TRI-STAR PARTNERSHIP
762 El Paseo de Saratoga
San Jose, CA 95130
Telephone (408) 866-0112

June 15, 1995

The Alameda Health Care Services Agency
80 Swan Way
Room 200
Oakland, CA 94621
Attn: Ms. Susan Hugo

Re: 5200 Telegraph Avenue, Oakland

Dear Ms. Hugo:

Environmental Science and Engineering, Inc. has recently completed the scope of work authorized for the above facility in accordance with the preliminary site assessment previously filed with you. I believe that all reports of ESE concerning their work on the site and the results of the quarterly monitoring were delivered to you.

We are hereby respectfully requesting a closing of the site or your further instructions if a closing cannot be issued.

Please, mail a copy of your decision to:

State Water Resources Control Board
Division of Clean Water Programs
Underground Storage Tank Clean-Up Fund Program
2014 T Street, Suite 130
P.O. Box 944212
Sacramento, CA 94244-2120
Claim# 2959

Thank you very much for your prompt attention to this matter.

Cordially yours,

By: _____
Ondrej Kojnok, General Partner

Report of Findings First Quarter 1995
Ground Water Monitoring
Autopro 5200 Telegraph Avenue,
Oakland, California

Prepared for:
Tri-Star Partnership
c/o Mr. Ondrej M. Kojnok, Attorney at Law
762 El Paseo De Saratoga
San Jose, California

Prepared by:
Environmental Science & Engineering, Inc.
Concord, CA

March 27, 1995

ESE Project No. 6-94-5219

This report has been prepared by Environmental Science & Engineering, Inc. for the exclusive use of Mr. George Tuma of Autopro and Mr. Ondrej M. Kojnok, Attorney at Law, as it pertains to their site located at 5200 Telegraph Avenue in Oakland, California. Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by other geologists and engineers practicing in this field. No other warranty, express or implied, is made regarding professional advice provided in this report.

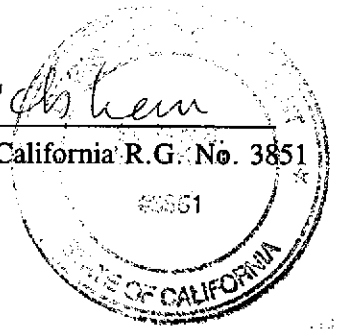
REPORT PREPARED BY:

Eric Garcia
Staff Geologist

3-27-95
Date

UNDER THE PROFESSIONAL REVIEW AND SUPERVISION OF:

Susan S. Wickham, California R.G. No. 3851
Senior Geologist



3-27-95
Date

ESE PROJECT NO. 6-94-5219

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1.0 Introduction

This report presents the results of First Quarter 1995 ground water monitoring conducted by Environmental Science & Engineering, Inc. (ESE) at the Autopro Facility (site) located at 5200 Telegraph Avenue in Oakland, California (Figure 1). The site is located at the northeastern corner of the intersection of Telegraph and Claremont Avenues in Oakland, California (Figure 2), in a mixed commercial and residential area within the northern portion of the City of Oakland. The site is at an elevation of approximately 120 feet above mean sea level (U.S.G.S., 1959). Regional topography slopes gently southwest toward the San Francisco Bay. The facility performs maintenance and repair on foreign and domestic automobiles.

Ground water monitoring activities conducted on January 18, 1995 included:

- Collection of depth to ground water measurements;
- Collection and analysis of ground water samples from four existing on-site monitoring wells (MW-1 through MW-4; Figure 2);
- Analysis and interpretation of the field and laboratory data;
- Comparison of the data to previous data collected at the site; and
- Preparation of this quarterly ground water monitoring report.

ESE's report titled *Report of Findings: Preliminary Site Assessment* for the site, dated May 24, 1994 (ESE, 1994a), summarized the site investigation background, presented the results of a preliminary site assessment, and presented the results of the first quarterly ground water monitoring event at the site (First Quarter 1994). Five underground storage tanks (USTs) were removed from three separate excavations at the site in December 1990, prior to ESE's involvement. The USTs had previously contained gasoline, diesel, and waste oil. Soil and ground water samples collected from the UST excavations during the UST removal program reported detectable concentrations of total petroleum hydrocarbons as gasoline (TPH-G) and total petroleum hydrocarbons as diesel (TPH-D). These samples also reported detectable concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total lead. Soil samples collected and analyzed from the waste oil UST excavation also reported detectable concentrations of petroleum oil and grease (O&G).

Some overexcavation of soils containing petroleum hydrocarbons was apparently conducted in July 1991, prior to ESE's involvement.

In April 1993, ESE performed a limited soil and ground water investigation at the site. The investigation included drilling one soil boring through the backfill material of each of the former

UST excavations on site, into the native material beneath, and collecting ground water samples using a temporary sampling probe. The conclusions of the limited investigation were that the soil and ground water samples collected at those locations contained total semi-volatile petroleum hydrocarbons (TSVPH), and that these hydrocarbons did not appear to consist of diesel fuel or gasoline components (ESE, 1993).

In April 1994, ESE conducted a preliminary site assessment (PSA) at the site. The investigation consisted of drilling four soil borings and installing four ground water monitoring wells in the borings (MW-1 through MW-4; Figure 2), and collecting soil and ground water samples from the four borings/monitoring wells. The PSA concluded that native soils beneath the site consist of silty-clay from beneath the asphalt surface subgrade to approximately 10 to 13 feet below ground surface (bgs). The silty clay is generally underlain by saturated sandy gravel. The static ground water level in the monitoring wells installed at the site was found to range from approximately 8.90 to 10.14 feet bgs, with an apparent ground water flow direction to the southwest. Soil and ground water samples collected and analyzed during the PSA reported detectable concentrations of petroleum hydrocarbons. The lateral extent of petroleum hydrocarbons in ground water off site to the southwest was not delineated during the PSA.

2.0 First Quarter 1995 Ground Water Monitoring

2.1 Ground Water Elevations

On January 18, 1995, ESE personnel measured static water levels in the four monitoring wells using an electric water level tape. Measurements were made relative to the surveyed datum at the top of each monitoring well casing. ESE calculated ground water elevations for each monitoring well by subtracting the depth to ground water measurement from the datum elevation. The ground water elevation data were used to construct a ground water elevation contour map, from which ESE estimated the direction and magnitude of ground water flow beneath the site (Figure 2). Field documentation of water level measurements are included with well purging results in Appendix A - Monitoring Well Purging and Sampling Data.

2.2 Ground Water Sampling and Analysis

Ground water samples were collected from each of the monitoring wells on January 18, 1995, after they were purged of approximately three casing volumes of water and allowed to recover, in accordance with ESE Standard Operating Procedure (SOP) No. 3 for Ground Water Monitoring and Sampling from Monitoring Wells (Appendix B). Samples were analyzed by Sequoia Analytical (Sequoia), a State-certified laboratory, for TPH-G with BTEX distinction according to United States Environmental Protection Agency (EPA) Method 5030/8015/8020; for total extractable petroleum hydrocarbons (TEPH) according to EPA Method 3510/3520/8015; and for cadmium, chromium, nickel, lead, and zinc according to EPA Method 200.7.

Purge water and decontamination rinseate were stored on-site remote to the public in DOT-rated 55-gallon drums pending analytical profiling for appropriate disposal.

3.0 First Quarter 1995 Results

3.1 Ground Water Elevations

Table 1 presents a historical summary of ground water elevation data, inclusive of the current monitoring event. Ground water elevation contours based on the January 1995 monitoring data are shown on Figure 2. The ground water elevation in all monitoring wells at the site increased between 2.66 and 3.09 feet between the October 1994 and January 1995 monitoring events (Table 1). No free phase petroleum hydrocarbons (free product) were observed in any of the monitoring wells. Based on current data, ground water flow direction and magnitude was estimated to be toward the southwest, with a gradient of approximately 0.007 feet per foot (37 feet per mile).

3.2 Ground Water Chemistry

Analytical results for the First Quarter of 1995 are summarized along with historical analytical data in Table 2. The laboratory report and chain of custody documentation are presented in Appendix C - Laboratory Reports and Chain of Custody Documentation for Ground Water Samples. Based on the laboratory analytical results, the estimated extent of TPH-G in ground water beneath the site is shown on Figure 3.

Evaluation of Table 2 indicates that concentrations of petroleum hydrocarbons and heavy metals increased slightly in wells from which they have been historically detected (MW-1, MW-3, and MW-4) during the current monitoring period. Most notable were the increases in TPH-G concentrations in monitoring wells MW-3, and MW-4, which are the downgradient site wells. BTEX concentrations increased during the monitoring period as well. The chromatograph pattern interpreted by the laboratory for TPH-G was interpreted by the laboratory as typical gasoline; The chromatograph pattern for detectable TEPH in monitoring wells MW-1, MW-3, and MW-4 were interpreted as undefined hydrocarbons in the $<$C14 to the $<$C16 ranges (Appendix C). This finding suggests the samples do not conform with a typical TPH-D pattern, which is consistent with ESE's April 1993 findings.

Monitoring well MW-2 has remained at non-detectable concentrations of petroleum hydrocarbons since its installation in April 1994 by ESE. Comparison of Figure 3 with it's counterpart in ESE's Second Quarter (August) 1994 monitoring report (ESE, 1994b) indicates that although TPH-G concentrations increased during the current quarter, the approximate extent of TPH-G in ground water has not changed significantly. These results confirm that the extent of petroleum

hydrocarbons in ground water has not been fully defined to the west, south, and southwest of the site.

Metals concentrations in all samples remained generally low, and are below applicable State and Federal drinking water standards. The detected concentrations of metals appear to be background levels unrelated to the site conditions. Overall concentratons of metals has decreased since April 1994 (Table 2).

4.0 Summary and Conculsions

- The predominant ground water flow direction during the First Quarter 1995 appears to be to the southwest, with an approximate gradient of 0.007 feet per foot (37 feet per mile);

    - The notable increase in ground water elevations (relative to October 1994 results) are indicative of extensive recharge associated with abnormally heavy precipitation during the Fourth Quarter 1994.

- TPH-G and BTEX concentrations increased slightly between October 1994 and January 1995 in ground water samples collected from monitoring wells MW-1, MW-3, and MW-4; No concentrations of TPH-G and BTEX have been detected in monitoring well MW-2 since its installation in April 1994;

- TEPH concentrations (quantitated by the laboratory as unknown hydrocarbons in the <C14-16 range) increased slightly between October 1994 and January 1995 in ground water samples collected from monitoring wells MW-1, MW-3, and MW-4; No concentrations of TEPH have been detected in monitoring well MW-2 since its installation in April 1994;

    - The overall increases noted for petroleum hydrocarbon concentrations are consistent with raised ground water elevations into the "smear" zone of petroleum hydrocarbons at the saturated/unsaturated zone interface.

- Metals concentrations have generally decreased since July 1994 and are below applicable State and Federal drinking water standards and appear to be at concentrations indicative of background conditions;

- The continued nondetectable results for TPH-D, TPH-G, and BTEX in monitoring well MW-2 support the ground water elevation data which indicate that monitoring well MW-2 is an upgradient (background) monitoring well;

- The areal extent of the plume of dissolved petroleum hydrocarbons in ground water does not appear to have changed significantly between October 1994 and January 1995; and

- The existing monitoring well network is sufficient to confirm with current data that petroleum hydrocarbons do appear to be migrating offsite to the southwest, but is not sufficient to confirm the extent to which this is occurring.

5.0 References

Environmental Science & Engineering, Inc. (ESE), 1993, Autopro, 5200 Telegraph Avenue, Oakland, California, Letter to Mr. Jeff Widman, dated April 19, 1993.

_____, 1994a, Report of Findings: Preliminary Site Assessment, Autopro, 5200 Telegraph Avenue, Oakland, California, dated May 24, 1994.

_____, 1994b, Report of Findings: Second Quarter 1994 Ground Water Monitoring, Autopro, 5200 Telegraph Avenue, Oakland, California, dated August 16, 1994.

United States Geologic Survey, 1959 Oakland East and Oakland West 7.5 Minute Topographic Quadrangles, Photorevised 1980.

Tables

TABLE 1

HISTORICAL GROUND WATER ELEVATION DATA

Autopro
5200 Telegraph Avenue
Oakland, California

Well	Date	Datum (ft. AMSL)	Depth to Water	Piezometric Surface Elevation	Change in Elevation
MW-1	01/18/95	115.44	10.14	105.30	2.92
	10/21/94		13.06	102.38	-0.67
	07/20/94		12.39	103.05	0.30
	04/26/94		12.69	102.75	--
MW-2	01/18/95	114.62	9.21	105.41	3.09
	10/21/94		12.30	102.32	-0.86
	07/20/94		11.44	103.18	-0.29
	04/26/94		11.15	103.47	--
MW-3	01/18/95	113.90	8.90	105.00	3.02
	10/21/94		11.92	101.98	-0.71
	07/20/94		11.21	102.69	-0.24
	04/26/94		10.97	102.93	--
MW-4	01/18/95	114.25	9.02	105.23	2.66
	10/21/94		11.68	102.57	-0.52
	07/20/94		11.16	103.09	-0.19
	04/26/94		10.97	103.28	--

NOTES:

ft. AMSL = Feet Above Mean Sea Level
Negative change in elevation denotes a decrease in piezometric surface elevation

TABLE 2

HISTORICAL GROUND WATER ANALYTICAL DATA

Autopro
5200 Telegraph Avenue
Oakland, California

Sample I.D.	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-Dichlorethane (µg/L)	Ethylene dibromide (µg/L)	Metals (mg/L)				
										Cd	Cr	Pb	Ni	Zn
MW-1	04/26/94	1,400	<50	<0.50	<0.50	4.5	2.1	<0.50	<0.50	0.001	<0.05	<0.005	0.12	<0.10
	07/20/94	1,200	100	19	2.5	2.4	1.6	--	--	<0.010	0.22	0.044	0.36	0.35
	10/21/94	560	130	8.4	1.1	0.90	1.8	--	--	<0.010	<0.010	<0.020	0.041	0.077
	01/18/95	620	240	8.5	2.1	1.3	2.3	--	--	<0.010	0.026	<0.020	0.024	0.067
MW-2	04/26/94	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.001	<0.05	<0.005	0.06	<0.10
	07/20/94	<50	<50	<0.50	<0.50	<0.50	<0.50	--	--	<0.010	0.022	<0.020	0.045	0.068
	10/21/94	<50	<50	<0.50	<0.50	<0.50	<0.50	--	--	<0.010	0.031	<0.020	0.027	0.044
	01/18/95	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.010	0.014	<0.020	0.023	0.045
MW-3	04/26/94	10,000	<3,000	70	40	40	50	<30	<30	<0.001	<0.05	0.043	0.10	0.10
	07/20/94	7,500	1,400	120	38	36	39	--	--	<0.010	0.099	0.14	0.12	0.25
	10/21/94	6,300	1,200	69	37	29	38	--	--	<0.010	<0.010	<0.020	0.036	0.14
	01/18/95	8,000	1,600	84	35	48	49	--	--	<0.010	0.046	0.049	0.040	0.11
MW-4	04/26/94	6,800	<300	<3.0	<3.0	3.0	4.0	<3.0	<3.0	<0.001	<0.05	0.007	0.06	<0.10
	07/20/94	5,600	1,500	35	11	12	17	--	--	<0.010	0.023	<0.020	0.048	0.060
	10/21/94	4,300	870	26	19	12	20	--	--	<0.010	0.013	<0.020	<0.020	0.092
	01/18/95	6,700	1,300	19	15	13	16	--	--	<0.010	0.020	<0.020	0.021	0.036

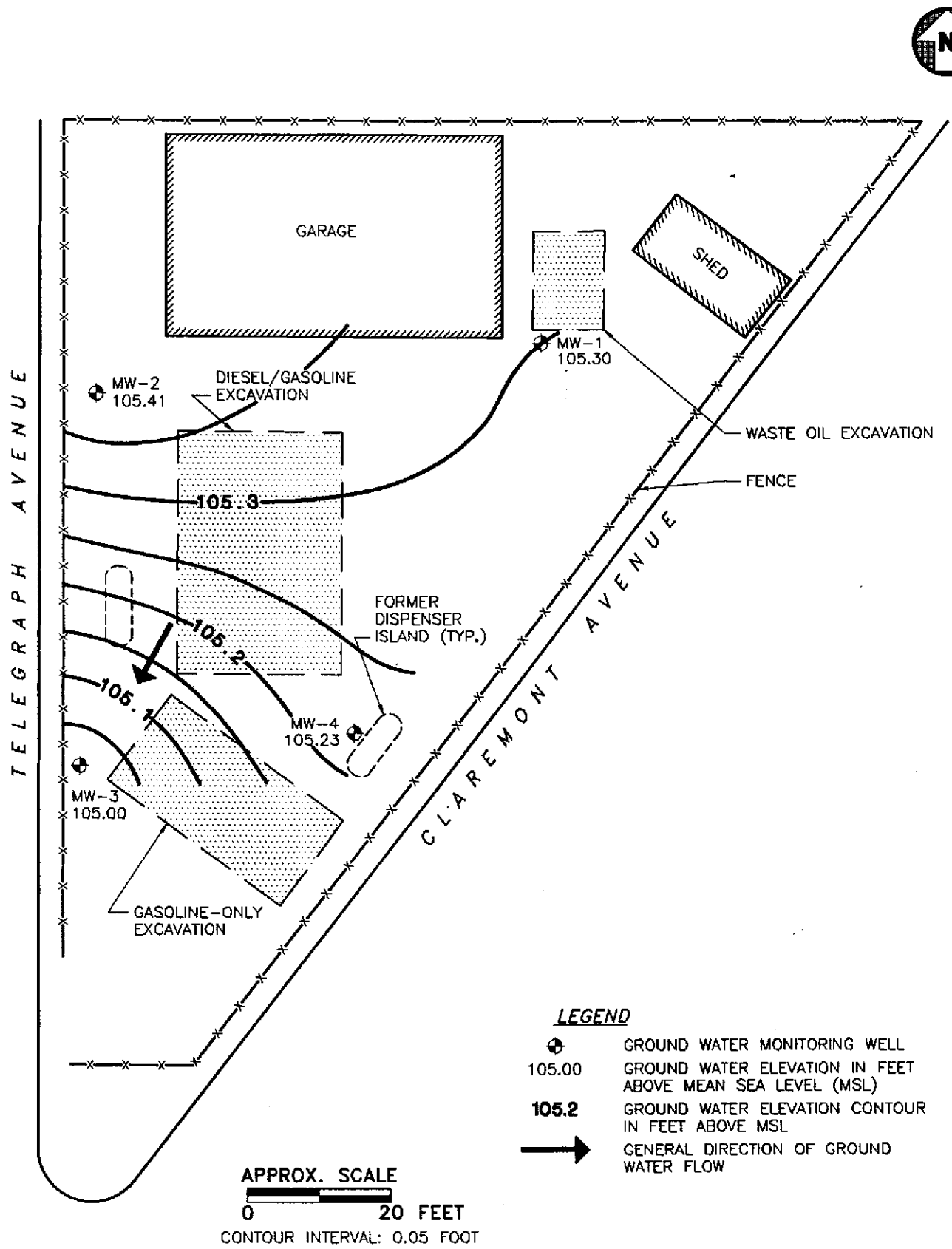
Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
TPH-D = Total Petroleum Hydrocarbons as Diesel
µg/L = Micrograms per liter or parts per billion (ppb)
mg/L = Milligrams per liter or parts per million (ppm)
Cd = Cadmium
Cr = Chromium
Pb = Lead
Ni = Nickel
Zn = Zinc
< = Less than listed detection limits
-- = Not analyzed

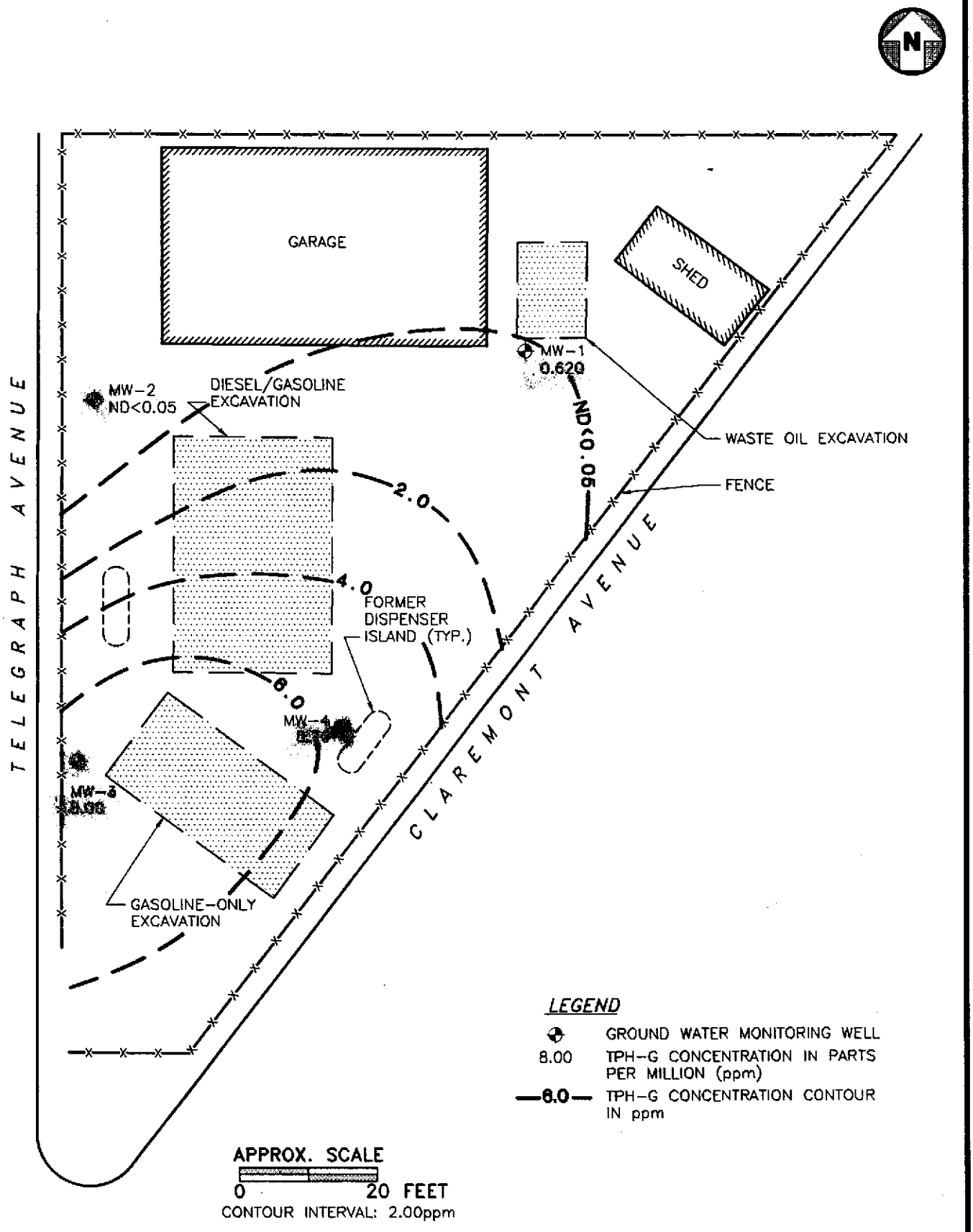
Figures

ADAPTED FROM U.S.G.S. OAKLAND EAST AND OAKLAND WEST 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAPS, 1959, PHOTOREVISED 1980.

ESE A CALGORP Company — Environmental Science & Engineering, Inc.	DATE 3/94	LOCATION MAP	FIGURE NO. 1
4090 NELSON AVENUE, SUITE J CONCORD, CA 94520	REVISED 2/6/95	AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	PROJ. NO. 6--94--5219
	CAD FILE 52191001		



Environmental Science & Engineering, Inc.	DATE 3/94	GROUND WATER ELEVATIONS JANUARY 18, 1995	FIGURE NO. 2
4090 NELSON AVENUE, SUITE J CONCORD, CA 94520	REVISED 12/6/95	AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	PROJ. NO. 6-94-5219
	CAD FILE 52191003		



Environmental Science & Engineering, Inc. 4090 NELSON AVENUE, SUITE J CONCORD, CA 94520	DATE 3/94 REVISED 2/6/95 CAD FILE 52191004	TPH-G CONCENTRATION CONTOUR MAP JANUARY 18, 1995 AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	FIGURE NO. 3 PROJ. NO. 6-94-5219

Appendix A

Monitoring Well Purging and Sampling Data

Environmental Science & Engineering, Inc.
A CILCORP Company

SAMPLE COLLECTION LOG

PROJECT NAME: AUTOPRO
PROJECT NO.: 6-94-5219
DATE: 1/18/95

SAMPLE LOCATION I.D.: MW-1
SAMPLER: CHRIS V. / ERIC G.
PROJECT MANAGER: MIKE GUILLEN

CASING DIAMETER

2" X
4"
Other

SAMPLE TYPE

Ground Water X
Surface Water
Treat. Influent
Treat. Effluent
Other

WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: — (ft.)
DEPTH TO WATER: 10.14 (ft.)
DEPTH OF WELL: 24.25 (ft.)

PRODUCT THICKNESS: (ft.)
WATER COLUMN: 14.11 (ft.)
WELL CASING VOLUME: 2.3 (gal)

MINIMUM PURGE VOLUME (3 or 4 WCV): 6.9 (gal)
ACTUAL VOLUME PURGED: 7.0 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
~~1144~~ 1225	0	~~7.4~~ 6.4	—	~~67~~ 66	—	CLOUDY/SILTY/ODOR
1231	2.5	6.5	—	66	—	↓
1236	5.0	6.5	—	66	—	↓

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE pH Tester/Temp/COND UNIT# — DATE: 1/18/95 TIME: 1100 BY: CHV
TURBIDITY: TYPE UNIT# DATE: TIME: BY:

PURGE METHOD

___Displacement Pump ___Other
X Bailer (Teflon/PVC/SS) ___Submersible Pump

SAMPLE METHOD

___Bailer (Teflon/PVC/SS) ___Dedicated
X Bailer (Disposable) ___Other

SAMPLES COLLECTED

	ID	TIME	DATE	LAB	ANALYSES
SAMPLE	MW-1	1240	1/18/95	SEQUOIA	
DUPLICATE					
SPLIT					
FIELD BLANK					

COMMENTS:

SAMPLER: [signature] PROJECT MANAGER [signature]

4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4053 Fax (510) 685-5323

Environmental Science & Engineering, Inc.
A CILCORP Company

SAMPLE COLLECTION LOG

PROJECT NAME: ANTOPRO
PROJECT NO.: 6-94-5219
DATE: 1/18/95

SAMPLE LOCATION I.D.: MW-2
SAMPLER: CHRIS V./ERIC G.
PROJECT MANAGER: MIKE Q.

CASING DIAMETER

2" X
4" ____
Other ____

SAMPLE TYPE

Ground Water X
Surface Water ____
Treat. Influent ____
Treat. Effluent ____
Other ____

WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: — (ft.) PRODUCT THICKNESS: — (ft.) MINIMUM PURGE VOLUME
DEPTH TO WATER: 9.21 (ft.) WATER COLUMN: 15.29 (ft.) (3) or 4 WCV): 7.5 (gal)
DEPTH OF WELL: 24.50 (ft.) WELL CASING VOLUME: 2.50 (gal) ACTUAL VOLUME PURGED: 7.75 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
1149	0	7.8	—	65	—	BAILER/SILTY
1300	3.0	7.1	"	64	"	
1309	6.0	6.4	"	66	"	

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE PH/TEMP TESTER UNIT# — DATE: 1/18/95 TIME: 1100 BY: CHV
TURBIDITY: TYPE ____ UNIT# ____ DATE: ____ TIME: ____ BY: ____

PURGE METHOD

___Displacement Pump ___Other
X Bailer (Teflon/PVC/SS) ___Submersible Pump

SAMPLE METHOD

___Bailer (Teflon/PVC/SS) ___Dedicated
X Bailer (Disposable) ___Other

SAMPLES COLLECTED

	ID	TIME	DATE	LAB	ANALYSES
SAMPLE	MW-2	1310	1/18/95	SEQUOIA	
DUPLICATE					
SPLIT					
FIELD BLANK					

COMMENTS: ____

SAMPLER: [signature] PROJECT MANAGER [signature]

4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4053 Fax (510) 685-5323

Environmental Science & Engineering, Inc.
A CILCORP Company

SAMPLE COLLECTION LOG

PROJECT NAME: AUTO PRO
PROJECT NO.: 6-94-5219
DATE: 1/18/95

SAMPLE LOCATION I.D.: MW-3
SAMPLER: CHRIS V. / ERIC G.
PROJECT MANAGER: MIKE Q.

CASING DIAMETER

2" X
4"
Other

SAMPLE TYPE

Ground Water X
Surface Water
Treat. Influent
Treat. Effluent
Other

WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: — (ft.) PRODUCT THICKNESS: — (ft.) MINIMUM PURGE VOLUME
DEPTH TO WATER: 8.90 (ft.) WATER COLUMN: 15.4 (ft.) (3 or 4 WCV): 7.6 (gal)
DEPTH OF WELL: 24.50 (ft.) WELL CASING VOLUME: 2.55 (gal) ACTUAL VOLUME PURGED: 7.75 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
1149	0	7.4	—	67	—	TRANSLUCENT / STRONG ODOR
1148	2.5	7.1	—	67	—	↓
1152	5.0	6.8	—	68	—	↓

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE pH TEST TEMP TEST UNIT# — DATE: 1/18/95 TIME: 1100 BY: CHV
TURBIDITY: TYPE ____ UNIT# ____ DATE: ____ TIME: ____ BY: ____

PURGE METHOD

___Displacement Pump ___Other
X Bailer (Teflon/PVC/SS) ___Submersible Pump

SAMPLE METHOD

___Bailer (Teflon/PVC/SS) ___Dedicated
X Bailer (Disposable) ___Other

SAMPLES COLLECTED

	ID	TIME	DATE	LAB	ANALYSES
SAMPLE	MW-3	1210	1/18/95	SEQUOIA	
DUPLICATE	DUP	1210	1/18/95	SEQUOIA	
SPLIT					
FIELD BLANK					

COMMENTS:

SAMPLER: Chris V. PROJECT MANAGER: M. Quill

4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4053 Fax (510) 685-5323

Environmental Science & Engineering, Inc.
A CILCORP Company

SAMPLE COLLECTION LOG

PROJECT NAME: Autopro
PROJECT NO.: 6-94-5219
DATE: 1/18/95

SAMPLE LOCATION I.D.: MW-4
SAMPLER: CHRIS V. / ERIC G.
PROJECT MANAGER: MIKE Q.

CASING DIAMETER

2" X
4" ____
Other ____

SAMPLE TYPE

Ground Water X
Surface Water ____
Treat. Influent ____
Treat. Effluent ____
Other ____

WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: — (ft.)
DEPTH TO WATER: 9.02 (ft.)
DEPTH OF WELL: 24.90 (ft.)

PRODUCT THICKNESS: — (ft.)
WATER COLUMN: 15.88 (ft.)
WELL CASING VOLUME: 2.5 (gal)

MINIMUM PURGE VOLUME (3) or 4 WCV): 7.5 (gal)
ACTUAL VOLUME PURGED: 7.75 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
1201	0	6.7	—	76	—	GREENISH/SEDIMENT
1207	3.0	6.8	—	68	—	
1213	6.0	6.8	—	68	—	

INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE PH TESTR UNIT# — DATE: 1/18/95 TIME: 1100 BY: CHV
TURBIDITY: TYPE ____ UNIT# ____ DATE: ____ TIME: ____ BY: ____

PURGE METHOD

___Displacement Pump ___Other
X Bailer (Teflon/PVC/SS) ___Submersible Pump

SAMPLE METHOD

___Bailer (Teflon/PVC/SS) ___Dedicated
X Bailer (Disposable) ___Other

SAMPLES COLLECTED

	ID	TIME	DATE	LAB	ANALYSES
SAMPLE	MW-4	1220	1/18/95	SEQUOIA	
DUPLICATE					
SPLIT					
FIELD BLANK					

COMMENTS: ____

SAMPLER: Chris V. PROJECT MANAGER M. Quill

4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4055 Fax (510) 685-5323

Appendix B

ESE Standard Operating Procedure No. 3 for Ground Water Monitoring and Sampling from Monitoring Wells

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
CONCORD, CALIFORNIA OFFICE

STANDARD OPERATING PROCEDURE NO. 3
FOR GROUND-WATER MONITORING AND SAMPLING FROM MONITORING WELLS

Environmental Science & Engineering, Inc. (ESE) typically performs ground-water monitoring at project sites on a quarterly basis. As part of the monitoring program an ESE staff member will first gauge the depth to water and free product (if present) in each well, then collect ground-water samples from each well. Depth to water measurements are taken by lowering an electric fiberglass tape measure into the well and recording the occurrence of water in feet below a fixed datum set on the top of the well-casing. If free-phase liquid hydrocarbons (free product) are known or suspected to be present in the well, then an electric oil/water interface probe is used to determine the depth to the occurrence of ground-water and the free product in feet below the fixed datum on the top of the well-casing. Depth to water and depth to product measurements are measured and recorded within an accuracy of 0.005-foot. The electric tape and the electric oil/water interface probe are washed with an Alconox® detergent and tap water solution then rinsed with tap water between uses in different wells.

Ground-water samples are collected from a well subsequent to purging a minimum of three to four well-casing volumes of ground water from the well, if the well bails dry prior to the removal of the required minimum volume, then the samples are collected upon the recovery of the ground water in that well to 80% of its initial static level. Ground water is typically purged from monitoring wells using either a hand-operated positive displacement pump, constructed of polyvinylchloride (PVC); a new (precleaned), disposable polyethylene bailer; or, a variable-flow submersible pump, constructed of stainless steel and Teflon®. The hand pumps and the submersible pumps are cleaned between each use with an Alconox® detergent and tap water solution followed by a tap water rinse. During the well purging process the conductivity, pH and temperature of the ground water are monitored by the ESE staff member. Ground-water samples are collected from the well subsequent to the stabilization of the of the conductivity, pH and temperature of the purge water, and the removal of four well-casing volumes of ground-water (unless the well bails dry). The parameters are deemed to have stabilized when two consecutive measurements are within 10% of each other, for each respective parameter. The temperature, pH, conductivity and purge volume measurements, and observations of water clarity and sediment content will be documented by the ESE staff member on ESE Ground-Water Sampling Data Forms.

Ground-water samples are collected by lowering a new (precleaned), disposable polyethylene bailer into the well using new, disposable nylon cord. The filled bailer is retrieved, emptied, then filled again. The ground water from this bailer is decanted into appropriate laboratory supplied glassware and/or plastic containers (if sample preservatives are required, they are added to the empty containers at the laboratory prior to the sampling event). The containers are filled carefully so that no headspace is present to avoid volatilization of the sample. The filled sample containers are then labeled and placed in a cooler with ice for transport under chain of custody documentation to the designated analytical laboratory. The ESE staff member will document the time and method of sample collection, and the type of sample containers and preservatives (if any) used. These facts will appear on the ESE Ground-Water Sampling Data Forms. ESE will collect a duplicate ground-water sample from one well for every ten wells sampled at each site. The duplicate will be a blind sample (its well designation will be unknown to the laboratory). The duplicate sample is for Quality Assurance and Quality Control (QA/QC) purposes, and provides a check on ESE sampling procedures and laboratory sample handling procedures. When VOCs are included in the laboratory analyses, ESE will include a trip blank, if required, in the cooler with the ground-water samples for analysis for the identical VOCs. The trip blank is supplied by the laboratory and consists of deionized water. The trip blank is for QA/QC purposes and provides a check on both ESE and laboratory sample handling and storage procedures. Since disposable bailers are used for sample collection, and are not reused, no equipment blank (rinsate) samples are collected.

Appendix C

Laboratory Reports and Chain of Custody Documentation for Ground Water Samples

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Environmental Science & Engineering, Inc.
4090 Nelson Ave., Ste J
Concord, CA 94520
Attention: Mike Quillin

Client Project ID: Autopro, 6-94-5219
Sample Matrix: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 501-0759

Sampled: Jan 18, 1995
Received: Jan 18, 1995
Reported: Feb 1, 1995

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 501-0759 MW-1	Sample I.D. 501-0760 MW-2	Sample I.D. 501-0761 MW-3	Sample I.D. 501-0762 MW-4
Purgeable Hydrocarbons	50	620	N.D.	8,000	5,700
Benzene	0.50	8.5	N.D.	84	19
Toluene	0.50	2.1	N.D.	16	15
Ethyl Benzene	0.50	1.3	N.D.	48	13
Total Xylenes	0.50	2.3	N.D.	49	16
Chromatogram Pattern:		Gasoline	--	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	2.0	1.0	20	10
Date Analyzed:	1/24/95	1/24/95	1/24/95	1/24/95
Instrument Identification:	HP-5	HP-4	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	77	93	74	70

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

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Environmental Science & Engineering, Inc.	Client Project ID:	Autopro, 6-94-5219	Sampled: Jan 18, 1995
4090 Nelson Ave., Ste J	Sample Matrix:	Water	Received: Jan 18, 1995
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported: Feb 1, 1995
Attention: Mike Quillin	First Sample #:	501-0759	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 501-0759 MW-1	Sample I.D. 501-0760 MW-2	Sample I.D. 501-0761 MW-3	Sample I.D. 501-0762 MW-4
Extractable Hydrocarbons	50	240	N.D.	1,600	1,300
Chromatogram Pattern:		Unidentified Hydrocarbons <C14	--	Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons <C16

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Extracted:	1/25/95	1/25/95	1/25/95	1/25/95
Date Analyzed:	1/27/95	1/27/95	1/27/95	1/27/95
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3B

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

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

5010759.ESE <2>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Environmental Science & Engineering, Inc.
4090 Nelson Ave., Ste J
Concord, CA 94520
Attention: Mike Quillin

Client Project ID: Autopro, 6-94-5219
Sample Descript: Water, MW-1
Lab Number: 501-0759

Sampled: Jan 18, 1995
Received: Jan 18, 1995
Analyzed: Jan 23, 1995
Reported: Feb 1, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Cadmium	0.010	N.D.
Chromium	**0.010**	**0.026**
Lead	0.020	N.D.
Nickel	**0.020**	**0.024**
Zinc	**0.020**	**0.067**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

5010759.ESE <3>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Environmental Science & Engineering, Inc.
4090 Nelson Ave., Ste J
Concord, CA 94520
Attention: Mike Quillin

Client Project ID: Autopro, 6-94-5219
Sample Descript: Water, MW-2
Lab Number: 501-0760

Sampled: Jan 18, 1995
Received: Jan 18, 1995
Analyzed: Jan 23, 1995
Reported: Feb 1, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Cadmium	0.010	N.D.
Chromium	**0.010**	**0.014**
Lead	0.020	N.D.
Nickel	**0.020**	**0.023**
Zinc	**0.020**	**0.045**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

5010759.ESE <4>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Environmental Science & Engineering, Inc.
4090 Nelson Ave., Ste J
Concord, CA 94520
Attention: Mike Quillin

Client Project ID: Autopro, 6-94-5219
Sample Descript: Water, MW-3
Lab Number: 501-0761

Sampled: Jan 18, 1995
Received: Jan 18, 1995
Analyzed: Jan 23, 1995
Reported: Feb 1, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Cadmium	0.010	N.D.
Chromium	0.010	0.046
Lead	0.020	0.049
Nickel	0.020	0.040
Zinc	0.020	0.11

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

5010759.ESE <5>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Environmental Science & Engineering, Inc.	Client Project ID:	Autopro, 6-94-5219	Sampled:	Jan 18, 1995
4090 Nelson Ave., Ste J	Sample Descript:	Water, MW-4	Received:	Jan 18, 1995
Concord, CA 94520			Analyzed:	Jan 23, 1995
Attention: Mike Quillin	Lab Number:	501-0762	Reported:	Feb 1, 1995

LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Cadmium	0.010	N.D.
Chromium	**0.010**	**0.020**
Lead	0.020	N.D.
Nickel	**0.020**	**0.021**
Zinc	**0.020**	**0.036**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

5010759.ESE <6>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Environmental Science & Engineering, Inc.
4090 Nelson Ave., Ste J
Concord, CA 94520
Attention: Mike Quillin

Client Project ID: Autopro, 6-94-5219
Matrix: Liquid
QC Sample Group: 5010759-62

Reported: Feb 1, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	M. Nguyen
MS/MSD Batch#:	5010763	5010763	5010763	5010763	BLK012595
Date Prepared:	1/24/95	1/24/95	1/24/95	1/24/95	1/25/95
Date Analyzed:	1/24/95	1/24/95	1/24/95	1/24/95	1/27/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	90	100	105	103	100
Matrix Spike Duplicate % Recovery:	90	100	100	100	104
Relative % Difference:	0.0	0.0	4.9	3.0	3.9
LCS Batch#:	3LCS012495	3LCS012495	3LCS012495	3LCS012495	BLK012595
Date Prepared:	1/24/95	1/24/95	1/24/95	1/24/95	1/25/95
Date Analyzed:	1/24/95	1/24/95	1/24/95	1/24/95	1/27/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3B
LCS % Recovery:	95	103	106	105	100
% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

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 matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

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Environmental Science & Engineering, Inc.
4090 Nelson Ave., Ste J
Concord, CA 94520
Attention: Mike Quillin

Client Project ID: Autopro, 6-94-5219
Matrix: Liquid

QC Sample Group: 5010759-62

Reported: Feb 1, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Cadmium	Chromium	Lead	Nickel	Zinc
Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7
Analyst:	J. Dinsay	J. Dinsay	J. Dinsay	J. Dinsay	J. Dinsay
MS/MSD Batch#:	5010762	5010762	5010762	5010762	5010762
Date Prepared:	1/20/95	1/20/95	1/20/95	1/20/95	1/20/95
Date Analyzed:	1/23/95	1/23/95	1/23/95	1/23/95	1/23/95
Instrument I.D.#:	Liberty-100	Liberty-100	Liberty-100	Liberty-100	Liberty-100
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Matrix Spike % Recovery:	88	89	90	87	87
Matrix Spike Duplicate % Recovery:	88	89	88	85	86
Relative % Difference:	0.0	0.0	2.2	2.3	1.2
LCS Batch#:	BLK012095	BLK012095	BLK012095	BLK012095	BLK012095
Date Prepared:	1/20/95	1/20/95	1/20/95	1/20/95	1/20/95
Date Analyzed:	1/23/95	1/23/95	1/23/95	1/23/95	1/23/95
Instrument I.D.#:	Liberty-100	Liberty-100	Liberty-100	Liberty-100	Liberty-100
LCS % Recovery:	85	87	88	87	87
% Recovery Control Limits:	75-125	75-125	75-125	75-125	75-125

SEQUOIA ANALYTICAL, #1271

Kenneth K.F. Lee
Laboratory Director

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 matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

CHAIN OF CUSTODY RECORD

DATE 1/18/95 PAGE 1 OF 1

PROJECT NAME AUTOPRO

ADDRESS 5200 TELEGRAPH
OAKLAND, CA

PROJECT NO. 6-94-5219

SAMPLED BY CHRIS VALLHEFF

LAB NAME SEQUOIA

ESE Environmental Science & Engineering, Inc.
A CILCORP Company
4090 Nelson Avenue
Suite J
Concord, CA 94520
Phone (510) 685-4053
Fax (510) 685-5323

SAMPLE #	DATE	TIME	LOCATION	TPH-G (8015)	BTEX (8020)	TPH-D (8015M)	Cadmium, Chromium, Lead, Nickel, Zinc (Metals)								MATRIX	NUMBER OF CONTAINERS	REMARKS (CONTAINER, SIZE, ETC.)
MW-1	1/18/95	1240	OAKLAND	X	X	X	X			5010759	A-L				H_2O	12	9 VOAs, 2 VOAs w/HCl, 1 PL LTR
MW-2	↓	1310	↓	X	X	X	X			5010760	A-D				↓	4	2 VOAs w/HCl, 1 AMBER JAR, 1 PL LTR
MW-3		1210		X	X	X	X			5010761	↓					4	↓
MW-4		1220		X	X	X	X			5010762						4	
DUP		1210		HOLD												4	
TRIP																2	2 VOAs

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	date	time
1. Chris Vallheff	Melissa Chenault	1/18/95	1530
2.			
3.			
4.			
5.			

30 TOTAL NUMBER OF CONTAINERS

REPORT RESULTS TO: MIKE QUILLIN

SPECIAL SHIPMENT REQUIREMENTS: COLD STORAGE/TRANSPORT

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):

STANDARD TAT.

SAMPLE RECEIPT

CHAIN OF CUSTODY SEALS	
REC'D GOOD CONDTN/COLD	
CONFORMS TO RECORD	