

February 14, 1996

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

Re: Fourth 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:

- 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 <u>Subsurface Investigation at Former Taxi Taxi at 2345 E. 14th St., Oakland, CA 94601</u>. 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 <u>Preliminary Site Assessment Report</u>, <u>Credit World Auto Sales</u>, 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 <u>First Quarter Report, 1994, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601</u> to Wong for their approval and delivery to the ACHCSA.
- June 24, 1994 Loosened well caps on all wells to allow depth-togroundwater 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 <u>Second Quarter Report, 1994, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601</u> to Wong for their approval and delivery to the ACHCSA.
- . September 14, 1994 Loosened well caps on all wells to allow depth-togroundwater 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 <u>Third Quarter Report</u>, 1994, <u>Credit World Auto Sales</u>, 2345 E. 14th Street, <u>Oakland</u>, <u>CA 94601</u> to Wong for their approval and delivery to the ACHCSA.
- . December 5, 1994 Began excavation of contaminated soil in area of the 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 by aeration.
- . March 29, 1995 Loosened well caps on all wells to allow depth-togroundwater 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.

Work performed by TPE during second quarter 1995:

- . April 20, 1995 Continued remediation of stockpiled soil by aeration.
- May 3, 1995 Submitted a <u>First Quarter Report, 1995, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601</u> to Wong for their approval and delivery to the ACHCSA.

- . May 11 and 12, 1995 Collected stockpile verification samples for evaluation of remediated stockpile for reuse as backfill material.
- June 12, 1995 Obtained a permit from City of Oakland Fire Prevention Bureau to temporarily store free product pumped from monitoring wells.
- . June 26, 1995 Began backfilling excavation with remediated soil.
- . June 27, 1995 Loosened well caps on all wells to allow groundwater levels to stabilize for groundwater gradient determination.
- June 28, 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.
- June 30, 1995 TPE continued excavation of contaminated soil and collected verification soil samples.

Work performed by TPE during third quarter 1995:

- August 4, 1995 Submitted a workplan for <u>Groundwater Investigation</u> (WPGI) to Wong for their approval and delivery to ACHCSA.
- . September 6, 1995 Submitted a <u>Second Quarter Report</u>, <u>1995</u>, <u>Credit World Auto Sales</u>, <u>2345 E. 14th Street</u>, <u>Oakland</u>, <u>CA 94601</u> to Messrs. Wong for their approval and delivery to the ACHCSA.
- September 26, 1995 Loosened well caps on all wells to allow depth-to groundwater to stabilize to atmospheric pressure for groundwater gradient determination.
- . September 28, 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 Methyl t-butyl Ether-BTEX (MBTEX). Additionally, a trip blank was analyzed for TPHG and MBTEX.

WORK PERFORMED BY TPE DURING FOURTH QUARTER, 1995:

- October 26, 1995 ACHCSA submitted a letter to Wong approving TPE's WPGI.
- December 12, 1995 Submitted a <u>Third Quarter Report, 1995, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601</u> to Messrs. Wong for their approval and delivery to the ACHCSA.
- December 21, 1995 Loosened well caps on all wells to allow depth-to groundwater to stabilize to atmospheric pressure for groundwater gradient determination.
- December 26, 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 MBTEX. Additionally, a trip blank was analyzed for TPHG and MBTEX.

Details of work conducted during the fourth quarter are presented below.

Excavation Activities

On December 5 and 6, 1995 TPE partially filled the excavation onsite.

Groundwater Gradient

On December 21, 1995 TPE personnel loosened all well caps to allow groundwater levels to stabilize to atmospheric pressure within the wells prior to making depth-to-groundwater measurements for evaluation of groundwater flow direction and gradient.

On December 26, 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 December 26, 1995 average groundwater elevation, as measured in the 5 monitoring wells, had increased 2.57 feet relative to the last sampling event of September 28, 1995 (see attached Table 2).

Attached Figure 1 is a groundwater gradient map constructed from the data collected on December 26, 1995. Groundwater flow direction appears to be radially outward from the location of the onsite excavation pit. Radial groundwater gradient is at an average of about .048 feet per foot to the north. 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 December 26, 1995 groundwater samples were collected from each of the 5 groundwater monitoring wells. Before sampling, the wells were purged of about 32 to 45 liters of water 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 MBTEX by the Modified EPA Method 8020.

Floating product was observed in wells MW-1, MW-2, MW-3, and TMW-5; having a thickness of .15 feet .90 feet, .06 feet and .05 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. Hydrocarbon odor and sheen was observed all wells except TMW-4.

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 MBTEX 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 61,000 parts per billion (ppb), 22,000 ppb, 25,000 ppb and 110,000 ppb, respectively. The reader is referred to attached Table 4 for a summary of MBTEX concentrations detected in these wells.

Well TMW-4 and the trip blank sample (TMW-6) were nondetectable for TPHG and MBTEX.

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 fully defined. Gasoline contaminant levels appear to be fluctuating. On August 4, 1995 TPE submitted a workplan for a groundwater investigation to ACHCSA to further investigate and define the horizontal extent of groundwater contamination. On October 26, 1995 ACHCSA approved the workplan.

TPE recommends that quarterly groundwater sampling of all 5 groundwater monitoring wells be continued to evaluate gradient and monitor contaminant concentrations.

The next sampling event for wells MW-1 through TMW-5 is proposed to take place on about March 28, 1996. All wells are proposed to be analyzed for TPHG and MBTEX.

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,

Lee Huckins

Registered Geologist

ED GEO

LEE N. HUCKINS No. 6286 Jeff Farhoomand, M.S.

Jagar Farhooman

Principal Engineer

Expiration Date 5/31/97

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
	06/28/95		13.50	12.60	14.51
	09/28/95		14.27	13.96	13.29
	12/26/95		11.77	11.62	15.67
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	12.658
	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	12.728
	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
	06/28/95		13.50	12.77	12.97
	09/28/95		14.63	14.09	11.70
	12/26/95		12.58	11.68	14.01
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

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-3	09/16/94		15.42	15.37	12.19
	03/31/95		12.98	12.52	14.94
	06/28/95		14.20	14.15	13.41
	09/28/95		15.17	ND	12.40
	12/26/95		13.33	13.27	14.28
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
	09/16/94		13.58	ND	12.92
	03/31/95		10.23	ND	16.27
	06/28/95		12.21	ND	14.29
	09/28/95		13.38	ND	13.12
	12/26/95		11.32	ND	15.18
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
	06/28/95		11.31	11.25	15.25
	09/28/95		14.42	ND	12.09
	12/26/95		10.16	10.11	16.38

¹ TOP-OF-CASING.

² RELATIVE TO SITE DATUM ESTABLISHED BY ESE.

³ ELEVATION CORRECTED FOR FLOATING PRODUCT USING 0.75 DENSITY FOR 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 GRADIENTS, FLOW DIRECTIONS,
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	-0.59	.020	RADIAL
09/16/94	12.65	-0.73	.01790411	RADIAL
03/31/95	16.48	+3.83	.075	RADIAL
06/28/95	14.09	-2.39	.025053	RADIAL
09/28/95	12.52	-1.57	.025	NW
12/26/95	15.09	+2.57	.048	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	0.01	
	08/17/93	14.40	13.63	0.77	
	03/31/94	12.64	ND		
	06/27/94	14.32	13.16	1.16	
	09/16/94	15.86	13.64	2.22	
	03/31/95	11.82	9.48	2.34	
	06/28/95	13.50	12.60	0.90	
	09/28/95	14.27	13.96	0.31	
	12/26/95	11.77	11.62	0.15	
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	0.01	
	03/31/94	13.61	13.07	0.54	
	06/27/94	14.24	13.44	0.80	
	09/16/94	17.82	13.36	4.46	
	03/31/95	16.72	9.28	7.44	
	06/28/95	13.50	12.77	0.73	
	09/28/95	14.63	14.09	0.54	
	12/26/95	12.58	11.68	0.90	
MW-3	04/16/92 ²	14.14	13.98	0.16	
	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	0.05	
	03/31/95	12.98	12.52	0.46	
	06/28/95 14.20		14.15	0.05	

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-3 09/28/95 15.7		ND		
	12/26/95	13.33	13.27	0.06
TMW-4	08/17/93	13.26	ND	
	03/31/94	12.40	ND	
<u></u>	06/27/94	12.84	ND	
	09/16/94	13.58	ND	
	03/31/95	10.23	ND	
	06/28/95	12.21	ND	ata and safe
	09/28/95	13.38	ND	
	12/26/95	11.32	ND	
TMW-5	08/17/93	12.98	12.95	0.03
	03/31/94	11.39	ND	
	06/27/94	12.24	ND	
-	09/16/94	13.02	12.97	0.05
	03/31/95	7.38	ND	
	06/28/95	11.31	11.25	0.06
	09/28/95	14.42	ND	
	12/26/95	10.16	10.11	0.05

¹ TOP-OF-CASING.

² WATER AND PRODUCT LEVELS MEASURED BY NKJ.

³ NOT DETECTED.

TABLE 4 SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS (ppb $^{\rm I}$)

Sample ID Name	Date	TPHG	Methyl t- butyl ether	Benzene	Toluene	Ethyl- benzene	Xylenes
MW-1	08/17/93	110,000	NA ²	270	690	730	3,100
	03/28/94	34,000	NA	4,900	1,800	1,200	4,000
	06/27/94	21,000	NA	12,000	810	760	2,500
	09/16/94	37,000	NA	7,900	2,400	1,300	3,300
	03/31/95	43,000	NA	8,100	1,900	1,000	4,200
	06/28/95	80,000	NA	7,900	3,200	1,800	7,300
	09/28/95	24,000	<1,200	4,900	470	470	1,700
	12/26/95	61,000	<1,200	12,000	4,200	1,500	5,500
MW-2	08/17/93	49,000	NA	94	240	250	980
	03/28/94	14,000	NA	4,200	<250	910	1,400
	06/27/94	24,000	NA	4,400	72	1,100	1,700
	09/16/94	40,000	NA	2,300	250	2,000	4,100
	03/31/95	28,000	NA	4,000	< 120	1,100	1,400
	06/28/95	40,000	NA	2,700	130	1,700	2,900
	09/28/95	7,500	<62	420	14	250	190
	12/26/95	22,000	<250	1,300	88	950	1,800
MW-3	08/17/93	9,600	NA	4.1	17	28	54
	03/28/94	8,400	NA	2,400	56	67	200
	06/27/94	9,900	NA	3,300	<22	<25	73
	09/16/94	16,000	NA	2,300	80	620	240
	03/31/95	16,000	NA	2,800	70	< 25	920
	06/28/95	11,000	NA	2,300	32	81	240
	09/28/95	6,300	<420	1,900	< 42	200	< 120
	12/26/95	25,000	<250	3,800	97	94	1,600
TMW-4	08/17/93	150	NA	< 0.5	0.8	1.4	3.7
	03/28/94	< 50	NA	<0.5	<0.5	< 0.5	<1.5
	06/27/94	< 50	NA	< 0.50	< 0.50	< 0.50	<1.5

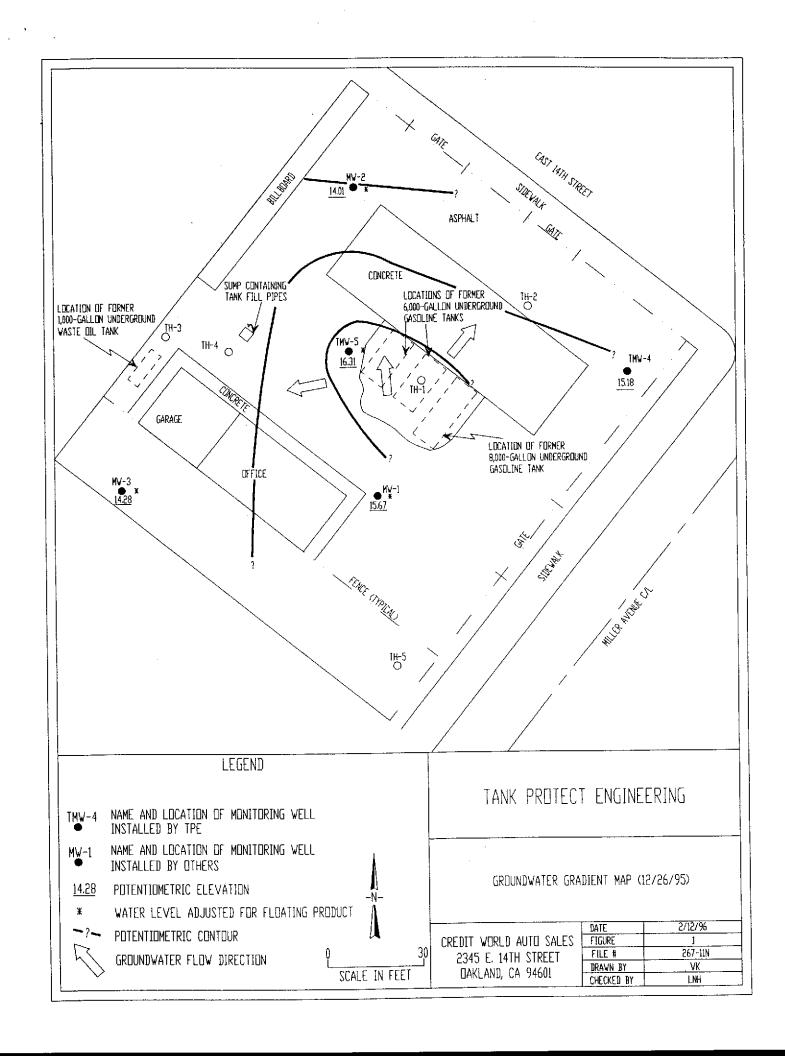
TABLE 4 SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS (ppb^1)

Sample ID Name	Date	TPHG	Methyl t- butyl ether	Benzene	Toluene	Ethyl- benzene	Xylenes
TMW-4	09/16/94	<50	NA	< 0.50	< 0.50	< 0.50	<1.5
	03/31/95	<50	NA	< 0.50	< 0.50	< 0.50	<1.5
	06/28/95	<50	NA	< 0.50	< 0.50	< 0.50	<1.5
	09/28/95	<50	<5.0	< 0.50	< 0.50	< 0.50	<1.5
	12/26/95	< 50	<5.0	< 0.50	< 0.50	< 0.50	<1.5
TMW-5	08/17/93	120,000	NA	340	730	790	3,600
	03/28/94	70,000	NA	23,000	1,500	4,100	15,000
	06/28/94	56,000	NA	26,000	940	5,500	26,000
	09/16/94	96,000	NA	17,000	720	3,500	12,000
	03/31/95	64,000	NA	13,000	470	2,800	6,100
	06/28/95	65,000	NA	9,000	240	2,600	5,300
	09/28/95	79,000	<1,200	17,000	1,800	2,700	7,000
	12/26/95	110,000	<1,200	24,000	2,300	4,100	10,000
TMW-6 ³	08/17/93	<50	NA	< 0.5	< 0.5	< 0.5	< 0.5
	03/28/94	<50	NA	< 0.5	<0.5	< 0.5	<1.5
	06/27/94	<50	NA	< 0.5	< 0.5	< 0.5	<1.5
	09/16/94	< 50	NA	< 0.50	< 0.50	< 0.50	<1.5
	03/31/95	<50	NA	< 0.50	< 0.50	< 0.50	<1.5
	06/28/95	<50	< 5.0	< 0.50	< 0.50	< 0.50	<1.5
	09/28/95	< 50	NA	< 0.50	< 0.50	< 0.50	<1.5
	12/26/95	<50	<5.0	< 0.50	< 0.50	< 0.50	<1.5

¹ PARTS PER BILLION.

² NOT ANALYZED.

³ TRIP BLANK.



PROJECT NO.: 267 DATE: 12 22 45	WELL NO.: <u>Mw-3</u>
PROJECT NAME. Credit world Auto Sale	WELL DIAMETER: 2 "
PROJECT LOCATION: 2345 E 14+6+ Oaklund	TOC ELEV: 27.57
SAMPLER: 257	LOCK NO.: ?-605
ANALYSES: TP HG / BTEX	
WELL DEPTH (from construction detail):	
WELL DEPTH (measured): 3 4, 91 SOFT BOTTOM?: No DEPTH TO WATER: 13.33 TIME: 0908	
DEPTH TO WATER: 13.33 TIME: 0908	Building
PRESSURE (circle one)?: YES OR NO	
IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?	Nw.3
WATER VOLUME IN WELL: 3.45g.l	
[2-INCH CASING = 0.16GAL/FT] [4-INCH CASING = 0.65GAL/FT]	
[6-INCH CASING = 1.47GAL/FT] [1 GAL = 3.78L]	
	LOCATION MAP
CALCULATED PURGE VOL. (GAL): 10, 4 (L): 40 ACTUAL PURGE	VOL. (GAL): (L): 42
PURGE METHOD: Pala Baile SAMPLE METI	HOD: Pala baile
/	
FIELD MEASUREMENTS	

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pН	EC	Clarity	Turbidity (NTU)	Remarks
1053		5"	62 5	6.67	10.36			ODOR, SHEEN
1059		15			10.66			
1105		25	61.7	·		T		
1/12		35	62.2	6.76	10.40			
1016		42	62.3	677	10.3			
140	7		500	ple 7	aken	<u> </u>	33,1	
		1			<u> </u>			
				1				

05	WATER VOL. IN DRUM:_	100%
SIGNATURE:	NEED NEW DRUM?:_	 -

PROJECT NO.: 267 DATE: 12/26/95	WELL NO.: TMU-
PROJECT NAME: Credit World Auto Sale	WELL DIAMETER: 21
PROJECT LOCATION: 2345 1445+0 alchel	TOC ELEV: 26 50
SAMPLER: 250	LOCK NO.: <u>P-605</u>
ANALYSES: TPHG/BTEX	
WELL DEPTH (from construction detail):	iqu
WELL DEPTH (measured): 37,12 SOFT BOTTOM?: AD DEPTH TO WATER: 11.32 TIME: 13913	Trum
PRESSURE (circle one)?: YES OR NO IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?	Building
WATER VOLUME IN WELL: 3.76 g d 5 [2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]	ruselle
[6-INCH CASING = 1.47GAL/FT] [1 GAL = 3.78L]	LOCATION MAP
CALCODITION OF COLOR	THOD: Poly books
PURGE METHOD: VS C POCICIO SANTE ME	

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	рН	EC	Clarity	Turbidity (NTU)	Remarks
1004		5	70,1	7.52	8,43			no odor, no sheer no poor
1009		10	67.8	7,82	6.83			
1013		15		6.75				
1017		20	65.9	6.72	9.18			
1024		30	65.9	6.92	9.35	ļ <u>.</u>		
1031		40	65.8	9.62	9.52		<u> </u>	
1037		45	65.7	6.75	9,48	1	-,00	·
141	14	<u> </u>	Sau	ple	Jeen	¥	70.8	
			'	F.				

•	1			
SIGNATURE:	<u>/</u>	2	una.	
		Sangaraper .	· · · · · · · · · · · · · · · · · · ·	

WATER	VOL. II	N DRUM:_	100 %	_
		DRUM?:_		

·	
PROJECT NO.: 267 DATE: 12/26/95	WELL NO.: TMW -
PROJECT NAME Credit World Auto Sale	WELL DIAMETER: 2"
PROJECT LOCATION: 2345 E. 14th St Oaklah	TOC ELEV: 26-51
SAMPLER: PSD	LOCK NO.: P-605
ANALYSES: TPHG/BIEX	
WELL DEPTH (from construction detail):	TMW-5
WELL DEPTH (measured): 23-45 SOFT BOTTOM?: DEPTH TO WATER: 10.16 TIME: 0924	
PRESSURE (circle one)?: YES OR NO IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?	
WATER VOLUME IN WELL: 2.13 [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]	
	LOCATION MAP
CALCULATED PURGE VOL. (GAL): 4 (L): 27 ACTUAL PURG	THOD: Poly beide
FIELD MEASUREMENTS	

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	рН	EC	Clarity	Turbidity (NTU)	Remarks
1157		2		4.65				ODOR SLIFHT AN PRIS
1201		12	64.1	6.75	11.83			
1205		22	63.4	6.68	12.13	P.,		
1211		32	63.0	669	12.56		001	
1421		 	Sayo C	4 Ta	ben	 	29.5	
			ļ	<u> </u>			<u> </u>	
		<u> </u>			 	 		
		 	1	<u> </u>	 	 		

	-//(
SIGNATURE:		1	acus	dan
31014717 0242				

WATER VOL. IN DRUM: 160%
NEED NEW DRUM?: 160%

PROJECT	NO.: 267	WELL NO.: Du-						
PROJECT	NAME: Cre	dit	WELL DIAMETER: 2"					
PROJECT	LOCATION: 2	2345	TOC ELEV: 27.33					
SAMPLER	<u> 227 :</u>		lock no.: <u>P-605</u>					
ANALYSE	s: TPHG	·/B	78x		·			
	PTH (from con							E,
WELL DE De mu DEPTH T	PTH (measured 70 P(110)17 O WATER:	0:34. 11.6 11.77						
	E (circle one)?:				•			Bullon
IF YES, W	AS PRESSURI	E (circle	one): POS	SITIVE (OR NEGA	TIVE?		mw-1 Liera
WATER VOLUME IN WELL: 3.6 [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]								MW-1 LETZ
								LOCATION MAP
CALCUL	ATED PURGE	VOL. ((GAL): <u>(O</u> .	<u>8</u> (L)	:_4/	ACTU	JAL PURGE	VOL. (GAL): (L): 41
PURGE I	METHOD: Y	3(2	Da. ore			ASUREN		
				FIE	LD ME	ASUKEN	ALIVIO	
Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pН	EC	Clarity	Turbidity (NTU)	Remarks
1129		5	62.5	(20	9.88			ODOR PRODUCT
1/34		15		I F	10.17			ODOR PRODUCT
1/38		<u> </u>	636	•	10:19			
0.27 78	1	125	1/4 /. 54	(C 2)	1 1 4 1 7		<u> </u>	1

							·
1/38	25 /	3.6	6-55	16:19			
1143	35 6	63.4	6.55	1003			
/147	4/1	52.5	6.52	9.95			
1350	l la	anne		ham		278	
	1		1 1	7.03			
		<u> </u>					
		·		<u> </u>	<u></u>	<u>L</u>	1
WATER VOL. IN DRUM: \GO%							

SIGNATURE: R Diuse

NEED NEW DRUM?: \60%

PROJECT NO.: 267 DATE: 12/26/95	WELL NO.: MW -2
PROJECT NAME: Creclithard Auto Solu	WELL DIAMETER: 2"
PROJECT LOCATION: 2345 E 14th S+ Oakland	TOC ELEV: 25:92
SAMPLER: 125 >	LOCK NO.: <u>P-60</u>
ANALYSES: TPHG/BTEX	
WELL DEPTH (from construction detail):	Just h
WELL DEPTH (measured): 33,59 SOFT BOTTOM?: 16 DEPTH TO PRIDUCT 11.68 DEPTH TO WATER: 12,58 TIME: 0919	MW-2
PRESSURE (circle one)?: YES OR NO	BLAG
IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?	
WATER VOLUME IN WELL: 3.76 [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]	MILLER
	LOCATION MAP
CALCOD::125 1 01:02 . 02: (0:22)	HOD: Paly ball
	•

FIELD	MEASOKEMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	рН	EC	Clarity	Turbidity (NTU)	Remarks
1219		2	66.6	6.80	7.89			4" PRODUCT
1224		22	67.2	6,72	8.49			
1229		22.	67.0	6.68	8,72			
1235		3z	65,1	6.66	8.74			
1238		38	65,1	6.65	8,73	·		
1402			Sa	up a	Tak	w	22.7	
	46	- (4)			7			
					1000			
		***	e shake e series	*				

7 6 G	14 August			62	4.4	Ĺ.
		F_{ijk}				Ų
7.7						Ţ
SIGNATURE:		A LA	12	187		
D202=		41.0	1.7		***	

WATER VOL. IN DRUM: 100%

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.
- Water samples will be cooled with crushed ice. In the Alameda County Water District, water samples will be buried in the crushed ice with a thermometer, and the laboratory will be requested to record thermometer temperature at the time of receipt.
- Lach 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 capping 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.

<u>Sample Control/Chain-of-Custody</u>: 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 will be identified with labels; all sample bottles will 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 location, station number, date, time, sampler's name, designation of the sample as a grab or composite, notation of the type of sample (e.g., groundwater, soil boring, etc.), preservatives used, onsite 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 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% or more of its initial water level.

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 probe or 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 will be handled and preserved according to the latest United States Environmental Protection Agency methods as described in the Federal Register (Volume 44, No. 233, Page 69544, Table II) 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

<u>Purged Water Parameter</u>: 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

<u>Documentation:</u> All parameter measurements will 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 quality assurance and quality control (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.

<u>Field Samples</u>: 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 blanks, field blanks and duplicate samples.

Trip blanks are a check for cross-contamination during sample collection, shipment, and laboratory analysis. They are water samples that remain with the collected samples during transportation and are analyzed along with the field samples to check for residual contamination. Analytically confirmed organic-free water will be used for organic parameters and deionized water for metal parameters. Blanks will be prepared by the laboratory supplying the sample containers. The blanks will be numbered, packaged and sealed in the same manner as the other samples. One trip blank will be used for sets greater than 20 samples. 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 due to air exposure can vary considerably from site to site.

The laboratory will not be informed about the presence of trip and field blanks, and false identifying numbers will be put on the labels. Full documentation of these collection and decoy procedures 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.

<u>Laboratory QA/QC</u>: 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 tests designed to measure the amount of random and systematic errors and to signal when correction of these errors is needed.

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

TAL

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LOG NUMBER: 6087
DATE SAMPLED: 12/26/95
DATE RECEIVED: 12/27/95
DATE ANALYZED: 01/03/96

DATE REPORTED: 01/03/96

CUSTOMER:

Tank Protect Engineering

REQUESTER:

Jeff Farhoomand

PROJECT:

No. 267-122695, Credit World Auto Sales, 2345 East 14th Street,

Oakland, CA 94601

			Sample	Type:	Water			
		ħ	1W-1	IW-2 MW-3				
Method and <u>Constituent</u> :	<u>Units</u>	Concen- tration	Reporting Limit	Concen- tration	Reporting Limit	Concen- tration	Reporting <u>Limit</u>	
DHS Method:								
Total Petroleum Hydro- carbons as Gasoline	ug/1	61,000	6,200	22,000	1,200	25,000	1,200	
EPA Method 8020 for:								
Methyl t-Butyl Ether	ug/l	ND	1,200	МĎ	250	ИD	250	
Benzene	ug/1	12,000	120	1,300	25	3,800	25	
Toluene	ug/1	4,200	120	88	25	97	25	
Ethylbenzene	ug/1	1,500	120	950	25	94	25	
Xylenes	ug/l	5,500	380	1,800	75	1,600	75	
		т	MW-4		TMW-5		MW-6	
Method and Constituent:	<u>Units</u>	Concen-	Reporting	Concen- tration	Reporting Limit	Concen- tration	Reporting <u>Limit</u>	
DHS Method:								
Total Petroleum Hydro- carbons as Gasoline	uġ/l	ND	50	110,000	6,200	ND	50	
EPA Method 8020 for:								
Methyl t-Butyl Ether	ug/1	ND	5.0	ND	1,200	ND	5.0	
Benzene	ug/1	ND	0.50	24,000	120	ND	0.50	
Toluene	ug/1	ND	0.50	2,300	120	ND	0.50	
Ethylbenzene	ug/1	ND	0.50	4,100	120	ND	0.50	
Xylenes	ug/l	ПD	1.5	10,000	380	ND	1.5	

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

Trace Analysis Laboratory, Inc.

LOG NUMBER: 6087 DATE SAMPLED: 12/26/95 DATE RECEIVED: 12/27/95 DATE ANALYZED: 01/03/96 DATE REPORTED: 01/23/96 PAGE: Two

Sampl	e Type:	Water

Method and Constituent:	<u>Units</u>	Concen-	d Blank Reporting Limit
DHS Method:			
Total Petroleum Hydro- carbons as Gasoline	ug/l	ND	50
EPA Method 8020 for:			
Methyl t-Butyl Ether	ug/1	ND	5.0
Benzene	ug/l	ND	0.50
Toluene	ug/1	ND	0.50
Ethylbenzene	ug/l	ND	0.50
Xylenes	ug/l	ND	1.5

QC Summary:

% Recovery:

90

% RPD: 5.2

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

Louis W. DuPuis

Quality Assurance/Quality Control Manager

TRACE ANALYSIS

C5107831512

01/23/96

TANK PROTECT ENGINEERING
of Northern California, Inc.
2821 Whipple Rd., Union City, CA 94587-1233

(510) 429.8088 = (800) 523.8088 = Fax (510) 429.8089

LAB: Trace Analytical

TURNAROUND: 15 days

P.O. #: 00/168

CHAIN OF CUSTODY PAGE / OF /

122		PLE ROA	2 (L) (L)	345 5 AND T Ceese	E. /VI HINPHORI Dev	ADDRESS Sales 1457. Oakland 94601 MINNER 187 (415) 429-8088 SAMPLING LOCATION	(1) TYPE OF CON- TAINER	1976						///
- - -	MW-4	14/26/25	ાપાપ		*	TMW-4	2-90m1	×	Ž.	Î	1	1	$ \uparrow $	TPHG/BTEX
	mw-3		1407			mw-3		#		Ц	4	1	1	
	7MW-5		1421			TMW-5	!	$ \!\!\! $	H		4	4	4	
	MW-1		1358			mw-1	↓	It.	上	Ц	_	_	4	
	MW-2		1405		4	mw-2	+	F	上	\square	_	4	4	1
4	mw-6	¥_	1428		<u> </u>	mw-6	¥	F	F	H	-	+	╁	Y
		╁	-	-			 	\vdash	╁	 	+	+	\dagger	
Ì	<u> </u>	 	_	┼─	-		1	t	†		1	1	1	
	Balinquist Rollnynist	and by	(Sign	(ature)	12/01	114:21 Constant 1	(Signa	tur	ľ	Rol 1r	tupe		by	y: (Signature) Date / Time Received by: (Signature) y: (Signature) Date / Time Received by: (Signature) Remarks 0/// 1-2/22 2-4c ml H Cl each
	Relinquis	and by	₹\$ 1 ga	aturo)	(124	Received for [Signature]								Romarks p/in votes 2-4cml HCl each White T-2 M

DATE:
