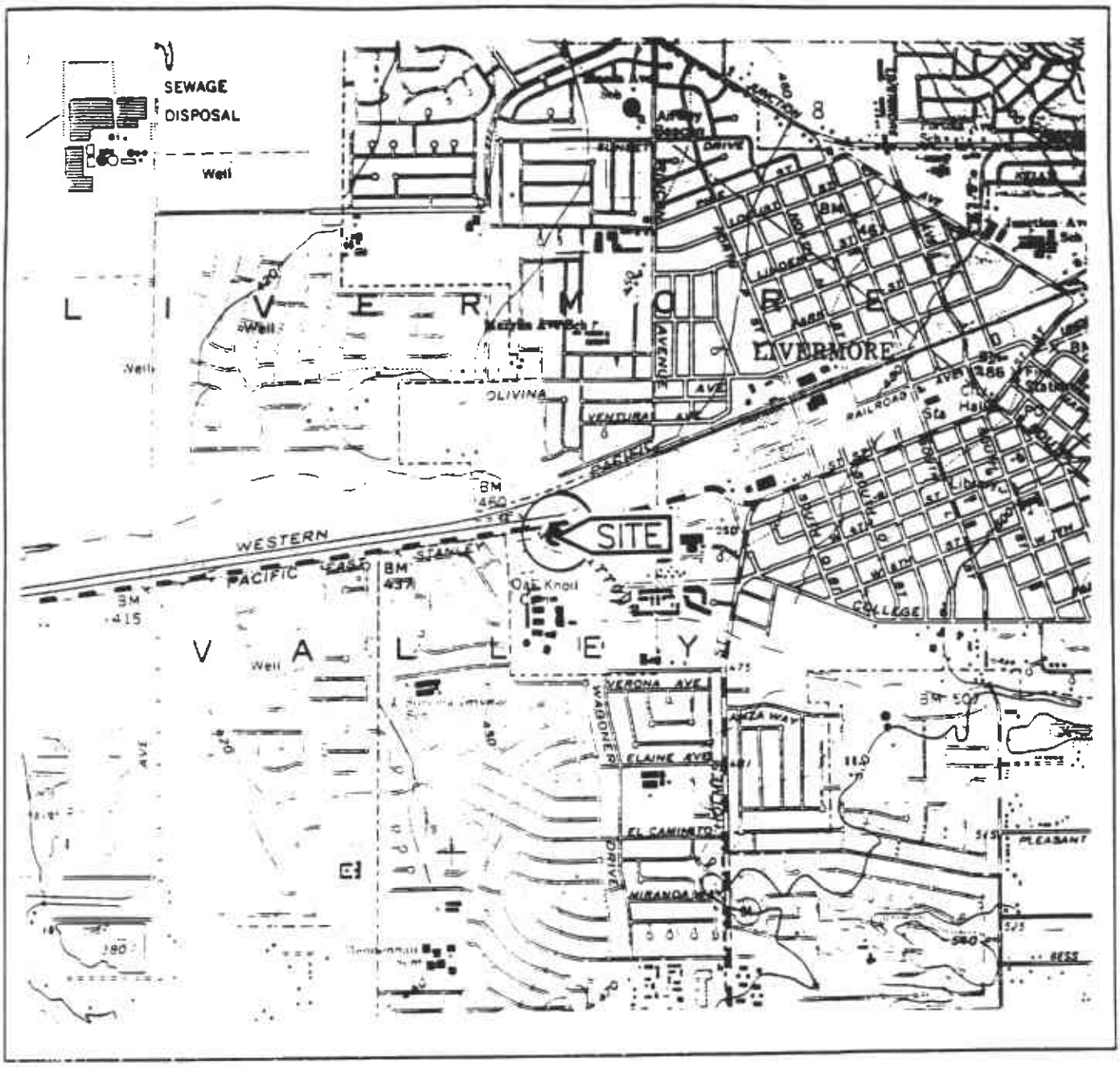
RESNA

## REFERENCES

RESNA. December 21, 1992. Report on Additional Subsurface Investigation and Vapor Extraction Test at ARCO Station 6113, 785 East Stanley Boulevard, Livermore, California. 69028.07

RESNA. June 7, 1993. Minutes of Meeting held at Alameda County Health Care Services Agency on May 19, 1993. Various

RESNA. March 8, 1994. Letter Report, Quarterly Groundwater Monitoring, Fourth Quarter 1993, at ARCO Station 6113, 785 East Stanley Boulevard, Livermore, California. 69028.08




Source: U.S. Geological Survey
7.5-Minute Quadrangle
Livermore, California
Photorevised 1980

Approximate Scale

2000 1000 0 2000

feet

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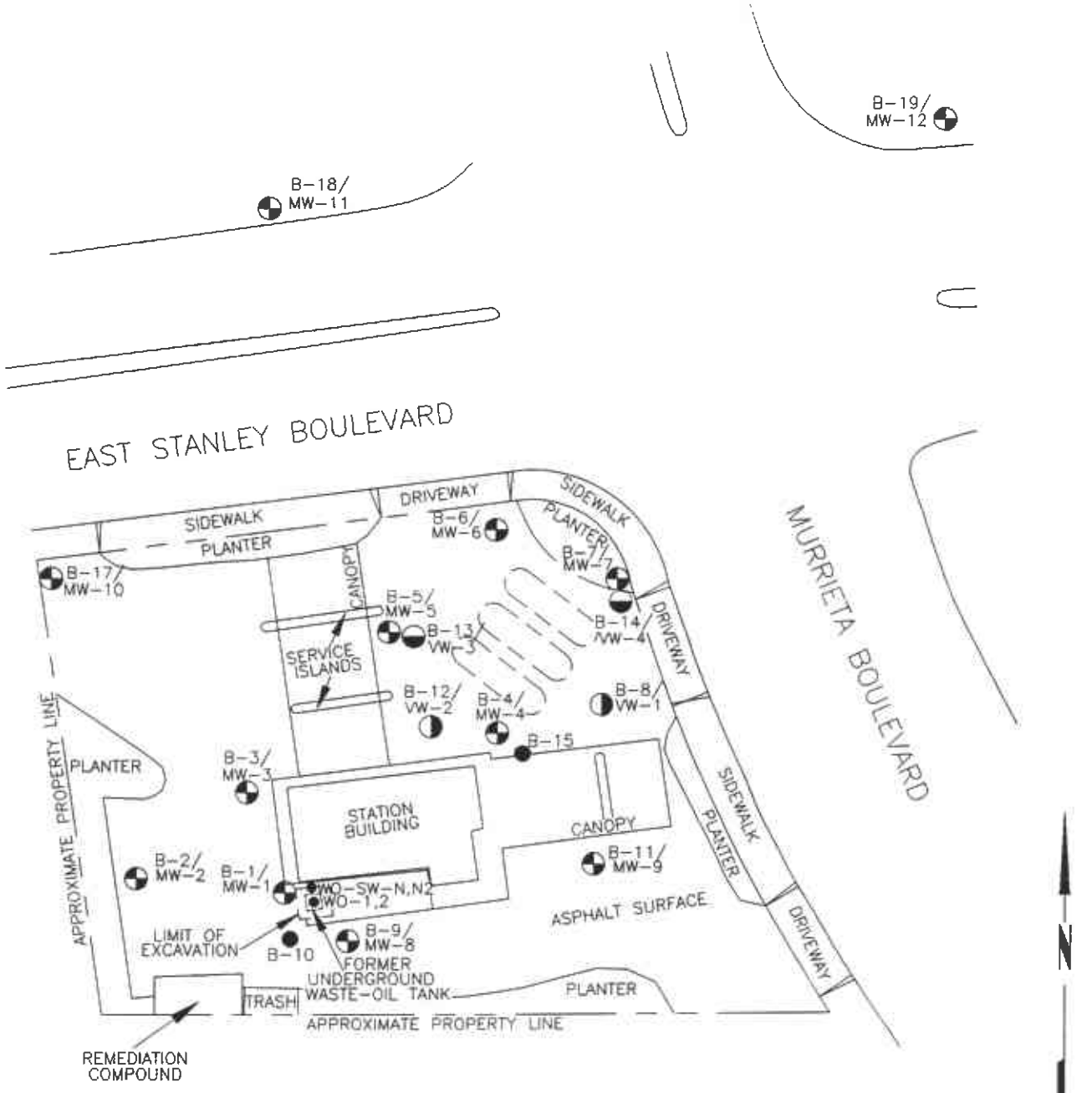
SITE VICINITY MAP
ARCO Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE
1




EXPLANATION

B-9/MW-12 = Boring/monitoring well (RESNA, 09/89, 02/91, 06/92 and 03/93)

B-12/VW-2 = Boring/vapor extraction well (RESNA, 06/92 and 08/92)

B-15 = Boring (RESNA, 06/92, 07/93)

B-14/VW-4 = Boring/vapor extraction well (RESNA, 07/93)

WO-SW-N,N2 = Soil sample collected by Pacific (1989)

= Existing underground gasoline storage tanks

Approximate Scale

50 25 0 50 100

feet

Source: Modified from plan supplied by Ron Archer, Civil Engineer Inc., Feb. 1991; and John Koch Land Surveyor, June 1992 and April 1993.

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GENERALIZED SITE PLAN
ARCO Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE 2

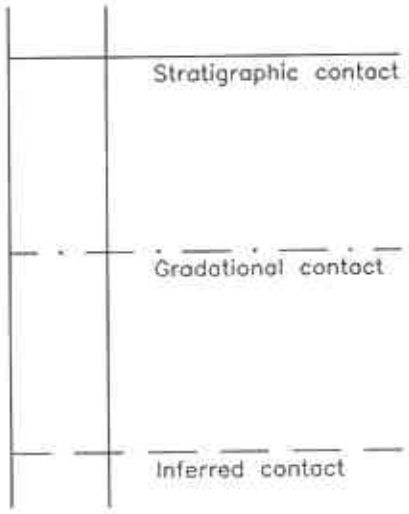
# UNIFIED SOIL CLASSIFICATION SYSTEM

| MAJOR DIVISION | | LTR | DESCRIPTION |
|---|---|---|---|
| COARSE-GRAINED SOILS | GRAVEL AND GRAVELLY SOILS | GW | Well-graded gravels or gravel-sand mixtures, little or no fines. |
| | | GP | Poorly-graded gravels or gravel-sand mixtures, little or no fines. |
| | | GM | Silty gravels, gravel-sand-silt mixtures. |
| | | GC | Clayey gravel, gravel-sand-clay mixtures. |
| | SAND AND SANDY SOILS | SW | Well-graded sand or gravelly sands, little or no fines. |
| | | SP | Poorly-graded sands or gravelly sands, little or no fines. |
| | | SM | Silty sands, sand-silt mixtures. |
| | | SC | Clayey sands, sand-clay mixtures. |

| MAJOR DIVISION | | LTR | DESCRIPTION |
|---|---|---|---|
| FINE-GRAINED SOILS | SILTS AND CLAYS LL<50 | ML | Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity. |
| | | CL | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays. |
| | | OL | Organic silts and organic silt-clays of low plasticity. |
| | SILTS AND CLAYS LL>50 | MH | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts. |
| | | CH | Inorganic clays of high plasticity, fat clays. |
| | | OH | Organic clays of medium to high plasticity, organic silts. |
| HIGHLY ORGANIC SOILS | | PT | Peat and other highly organic soils. |

- Depth through which sampler is driven
- Relatively undisturbed sample
- No sample recovered
- Static water level observed in well/boring
- Initial water level observed in boring
- S-10 Sample number
- P.I.D. Photoionization detector

- Sand pack
- Bentonite
- Neat cement
- Caved native soil
- Blank PVC
- Machine-slotted PVC
- Pea gravel




BLOWS REPRESENT THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH EACH 6 INCHES OF AN 18-INCH PENETRATION.

GRADATIONAL AND INFERRED CONTACT LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.

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UNIFIED SOIL CLASSIFICATION SYSTEM AND SYMBOL KEY
ARCO Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE 3

Total depth of boring: 24 feet
Diameter of boring: 12 inches
Date drilled: 6-16-93
Drilling Company: Exploration Geoservices
Driller: John
Drilling method: Hollow-Stem Auger

Casing diameter: 4 inches
Casing material: Sch 40 PVC
Slot size: 0.10-inch
Sand size: 3/8" pea gravel
Screen Interval: 15-1/2 feet to 24 feet
Field Geologist: Zbigniew Ignatowicz

Signature of Registered Professional:
Registration No.: RG 4313 State: CA

| Depth | Sample No. | Blows | P.I.D. | USCS Code | Description | Well Const. |
|---|---|---|---|---|---|---|
| | | | | | Pea gravel backfill. | |
| 10 | S-11 | 7, 9, 10 | 10.5 | ML | Gravelly silt, dark olive-gray, damp, low plasticity, very stiff to hard; fine gravel ~10%. | |
| 14 | | 8, 18, 26, 26, 50/6 | 14.3 | | Fine gravel, color change to dark greenish-gray; rootlets. | |
| 16 | S-16 | 26, 40, 45, 20, 50/6 | 21.8<br>26.2 | GW | Sandy gravel, coarse-grained sand, fine gravel, greenish-gray, damp, very dense. | |
| 18 | | 14, 20, 21, 24, 50/6 | 373 | | | |
| 20 | S-20.5 | 50/6, 28, 50/6 | 1096 | | ▽ | |
| 22 | | | | | Silty clay, ~10% fine-grained sand, olive-brown, moist, low to medium plasticity, hard. | |
| 24 | S-23.5 | 22, 27 | 2800 | CL | Total Depth = 14 feet. | |

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# LOG OF BORING B-13/VW-3

ARCO Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE 4

| | | | |
|---|---|---|---|
| Total depth of boring: | 31 feet | Casing diameter: | 4 inches |
| Diameter of boring: | 12 inches | Casing material: | Sch 40 PVC |
| Date drilled: | 6-16-93 | Slot size: | 0.10-inch |
| Drilling Company: | Exploration Geoservices | Sand size: | 3/8" pea gravel |
| Driller: | John | Screen Interval: | 17 feet to 30 feet |
| Drilling method: | Hollow-Stem Auger | Field Geologist: | Zbigniew Ignatowicz |

Signature of Registered Professional: [signature]

Registration No.: RG 4313 State: CA

| Depth | Sample No. | Blows | P.I.D. | USCS Code | Description | Well Const. |
|---|---|---|---|---|---|---|
| | | | | | Pea gravel backfill. | |
| 2 | | | | GW | Sandy gravel, coarse-grained sand, fine to coarse gravel, dark brown, damp, very dense. | |
| 4 | | | | | | |
| 6 | S-5.5 | 30<br>50 | | | | |
| 8 | | | | | | |
| 10 | | 15<br>24 | | CL/CH | Silty clay, very dark grayish-brown, damp, medium to high plasticity, hard. | |
| 12 | S-11 | 26 | 129 | | | |
| 14 | | 8 | | | | |
| | S-14.5 | 9<br>9 | 49.8 | | Moist, yellow-orange oxidation stains. | |
| 16 | | | | | | |
| | S-17 | 50/6 | 45.6 | GW | Sandy gravel, dark gray, moist, very dense. | |
| 18 | | | | | | |
| 20 | | | | | | |
| 22 | | | | | | |
| | S-23 | 50/3 | | ▽ | Wet. | |
| 24 | | | | | | |
| 26 | | | | | | |
| | | 23<br>25 | | | | |
| 28 | S-28 | 18 | 2570 | SC | Clayey sand, fine-grained, dark olive-gray, wet, dense. | |
| 30 | S-30.5 | 12<br>18 | 230 | CL | Silty clay, olive, moist, medium plasticity, stiff. | |
| 32 | | | | | Total Depth = 31 feet. | |
| 34 | | | | | | |
| 36 | | | | | | |
| 38 | | | | | | |
| 40 | | | | | | |

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# LOG OF BORING B-14/VW-4

ARCO Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE 5

Total depth of boring: 31-1/2 feet
Diameter of boring: 12 inches
Date drilled: 6-16-93
Drilling Company: Exploration Geoservices
Driller: John
Drilling method: Hollow-Stem Auger

Casing diameter: NA
Casing material: NA
Slot size: NA
Sand size: NA
Screen Interval: NA
Field Geologist: Zbigniew Ignatowicz

Signature of Registered Professional:
Registration No.: RG 4313 State: CA

| Depth | Sample No. | Blows | P.I.D. | USCS Code | Description | Well Const. |
|---|---|---|---|---|---|---|
| | | | | | Steel box. | |
| 2 | | | | GW | Sandy gravel, grayish-brown, slightly damp, dense. | |
| 4 | | | | | | |
| 6 | S-6 | 15<br>21<br>29 | 6.1 | | | |
| 8 | | | | | | |
| 10 | S-10.5 | 25<br>50/6 | 7.0 | | | |
| 12 | | | | | | |
| 14 | | | | ML | Sandy silt, with some gravel, dark grayish-brown, damp, low plasticity, hard. | |
| 16 | S-15.5 | 27<br>50/3 | 17.8 | CL | Gravelly clay, olive, damp, medium plasticity, hard. | |
| 18 | | | | | | |
| 20 | S-20.5 | 35<br>50/2 | 21.4 | | | |
| 22 | | | | | | |
| 24 | | | | CL | Sandy clay, dark greenish-gray, very moist, medium plasticity, hard. | |
| 26 | S-26 | 11<br>18<br>25 | 34.2 | | | |
| 28 | | | | | | |
| 30 | S-31 | 13<br>31<br>18 | 28.6 | | | |
| 32 | | | | | Total Depth = 31-1/2 feet. | |
| 34 | | | | | | |
| 36 | | | | | | |
| 38 | | | | | | |
| 40 | | | | | | |

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# LOG OF BORING B-15

ARCO Station 6113
785 East Stanley Boulevard
Livermore, California

PLATE 6

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TABLE 1
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES
ARCO Station 6113
Livermore, California
(Page 1 of 3)

| Sample | B | T | E | X | TPHg | TPHd | TOG |
|---|---|---|---|---|---|---|---|
| September 1989 | | | | | | | |
| S-14½-B1 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <30 |
| S-34½-B1 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <30 |
| S-44½-B1 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <30 |
| S-19-B2 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-34-B2 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-41-B2 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-14-B3 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-34-B3 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-37½-B3 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| February 1991 | | | | | | | |
| S-14½-B4 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-19½-B4 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-29-B4 | 0.008 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | <50 |
| S-0221-SP(A-D) | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <10 | NA |
| June 1992 | | | | | | | |
| S-10½-B5 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-20½-B5 | 1.4 | 2.0 | 13 | 67 | 1,200 | NA | NA |
| S-30½-B5 | 1.1 | 0.30 | 1.1 | 6.0 | 150 | NA | NA |
| S-40½-B5 | 17 | 32 | 14 | 150 | 230 | NA | NA |
| S-50½-B5 | 0.012 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-10½-B6 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-20½-B6 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-30½-B6 | 0.45 | 0.079 | 0.035 | 0.15 | 23 | NA | NA |
| S-45½-B6 | 0.70 | 0.021 | <0.005 | <0.005 | 1.9 | NA | NA |
| S-50½-B6 | 0.056 | <0.005 | <0.005 | 0.006 | <1.0 | NA | NA |
| S-10½-B7 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-20½-B7 | 0.43 | 1.3 | 0.35 | 2.5 | 21 | NA | NA |
| S-30½-B7 | 0.094 | 0.20 | <0.005 | 0.023 | 1.6 | NA | NA |
| S-40½-B7 | 0.009 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-50½-B7 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-10½-B8 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-20½-B8 | <0.005 | 0.22 | 0.42 | 2.1 | 68 | NA | NA |
| S-30½-B8 | 0.043 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-45½-B8 | 0.022 | <0.005 | <0.005 | <0.005 | 1.1 | NA | NA |

See notes on Page 3 of 3.

TABLE 1
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES
ARCO Station 6113
Livermore, California
(Page 2 of 3)

| Sample | B | T | E | X | TPHg | TPHd | TOG |
|---|---|---|---|---|---|---|---|
| June 1992 (cont.) | | | | | | | |
| S-8½-B9 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-20½-B9 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | 74 |
| S-30½-B9 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-40½-B9 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-50½-B9 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-10-B10 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-20-B10 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-30-B10 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-45-B10 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | 77 |
| S-55-B10 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | <1.0 | <30 |
| S-10½-B11 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-20½-B11 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-30½-B11 | <0.005 | <0.005 | <0.005 | <0.005 | 5.7 | NA | NA |
| S-40½-B11 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-50½-B11 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-55½-B11 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-0615-SP1(A-D) | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-0615-SP2(A-D) | 0.014 | 0.037 | 0.054 | 0.45 | 24 | NA | NA |
| August 1992 | | | | | | | |
| S-10-B12 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-20-B12 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-30-B12 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-40-B12 | 0.59 | 0.60 | 1.3 | 2.0 | 110 | NA | NA |
| S-50-B12 | <0.005 | <0.005 | <0.005 | <0.005 | <1.0 | NA | NA |
| S-0804-SP(A-D) | <0.005 | 0.011 | 0.030 | 0.066 | 2.6 | NA | NA |
| June 1993 | | | | | | | |
| B13-2-16 | <0.0050 | <0.0050 | 0.011 | 0.046 | 15 | NA | NA |
| B13-4-23.5 | 14 | 54 | 18 | 110 | 1,100 | NA | NA |
| B14-5-23 | 3.0 | 13 | 5.1 | 34 | 340 | NA | NA |
| B14-7-30.5 | 0.69 | 0.085 | 0.021 | 0.054 | 2.9 | NA | NA |
| B15-2-10.5 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | NA | NA |
| B15-4-20.5 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | NA | NA |
| B15-6-31 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | NA | NA |
| SP1 (A-D) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | NA | NA |

See notes on Page 3 of 3.

RESNA

TABLE 1
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES
ARCO Station 6113
Livermore, California
(Page 3 of 3)

Results in parts per million (ppm).

| | |
|---|---|
| <: | Results reported as less than the detection limit. |
| NA: | Not Analyzed |
| TPHg: | Total petroleum hydrocarbons as gasoline by EPA method 5030/8015/8020. |
| TPHd: | Total petroleum hydrocarbons as diesel by EPA method 3550/8015. |
| B: | Benzene, T: Toluene, E: Ethylbenzene, T: Total Xylene isomers |
| BTEX: | Analyzed by EPA method 5030/8015/8020. |
| TOG: | Total Oil and Grease by Standard Method 5520 E&F. |
| VOCs = | Halogenated volatile organics. |
| NA = | Compound not analyzed for. |
| ND = | Compound not detected. |

Sample designation:

S-55-B11

- S: Soil sample
- 55: Sample depth in feet below ground surface
- B11: Boring number

B13-2-16

- B13: Boring number
- 2: Sample collected from boring
- 16: Sample depth in feet below ground surface

# APPENDIX A

## CERTIFIED LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY RECORDS

# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


RESNA
3315 Almaden Expwy., Suite 34
San Jose, CA 95118
Attention: John Young

Project: 69028.11, Arco 6113

Enclosed are the results from 7 soil samples received at Sequoia Analytical on June 21,1993. The requested analyses are listed below:

| SAMPLE # | SAMPLE DESCRIPTION | DATE OF COLLECTION | TEST METHOD |
|---|---|---|---|
| 3FA4501 | Soil, B13-2-16 | 6/16/93 | EPA 5030/8015/8020 |
| 3FA4502 | Soil, B13-4-23.5 | 6/16/93 | EPA 5030/8015/8020 |
| 3FA4503 | Soil, B14-5-23 | 6/16/93 | EPA 5030/8015/8020 |
| 3FA4504 | Soil, B14-7-30.5 | 6/16/93 | EPA 5030/8015/8020 |
| 3FA4505 | Soil, B15-2-10.5 | 6/16/93 | EPA 5030/8015/8020 |
| 3FA4506 | Soil, B15-4-20.5 | 6/16/93 | EPA 5030/8015/8020 |
| 3FA4507 | Soil, B15-6-31 | 6/16/93 | EPA 5030/8015/8020 |

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


| | | | |
|---|---|---|---|
| RESNA | Client Project ID: | 69028.11, Arco 6113 | Sampled: Jun 16, 1993 |
| 3315 Almaden Expwy., Suite 34 | Sample Matrix: | Soil | Received: Jun 21, 1993 |
| San Jose, CA 95118 | Analysis Method: | EPA 5030/8015/8020 | Reported: Jul 2, 1993 |
| Attention: John Young | First Sample #: | 3FA4501 | |

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

| Analyte | Reporting Limit mg/kg | Sample I.D. 3FA4501 B13-2-16 | Sample I.D. 3FA4502 B13-4-23.5 | Sample I.D. 3FA4503 B14-5-23 | Sample I.D. 3FA4504 B14-7-30.5 | Sample I.D. 3FA4505 B15-2-10.5 | Sample I.D. 3FA4506 B15-4-20.5 |
|---|---|---|---|---|---|---|---|
| Purgeable Hydrocarbons | 1.0 | 15 | 1,100 | 340 | 2.9 | N.D. | N.D. |
| Benzene | 0.0050 | N.D. | 14 | 3.0 | 0.69 | N.D. | N.D. |
| Toluene | 0.0050 | N.D. | 54 | 13 | 0.085 | N.D. | N.D. |
| Ethyl Benzene | 0.0050 | 0.011 | 18 | 5.1 | 0.021 | N.D. | N.D. |
| Total Xylenes | 0.0050 | 0.046 | 110 | 34 | 0.054 | N.D. | N.D. |
| Chromatogram Pattern: | | Non-Gas Mix > C6 | Gas | Gas | Gas | -- | -- |

**Quality Control Data**

| | | | | | | |
|---|---|---|---|---|---|---|
| Report Limit Multiplication Factor: | 1.0 | 50 | 50 | 1.0 | 1.0 | 1.0 |
| Date Analyzed: | 6/27/93 | 6/28/93 | 6/28/93 | 6/27/93 | 6/27/93 | 6/27/93 |
| Instrument Identification: | GCHP-18 | GCHP-1 | GCHP-18 | GCHP-18 | GCHP-17 | GCHP-17 |
| Surrogate Recovery, %: (QC Limits = 70-130%) | 96 | 83 | 116 | 112 | 112 | 119 |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


| | | | | |
|---|---|---|---|---|
| RESNA | Client Project ID: | 69028.11, Arco 6113 | Sampled: | Jun 16, 1993 |
| 3315 Almaden Expwy., Suite 34 | Sample Matrix: | Soil | Received: | Jun 21, 1993 |
| San Jose, CA 95118 | Analysis Method: | EPA 5030/8015/8020 | Reported: | Jul 2, 1993 |
| Attention: John Young | First Sample #: | 3FA4507 | | |

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

| Analyte | Reporting Limit mg/kg | Sample I.D. 3FA4507 B15-6-31 |
|---|---|---|
| Purgeable Hydrocarbons | 1.0 | N.D. |
| Benzene | 0.0050 | N.D. |
| Toluene | 0.0050 | N.D. |
| Ethyl Benzene | 0.0050 | N.D. |
| Total Xylenes | 0.0050 | N.D. |
| Chromatogram Pattern: | | -- |

**Quality Control Data**

| | |
|---|---|
| Report Limit Multiplication Factor: | 1.0 |
| Date Analyzed: | 6/27/93 |
| Instrument Identification: | GCHP-17 |
| Surrogate Recovery, %: (QC Limits = 70-130%) | 108 |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL**

Vickie Tague
Project Manager

3FA4501.RES

# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


RESNA
3315 Almaden Expwy., Suite 34
San Jose, CA 95118
Attention: John Young

Client Project ID: 69028.11, Arco 6113
Matrix: Soil
QC Sample Group: 3FA4501-07

Reported: Jul 2, 1993

## QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|---|---|---|---|---|
| **Method:** | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| **Analyst:** | A. Maralit | A. Maralit | A. Maralit | A. Maralit |
| **Conc. Spiked:** | 0.20 | 0.20 | 0.20 | 0.60 |
| **Units:** | mg/Kg | mg/Kg | mg/Kg | mg/Kg |
| **LCS Batch#:** | BLK062593 | BLK062593 | BLK062593 | BLK062593 |
| **Date Prepared:** | 6/25/93 | 6/25/93 | 6/25/93 | 6/25/93 |
| **Date Analyzed:** | 6/27/93 | 6/27/93 | 6/27/93 | 6/27/93 |
| **Instrument I.D.#:** | GCHP-18 | GCHP-18 | GCHP-18 | GCHP-18 |
| **LCS % Recovery:** | 90 | 90 | 90 | 90 |
| **Control Limits:** | 60-140 | 60-140 | 60-140 | 60-140 |
| **MS/MSD Batch #:** | 3FA4008 | 3FA4008 | 3FA4008 | 3FA4008 |
| **Date Prepared:** | 6/25/93 | 6/25/93 | 6/25/93 | 6/25/93 |
| **Date Analyzed:** | 6/27/93 | 6/27/93 | 6/27/93 | 6/27/93 |
| **Instrument I.D.#:** | GCHP-18 | GCHP-18 | GCHP-18 | GCHP-18 |
| **Matrix Spike % Recovery:** | 75 | 80 | 80 | 82 |
| **Matrix Spike Duplicate % Recovery:** | 80 | 85 | 85 | 85 |
| **Relative % Difference:** | 6.5 | 6.1 | 6.1 | 3.6 |

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

**SEQUOIA ANALYTICAL**

Vickie Tague
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


RESNA
3315 Almaden Expwy., Suite 34
San Jose, CA 95118
Attention: John Young

Client Project ID: 69028.11, Arco 6113
Matrix: Soil
QC Sample Group: 3FA4501-07

Reported: Jul 2, 1993

## QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|---|---|---|---|---|
| **Method:** | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| **Analyst:** | R. Geckler | R. Geckler | R. Geckler | R. Geckler |
| **Conc. Spiked:** | 0.20 | 0.20 | 0.20 | 0.60 |
| **Units:** | mg/Kg | mg/Kg | mg/Kg | mg/Kg |
| **LCS Batch#:** | BLK062593 | BLK062593 | BLK062593 | BLK062593 |
| **Date Prepared:** | 6/25/93 | 6/25/93 | 6/25/93 | 6/25/93 |
| **Date Analyzed:** | 6/25/93 | 6/25/93 | 6/25/93 | 6/25/93 |
| **Instrument I.D.#:** | GCHP-17 | GCHP-17 | GCHP-17 | GCHP-17 |
| **LCS % Recovery:** | 110 | 100 | 100 | 100 |
| **Control Limits:** | 60-140 | 60-140 | 60-140 | 60-140 |
| **MS/MSD Batch #:** | 3FA4004 | 3FA4004 | 3FA4004 | 3FA4004 |
| **Date Prepared:** | 6/25/93 | 6/25/93 | 6/25/93 | 6/25/93 |
| **Date Analyzed:** | 6/25/93 | 6/25/93 | 6/25/93 | 6/25/93 |
| **Instrument I.D.#:** | GCHP-18 | GCHP-18 | GCHP-18 | GCHP-18 |
| **Matrix Spike % Recovery:** | 95 | 95 | 95 | 97 |
| **Matrix Spike Duplicate % Recovery:** | 100 | 100 | 100 | 98 |
| **Relative % Difference:** | 5.1 | 5.1 | 5.1 | 1.0 |

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

**SEQUOIA ANALYTICAL**

Vickie Tague
Project Manager

**Please Note:**
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

# ARCO Products Company

Division of AtlanticRichfieldCompany

Task Order No. 6113-93-2 69028.11

## Chain of Custody

| | | | |
|---|---|---|---|
| ARCO Facility no. 6113 | City (Facility) LIVERMORE | Project manager (Consultant) JOHN YOUNG | Laboratory name SEQUOIA |
| ARCO engineer Michael Whelan | Telephone no (ARCO) | Telephone no (Consultant) (408) 264-7723 | Fax no. (Consultant) (408) 264-2435 |
| Consultant name RESNA | Address (Consultant) 3315 ALMADEN EXPRESSWAY | | Contract number 07-073 |

Method of shipment: 69028.11

| Sample I.D. | Lab no. | Container no. | Matrix: Soil | Matrix: Water | Matrix: Other | Preservation: Ice | Preservation: Acid | Sampling date | Sampling time | BTEX 602/EPA 8020 | BTEX/TPH EPA M602/8020/8015 | TPH Modified 8015 Gas ☐ Diesel ☐ | Oil and Grease 413.1 ☐ 413.2 ☐ | TPH EPA 418.1/SM503E | EPA 8010/8010 | EPA 624/8240 | EPA 625/8270 | TCLP Metals ☐ Semi VOA ☐ VOA ☐ | CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐ | Lead Org./DHS ☐ Lead EPA 7420/7421 ☐ | H2O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B13-1-11 | | 1 | X | | | X | | 6-16-93 | | | | | | 9306A45-01 | | | | (A) | | | X |
| B13-2-16 | | 1 | X | | | X | | | | | X | | | | | | 02 | | | | |
| B13-3-20.5 | | 1 | X | | | X | | | | | | | | | | | 03 | (A) | | | X |
| B13-4-23.5 | | 1 | X | | | X | | | | | X | | | | | | 04 | (LUFT) | | | |
| B14-1-5.5 | | 1 | X | | | X | | | | | | | | | | | 05 | | | | X |
| B14-2-11 | | 1 | X | | | X | | | | | | | | | | | 06 | | | | X |
| B14-3-14.5 | | 1 | X | | | X | | | | | | | | | | | 07 | | | | X |
| B14-4-17 | | 1 | X | | | X | | | | | | | | | | | 08 | (A) | | | X |
| B14-5-23 | | 1 | X | | | X | | | | | | X | | | | | | 09 | | | | |
| B14-6-28 | | 1 | X | | | X | | | | | | | | | | | | 10 | (LUFT) | | | X |
| B14-7-30.5 | | 1 | X | | | X | | | | | | X | | | | | | 11 | | | | |

Special detection Limit/reporting:

Special QA/QC:

Remarks:

Lab number: 9306A45

Turnaround time:

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample: good

Temperature received: 600

| | | | |
|---|---|---|---|
| Relinquished by sampler | Date 6-17-93 | Time 11:20 | Received by: 6/21/93 3:15pm |
| Relinquished by: | Date 6/21/93 | Time 4:01 | Received by: |
| Relinquished by: | Date | Time | Received by laboratory: Date 6-21-93 Time 1601 |

Distribution: White copy -- Laboratory; Canary copy -- ARCO Environmental Engineering; Pink copy -- Consultant

ARPC 3792 (2-91)

**ARCO Products Company**
Division of AtlanticRichfieldCompany

**Chain of Custody**

Task Order No. ~~67028.11~~ 6113-93-2

| | | | |
|---|---|---|---|
| ARCO Facility no. 6113 | City (Facility) LIVERMORE | Project manager (Consultant) JOHN YOUNG | Laboratory name SEQUOIA |
| ARCO engineer Michael Whelan | Telephone no. (ARCO) | Telephone no. (Consultant) (408)264-7723 | Fax no. (Consultant) (408)264-2435 | Contract number 07-073 |
| Consultant name RESNA | Address (Consultant) 3375 SCOTT BLVD. SANTA CLARA | | Method of shipment 69028.11 |

| Sample I.D. | Lab no. | Container no. | Matrix: Soil | Matrix: Water | Matrix: Other | Preservation: Ice | Preservation: Acid | Sampling date | Sampling time | BTEX 602/EPA 8020 | BTEX/TP- EPA M602/8020/8015 | TPH Modified 8015 Gas / Diesel | Oil and Grease 413.1 / 413.2 | TPH EPA 418.1/SM503E | EPA 601/8010 | EPA 624/8240 | EPA 625/8270 | TCLP Metals / Semi VOA / VOA | CAM Metals EPA 6010/7000 TTLC / STLC | Lead Org/DHS / Lead EPA 7420/7421 | PNA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B15-1-6 | | 1 | X | | | X | | 6/16/93 | | | | | | 9306 | A45 | | ~~02~~ | ~~X~~ | | | X |
| B15-2-10.5 | | 1 | X | | | X | | | | | X | | | | | | 03 | ~~X~~ | | | |
| B15-3-15.5 | | 1 | X | | | X | | | | | | | | | | | ~~04~~ | | | | X |
| B15-4-20.5 | | 1 | X | | | X | | | | | X | | | | | | 06 | | | | |
| B15-5-26 | | 1 | X | | | X | | | | | | | | | | | ~~05~~ | ~~X~~ | | | X |
| B15-6-31 | | 1 | X | | | X | | | | | X | | | | | | 07 | | | | |

Condition of sample: good

Temperature received: cool

| | | | |
|---|---|---|---|
| Relinquished by sampler | Date 6-17-93 | Time 1120 | Received by 6/21/93 3:15pm |
| Relinquished by | Date 6/21/93 | Time 1505 | Received by |
| Relinquished by | | | Received by laboratory — Date 6/21/93 Time 1605 |

Laboratory number 9306A45

Turnaround time
- Priority Rush 1 Business Day [ ]
- Rush 2 Business Days [ ]
- Expedited 5 Business Days [ ]
- Standard 10 Business Days [ ]

Special detection Limit/reporting

Special QA/QC

Remarks

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

APPX: 0592 (2-91)

# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


RESNA
3315 Almaden Expwy., Suite 34
San Jose, CA 95118
Attention: John Young

Project: 69028.11 Arco 6113

Enclosed are the results from 1 soil sample received at Sequoia Analytical on June 21,1993. The requested analyses are listed below:

| SAMPLE # | SAMPLE DESCRIPTION | DATE OF COLLECTION | TEST METHOD |
|---|---|---|---|
| 3F93101 | Soil, SP1 (A-D) | 6/16/93 | EPA 5030/8015/8020 |

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


| | | | | |
|---|---|---|---|---|
| RESNA | Client Project ID: | 69028.11 Arco 6113 | Sampled: | Jun 16, 1993 |
| 3315 Almaden Expwy., Suite 34 | Sample Matrix: | Soil | Received: | Jun 21, 1993 |
| San Jose, CA 95118 | Analysis Method: | EPA 5030/8015/8020 | Reported: | Jun 23, 1993 |
| Attention: John Young | First Sample #: | 3F93101 | | |

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

| Analyte | Reporting Limit mg/kg | Sample I.D. 3F93101 SP1 (A-D) |
|---|---|---|
| Purgeable Hydrocarbons | 1.0 | N.D. |
| Benzene | 0.0050 | N.D. |
| Toluene | 0.0050 | N.D. |
| Ethyl Benzene | 0.0050 | N.D. |
| Total Xylenes | 0.0050 | N.D. |
| Chromatogram Pattern: | | -- |

**Quality Control Data**

| | |
|---|---|
| Report Limit Multiplication Factor: | 1.0 |
| Date Analyzed: | 6/22/93 |
| Instrument Identification: | GCHP-18 |
| Surrogate Recovery, %: (QC Limits = 70-130%) | 94 |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL**

Vickie Tague
Project Manager

# SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233


| | | |
|---|---|---|
| RESNA | Client Project ID: | 69028.11 Arco 6113 |
| 3315 Almaden Expwy., Suite 34 | Matrix: | Soil |
| San Jose, CA 95118 | | |
| Attention: John Young | QC Sample Group: 3F93101 | Reported: Jun 23, 1993 |

## QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|---|---|---|---|---|
| Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Analyst: | R. Geckler | R. Geckler | R. Geckler | R. Geckler |
| Conc. Spiked: | 0.20 | 0.20 | 0.20 | 0.60 |
| Units: | mg/Kg | mg/Kg | mg/Kg | mg/Kg |
| LCS Batch#: | BLK062293 | BLK062293 | BLK062293 | BLK062293 |
| Date Prepared: | 6/22/93 | 6/22/93 | 6/22/93 | 6/22/93 |
| Date Analyzed: | 6/22/93 | 6/22/93 | 6/22/93 | 6/22/93 |
| Instrument I.D.#: | GCHP-18 | GCHP-18 | GCHP-18 | GCHP-18 |
| LCS % Recovery: | 100 | 105 | 105 | 103 |
| Control Limits: | 60-140 | 60-140 | 60-140 | 60-140 |
| MS/MSD Batch #: | 3F79211 | 3F79211 | 3F79211 | 3F79211 |
| Date Prepared: | 6/22/93 | 6/22/93 | 6/22/93 | 6/22/93 |
| Date Analyzed: | 6/22/93 | 6/22/93 | 6/22/93 | 6/22/93 |
| Instrument I.D.#: | GCHP-18 | GCHP-18 | GCHP-18 | GCHP-18 |
| Matrix Spike % Recovery: | 100 | 100 | 100 | 100 |
| Matrix Spike Duplicate % Recovery: | 100 | 100 | 100 | 98 |
| Relative % Difference: | 0.0 | 0.0 | 0.0 | 2.0 |

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

**ARCO Products Company**
Division of AtlanticRichfieldCompany

**Chain of Custody**

Task Order No. 69028.11

| | | | |
|---|---|---|---|
| ARCO Facility no. 6113 | City (Facility) LIVERMORE, CA | Project manager (Consultant) JOHN YOUNG | Laboratory name SEQUOIA |
| ARCO engineer Michael Whelan | Telephone no. (ARCO) | Telephone no. (Consultant) (408) 264-9723 | Fax no. (Consultant) (408) 264-2435 | Contract number 07-073 |
| Consultant name RESNA INDUSTRIES | Address (Consultant) 3315 ALMADEN EXPRESSWAY, SAN JOSE | | | Method of shipment |

| Sample I.D. | Lab no. | Container no. | Matrix: Soil | Matrix: Water | Matrix: Other | Preservation: Ice | Preservation: Acid | Sampling date | Sampling time | BTEX 602/EPA 8020 | BTEX/TPH EPA M602/8020/8015E | TPH Modified 8015 Gas ☒ Diesel ☐ | Oil and Grease 413.1 ☐ 413.2 ☐ | TPH EPA 418.1/SM503E | EPA 601/8010 | EPA 624/8240 | EPA 625/8270 | TCLP Metals ☐ VOA ☐ Semi VOA ☐ | CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐ | Lead Org./DHS Lead EPA 7420/7421 ☐ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP1-A | | 1 | X | | | X | | 6-16-93 | | X | | X | | | 9306 | 931 | | - | 01 | A | | |
| SP1-B | | 1 | X | | | X | | ↓ | | X | | X | | | | ↓ | | - | 01 | B | | |
| SP1-C | | 1 | X | | | X | | | | X | | X | | | | | | - | 01 | C | | |
| SP1-D | | 1 | X | | | X | | | | X | | X | | | | | | - | 01 | D | | |

Special detection Limit/reporting

Special QA/QC

Remarks: 48 HRS TURN AROUND

Lab number: 9306931

Turnaround time
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☒
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☐

Condition of sample: good

Temperature received: cool

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| Relinquished by sampler: [signature] | 6-17-93 | 1100 | Received by: David Adams | 6/21/93 | 3:12 pm |
| Relinquished by: David Adams | 6/21/93 | 430 | Received by: | | |
| Relinquished by: | Date | Time | Received by laboratory: [signature] | Date 6/21/93 | Time 1609 |

Distribution: White copy — Laboratory, Canary copy — ARCO Environmental Engineering, Pink copy — Consultant

APPC 3292 (2-91)