

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

Re: First Quarter Report, 1999, 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, 1998 is summarized in TPE's January 14, 1998 Fourth Quarter Report, 1997, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601. Work conducted after January 1, 1998 is summarized below.

Work conducted by TPE during First Quarter, 1998:

- January 14, 1998 Submitted a Fourth Quarter Report, 1997, 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).
- March 25, 1998 Supervised the removal of 500 gallons of hydrocarbon contaminated groundwater stored in drums.
  - March 24 and 25, 1998 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.

PROTECTION AL 99 JUL 26 PM 3:36 Work conducted by TPE during Second Quarter, 1998:

June 29, 1998 - Measured depth-to-groundwater in monitoring wells MW-1 through MW-3, TMW-4, and TMW-5, for evaluation of groundwater flow direction and gradient. Collected a groundwater sample from each well for analysis for TPHG and MBTEX. Additionally, analyzed 1 trip blank sample (TMW-6) for TPHG and MBTEX.

### Work conducted by TPE during the Third Quarter, 1998:

- July 27, 1998 Submitted a Second Quarter Report, 1998, Credit World Auto Sales, 2345 E, 14th Street, Oakland, CA 94601 to Messrs. Wong for their approval and delivery to the ACHCSA.
- September 28, 1998 Loosened well caps on all wells to allow depth-to groundwater to stabilize to atmospheric pressure for groundwater gradient determination.
- October 2, 1998 Measured depth-to-groundwater in monitoring wells MW-1 through MW-3, TMW-4, and TMW-5, for evaluation of groundwater flow direction and gradient. Collected a groundwater sample from each well for analysis for TPHG and MBTEX.

### Work Conducted by TPE During the fourth Quarter, 1998:

- . December 21, 1998 Submitted a Fourth Quarter Report, 1998, Credit World Auto Sales, 2345 E. 14th Street, Oakland, CA 94601 to Messrs. Wong for their approval and delivery to the ACHCSA.
- December 9, 1998 Loosened well caps on all wells to allow depth-to groundwater to stabilize to atmospheric pressure for groundwater gradient determination.

December 10, 1998 - Measured depth-to-groundwater in monitoring wells MW-1 through MW-3, TMW-4, and TMW-5, for evaluation of groundwater flow direction and gradient. Collected a groundwater sample from each well for analysis for TPHG and MBTEX.

# WORK CONDUCTED BY TPE DURING FIRST QUARTER, 1999:

- 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).
  - March 26, 1999 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).

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

#### Groundwater Gradient

On March 26, 1999, a representative from TPE loosened well caps on wells MW-1 through MW-3, TMW-4 and TMW-5 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.

Depth-to-groundwater was measured from the top of casing (TOC) in all wells to the nearest 0.01 foot using an electronic solinst water level sound. 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

Purge water was stored on site in 55-gallon drums labeled to show material stored, 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.

Total Petroleum Hydrocarbons as Gasoline (TPHG) were detected in wells MW-1, MW-2, TMW-3, and TMW-5, at concentrations of 230,000 parts per billion (ppb), 110,000 ppb, 10,000, and 35,000 ppb, respectively. No detectable levels of TPHG were measured in well TMW-4. MBTEX was non-detected in well TMW-4. The reader is referred to Table 4 for a summary of MBTEX chemical concentrations, for wells MW-1, MW-2, TMW-3, and TMW-5.

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

### CONCLUSIONS AND RECOMMENDATIONS

Floating product was observed in well MW-2. TPE recommends that quarterly groundwater sampling of all five groundwater monitoring wells be continued to evaluate gradient, and to monitor contaminant concentrations and free product from the wells. Concentrations of TPHG and MBTEX appear to be fluctuating in all wells in comparison with the third quarterly monitoring period.

The next sampling event is due in June 1999.

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.

Jeff Farhoomand, M.S.

Principal Engineer

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

Sincerely,

Bichard & Drunnfr.
Richard & Dressen Ir

RICHARD S. DREESSEN JR

No. 3165

DE CALLED

Louis Travis III

. Project Éngineer

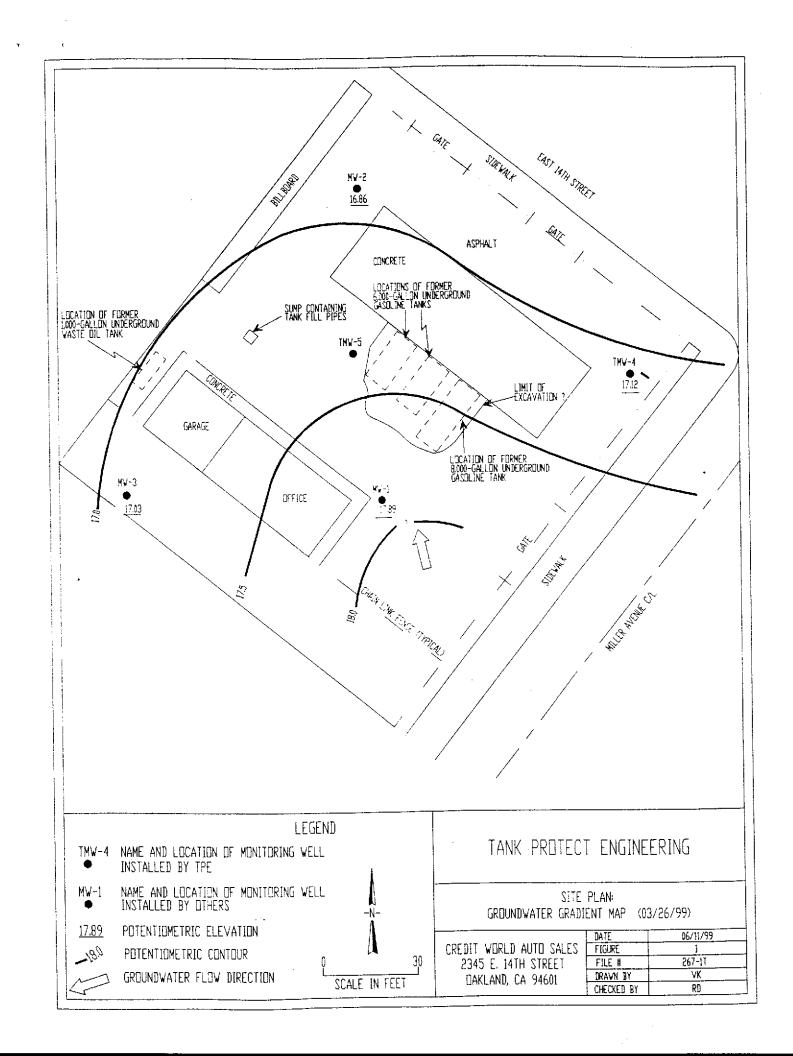


TABLE 1
GROUNDWATER ELEVATION

Well Name	Date	TOC <sup>1</sup> Elevation (Feet MSL <sup>4</sup> )	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected <sup>3</sup> Groundwater Elevation (Feet MSL)
MW-1	08/23/91 <sup>5</sup>	100.00 <sup>2</sup>	15.42	NA <sup>9</sup>	84.58
	04/16/92 <sup>6</sup>	27.33 <sup>7</sup>	16.66	11.54	14.51 <sup>8</sup>
	06/11/93		12.61	12.60	14.73
	08/17/93		14.40	13.63	13.50 <sup>7</sup>
	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
	03/24/98		9.33	ND	18.00
	06/29/98		12.20	ND	15.13
	10/02/98		13.46	ND	13.87
	12/10/98		10.49	ND	16.84
	03/26/99		9.44	ND	17.89
MW-2	08/23/91 <sup>5</sup>	98.585 <sup>2</sup>	13.77	NA	84.815
	04/16/92 <sup>6</sup>	25.92 <sup>7</sup>	15.38	12.57	12.658
	06/11/93		13.185	ND <sup>10</sup>	12.74

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Well Name	Date	TOC <sup>1</sup> Elevation (Feet MSL <sup>4</sup> )	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected <sup>3</sup> Groundwater Elevation (Feet MSL)
MW-2	08/17/93	25.92 <sup>7</sup>	14.04	14.03	11.89
	03/31/94		13.61	13.07	12.728
	06/27/94	25.92 <sup>7</sup>	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
	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
	03/25/98		10.02	ND	15.90
	06/29/98		11.96	ND	13.96
	10/02/98		13.74	ND	12.18
	12/10/98		12.91	10.81	14.58
	03/26/99		9.06	8.86	16.86
MW-3	08/23/915	99.25 <sup>2</sup>	15.07	NA	84.18
	04/16/926	27.57 <sup>7</sup>	14.14	13.98	13.558
	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

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Well Name	Date	TOC <sup>1</sup> Elevation (Feet MSL <sup>4</sup> )	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected <sup>3</sup> Groundwater Elevation (Feet MSL)
MW-3	09/16/94	27.57 <sup>7</sup>	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
	12/30/97		12.97	ND	14.60
	03/24/98		11.75	ND	15.82
	06/29/98		13.38	ND	14.19
	10/02/98		14.42	ND	13.15
	12/08/98		12.55	ND	15.02
	03/26/99		10.54	ND	17.03
TMW-4	08/17/93	26.50 <sup>7</sup>	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

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Well Name	Date	TOC <sup>1</sup> Elevation (Feet MSL <sup>4</sup> )	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected <sup>3</sup> Groundwater Elevation (Feet MSL)
TMW-4	06/20/96	26.50 <sup>7</sup>	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
	03/25/98		9.60	ND	16.90
	06/29/98		11.32	ND	15.18
	10/02/98		12.56	ND	13.94
<u> </u>	12/08/98		10.44	ND	16.06
	03/26/99		9.38	ND	17.12
TMW-5	08/17/93	26.51 <sup>7</sup>	12.98	12.95	13.55
	03/31/94		11.39	ND	15.12
	06/27/94		12.24	ND	13.53
	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
	06/26/9611		7.12	ND	NA
	09/30/9611		7.42	ND <sup>10</sup>	NA <sup>9</sup>
	12/27/96 <sup>11</sup>		6.38	ND	NA
	03/07/97 <sup>11</sup>		11.12	ND	NA
	08/17/9311		12.98	12.95	13.55
	09/18/97 <sup>11</sup>		12	ND	

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/W-1	08/23/91 <sup>5</sup>	$100.00^2$	15.42	NA <sup>9</sup>	84.58
	04/16/92 <sup>6</sup>	27.33 <sup>7</sup>	16.66	11.54	14.518
	06/11/93		12.61	12.60	14.73
	08/17/93	, , , , , , , , , , , , , , , , , , ,	14.40	13.63	13.507
	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
<u>,                                     </u>	12/26/95		11.77	11.62	15.67
<u>,                                     </u>	03/22/96		10.52	10.44	16.87
	06/20/96		13.38	12.49	14.63
<del></del>	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
<u></u>	03/24/98		9.33	ND	18.00
	06/29/98		12.20	ND	15.13
	10/02/98	-	13.46	ND	13.87
	12/10/98		10.49	ND	16.84
<del></del> -	03/26/99		9.44	ND	17.89
MW-2	08/23/915	98.585 <sup>2</sup>	13.77	NA	84.815
	04/16/926	25.927	15.38	12.57	12.65 <sup>8</sup>
	06/11/93		13.185	ND <sup>10</sup>	12.74

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	06/27/94	25.927	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
<del>-</del>	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
	03/25/98		10.02	ND	15.90
	06/29/98		11.96	ND	13.96
	10/02/98		13.74	ND	12.18
	12/10/98		12.91	10.81	14.58
	03/26/99		9.06	8.86	16.86
MW-3	08/23/91 <sup>5</sup>	99.25 <sup>2</sup>	15.07	NA	84.18
	04/16/92 <sup>6</sup>	27.57	14.14	13.98	13.55 <sup>8</sup>
	06/11/93		14.275	ND	13.30
	08/17/93	-	15.77	ND	11.80
	03/31/94		14.35	ND	13.22
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MW-3	09/16/94	27.57 <sup>7</sup>	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
	12/30/97		12.97	ND	14.60
	03/24/98		11.75	ND	15.82
	06/29/98		13.38	ND	14.19
	10/02/98		14.42	ND	13.15
	12/08/98		12.55	ND	15.02
	03/26/99		10.54	ND	17.03
TMW-4	08/17/93	26.50 <sup>7</sup>	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
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TMW-4	06/20/96	26.50 <sup>7</sup>	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
	03/25/98		9.60	ND	16.90
	06/29/98		11.32	ND	15.18
	10/02/98		12.56	ND	13.94
	12/08/98		10.44	ND	16.06
	03/26/99		9.38	ND	17.12
TMW-5	08/17/93	26.51 <sup>7</sup>	12.98	12.95	13.55
•	03/31/94		11.39	ND	15.12
	06/27/94		12.24	ND	13.53
	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 <sup>11</sup>		7.12	ND	NA
	09/30/9611		7.42	ND <sup>10</sup>	NA <sup>9</sup>
	12/27/9611		6.38	ND	NA
	03/07/9711		11.12	ND	NA
	08/17/93 <sup>11</sup>		12.98	12.95	13.55
	09/18/97 <sup>11</sup>		12	ND	

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Well Name	Date	TOC <sup>1</sup> Elevation (Feet MSL <sup>4</sup> )	Depth-to-Water From TOC (Feet)	Depth to Product From TOC (Feet)	Corrected <sup>3</sup> Groundwater Elevation (Feet MSL)
TMW-5	12/30/9711	26.51 <sup>7</sup>	8.97	ND	
	03/25/9811		7.32	ND	
	06/29/9811		11.50	ND	
	10/02/9811		12.56	ND	
	12/08/98 <sup>11</sup>		10.14	ND	
	03/26/99		7.08	ND	

<sup>1</sup> TOP-OF-CASING.

<sup>&</sup>lt;sup>2</sup> RELATIVE TO SITE DATUM ESTABLISHED BY ESE.

<sup>&</sup>lt;sup>3</sup> ELEVATION CORRECTED FOR FLOATING PRODUCT USING 0.75 DENSITY FOR GASOLINE.

<sup>&</sup>lt;sup>4</sup> MEAN SEA LEVEL.

<sup>5</sup> WATER LEVEL MEASUREMENTS BY ESE.

<sup>&</sup>lt;sup>6</sup> WATER LEVEL MEASUREMENTS BY NKJ.

<sup>7</sup> TOC SURVEYED 8/10/93 BY PROFESSIONAL ENGINEER.

<sup>8</sup> CORRECTED GROUNDWATER ELEVATION BY TANK PROTECT ENGINEERING.

<sup>9</sup> NOT AVAILABLE.

<sup>&</sup>lt;sup>10</sup> NOT DETECTED.

<sup>11</sup> WELL TOP DESTROYED DURING REMEDIATION, UNSURVEYED

<sup>12</sup> NOT MEASURED - WELL OBSTRUCTED

TABLE 2
GROUNDWATER GRADIENTS, FLOW DIRECTIONS,
AND ELEVATION DATA

Date	Average Groundwater Elevation (Feet-MSL <sup>1</sup> )	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	<b>-0.</b> 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
03/22/96	16.23	+1.14	.034132	RADIAL
06/20/96 <sup>2</sup>	13.95	-2.28	.016	NW
09/30/96 <sup>2</sup>	12.98	-0.97	.019	NW
12/27/96 <sup>2</sup>	16.41	+3.43	.024029	N-NW
03/07/97 <sup>2</sup>	14.18	-2.23	.020035	N-NW
06/28/97 <sup>2</sup>	15.07	+.89	.02704	NW
09/1 <b>8/97</b> <sup>2</sup>	13.30	-1.77	.02026	RADIAL
12/30/97 <sup>2</sup>	15.32	+2.02	.025030	N-NW
03/ <b>25/98</b> <sup>2</sup>	16.65	+1,34	.021033	RADIAL
06/ <b>29/98<sup>2</sup></b>	14.69	-1.96	.013019	NW
10/02/98 <sup>2</sup>	13.35	-1.34	.011019	NW
12/08/98 <sup>2</sup>	15.77	+2.42	0.23	NW
03/26/99	17.225	+1.455	0.01	N-NW

MEAN SEA LEVEL.

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 <sup>1</sup> (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
MW-1	04/16/92 <sup>2</sup>	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
	03/24/98	9.33	ND	
	06/29/98	12.20	11.78	0.42
<u> </u>	10/02/98	13.46	13.21	0.25
	12/08/98	10.49	ND	
	03/26/99	9.44	ND	
MW-2	04/16/922	15.38	12.57	2.81
	06/11/93	13.185	ND <sup>3</sup>	
	08/17/93	14.04	14.03	0.01
	03/31/94	13.61	13.07	0.54

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC <sup>1</sup> (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
MW-2	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
	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	
	03/25/98	10.02	ND	
	06/29/98	11.96	ND	
	10/02/98	13.74	13.55	.187
	12/08/98	12.91	10.81	2.1
	03/26/99	9.06	8.86	0.20
MW-3	04/16/922	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

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC <sup>1</sup> (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)	
MW-3	09/29/95	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		
	09/18/97	14.76	ND	***	
	12/30/97	12.97	ND		
	03/24/98	11.75	ND		
	06/29/98	13.38	ND		
	10/02/98	14.42	ND		
	12/08/98	12.55	ND		
	03/26/99	10.54	ND		
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		
<u> </u>	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		

TABLE 3
SUMMARY OF FLOATING PRODUCT THICKNESS

Well Name	Date	Depth-to-Water From TOC <sup>1</sup> (Feet)	Depth-to-Product From TOC (Feet)	Product Thickness (Feet)
TMW-4	03/07/97	11.92	ND	
	06/28/97	10.70	ND	
	09/18/97*	12.94	ND	
	12/30/97	10.92	ND	
	03/25/98	9.60	ND	
	06/29/98	11.32	ND	
	10/02/98	12.56	ND	
	12/08/98	10.44	ND	
	03/26/99	9.38	ND	W
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
	06/20/9611	7.12	ND	
	09/30/9611	7.42	ND	<b>-</b>
	12/27/9611	6.38	ND	
	03/07/97 <sup>11</sup>	11.12	ND	
	06/28/9712	NM <sup>12</sup>	ND <sup>12</sup>	
	09/18/97*	12.00	ND	
	12/30/97	8.97	ND	
	03/25/98	7.32	ND	
	06/29/98	11.50	ND	
	10/02/98	12.56	ND	
	12/08/98	10.14	ND	

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS (ppb1)

Sample ID Name	Date	ТРНС	Methyl t- Butyl Ether	Benzene	Toluene	Ethyl- benzene	Xylenes
MW-1	08/17/93	110,000	NA <sup>2</sup>	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
<del></del>	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	<b>&lt;75</b> 0
	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
<del>,</del>	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
	03/24/98	24,000	2,000	1,000	1,000	1,300	4,300
	06/29/98	130,000	3,300	3,800	370	1,200	4,200
	10/02/98	22,000	< 0.50	66	21	26	140
	12/10/98	32,000	< 250	4,600	970	1,700	4,900
	03/26/99	230,000	< 0.50	370	290	280	720
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

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS (ppb1)

Sample ID Name	Date	ТРНС	Methyl t- butyl ether	Benzene	Toluene	Ethyl- benzene	Xylenes
MW-2	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
<u></u>	12/27/96	29,000	< 5.0	2,100	< 0.50	1,200	1,800
	03/07/97	13,000	<5.0	1,300	37	290	180
	06/28/97	12,000	< 5.0	840	< 0.50	640	360
<u> </u>	09/18/97	12,000	< 5.0	680	< 0.50	320	84
	12/30/97	13,000	<5.0	1,100	40	350	220
	03/25/98	8,100	670	1,300	51	410	230
	06/29/98	12,000	430	880	13	180	72
	10/02/98	47,000	< 0.50	140	100	110	200
	12/10/98	26,000	< 1,000	1,000	210	1,500	1,900
	03/26/99	110,000	< 0.50	190	150	120	380
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		2,200	< 0.50	31	< 0.50

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS (ppb1)

Sample ID Name	Date	ТРНС	Methyl t- butyl ether	Benzene	Toluene	Ethyl- benzene	Xylenes
MW-3	03/24/98	2,300	85	870	7.2	20	< 0.50
	06/29/98	6,500	140	1,300	12	62	14
	10/02/98	11,000	< 0.50	31	27	35	69
	12/10/98	< 2,500	< 250	2,800	68	42	55
	03/26/99	10,000	< 0.50	21	14	10	41
TMW-4	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
•	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
<u> </u>	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
	03/25/98	< 50	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50
	06/29/98	< 50	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50
	10/02/98	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
	12/10/98	<50	<5.0	< 0.50	< 0.50	< 0.50	< 0.50
	03/26/99	<50	< 0.50	< 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		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		13,000	470	3,500	6.100

TABLE 4 SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS (ppb1)

Sample ID Name	Date	трнс	Methyl t- butyl ether	Benzene	Toluene	Ethyl- benzene	Xylenes
TMW-5	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
	03/25/98	20,000	2,400	6,000	260	2,700	5,800
	10/08/98	46,000	< 0.50	120	98	120	240
	12/10/98	46,000	< 1,200	5,900	320	2,200	5,400
	03/26/99	35,000	< 0.50	69	61	37	120
TMW-6	09/18/973	< 50.0	<5.0	< 0.5	< 0.5	< 0.5	< 0.5
	12/30/97 <sup>3</sup>	< 50.0	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	03/25/983	<50.0	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	06/29/98 <sup>3</sup>	<50.0	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	10/02/98 <sup>3</sup>	NA	NA	NA	NA	NA	NA
	12/10/98 <sup>3</sup>	NA	NA	NA	NA	NA	NA
	03/26/99 <sup>3</sup>	< 50	< 0.50	< 0.05	< 0.50	< 0.50	< 0.50

<sup>&</sup>lt;sup>1</sup> PARTS PER BILLION. <sup>2</sup> NOT ANALYZED.

<sup>&</sup>lt;sup>3</sup> TRIP BLANKS.

PROJECT NO.: 267 DATE: 3 26 98	WELL NO.: MN-1
PROJECT NAME: Credit World Amb Sales	WELL DIAMETER: 216
PROJECT LOCATION: 2345 E. 14th Street	TOC ELEV:
SAMPLER: L.T. M.	LOCK NO.: 60C
ANALYSES: TPHE, MBTEX	, <del>-                                   </del>
WELL DEPTH (from construction detail):	E. 14th Street
WELL DEPTH (measured): 33.64 SOFT BOTTOM?:	. MW-2
DEPTH TO WATER: 9.44 TIME: 2 0	P-WAT.
PRESSURE (circle one)?: YES OR NO	·16/10-3
IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?	BLDS/OFFICE
WATER VOLUME IN WELL: 3.9 gal	
[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]	s-wn.
[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]	
·	LOCATION MAP
CALCULATED PURGE VOL. (GAL): 15 (L): 62 ACTUAL PURGE	VOL. (GAL):(L):
FUNCE METTO	1- /
FIELD MEASUREMENTS	

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	рН	FC FC	Clarity	Turbidity (NTU)	Remarks
كادر		1_	65.8	6.95	1,23			observed sheen; strong hydroparbon
7.7		<b>6</b> 0	(14.5	4.50	1,34			odor: no flation product
		ø	66.6	وي ي	1,35			, , , , , ,
		62	64.2	(r.ij.)	1,33			
*429								Sampled MW-1
- '								1
					_			

SIGNATURE:

WATER VOL. IN DRUM: 500 NEED NEW DRUM?: 1500

			• • • • • • • • • • • • • • • • • • •					Mula
PROJECT	NO.: 247	DATE:	1 4 1	01				WELL NO.: MW-2
PROJECT	NAME: Cred	t wor	a mundo	Jales 1			er The graph of	WELL DIAMETER: 2*♦
	LOCATION:		E-14-	Stree	<u> </u>			TOC ELEV:
	L.T.			<u> </u>			_	LOCK NO.: 60
ANALYSE	:s:	, ME	STEX	5.5	·			E 14th Street
WELL DE	PTH (from con	struction	detail):	<del></del>			.	C 14 Sheet
WELL DE	PTH (measured	):_29.	SOF	г вотто	DM?: <u>υ</u>			( MW-2)
DEPTH T	O WATER:	9.00	TIM	IE: 2: 00	<u></u>	-		TMW-5
=	E (circle one)?:							
IF YES, V	VAS PRESSURE	(circle	one): POS	SITIVE C	OR NEGA	TIVE?		BLDS/OFFICE
								0-27011100
	VOLUME IN V							s-wn.
-	CASING = 0.16					),65 GAL/I	F1;	
[6-INCH	CASING = 1.47	/GAL/F	1] [1 G	AL = 3.	78 L]			LOCATION MAP
								ECCATION MA
CALCUL	ATED PURGE	VOL. (	GAL): 13	(L)	: 52	ACTU	AL PURGE	VOL. (GAL):(L):
	METHOD:							HOD: POLY
•	••	•	•	FIE	LD ME	ASUREN	MENTS	•
Time	Depth to	Vol	Temp	pН	EC	Clarity	Turbidity	Remarks
	Water (FT)	(L)	(Deg. F)		X103		(NTU)	, , , , , ,
2:11		1_	72 6	>14	1,24			deened approx 20 of floating
		<u> </u>	48.3	17	1.24			product in bailer.
		92	68.9	27	1-23			
		\$3	62.7	47	1,23			
3:80				. ,				Sampled MV-2
3.00	<del></del>			<b> </b>	<del> </del>			,
		<del> </del>			<del> </del>	<del> </del>		·
<u> </u>		1	<del>                                     </del>	<del> </del>	<del> </del>	<del> </del>		
	į.				1	l.		į ii

SIGNATURE:\_\_\_\_\_\_ NEED NEW DRUM?:\_\_\_\_\_

ROJECT	NO.: 267	DATE:							** 1511	. no.: <u> </u>	<u>ം</u>
ROJECT	NAME: Cred	it Wor	U Auto	Sales			·-	WE	LL DIAME	TER: 2	φ_
ROJECT	LOCATION:_	2345	E. 14th	Street	<u> </u>				•	ELEV:	
	<u>LT</u>								LOCK	:.on	<u>x</u>
	s:TPH			, 4				1.			
VELL DE	PTH (from con	struction	detail):		<u>-</u>		·	E · 142	2 Street		<del></del>
VELL DE	PTH (measured	l): 35 8	sor_sor	т вотто	OM?:			. MW-2		- Ind-	
ЕРТН Т	O WATER:	12.01	TIM	1E: 10-4	)	-			Z-WMT.	· (PW-	7
RESSUR	E (circle one)?:	YES	OR NO						*! ww-7	_ mw-\	
f yes, v	VAS PRESSURE	E (circle	one): POS	SITIVE C	R NEGA	TIVE?	·	Rı	DE OFFIC		
			1 ~	ı							
	VOLUME IN V		U			· - ·			-w-3		
	CASING = 0.10					),65 GAL/	FIJ				
6-INCH	CASING = 1.4	7 GAL/F	T] [1 C	AL = 3.	78 L]						
•									LOCATION :	MAP	
•									LOCATION		
•			(GAL): \b	(L)	. 64	actu	JAL PURGE				
CALCUL	ATED PURGE	VOL.		(L)	64	actu Sal	JAL PURGE MPLE METI			(L):	
CALCUL PURGE		VOL.			<del></del>	actu sai asuren	MPLE METI	VOL. (GAL):		(L):	
CALCUL PURGE	ATED PURGE METHOD:	VOL.			LD ME	SAI ASUREN	MPLE METI MENTS	VOL. (GAL):	POLY	(L):	
CALCUL PURGE	ATED PURGE METHOD:	VOL.			<del></del>	SA	MPLE METI	VOL. (GAL):		(L):	
CALCUL PURGE	ATED PURGE METHOD: Depth to	VOL.	Temp (Deg. F)	FIEI pH	LD ME	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_	Remarks	(L):	
CALCUL PURGE	ATED PURGE METHOD: Depth to	Vol.	Temp (Deg. F)	FIE	EC	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):	Remarks	(L):	
CALCUL PURGE	ATED PURGE METHOD: Depth to	VOL.	Temp (Deg. F)	PH	EC 4103	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_	Remarks	(L):	
CALCUL PURGE	ATED PURGE METHOD: Depth to	VOL. (POL) Vol (L)  1 G1 G2	Temp (Deg. F) (2.8 (3.4)	PH 7.12 4.62	EC 4103	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_	Remarks	(L):	
CALCUL PURGE	ATED PURGE METHOD: Depth to	VOL.	Temp (Deg. F)	PH 7.12	EC 4103	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_	Remarks	(L):	
Time	ATED PURGE METHOD: Depth to	VOL. (POL) Vol (L)  1 G1 G2	Temp (Deg. F) (2.8 (3.4)	PH 7.12 4.62	EC 4103	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_	Remarks	_(L):	
CALCUL PURGE	ATED PURGE METHOD: Depth to	VOL. (POL) Vol (L)  1 G1 G2	Temp (Deg. F) (2.8 (3.4)	PH 7.12 4.62	EC 4103	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_ HOD:	Remarks sheen:	_(L):	
Time	ATED PURGE METHOD: Depth to	VOL. (POL) Vol (L)  1 G1 G2	Temp (Deg. F) (2.8 (3.4)	PH 7.12 4.62	EC 4103	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_ HOD:	Remarks sheen:	_(L):	
Time	ATED PURGE METHOD: Depth to	VOL. (POL) Vol (L)  1 G1 G2	Temp (Deg. F) (2.8 (3.4)	PH 7.12 4.62	EC 4103	SAI ASUREN	MPLE METI MENTS  Turbidity	VOL. (GAL):_ HOD:	Remarks sheen:	_(L):	

PROJECT NO.: 267 DATE: 3 26 99	WELL NO.: TMU-4
PROJECT NAME: Credit World Amb Sales	WELL DIAMETER: 2*6
PROJECT LOCATION: 2345 E. 14th Street	TOC ELEV:
SAMPLER:L.TM_	LOCK NO.: 600
ANALYSES: TPHE, MBTEX	E 14th Street
WELL DEPTH (from construction detail):	E.14 Sheet
WELL DEPTH (measured): 33.38 SOFT BOTTOM?: N	. MW-2
DEPTH TO WATER: 9.38 TIME: 1.25	TMW-5
PRESSURE (circle one)?: YES OR NO	mu )
IF YES, WAS PRESSURE (circle one): POSITIVE OR NEGATIVE?	BLDS/OFFICE
WATER VOLUME IN WELL: 3-84	
[2-INCH CASING = 0.16 GAL/FT] [4-INCH CASING = 0.65 GAL/FT]	s-wa.
[6-INCH CASING = 1.47 GAL/FT] [1 GAL = 3.78 L]	
•	LOCATION MAP
CALCULATED PURGE VOL. (GAL): 12 (L): 12 ACTUAL PURGE	VOL. (GAL): (L):
	HOD: POLY
TOROS MISSISSIANI	nob
FIELD MEASUREMENTS	

Time	Depth to Water (FT)	Vol (L)	Temp (Deg. F)	рН	EC XIOS	Clarity	Turbidity (NTU)	Remarks
1:29		1	70,2	7.44	1,10			clear, moder
		(00	48.4	4.83	1.03			
		6	68.4	4.83	1.03			
		62	67.2	6.82	1,04			
<del>*</del> -2:01							<u> </u>	Sompled TMW-4
<del></del>								
		-		_				
								· .

SIGNATURE:

WATER VOL. IN DRUM:\_ NEED NEW DRUM?:\_

			a' ' A					
PROJECT	NO.: 247	DATE:	3 26	99		•		WELL NO.: TMW-5
PROJECT	NAME: Cred	it Wor	-	WELL DIAMETER: 2*6				
PROJECT	LOCATION:_	2345	E. 14th			TOC ELEV:		
SAMPLER	<u>L.T</u>	M	<del></del>					LOCK NO.: 600
ANALYSE	s:	e, ME	STEX	, ,	<u>.</u>			- th 1
WELL DE	PTH (from cor	nstruction	n detail):		<del></del>			E 14th Street
WELL DE	EPTH (measured	i): <u> </u>	<u> १५                                    </u>	т вотто	OM?:			. Mw)-2
DEPTH T	O WATER:	7.03	TIM	1E: 12:3	39	-		TMW-4
	E (circle one)?:			•				
IF YES, V	VAS PRESSURI	E (circle	one): PO	SITIVE C	R NEGA	TIVE?		BLDS OFFICE
			a. 1					0.00/01/100
	VOLUME IN V		~			2 (C C AT /	ETI	E-WA.
•	CASING = $0.16$ CASING = $1.4$					J.03 QAL7		
[0-INCII	CASING - III	Ondin	1) [10	— J.	, 0 121			LOCATION MAP
			_	(L)	: <u> </u>			VOL. (GAL):(L):
PURGE 1	METHOD:	POL						HOD: POLY
•	••			FIEI	LD ME.	ASUREN	MENTS	
Time	Depth to	Vol	Temp	pН	EC	Clarity	Turbidity	Remarks
	Water (FT)	(L)	(Deg. F)		X103		(NTU)	
12 49		1_	69.2	7,26	123			Clean; strong hydrocarbon odor
		31	48.6	6.66	132			
		3-2	68.5	(4.64	1.31			
1.09								Sampled Traw-1
								1
<b> </b>		<del> </del>	1	<del>                                     </del>				

SIGNATURE:\_

WATER VOL. IN DRUM:\_\_\_\_\_\_
NEED NEW DRUM?:\_\_\_\_\_

#### 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.

<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 11) 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.

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

Laboratory OA/OC: 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 standards (both standards, check blanks, calibration involve analyzing method States Environmental Agency-certified Protection the United independent and standards), duplicates, replicates and sample spikes. Internal QC also requires adherence to written methods, procedural documentation and the observance of good laboratory practices.



# PRIORITY ENVIRONMENTAL LABS

o Andrea Interna

March 31, 1999

PEL # 9903022

TANK PROTECT ENGINEERING

Attn: Louis Travis III

Re: Five water samples for Gasoline/BTEX with MTBE analyses.

Project name: Credit World Auto Sales

Project location: 2345 E. 14th St., Oakland.

Project number: 267-032699

Date sampled: Mar 26, 1999

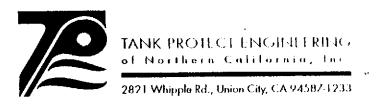
Date extracted: Mar 29-30, 1999

Date submitted: Mar 29, 1999 Date analyzed: Mar 29-30, 1999

#### RESULTS:

SAMPLE	Gasoline	MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes	
I.D.	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(nd/T)	(ug/L)	
MW-1	230000	N.D.	370	290	280	720	
MW-2	110,000	N.D.	190	150	120	380	
MW-3	10000	N.D.	21	14	10	41	
TMW-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	
TMW-5	35000	N.D.	69	61	37	120	
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	
Spiked Recovery	81.9%		90.1%	80.4%	96.5%	97.9%	
Detection limit	50	0.5	0.5	0.5	0.5	0.5	
Method of Analysis	5030/ 8015	602	602	602	602	602	

David Duong Laboratory Director



[510] 429-8088 **(800)** 523-8088 **1** [ax [510] 429-8089

LAB:	7 E.L	· · · · · · · · · · · · · · · · · · ·	
TURNAR	OUND:	Normal	
P.O. #	: 1212		

CHAIN OF CUSTODY

PAGE 4 OF 4

PROJECT NO.  SITE NAME & ADDRESS  Credit World And Color  247 - 022071 2345 & 19th STEERT, OAKLAND  SAMPLER HAME, ADDRESS AND TELEPHONE NUMBER  DULL TRAVE III.  2821 UNIPPLE ROAD, UNION CITY, CA 94587 (415) 429-8088  ID NO. DATE TIME SOIL VATER SAMPLING LOCATION							TYPE OF CON- TAINER								PEL # 9903022 INV # 28768	
	7	249	429	1	/		Mu)-(		\ 	\  -  -			$iggl\{$			
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DATE	:	
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