TANK PROTECT ENGINEERING
of Northern California, Inc.

Rcvd 5/4/95
~12:00
B. Chan
2116

May 3, 1995

Messrs. Aaron and Stanley Wong
2200 E. 12th Street
Oakland, CA 94606

Re: First Quarter Report, 1995, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601

Dear Messrs. Wong:

Tank Protect Engineering of Northern California, Inc. (TPE) is pleased to submit this quarterly letter report of environmental services conducted at the subject site. Previous work conducted at the site is summarized and work conducted during the subject quarter is presented in detail.

BACKGROUND

Work performed by others during the second half 1988:

- August 5, 1988 - West Coast Tank Company of Campbell, California removed one 8,000-gallon and two 6,000-gallon underground gasoline storage tanks; one 1,000-gallon underground waste oil storage tank; 2 dispenser islands; and associated piping from the site.

- August 25, 1988 - SCS Engineers (SCS) of Dublin, California collected soil samples from beneath the former locations of each gasoline tank and the waste oil tank. Samples collected from beneath the gasoline tanks were analyzed for total petroleum hydrocarbons as gasoline (TPHG) by the United States Environmental Protection Agency (EPA) Method 8015;

for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020; and for lead by EPA Method 7420. Samples collected from beneath the waste oil storage tank were analyzed for total petroleum hydrocarbons as diesel (TPHD) by EPA Method 8015, for total oil & grease (TOG) by Standard Method 503E, and for volatile organics by EPA Method 624. The reader is referred to SCS's September 19, 1988 letter report to Mr. Dino Gonis for documentation of the work conducted on August 5 and 25, 1988.

- October 3, 1988 - California Environmental Consultants (CEC) drilled 3 soil borings, B-1 through B-3, to characterize the soil in the vicinity of the tanks. Borings B-1 and B-2 were drilled in the area of the former underground gasoline tanks and boring B-3 was drilled in the area of the former waste oil tank. One soil sample and 1 "grab" groundwater sample were collected from each boring. Soil samples were collected at depths of about 15 feet. The reader is referred to CEC's November 21, 1988 letter report to Mr. Dino Gonis for documentation of the work and analytical results.

Work performed by others during 1991:

- May 22, August 21, and August 22, 1991 - Earth Systems Environmental, Inc. (ESE), under subcontract to Mobile Labs, installed 3 groundwater monitoring wells, MW-1 through MW-3, and drilled 5 soil borings, TH-1 through TH-5, as a further characterization of soil and groundwater contamination.

- August 23, 1991 - ESE collected groundwater samples from the monitoring wells, 1 day after their construction and development. The samples were analyzed for TPHG by Modified EPA Method 8015 and for BTEX by EPA Method 602. The reader is referred to ESE's December 23, 1991 Phase I Soil and Ground Water Assessment report for documentation of the work conducted during May and August, 1991.

Work performed by others during the first half 1992:

- April 16, 1992 - NKJ Environmental Monitoring (NKJ) measured depth-to-groundwater in each well and found floating product present in all wells. The thickness of product ranged from 0.16 to 5.12 feet. The reader is referred to NKJ's May 1, 1992 letter report to Mobile Labs, Inc. for documentation of the work.

Communications with the Alameda County Health Care Services Agency (ACHCSA) during second half 1992:

- October 19, 1992 - ACHCSA sent a letter to Messrs. Aaron and Stanley Wong (Wong) titled Request for Report of Subsurface Investigation and Workplan Addendum for Former Taxi Taxi, Inc. at 2345 E. 14th St., Oakland, CA 94601. This letter requested additional information about the tank closure, disposition of stockpiled soil, and an additional workplan to further characterize soil and groundwater contamination.

- October 30, 1992 - ACHCSA sent a letter to Wong titled Subsurface Investigation at Former Taxi Taxi at 2345 E. 14th St., Oakland, CA 94601. This letter approved ESE's recommendations for installation of 2 additional groundwater monitoring wells and recommended a product removal system.

Work performed by TPE during second quarter 1993:

- June 11, 1993 - Conducted a site visit and measured depth-to-groundwater and free product thickness in each of the 3 wells for preparation of a groundwater gradient map for the site.

- June 18, 1993 - Submitted a Workplan for Construction of Groundwater Monitoring Wells (WP) to Wong for their approval and delivery to the ACHCSA and the California Regional Water Quality Control Board-San Francisco Bay Region (CRWQCB).

- June 25, 1993 - ACHCSA submitted a letter to Wong approving TPE's WP.

Work performed by TPE during third quarter 1993:

- July 22 and 23, 1993 - Drilled 2 soil borings and converted the borings into groundwater monitoring wells (TMW-4 and TMW-5). Collected and analyzed 3 soil samples from each boring for TPHG and BTEX.

- July 26, 1993 - Developed monitoring wells TMW-4 and TMW-5.

- August 10, 1993 - Surveyed the top-of-casing (TOC) of all 5 monitoring wells relative to mean sea level (MSL).

- August 17, 1993 - Measured depth-to-groundwater and free product thickness in wells MW-1 through TMW-5 for evaluation of groundwater flow direction and gradient and collected a groundwater sample from each well for analysis for TPHG and BTEX. Additionally, a trip blank sample was analyzed for TPHG and BTEX.

Work performed by TPE during fourth quarter 1993:

- November 4, 1993 - Submitted a Preliminary Site Assessment Report, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Wong for their approval and delivery to the ACHCSA and CRWQCB.

Work performed by TPE during first quarter 1994:

- March 28, 1994 - Measured depth-to-groundwater and free product thickness in wells MW-1 through TMW-5 for evaluation of groundwater flow direction and gradient and collected 5 groundwater samples for

analysis for TPHG and BTEX. Additionally, a trip blank sample was analyzed for TPHG and BTEX.

- March 31, 1994 - Measured depth-to-groundwater and free product thickness in wells MW-1 through TMW-5 for evaluation of groundwater flow direction and gradient.

Work performed by TPE during second quarter 1994:

- May 18, 1994 - Submitted a First Quarter Report, 1994, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Wong for their approval and delivery to the ACHCSA.

- June 24, 1994 - Loosened well caps on all wells to allow depth-to-groundwater to stabilize to atmospheric pressure for groundwater gradient determination.

- June 27, 1994 - Measured depth-to-groundwater and free product thickness in wells MW-1 through TMW-5 for evaluation of groundwater flow direction and gradient and collected 5 groundwater samples for analysis for TPHG and BTEX. Additionally, a trip blank sample was analyzed for TPHG and BTEX.

Work performed by TPE during third quarter 1994:

- July 29, 1994 - Submitted a Second Quarter Report, 1994, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Wong for their approval and delivery to the ACHCSA.

- September 14, 1994 - Loosened well caps on all wells to allow depth-to-groundwater to stabilize to atmospheric pressure for groundwater gradient determination.

- September 16, 1994 - Measured depth-to-groundwater and free product thickness in wells MW-1 through TMW-5 for evaluation of groundwater flow direction and gradient and collected 5 groundwater samples for analysis for TPHG and BTEX. Additionally, a trip blank sample was analyzed for TPHG and BTEX.

Work performed by TPE during fourth quarter 1994:

- November 2, 1994 - Submitted a Third Quarter Report, 1994, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Wong for their approval and delivery to the ACHCSA.

- December 5, 1994 - Began excavation of contaminated soil in area of former underground fuel tank complex.

  Note: No groundwater sampling was conducted during the subject quarter because several monitoring wells were covered by stockpiled soil resulting from the above excavation activities.

WORK PERFORMED BY TPE DURING FIRST QUARTER 1995:

- February 14, 1995 - Began remediation of stockpiled soil.

- March 29, 1995 - Loosened well caps on all wells to allow depth-to-groundwater to stabilize to atmospheric pressure for groundwater gradient determination.

- March 31, 1995 - Measured depth-to-groundwater and free product thickness in wells MW-1 through TMW-5 for evaluation of groundwater flow direction and gradient and collected 5 groundwater samples for analysis for TPHG and BTEX. Additionally, a trip blank sample was analyzed for TPHG and BTEX.

Details of the work conducted on March 29 and 31, 1995 are presented below.

Groundwater Gradient

On March 29, 1995, TPE personnel loosened all well caps to allow groundwater to stabilize to atmospheric pressure within the wells prior to making depth-to-groundwater measurements for evaluation of groundwater flow direction and gradient.

On March 31, 1995, depth-to-groundwater was measured from TOC in wells MW-1 through TMW-5 to the nearest 0.01 foot using an electronic Keck Instrument, Inc., KIR-89 interface probe. A minimum of 3 repetitive measurements were made for each level determination to ensure accuracy. Depth-to-groundwater was subtracted from the TOC elevation, measured relative to mean sea level, to calculate the elevation of the groundwater level in each well (see attached Table 1). When floating product was present, the groundwater elevation was corrected by multiplying the floating product thickness by a density of .75 and adding the resultant value to the groundwater elevation.

On March 31, 1995, average groundwater elevation, as measured in the 5 monitoring wells, had increased 3.83 feet relative to the last sampling event of September 31, 1994 (see attached Table 2).

Attached Figure 1 is a groundwater gradient map constructed from the data collected on March 31, 1995. Groundwater flow direction appears to be radially outward from the location of the former underground tank complex. The radial pattern of groundwater flow is probably a result of recharge of the aquifer due to rainwater collecting in the newly opened excavation. Groundwater gradient in the northwesterly direction is about .075 feet per foot. Average groundwater elevations, changes in average groundwater elevations, groundwater gradients, and groundwater flow directions are tabulated in attached Table 2.

Groundwater Sampling and Analytical Results

On March 31, 1995, groundwater samples were collected from each of the 5 groundwater monitoring wells. Before sampling, the wells were purged from 30 to 43 liters of water (a minimum of 3 casing volumes per well) with dedicated polyethylene bailers and until the temperature, conductivity, and pH of the water in the wells had stabilized (see attached Records of Water Sampling). Since dedicated bailers were used for each well sampled, no decontamination was necessary between sampling events. The water samples were collected in laboratory provided, sterilized, 40-milliliter glass vials having Teflon-lined screw caps; and labeled with project name, date, time collected, sample number, and sampler name. The samples were immediately stored in an iced-cooler for transport to California State Department of Health Services (DHS) certified Trace Analysis Laboratory, Inc. (TAL), located in Hayward, California accompanied by chain-of-custody documentation. All groundwater samples and a trip blank sample, TMW-6, were analyzed for TPHG by the DHS Method and for BTEX by the Modified EPA Method 8020.

Floating product was observed in wells MW-1, MW-2, and MW-3 having a thickness of 2.34 feet, 7.44 feet, and .46 feet, respectively. Attached Table 3 summarizes the thickness of floating product measured in each well. The floating product was easily removed by purging at the time of sampling.

Purge water is stored on site in 55-gallon drums labeled to show material stored, known or suspected chemical contaminant, date filled, expected removal date, company name, contact person, and telephone number.

See attached protocols for TPE's sample handling, groundwater monitoring well sampling, and quality assurance and quality control procedures.

Chemical analyses detected TPHG and BTEX chemicals in all wells except well TMW-4. TPHG was detected in wells MW-1, MW-2, MW-3, and TMW-5 at concentrations of 43,000 parts per billion (ppb), 28,000 ppb, 16,000 ppb, and 64,000 ppb, respectively. The reader is referred to attached Table 4 for a summary of BTEX concentrations detected in these wells.

Trip blank sample TMW-6 was nondetectable for TPHG and BTEX.

Analytical results are summarized in attached Table 4 and documented in an attached certified analytical report and a chain-of-custody.

RECOMMENDATIONS

Presently, the groundwater contaminant plume beneath the site has not been defined. TPE recommends that quarterly groundwater sampling of all 5 groundwater monitoring wells be continued to evaluate gradient and monitor contaminant concentrations. TPHG concentrations have generally decreased relative to the previous quarter's results.

On completion of vadose zone remedial activities, TPE expects to detect a cleaningup trend of groundwater quality with respect to TPHG and BTEX contamination.

The next sampling event for wells MW-1 through TMW-5 is proposed to take place on about June 29, 1995. All wells are proposed to be analyzed for TPHG and BTEX.

An additional copy of this report has been included for your delivery to:

Mr. Barney Chan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

TPE recommends that this quarterly report be submitted with a signed cover letter from Messrs. Aaron and Stanley Wong.

If you have any questions, please call TPE at (510) 429-8088.

Sincerely,

John V. Mrakovich, Ph.D.
Sr. Registered Geologist

Jeff Farhoomand, M.S.
Civil Engineer

REGISTERED GEOLOGIST
JOHN V. MRAKOVICH
4665
STATE OF CALIFORNIA

Expiration Date 4/30/96

TABLE 1
GROUNDWATER ELEVATION

Well Name	Date	TOC[1] Elevation (Feet MSL[4])	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected[3] Groundwater Elevation (Feet MSL)
MW-1	08/23/91[5]	100.00[2]	15.42	NA[9]	84.58
	04/16/92[6]	27.33[7]	16.66	11.54	14.51[8]
	06/11/93		12.61	12.60	14.73
	08/17/93		14.40	13.63	13.50[7]
	03/31/94		12.64	ND	14.69
	06/27/94		14.32	13.16	13.88
	09/16/94		15.86	13.64	13.14
	03/31/95		11.82	9.48	17.27
MW-2	08/23/91[5]	98.585[2]	13.77	NA	84.815
	04/16/92[6]	25.92[7]	15.38	12.57	12.65[8]
	06/11/93		13.185	ND[10]	12.74
	08/17/93		14.04	14.03	11.89
	03/31/94		13.61	13.07	12.72[8]
	06/27/94		14.24	13.44	12.28
	09/16/94		17.82	13.36	11.45
	03/31/95		16.72	9.28	14.78
MW-3	08/23/91[5]	99.25[2]	15.07	NA	84.18
	04/16/92[6]	27.57[7]	14.14	13.98	13.55[8]
	06/11/93		14.275	ND	13.30
	08/17/93		15.77	ND	11.80
	03/31/94		14.35	ND	13.22
	06/27/94		14.77	ND	12.80
	09/16/94		15.42	15.37	12.19
	03/31/95		12.98	12.52	14.94
TMW-4	08/17/93	26.50[7]	13.26	ND	13.24
	03/31/94		12.40	ND	14.10
	06/27/94		12.84	ND	13.66

TABLE 1
GROUNDWATER ELEVATION

Well Name	Date	TOC[1] Elevation (Feet MSL[4])	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected[3] Groundwater Elevation (Feet MSL)
TMW-4	09/16/94	26.50[7]	13.58	ND	12.92
	03/31/95		10.23	ND	16.27
TMW-5	08/17/93	26.51[7]	12.98	12.95	13.55
	03/31/94		11.39	ND	15.12
	06/27/94		12.24	ND	14.27
	09/16/94		13.02	12.97	13.53
	03/31/95		7.38	ND	19.13

[1] TOP-OF-CASING.
[2] RELATIVE TO SITE DATUM ESTABLISHED BY ESE.
[3] ELEVATION CORRECTED FOR FLOATING PRODUCT USING .75 DENSITY OF GASOLINE.
[4] MEAN SEA LEVEL.
[5] WATER LEVEL MEASUREMENTS BY ESE.
[6] WATER LEVEL MEASUREMENTS BY NKJ.
[7] TOC SURVEYED 8/10/93 BY PROFESSIONAL ENGINEER.
[8] CORRECTED GROUNDWATER ELEVATION BY TANK PROTECT ENGINEERING.
[9] NOT AVAILABLE.
[10] NOT DETECTED.

TABLE 2
GROUNDWATER GRADIENT, FLOW DIRECTION, AND ELEVATION DATA

Date	Average Groundwater Elevation (Feet-MSL[1])	Change in Average Groundwater Elevation (Feet)	Groundwater Gradient	Groundwater Flow Direction
04/16/92	13.57	---	.021	NW
06/11/93	13.59	0.02	.026	NW
08/17/93	12.80	-0.79	.029	RADIAL
03/31/94	13.97	1.17	.050	RADIAL
06/27/94	13.38	-.59	.020	RADIAL
09/16/94	12.65	-.73	.0179-.0411	RADIAL
03/31/95	16.48	+3.83	.075	RADIAL

[1] MEAN SEA LEVEL.

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC[1] (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
MW-1	04/16/92[2]	16.66	11.54	5.12
	06/11/93	12.61	12.60	.01
	08/17/93	14.40	13.63	.77
	03/31/94	12.64	ND	---
	06/27/94	14.32	13.16	1.16
	09/16/94	15.86	13.64	2.22
	3/31/95	11.82	9.48	2.34
MW-2	04/16/92[2]	15.38	12.57	2.81
	06/11/93	13.185	ND[3]	---
	08/17/93	14.04	14.03	.01
	03/31/94	13.61	13.07	.54
	06/27/94	14.24	13.44	.80
	09/16/94	17.82	13.36	4.46
	03/31/95	16.72	9.28	7.44
MW-3	04/16/92[2]	14.14	13.98	.16
	06/11/93	14.275	ND	---
	08/17/93	15.77	ND	---
	03/31/94	14.35	ND	---
	06/27/94	14.77	ND	---
	09/16/94	15.42	15.37	.05
	03/31/95	12.98	12.52	.46
TMW-4	08/17/93	13.26	ND	---
	03/31/94	12.40	ND	---
	06/27/94	12.84	ND	---
	09/16/94	13.58	ND	---
	03/31/95	10.23	ND	---
TMW-5	08/17/93	12.98	12.95	.03
	03/31/94	11.39	ND	---

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC[1] (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
TMW-5	06/27/94	12.24	ND	---
	09/16/94	13.02	12.97	.05
	03/31/95	7.38	ND	---

[1] TOP-OF-CASING.
[2] WATER AND PRODUCT LEVELS MEASURED BY NKJ.
[3] NOT DETECTED.

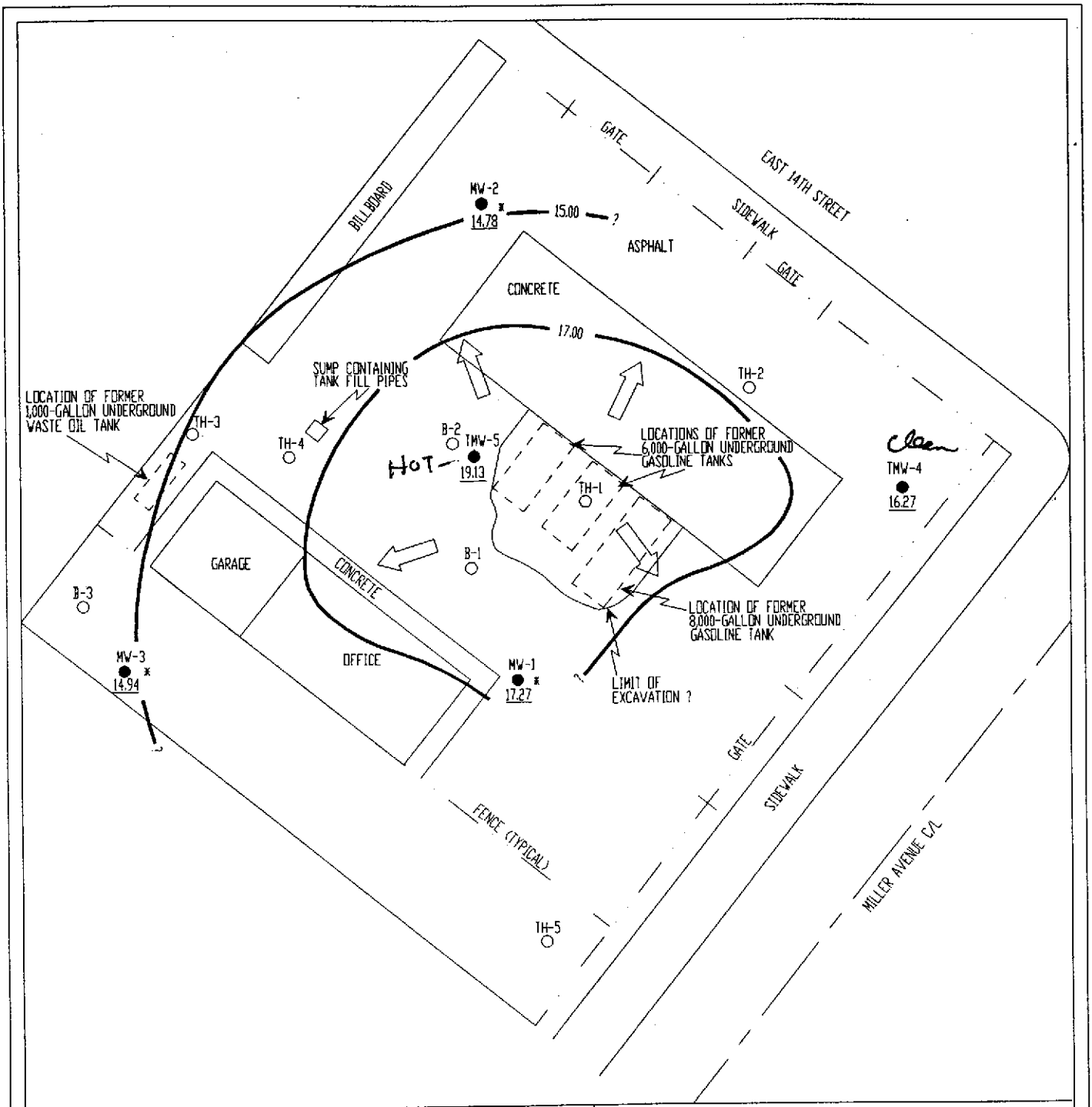
TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-1	08/17/93	110,000	270	690	730	3,100
	03/28/94	34,000	4,900	1,800	1,200	4,000
	06/27/94	21,000	12,000	810	760	2,500
	09/16/94	37,000	7,900	2,400	1,300	3,300
	03/31/95	43,000	8,100	1,900	1,000	4,200
MW-2	08/17/93	49,000	94	240	250	980
	03/28/94	14,000	4,200	<250	910	1,400
	06/27/94	24,000	4,400	72	1,100	1,700
	09/16/94	40,000	2,300	250	2,000	4,100
	03/31/95	28,000	4,000	<120	1,100	1,400
MW-3	08/17/93	9,600	4.1	17	28	54
	03/28/94	8,400	2,400	56	67	200
	06/27/94	9,900	3,300	<22	<25	73
	09/16/94	16,000	2,300	80	620	240
	03/31/95	16,000	2,800	70	<25	920
TMW-4	08/17/93	150	<0.5	0.8	1.4	3.7
	03/28/94	<50	<0.5	<0.5	<0.5	<1.5
	06/27/94	<50	<0.50	<0.50	<0.50	<1.5
	09/16/94	<50	<0.50	<0.50	<0.50	<1.5
	03/31/95	<50	<0.50	<0.50	<0.50	<1.5
TMW-5	08/17/93	120,000	340	730	790	3,600
	03/28/94	70,000	23,000	1,500	4,100	15,000
	06/27/94	56,000	26,000	940	5,500	26,000
	09/16/94	96,000	17,000	720	3,500	12,000
	03/31/95	64,000	13,000	470	2,800	6,100
TMW-6[2]	08/17/93	<50	<0.5	<0.5	<0.5	<0.5

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb[1])

Sample ID Name	Date	TPHG	Benzene	Toluene	Ethyl-benzene	Xylenes
TMW-6[2]	03/28/94	<50	<0.5	<0.5	<0.5	<1.5
	06/27/94	<50	<0.5	<0.5	<0.5	<1.5
	09/16/94	<50	<0.50	<0.50	<0.50	<1.5
	03/31/95	<50	<0.50	<0.50	<0.50	<1.5

1 PARTS PER BILLION.
2 TRIP BLANK.



LEGEND

- TMW-4 ● — NAME AND LOCATION OF MONITORING WELL INSTALLED BY TPE
- MW-1 ● — NAME AND LOCATION OF MONITORING WELL INSTALLED BY OTHERS
- B-1 ○ — NAME AND APPROXIMATE LOCATION OF SOIL BORING DRILLED BY OTHERS
- 17.27 — POTENTIOMETRIC ELEVATION
- * — WATER LEVEL ADJUSTED FOR FLOATING PRODUCT
- 15.00 — POTENTIOMETRIC CONTOUR
- GROUNDWATER FLOW DIRECTION

-N-

0 30

SCALE IN FEET

TANK PROTECT ENGINEERING

GROUNDWATER GRADIENT MAP (3/31/95)

CREDIT WORLD AUTO SALES
2345 E. 14TH STREET
OAKLAND, CA 94601

DATE	4/20/95
FIGURE	1
FILE #	267-18D
DRAWN BY	AK
CHECKED BY	JVM

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 3-31-95

PROJECT NAME: CWAS

PROJECT LOCATION: 2345 E 11th

SAMPLER: LHH IAK

ANALYSES: TPHG & BTEX

WELL DEPTH (from construction detail): 9.48 995

WELL DEPTH (measured): 35.28 SOFT BOTTOM?: YES

DEPTH TO WATER: 11.82 TIME: 1347

PRESSURE (circle one)?: YES OR NO

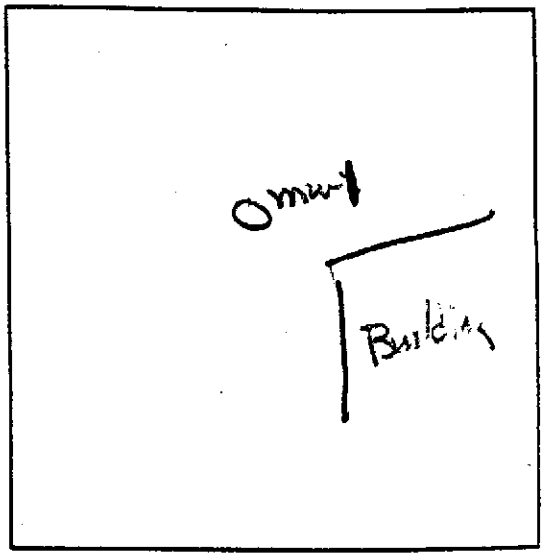
IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?

WELL NO.: MW-1

WELL DIAMETER: 2"

TOC ELEV:

LOCK NO.: 60



LOCATION MAP

WATER VOLUME IN WELL: 3.75

[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]

[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]

CALCULATED PURGE VOL. (GAL): 11.25 (L): 42.5 ACTUAL PURGE VOL. (GAL): (L): 43

PURGE METHOD: Pole SAMPLE METHOD: Pole

FIELD MEASUREMENTS

14.5' mean sinker

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks
1629		7	63.7	7.02	960			product
1634		14	64.0	7.08	987			"
1640		21	64.1	6.90	1080			"
1644		28	65.0	6.81	1050			"
1649		35	64.1	6.76	1040			" product
1653		42	64.7	6.70	1020			"
1654		43	65.5	6.70	1020			"
1657	well sampled							

SIGNATURE: Lee Auckum

WATER VOL. IN DRUM: 80%

NEED NEW DRUM?: NO

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 3-31-95

PROJECT NAME: CWAS

PROJECT LOCATION: 2345 B 14th

SAMPLER: LNH

ANALYSES: TPHG & BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 34.91 SOFT BOTTOM?: yes

DEPTH TO WATER: 16.72 TIME: 1335

PRESSURE (circle one)?: YES OR NO

IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?

WATER VOLUME IN WELL: 2.92

[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]

[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]

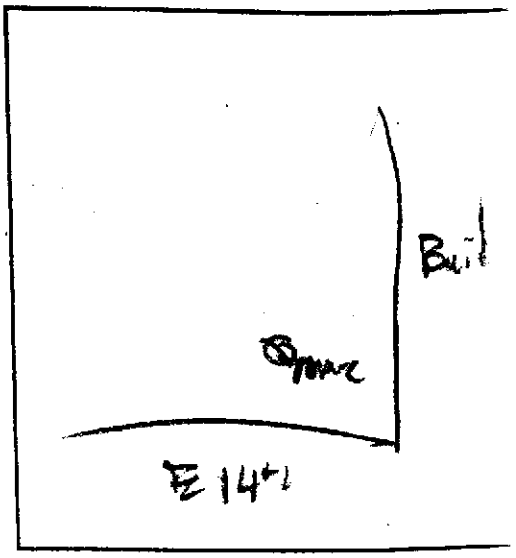
9.28 gals

WELL NO.: MW2

WELL DIAMETER: 2

TOC ELEV: _____

LOCK NO.: 605



LOCATION MAP

CALCULATED PURGE VOL. (GAL): 8.67 (L): 33 ACTUAL PURGE VOL. (GAL): _____ (L): 33

PURGE METHOD: Poly SAMPLE METHOD: Poly

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks 3' measure
1504		7	67.8	7.17	11880		product	product
1507		12	67.9	6.85	12820		"	"
1513		18	67.8	6.83	13960		"	"
1518		24	67.8	6.81	13600		"	"
1521		30	67.8	6.81	13600		"	"
1528		33	67.9	6.79	13460		"	"
1535	well sampled						62.4	product

SIGNATURE: Lee Hutchins

WATER VOL. IN DRUM: 80%

NEED NEW DRUM?: NO

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 3-31-95

PROJECT NAME: CWAS

PROJECT LOCATION: 2345 E 14th

SAMPLER: LNH

ANALYSES: TPHG ~~& BTEX~~

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 39.95 SOFT BOTTOM?: yes

DEPTH TO WATER: 12.98 TIME: 1353

PRESSURE (circle one)?: YES OR NO

IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?

WATER VOLUME IN WELL: 3.51

[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]

[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]

12.52

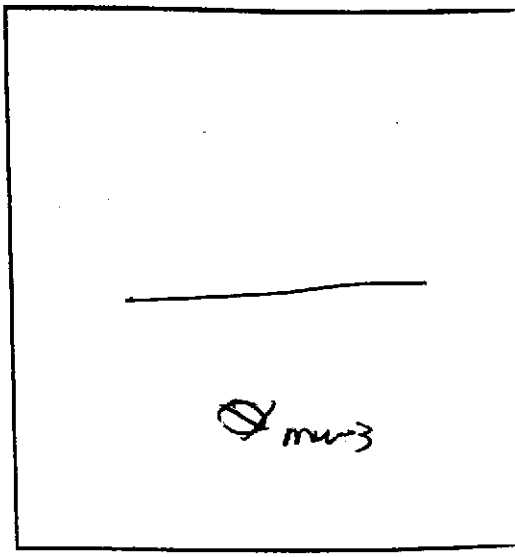
995

WELL NO.: MW-3

WELL DIAMETER: 2

TOC ELEV: _____

LOCK NO.: 105



LOCATION MAP

CALCULATED PURGE VOL. (GAL): 10.53 (L): 39.8 ACTUAL PURGE VOL. (GAL): _____ (L): 40

PURGE METHOD: Pole SAMPLE METHOD: Poly

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks
1415		7	69.0	7.15	1100		clear	sheen, odor no product
1419		14	65.7	6.84	969		"	"
1423		21	64.7	6.76	934		"	"
1428		28	64.0	6.71	924		"	"
1433		35	63.7	6.69	913		"	
1437		40	63.4	6.79	920			
1440	well sampled						169	sheen

SIGNATURE: Lee Herbins

WATER VOL. IN DRUM: 80%

NEED NEW DRUM?: no

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 3-31-95

PROJECT NAME: CWAS

PROJECT LOCATION: 2345 E 14th

SAMPLER: LWH

ANALYSES: TPHG & BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 33.91 SOFT BOTTOM?: yes

DEPTH TO WATER: 10.23 TIME: 12:38

PRESSURE (circle one)?: YES OR (NO)

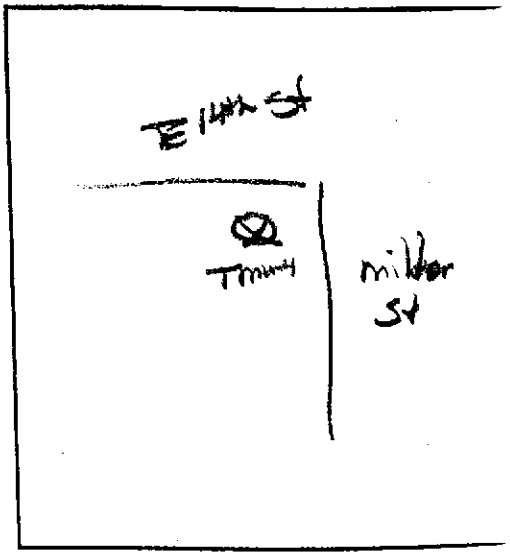
IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?

WELL NO.: TMW-4

WELL DIAMETER: 2"

TOC ELEV: _____

LOCK NO.: 1035



LOCATION MAP

WATER VOLUME IN WELL: 3.80

[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]

[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]

CALCULATED PURGE VOL. (GAL): 11.4 (L): 43.00 ACTUAL PURGE VOL. (GAL): _____ (L): 43

PURGE METHOD: Poly SAMPLE METHOD: Poly

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks
1250		7	74.7	695	1480			No odor
1253		14	70	7.12	1260			"
1259		21	69.3	6.67	1240			"
1304		28	69.0	6.49	1220			"
1309		35	69.0	6.96	1250			"
1318		42	68.9	6.49	1220			"
1319		43	68.7	6.47	1220			
1320	well sampled						>200	

WATER VOL. IN DRUM: 90

NEED NEW DRUM?: NO

SIGNATURE: Lee Hawkins

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 3-31-95

PROJECT NAME: CWAS

PROJECT LOCATION: 2315 E. 14th

SAMPLER: LNH

ANALYSES: TPHG & BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 24.06 SOFT BOTTOM?: NO

DEPTH TO WATER: 7.38 TIME: 1:41

PRESSURE (circle one)?: YES OR NO

IF YES, WAS PRESSURE (circle one) POSITIVE OR NEGATIVE?

WATER VOLUME IN WELL: 2.65

[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]

[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]

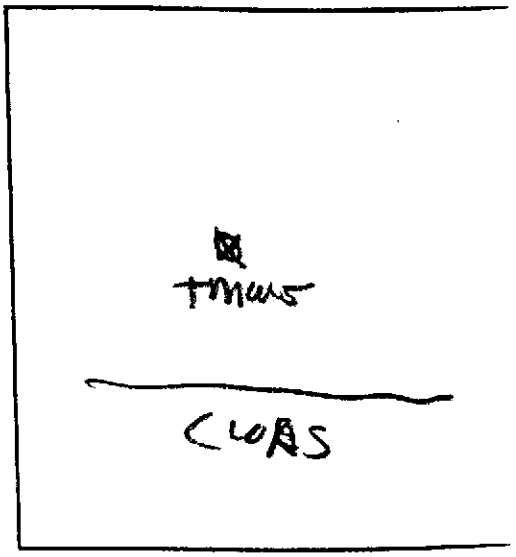
7.39
7.38 gas

WELL NO.: TMW5

WELL DIAMETER: 2

TOC ELEV: _____

LOCK NO.: 105



LOCATION MAP

CALCULATED PURGE VOL. (GAL): 7.97 (L): 30 ACTUAL PURGE VOL. (GAL): _____ (L): 30

PURGE METHOD: Poly SAMPLE METHOD: Poly

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks
1553		5	66.0	6.96	1450			odor clear no product
1556		10	65.9	7.05	1590			"
1559		15	65.4	6.97	1560			"
1604		20	64.2	6.88	1440			"
1607		25	64.0	6.86	1320			"
~~1610~~	1610	30	65.0	6.87	1450			"
1613	well sampled							

SIGNATURE: Lee Hecker

WATER VOL. IN DRUM: 80%

NEED NEW DRUM?: NO

SAMPLE HANDLING PROCEDURES

Soil and groundwater samples will be packaged carefully to avoid breakage or contamination, and will be delivered to the laboratory in an iced-cooler. The following sample packaging requirements will be followed.

- Sample bottle/sleeve lids will not be mixed. All sample lids will stay with the original containers and have custody seals affixed to them.

- Samples will be secured in coolers to maintain custody, control temperature, and prevent breakage during transportation to the laboratory.

- A chain-of-custody form will be completed for all samples and accompany the sample cooler to the laboratory.

- Ice, blue ice, or dry ice (dry ice will be used for preserving soil samples collected for the Alameda County Water District) will be used to cool samples during transport to the laboratory.

- Each sample will be identified by affixing a pressure sensitive, gummed label, or standardized tag on the container(s). This label will contain the site identification, sample identification number, date and time of sample collection, and the collector's initials.

- Soil samples collected in brass tubes will be preserved by covering the ends with Teflon tape and capped with plastic end-caps. The tubes will be labeled, sealed in quart size bags, and placed in an iced-cooler for transport to the laboratory.

All groundwater sample containers will be precleaned and will be obtained from a State Department of Health Services certified analytical laboratory.

Sample Control/Chain-of-Custody: All field personnel will refer to this workplan to verify the methods to be employed during sample collection. All sample gathering activities will be recorded in the site file; all sample transfers will be documented in the chain-of-custody; samples are to be identified with labels and all sample bottles are to be custody-sealed. All information is to be recorded in waterproof ink. All TPE field personnel are personally responsible for sample collection and the care and custody of collected samples until the samples are transferred or properly dispatched.

The custody record will be completed by the field technician or professional who has been designated by the TPE project manager as being responsible for sample shipment to the appropriate laboratory. The custody record will include, among other things, the following information: site identification, name of person collecting the samples, date and time samples were collected, type of sampling conducted (composite/grab), location of sampling station, number and type of containers used, and signature of the TPE person relinquishing samples to a non-TPE person with the date and time of transfer noted. The relinquishing individual will also put all the specific shipping data on the custody record.

Records will be maintained by a designated TPE field employee for each sample, site identification, sampling locations, station numbers, dates, times, sampler's name, designation of the samples as a grab or composite, notation of the type of sample (e.g. groundwater, soil boring, etc.), preservatives used, on-site measurement data, and other observations or remarks.

GROUNDWATER MONITORING WELL SAMPLING PROCEDURES

Groundwater monitoring wells will not be sampled until at least 24 to 72 hours (according to local regulatory guidelines) after well development. Groundwater samples will be obtained using either a bladder pump, clear Teflon bailer, or dedicated polyethylene bailer. Prior to collecting samples, the sampling equipment will be thoroughly decontaminated to prevent introduction of contaminants into the well and to avoid cross-contamination. Monitoring wells will be sampled after 3 to 10 wetted casing volumes of groundwater have been evacuated and pH, electrical conductivity, and temperature have stabilized as measured with a Hydac Digital Tester. If the well is emptied before 3 to 10 well volumes are removed, the sample will be taken when the water level in the well recovers to 80% of its initial water level or more.

When a water sample is collected, turbidity of the water will be measured and recorded with a digital turbidimeter. Degree of turbidity will be measured and recorded in nephelometric turbidity units (NTU).

TPE will also measure the thickness of any floating product in the monitoring wells using an interface or probe clear Teflon or polyethylene bailer. The floating product will be measured after well development but prior to the collection of groundwater samples. If floating product is present in the well, TPE will recommend to the client that product removal be commenced immediately and reported to the appropriate regulatory agency.

Unless specifically waived or changed by the local, prevailing regulatory agency, water samples shall be handled and preserved according to the latest EPA methods as described in the Federal Register (Volume 44, No. 233, Page 69544, Table ll) for the type of analysis to be performed.

Development and/or purge water will be stored on site in labeled containers. The disposal of the containers and development and/or purge water is the responsibility of the client.

MEASUREMENTS

Purged Water Parameter: During purging, discharged water will be measured for the following parameters.

Parameter	Units of Measurement
pH	None
Electrical Conductivity	Micromhos
Temperature	Degrees F or C
Depth to Water	Feet/Hundredths
Volume of Water Discharged	Gallons
Turbidity	NTU

Documentation: All parameter measurements shall be documented in writing on TPE development logs.

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

The overall objectives of the field sampling program include generation of reliable data that will support development of a remedial action plan. Sample quality will be checked by the use of proper sampling, handling, and testing methods. Additional sample quality control methods may include the use of background samples, equipment rinsate samples, and trip and field blanks. Chain-of-custody forms, use of a qualified laboratory, acceptable detection limits, and proper sample preservation and holding times also provide assurance of accurate analytical data.

TPE will follow a QA/QC program in the field to ensure that all samples collected and field measurements taken are representative of actual field and environmental conditions and that data obtained are accurate and reproducible. These activities and laboratory QA/QC procedures are described below.

Field Samples: Additional samples may be taken in the field to evaluate both sampling and analytical methods. Three basic categories of QA/QC samples that may be collected are trip samples, field blanks, and duplicate samples.

Trip blanks are a check for cross-contamination during sample collection, shipment, and in the laboratory. Analytically confirmed organic-free water shall be used for organic parameters and deionized water for metal parameters. Blanks will be prepared by the laboratory supplying the sample containers. The blank shall be numbered, packaged, and sealed in the same manner as the other samples. One trip blank will be used for each sample set of less than 20 samples. At least 5% blanks will be used for sets greater than 20 samples. The trip blank is a water sample that remains with the collected samples during transportation and is analyzed along with the field samples to check for residual contamination. The trip blank is not to be opened by either the sample collectors or the handlers.

The field blank is a water sample that is taken into the field and is opened and exposed at the sampling point to detect contamination from air exposure. The water

sample is poured into appropriate containers to simulate actual sampling conditions. Contamination for air exposure can vary considerably from site to site.

The laboratory will not be informed about the presence of field and trip blanks and a false identifying number will be put on the label. Full documentation of these collection and decoy procedure will be made in the site log book.

Duplicate samples are identical sample pairs (collected in the same place and at the same time), placed in identical containers. For soils, adjacent sample liners will be analyzed. For the purpose of data reporting, one is arbitrarily designated the sample, and the other is designated as a duplicate sample. Both sets of results are reported to give an indication of the precision of sampling and analytical methods.

The laboratory's precision will be assessed without the laboratory's knowledge by labeling one of the duplicates with false identifying information. Data quality will be evaluated on the basis of the duplicate results.

Laboratory QA/QC: Execution of a strict QA/QC program is an essential ingredient in high-quality analytical results. By using accredited laboratory techniques and analytical procedures, estimates of the experimental values can be very close to the actual value of the environmental sample. The experimental value is monitored for its precision and accuracy by performing QC test designed to measure the amount of random and systematic errors and to signal when correction of these errors is needed.

The QA/QC program describes methods for performing QC tests. These methods involve analyzing method blanks, calibration standards, check standards (both independent and EPA-certified standards), duplicates, replicates, and sample spikes. Internal QC also requires adherence to written methods, procedural documentation, and record keeping, and the observance of good laboratory practices.

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

April 10, 1995

Mr. Jeff Farhoomand
Tank Protect Engineering
2821 Whipple Road
Union City, California 94587

Dear Mr. Farhoomand:

Trace Analysis Laboratory received six water samples on April 4, 1995 for your Project No. 267, Credit World Auto Sales, 2345 East 14th Street (our custody log number 5388).

These samples were analyzed for Total Petroleum Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene, and Xylenes. Our analytical report and the completed chain of custody form are enclosed for your review.

Trace Analysis Laboratory is certified under the California Environmental Laboratory Accreditation Program. Our certification number is 1199.

If you should have any questions or require additional information, please call me.

Sincerely yours,

Scott T. Ferriman
Project Specialist

Enclosures

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 5388
DATE SAMPLED: 03/31/95
DATE RECEIVED: 04/04/95
DATE ANALYZED: 04/06/95
DATE REPORTED: 04/10/95

CUSTOMER: Tank Protect Engineering

REQUESTER: Jeff Farhoomand

PROJECT: No. 267, Credit World Auto Sales, 2345 East 14th Street

Sample Type: Water

Method and Constituent:	Units	MW-1 Concentration	MW-1 Reporting Limit	MW-2 Concentration	MW-2 Reporting Limit	MW-3 Concentration	MW-3 Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/l	43,000	12,000	28,000	6,200	16,000	1,200
Modified EPA Method 8020 for:							
Benzene	ug/l	8,100	250	4,000	120	2,800	25
Toluene	ug/l	1,900	250	ND	120	70	25
Ethylbenzene	ug/l	1,000	250	1,100	120	ND	25
Xylenes	ug/l	4,200	750	1,400	380	920	75

Method and Constituent:	Units	TMW-4 Concentration	TMW-4 Reporting Limit	TMW-5 Concentration	TMW-5 Reporting Limit	TMW-6 Concentration	TMW-6 Reporting Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/l	ND	50	64,000	12,000	ND	50
Modified EPA Method 8020 for:							
Benzene	ug/l	ND	0.50	13,000	250	ND	0.50
Toluene	ug/l	ND	0.50	470	250	ND	0.50
Ethylbenzene	ug/l	ND	0.50	2,800	250	ND	0.50
Xylenes	ug/l	ND	1.5	6,100	750	ND	1.5

Concentrations reported as ND were not detected at or above the reporting limit.

TAL Trace Analysis Laboratory, Inc.

LOG NUMBER: 5388
DATE SAMPLED: 03/31/95
DATE RECEIVED: 04/04/95
DATE ANALYZED: 04/06/95
DATE REPORTED: 04/10/95
PAGE: Two

Sample Type: Water

Method and Constituent:	Units	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:			
Total Petroleum Hydrocarbons as Gasoline	ug/l	ND	50
Modified EPA Method 8020 for:			
Benzene	ug/l	ND	0.50
Toluene	ug/l	ND	0.50
Ethylbenzene	ug/l	ND	0.50
Xylenes	ug/l	ND	1.5

QC Summary:

% Recovery: 94
% RPD: 5.2

Concentrations reported as ND were not detected at or above the reporting limit.

Louis W. DuPuis
Quality Assurance/Quality Control Manager

5388

TANK PROTECT ENGINEERING
2821 WHIPPLE ROAD
UNION CITY, CA 94587
(415)429-8088
(800)523-8088
FAX(415)429-8089

LAB: TAL

TURNAROUND: 15 day

P.O. #: 1029

PAGE 1 OF 1

CHAIN OF CUSTODY

PROJECT NO.	SITE NAME & ADDRESS
267	Credit Work Auto Sales 2345 E 14th St

SAMPLER NAME, ADDRESS AND TELEPHONE NUMBER
Lee Huckins
2821 WHIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088

ID NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	(1) TYPE OF CONTAINER	TOTAL LIGHT HC	AROMATIC HC (BTX)	TOTAL HEAVY HC	OIL & GREASE	VOC SCAN (624's)	OTHER	REMARKS
MW-1	3/31	1657		X		2-40ml	X	X					
MW-2	3/31	1525		X		2-40ml	X	X					1 VOA ; 1 VOA was Frozen and Broke
MW-3	3/31	1440		X		2-40ml	X	X					
TMW-4	3/31	1320		X		2-40ml	X	X					1 VOA ; 1 VOA was frozen and Broke
TMW-5	3/31	1613		X		2-40ml	X	X					
TMW-6	3/31	1702		X		2-40ml	X	X					

Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Lee Huckins	3/4/95 10:00			4/4/95 2:29	
Relinquished by : (Signature)	Date / Time	Received by : (Signature)	Relinquished by : (Signature)	Date / Time	Received by : (Signature)
Relinquished by : (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			4/4/95 2:29		

P/u, water, 1-2 VOAs each, on ice, Gem, Tray 2, Reg
HCl

DATE: 4-4-95