



TANK PROTECT ENGINEERING
of Northern California, Inc.

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

98 JAN 07 08 00 AM

January 14, 1998

2/16

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

Re: Fourth Quarter Report, 1997, 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 prior to January 1, 1997 is summarized in TPE's January 10, 1997 Fourth Quarter Report, 1996, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601. Work conducted after January 1, 1997 is summarized and work conducted during the subject quarter is presented in detail.

Work performed by TPE during first quarter, 1997

- January 10, 1997 - Submitted a Fourth Quarter Report, 1996, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Messrs. Wong for their approval and delivery to the Alameda County Health Care Services Agency (ACHCSA).
- February 2, 1997 - Submitted an Addendum to August 4, 1995, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Messrs. Wong for their approval and delivery to the ACHCSA.
- February 10, 1997 - ACHCSA approves the addendum to the workplan.

- March 6, 1997 - Supervised the removal of 400 gallons of hydrocarbon contaminated groundwater stored in drums.
- March 7 and 10, 1997 - 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 groundwater samples from wells MW-1 through TMW-5 for analysis for total petroleum hydrocarbons as gasoline (TPHG) and methyl t-butyl ether, benzene, toluene, ethyl benzene and xylene (MBTEX). Additionally, a trip blank was analyzed for TPHG and MBTEX.

Work performed by TPE during second quarter, 1997

- April 7, 1997 - Submitted a First Quarter Report, 1997, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Messrs. Wong for their approval and delivery to the ACHCSA.
- April 21 and May 1, 1997 - Drilled 5 soil borings for the collection of soil and groundwater samples to investigate the horizontal extent of groundwater contamination.
- June 3, 1997 - Submitted a Site Assessment Report Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 providing results of the soil boring program.
- June 12, 1997 - ACHCSA submits a letter requesting a workplan to enhance bioremediation.
- June 27 and 28, 1997 - Measured depth-to-groundwater and free product thickness in wells MW-1 through TMW-4 for evaluation of groundwater flow direction and gradient and collected groundwater samples from wells MW-1 through TMW-4 for analysis for TPHG and MBTEX.

Work performed by TPE during third quarter, 1997

- . August 12, 1997 - Submitted a Second Quarter Report, 1997, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Messrs. Wong for their approval and delivery to the ACHCSA.
- . August 20, 1997 - TPE initiates free product removal in the monitoring wells.
- . September 2, 1997 - ACHCSA submits a letter to Wong requesting sampling of bioindicator parameters to evaluate the site for possible bioremediation. ACHCSA also requested that free product removal be initiated and a workplan be submitted addressing bioremediation (see attached).
- . September 17 and 18, 1997 - 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 groundwater samples from wells MW-1 through TMW-5 for analysis for TPHG and MBTEX. The wells were also sampled for bioindicator parameters, alkalinity, nitrate, sulfate, ferrous iron and oxidation-reduction potential. Additionally, a trip blank was analyzed for TPHG and MBTEX.

WORK PERFORMED BY TPE DURING FOURTH QUARTER, 1997

- . October 6, 1997 - Submitted a Third Quarter Report, 1997, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Messrs. Wong for their approval and delivery to the ACHCSA.
- . October 20, 1997 - Submitted a Remedial Action Plan, 1997, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Messrs.

Wong for their approval and delivery to the ACHCSA. The remedial action plan outlined various remedial options for the site and suggested a remediation strategy.

December 29 and 30, 1997 - 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 groundwater samples from wells MW-1 through TMW-5 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.

Site Activities

TPE continued free product removal at the subject site using a automated skimmer device. To date, about 3 to 5 gallons of free product have been removed. Rising water levels and the amount of free product available have hampered free product removal activities.

Groundwater Gradient

On December 29, 1997 a TPE representative loosened well caps on all wells 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 30, 1997 depth-to-groundwater was measured from the top of casing (TOC) in all wells 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.

Attached Figure 1 is a groundwater gradient map constructed from the data collected on December 30, 1997. Groundwater flow direction was to the north-northwest with a gradient about .025 -.030 feet per foot, respectively. 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 30, 1997 groundwater samples were collected from groundwater monitoring wells MW-1 through TMW-5. Before sampling, the wells were purged of about 21 to 44 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; measured for turbidity 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 Entech Analytical Labs, Inc., located in Sunnyvale, California accompanied by chain-of-custody documentation.

All groundwater samples, were analyzed for TPHG by the United States Environmental Protection Agency (EPA) Method 8015M and for MBTEX by the Modified EPA Method 8020.

Floating product was measured in one monitoring well during this quarterly period. Attached Table 3 summarizes the thickness of floating product measured in each well. Hydrocarbon odor and/or sheen were observed in all wells, except TMW-4.

Purge water was 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.

TPHG was detected in wells MW-1, MW-2, MW-3 and TMW-5, at concentrations of 61,000 parts per billion (ppb), 13,000 ppb, 21,000 ppb, and 79,000 ppb respectively. Well TMW-4 was nondetectable for TPHG and MBTEX. MTBE was detectable in well's MW-1 and MW-3 at concentrations of 1,400 ppb and 300 ppb, respectively. Some or all BTEX chemicals also were detected. The reader is referred to Table 4 for a summary of BTEX chemical concentrations.

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

RECOMMENDATIONS

TPE recommends that quarterly groundwater sampling of all 5 groundwater monitoring wells be continued to evaluate gradient, to monitor contaminant concentrations and to continue removal of free product from the wells. Concentrations of TPHG and MBTEX remained consistent in all wells.

TPE did not sample for natural biodegradation parameters this quarter. In accordance with ACHCSA's letter of June 12, 1997, TPE recommends and will continue to sample for natural biodegradation parameters.

Floating product was measured in MW-1. TPE will continue free product removal in wells MW-1 and MW-2. Floating product has decreased due to rising water levels and to continued free product removal.

The next sampling event is due on about March 25, 1998.

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

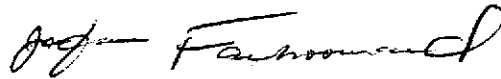
TPE recommends that this quarterly report be submitted with a signed cover letter from Messrs. Aaron and Stanley Wong.

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

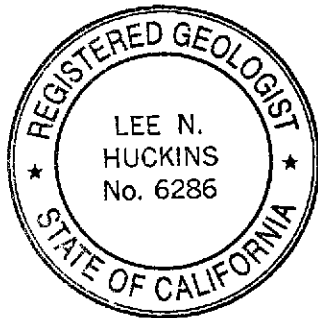
Sincerely,



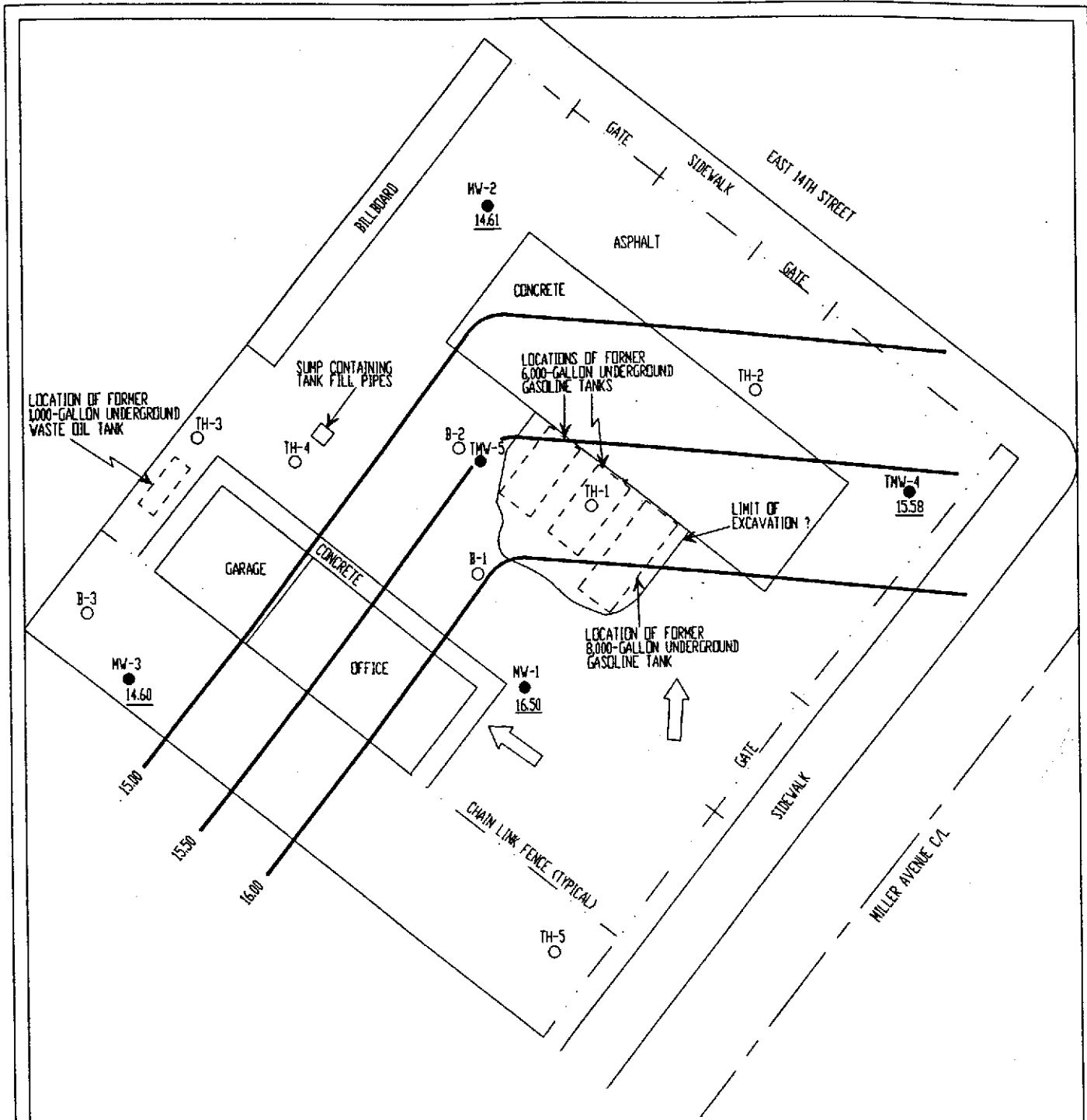
Lee Huckins
Registered Geologist



Jeff Farhoomand, M.S.
Principal Engineer



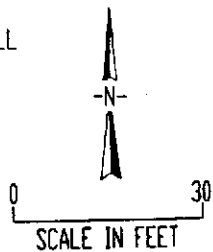
Expiration 5/31/99



NOTE: REVISED SEPTEMBER 10, 1997

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
- 16.50 POTENTIOMETRIC ELEVATION
- 15.00 POTENTIOMETRIC CONTOUR
- ← GROUNDWATER FLOW DIRECTION



TANK PROTECT ENGINEERING

SITE PLAN:
GROUNDWATER GRADIENT MAP (12/30/97)

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

DATE	1/5/98
FIGURE	1
FILE #	267-3-IN
DRAWN BY	VK
CHECKED BY	LNH

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
	03/22/96		10.52	10.44	16.87
	06/20/96		13.38	12.49	14.63
	09/24/96		14.60	13.40	13.63
	12/27/96		9.17	9.08	18.23
	03/06/97		12.35	ND	14.98
	06/28/97		10.93	10.60	16.65
	09/18/97		13.10	12.93	14.36
	12/30/97		10.96	10.79	16.50
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
	06/28/95		13.50	12.77	12.97

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-2	09/28/95	25.92 ⁷	14.63	14.09	11.70
	12/26/95		12.58	11.68	14.01
	03/22/96		11.46	11.31	14.57
	06/20/96		13.08	12.71	13.12
	09/30/96		16.67	12.92	12.06
	12/27/96		15.74	8.17	15.86
	03/06/97		12.55	ND	13.37
	06/28/97		11.98	11.94	13.97
	09/18/97		13.44	13.44	12.48
	12/30/97		11.31	ND	14.61
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
	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
	03/22/96		12.81	12.77	14.79
	06/20/96		13.95	13.88	13.67
	09/24/96		14.86	14.82	12.74
	12/27/96		11.04	10.98	16.58
	03/07/97		13.80	ND	13.77
	06/28/97		13.72	13.66	13.89
	09/18/97		14.76	ND	12.81

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	12/30/97	27.57 ⁷	12.97	ND	14.60
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
	03/22/96		10.54	ND	15.96
	06/20/96		12.14	ND	14.36
	09/24/96		13.01	ND	13.49
	12/27/96		9.51	ND	16.99
	03/07/97		11.92	ND	14.58
	06/28/97		10.70	ND	15.80
	09/18/97		12.94	ND	13.56
	12/30/97		10.92	ND	15.58
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
	03/22/96		7.59	7.54	18.96
	06/26/96 ¹¹		7.12	ND	NA
	09/30/96 ¹¹		7.42	ND ¹⁰	NA ⁹

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-5	12/27/96 ¹¹	26.51 ⁷	6.38	ND	NA
	03/07/97 ¹¹		11.12	ND	NA
	08/17/93		12.98	12.95	13.55
	09/18/97 ¹¹		12	ND	---
	12/30/97 ¹¹		8.97	ND	---

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

⁸ CORRECTED GROUNDWATER ELEVATION BY TANK PROTECT ENGINEERING.

⁹ NOT AVAILABLE.

¹⁰ NOT DETECTED.

¹¹ WELL TOP DESTROYED DURING REMEDIATION

¹² NOT MEASURED - WELL OBSTRUCTED

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	.0179-.0411	RADIAL
03/31/95	16.48	+3.83	.075	RADIAL
06/28/95	14.09	-2.39	.025-.053	RADIAL
09/28/95	12.52	-1.57	.025	NW
12/26/95	15.09	+2.57	.048	RADIAL
03/22/96	16.23	+1.14	.034-.132	RADIAL
06/20/96 ²	13.95	-2.28	.016	NW
09/30/96 ²	12.98	-0.97	.019	NW
12/27/96 ²	16.41	+3.43	.024-.029	N-NW
03/07/97 ²	14.18	-2.23	.020-.035	N-NW
06/28/97 ²	15.07	+ .89	.027-.04	NW
09/18/97	13.30	-1.77	.02-.026	RADIAL
12/30/97	15.32	+2.02	.025-.030	N-NW

¹ MEAN SEA LEVEL.

² DOES NOT INCLUDE DATA FOR TMW-5; WELL TOP DESTROYED DURING REMEDIATION ACTIVITIES.

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
	03/22/96	10.52	10.44	0.08
	06/20/96	13.38	12.49	0.089
	09/24/96	14.60	13.40	1.20
	12/27/96	9.17	9.08	0.09
	03/06/97	12.35	ND	---
	06/28/97	10.93	10.60	0.33
	09/18/97*	13.10	12.93	.17
	12/30/97	10.96	10.79	0.17
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

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-2	03/22/96	11.46	11.31	0.15
	06/20/96	13.08	12.71	0.37
	09/30/96	16.67	12.92	3.75
	12/27/96	15.74	8.17	7.57
	03/06/97	12.55	ND	---
	06/28/97	11.98	11.94	0.04
	09/18/97*	13.44	13.44	TRACE
	12/30/97	11.31	ND	---
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	---
	03/31/95	12.98	12.52	0.46
	06/28/95	14.20	14.15	0.05
	09/28/95	15.7	ND	--
	12/26/95	13.33	13.27	0.06
	03/22/96	12.81	12.77	0.04
	06/20/96	13.95	13.88	0.07
	09/24/96	14.86	14.82	0.04
	12/27/96	11.04	10.98	0.06
	03/07/97	13.80	ND	---
	06/28/97	13.72	13.66	0.06
	09/18/97	14.76	ND	---
	12/30/97	12.97	ND	---
TMW-4	08/17/93	13.26	ND	---
	03/31/94	12.40	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-4	06/27/94	12.84	ND	---
	09/16/94	13.58	ND	---
	03/31/95	10.23	ND	---
	06/28/95	12.21	ND	---
	09/28/95	13.38	ND	---
	12/26/95	11.32	ND	---
	03/22/96	10.54	ND	---
	06/20/96	12.14	ND	---
	09/24/96	13.01	ND	---
	12/27/96	9.51	ND	---
	03/07/97	11.92	ND	---
	06/28/97	10.70	ND	---
	09/18/97*	12.94	ND	---
	12/30/97	10.92	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
	03/22/96	7.59	7.54	0.05
	06/20/96 ¹¹	7.12	ND	---
	09/30/96 ¹¹	7.42	ND	---
	12/27/96 ¹¹	6.38	ND	---
	03/07/97 ¹¹	11.12	ND	---
	06/28/97 ¹²	NM ¹²	NM ¹²	---

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	09/18/97*	12.00	ND	---
	12/30/97	8.97	ND	---

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.

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⁷ TOC SURVEYED 8/10/93 BY PROFESSIONAL ENGINEER.

⁸ CORRECTED GROUNDWATER ELEVATION BY TANK PROTECT ENGINEERING.

⁹ NOT AVAILABLE.

¹⁰ NOT DETECTED.

¹¹ WELL TOP DESTROYED DURING REMEDIATION

¹² NOT MEASURED - WELL OBSTRUCTED

* VISUAL MEASUREMENTS FROM BAILER

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb¹)

Sample ID Name	Date	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethylbenzene	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
	03/22/96	19,000	<2,500	6,000	47	260	<750
	06/20/96	15,000	910	2,900	100	240	98
	09/24/96	20,000	340	4,800	220	300	770
	12/27/96	24,000	<5.0	5,900	440	310	740
	03/07/97	30,000	<5.0	5,700	370	290	780
	06/28/97	54,000	<5.0	5,200	1,300	1,000	4,900
	09/18/97	54,000	<5.0	5,300	1,200	1,100	4,600
	12/30/97	61,000	1,400	4,300	1,800	1,600	6,900
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
	03/22/96	9,800	<1,200	2,200	<120	400	<380
	06/20/96	35,000	550	770	<0.50	240	<0.50
	09/30/96	58,000	<5.0	1,600	230	2,200	4,000
	12/27/96	29,000	<5.0	2,100	<0.50	1,200	1,800

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb¹)

Sample ID Name	Date	TPHG	Methyl t-butyl ether	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-2	03/07/97	13,000	<5.0	1,300	37	290	180
	06/28/97	12,000	<5.0	840	<0.50	640	360
	09/18/97	12,000	<5.0	680	<0.50	320	84
	12/30/97	13,000	<5.0	1,100	40	350	220
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
	03/22/96	16,000	250	3,100	75	69	350
	06/20/96	8,500	220	1,400	28	140	15
	09/24/96	12,000	<5.0	2,400	87	340	110
	12/27/96	5,800	240	1,700	28	<0.50	42
	03/10/97	9,000	<5.0	1,700	<0.50	110	<0.50
	06/28/97	15,000	<5.0	2,200	<0.50	160	190
	09/18/97	28,000	<5.0	3,800	<0.50	100	<0.50
	12/30/97	21,000	300	2,200	<0.50	31	<0.50
TMW-4	08/17/93	150	NA	<0.50	0.8	1.4	3.7
	03/28/94	<50	NA	<0.50	<0.50	<0.50	<1.5
	06/27/94	<50	NA	<0.50	<0.50	<0.50	<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	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
	03/22/96	<50	<5.0	<0.50	<0.50	<0.50	<1.5
	06/20/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
(ppb¹)

Sample ID Name	Date	TPHG	Methyl t-butyl ether	Benzene	Toluene	Ethyl-benzene	Xylenes
TMW-4	09/24/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/27/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/10/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	06/27/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/18/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/30/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
TMW-5	08/17/93	120,000	NA	640	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	3,500	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	11,000	800	2,300	4,500
	06/26/96	30,000	830	4,000	180	1,500	2,500
	09/30/96	6,900	<5.0	1,600	79	130	370
	12/27/96	78,000	<5.0	12,000	1,900	2,900	9,700
	03/10/97	84,000	<5.0	9,900	1,100	2,600	8,800
	06/28/97	NA	NA	NA	NA	NA	NA
	09/18/97	65,000	<5.0	8,000	<0.5	2,000	4,700
	12/30/97	79,000	<5.0	6,400	340	2,300	5,500
TMW-6	09/18/97	<50.0	<5.0	<0.5	<0.5	<0.5	<0.5
	12/30/97	<50.0	<5.0	<0.5	<0.5	<0.5	<0.5

¹ PARTS PER BILLION.

² NOT ANALYZED.

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.
- . 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 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.

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 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

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

<u>Parameter</u>	<u>Units of Measurement</u>
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 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.

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 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 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 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.

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 tests 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 the United States Environmental Protection Agency-certified standards), duplicates, replicates and sample spikes. Internal QC also requires adherence to written methods, procedural documentation and the observance of good laboratory practices.

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 12-30

WELL NO.: MW-1

PROJECT NAME: CWAS

WELL DIAMETER: 2"

PROJECT LOCATION: 2345E 144th

TOC ELEV: _____

SAMPLER: LNH

LOCK NO.: _____

ANALYSES: TPHC & BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 34.05 SOFT BOTTOM?: NO

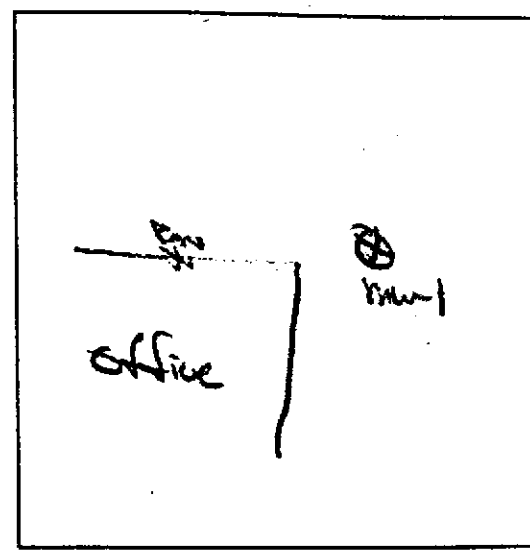
DEPTH TO WATER: 10.79 / 10.96 TIME: 1403

PRESSURE (circle one): YES OR NO

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

WATER VOLUME IN WELL: 3.69

[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): 11.07 (L): 44 ACTUAL PURGE VOL. (GAL): _____ (L): 44

PURGE METHOD: Poly SAMPLE METHOD: Poly

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks
1411		1	65.8	6.95	1230			40' in boiler starting product
1435		39	64.6	6.55	1370			over screen
1437		40	65.2	6.55	1330			"
1439		41	66.1	6.54	1300			"
1441		42	66.5	6.50	1260			"
1443		43	66.6	6.50	1350			"
1445		44	66.2	6.46	1330			"
1450	well sampled							

WATER VOL. IN DRUM: _____
 NEED NEW DRUM?: _____

SIGNATURE: _____

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 12-30-97

WELL NO.: MW-2

PROJECT NAME: CWAS

WELL DIAMETER: _____

PROJECT LOCATION: 2345 E 14th

TOC ELEV: _____

SAMPLER: LNH

LOCK NO.: _____

ANALYSES: TPHC & BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 29.13 SOFT BOTTOM?: NO

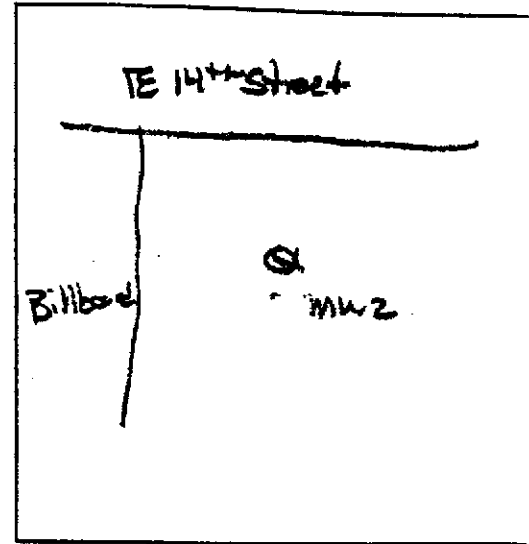
DEPTH TO WATER: 11.31 TIME: 1132

PRESSURE (circle one): YES OR NO

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

WATER VOLUME IN WELL: 2.85

[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): 7.55 (L): 30.0 ACTUAL PURGE VOL. (GAL): _____ (L): 30.0

PURGE METHOD: Poly

SAMPLE METHOD: Poly

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks
1144		1	72.6	7.02	1240		clear	odorless
1159		25	68.2	6.61	1220		turbid	" "
1200		26	68.6	6.58	1230		"	"
1202		27	68.6	6.54	1230		"	"
1204		28	68.8	6.53	1240		"	"
1205		29	68.9	6.52	1250		"	"
1207		30	68.7	6.53	1220		"	"
1210	well sampled						47.5	

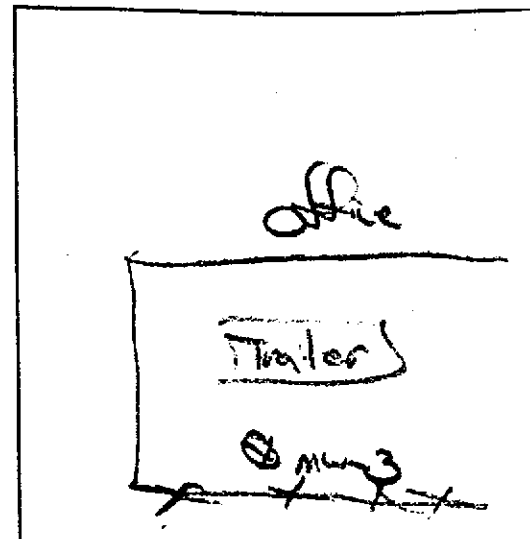
SIGNATURE: _____

WATER VOL. IN DRUM: _____
 NEED NEW DRUM?: _____

RECORD OF WATER SAMPLING

PROJECT NO.: 207 DATE: 12-30
 PROJECT NAME: CWAS
 PROJECT LOCATION: ZBYS E 14
 SAMPLER: LNH
 ANALYSES: TPH, Pb, PTE, L
 WELL DEPTH (from construction detail): _____
 WELL DEPTH (measured): 34.85 SOFT BOTTOM?: _____
 DEPTH TO WATER: 12.97 TIME: 1510
 PRESSURE (circle one)? YES OR NO
 IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?

WELL NO.: MW-3
 WELL DIAMETER: 2
 TOC ELEV: _____
 LOCK NO.: 65



LOCATION MAP

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]

CALCULATED PURGE VOL. (GAL): 10.53 (L): 47 ACTUAL PURGE VOL. (GAL): _____ (L): 42
 PURGE METHOD: Pdy SAMPLE METHOD: Pdy

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks
1517		1	62.7	7.11	1040		clear	odor shown
1542		37	61.0	6.69	998		slight	" "
1543		38	63.0	6.68	1070		"	" "
1545		39	63.6	6.63	1080		"	" "
1546		40	63.5	6.61	1080		"	" "
1548		41	63.6	6.61	1090		"	" "
1549		42	63.8	6.61	1090		"	" "
ESP well sample							1298	

SIGNATURE: _____ WATER VOL. IN DRUM: _____
 NEED NEW DRUM?: _____

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 12-30-97

PROJECT NAME: CWAS

PROJECT LOCATION: 2345 E 14th

SAMPLER: LNH

ANALYSES: TPHC & BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 33.52 SOFT BOTTOM?: yes

DEPTH TO WATER: 10.92 TIME: 10:25

PRESSURE (circle one): YES OR NO

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

WATER VOLUME IN WELL: 3.61

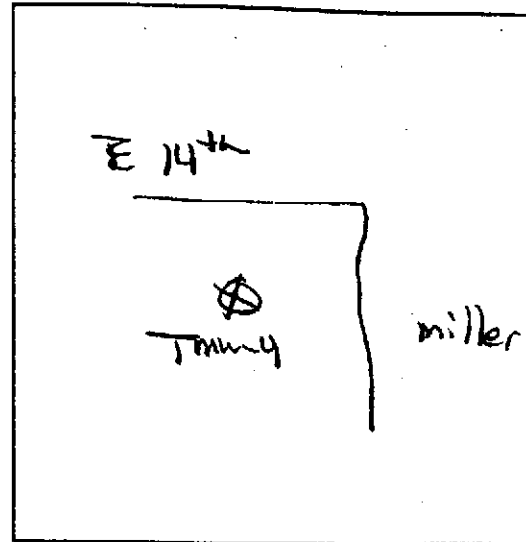
[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]
 [6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]

WELL NO.: THW-4

WELL DIAMETER: _____

TOC ELEV: _____

LOCK NO.: _____



LOCATION MAP

CALCULATED PURGE VOL. (GAL): 0.33 (L): 43 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
1035		1	70.2	7.44	1100		clear	no odor
1059		38	69.8	6.91	1120		"	"
1100		39	69.6	6.85	1090		Slight	"
1103		40	69.0	6.84	1090		"	"
1104		41	68.6	6.83	1030		"	"
1106		42	68.4	6.83	1060		"	"
1107		43	68.0	6.82	1070		"	"
1110	well sample						49.5	

SIGNATURE: _____

WATER VOL. IN DRUM: _____
 NEED NEW DRUM?: _____

RECORD OF WATER SAMPLING

PROJECT NO.: 267 DATE: 12-30-97

PROJECT NAME: CWAS

PROJECT LOCATION: 2345 E 14th

SAMPLER: LNA

ANALYSES: TPH, 4 BTEX

WELL DEPTH (from construction detail): _____

WELL DEPTH (measured): 20.14 SOFT BOTTOM?: NO

DEPTH TO WATER: 8.97 TIME: 1307

PRESSURE (circle one): YES OR NO

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

WATER VOLUME IN WELL: 1.78

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

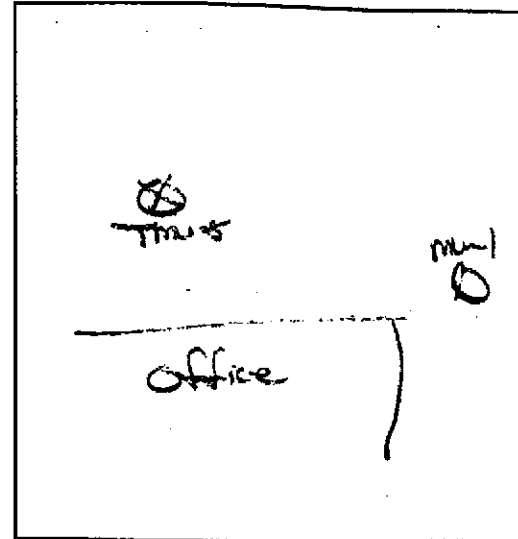
[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]

WELL NO.: Truss

WELL DIAMETER: 2

TOC ELEV: _____

LOCK NO.: _____



LOCATION MAP

CALCULATED PURGE VOL. (GAL): 5.34 (L): 21 ACTUAL PURGE VOL. (GAL): _____ (L): 21

PURGE METHOD: Poly

SAMPLE METHOD: Poly

FIELD MEASUREMENTS

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	pH	EC	Clarity	Turbidity (NTU)	Remarks	
1315		1	69.8	7.23	1520		Clear	odorous	
1325		16	69.8	6.86	1430		"	"	
1327		17	69.0	6.78	1490		"	"	
1328		18	68.5	6.69	1480		"	"	
1329		19	68.2	6.66	1500		"	"	
1331		20	67.7	6.64	1470		"	"	
1332		21	67.4	6.62	1460		"	"	
1335	well sampled							16.5	

SIGNATURE: _____

WATER VOL. IN DRUM: _____

NEED NEW DRUM?: _____

Entech Analytical Labs, Inc.

CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins


Date:	1/8/98
Date Received:	12/31/97
Date Analyzed:	1/1/98
Project #:	267123097
P.O. #:	1452
Sampled By:	Client

Certified Analytical Report

Water Sample Analysis:

Test	MW-1	MW-2	MW-3	Units	PQL	EPA Method #
Sample Matrix	Water	Water	Water			
Sample Date	12/30/97	12/30/97	12/30/97			
Sample Time	1450	1210	1550			
Lab #	D19942	D19943	D19944			
DF-Gas/BTEX	80	80	40			
TPH-Gas	61,000	13,000	21,000	µg/liter	50.0 µg/l	8015M
MTBE	1,400	ND	300	µg/liter	5.0 µg/l	8020
Benzene	4,300	1,100	2,200	µg/liter	0.5 µg/l	8020
Toluene	1,800	40	ND	µg/liter	0.5 µg/l	8020
Ethyl Benzene	1,600	350	31	µg/liter	0.5 µg/l	8020
Xylenes	6,900	220	ND	µg/liter	0.5 µg/l	8020

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)



Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Tank Protect Engineering
2821 Whipple Road
Union City, CA 94587
Attn: Lee Huckins

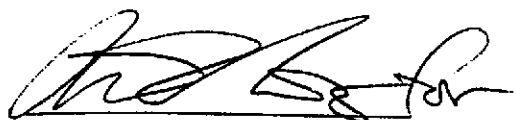
Date:	1/8/98
Date Received:	12/31/97
Date Analyzed:	1/1-1/2/98
Project #:	267123097
P.O. #:	1452
Sampled By:	Client

Certified Analytical Report

Water Sample Analysis:

Test	TMW-4	TMW-5	TMW-6	Units	PQL	EPA Method #
Sample Matrix	Water	Water	Water			
Sample Date	12/30/97	12/30/97	12/30/97			
Sample Time	1110	1335	1605			
Lab #	D19945	D19946	D19947			
DF-Gas/BTEX	1	200	1			
TPH-Gas	ND	79,000	ND	µg/liter	50.0 µg/l	8015M
MTBE	ND	ND	ND	µg/liter	5.0 µg/l	8020
Benzene	ND	6,400	ND	µg/liter	0.5 µg/l	8020
Toluene	ND	340	ND	µg/liter	0.5 µg/l	8020
Ethyl Benzene	ND	2,300	ND	µg/liter	0.5 µg/l	8020
Xylenes	ND	5,500	ND	µg/liter	0.5 µg/l	8020

1. $DLR = DF \times PQL$
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)



Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5980102

Matrix: Water

Units: µg/L

Date Analyzed: 01/02/98

Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP % R	SPD µg/L	SPD %R	RPD	QC LIMITS (ADVISORY)	
										RPD	%R
Benzene	8020	<0.50	10.0	ND	10.4	104	11.1	111	6.8	25	50-150
Toluene	8020	<0.50	10.0	ND	9.3	93	9.8	98	5.2	25	50-150
Ethyl Benzene	8020	<0.50	10.0	ND	9.4	94	10.2	102	7.6	25	50-150
Xylenes	8020	<0.50	30	ND	30	101	33	109	7.6	25	50-150
Gasoline	8015	<50.0	625	ND	618	99	637	102	3.0	25	50-150

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5971231

Matrix: Water

Units: µg/L

Date Analyzed: 12/31/97

Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP % R	SPD µg/L	SPD %R	RPD	QC LIMITS (ADVISORY)	
										RPD	%R
Benzene	8020	<0.50	10.0	ND	9.3	93	9.6	96	3.1	25	50-150
Toluene	8020	<0.50	10.0	ND	9.0	90	9.1	91	1.9	25	50-150
Ethyl Benzene	8020	<0.50	10.0	ND	9.1	91	9.0	90	0.7	25	50-150
Xylenes	8020	<0.50	30	ND	29	98	29	96	2.7	25	50-150
Gasoline	8015	<50.0	625	ND	617	99	619	99	0.3	25	50-150

Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank

SA: Spike Added

SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated