Groundwater Monitoring 1995
Utility Trailer Manufacturing Company
17300 East Chestnut Street
City of Industry, California

Prepared for

Utility Trailer Manufacturing Company
17295 East Railroad Street
P.O. Box 1299
City of Industry, California 91749

HLA Project No. 30987 4

Kevin J. Trout
Staff Engineer

Kurt H. Wiebe, P.E.
Associate Engineer

January 30, 1996

Harding Lawson Associates
Engineering and Environmental Services
30 Corporate Park, Suite 400
Irvine, CA 92714 – (714) 260-1800

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INTRODUCTION

This report presents groundwater monitoring and analytical data compiled by Harding Lawson Associates (HLA) for the period from November 1, 1994 through December 31, 1995, for Utility Trailer Manufacturing Company (UTM), 17300 East Chestnut Street, City of Industry, California (Plate 1). The reporting frequency for these data has been changed from semesterly to annually, with Regional Water Quality Control Board - Los Angeles Region (RWQCB) approval. This report also includes water level data from the last two months of 1994, which were not included in the previous groundwater monitoring report, *Groundwater Monitoring, May through October 1994* (HLA, 1995). Although the RWQCB requires that groundwater quality sampling at UTM be performed once per year, UTM voluntarily sampled more frequently in 1995.

WORK CONDUCTED THIS PERIOD

Groundwater Depth Measurement

Depth to groundwater was measured using a Solinst electric well sounder. Groundwater depth measurement data collected during this period are presented along with historical data in Table 1. Groundwater beneath the site occurs at an average depth of approximately 22 feet below ground surface (bgs), which is equivalent to an approximate elevation of 356 feet above mean sea level. The September 1995 data were used to produce the groundwater elevation contour map (Plate 2). The contour map indicates a northwesterly flow direction and a gradient with a magnitude of approximately 0.005 foot per foot. All of the groundwater elevation data were used to produce the groundwater elevation hydrograph presented on Plate 3. For the first few months of 1995, the groundwater elevation increased; however, in March 1995, a decline in groundwater elevation began that continued over the remainder of 1995. Generally, 1995 groundwater elevation data indicate continuation of an overall elevation decline trend that began in early 1993.

Groundwater Sampling

An HLA geologist collected groundwater samples for chemical analyses from site observation Wells MW-02 through MW-06 on March 16, July 12, and September 14, 1995. UTM had planned to sample in March and July as part of the Puente Valley Steering Committee Interim Shallow Groundwater Monitoring Network. However, results from the July sampling round indicated substantially lower concentrations than expected, and the wells were sampled again in September.

Prior to sampling, wells were purged of approximately four well volumes to remove standing water and to promote the flow of water from the surrounding formation into the well casing. Purge water was collected by lowering a submersible pump to a depth approximately 2 feet above the bottom of each casing. The pH, electric conductance, temperature, and turbidity of the purged groundwater were monitored during purging. Well purging data from all three sampling events are presented in Appendix A. Equipment was decontaminated prior to each use with Liqui-Nox detergent solution followed by potable and distilled water rinses.

Water levels in the well casings were allowed to recover to within at least 80 percent of the original static water level observed while purging before any samples were collected. To minimize agitation/volatilization, the samples were collected by gently lowering a disposable bailer into the groundwater. The collected groundwater was immediately and carefully transferred into laboratory-prepared 40-milliliter glass volatile organic analysis vials. The vials were immediately sealed with screw caps, labeled, and placed in an iced field cooler for shipment to Del Mar Analytical (DMA), a California state-certified laboratory, in accordance with chain-of-custody protocol.

To check laboratory quality control, duplicate groundwater samples were collected from Well MW-04 (labeled as MW-07) during the March sampling event, from Well MW-03 (labeled MW-07) during the July event, and again from Well MW-03 (labeled MW-08) during the September event and were submitted for analysis. To assess the effectiveness of decontamination procedures, an equipment blank was collected during every sampling event (labeled MW-08 or MW-07) by running deionized water through a decontaminated pump. Equipment blanks were submitted with the groundwater samples for analysis. All groundwater samples were analyzed for chlorinated volatile organic compounds (CVOCs) using EPA Method 8010.

Groundwater Analytical Results

A summary of groundwater analytical results from the March, July, and September 1995 sampling events is presented in Table 2. Analytical laboratory reports and associated quality assurance/quality control (QA/QC) data are presented in Appendix B. A total of eight CVOCs were detected in groundwater samples collected from the site observation wells. Maximum concentrations detected in 1995 for four of these compounds are listed below:

- Tetrachloroethene (PCE) - 440 micrograms per liter ($\mu g/l$) in upgradient Well MW-04

- Trichloroethene (TCE) - 66 $\mu g/l$ in upgradient Well MW-03

- 1,1-Dichloroethene (1,1-DCE) - 110 $\mu g/l$ in upgradient Well MW-04 and Well MW-05

- 1,1,1-Trichloroethane (1,1,1-TCA) - 36 $\mu g/l$ in Well MW-05

The relative percent differences (RPDs), as calculated by HLA, between analytes for the duplicate sample and the original sample are presented in Table 3. RPDs for both the March and July sampling events were within 20 percent; however, RPDs for TCE and PCE for the September sampling event were 49.1 and 46.7 percent, respectively. These relatively large RPDs occurred on samples that were diluted by DMA in order to obtain WIP-qualifying quantitative results for TCE and PCE. Analytical laboratory reports and QA/QC data from the laboratory analysis generally met acceptance criteria. DMA's letter of explanation for potential causes of the large RPDs and analytical laboratory reports are included in Appendix B.

DISCUSSION

Plots of CVOC concentration and water elevation versus time for each well are presented on Plates 4 through 8. A review of these data together with historical groundwater chemical data collected at the site indicates the following:

- Historically, PCE has been the predominant Method 8010 analyte detected in Well MW-02. The trend of decline of PCE concentrations in this well continued through 1995. The concentrations of other analytes in this well remained generally within their historical ranges.

- CVOCs, predominantly PCE and TCE, continue to be detected in Well MW-03, which is located upgradient of the UTM facility at the fenceline with L.A. Water. Results from this well are consistent with those reported from Well MW6-82, installed in the shallow groundwater system upgradient of L.A. Water by the Puente Valley Operable Unit steering committee (PVOU, 1995). See Plate 1 for the location of Well MW6-82.

- Concentrations of PCE, TCE, and 1,1-DCE varied in Well MW-04 during 1995. Concentrations of these analytes dropped by nearly an order of magnitude between the March and July sampling events, then in September rebounded to approximately 70 percent of the concentrations measured in March. It is hypothesized that the late March soil vapor extraction (SVE) testing in

the nearby southwest area may have caused a temporary drop in concentration at MW-04 by stripping volatile compounds from groundwater.

- A similar concentration decline was observed in Well MW-02, which is located northwest of the North area SVE remediation wells and trenches. However, this well is located approximately 150 feet downgradient of SVE activity, which is beyond the expected area of influence. Additionally, data from the September sampling event show a rebound in values even though SVE activities were continuous in the North area.

- Until early 1994, Well MW-05 generally contained the lowest concentrations of dissolved CVOCs of the five wells at the site. Concentrations of PCE and 1,1-DCE have slowly risen in this well during the past five sampling rounds. Laboratory results indicate that MW-05 now contains approximately 100 $\mu g/l$ of each of these two Method 8010 analytes, representing the second highest total dissolved CVOC concentration (sum of Method 8010 analytes) after upgradient Well MW-04. Preliminary analysis of the data suggests that CVOCs are migrating from the vicinity of upgradient Well MW-04 downgradient toward Well MW-05.

Isoconcentration contour maps of the average 1995 value for selected analytes at each well are presented on Plates 9 through 11.

REFERENCES

Harding Lawson Associates. 1995. *Groundwater Monitoring, May through October 1994, Utility Trailer Manufacturing Company, 17300 East Chestnut Street, City of Industry, California.* December.

The Puente Valley Operable Unit. 1995. *Draft Remedial Investigation Report, Puente Valley Operable Unit Interim RI/FS, Camp Dresser and McKee Incorporated,* Table 4-4.

TABLES

Table 1. Groundwater Depth Measurement Data
Utility Trailer Manufactunng Company

WELL NUMBER	SURVEYED ELEVATION (FEET MSL)*	DATE	DEPTH TO GROUNDWATER (FEET)**	EQUIVALENT GROUNDWATER ELEVATION (FEET MSL)
MW-02	375 66	6/1/89	22.95	353.71
		8/28/89	23.03	353.63
		9/15/89	23.05	353.61
		10/11/89	23 13	353.53
		11/16/89	23.20	353.46
		12/11/89	23.25	353.41
		1/15/90	23 26	353.40
		2/12/90	23.16	353.50
		3/9/90	23.07	353.59
		4/12/90	22.95	353.71
		5/14/90	23.48	353.18
		6/7/90	23.42	353.24
		7/10/90	23.35	353.31
		8/16/90	23.80	352.86
		9/11/90	23.47	353.19
		1/31/91	24.28	352.38
		2/27/91	24.52	352.14
		3/7/91	23.80	352.86
		4/8/91	23.36	353.30
		5/7/91	23.60	353.06
		6/7/91	23 76	352.90
		7/10/91	24.04	352.62
		8/8/91	24 22	352.44
		9/6/91	24 02	352.64
		10/7/91	23.77	352.89
		11/6/91	24 00	352.66
		12/5/91	24 10	352.56
		4/9/92	23 16	353.50
		5/7/92	23.12	353.54
		6/9/92	22.75	353.91
		7/7/92	22.90	353.76
		8/7/92	23.57	353.09
		9/8/92	23 50	353 16
		10/7/92	23.67	352.99
		11/4/92	23 66	353.00
		12/4/92	23.65	353.01
		1/8/93	22.61	354 05
		2/5/93	21 50	355.16
		3/4/93	20 99	355 67
		4/7/93	21 42	355 24
		5/4/93	21.60	355.06
		6/4/93	21 55	355 11
		7/6/93	21 60	355 06
		8/2/93	21 96	354 70
		9/7/93	21 74	354 92
		10/4/93	21.83	354 83
		11/4/93	21 86	354 80
		12/3/93	22 38	354 28
		1/10/94	22 43	354 23
		2/9/94	22 40	354 26
		3/15/94	22.55	354.11
		4/8/94	22.45	354 21
		5/9/94	22 40	354 26
		6/8/94	22 56	354 10
		7/11/94	22 70	353.96
		8/3/94	22.84	353 82
		9/1/94	23 10	353 56
		10/4/94	23 02	353.64
		11/3/94	22.90	353 76
		12/29/94	22 68	353 98
		1/19/95	22 20	354 46
		3/16/95	21.85	354 81
		6/20/95	22.12	354.54
		7/12/95	22.19	354 47
		9/14/95	22.42	354.24
		12/4/95	22.42	354.24

Notes: MSL = Mean Sea Level
* Elevation surveyed to top of well casing
** Depth to ground water referenced to top of well casing
Water levels measured quarterly starting January 1995

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Table 1. Groundwater Depth Measurement Data
Utility Trailer Manufacturing Company

WELL NUMBER	SURVEYED ELEVATION (FEET MSL)*	DATE	DEPTH TO GROUNDWATER (FEET)**	EQUIVALENT GROUNDWATER ELEVATION (FEET MSL)
MW-03	378 03	6/1/89	21.77	356 26
		8/28/89	21.82	356 21
		9/15/89	21 88	356.15
		10/11/89	21 95	356.08
		11/16/89	22.02	356.01
		12/11/89	22.04	355.99
		1/15/90	22.04	355 99
		2/12/90	21.94	356.09
		3/9/90	21.77	356.26
		4/12/90	21.74	356.29
		5/14/90	22.15	355.88
		6/7/90	22.10	355 93
		7/10/90	22.09	355 94
		8/16/90	22.39	355.64
		9/11/90	22.16	355.87
		1/31/91	22.74	355.29
		2/27/91	22.92	355.11
		3/7/91	22.33	355.70
		4/8/91	21.93	356.10
		5/7/91	22.15	355.88
		6/7/91	22.46	355.57
		7/10/91	22 54	355.49
		8/8/91	22.67	355.36
		9/6/91	22.55	355.48
		10/7/91	22.37	355.66
		11/6/91	22.40	355 63
		12/5/91	22.61	355.42
		4/9/92	21 83	356 20
		5/7/92	21.97	356.06
		6/9/92	21.41	356.62
		7/7/92	21 51	356 52
		8/7/92	22 22	355 81
		9/8/92	22.16	355.87
		10/7/92	22.29	355 74
		11/4/92	22 30	355.73
		12/4/92	22.30	355.73
		1/8/93	21.54	356 49
		2/5/93	20.48	357 55
		3/4/93	20 05	357 98
		4/7/93	20 35	357 68
		5/14/93	20 55	357 48
		6/4/93	20.54	357.49
		7/6/93	20 55	357 48
		8/2/93	20 89	357.14
		9/7/93	20.65	357 38
		10/4/93	20 74	357 29
		11/4/93	20 79	357 24
		12/3/93	21 37	356 66
		1/10/94	21 44	356.59
		2/9/94	21.45	356.58
		3/15/94	21 52	356.51
		4/8/94	21 43	356 60
		5/9/94	21 35	356.68
		6/8/94	21 53	356.50
		7/11/94	21 67	356 36
		8/3/94	21 77	356 26
		9/1/94	22.05	355.98
		10/4/94	21 95	356.08
		11/3/94	21 85	356.18
		12/29/94	21 62	356.41
		1/19/95	21.15	356.88
		3/16/95	20 75	357.28
		6/20/95	21 04	356.99
		7/12/95	21.12	356.91
		9/14/95	21 34	356.69
		12/4/95	21 45	356 58

Notes MSL = Mean Sea Level
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Water levels measured quarterly starting January 1995

Table 1 Groundwater Depth Measurement Data
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WELL NUMBER	SURVEYED ELEVATION (FEET MSL)*	DATE	DEPTH TO GROUNDWATER (FEET)**	EQUIVALENT GROUNDWATER ELEVATION (FEET MSL)
MW-04	383.21	6/1/89	27.34	355.87
		8/28/89	27.41	355.80
		9/15/89	27.43	355.78
		10/11/89	27.49	355.72
		11/16/89	27.58	355.63
		12/11/89	27.65	355.56
		1/15/90	27.68	355.53
		2/12/90	27.61	355.60
		3/9/90	27.47	355.74
		4/12/90	27.56	355.65
		5/14/90	27.89	355.32
		6/7/90	27.94	355.27
		7/10/90	27.93	355.28
		8/16/90	28.14	355.07
		9/11/90	28.06	355.15
		1/31/91	28.56	354.65
		2/27/91	28.77	354.44
		3/7/91	28.19	355.02
		4/8/91	27.70	355.51
		5/7/91	27.94	355.27
		6/7/91	28.27	354.94
		7/10/91	28.39	354.82
		8/8/91	28.48	354.73
		9/6/91	28.52	354.69
		10/7/91	28.37	354.84
		11/6/91	28.44	354.77
		12/5/91	28.56	354.65
		4/9/92	27.61	355.60
		5/7/92	27.78	355.43
		6/9/92	27.33	355.88
		7/7/92	27.53	355.68
		8/7/92	28.09	355.12
		9/8/92	27.99	355.22
		10/7/92	28.14	355.07
		11/4/92	28.20	355.01
		12/4/92	28.18	355.03
		1/8/93	27.19	356.02
		2/5/93	25.88	357.33
		3/4/93	25.35	357.86
		4/7/93	25.75	357.46
		5/14/93	26.00	357.21
		6/4/93	25.96	357.25
		7/6/93	26.02	357.19
		8/2/93	26.23	356.98
		9/7/93	26.22	356.99
		10/4/93	26.35	356.86
		11/4/93	26.90	356.31
		12/3/93	26.82	356.39
		1/10/94	26.90	356.31
		2/9/94	26.92	356.29
		3/15/94	27.04	356.17
		4/8/94	26.89	356.32
		5/9/94	26.93	356.28
		6/8/94	27.16	356.05
		7/11/94	27.22	355.99
		8/3/94	27.36	355.85
		9/1/94		
		10/4/94	27.56	355.65
		11/3/94	26.96	356.25
		12/29/94	27.35	355.86
		1/19/95	26.63	356.58
		3/16/95	26.25	356.96
		6/20/95	26.44	356.77
		7/12/95	26.58	356.63
		9/14/95	26.83	356.38
		12/4/95	26.92	356.29

Notes: MSL = Mean Sea Level
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WELL NUMBER	SURVEYED ELEVATION (FEET MSL)*	DATE	DEPTH TO GROUNDWATER (FEET)**	EQUIVALENT GROUNDWATER ELEVATION (FEET MSL)
MW-05	380.61	6/1/89	25.71	354.90
		8/28/89	25.68	354.93
		9/15/89	25.72	354.89
		10/11/89	25.76	354.85
		11/16/89	25.87	354.74
		12/11/89	25.96	354.65
		1/15/90	25.98	354.63
		2/12/90	25.92	354.69
		3/9/90	25.81	354.80
		4/12/90	25.88	354.73
		5/14/90	26.25	354.36
		6/7/90	26.31	354.30
		7/10/90	26.28	354.33
		8/16/90	26.58	354.03
		9/11/90	26.40	354.21
		1/31/91	26.97	353.64
		2/27/91	27.17	353.44
		3/7/91	26.54	354.07
		4/8/91	26.11	354.50
		5/7/91	26.29	354.32
		6/7/91	26.62	353.99
		7/10/91	26.75	353.86
		8/8/91	26.60	354.01
		9/6/91	26.90	353.71
		10/7/91	26.77	353.84
		11/6/91	26.83	353.78
		12/5/91	26.92	353.69
		4/9/92	25.90	354.71
		5/7/92	26.08	354.53
		6/9/92	25.42	355.19
		7/7/92	25.63	354.98
		8/7/92	26.43	354.18
		9/8/92	26.31	354.30
		10/7/92	26.44	354.17
		11/4/92	26.53	354.08
		12/4/92	26.49	354.12
		1/8/93	25.43	355.18
		2/5/93	24.09	356.52
		3/4/93	23.54	357.07
		4/7/93	24.03	356.58
		5/14/93	24.27	356.34
		6/4/93	23.98	356.63
		7/6/93	24.33	356.28
		8/2/93	24.60	356.01
		9/7/93	24.28	356.33
		10/4/93	24.42	356.19
		11/4/93	24.48	356.13
		12/3/93	25.06	355.55
		1/10/94	25.16	355.45
		2/9/94	25.18	355.43
		3/15/94	25.29	355.32
		4/8/94	25.15	355.46
		5/9/94	25.50	355.11
		6/8/94	25.42	355.19
		7/11/94	25.49	355.12
		8/3/94	25.64	354.97
		9/1/94	25.93	354.68
		10/4/94	25.85	354.76
		11/3/94	25.86	354.75
		12/29/94	25.59	355.02
		1/19/95	24.80	355.81
		3/16/95	24.45	356.16
		6/20/95	24.70	355.91
		7/12/95	24.85	355.76
		9/14/95	25.06	355.55
		12/4/95	25.15	355.46

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WELL NUMBER	SURVEYED ELEVATION (FEET MSL)*	DATE	DEPTH TO GROUNDWATER (FEET)**	EQUIVALENT GROUNDWATER ELEVATION (FEET MSL)
MW-06	379.79	6/1/89	24.04	355.75
		8/28/89	24.07	355.72
		9/15/89	24.12	355.67
		10/11/89	24.22	355.57
		11/16/89	24.26	355.53
		12/11/89	24.34	355.45
		1/15/90	24.35	355.44
		2/12/90	24.26	355.53
		3/9/90	24.11	355.68
		4/12/90	24.14	355.65
		5/14/90	24.52	355.27
		6/7/90	24.54	355.25
		7/10/90	24.51	355.28
		8/16/90	24.77	355.02
		9/11/90	24.63	355.16
		1/31/91	25.20	354.59
		2/27/91	25.38	354.41
		3/7/91	24.77	355.02
		4/8/91	24.35	355.44
		5/7/91	24.54	355.25
		6/7/91	24.88	354.91
		7/10/91	24.98	354.81
		8/8/91	24.92	354.87
		9/6/91	25.06	354.73
		10/7/91	24.89	354.90
		11/6/91	24.97	354.82
		12/5/91	25.11	354.68
		4/9/92	24.22	355.57
		5/7/92	24.39	355.40
		6/9/92	23.93	355.86
		7/7/92	24.09	355.70
		8/7/92	24.65	355.14
		9/8/92	24.15	355.64
		10/7/92	24.72	355.07
		11/4/92	24.79	355.00
		12/4/92	24.75	355.04
		1/8/93	23.95	355.84
		2/5/93	22.67	357.12
		3/4/93	22.19	357.60
		4/7/93	22.55	357.24
		5/14/93	22.79	357.00
		6/4/93	22.76	357.03
		7/6/93	22.76	357.03
		8/2/93	23.04	356.75
		9/7/93	22.98	356.81
		10/4/93	23.09	356.70
		11/4/93	23.14	356.65
		12/3/93	23.57	356.22
		1/10/94	23.54	356.25
		2/9/94	23.69	356.10
		3/15/94	23.76	356.03
		4/6/94	23.64	356.15
		5/9/94	23.64	356.15
		6/8/94	23.85	355.94
		7/11/94	23.93	355.86
		8/3/94	24.09	355.70
		9/1/94	24.31	355.48
		10/4/94	24.25	355.54
		11/3/94	24.23	355.56
		12/29/94	23.92	355.87
		1/19/95	23.30	356.49
		3/16/95	23.00	356.79
		6/23/95	23.22	356.57
		7/12/95	23.29	356.50
		9/14/95	23.53	356.26
		12/4/95	23.62	356.17

Notes: MSL = Mean Sea Level
* Elevation surveyed to top of well casing
** Depth to ground water referenced to top of well casing
Water levels measured quarterly starting January 1995

Table 2. Groundwater Chemical Analytical Data
Utility Trailer Manufacturing Company
EPA Test Method 8010

Well No.	Date	PCE (ug/L)	TCE (ug/L)	1,1-DCE (ug/L)	1,1,1-TCA (ug/L)	1,1-DCA (ug/L)	cis-1,2-DCE (ug/L)	TCFM (ug/L)	Chloroform (ug/L)
MW-02	3/16/95	270	36	37	9.4	36	11	3.0	(1.0)
MW-02	7/12/95	97	15	10	2.1	19	4.1	3.1	(0.5)
MW-02	9/14/95	120	19	11	1.3	13	4.0	2.0	0.56
MW-03	3/16/95	150	23	4.4	2.0	1.5	9.5	17	(0.5)
MW-03	7/12/95	100	58	5.2	1.4	1.3	6.1	6.4	0.65
MW-03 Duplicate	7/12/95	110	63	5.4	1.4	1.3	6.5	6.5	0.69
MW-03	9/14/95	87	40	6.5	0.96	1.3	8.4	4.7	0.6
MW-03 Duplicate	9/14/95	140	66	6.4	1.0	1.3	8.7	4.6	0.62
MW-04	3/16/95	440	16	93	5.9	(1.3)	(1.3)	(1.3)	(1.3)
MW-04 Duplicate	3/16/95	400	15	110	6.5	(1.0)	(1.0)	(1.0)	(1.0)
MW-04	7/12/95	45	2.8	15	2.9	(0.5)	(0.5)	(0.5)	(0.5)
MW-04	9/14/95	290	11	88	3.0	(1.0)	(1.0)	(1.0)	(1.0)
MW-05	3/16/95	52	7.3	95	36	29	(0.5)	0.58	(0.5)
MW-05	7/12/95	74	13	70	31	19	0.56	(0.5)	(0.5)
MW-05	9/14/95	100	13	110	36	25	(0.5)	(0.5)	(0.5)
MW-06	3/16/95	77	15	25	16	5.3	0.8	(0.5)	(0.5)
MW-06	7/12/95	72	13	13	14	4.0	(0.5)	(0.5)	(0.5)
MW-06	9/14/95	110	13	18	14	4.9	(0.5)	(0.5)	(0.5)
equipment blank	3/16/95	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)
equipment blank	7/12/95	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)
equipment blank	9/14/95	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)
California MCL		5	5	6	200	5	6	150	100*

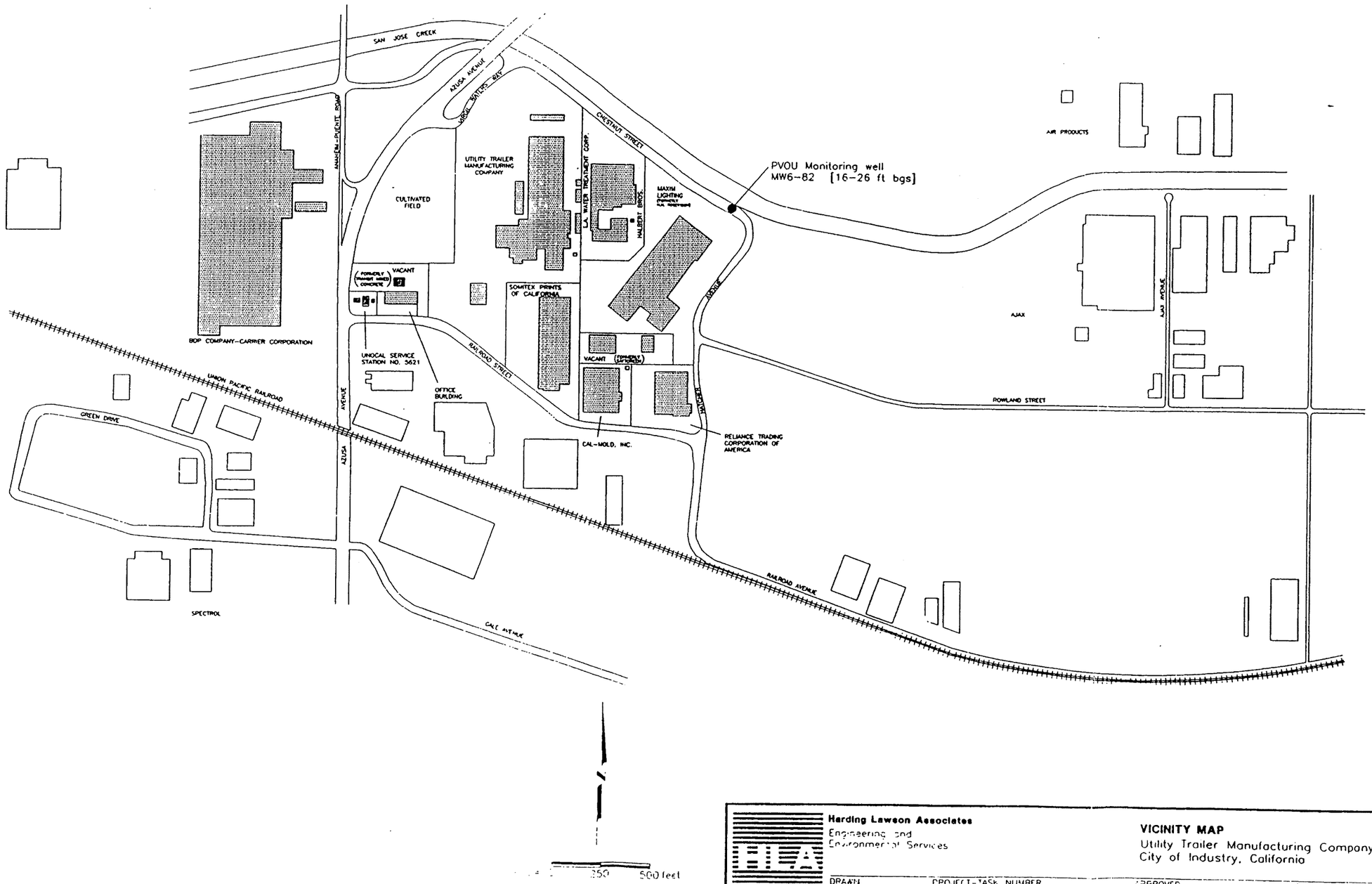
( ) indicates compound not detected above enclosed reporting limit.
ug/L=micrograms per liter.
PCE=tetrachloroethene, TCE=trichloroethene, DCE=dichloroethene, TCA=trichloroethane, DCA=dichloroethane
TCFM=trichlorofluoromethane
MCL=maximum contaminant level ; * = for total trihalomethanes

Table 3. Relative Percent Difference of Quality Control Sample
Utility Trailer Manufacturing Company

Well No.	Date	PCE (ug/L)	TCE (ug/L)	1,1-DCE (ug/L)	1,1,1-TCA (ug/L)	1,1-DCA (ug/L)	cis-1,2-DCE (ug/L)	TCFM (ug/L)	Chloroform (ug/L)
MW-04	3/16/95	440	16	93	5.9	(1.3)	(1.3)	(1.3)	(1.3)
MW-04 Duplicate	3/16/95	400	15	110	6.5	(1.0)	(1.0)	(1.0)	(1.0)
RPD	3/16/95	9.5%	6.5%	16.7%	9.7%	NA	NA	NA	NA
MW-03	7/12/95	100	58	5.2	1.4	1.3	6.1	6.4	0.65
MW-03 Duplicate	7/12/95	110	63	5.4	1.4	1.3	6.5	6.5	0.69
RPD	7/12/95	9.5%	8.3%	3.8%	0%	0%	6.3%	1.6%	6.0%
MW-03	9/14/95	87	40	6.5	1.0	1.3	8.4	4.7	0.60
MW-03 Duplicate	9/14/95	140	66	6.4	1.0	1.3	8.7	4.6	0.62
RPD	9/14/95	46.7%	49.1%	1.6%	4.1%	0%	3.5%	2.2%	3.3%

( ) indicates compound not detected above enclosed reporting limit.
ug/L=micrograms per liter.
PCE=tetrachloroethene, TCE=trichloroethene, DCE=dichloroethene, TCA=trichloroethane, DCA=dichloroethane
TCFM=trichlorofluoromethane
NA = RPD is not applicable, compound not detected at or above enclosed reporting limit.

PLATES



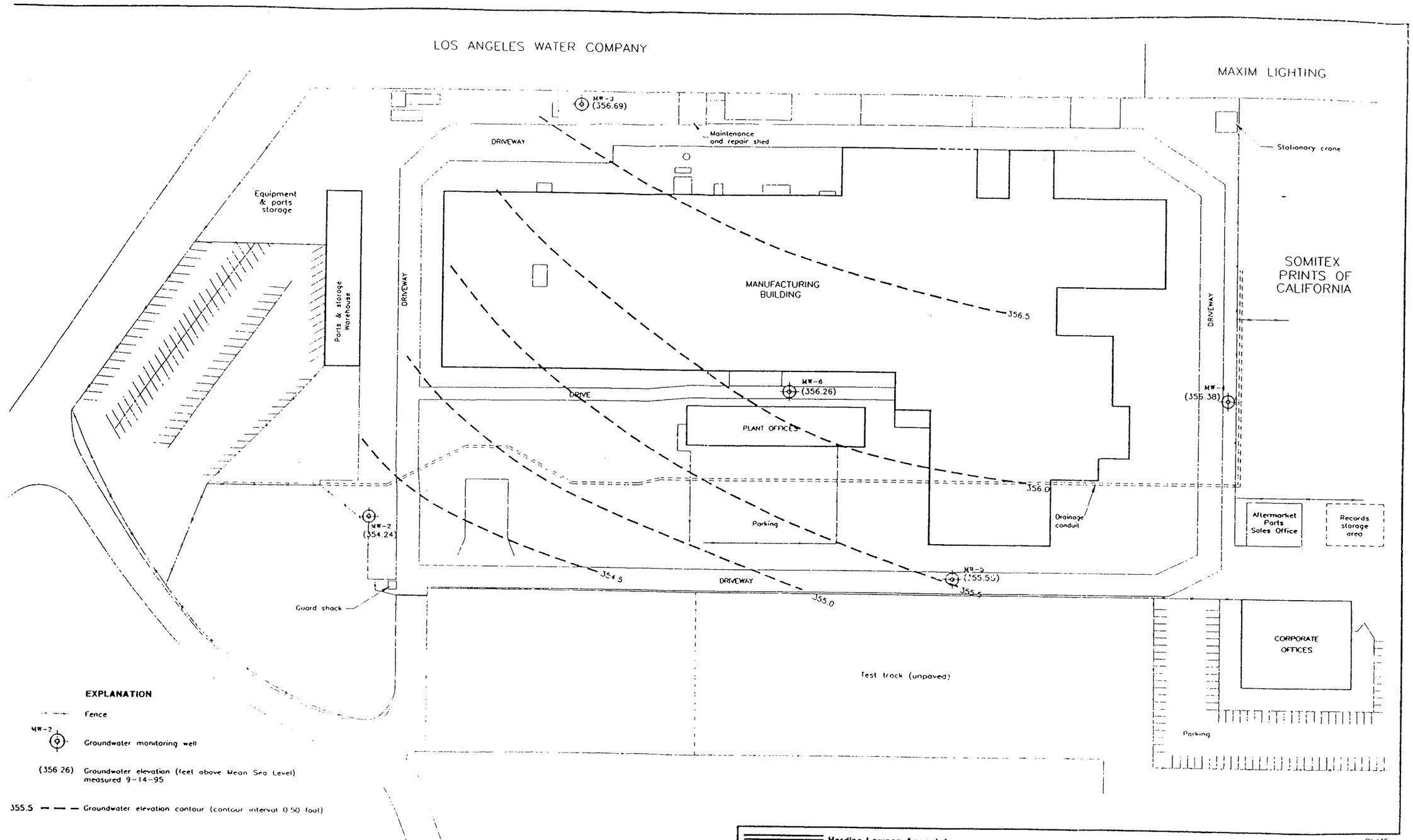
Harding Lawson Associates
Engineering and Environmental Services

VICINITY MAP
Utility Trailer Manufacturing Company
City of Industry, California

PLATE **1**

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4	KTT	1/96	

UTM 005521



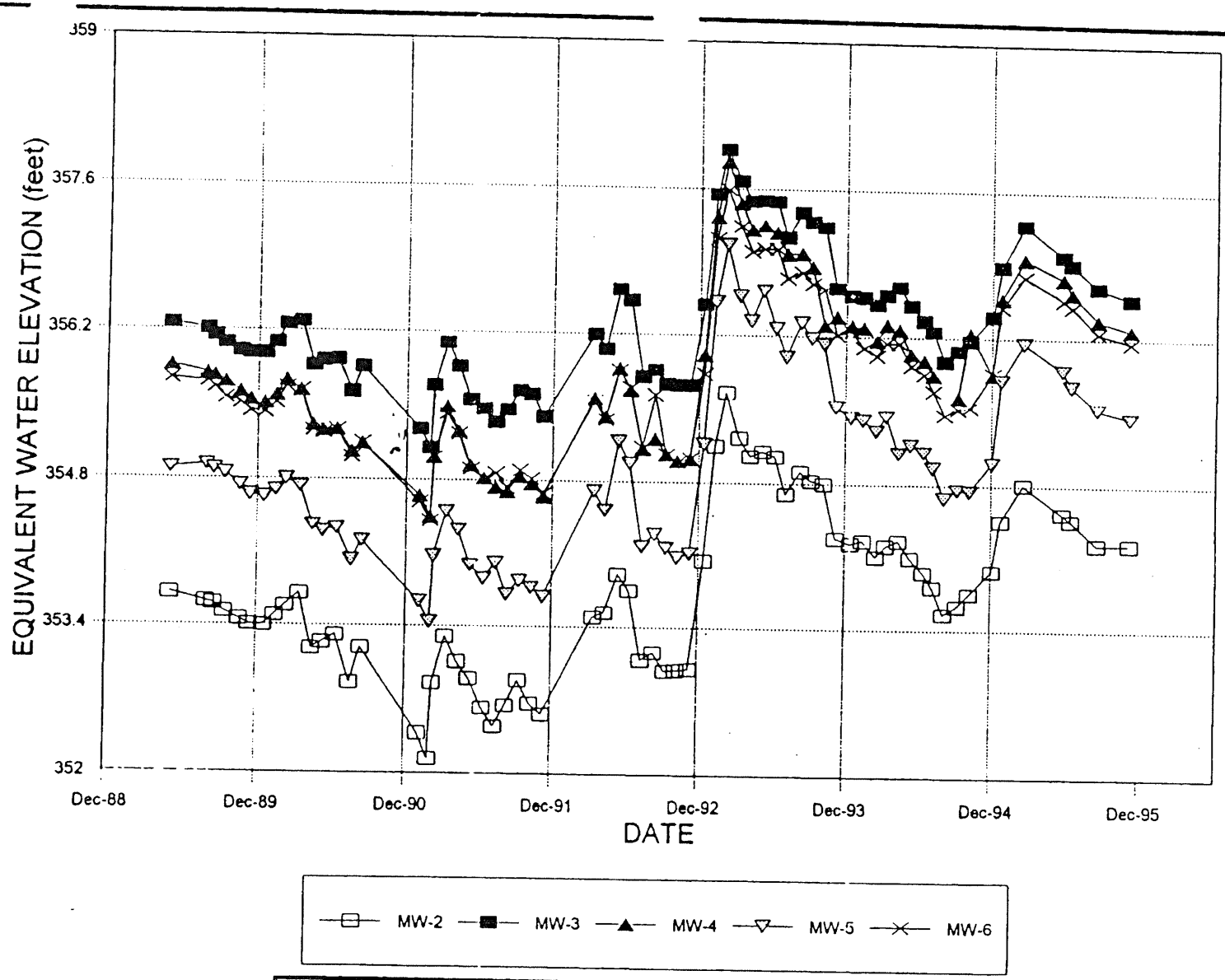
Harding Lawson Associates
Engineering and Environmental Services

GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 1995
Utility Trailer Manufacturing Company
City of Industry, California

PLATE **2**

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4	KJT	1/96	

UTM 005522



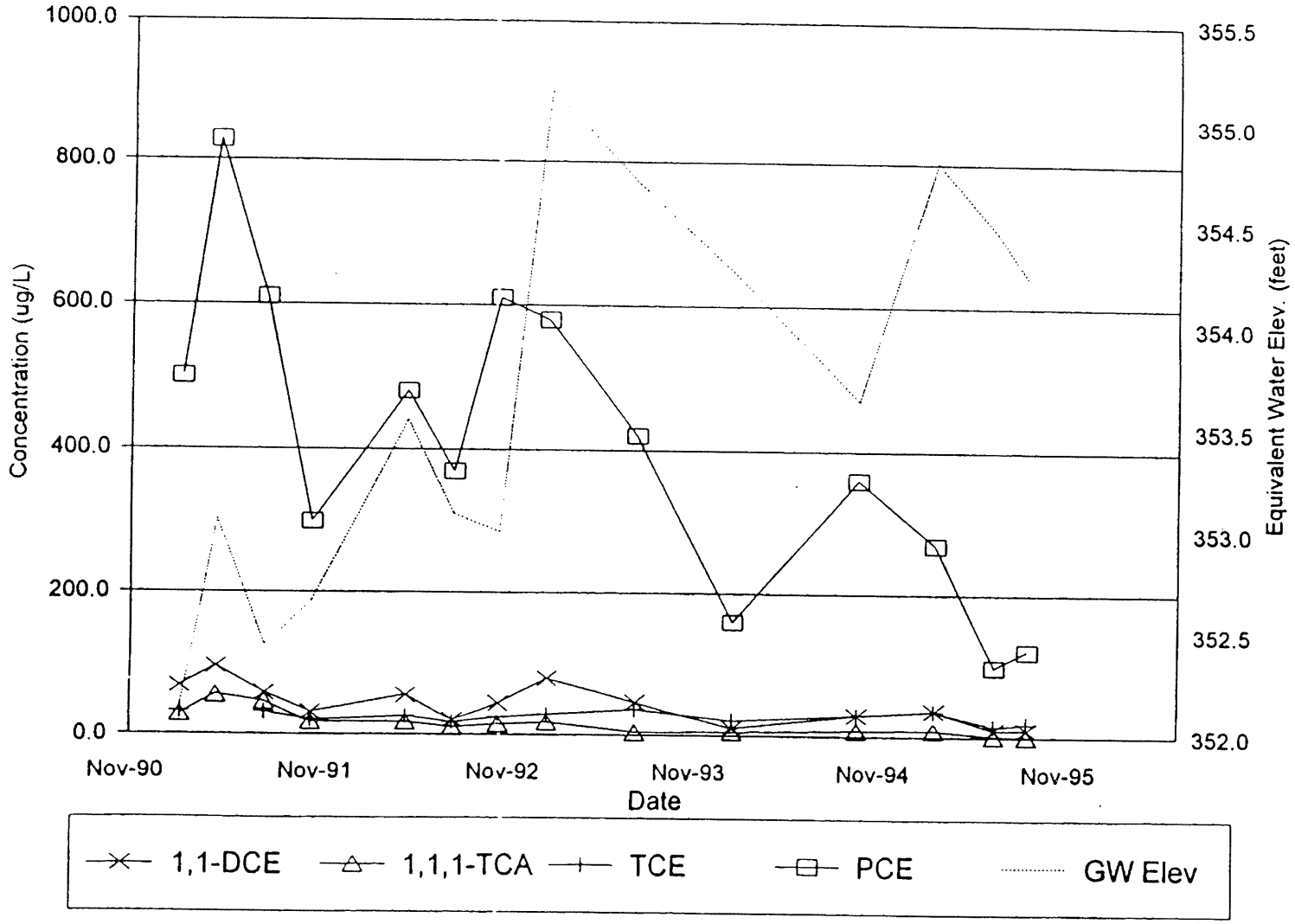
Harding Lawson Associates
Engineering and
Environmental Services

GROUNDWATER ELEVATION HYDROGRAPH
Utility Trailer Manufacturing Company
City of Industry, California

PLATE
3

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4		12/95	

UTM 005523



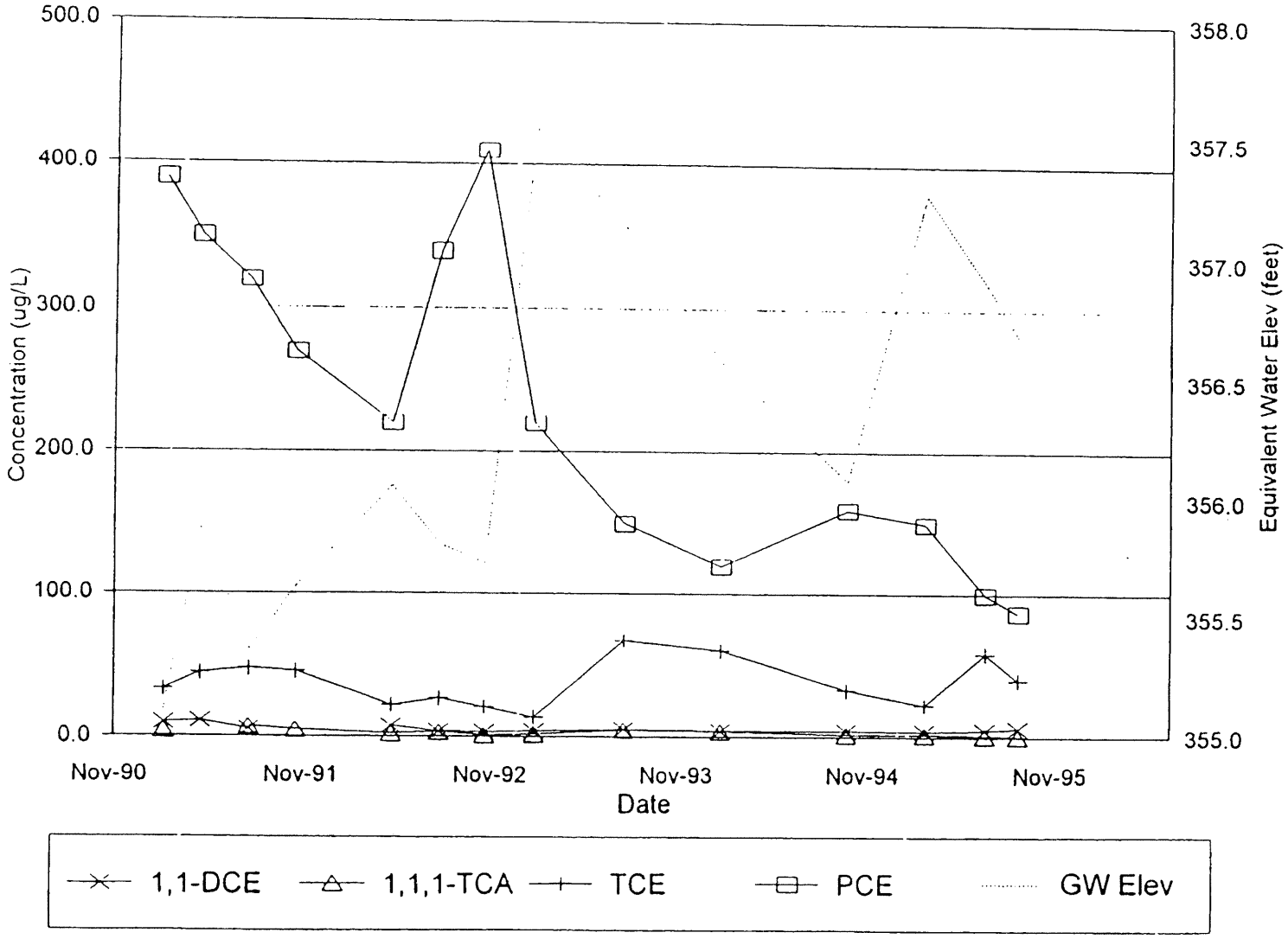
Harding Lawson Associates
Engineering and Environmental Services

CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME - MW-02
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 4

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4	LJT	12/95	

UTM 005524



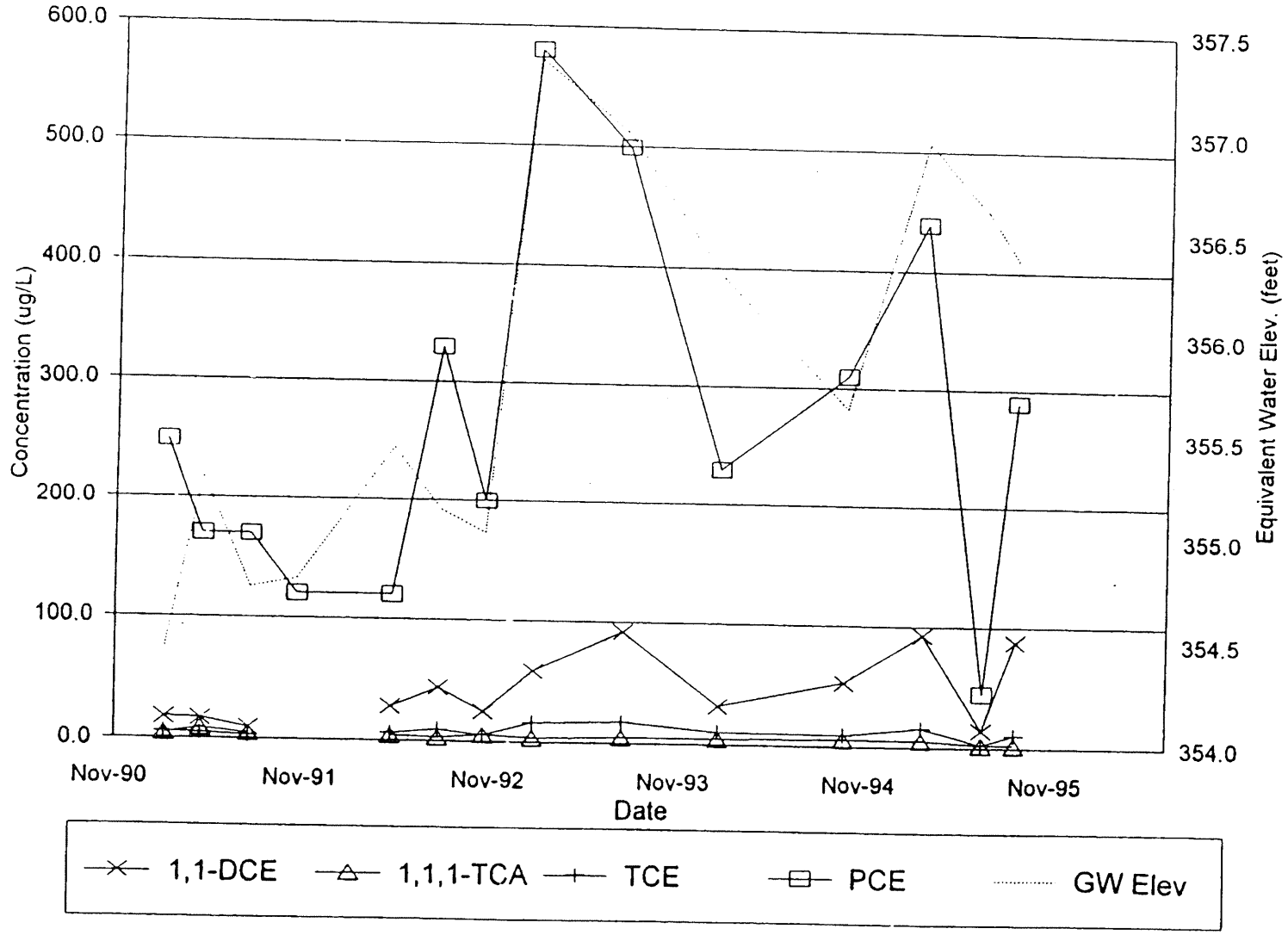
Harding Lawson Associates
Engineering and Environmental Services

CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME - MW-03
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 5

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4		12/95	

UTM 005525



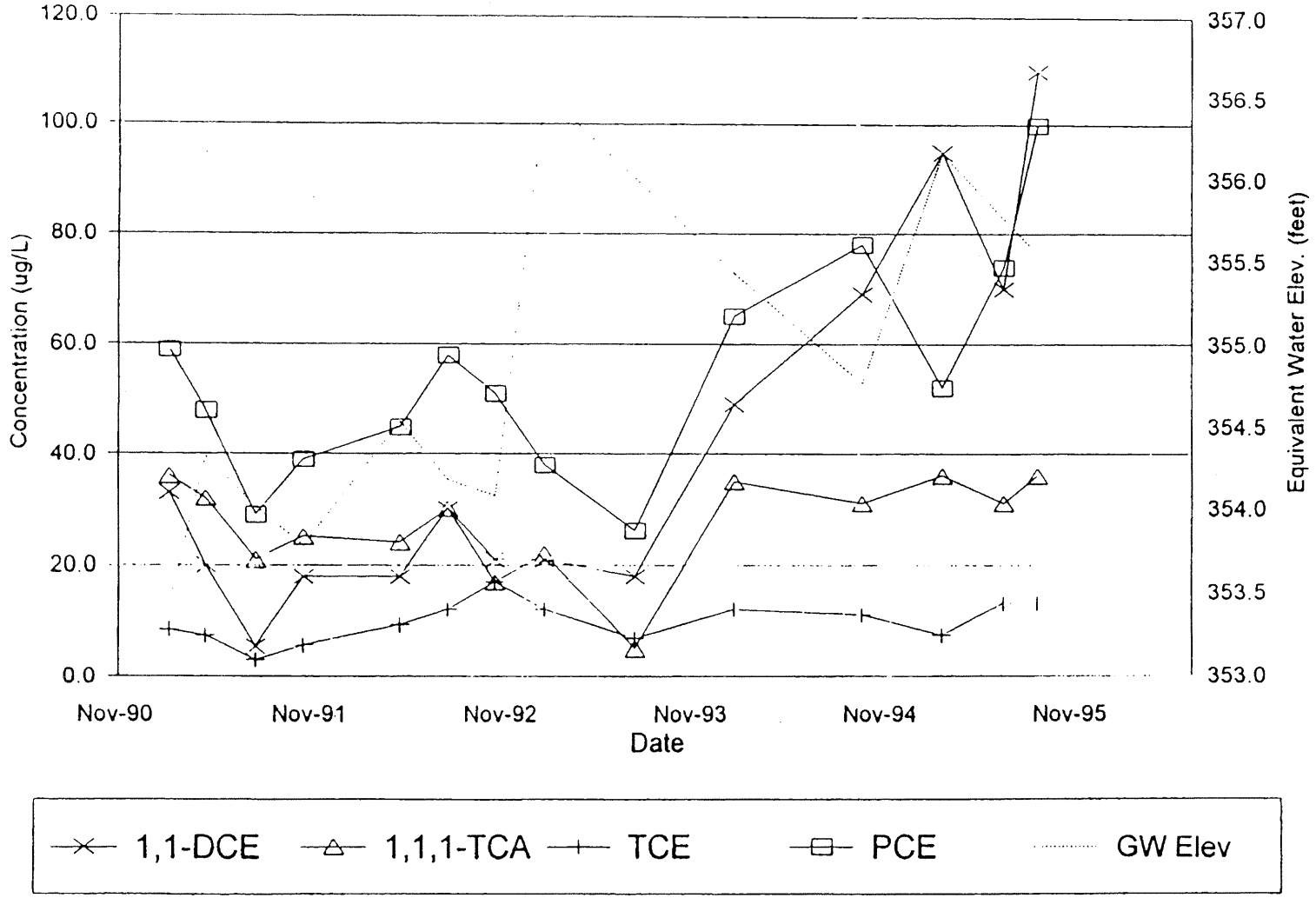
Harding Lawson Associates
Engineering and Environmental Services

CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME - MW-04
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 6

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4	KJT	12/95	

UTM 005526



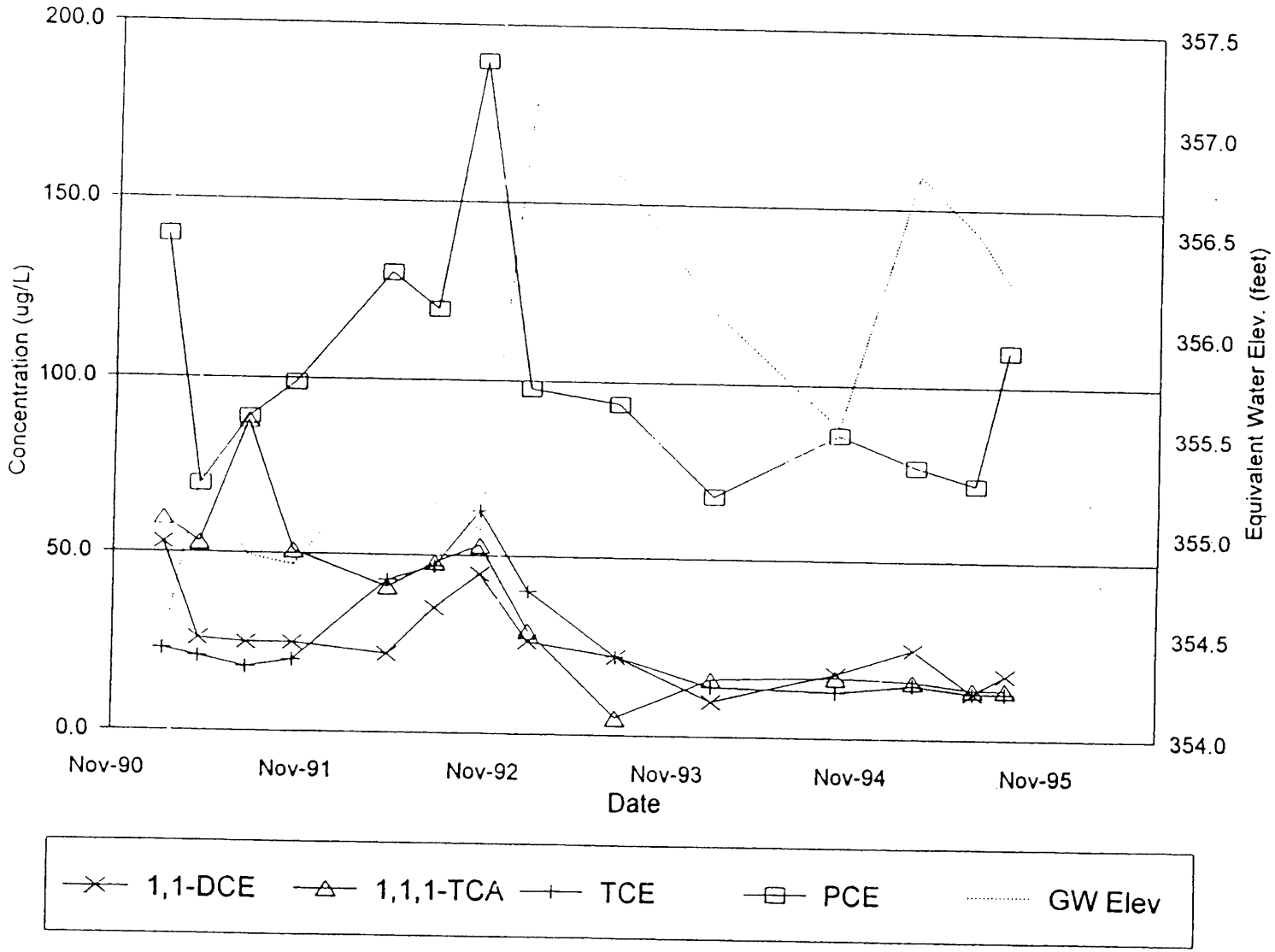
Harding Lawson Associates
Engineering and Environmental Services

CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME - MW-05
Utility Trailer Manufacturing Company
City of Industry, California

PLATE **7**

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4		12/95	

UTM 005527



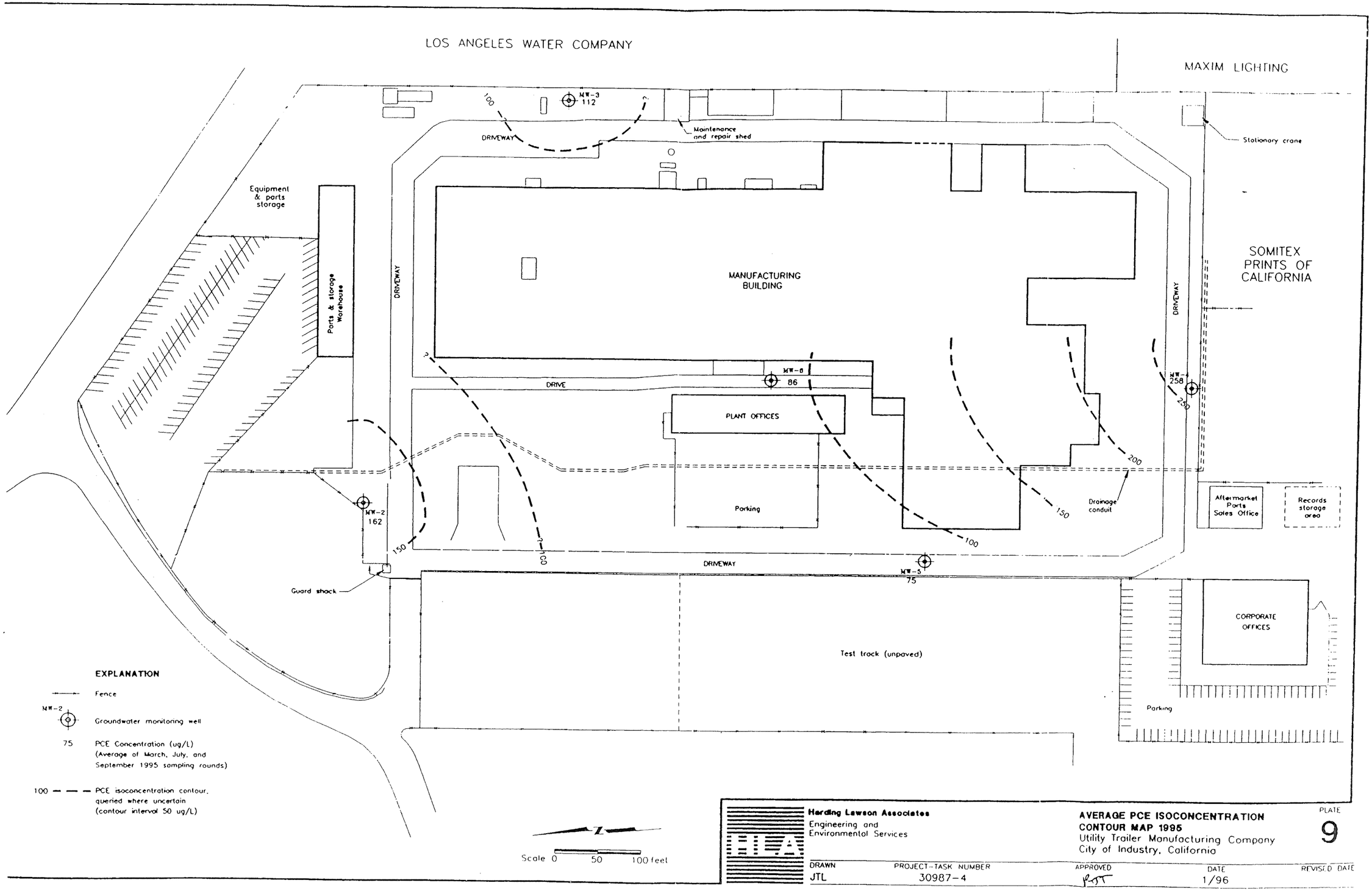
Harding Lawson Associates
Engineering and
Environmental Services

CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME - MW-06
Utility Trailer Manufacturing Company
City of Industry, California

PLATE
8

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4	KJT	12/95	

UTM 005528



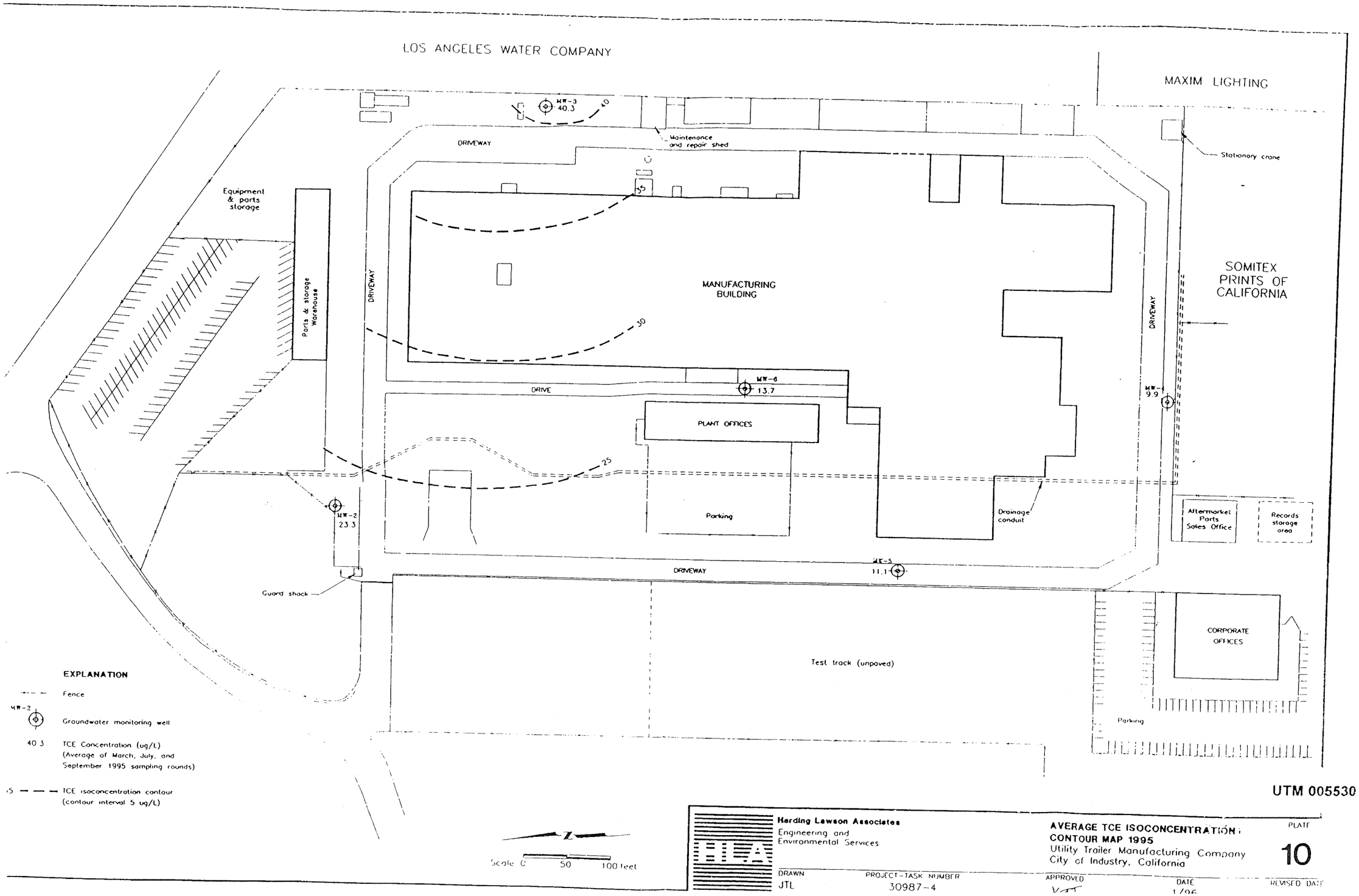
Harding Lawson Associates
Engineering and Environmental Services

AVERAGE PCE ISOCONCENTRATION CONTOUR MAP 1995
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 9

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4		1/96	

UTM 005529



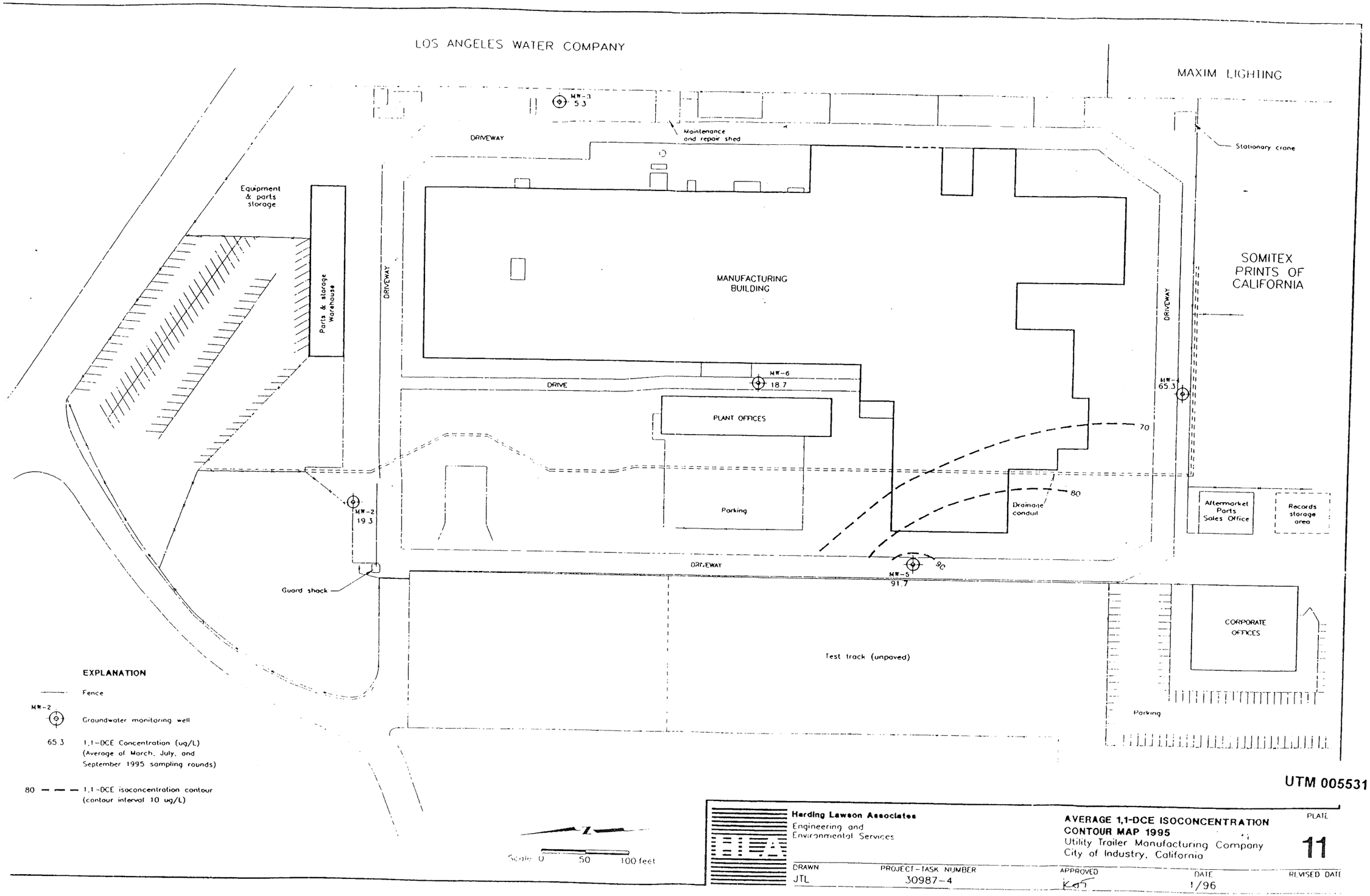
UTM 005530

Harding Lawson Associates
Engineering and Environmental Services

AVERAGE TCE ISOCONCENTRATION CONTOUR MAP 1995
Utility Trailer Manufacturing Company
City of Industry, California

PLATE **10**

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4	VJT	1/96	



UTM 005531

Harding Lawson Associates
Engineering and Environmental Services

AVERAGE 1,1-DCE ISOCONCENTRATION CONTOUR MAP 1995
Utility Trailer Manufacturing Company
City of Industry, California

PLATE **11**

DRAWN	PROJECT-TASK NUMBER	APPROVED	DATE	REVISED DATE
JTL	30987-4	KGS	1/96	

APPENDIX A

APPENDIX A

WELL PURGING DATA

Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name UTM
Job Number 30987.3
Recorded by R.R. (Signature)

Well No. MW-02
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 3/16/95 Time
Sampled by RR/JF (Printed)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION

(42.90 TD (feet) - 21.85 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 55 gallons Calculated Purge Volume

PURGE TIME

1510 Start 1527 Stop Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

JT gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	~~Other~~ Turb. NTU	
1513.30	7.16	335	75.0	5 gls	3.9
1513	6.95	375	73.2	10 gls	
1516	6.67	399	73.2	20 gls	3.2
1519	6.52	405	73.1	30 gls	
1522	6.50	410	73	40 gls	

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other NTU
JT	6.50	410	73	JT 2.87
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear / no odor / no sheen / 7' drawdown

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other Vac Truck

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: Teflon Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☐ Grab - Type:
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-02		8010	HCL	Del Mar	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
EQUIP PURP	MW-8

Other Samples

Type	Sample No.

UTM 005534

Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name UTM
Job Number 30987.3
Recorded by RR (Signature)

Well No. MW-03
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 3/16/95 Time
Sampled by RR/SF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION

(37.45 - 20.75) X 4² X 4 X 0.0408 = 44 gallons

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

1100 Start 1136 Stop 36 Elapsed

PURGE RATE

Initial NA gpm Final NA gpm

ACTUAL PURGE VOLUME

35 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other
1102	7.00	413	71.0	5 gls.
1104	7.03	419	71.5	10 gll
well goes up dry				12 gls
1106	no purge			
1107		357	71.7	15 gls.

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other
1108	6.65	427	71.8	17 gls
1113	6.43	432	72.1	20 gls
well goes dry				
1130 no purge				
Meter No. 2	6.52	418	75.1	25 gls.

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear H2O. Recovered to 27.75' sampled
Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other Vac Truck

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: Teflon disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☐ Grab - Type:
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-03	3 x 40ml	8010	HCL	Del Mar	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005535

RL004

Office Copy - White Field Copy - Canary

0746

Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name _____

Job Number _____

Recorded by _____ (Signature)

Well No. MW-03 (Lined)

Well Type: ☐ Monitor ☐ Extraction ☐ Other _____

Well Material: ☐ PVC ☐ St. Steel ☐ Other _____

Date _____ Time _____

Sampled by _____ (Please)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other _____

Total Depth of Casing (TD in feet BTOC): _____

Water Level Depth (WL in feet BTOC): _____

Number of Well Volumes to be purged (# Vols)
☐ 3 ☐ 4 ☐ 5 ☐ 10 ☐ Other _____

PURGE METHOD

☐ Bailer - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Other _____

Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION:

(_____ - _____) X _____ ^{2} X _____ X 0.0408 = _____ gallons

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

_____ Start _____ Stop _____ Elapsed

PURGE RATE

Initial _____ gpm Final _____ gpm

ACTUAL PURGE VOLUME

_____ gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	Other ____
1136	6.30	369	74.2	35

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	Other ____
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): _____

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☐ Other _____

WELL SAMPLING

SAMPLING METHOD

☐ Same As Above

☐ Bailer - Type: _____

☐ Grab - Type: _____

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005536

RL004

Office Copy - White Field Copy - Canary

0746

Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name VTM
Job Number 30987.3
Recorded by [signature] (Signature)

Well No. MW-04
Well Type: ☐ Monitor ☐ Extraction ☐ Other
Well Material: ☐ PVC ☐ St. Steel ☐ Other
Date 3/16/95 Time
Sampled by MJSF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION

(53.45 TD (feet) - 26.25 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 71 gallons Calculated Purge Volume

PURGE TIME

1208 Start 1408 Stop Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

71 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other
1209	[illegible]	379	73.4	5 gls
1213				15 gls
:				
1347	Purge			
1350	6.81	352	69.7	10 gls

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	Other
1353	6.71	3.99	69.7	20 gls.
1356	6.62	412	69.5	30 gls
1359	6.56	401	69.6	40 gls
1402	6.50	403	69.1	50 gls
Meter Nos.	643	400	69.2	70

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear (1 foot

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other Vac Truck

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: Teflon Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☐ Grab - Type:
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-04		8010	HCl	Del Mar	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.
MW-04	MW 07

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005537

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name UTM

Job Number 30987.3

Recorded by [signature] (Signature)

Well No. MW-05

Well Type: ☒ Monitor ☐ Extraction ☐ Other _____

Well Material: ☒ PVC ☐ St. Steel ☐ Other _____

Date 3/16/95 Time _____

Sampled by [illegible] (Printed)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other _____

Total Depth of Casing (TD in feet BTOC): _____

Water Level Depth (WL in feet BTOC): _____

Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

PURGE METHOD

☐ Bailer - Type: _____

☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Other - Type: _____

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other _____

Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION

(44.05 − 24.45) × 4² × 4 × 0.0408 = 51 gallons

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

1005 Start 1031 Stop 26 Elapsed

PURGE RATE

Initial 3 gpm Final _____ gpm

ACTUAL PURGE VOLUME

80 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other _____	DTW
1008	7.19	265	69.0	10 gls	43
1010	6.95	271	67.7	20 gls	45.5
1012	6.55	279	67.6	30 gls	
1015	6.51	279	67.0	40 gls	47.5
1018	6.85	270	66.8	50 gls	

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	DO Other _____	DTW
1021	6.67	285	66.6	60	5.7 ~~5.7~~ JE
1027	6.65	300	66.1	70	4.95
1029	6.70	310	66.5	75	4.75
1031	6.67	300	66.4	80	4.8
Meter Nos.					

Observations During Purging (Well Condition, Turbidity, Color, Odor): Semi turbid first 10 gls, No drawdown

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other Veec truck

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: Teflon Disposable

☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above

☐ Grab - Type: _____

☐ Other - Type: _____

SAMPLING DISTRIBUTION

Sample Series: _____

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-05	3 x 80 ml	8010	HCl	Del Mar	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005538

RL004

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name VTM
Job Number 30987.3
Recorded by R. Ry (Signature)

Well No. MW-06
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date 3/16/95 Time 0945
Sampled by RR/SF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION

(39.10 TD (feet) - 23.00 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 42 gallons Calculated Purge Volume

PURGE TIME

920 Start 938 Stop 18 Elapsed

PURGE RATE

Initial 2.5 gpm Final 2.5 gpm

ACTUAL PURGE VOLUME

45 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other
922	7.5	335.0	67.7	5 gls
924	7.32	273	67.6	10 gls
926	7.10	291	69	15 gls.
929	7.15	279	68	25 gls
932	6.97	292	68	30

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other
934	6.95	7.15	68.5	35 gls
936	6.95	293	69.0	40 gls
938	6.95	295	69.0	45 gls
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): Clear H2O, Did not draw down → 100% recovery

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other Vac truck

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: Teflon Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☐ Grab - Type:
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-06	3x40ml	8010	HCL	Del Mar	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005539

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 30987-3
Recorded by: [signature] (Signature)

Well No.: MW-02
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 7/12/95 Time: 1145
Sampled by: JF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☒ Other - Type: Grundfos pump

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION:

(42.80 TD (feet) - 22.20 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 54 gallons Calculated Purge Volume

PURGE TIME

1127 Start 1143 Stop Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

55 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other NTU
Initial	6.92	1420	75.5	
1129				55 gals 2.95
1131	6.92	1420	77.0	15 gals 2.80
1135	6.95	1430	75.9	25 gals 2.00
1137	6.95	1400	74.7	30 gals 3.25

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	Other purge NTU
11:4030	6.92	1420	75.7	40 gals. 2.0
11:4300	6.92	1420	73.3	50 gals 3.0
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): Clear / no odor / no [illegible]

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other ON SITE. 55 gals drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1 L DISP
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☒ Grab - Type: 8010
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-2	40ml/2	8010	ICE	DEL MAR	Clear / [illegible]

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
Pump Equipment	MW-08

Other Samples

Type	Sample No.

UTM 005540

RL004

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 30987-3
Recorded by: [signature] (Signature)

Well No.: MW-03
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 7/12/95 Time:
Sampled by: JF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☒ Other - Type: Grundfos pump

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION:

(37.40 TD (feet) - 21.16 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 43.38 gallons Calculated Purge Volume

PURGE TIME

1012 Start 1058 Stop Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

47 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other NTU / Actual
[illegible]	7.13	1200	74	1.25
1012	6.92	1510	74.0	5.50 10 gls
1022	6.44	1520	75.0	2.80 20 gls
1028		9:[illegible] 25 gls. and well		
	9:[illegible] up dry			

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other
1045	Recharge.			
1051	6.82	1490	72	35 gls. 5.6
1054	6.86	1510	73.9	40 gls 3.36
1057	6.85	1500	74.0	45 gls 2.25
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): Clear / No odor / No sheen

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other on site 55 gls. tank

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: LDPE DISP
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☒ Grab - Type: HCLO
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-3	[illegible]	8010	ICE	DEL MAR	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.
MW-3	MW-07

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005541

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Harding Lawson Associates
Engineering and Environmental Services

Job Name: UTM
Job Number: 30987-3
Recorded by: [signature] (Signature)

Well No.: MW-04
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 7/12/95 Time: 1245
Sampled by: JF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☒ Other - Type: Grundfos pump

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC):
Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION:

(53.30 TD (feet) - 26.54 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 70 gallons
Calculated Purge Volume

PURGE TIME

1219 Start Stop Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

70 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other (Actual Turbidity)	MTD
Initial	6			Clr	
1221	6.95	2270	80	8.01.21	
1225	7.09	1710	77.9	16.01.34	
1230	7.03	1600	78.5	32.01.05	
1234	7.05	1730	79.0	50.0.46	

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other (Actual Turbidity)	MTD
1236 45	7.01	1370	76.0	60	0.25
1238 30	7.00	1330	76.0	70	0.30
Meter Nos.					

Observations During Purging (Well Condition, Turbidity, Color, Odor): Clear 1:20 / no odor / no sheen

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other on site. 55 gls drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1" DISP
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☒ Grab - Type: 8010
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-04	40 ml / 2	8010	ICE	SEC MAL	Chain # 20

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

(50/110)

Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 30987-3
Recorded by: [signature] (Signature)

Well No.: MW-05
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 7/12/95 Time: 900
Sampled by: JF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☒ Other - Type: Grundfos pump

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION:

(44.0 TD (feet) - 24.80 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 50.112 gls. gallons Calculated Purge Volume

PURGE TIME

0835 Start 853 Stop Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

65 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other NTU	Purge Vol
Initial	7.73	1050	71.6		
0835	7.35	1230	72.2	19.50	10 gls
0841	7.22	1230	71.8	11.0	20 gls
0845	7.17	1230	72.0	7.8	30 gls
0846	7.14	1220	71.9	7.0	

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other	
0849	7.10	1210	71.40	50 gls	7.12
0852	7.12	1210	71.5	60 gls	7.42
Meter Nos.					

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear / no odor / no sheen

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other on site 55 gls. drum.

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1 L DISP
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☒ Grab - Type: 8010
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-5	40 ml/2	8010	ice	Del Mar	clear N2

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005543

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 30987-3
Recorded by: [signature] (Signature)

Well No.: MW-06
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 7/12/95 Time:
Sampled by: JF (Initials)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☒ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☒ Other - Type: Grundfos pump

PUMP INTAKE SETTING

☒ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION:

(39.0 TD (feet) - 23.29 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 41 gallons Calculated Purge Volume

PURGE TIME

0932 Start 1:45 Stop Elapsed

PURGE RATE

Initial gpm Final gpm

ACTUAL PURGE VOLUME

45.00 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other Purge ~Td
Initial				
0933	7.05	1200	75.0	2 gals 1.20
0937	7.05	1250	73.0	2 gals 0.8
0940	7.00	1250	71.0	3 gals 0.68
943	7.01	1200	71.4	4 gals 1.0.38

Minutes Since Pumping Began	pH	Cond (µmhos/cm)	T ☐ °C ☐ °F	Other
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): Clear / No odor / No sheen

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other ON SITE 55 gls drum

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: 1 ea DISPOSABLE
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Same As Above
☒ Grab - Type: 8010
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-06	4 cont/2	8010	ICE	Calnga	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No

UTM 005544

RL004

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 28739-04.08
Recorded by: [signature]

Well No.: MW-2
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 9/14/95 Time: 14:00
Sampled by: JF/KRM

WELL DATA

Casing Diameter (D in inches):
☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

☐ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME

(43.55 - 22.42) X 4 ^{2} X 4 X 0.0408 = 55.14 gallons

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

1320 Start 1347 Stop Elapsed

Initial 2.22 gpm Final gpm

55 gallons

FIELD PARAMETERS

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other NTU	Gal
2:15/5	7.04	1630	81.3	3.42	5
4:30/10					
6:45/15	6.66	1660	76.9	1.80	15
11:15/25	6.68	1656	77.0	2.35	25
15:45/35	6.48	1659	77.8	3.55	35

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other NTU	Gal
20:15/45	6.40	1675	77.2	4.45	45
26:45/55	6.40	1680	78.1	1.90	55
Meter Nos.					

Observations During Purging (Well Condition, Turbidity, Color, Odor): Clear / no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other on site (55 gls. drum)

SAMPLE COLLECTION

☐ Same As Above

☒ Bailer - Type: Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☒ Grab - Type: GOLO
☐ Other - Type:

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-	40ml/2	GOLO	ICE	OCL MA	

QUALITY CONTROL

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005545

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Well No. MW-3

Job Name UTM

Job Number 28739-04.08

Recorded by _____ (Signature)

Well Type: ☒ Monitor ☐ Extraction ☐ Other _____

Well Material: ☒ PVC ☐ St. Steel ☐ Other _____

Date 9/14/95 Time 15:15

Sampled by JF/KRM (Initials)

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other _____

Total Depth of Casing (TD in feet BTOC): _____

Water Level Depth (WL in feet BTOC): _____

Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

PUMP

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

PUMP INTAKE

☐ Near Bottom ☐ Near Top ☐ Other _____
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

PURGE VOLUME CALCULATION

(38.22 TD (feet) - 21.34 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 44.05 gallons Calculated Purge Volume

PURGE TIME

1421 Start 1453 Stop _____ Elapsed

PUMP RATE

Initial 2.5 gpm Final _____ gpm

TOTAL VOLUME

35 gallons

FIELD PARAMETERS

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	Other	TD
3 min 15gals	7.56	1910	84.9	12.0	15gals
6 / 15gal	7.08	1830	81.7	11.5	15g
9 / 20gals				7.0	20gals
	well stop to give			H2O	
1437		WL =	24.0'		

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	Other	TD
1446	Repurge				
1453 / 20gal	7.38	1890	83.7	1.11	3
Meter Nos.					

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear / no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other on site (55 gals. from

SAMPLE COLLECTION

☐ Bailer - Type: Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above
☒ Grab - Type: BOLO
☐ Other - Type: _____

Sample Series: _____

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-3	40ml/2	BOLO	ICE	DEL MAR	

QUALITY CONTROL

Duplicate Samples

Original Sample No.	Duplicate Sample No.
MW-3	MW-8

Blank Samples

Type	Sample No.
PUMP	MW-7

Other Samples

Type	Sample No.

UTM 005546

RL004

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Harding Lawson Associates
Engineering and
Environmental Services

GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 28739-04.08
Recorded by: (Signature)

Well No.: MW-4
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 9/14/95 Time: 1150
Sampled by: JF/KRM (Name)

WELL PURGING

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

PURGE METHOD

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION:

(53.95 − 26.83) × 4² × 4 × 0.0408 = 71 gallons

TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

PURGE TIME

1052 Start 1120 Stop Elapsed

PURGE RATE

Initial 2.5 gpm Final gpm

ACTUAL PURGE VOLUME

71 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other (turbidity NTU)	gls
2/5gls	5.81	1973	80.	17	5
6/15gls	6.11	1673	79.	2.0	15
8/20gls	6.34	1535	76.5	0.70	20
14/35gls	6.34	1438	75.9	0.60	35
18/45	6.36	1397	75.8		

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other (NTU)	
24/60gls	6.45	1404	76.7	0.03	
28/70	6.55	1409	77.5	0.06	
Meter Nos.					

Observations During Purging (Well Condition, Turbidity, Color, Odor): FIRST HCL come out turbid, brown color, after clear

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other on site (55 gls. drum)

WELL SAMPLING

SAMPLING METHOD

☒ Bailer - Type: Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Same As Above
☒ Grab - Type: 8010
☐ Other - Type:

SAMPLING DISTRIBUTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-1	40ml/2	8010	ICE	DEL MAR	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005547

RL004

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Harding Lawson Associates
Engineering and Environmental Services

GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 28739-04.08
Recorded by: [signature]

Well No.: MW-5
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 9/14/95 Time: 1610
Sampled by: JF/KRM

PURGE VOLUME

Casing Diameter (D in inches):
☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
Total Depth of Casing (TD in feet BTOC):
Water Level Depth (WL in feet BTOC):
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other

☐ Bailer - Type:
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

☐ Near Bottom ☐ Near Top ☐ Other
Depth in feet (BTOC): Screen Interval in Feet (BTOC) from to

PURGE VOLUME CALCULATION

(44.85 TD (feet) - 25.06 WL (feet)) X 4 D (inches)^2 X 4 # Vols X 0.0408 = 51.65 gallons Calculated Purge Volume

PURGE TIME

1542 Start 1602 Stop Elapsed

Initial 2.5 gpm Final gpm (52) gallons

FIELD PARAMETER MEASUREMENTS

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other turbidity NTU	
2 min/5.5	7.50	1610	84.9	6.20	5 gls
6 min/	7.07	1540	81.4	5.65	15 gls
10 min	6.94	1500	79.7	3.40	25 gal
14 min	7.19	1500	77.8	2.48	35 gal
16 min	7.07	1500	77.4	2.60	40 gal

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other turb	Gal
~~20 min~~ KRM	KRM		~~2.50~~	~~50~~	50 gal KRM
20	7.09	1520	77.1	2.50	50 gal
Meter Nos.					

Observations During Purging (Well Condition, Turbidity, Color, Odor): ~~first~~ 1120 came out semi turbid, then clear. 2 gls

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other ~~on site~~ 55 gls. KRM

SAMPLE COLLECTION

☒ Bailer - Type: Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:

☐ Same As Above
☒ Grab - Type: BOLO
☐ Other - Type:

SAMPLE DESCRIPTION

Sample Series:

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-5	40ml/2	8010	ICE	DEQ MA	

QUALITY CONTROL

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005548

RL004

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Harding Lawson Associates
Engineering and
Environmental Services

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GROUND-WATER SAMPLING FORM

Job Name: UTM
Job Number: 28739-04.08
Recorded by: _____ (Signature)

Well No.: MW-6
Well Type: ☒ Monitor ☐ Extraction ☐ Other _____
Well Material: ☒ PVC ☐ St. Steel ☐ Other _____
Date: 9/14/95 Time: 1255
Sampled by: JF/KRM (Initials)

[redacted]

Casing Diameter (D in inches):
☐ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other _____
Total Depth of Casing (TD in feet BTOC): _____
Water Level Depth (WL in feet BTOC): _____
Number of Well Volumes to be purged (# Vols)
☐ 3 ☒ 4 ☐ 5 ☐ 10 ☐ Other _____

☐ Bailer - Type: _____
☒ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____
☐ Other - Type: _____

☐ Near Bottom ☐ Near Top ☐ Other _____
Depth in feet (BTOC): _____ Screen Interval in Feet (BTOC) from _____ to _____

(39.70 - 23.53) X 4 ^{2} X 4 X 0.0408 = 42.2 gallons
TD (feet) WL (feet) D (inches) # Vols Calculated Purge Volume

219 Start 246 Stop _____ Elapsed

Initial _____ gpm Final _____ gpm

45 gallons

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☒ °F	Other NTU	
6 min / 5 gls	7.08	1513	84.2	21.3	5 gls
9 min / 15	6.65	1463	79.0	12.	15
15 / 25	6.54	1425	76.7	2.75	25
21 / 35	6.46	1411	75.5	1.60	35
27 / 45	6.48	1415	77.3	1.82	45

Minutes Since Pumping Began	pH	Cond. (µmhos/cm)	T ☐ °C ☐ °F	Other _____
Meter Nos.				

Observations During Purging (Well Condition, Turbidity, Color, Odor): clear / no odor /

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other on site / 55 gls. drum

☒ Bailer - Type: Disposable
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.: _____

☐ Same As Above
☒ Grab - Type: BOLO
☐ Other - Type: _____

Sample Series: _____

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab	Comments
MW-6	40ml/2	8010	ICE	DEL MAR	Clear.

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

UTM 005549

RL004

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APPENDIX B

APPENDIX B

SUPPORTING LABORATORY DOCUMENTATION

Del Mar Analytical

2852 Alton Ave. Irvine, CA 92714 (714) 261-1022 FAX (714) 261-2231
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

January 16, 1996

Harding Lawson Associates
30 Corporate Park, Suite 400
Irvine, CA 92714

Attention: Mr. Kevin Trout

Subject: 28739-04.08 UTM City of Industry

Dear Mr. Trout:

Per our conversation on January 16, 1996, I investigated the possible causes as to why the results for the two duplicate samples, MW-3 and MW-8, were not consistent for Tetrachloroethene (PCE) and Trichloroethene (TCE). I started by looking at the raw data from September 19, 1995. A possible explanation for why the PCE and TCE results in MW-3 were lower than MW-8 could be attributed to the analyst not actually analyzing 1 ml of sample as the run log states, but rather analyzing 0.5 ml of sample MW-3. However, the probability that this happened is small due to the fact that all of the samples from this project were analyzed together as a batch, on the same day and on the same GC by the same analyst. Another possible cause could be that the analyst analyzed the wrong sample. This again is highly unlikely due to the fact that no other sample in the batch contained levels of PCE or TCE that matched the levels found in MW-3 or MW-8.

By checking the raw data, no definitive reason could be found to explain the discrepancy. Possible headspace either during the sampling event or when the sample was analyzed in the laboratory could explain why the MW-3 results were lower. Field sampling techniques could also explain the difference in the results. At this time there is no way to positively determine the difference between the duplicate PCE and TCE results for MW-3 and MW-8.

If you have any questions, please call me at (714) 261-1022.

Sincerely,

DEL MAR ANALYTICAL

Debbie Ranck

Debbie Ranck
Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-12.
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370 1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968 1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-02
Lab Number: EC02381

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D
Carbon tetrachloride	5.0	N.D
Chlorobenzene	10	N.D
Chloroethane	25	N.D.
2-Chloroethylvinyl ether	25	N.D
Chloroform	5.0	N.D
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D
1,2-Dichlorobenzene	10	N.D
1,3-Dichlorobenzene	10	N.D
1,4-Dichlorobenzene	10	N.D
1,1-Dichloroethane	**5.0**	**26**
1,2-Dichloroethane	5.0	N.D
1,1-Dichloroethene	**5.0**	**25**
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	**5.0**	**270**
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	**5.0**	**18**
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 10.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	90%

UTM 005553

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Del Mar Analytical

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-03
Lab Number: EC02382

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	13	N.D.
2-Chloroethylvinyl ether	13	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	2.5	N.D.
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	**2.5**	**2.7**
cis-1,2-Dichloroethene	**2.5**	**4.5**
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	**2.5**	**150**
1,1,1-Trichloroethane	2.5	N.D.
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**17**
Trichlorofluoromethane	**2.5**	**13**
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	88%

UTM 005554

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-04
Lab Number: EC02383

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	10	N.D.
Chloroethane	25	N.D.
2-Chloroethylvinyl ether	25	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	10	N.D.
1,3-Dichlorobenzene	10	N.D.
1,4-Dichlorobenzene	10	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	**5.0**	**120**
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	**5.0**	**440**
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	**5.0**	**14**
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 10.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-2-bromopropane	93%

UTM 005555

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968 1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-05
Lab Number: EC02384

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	**1.3**	**26**
1,2-Dichloroethane	1.3	N.D.
1,1-Dichloroethene	**1.3**	**95**
cis-1,2-Dichloroethene	1.3	N.D.
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**52**
1,1,1-Trichloroethane	**1.3**	**36**
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**4.8**
Trichlorofluoromethane	1.3	N.D.
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	89%

UTM 005556

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-06
Lab Number: EC02385

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	**1.3**	**4.1**
1,2-Dichloroethane	1.3	N.D.
1,1-Dichloroethene	**1.3**	**21**
cis-1,2-Dichloroethene	1.3	N.D.
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**77**
1,1,1-Trichloroethane	**1.3**	**14**
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**14**
Trichlorofluoromethane	1.3	N.D.
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	94%

UTM 005557

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Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-07 mw 4 c-p
Lab Number: EC02386

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	10	N.D.
Chloroethane	25	N.D.
2-Chloroethylvinyl ether	25	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	10	N.D.
1,3-Dichlorobenzene	10	N.D.
1,4-Dichlorobenzene	10	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	**5.0**	**110**
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	**5.0**	**400**
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	**5.0**	**12**
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 10.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	92%

UTM 005558

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Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-08, 5-L P Plastic
Lab Number: EC02387

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	83%

UTM 005559

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Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, Trip Blank
Lab Number: EC02388

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 22, 1995
Reported: Mar 23, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	90%

UTM 005560

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Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Method Blank

Analyzed: Mar 22, 1995
Reported: Mar 23, 1995
Matrix: Water

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	100%

UTM 005561

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-02
Lab Number: EC02381

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 23, 1995
Reported: Mar 27, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.0	N.D.
Bromoform	1.0	N.D.
Bromomethane	2.0	N.D.
Carbon tetrachloride	1.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	5.0	N.D.
2-Chloroethylvinyl ether	5.0	N.D.
Chloroform	1.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	1.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.
1,1-Dichloroethane	**1.0**	**36**
1,2-Dichloroethane	1.0	N.D.
1,1-Dichloroethene	**1.0**	**37**
cis-1,2-Dichloroethene	**1.0**	**11**
trans-1,2-Dichloroethene	1.0	N.D.
1,2-Dichloropropane	1.0	N.D.
cis-1,3-Dichloropropene	1.0	N.D.
trans-1,3-Dichloropropene	1.0	N.D.
Methylene chloride	10	N.D.
1,1,2,2-Tetrachloroethane	1.0	N.D.
Tetrachloroethene	**1.0**	**>200**
1,1,1-Trichloroethane	**1.0**	**9.4**
1,1,2-Trichloroethane	1.0	N.D.
Trichloroethene	**1.0**	**36**
Trichlorofluoromethane	**1.0**	**3.0**
Vinyl chloride	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	111%

UTM 005562

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Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-03
Lab Number: EC02382

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 23, 1995
Reported: Mar 27, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**1.5**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**4.4**
cis-1,2-Dichloroethene	**0.50**	**9.5**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>100**
1,1,1-Trichloroethane	**0.50**	**2.0**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**23**
Trichlorofluoromethane	**0.50**	**17**
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	107%

UTM 005563

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Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-04
Lab Number: EC02383

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 23, 1995
Reported: Mar 27, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	1.3	N.D.
1,2-Dichloroethane	1.3	N.D.
1,1-Dichloroethene	**1.3**	**93**
cis-1,2-Dichloroethene	1.3	N.D.
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**>200**
1,1,1-Trichloroethane	**1.3**	**5.9**
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**16**
Trichlorofluoromethane	1.3	N.D.
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Stebbe
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	111%

UTM 005564

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-05
Lab Number: EC02384

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 23, 1995
Reported: Mar 27, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**29**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**>75**
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>35**
1,1,1-Trichloroethane	**0.50**	**>35**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**7.3**
Trichlorofluoromethane	**0.50**	**0.58**
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	90%

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UTM 005565

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351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-06
Lab Number: EC02385

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 23, 1995
Reported: Mar 27, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**5.3**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**25**
cis-1,2-Dichloroethene	**0.50**	**0.80**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>50**
1,1,1-Trichloroethane	**0.50**	**16**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**15**
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	110%

UTM 005566

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Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Client Project ID: 30987-3
UTM-Industry
Sample Descript: Water, MW-07
Lab Number: EC02386

Sampled: Mar 16, 1995
Received: Mar 16, 1995
Analyzed: Mar 23, 1995
Reported: Mar 27, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.0	N.D.
Bromoform	1.0	N.D.
Bromomethane	2.0	N.D.
Carbon tetrachloride	1.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	5.0	N.D.
2-Chloroethylvinyl ether	5.0	N.D.
Chloroform	1.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	1.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.
1,1-Dichloroethane	1.0	N.D.
1,2-Dichloroethane	1.0	N.D.
1,1-Dichloroethene	**1.0**	**>75**
cis-1,2-Dichloroethene	1.0	N.D.
trans-1,2-Dichloroethene	1.0	N.D.
1,2-Dichloropropane	1.0	N.D.
cis-1,3-Dichloropropene	1.0	N.D.
trans-1,3-Dichloropropene	1.0	N.D.
Methylene chloride	10	N.D.
1,1,2,2-Tetrachloroethane	1.0	N.D.
Tetrachloroethene	**1.0**	**>150**
1,1,1-Trichloroethane	**1.0**	**6.5**
1,1,2-Trichloroethane	1.0	N.D.
Trichloroethene	**1.0**	**15**
Trichlorofluoromethane	1.0	N.D.
Vinyl chloride	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	99%

UTM 005567

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
351 Rolling Oaks Dr., Suite 100
Thousand Oaks, CA 91361
Attention: Mark Rickertsen

Method Blank

Analyzed: Mar 23, 1995
Reported: Mar 27, 1995
Matrix: Water

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-2-bromopropane	88%

UTM 005568

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Harl awson Associates
15621 Jhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

CHAIN OF C ODY FORM

Lab: Del Mar

Samplers: Ron Rogers

Job Number: 30987-3

Name/Location: UTM - Industry

Project Manager: M. Rickertson

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil		#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCl		SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.
	X								3					9	5	0	3	1 6 1 5 4 5	MW-02	X					
																		1 1 3 0	MW-03						
																		1 4 1 0	MW-04						
																		1 0 3 0	MW-05						
																		0 9 4 5	MW-06						
																		1 4 2 0	MW-07						
	X								3					9	5	0	3	1 6 1 4 5 0	MW-08	X					
	X								1					9	5	0	3	1 6	TRIP Blank	X					

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Must Meet WIP standards. Detection limit between 0.5 an 1.0 ug/l

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
R. Rog 1740/3/6/87		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 3.6.87 5:00
METHOD OF SHIPMENT hand del.		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

cittact, on file

UTM 005570

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-153

CORRECTIVE ACTION REPORT

Department:	Volatiles	Method:	EPA 8010
Date:	3/22/95	Matrix:	Water

Identification and Definition of Problem:

The Trichloroethene recoveries for the Matrix Spike(MS) and Matrix Spike Duplicate(MSD) were below acceptance limits.

Determination of the Cause of the Problem:

The cause for the low recoveries is undetermined. All other spiking compounds were within acceptance limits and there were no apparent matrix interferences.

Corrective Action:

The LCS and the surrogates were within acceptance limits. The following day the recoveries for Trichloroethene were back within acceptance limits for the MS/MSD. Due to the undetermined cause, no corrective action was taken.

QA/QC Officer Signature: Debbie Ranck Date: 4/13/95

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968 133

CORRECTIVE ACTION REPORT

Department:	Volatiles	Method:	EPA 8010/8020
Date:	3/23/95	Matrix:	Water

Identification and Definition of Problem:

The 1,1-DCA and 1,1-DCE recoveries for the Matrix Spike/Matrix Spike Duplicate(MS/MSD) and the Laboratory Control Sample below the acceptance limits for RWQCB projects. Some of the analytes on the continuing calibration exceed acceptance limits also.

Determination of the Cause of the Problem:

Some samples analyzed on this day and the previous day contained high levels of target analytes. The samples were analyzed at high concentrations to meet the requirements of the RWQCB testing program. These highly concentrated analyses saturated the sample concentrator and left active sites on the trap. Any time a gas chromatograph system and its auxiliary components are intentionally saturated, there is a risk of contamination and damage to the system which may compromise the QC of the sample batch.

Corrective Action:

Since the samples analyzed on this day were for confirmation or to determine trace levels of analytes only, the data was reported even though some QC parameters were outside of acceptance limits. The 1,1-DCE recoveries for the MS/MSD were outside of the RWQCB acceptance limits, but within the limits established by in-house control charts. The Laboratory Control Sample and the surrogate recoveries were within acceptance limits. The samples analyzed on this day would further saturate the gas chromatograph system and its auxiliary components cause and cause more contamination of the system. Therefore, the system was not optimized prior to the sample analyses. After these samples were analyzed the analyst cleaned and optimized the GC system.

QA/QC Officer Signature: Debbie Ranck Date: 4/13/95

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

LABORATORY REPORT FORM (COVER PAGE 1)

Laboratory Name: Del Mar Analytical

Address: 2852 Alton Avenue
Irvine, CA 92714

Telephone/FAX: (714) 261-1022 / (714) 261-1228

ELAP Certification No.: 1197 Expiration Date: May 31, 1996

Authorized Signature:
Name, Title (print) Mark Weiner, Laboratory Manager

Signature, Date: Mark Weiner 4/11/95

Client Name: Harding Lawson Associates

Project No.: 30987-3 UTM-Industry

Date(s) Sampled: 3/16/95 To

Date(s) Received: 3/16/95 To

Date(s) Reported: 3/23/95 To 3/27/95

Chain of Custody received: Yes X No

Comments:

(RWQCB LabForm; Ver 12/94)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

LABORATORY REPORT FORM (COVER PAGE 2)

Organic Analyses	# of Samples	# of Samples Subcontracted
EPA 8010	8	0

Sample Condition: Acceptable

Inorganic Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

Microbiological Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

Other Types of Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

(RWQCB LabForm; Ver 12/94)

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

		DATE ANALYZED	3/22/95	3/22/95	3/22/95	3/22/95
		DATE EXTRACTED	3/22/95	3/22/95	3/22/95	3/22/95
		LAB SAMPLE ID	Method Blank	EC02381	EC02382	EC02383
		CLIENT SAMPLE ID	n/a	MW-02	MW-03	MW-04
		EXTRACTION SOLVENT	n/a	n/a	n/a	n/a
		EXTRACTION METHOD	5030	5030	5030	5030
		DILUTION FACTOR	1	10	5	10
COMPOUND		**CRDL**				
Bromodichloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		0.50	< 0.50	**26**	< 0.50	< 0.50
1,2-Dichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene		0.50	< 0.50	**25**	**2.7**	**120**
cis-1,2-Dichloroethene		0.50	< 0.50	< 0.50	**4.5**	< 0.50
trans-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride		1.0	**2.3**	**35**	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene		0.50	< 0.50	**270**	**150**	**440**
1,1,1-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene		0.50	< 0.50	**18**	**17**	**14**
Trichlorofluoromethane		0.50	< 0.50	< 0.50	**13**	< 0.50
Vinyl chloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-2-bromopropane	10	80-120	100	90	88	93

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

		DATE ANALYZED	3/22/95	3/22/95	3/22/95	3/22/95
		DATE EXTRACTED	3/22/95	3/22/95	3/22/95	3/22/95
		LAB SAMPLE ID	EC02384	EC02385	EC02386	EC02387
		CLIENT SAMPLE ID	MW-05	MW-06	MW-07	MW-08
		EXTRACTION SOLVENT	n/a	n/a	n/a	n/a
		EXTRACTION METHOD	5030	5030	5030	5030
		DILUTION FACTOR	2.5	2.5	10	1
COMPOUND		**CRDL**				
Bromodichloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		0.50	**26**	**4.1**	< 0.50	< 0.50
1,2-Dichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene		0.50	**95**	**21**	**110**	< 0.50
cis-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride		1.0	< 1.0	**4.0**	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene		0.50	**52**	**77**	**400**	< 0.50
1,1,1-Trichloroethane		0.50	**36**	**14**	< 0.50	< 0.50
1,1,2-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene		0.50	**4.8**	**14**	**12**	< 0.50
Trichlorofluoromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-2-bromopropane	10	80-120	89	94	92	83

PROJECT NO: 30987-3 (RWQCB LabForm 10A: Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

		DATE ANALYZED	3/22/95			
		DATE EXTRACTED	3/22/95			
		LAB SAMPLE ID	EC02388			
		CLIENT SAMPLE ID	Trip Blank			
		EXTRACTION SOLVENT	n/a			
		EXTRACTION METHOD	5030			
		DILUTION FACTOR	1			
COMPOUND		**CRDL**				
Bromodichloromethane		0.50	< 0.50			
Bromoform		0.50	< 0.50			
Bromomethane		1.0	< 1.0			
Carbon tetrachloride		0.50	< 0.50			
Chlorobenzene		1.0	< 1.0			
Chloroethane		1.0	< 1.0			
2-Chloroethylvinyl ether		1.0	< 1.0			
Chloroform		0.50	< 0.50			
Chloromethane		1.0	< 1.0			
Dibromochloromethane		0.50	< 0.50			
1,2-Dichlorobenzene		1.0	< 1.0			
1,3-Dichlorobenzene		1.0	< 1.0			
1,4-Dichlorobenzene		1.0	< 1.0			
1,1-Dichloroethane		0.50	< 0.50			
1,2-Dichloroethane		0.50	< 0.50			
1,1-Dichloroethene		0.50	< 0.50			
cis-1,2-Dichloroethene		0.50	< 0.50			
trans-1,2-Dichloroethene		0.50	< 0.50			
1,2-Dichloropropane		0.50	< 0.50			
cis-1,3-Dichloropropene		0.50	< 0.50			
trans-1,3-Dichloropropene		0.50	< 0.50			
Methylene chloride		1.0	< 1.0			
1,1,2,2-Tetrachloroethane		0.50	< 0.50			
Tetrachloroethene		0.50	< 0.50			
1,1,1-Trichloroethane		0.50	< 0.50			
1,1,2-Trichloroethane		0.50	< 0.50			
Trichloroethene		0.50	< 0.50			
Trichlorofluoromethane		0.50	< 0.50			
Vinyl chloride		0.50	< 0.50			
SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-2-bromopropane	10	80-120	90			

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

	DATE ANALYZED	3/23/95	3/23/95	3/23/95	3/23/95
	DATE EXTRACTED	3/23/95	3/23/95	3/23/95	3/23/95
	LAB SAMPLE ID	Method Blank	EC02381	EC02382	EC02383
	CLIENT SAMPLE ID	n/a	MW-02	MW-03	MW-04
	EXTRACTION SOLVENT	n/a	n/a	n/a	n/a
	EXTRACTION METHOD	5030	5030	5030	5030
	DILUTION FACTOR	1	2	1	2.5
COMPOUND	**CRDL**				
Bromodichloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	0.50	< 0.50	**36**	**1.5**	< 0.50
1,2-Dichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	0.50	< 0.50	**37**	**4.4**	**93**
cis-1,2-Dichloroethene	0.50	< 0.50	**11**	**9.5**	< 0.50
trans-1,2-Dichloroethene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	0.50	< 0.50	**> 200**	**> 100**	**> 200**
1,1,1-Trichloroethane	0.50	< 0.50	**9.4**	**2.0**	**5.9**
1,1,2-Trichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene	0.50	< 0.50	**36**	**23**	**16**
Trichlorofluoromethane	0.50	< 0.50	**3.0**	**17**	< 0.50
Vinyl chloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50

SURROGATE	SPIKE CONC	ACCEPT LIMITS %	% RECOVERY	% RECOVERY	% RECOVERY	% RECOVERY
1-Chloro-2-bromopropane	10	80-120	88	111	107	111

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

		DATE ANALYZED	3/23/95	3/23/95	3/23/95	
		DATE EXTRACTED	3/23/95	3/23/95	3/23/95	
		LAB SAMPLE ID	EC02384	EC02385	EC02386	
		CLIENT SAMPLE ID	MW-05	MW-06	MW-07	
		EXTRACTION SOLVENT	n/a	n/a	n/a	
		EXTRACTION METHOD	5030	5030	5030	
		DILUTION FACTOR	1	1	2	
COMPOUND		**CRDL**				
Bromodichloromethane		0.50	< 0.50	< 0.50	< 0.50	
Bromoform		0.50	< 0.50	< 0.50	< 0.50	
Bromomethane		1.0	< 1.0	< 1.0	< 1.0	
Carbon tetrachloride		0.50	< 0.50	< 0.50	< 0.50	
Chlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
Chloroethane		1.0	< 1.0	< 1.0	< 1.0	
2-Chloroethylvinyl ether		1.0	< 1.0	< 1.0	< 1.0	
Chloroform		0.50	< 0.50	< 0.50	< 0.50	
Chloromethane		1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane		0.50	< 0.50	< 0.50	< 0.50	
1,2-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane		0.50	**29**	**5.3**	< 0.50	
1,2-Dichloroethane		0.50	< 0.50	< 0.50	< 0.50	
1,1-Dichloroethene		0.50	**> 75**	**25**	**> 75**	
cis-1,2-Dichloroethene		0.50	< 0.50	**0.80**	< 0.50	
trans-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	
1,2-Dichloropropane		0.50	< 0.50	< 0.50	< 0.50	
cis-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	
trans-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	
Methylene chloride		1.0	< 1.0	< 1.0	**2.4**	
1,1,2,2-Tetrachloroethane		0.50	< 0.50	< 0.50	< 0.50	
Tetrachloroethene		0.50	**> 35**	**> 50**	**> 150**	
1,1,1-Trichloroethane		0.50	**> 35**	**16**	**6.5**	
1,1,2-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	
Trichloroethene		0.50	**7.3**	**15**	**15**	
Trichlorofluoromethane		0.50	**0.58**	< 0.50	< 0.50	
Vinyl chloride		0.50	< 0.50	< 0.50	< 0.50	
SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-2-bromopropane	10	80-120	90	110	99	

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

QA/QC REPORT

II. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATE (MSD)

Date Performed: 3/22/95
Batch Number: EC22111W
Lab Sample I.D.: EC02388
Analytical Method: EPA 8010
Reporting Unit: µg/L

Analyte	Sample Result	Spike Conc	MS	% MS	Spike Conc (Dup)	MSD	%MSD	RPD	MS/MSD Limit	RPD Limit
Chloroform	0	10	8.1	81%	10	8.2	82%	1.2%	80-120	20%
1,1-Dichloroethane	0	10	8.5	85%	10	8.3	83%	2.4%	80-120	20%
1,2-Dichloroethane	0	10	8.4	84%	10	8.1	81%	3.6%	80-120	20%
1,1-Dichloroethene	0	10	8.3	83%	10	8.3	83%	0.0%	80-120	20%
Tetrachloroethene	0.049	10	8.5	85%	10	8.2	82%	3.6%	80-120	20%
Trichloroethene	0	10	7.3	73%	10	7.1	71%	2.8%	80-120	20%

III. LABORATORY QUALITY CONTROL CHECK SAMPLE (LCS)

Date Performed: 3/22/95
Supply Source: Supelco
Lot Number: LA 28800
Date of Source: 9/3/94
Analytical Method: EPA 8010
Reporting Unit: µg/L
Lab LCS I.D.: LCS

Analyte	Spike Concentration	Result	% Recovery	Acceptance % Recovery Limit
Chloroform	10	9.1	91%	80-120
1,1-Dichloroethane	10	9.5	95%	80-120
1,2-Dichloroethane	10	9.2	92%	80-120
1,1-Dichloroethene	10	9.6	96%	80-120
Tetrachloroethene	10	8.8	88%	80-120
Trichloroethene	10	8.7	87%	80-120

PROJECT NO: 30987-3 (RWQCB LabForm 10A: Ver12/94)

QA/QC REPORT

II. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATE (MSD)

Date Performed: 3/23/95
Batch Number: EC23111W
Lab Sample I.D.: EC02865
Analytical Method: EPA 8010
Reporting Unit: µg/L

Analyte	Sample Result	Spike Conc	MS	% MS	Spike Conc (Dup)	MSD	%MSD	RPD	MS/MSD Limit	RPD Limit
Chloroform	0	10	9.3	93%	10	8.6	86%	7.8%	80-120	20%
1,1-Dichloroethane	0	10	7.7	77%	10	7.0	70%	9.5%	80-120	20%
1,2-Dichloroethane	0	10	9.2	92%	10	9.3	93%	1.1%	80-120	20%
1,1-Dichloroethene	0	10	7.5	75%	10	6.7	67%	11%	80-120	20%
Tetrachloroethene	0.12	10	9.5	94%	10	8.1	80%	16%	80-120	20%
Trichloroethene	0	10	8.2	82%	10	8.7	87%	5.9%	80-120	20%

III. LABORATORY QUALITY CONTROL CHECK SAMPLE (LCS)

Date Performed: 3/23/95
Supply Source: Supelco
Lot Number: LA 28800
Date of Source: 9/3/94
Analytical Method: EPA 8010
Reporting Unit: µg/L
Lab LCS I.D.: LCS

Analyte	Spike Concentration	Result	% Recovery	Acceptance % Recovery Limit
Chloroform	10	8.2	82%	80-120
1,1-Dichloroethane	10	8.3	83%	80-120
1,2-Dichloroethane	10	8.4	84%	80-120
1,1-Dichloroethene	10	8.3	83%	80-120
Tetrachloroethene	10	9.4	94%	80-120
Trichloroethene	10	9.9	99%	80-120

Calibration data for Sequence file: h:\data\gc11a\22op.seq

Initial Calibration Date:	2/3/95	PID Sample File:	h:\data\gc11a\502pn.smp	Supply Source:	Supelco
Created by:	AB/DM	ELCD Sample File:	h:\data\gc11a\502en.smp	Lot Number:	LA 31224
Midpoint Acquire Date:	3/22/95	PID MP File:	h:\data\gc11a\22oe001.rst	Standard Prep. Date:	~~2/6/95~~ 3/9/95
Date Printed:	03/31/95	ELCD MP File:	h:\data\gc11a\22of001.rst		

INITIAL CALIBRATION — DAILY MIDPOINT CALIBRATION 4/5/95 cm

BROMODICHLOROMETHAN (RT = 19.16 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	91535	4.290
3	20	159056	3.813
4	50	398596	3.977
5	80	575643	3.724
6	140	997422	3.599
7	200	1427969	3.439

(Ave. RF = 3.807)
%RSD = 7.86

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.328	10.0	8.7	13	290409	≤ 15%

BROMOFORM (RT = 24.76 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	50482	1.210
4	50	151603	1.512
5	80	248945	1.610
6	140	429399	1.549
7	200	648559	1.562

(Ave. RF = 1.489)
%RSD = 10.73

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.492	10.0	10.0	0.18	130166	≤ 15%

BROMOMETHANE (RT = 4.62 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
4	50	43024	0.429
5	80	84710	0.548
6	140	170543	0.615
7	200	239726	0.577

(Ave. RF = 0.542)
%RSD = 14.82

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.482	10.0	8.9	11	42034	≤ 15%

CARBON TETRACHLORIDE (RT = 16.36 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	116056	5.439
3	20	218003	5.225
4	50	492289	4.911
5	80	757301	4.899
6	140	1377004	4.969
7	200	1720098	4.142

(Ave. RF = 4.931)
%RSD = 8.93

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.394	10.0	8.9	11	383435	≤ 15%

CHLOROETHANE (RT = 4.81 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	16547	1.311
2	10	27927	1.309
3	20	56000	1.342
4	50	137261	1.369
5	80	226806	1.467
6	140	396603	1.431
7	200	514148	1.238

(Ave. RF = 1.353)
%RSD = 5.76

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.421	10.0	10.5	5.1	123998	≤ 15%

CHLOROFORM (RT = 13.04 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	121722	5.704
3	20	229900	5.511
4	50	515424	5.142
5	80	809735	5.238
6	140	1390389	5.017
7	200	1796218	4.326

(Ave. RF = 5.156)
%RSD = 9.27

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.666	10.0	9.0	9.5	407182	≤ 15%

CHLOROMETHANE

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	16847	1.334
2	10	26652	1.249
3	20	55145	1.322
4	50	135642	1.353

(Ave. RF = 1.329)
%RSD = 3.60

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.360	10.0	10.2	2.4	118725	≤ 15%

5	80	213853	1.383
6	140	380857	1.374
7	200	534896	1.288

DIBROMOCHLOROMETHAN (RT = 22.61 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	51243	2.401
3	20	100426	2.407
4	50	242414	2.418
5	80	382988	2.478
6	140	667359	2.408
7	200	938437	2.260

(Ave. RF = 2.395)
%RSD = 3.01

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.313	10.0	9.7	3.5	201818	≤ 15%

CH2BR2 (RT = 18.62 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
4	50	149378	1.490
5	80	242093	1.566
6	140	482803	1.742
7	200	702979	1.693

(Ave. RF = 1.623)
%RSD = 7.11

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.331	10.0	8.2	18	116116	≤ 15%

METHYLENE CHLORIDE (RT = 7.38 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	144811	3.471
4	50	312570	3.118
5	80	498529	3.225
6	140	834338	3.011
7	200	1140900	2.748

(Ave. RF = 3.115)
%RSD = 8.57

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.382	10.0	10.9	8.6	295101	≤ 15%

1,1-DCA (RT = 10.04 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	46869	2.196
3	20	96016	2.301
4	50	235212	2.347
5	80	382352	2.473
6	140	697882	2.518
7	200	916222	2.206

(Ave. RF = 2.340)
%RSD = 5.72

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.378	10.0	10.2	1.6	207519	≤ 15%

1,2-DCA (RT = 15.01 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	54559	4.322
2	10	79294	3.716
3	20	156020	3.740
4	50	357123	3.563
5	80	564616	3.653
6	140	1005789	3.629
7	200	1337500	3.221

(Ave. RF = 3.692)
%RSD = 8.87

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.329	10.0	9.0	9.8	290506	≤ 15%

1,1-DCE (RT = 6.96 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	26895	2.130
2	10	42924	2.012
3	20	88011	2.110
4	50	216040	2.155
5	80	351185	2.272
6	140	621108	2.241
7	200	816781	1.967

(Ave. RF = 2.127)
%RSD = 5.22

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.128	10.0	10.0	0.081	185739	≤ 15%

T-1,2-DCE (RT = 9.22 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	25746	2.039
2	10	42372	1.986
3	20	87275	2.092
4	50	220043	2.195
5	80	362480	2.345
6	140	650921	2.349
7	200	857098	2.064

(Ave. RF = 2.153)
%RSD = 6.82

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.200	10.0	10.2	2.2	192006	≤ 15%

1,2-DCP (RT = 18.87 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	95454	4.473
3	20	172535	4.136
4	50	389613	3.887
5	80	588536	3.807
6	140	1023635	3.694
7	200	1365799	3.289

(Ave. RF = 3.881)
%RSD = 10.35

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.399	10.0	8.8	12	296617	≤ 15%

C1,3-DCP (RT = 20.81 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	78294	3.669
3	20	148112	3.550
4	50	346153	3.453
5	80	508942	3.292
6	140	898606	3.243
7	200	1228998	2.960

(Ave. RF = 3.361)
%RSD = 7.52

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.013	10.0	9.0	10	262926	≤ 15%

T-1,3-DCP (RT = 21.67 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	66454	3.114
3	20	124923	2.994
4	50	291925	2.912
5	80	444003	2.872
6	140	763985	2.757
7	200	1056231	2.544

(Ave. RF = 2.866)
%RSD = 6.91

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.716	10.0	9.5	5.2	236972	≤ 15%

1,1,1,2-TCA (RT = 24.07 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	104725	4.908
3	20	189171	4.534
4	50	435131	4.341
5	80	668395	4.324
6	140	1109535	4.004

(Ave. RF = 4.422)
%RSD = 7.50

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.150	10.0	9.4	6.1	362170	≤ 15%

1,1,2,2-TCA (RT = 25.12 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	86925	2.084
4	50	201559	2.011
5	80	290149	1.877
6	140	474776	1.713
7	200	661252	1.592

(Ave. RF = 1.855)
%RSD = 10.98

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.241	10.0	12.1	21	195589	≤ 15%

TETRACHLOROETHENE (RT = 23.25 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	121847	5.710
3	20	210743	5.051
4	50	454712	4.536
5	80	659347	4.265
6	140	1183848	4.272

(Ave. RF = 4.767)
%RSD = 12.93

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.233	10.0	8.9	11	369357	≤ 15%

1,1,1-TCA (RT = 15.25 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	110399	5.174
3	20	203689	4.882
4	50	455469	4.544
5	80	707887	4.579
6	140	1269914	4.582
7	200	1575551	3.794

(Ave. RF = 4.593)
%RSD = 10.03

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.049	10.0	8.8	12	353317	≤ 15%

1,1,2-TCA (RT = 21.87 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	98368	4.610
3	20	179911	4.312
4	50	403729	4.028
5	80	606506	3.923
6	140	1002668	3.618

(Ave. RF = 4.098)
%RSD = 9.24

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.720	10.0	9.1	9.2	324610	≤ 15%

TCE (RT = 19.03 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	125368	5.875
3	20	264469	6.339
4	50	556320	5.550
5	80	833173	5.390
6	140	1617181	5.835
7	200	1974481	4.755

(Ave. RF = 5.624)
%RSD = 9.52

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.618	10.0	8.2	18	402966	≤ 15%

1,2,3-TCP (RT = 25.28 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	54019	2.532
3	20	96878	2.322
4	50	226908	2.264
5	80	343317	2.221
6	140	565914	2.042
7	200	805695	1.940

(Ave. RF = 2.220)
%RSD = 9.43

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.250	10.0	10.1	1.4	196381	≤ 15%

BROMOBN (RT = 25.77 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	21997	1.031
3	20	50908	1.220
4	50	106283	1.060
5	80	162995	1.054
6	140	301859	1.089
7	200	415603	1.001

(Ave. RF = 1.076)
%RSD = 7.12

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.041	10.0	10.2	90	178124	≤ 15%

VINYL CHLORIDE (RT = 3.93 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	14566	1.154
2	10	22892	1.073
3	20	48273	1.157
4	50	123668	1.234
5	80	201543	1.304
6	140	346802	1.251
7	200	457577	1.102

(Ave. RF = 1.182)
%RSD = 7.08

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.197	10.0	10.1	1.2	104416	≤ 15%

BENZENE (RT = 16.55 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	121039	1.623
3	20	234807	1.544
4	50	578059	1.494
5	80	929326	1.497
6	140	1733170	1.538
7	200	2334347	1.492

(Ave. RF = 1.531)
%RSD = 3.30

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.487	10.0	9.7	2.9	590782	≤ 15%

CHLOROBNZN (RT = 24.16 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	97040	2.326
4	50	191301	1.908
5	80	296441	1.918
6	140	509776	1.839
7	200	753394	1.814

(Ave. RF = 1.961)
%RSD = 10.64

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.826	10.0	9.3	6.9	159376	≤ 15%

1,2-DCB (RT = 27.27 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	60390	2.830
3	20	107266	2.571
4	50	241982	2.414
5	80	372986	2.413
6	140	677832	2.446

(Ave. RF = 2.535)
%RSD = 7.00

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.337	10.0	9.2	7.8	203937	≤ 15%

1,3-DCB (RT = 26.84 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	47676	2.234
3	20	99640	2.388
4	50	238337	2.378
5	80	314631	2.035
6	140	679140	2.451

(Ave. RF = 2.297)
%RSD = 7.25

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.062	10.0	9.0	10	179962	≤ 15%

1,4-DCB (RT = 26.91 Minutes) — ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	124307	2.980
4	50	248676	2.481
5	80	422770	2.735
6	140	675648	2.438
7	200	924980	2.228

(Ave. RF = 2.572)
%RSD = 11.29

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.601	10.0	10.1	1.1	226940	≤ 15%

ETHYLBENZENE (RT = 24.44 Minutes) — PID

Calibration Levels

Level	Amount	Area	Response
2	10	105481	1.414
3	20	199966	1.315
4	50	468182	1.210
5	80	738883	1.190
6	140	1437754	1.276
7	200	1836493	1.174

(Ave. RF = 1.263)
%RSD = 7.24

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.241	10.0	9.8	1.8	492952	≤ 15%

TOLUENE (RT = 22.17 Minutes) — PID

Calibration Levels

Level	Amount	Area	Response
3	20	234565	1.543
4	50	538909	1.393
5	80	844178	1.359
6	140	1591413	1.413
7	200	2100521	1.343

(Ave. RF = 1.410)
%RSD = 5.60

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.428	10.0	10.1	1.3	567281	≤ 15%

M,P-XYLENES (RT = 24.68 Minutes) — PID

Calibration Levels

Level	Amount	Area	Response
2	20	252313	1.692
3	40	491065	1.615
4	100	1130985	1.462
5	160	1764438	1.421
6	280	3017633	1.339

(Ave. RF = 1.506)
%RSD = 9.59

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.510	20.0	20.1	0.26	1199063	≤ 15%

O-XYLENE (RT = 25.12 Minutes) — PID

Calibration Levels

Level	Amount	Area	Response
2	10	104807	1.405
3	20	211065	1.388
4	50	486977	1.259
5	80	766365	1.234
6	140	1491949	1.324
7	200	1880193	1.202

(Ave. RF = 1.302)
%RSD = 6.43

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.298	10.0	10.0	0.30	515607	≤ 15%

N-BUTYLBENZENE (RT = 27.37 Minutes) — PID

Calibration Levels

Level	Amount	Area	Response
2	10	94340	1.265
3	20	179840	1.183
4	50	381522	0.986
5	80	595292	0.959
6	140	1260160	1.119

(Ave. RF = 1.102)
%RSD = 11.77

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.060	10.0	9.6	3.8	421186	≤ 15%

T-BUTYLBENZENE (RT = 26.56 Minutes) — PID

Calibration Levels

Level	Amount	Area	Response
2	10	91033	1.221
3	20	167720	1.103
4	50	378925	0.980
5	80	587080	0.945
6	140	1145513	1.017
7	200	1444137	0.923

(Ave. RF = 1.031)
%RSD = 10.88

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.985	10.0	9.6	4.5	391229	≤ 15%

2-CHLOROTOLUENE (RT = 26.08 Minutes) — ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	32141	1.506
3	20	66220	1.587
4	50	141883	1.415
5	80	215235	1.392
6	140	395261	1.426
7	200	515461	1.241

(Ave. RF = 1.428)
%RSD = 8.15

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.395	10.0	9.8	2.3	121752	≤ 15%

4-CHLOROTOLUENE (RT = 26.16 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	43041	2.017
3	20	73060	1.751
4	50	170775	1.704
5	80	248887	1.610
6	140	445196	1.606

(Ave. RF = 1.738)
%RSD = 9.67

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.528	10.0	8.8	12	133331	≤ 15%

DICHLORODIFLUOROMETH (RT = 3.42 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
4	50	54041	0.539
5	80	93167	0.603
6	140	169145	0.610
7	200	240165	0.578

(Ave. RF = 0.583)
%RSD = 5.50

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.503	10.0	8.6	14	43868	≤ 15%

CIS-1,2-DCE (RT = 12.18 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	56020	4.437
2	10	77888	3.650
3	20	160366	3.844
4	50	375272	3.744
5	80	626513	4.053
6	140	1097512	3.960
7	200	1420469	3.421

(Ave. RF = 3.873)
%RSD = 8.37

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.464	10.0	8.9	11	302325	≤ 15%

1,3-DCP (RT = 22.27 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	161817	3.879
4	50	337429	3.366
5	80	493437	3.192
6	140	825895	2.980
7	200	1136767	2.738

(Ave. RF = 3.231)
%RSD = 13.36

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.129	10.0	9.7	3.2	273060	≤ 15%

2,2-DCP (RT = 13.25 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	81506	3.820
3	20	153693	3.684
4	50	329109	3.283
5	80	534792	3.460
6	140	962340	3.473

(Ave. RF = 3.544)
%RSD = 5.91

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.041	10.0	8.6	14	265358	≤ 15%

1,1-DICHLOROPROPENE (RT = 15.91 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	68283	3.200
3	20	134405	3.222
4	50	306515	3.058
5	80	471453	3.050
6	140	875879	3.161

(Ave. RF = 3.138)
%RSD = 2.55

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.681	10.0	8.5	15	233946	≤ 15%

EDB (RT = 22.98 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	18148	1.437
2	10	27866	1.306
3	20	58571	1.404
4	50	152562	1.522
5	80	242631	1.570
6	140	432755	1.562
7	200	619691	1.492

(Ave. RF = 1.470)
%RSD = 6.44

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.473	10.0	10.0	0.15	128504	≤ 15%

HEXACHLOROBUTADIENE (RT = 29.87 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	96896	4.541
3	20	170400	4.084
4	50	343215	3.424
5	80	536621	3.471
6	140	1084014	3.912

(Ave. RF = 3.886)
%RSD = 11.89

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.653	10.0	9.4	6.0	318757	≤ 15%

Calibration data for Sequence file: h:\tempdata\gc11a\23op.seq

Initial Calibration Date: 3/29/95		PID Sample File:	h:\data\gc11a\502pn.smp	Supply Source:	Supelco
Created by:		ELCD Sample File:	h:\data\gc11a\502en.smp	Lot Number:	LA 31224
Midpoint Acquire Date: 3/23/95		PID MP File:	h:\tempdata\gc11a\23oe003.rst	Standard Prep. Date:	3/9/95
Date Printed:	04/06/95	ELCD MP File:	h:\tempdata\gc11a\23of003.rst		

INITIAL CALIBRATION — DAILY MIDPOINT CALIBRATION

BROMODICHLOROMETHAN (RT = 19.04 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	91535	4.290
3	20	159056	3.813
4	50	398596	3.977
5	80	575643	3.724
6	140	997422	3.599
7	200	1427969	3.439

(Ave. RF = 3.807)
%RSD = 7.86

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.677	10.0	9.7	3.4	609619	≤ 15%

BROMOFORM (RT = 24.76 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	50482	1.210
4	50	151603	1.512
5	80	248945	1.610
6	140	429399	1.549
7	200	648559	1.562

(Ave. RF = 1.489)
%RSD = 10.73

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.472	10.0	9.9	1.2	243973	≤ 15%

BROMOMETHANE (RT = 4.62 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
4	50	43024	0.429
5	80	84710	0.548
6	140	170543	0.615
7	200	239726	0.577

(Ave. RF = 0.542)
%RSD = 14.82

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.464	10.0	8.6	14	75942	≤ 15%

CARBON TETRACHLORIDE (RT = 16.36 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	116056	5.439
3	20	218003	5.225
4	50	492289	4.911
5	80	757301	4.899
6	140	1377004	4.969
7	200	1720098	4.142

(Ave. RF = 4.931)
%RSD = 8.93

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.094	10.0	8.3	17	678726	≤ 15%

CHLOROETHANE (RT = 4.81 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	16547	1.311
2	10	27927	1.309
3	20	56000	1.342
4	50	137261	1.369
5	80	226806	1.467
6	140	396603	1.431
7	200	514148	1.238

(Ave. RF = 1.353)
%RSD = 5.76

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.270	10.0	9.4	6.1	210508	≤ 15%

CHLOROFORM (RT = 12.89 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	121722	5.704
3	20	229900	5.511
4	50	515424	5.142
5	80	809735	5.238
6	140	1390389	5.017
7	200	1796218	4.326

(Ave. RF = 5.156)
%RSD = 9.27

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.221	10.0	8.2	18	699706	≤ 15%

CHLOROMETHANE

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	16847	1.334
2	10	26652	1.249
3	20	55145	1.322
4	50	135642	1.353

(Ave. RF = 1.329)
%RSD = 3.60

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.249	10.0	9.4	6.0	207025	≤ 15%

5	80	213853	1.383
6	140	380857	1.374
7	200	534896	1.288

DIBROMOCHLOROMETHAN (RT = 22.61 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	51243	2.401
3	20	100426	2.407
4	50	242414	2.418
5	80	382988	2.478
6	140	667359	2.408
7	200	938437	2.260

(Ave. RF = 2.395)
%RSD = 3.01

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.341	10.0	9.8	2.3	388045	≤ 15%

CH2BR2 (RT = 18.62 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
4	50	149378	1.490
5	80	242093	1.566
6	140	482803	1.742
7	200	702979	1.693

(Ave. RF = 1.623)
%RSD = 7.11

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.070	10.0	6.6	34	177362	≤ 15%

METHYLENE CHLORIDE (RT = 7.38 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	144811	3.471
4	50	312570	3.118
5	80	498529	3.225
6	140	834338	3.011
7	200	1140900	2.748

(Ave. RF = 3.115)
%RSD = 8.57

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.655	10.0	8.5	15	440148	≤ 15%

1,1-DCA (RT = 10.04 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	46869	2.196
3	20	96015	2.301
4	50	235212	2.347
5	80	382352	2.473
6	140	697882	2.518
7	200	916222	2.206

(Ave. RF = 2.340)
%RSD = 5.72

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.811	10.0	12.0	20	466049	≤ 15%

1,2-DCA (RT = 15.01 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	54559	4.322
2	10	79294	3.716
3	20	156020	3.740
4	50	357123	3.563
5	80	564616	3.653
6	140	1005789	3.629
7	200	1337500	3.221

(Ave. RF = 3.692)
%RSD = 8.87

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.812	10.0	7.6	24	466121	≤ 15%

1,1-DCE (RT = 6.96 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	26895	2.130
2	10	42924	2.012
3	20	88011	2.110
4	50	216040	2.155
5	80	351185	2.272
6	140	621108	2.241
7	200	816781	1.967

(Ave. RF = 2.127)
%RSD = 5.22

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.033	10.0	9.6	4.4	337092	≤ 15%

T-1,2-DCE (RT = 9.22 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	25746	2.039
2	10	42372	1.986
3	20	87275	2.092
4	50	220043	2.195
5	80	362480	2.345
6	140	650921	2.349
7	200	857098	2.064

(Ave. RF = 2.153)
%RSD = 6.82

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.239	10.0	10.4	4.0	371202	≤ 15%

1,2-DCP (RT = 18.74 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	95454	4.473
3	20	172535	4.136
4	50	389613	3.887
5	80	588536	3.807
6	140	1023635	3.694
7	200	1974481	4.755

(Ave. RF = 4.125)
%RSD = 10.06

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.233	10.0	7.8	22	536022	≤ 15%

C1,3-DCP (RT = 20.81 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	78294	3.669
3	20	148112	3.550
4	50	346153	3.453
5	80	508942	3.292
6	140	898606	3.243
7	200	1228998	2.960

(Ave. RF = 3.361)
%RSD = 7.52

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.131	10.0	9.3	6.9	519013	≤ 15%

T-1,3-DCP (RT = 21.67 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	66454	3.114
3	20	124923	2.994
4	50	291925	2.912
5	80	444003	2.872
6	140	763985	2.757
7	200	1056231	2.544

(Ave. RF = 2.866)
%RSD = 6.91

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.659	10.0	9.3	7.2	440799	≤ 15%

1,1,1,2-TCA (RT = 24.07 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	104725	4.908
3	20	189171	4.534
4	50	435131	4.341
5	80	668395	4.324
6	140	1109535	4.004

(Ave. RF = 4.422)
%RSD = 7.50

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.733	10.0	8.4	16	618897	≤ 15%

1,1,2,2-TCA (RT = 25.12 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	86925	2.084
4	50	201559	2.011
5	80	290149	1.877
6	140	474776	1.713
7	200	661252	1.592

(Ave. RF = 1.855)
%RSD = 10.98

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.427	10.0	13.1	31	402303	≤ 15%

TETRACHLOROETHENE (RT = 23.25 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	121847	5.710
3	20	210743	5.051
4	50	454712	4.536
5	80	659347	4.265
6	140	1183848	4.272
7	200	1482431	3.570

(Ave. RF = 4.568)
%RSD = 16.13

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.343	10.0	9.5	4.9	719930	≤ 15%

1,1,1-TCA (RT = 15.25 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	110399	5.174
3	20	203689	4.882
4	50	455469	4.544
5	80	707887	4.579
6	140	1269914	4.582
7	200	1575551	3.794

(Ave. RF = 4.593)
%RSD = 10.03

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.711	10.0	8.1	19	615138	≤ 15%

1,1,2-TCA (RT = 21.87 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	98368	4.610
3	20	179911	4.312
4	50	403729	4.028
5	80	606506	3.923
6	140	1002668	3.618

(Ave. RF = 4.098)
%RSD = 9.24

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.522	10.0	8.6	14	583946	≤ 15%

TCE (RT = 18.91 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	125368	5.875
3	20	264469	6.339
4	50	556320	5.550
5	80	833173	5.390
6	140	1617181	5.835
7	200	1427969	3.439

(Ave. RF = 5.405)
%RSD = 18.81

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
4.704	10.0	8.7	13	779912	≤ 15%

1,2,3-TCP (RT = 25.28 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	54019	2.532
3	20	96878	2.322
4	50	226908	2.264
5	80	343317	2.221
6	140	565914	2.042
7	200	805695	1.940

(Ave. RF = 2.220)
%RSD = 9.43

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.997	10.0	9.0	10	331085	≤ 15%

BROMOBN (RT = 25.77 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	21997	1.031
3	20	50908	1.220
4	50	106283	1.060
5	80	162995	1.054
6	140	301859	1.089
7	200	415603	1.001

(Ave. RF = 1.076)
%RSD = 7.12

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.884	10.0	9.4	75	312361	≤ 15%

VINYL CHLORIDE (RT = 3.93 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	14566	1.154
2	10	22892	1.073
3	20	48273	1.157
4	50	123668	1.234
5	80	201543	1.304
6	140	346802	1.251
7	200	457577	1.102

(Ave. RF = 1.182)
%RSD = 7.08

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.908	10.0	7.7	23	150582	≤ 15%

BENZENE (RT = 16.55 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
2	10	121039	1.623
3	20	234807	1.544
4	50	578059	1.494
5	80	929326	1.497
6	140	1733170	1.538
7	200	2334347	1.492

(Ave. RF = 1.531)
%RSD = 3.30

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.449	10.0	9.5	5.4	653087	≤ 15%

CHLOROBNZN (RT = 24.16 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	97040	2.326
4	50	191301	1.908
5	80	296441	1.918
6	140	509776	1.839
7	200	753394	1.814

(Ave. RF = 1.961)
%RSD = 10.64

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.013	10.0	10.3	2.6	333687	≤ 15%

1,2-DCB (RT = 27.27 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	60390	2.830
3	20	107266	2.571
4	50	241982	2.414
5	80	372986	2.413
6	140	677832	2.446

(Ave. RF = 2.535)
%RSD = 7.00

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.366	10.0	9.3	6.7	392256	≤ 15%

1,3-DCB (RT = 26.84 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	47676	2.234
3	20	99640	2.388
4	50	238337	2.378
5	80	314631	2.035
6	140	679140	2.451

(Ave. RF = 2.297)
%RSD = 7.25

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.121	10.0	9.2	7.7	351685	≤ 15%

1,4-DCB (RT = 26.91 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	124307	2.980
4	50	248676	2.481
5	80	422770	2.735
6	140	675648	2.438
7	200	924980	2.228

(Ave. RF = 2.572)
%RSD = 11.29

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.650	10.0	10.3	3.0	439314	≤ 15%

ETHYLBENZENE (RT = 24.44 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	105481	1.414
3	20	199966	1.315
4	50	468182	1.210
5	80	738883	1.190
6	140	1437754	1.276
7	200	1836493	1.174

(Ave. RF = 1.263)
%RSD = 7.24

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.219	10.0	9.6	3.5	549267	≤ 15%

TOLUENE (RT = 22.17 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
3	20	234565	1.543
4	50	538909	1.393
5	80	844178	1.359
6	140	1591413	1.413
7	200	2100521	1.343

(Ave. RF = 1.410)
%RSD = 5.60

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.374	10.0	9.7	2.6	619307	≤ 15%

M,P-XYLENES (RT = 24.68 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	20	252313	1.692
3	40	491065	1.615
4	100	1130985	1.462
5	160	1764438	1.421
6	280	3017633	1.339

(Ave. RF = 1.506)
%RSD = 9.59

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.485	20.0	19.7	1.4	1338852	≤ 15%

O-XYLENE (RT = 25.12 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	104807	1.405
3	20	211065	1.388
4	50	486977	1.259
5	80	766365	1.234
6	140	1491949	1.324
7	200	1880193	1.202

(Ave. RF = 1.302)
%RSD = 6.43

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.298	10.0	10.0	0.33	585015	≤ 15%

N-BUTYLBENZENE (RT = 27.37 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	94340	1.265
3	20	179840	1.183
4	50	381522	0.986
5	80	595292	0.959
6	140	1260160	1.119

(Ave. RF = 1.102)
%RSD = 11.77

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.108	10.0	10.1	0.55	499555	≤ 15%

T-BUTYLBENZENE (RT = 26.56 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	91033	1.221
3	20	167720	1.103
4	50	378925	0.980
5	80	587080	0.945
6	140	1145513	1.017
7	200	1444137	0.923

(Ave. RF = 1.031)
%RSD = 10.88

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.969	10.0	9.4	6.1	436678	≤ 15%

2-CHLOROTOLUENE (RT = 26.08 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	32141	1.506
3	20	66220	1.587
4	50	141883	1.415
5	80	215235	1.392
6	140	395261	1.426
7	200	515461	1.241

(Ave. RF = 1.428)
%RSD = 8.15

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.466	10.0	10.3	2.6	243030	≤ 15%

4-CHLOROTOLUENE (RT = 26.16 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	43041	2.017
3	20	73060	1.751
4	50	170775	1.704
5	80	248887	1.610
6	140	445196	1.606

(Ave. RF = 1.738)
%RSD = 9.67

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.626	10.0	9.4	6.4	269590	≤ 15%

DICHLORODIFLUOROMETH (RT = 3.42 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
4	50	54041	0.539
5	80	93167	0.603
6	140	169145	0.610
7	200	240165	0.578

(Ave. RF = 0.583)
%RSD = 5.50

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.475	10.0	8.2	18	78795	≤ 15%

CIS-1,2-DCE (RT = 12.18 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	56020	4.437
2	10	77888	3.650
3	20	160366	3.844
4	50	375272	3.744
5	80	626513	4.053
6	140	1097512	3.960
7	200	1420469	3.421

(Ave. RF = 3.873)
%RSD = 8.37

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.108	10.0	8.0	20	515201	≤ 15%

1,3-DCP (RT = 22.27 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	20	161817	3.879
4	50	337429	3.366
5	80	493437	3.192
6	140	825895	2.980
7	200	1136767	2.738

(Ave. RF = 3.231)
%RSD = 13.36

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.047	10.0	9.4	5.7	505127	≤ 15%

2,2-DCP (RT = 13.08 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	81506	3.820
3	20	153693	3.684
4	50	329109	3.283
5	80	534792	3.460
6	140	962340	3.473

(Ave. RF = 3.544)
%RSD = 5.91

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.849	10.0	8.0	20	472324	≤ 15%

1,1-DICHLOROPROPENE (RT = 15.91 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	68283	3.200
3	20	134405	3.222
4	50	306515	3.058
5	80	471453	3.050
6	140	875879	3.161

(Ave. RF = 3.138)
%RSD = 2.55

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.593	10.0	8.3	17	429898	≤ 15%

EDB (RT = 22.98 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	18148	1.437
2	10	27866	1.306
3	20	58571	1.404
4	50	152562	1.522
5	80	242631	1.570
6	140	432755	1.562
7	200	619691	1.492

(Ave. RF = 1.470)
%RSD = 6.44

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.514	10.0	10.3	3.0	251016	≤ 15%

HEXACHLOROBUTADIENE (RT = 29.87 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	96896	4.541
3	20	170400	4.084
4	50	343215	3.424
5	80	536621	3.471
6	140	1084014	3.912

(Ave. RF = 3.886)
%RSD = 11.89

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
3.823	10.0	9.8	1.6	633859	≤ 15%

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-02
Lab Number: EG01028

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**19**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**10**
cis-1,2-Dichloroethene	**0.50**	**4.1**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>40**
1,1,1-Trichloroethane	**0.50**	**2.1**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**15**
Trichlorofluoromethane	**0.50**	**3.1**
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	94%

UTM 005594

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-02
Lab Number: EG01028

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	**1.3**	**12**
1,2-Dichloroethane	1.3	N.D.
1,1-Dichloroethene	**1.3**	**8.6**
cis-1,2-Dichloroethene	**1.3**	**2.6**
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**97**
1,1,1-Trichloroethane	1.3	N.D.
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**15**
Trichlorofluoromethane	1.3	N.D.
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	84%

UTM 005595

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-03
Lab Number: EG01027

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	**0.50**	**0.65**
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**1.3**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**5.2**
cis-1,2-Dichloroethene	**0.50**	**6.1**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>40**
1,1,1-Trichloroethane	**0.50**	**1.4**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**>40**
Trichlorofluoromethane	**0.50**	**6.4**
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	96%

UTM 005596

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-03
Lab Number: EG01027

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	1.3	N.D.
1,2-Dichloroethane	1.3	N.D.
1,1-Dichloroethene	**1.3**	**4.8**
cis-1,2-Dichloroethene	**1.3**	**8.8**
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**100**
1,1,1-Trichloroethane	1.3	N.D.
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**58**
Trichlorofluoromethane	**1.3**	**4.6**
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	83%

UTM 005597

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-04
Lab Number: EG01029

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**15**
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**45**
1,1,1-Trichloroethane	**0.50**	**2.9**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**2.8**
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	91%

UTM 005598

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-05
Lab Number: EG01025

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**19**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**>40**
cis-1,2-Dichloroethene	**0.50**	**0.56**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>40**
1,1,1-Trichloroethane	**0.50**	**31**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**13**
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	88%

UTM 005599

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-05
Lab Number: EG01025

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	**1.3**	**20**
1,2-Dichloroethane	1.3	N.D.
1,1-Dichloroethene	**1.3**	**70**
cis-1,2-Dichloroethene	1.3	N.D.
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**74**
1,1,1-Trichloroethane	**1.3**	**30**
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**13**
Trichlorofluoromethane	1.3	N.D.
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	82%

UTM 005600

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-06
Lab Number: EG01026

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**4.0**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**13**
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>40**
1,1,1-Trichloroethane	**0.50**	**14**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**13**
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	91%

UTM 005601

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-06
Lab Number: EG01026

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	**1.3**	**5.3**
1,2-Dichloroethane	1.3	N.D.
1,1-Dichloroethene	**1.3**	**14**
cis-1,2-Dichloroethene	1.3	N.D.
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**72**
1,1,1-Trichloroethane	**1.3**	**13**
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**13**
Trichlorofluoromethane	1.3	N.D.
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	83%

UTM 005602

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-07 MW-3 O-P
Lab Number: EG01030

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	**0.50**	**0.69**
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**1.3**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**5.4**
cis-1,2-Dichloroethene	**0.50**	**6.5**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>40**
1,1,1-Trichloroethane	**0.50**	**1.4**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**>40**
Trichlorofluoromethane	**0.50**	**6.5**
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	98%

UTM 005603

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

arding Lawson Associates
5 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-07
Lab Number: EG01030

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.3	N.D.
Bromoform	1.3	N.D.
Bromomethane	2.5	N.D.
Carbon tetrachloride	1.3	N.D.
Chlorobenzene	2.5	N.D.
Chloroethane	6.3	N.D.
2-Chloroethylvinyl ether	6.3	N.D.
Chloroform	1.3	N.D.
Chloromethane	2.5	N.D.
Dibromochloromethane	1.3	N.D.
1,2-Dichlorobenzene	2.5	N.D.
1,3-Dichlorobenzene	2.5	N.D.
1,4-Dichlorobenzene	2.5	N.D.
1,1-Dichloroethane	**1.3**	**1.5**
1,2-Dichloroethane	1.3	N.D.
,1-Dichloroethene	**1.3**	**5.1**
cis-1,2-Dichloroethene	**1.3**	**9.1**
trans-1,2-Dichloroethene	1.3	N.D.
1,2-Dichloropropane	1.3	N.D.
cis-1,3-Dichloropropene	1.3	N.D.
trans-1,3-Dichloropropene	1.3	N.D.
Methylene chloride	13	N.D.
1,1,2,2-Tetrachloroethane	1.3	N.D.
Tetrachloroethene	**1.3**	**110**
1,1,1-Trichloroethane	1.3	N.D.
1,1,2-Trichloroethane	1.3	N.D.
Trichloroethene	**1.3**	**63**
Trichlorofluoromethane	**1.3**	**4.9**
Vinyl chloride	2.5	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 2.5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	83%

UTM 005604

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 30987-3
Utility Trailer
Sample Descript: Water, MW-08
Lab Number: EG01031

Sampled: Jul 12, 1995
Received: Jul 12, 1995
Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	86%

UTM 005605

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Method Blank

Extracted: Jul 17, 1995
Analyzed: Jul 17, 1995
Reported: Jul 19, 1995
Matrix: Water

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	87%

UTM 005606

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MS/MSD DATA REPORT

EPA Method 601/602

Matrix: Water

Date: 07/17/95

Sample #: EG01031

Batch #: EG17101W

Analyte	R1 ppb	Sp ppb	MS ppb	MSD ppb	PR1 %	PR2 %	RPD %	Mean PR %	Acceptance Limits RPD	Acceptance Limits Mean PR
Benzene	0	10	10	10	100	100	0	100	≤10	91 - 107
Chloroform	0	10	9.5	9.8	95	98	3.1	96	≤22	81 - 117
1,1-Dichloroethane	0	10	11	11	110	110	0	110	≤21	86 - 112
-Dichloroethane	0	10	9.3	9.9	93	99	6.2	96	≤18	70 - 130
1,1-Dichloroethene	0	10	8.0	7.7	80	77	3.8	78	≤12	71 - 127
Tetrachloroethene	0.22	10	9.1	8.9	89	87	2.3	88	≤13	70 - 130
Toluene	0.26	10	10	10	97	97	0	97	≤11	79 - 119
Trichloroethene	0.033	10	10	10	100	100	0	100	≤19	70 - 129

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits ..... Determined by in-house Control Charts

Harding Lawson Associates
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707
714/556-7992 - 213/617-7232
FAX: 714/662-3297

CHAIN OF CUSTODY FORM

Lab: Del Mar
Normal Turn around

Job Number: 30987-3
Name/Location: UTILITY Trailer
Project Manager: K. Weibe

Samplers: R Rogers
J. Fausto

Recorder: [signature] (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.
23	X				2						95	07	12	0900	MW-05	X						
	↓				↓						↓	↓	↓	1000	MW-06	↓						
														1115	MW-03							
														1145	MW-02							
														1235	MW-04							
	↓				↓						↓	↓	↓	1130	MW-07	↓						
	X				2						95	07	12	1200	MW-08	X						

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Analyze following WIP Guidlines
						intact, on ice

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[signature] 7/12/91 1450		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
	[signature]	7/12 1450

METHOD OF SHIPMENT hand del

Laboratory Copy Pr... ...ice Copy Field or Office Copy

UTM 005608

6533

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-12.
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

CRWQCB - L.A. REGION
WELL INVESTIGATION PROGRAM
QA/QC REPORT

PREPARED FOR HARDING LAWSON ASSOCIATES
PROJECT: 30987-3 UTILITY TRAILER
SAMPLED: 7/12/95

Harding Lawson Associates
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707
714/556-7992 - 213/617-7232
FAX 714/662-3297

CHAIN OF CUSTODY FORM

Lab: Del Mar
NORMAL TURN AROUND

Samplers: R. Rogers
J. Fausto

Job Number: 30987-3

Name/Location: UTILITY Trailer

Project Manager: K. Weibe

Recorder: [signature] (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pltnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.
23	X				2						95	07	12	0900	MW-05	X						
														1000	MW-06							
														1115	MW-03							
														1145	MW-02							
														1235	MW-04							
														1130	MW-07							
	X				2						95	07	12	1200	MW-08	X						

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Analyze following WIP Guidlines
						intact, on ice

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[signature] 7/12/88 1450		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature) [signature]	DATE/TIME 7/12 1450
METHOD OF SHIPMENT hand del		

Laboratory Copy Project Office Copy Field or Office Copy 651

UTM 005610

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

LABORATORY REPORT FORM (COVER PAGE 1)

Laboratory Name: Del Mar Analytical

Address: 2852 Alton Avenue

Irvine, CA 92714

Telephone/FAX: (714) 261-1022 / (714) 261-1228

ELAP Certification No.: 1197 Expiration Date: May 31, 1996

Authorized Signature:
Name, Title (print) Roberta Edwards, Project Manager

Signature, Date: Roberta Edwards 7/25/95

Client Name: Harding Lawson Associates

Project No.: 30987-3 Utility Trailer

Date(s) Sampled: 7/12/95 To

Date(s) Received: 7/12/95 To

Date(s) Reported: 7/19/95 To

Chain of Custody received: Yes X No

Comments:

(RWQCB LabForm; Ver 12/94)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

LABORATORY REPORT FORM (COVER PAGE 2)

Organic Analyses	# of Samples	# of Samples Subcontracted
EPA 8010	7	0

Sample Condition: Acceptable

Inorganic Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

Microbiological Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

Other Types of Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

(RWQCB LabForm; Ver 12/94)

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

CORRECTIVE ACTION REPORT

Department:	GC	Client:	Harding Lawson Assoc.
Method:	EPA 8010	Project:	30987-3 Utility Trailer
Date:	7/17/95	Matrix:	Water

Identification and Definition of the Problem:

The percent recovery of 1,1-Dichloroethene was 77% in the Matrix Spike Duplicate and 79% in the Laboratory Control Sample. These recoveries are below the RWQCB acceptance limits of 80 - 120%.

Determination of the Cause of the Problem:

The response factor of 1,1-Dichloroethene was acceptable in the Mid Point Calibration check, but the response dropped slightly in the MS/MSD and LCS samples. The problem appeared to be a random fluctuation in the response of 1,1-Dichloroethene.

Corrective Action:

All quality control data and analytical results were reviewed. The percent recovery of 1,1-Dichloroethene in the Mid Point Calibration Check, Matrix Spike, and check standard was within acceptance limits; therefore, no further corrective actions were made.

QA/QC Officer Signature: Debbie Ranck Date: 7/25/95

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

DATE ANALYZED		7/17/95	7/17/95	7/17/95	7/17/95
DATE EXTRACTED		7/17/95	7/17/95	7/17/95	7/17/95
LAB SAMPLE ID		Method Blank	EG01025	EG01025	EG01026
CLIENT SAMPLE ID		n/a	MW-05	MW-05	MW-06
EXTRACTION SOLVENT		n/a	n/a	n/a	n/a
EXTRACTION METHOD		5030	5030	5030	5030
DILUTION FACTOR		1	1	2.5	1
COMPOUND	**CRDL**				
Bromodichloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	0.50	< 0.50	**19**	**20**	**4.0**
1,2-Dichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	0.50	< 0.50	**> 40**	**70**	**13**
cis-1,2-Dichloroethene	0.50	< 0.50	**0.56**	< 0.50	< 0.50
trans-1,2-Dichloroethene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride	1.0	< 1.0	< 1.0	**4.4**	< 1.0
1,1,2,2-Tetrachloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	0.50	< 0.50	**> 40**	**74**	**> 40**
1,1,1-Trichloroethane	0.50	< 0.50	**31**	**30**	**14**
1,1,2-Trichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene	0.50	< 0.50	**13**	**13**	**13**
Trichlorofluoromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50

SURROGATE	SPIKE CONC	ACCEPT LIMITS %	% RECOVERY	% RECOVERY	% RECOVERY	% RECOVERY
1-Chloro-3-fluorobenzene	10	80-120	87	88	82	91

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

		DATE ANALYZED	7/17/95	7/17/95	7/17/95	7/17/95
		DATE EXTRACTED	7/17/95	7/17/95	7/17/95	7/17/95
		LAB SAMPLE ID	EG01026	EG01027	EG01027	EG01028
		CLIENT SAMPLE ID	MW-06	MW-03	MW-03	MW-02
		EXTRACTION SOLVENT	n/a	n/a	n/a	n/a
		EXTRACTION METHOD	5030	5030	5030	5030
		DILUTION FACTOR	2.5	1	2.5	1
COMPOUND		CRDL				
Bromodichloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		0.50	< 0.50	**0.65**	< 0.50	< 0.50
Chloromethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		0.50	**5.3**	**1.3**	< 0.50	**19**
1,2-Dichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene		0.50	**14**	**5.2**	**4.8**	**10**
cis-1,2-Dichloroethene		0.50	< 0.50	**6.1**	**8.8**	**4.1**
trans-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride		1.0	**3.6**	< 1.0	**3.7**	< 1.0
1,1,2,2-Tetrachloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene		0.50	**72**	**> 40**	**100**	**> 40**
1,1,1-Trichloroethane		0.50	**13**	**1.4**	< 0.50	**2.1**
1,1,2-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene		0.50	**13**	**> 40**	**58**	**15**
Trichlorofluoromethane		0.50	< 0.50	**6.4**	**4.6**	**3.1**
Vinyl chloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
SURROGATE	SPIKE CONC	ACCEPT LIMITS %	% RECOVERY	% RECOVERY	% RECOVERY	% RECOVERY
1-Chloro-3-fluorobenzene	10	80-120	83	96	83	94

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

		DATE ANALYZED	7/17/95	7/17/95	7/17/95	7/17/95
		DATE EXTRACTED	7/17/95	7/17/95	7/17/95	7/17/95
		LAB SAMPLE ID	EG01028	EG01029	EG01030	EG01030
		CLIENT SAMPLE ID	MW-02	MW-04	MW-07	MW-07
		EXTRACTION SOLVENT	n/a	n/a	n/a	n/a
		EXTRACTION METHOD	5030	5030	5030	5030
		DILUTION FACTOR	2.5	1	1	2.5
COMPOUND		**CRDL**				
Bromodichloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		0.50	< 0.50	< 0.50	**0.69**	< 0.50
Chloromethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		0.50	**12**	< 0.50	**1.3**	**1.5**
1,2-Dichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene		0.50	**8.6**	**15**	**5.4**	**5.1**
cis-1,2-Dichloroethene		0.50	**2.6**	< 0.50	**6.5**	**9.1**
trans-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride		1.0	**3.7**	< 1.0	< 1.0	**3.9**
1,1,2,2-Tetrachloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene		0.50	**97**	**45**	**> 40**	**110**
1,1,1-Trichloroethane		0.50	< 0.50	**2.9**	**1.4**	< 0.50
1,1,2-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene		0.50	**15**	**2.8**	**> 40**	**63**
Trichlorofluoromethane		0.50	< 0.50	< 0.50	**6.5**	**4.9**
Vinyl chloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-3-fluorobenzene	10	80-120	84	91	98	83

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

DATE ANALYZED		7/17/95			
DATE EXTRACTED		7/17/95			
LAB SAMPLE ID		EG01031			
CLIENT SAMPLE ID		MW-08			
EXTRACTION SOLVENT		n/a			
EXTRACTION METHOD		5030			
DILUTION FACTOR		1			
COMPOUND	**CRDL**				
Bromodichloromethane	0.50	< 0.50			
Bromoform	0.50	< 0.50			
Bromomethane	1.0	< 1.0			
Carbon tetrachloride	0.50	< 0.50			
Chlorobenzene	1.0	< 1.0			
Chloroethane	1.0	< 1.0			
2-Chloroethylvinyl ether	1.0	< 1.0			
Chloroform	0.50	< 0.50			
Chloromethane	1.0	< 1.0			
Dibromochloromethane	0.50	< 0.50			
1,2-Dichlorobenzene	1.0	< 1.0			
1,3-Dichlorobenzene	1.0	< 1.0			
1,4-Dichlorobenzene	1.0	< 1.0			
1,1-Dichloroethane	0.50	< 0.50			
1,2-Dichloroethane	0.50	< 0.50			
1,1-Dichloroethene	0.50	< 0.50			
cis-1,2-Dichloroethene	0.50	< 0.50			
trans-1,2-Dichloroethene	0.50	< 0.50			
1,2-Dichloropropane	0.50	< 0.50			
cis-1,3-Dichloropropene	0.50	< 0.50			
trans-1,3-Dichloropropene	0.50	< 0.50			
Methylene chloride	1.0	< 1.0			
1,1,2,2-Tetrachloroethane	0.50	< 0.50			
Tetrachloroethene	0.50	< 0.50			
1,1,1-Trichloroethane	0.50	< 0.50			
1,1,2-Trichloroethane	0.50	< 0.50			
Trichloroethene	0.50	< 0.50			
Trichlorofluoromethane	0.50	< 0.50			
Vinyl chloride	0.50	< 0.50			

SURROGATE	SPIKE CONC	ACCEPT LIMITS %	% RECOVERY		
1-Chloro-3-fluorobenzene	10	80-120	86		

PROJECT NO: 30987-3 (RWQCB LabForm 10A; Ver12/94)

QA/QC REPORT

II. MATRIX SPIKE (MS)/ MATRIX SPIKE DUPLICATE (MSD)

Date Performed: 7/17/95
Batch Number: EG17101W
Lab Sample I.D.: EG01031
Analytical Method: EPA 8010
Reporting Unit: µg/L

Analyte	Sample Result	Spike Conc	MS	% MS	Spike Conc (Dup)	MSD	%MSD	RPD	MS/MSD Limit	RPD Limit
Chloroform	0	10	9.5	95%	10	9.8	98%	3.1%	80-120	20%
1,1-Dichloroethane	0	10	11	110%	10	11	110%	0.0%	80-120	20%
1,2-Dichloroethane	0	10	9.3	93%	10	9.9	99%	6.2%	80-120	20%
1,1-Dichloroethene	0	10	8.0	80%	10	7.7	77%	3.8%	80-120	20%
Tetrachloroethene	0.22	10	9.1	89%	10	8.9	87%	2.3%	80-120	20%
Trichloroethene	0.033	10	10	100%	10	10	100%	0.0%	80-120	20%

III. LABORATORY QUALITY CONTROL CHECK SAMPLE (LCS)

Date Performed: 7/17/95
Supply Source: AccuStandard
Lot Number: 024-309
Date of Source: 7/13/95
Analytical Method: EPA 8010
Reporting Unit: µg/L
Lab LCS I.D.: LCS

Analyte	Spike Concentration	Result	% Recovery	Acceptance % Recovery Limit
Chloroform	10	9.6	96%	80-120
1,1-Dichloroethane	10	11	110%	80-120
1,2-Dichloroethane	10	9.9	99%	80-120
1,1-Dichloroethene	10	7.9	79%	80-120
Tetrachloroethene	10	8.5	85%	80-120
Trichloroethene	10	10	100%	80-120

Calibration data for Sequence file: h:\data\gc10\q17p.seq

Initial Calibration Date:	06/30/95	PID Sample File:	h:\data\gc10\p-503-l.smp	Supply Source:	ULTRA S.
Created by:	DM/AB	ELCD Sample File:	h:\data\gc10\e-502-l.smp	Lot Number:	H-0202
Midpoint Acquire Date:	7/17/95	PID MP File:	h:\data\gc10\q17a001.rst	Standard Prep. Date:	6/30/95
Date Printed:	07/25/95	ELCD MP File:	h:\data\gc10\q17b001.rst		

INITIAL CALIBRATION — DAILY MIDPOINT CALIBRATION

BROMODICHLOROMETHAN (RT = 18.80 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	180081	1.253
4	50	345501	1.441
6	120	832742	1.398
7	160	1188054	1.516
8	200	1573744	1.667
9	300	2241605	1.503

(Ave. RF = 1.463)
%RSD = 9.42

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.545	10.0	10.6	5.6	641339	≤ 15%

BROMOFORM (RT = 24.31 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	21341	0.439
3	30	76603	0.533
4	50	148560	0.619
5	100	290220	0.643
6	120	378315	0.635
7	160	486341	0.621
8	200	608397	0.645
9	300	894683	0.600

(Ave. RF = 0.592)
%RSD = 12.09

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.731	10.0	12.4	24	303605	≤ 15%

BROMOMETHANE (RT = 4.10 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	16140	0.332
3	30	45084	0.314
4	50	73867	0.308
5	100	154225	0.342
6	120	194301	0.326
7	160	266956	0.341
8	200	366275	0.388
9	300	531252	0.356

(Ave. RF = 0.338)
%RSD = 7.52

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.358	10.0	10.6	5.8	148517	≤ 15%

CARBON TETRACHLORIDE (RT = 16.08 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	222171	1.546
4	50	406669	1.696
5	100	970839	2.151
6	120	1149856	1.930
7	160	1438410	1.836
8	200	2051420	2.173
9	300	3098701	2.078

(Ave. RF = 1.916)
%RSD = 12.42

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.183	10.0	11.4	14	905958	≤ 15%

CHLOROETHANE (RT = 4.33 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	17897	0.782
2	10	36745	0.755
3	30	114824	0.799
4	50	192018	0.801
5	100	384159	0.851
6	120	457605	0.768
7	160	563507	0.719
8	200	773742	0.820
9	300	1048879	0.703

(Ave. RF = 0.778)
%RSD = 6.06

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.799	10.0	10.3	2.8	331749	≤ 15%

CHLOROFORM (RT = 11.96 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	43603	1.905
2	10	88343	1.816
3	30	297770	2.072
4	50	525409	2.191
5	100	1070372	2.372

(Ave. RF = 2.182)
%RSD = 9.61

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.294	10.0	10.5	5.1	952259	≤ 15%

6	120	1384202	2.323
7	160	1767073	2.255
8	200	2286046	2.422
9	300	3400580	2.280

CHLOROMETHANE

ELCD

Calibration Levels

Level	Amount	Area	Response
4	50	305521	1.274
5	100	554189	1.228
6	120	659455	1.107
7	160	794123	1.013
8	200	1067373	1.131
9	300	1551970	1.041

(Ave. RF = 1.132)
%RSD = 9.04

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.876	10.0	7.7	23	363418	≤ 15%

DIBROMOCHLOROMETHAN (RT = 22.26 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	16961	0.741
2	10	35270	0.725
3	30	122640	0.854
4	50	223624	0.932
5	100	449838	0.997
6	120	552061	0.927
7	160	742795	0.948
8	200	964893	1.022
9	300	1449354	0.972

(Ave. RF = 0.902)
%RSD = 11.86

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.060	10.0	11.8	18	440166	≤ 15%

CH2BR2 (RT = 18.31 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	13904	0.607
3	30	98001	0.682
4	50	173845	0.725
6	120	463249	0.777
7	160	607526	0.775
8	200	788303	0.835
9	300	1221434	0.819

(Ave. RF = 0.746)
%RSD = 10.79

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.815	10.0	10.9	9.2	338144	≤ 15%

MECL2 (RT = 6.65 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	296436	2.063
4	50	472886	1.972
5	100	851337	1.886
6	120	1024375	1.719
7	160	1347737	1.720
8	200	1735826	1.839
9	300	2453852	1.645

(Ave. RF = 1.835)
%RSD = 8.21

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.754	10.0	9.6	4.4	727991	≤ 15%

1,1-DCA (RT = 9.05 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	28560	1.248
2	10	59300	1.219
3	30	185092	1.288
5	100	668128	1.480
6	120	830992	1.395
7	160	1077472	1.375

(Ave. RF = 1.334)
%RSD = 7.47

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.191	10.0	8.9	11	494537	≤ 15%

1,2-DCA (RT = 14.54 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	31243	1.365
3	30	212616	1.480
4	50	383886	1.601
5	100	836639	1.854
6	120	1042678	1.750
7	160	1325632	1.692
8	200	1697690	1.799
9	300	2633029	1.765

(Ave. RF = 1.663)
%RSD = 10.17

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.683	10.0	10.1	1.2	698468	≤ 15%

1,1-DCE (RT = 6.29 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	32801	1.433
2	10	68480	1.408
3	30	201059	1.399
4	50	342500	1.428
5	100	669947	1.485
6	120	822590	1.381
7	160	1077227	1.375
8	200	1453310	1.540
9	300	2017591	1.353

(Ave. RF = 1.422)
%RSD = 4.11

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.192	10.0	8.4	16	494934	≤ 15%

T-1,2-DCE (RT = 8.32 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	60336	1.240
3	30	183117	1.274
4	50	384906	1.605
5	100	646770	1.433
6	120	797194	1.338
7	160	1032052	1.317
9	300	1982335	1.329

(Ave. RF = 1.362)
%RSD = 9.00

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.210	10.0	8.9	11	502106	≤ 15%

1,2-DCP (RT = 18.51 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	57812	1.189
3	30	200803	1.397
4	50	334763	1.396
5	100	741153	1.642
6	120	852500	1.431
7	160	1131627	1.444
8	200	1627059	1.724
9	300	2481091	1.664

(Ave. RF = 1.486)
%RSD = 11.98

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.514	10.0	10.2	1.9	628366	≤ 15%

C1,3-DCP (RT = 20.48 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	22598	0.987
2	10	46563	0.957
3	30	166631	1.160
4	50	294414	1.228
5	100	630747	1.398
6	120	723825	1.215
7	160	994503	1.269
8	200	1340013	1.420
9	300	2030187	1.361

(Ave. RF = 1.222)
%RSD = 13.60

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.347	10.0	11.0	10	559040	≤ 15%

T-1,3-DCP (RT = 21.35 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	21871	0.955
2	10	44618	0.917
3	30	159572	1.111
4	50	280758	1.171
5	100	566959	1.256
6	120	692369	1.162
7	160	944381	1.205
8	200	1198027	1.269
9	300	1837095	1.232

(Ave. RF = 1.142)
%RSD = 11.11

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.220	10.0	10.7	6.8	506243	≤ 15%

1,1,1,2-TCA (RT = 23.67 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	38714	1.691
2	10	81997	1.686
3	30	267725	1.863
4	50	461191	1.923
5	100	886512	1.964
6	120	1136208	1.907
7	160	1462462	1.866
8	200	1767088	1.872
9	300	2368515	1.588

(Ave. RF = 1.818)
%RSD = 7.12

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.892	10.0	10.4	4.1	785425	≤ 15%

1,1,2,2-TCA (RT = 24.69 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	27093	1.183
2	10	59120	1.215
3	30	197134	1.372
4	50	326933	1.363
5	100	599626	1.329
6	120	750617	1.260
7	160	967939	1.235
8	200	953604	1.010
9	300	1560084	1.046

(Ave. RF = 1.224)
%RSD = 10.52

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.334	10.0	10.9	9.0	553536	≤ 15%

TETRACHLOROETHENE (RT = 22.88 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	63687	2.782
2	10	96429	1.982
3	30	317404	2.209
4	50	516700	2.155
5	100	980072	2.172
6	120	1214431	2.038
7	160	1525022	1.946
8	200	1935317	2.050

(Ave. RF = 2.167)
%RSD = 12.25

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.011	10.0	9.3	7.2	834781	≤ 15%

1,1,1-TCA (RT = 14.82 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	33451	1.461
3	30	211578	1.472
4	50	386674	1.612
5	100	915219	2.028
6	120	1120456	1.880
7	160	1386262	1.769
8	200	1923303	2.038
9	300	2945394	1.975

(Ave. RF = 1.780)
%RSD = 13.44

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.964	10.0	11.0	10	815356	≤ 15%

1,1,2-TCA (RT = 21.55 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	34126	1.491
2	10	75723	1.557
3	30	251325	1.749
4	50	426593	1.779
5	100	808563	1.792
6	120	991494	1.664
7	160	1327053	1.693
8	200	1640590	1.738
9	300	2469376	1.656

(Ave. RF = 1.680)
%RSD = 6.04

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.687	10.0	10.0	0.42	700178	≤ 15%

TCE (RT = 18.67 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	41450	1.811
2	10	80546	1.656
3	30	277201	1.929
4	50	476179	1.986
5	100	1030030	2.282
6	120	1255126	2.106
7	160	1545010	1.972
8	200	2396715	2.539
9	300	3386918	2.271

(Ave. RF = 2.061)
%RSD = 13.08

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.996	10.0	9.7	3.1	828683	≤ 15%

1,2,3-TCP (RT = 24.84 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	20186	0.882
2	10	44948	0.924
3	30	157335	1.095
4	50	282908	1.180
5	100	533059	1.181
6	120	668601	1.122
7	160	888105	1.133
8	200	1071786	1.136
9	300	1498315	1.005

(Ave. RF = 1.073)
%RSD = 10.26

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.075	10.0	10.0	0.18	446188	≤ 15%

TRICHLOROFLUOROMETH (RT = 5.26 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	29458	1.287
2	10	57674	1.186
3	30	177578	1.236
4	50	312359	1.302
5	100	618815	1.371
6	120	750316	1.259
7	160	917000	1.170
8	200	1214556	1.287
9	300	1542599	1.034

(Ave. RF = 1.237)
%RSD = 7.88

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.113	10.0	9.0	10	462165	≤ 15%

VINYL CHLORIDE (RT = 3.52 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	20482	0.895
2	10	42366	0.871
3	30	134686	0.937
4	50	222312	0.927
5	100	422227	0.936
6	120	520564	0.874
7	160	616849	0.787
8	200	857671	0.909
9	300	1225319	0.822

(Ave. RF = 0.884)
%RSD = 5.88

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.756	10.0	8.6	14	313948	≤ 15%

BENZENE (RT = 16.30 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	5	29191	1.784
2	10	55007	1.529
3	30	157978	1.526
4	50	257084	1.514
5	100	490080	1.549
6	120	603622	1.494
7	160	775495	1.519
8	200	1041862	1.609
9	300	1580344	1.575

(Ave. RF = 1.567)
%RSD = 5.66

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.615	10.0	10.3	3.1	315110	≤ 15%

CHLOROBNZN (RT = 23.76 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	27915	0.574
3	30	110345	0.768
4	50	201645	0.841
5	100	402909	0.893
6	120	488570	0.820
7	160	655332	0.836
8	200	810648	0.859
9	300	1130294	0.758

(Ave. RF = 0.794)
%RSD = 12.52

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.830	10.0	10.5	4.6	344451	≤ 15%

1,2-DCB (RT = 26.76 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	19939	0.871
2	10	43885	0.902
3	30	149974	1.044
4	50	275154	1.147
5	100	543100	1.203
6	120	691167	1.160
7	160	909890	1.161
8	200	1123411	1.190
9	300	1619391	1.086

(Ave. RF = 1.085)
%RSD = 11.35

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.093	10.0	10.1	0.76	453789	≤ 15%

1,3-DCB (RT = 26.35 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	44749	0.920
3	30	156987	1.093
4	50	268050	1.118
5	100	511488	1.133
6	120	715680	1.201
7	160	858198	1.095
8	200	1145192	1.213
9	300	1688752	1.132

(Ave. RF = 1.113)
%RSD = 8.08

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.129	10.0	10.1	1.4	468599	≤ 15%

1,4-DCB (RT = 26.42 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	20862	0.911
2	10	43147	0.887
3	30	143585	0.999
4	50	283726	1.183
5	100	567799	1.258
6	120	659622	1.107
7	160	931336	1.188
8	200	1088373	1.153
9	300	1487439	0.997

(Ave. RF = 1.076)
%RSD = 12.26

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.045	10.0	9.7	2.9	433903	≤ 15%

ETHYLBENZENE (RT = 24.03 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	5	25449	1.556
2	10	40289	1.120
3	30	135613	1.310
4	50	224650	1.323
5	100	451376	1.426
6	120	545154	1.350
7	160	685795	1.343
8	200	907104	1.400
9	300	1298672	1.294

(Ave. RF = 1.347)
%RSD = 8.67

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.334	10.0	9.9	0.93	260341	≤ 15%

TOLUENE (RT = 21.84 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
2	10	53802	1.495
3	30	155339	1.501
4	50	250518	1.475
5	100	492118	1.555
6	120	610100	1.510
7	160	762379	1.493
8	200	1000617	1.545
9	300	1400435	1.396

(Ave. RF = 1.496)
%RSD = 3.25

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.540	10.0	10.3	2.9	300429	≤ 15%

M,P-XYLENES (RT = 24.27 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	10	52044	1.591
2	20	101599	1.412
3	60	311779	1.506
4	100	516884	1.522
5	200	1046754	1.654
6	240	1259581	1.559
7	320	1597229	1.564
8	400	2097652	1.619
9	600	2877606	1.434

(Ave. RF = 1.540)
%RSD = 5.23

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.533	20.0	19.9	0.43	598360	≤ 15%

O-XYLENE (RT = 24.69 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	5	21323	1.303
2	10	41349	1.149
3	30	141916	1.371
4	50	231710	1.365
5	100	438263	1.385
6	120	556103	1.377
7	160	713335	1.397
8	200	921977	1.423
9	300	1324542	1.320

(Ave. RF = 1.343)
%RSD = 6.07

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.353	10.0	10.1	0.74	264029	≤ 15%

N-BUTYLBENZENE (RT = 26.87 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	5	20535	1.255
2	10	35757	0.994
3	30	109478	1.058
4	50	181481	1.069
5	100	372000	1.176
6	120	444000	1.099
7	160	573766	1.124
8	200	752210	1.161
9	300	1063610	1.060

(Ave. RF = 1.111)
%RSD = 7.03

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.982	10.0	8.8	12	191523	≤ 15%

SEC-BUTYLBENZENE (RT = 26.29 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	32891	0.914
3	30	101885	0.984
4	50	194818	1.147
5	100	369452	1.168
6	120	414277	1.026
7	160	584579	1.145
8	200	689341	1.064
9	300	1026486	1.023

(Ave. RF = 1.059)
%RSD = 8.44

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.005	10.0	9.5	5.1	196130	≤ 15%

T-BUTYLBENZENE (RT = 26.08 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	17168	1.049
2	10	31507	0.876
3	30	96764	0.935
4	50	163628	0.964
5	100	331186	1.047
6	120	399220	0.988
7	160	510424	1.000
8	200	679475	1.049
9	300	975073	0.972

(Ave. RF = 0.987)
%RSD = 5.93

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.980	10.0	9.9	0.71	191112	≤ 15%

2-CVE (RT = 20.17 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	50807	0.354
4	50	104582	0.436
5	100	221609	0.491
6	120	274419	0.461
7	160	375436	0.479
8	200	460767	0.488
9	300	726757	0.487

(Ave. RF = 0.457)
%RSD = 10.83

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.422	10.0	9.3	7.5	175342	≤ 15%

2-CHLOROTOLUENE (RT = 25.62 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	23548	0.484
3	30	84142	0.586
4	50	159322	0.664
5	100	314325	0.697
6	120	419440	0.704
7	160	522301	0.666
8	200	686407	0.727
9	300	978567	0.656

(Ave. RF = 0.648)
%RSD = 12.12

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.665	10.0	10.3	2.7	276200	≤ 15%

4-CHLOROTOLUENE (RT = 25.70 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	24231	0.498
3	30	83396	0.580
4	50	167782	0.700
5	100	334838	0.742
6	120	395887	0.664
7	160	534666	0.682
8	200	669927	0.710
9	300	965490	0.647

(Ave. RF = 0.653)
%RSD = 12.08

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.664	10.0	10.2	1.7	275685	≤ 15%

DICHLORODIFLUOROMETH (RT = 3.04 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	94849	0.660
4	50	149446	0.623
5	100	285352	0.632
6	120	350929	0.589
7	160	433799	0.554
8	200	617478	0.654
9	300	915393	0.614

(Ave. RF = 0.618)
%RSD = 6.03

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.493	10.0	8.0	20	204738	≤ 15%

CIS-1,2-DCE (RT = 11.06 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	226056	1.573
4	50	408384	1.703
5	100	843701	1.870
6	120	1083145	1.818

(Ave. RF = 1.775)
%RSD = 6.25

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.298	10.0	7.3	27	538936	≤ 15%

7	160	1398432	1.784
8	200	1799007	1.906
9	300	2645272	1.774

1,3-DCP (RT = 21.94 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	27907	1.219
2	10	66723	1.372
3	30	205495	1.430
4	50	345932	1.442
5	100	655645	1.453
6	120	803066	1.348
7	160	1074387	1.371
8	200	1338823	1.418
9	300	2002305	1.343

(Ave. RF = 1.377)
%RSD = 5.24

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.407	10.0	10.2	2.2	584057	≤ 15%

2,2-DCP (RT = 12.20 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	134748	0.938
4	50	262559	1.095
5	100	588171	1.303
6	120	740149	1.242
7	160	957099	1.221
9	300	1972152	1.322

(Ave. RF = 1.187)
%RSD = 12.31

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.392	10.0	11.7	17	577919	≤ 15%

1,1-DICHLOROPROPENE (RT = 15.60 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
3	30	184448	1.284
4	50	321671	1.341
5	100	736905	1.633
6	120	867456	1.456
7	160	1085476	1.385
8	200	1599223	1.694
9	300	2390462	1.603

(Ave. RF = 1.485)
%RSD = 10.70

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.576	10.0	10.6	6.1	654133	≤ 15%

EDB (RT = 22.61 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	11978	0.523
2	10	26526	0.545
3	30	89959	0.626
4	50	158626	0.661
5	100	300438	0.666
6	120	377707	0.634
7	160	507904	0.648
8	200	620466	0.657
9	300	952933	0.639

(Ave. RF = 0.622)
%RSD = 8.33

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.704	10.0	11.3	13	292381	≤ 15%

HEXACHLOROBUTADIENE (RT = 29.08 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	37797	1.651
2	10	75214	1.546
3	30	241963	1.684
4	50	427294	1.782
5	100	825380	1.829
6	120	1066602	1.790
7	160	1307149	1.668
8	200	1630287	1.727
9	300	2344340	1.572

(Ave. RF = 1.694)
%RSD = 5.74

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.669	10.0	9.9	1.5	692845	≤ 15%

P-ISOPROPYLTOLUENE (RT = 26.47 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	5	18887	1.154
2	10	32193	0.895
3	30	97207	0.939
4	50	171562	1.010
5	100	311184	0.983
6	120	405190	1.003
7	160	474132	0.928
8	200	686693	1.060
9	300	972697	0.970

(Ave. RF = 0.994)
%RSD = 7.82

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.943	10.0	9.5	5.1	184013	≤ 15%

NAPHTHALENE (RT = 29.01 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	19439	1.188
2	10	34867	0.969
3	30	115907	1.120
4	50	201735	1.188
5	100	399747	1.263
6	120	491048	1.216
7	160	710761	1.392
8	200	772958	1.193
9	300	1244947	1.241

(Ave. RF = 1.197)
%RSD = 9.47

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.842	10.0	7.0	30	164304	≤ 15%

N-PROPYLBENZENE (RT = 25.53 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	23767	1.453
2	10	37900	1.053
3	30	116924	1.129
4	50	210136	1.237
5	100	419539	1.326
6	120	488763	1.210
7	160	656276	1.285
8	200	831840	1.284
9	300	1195292	1.191

(Ave. RF = 1.241)
%RSD = 9.32

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.204	10.0	9.7	3.0	234916	≤ 15%

STYRENE (RT = 24.62 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	28642	1.751
2	10	55019	1.529
3	30	158107	1.527
4	50	268017	1.578
5	100	585071	1.849
6	120	676892	1.676
7	160	868397	1.701
8	200	1140269	1.760
9	300	1654029	1.649

(Ave. RF = 1.669)
%RSD = 6.59

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.589	10 0	9.5	4.8	310098	≤ 15%

1,2,3-TCB (RT = 29.23 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	23346	1.020
2	10	48060	0.988
3	30	168095	1.170
4	50	305158	1.272
5	100	601382	1.333
6	120	764934	1.284
7	160	992543	1.267
8	200	1190089	1.261
9	300	1794085	1.203

(Ave. RF = 1.200)
%RSD = 10.05

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.093	10.0	9.1	8.9	453486	≤ 15%

1,2,4-TCB (RT = 28.75 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	21587	0.943
2	10	44729	0.920
3	30	155062	1.079
4	50	284436	1.186
5	100	578412	1.282
6	120	735459	1.234
7	160	958590	1.223
8	200	1147328	1.216
9	300	1726708	1.158

(Ave. RF = 1.138)
%RSD = 11.42

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.034	10.0	9.1	9.1	429244	≤ 15%

1,2,4-TRIMETHYLBENZE (RT = 26.20 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	24604	1.504
2	10	42249	1.174
3	30	131768	1.273
4	50	218856	1.289
5	100	439983	1.390
6	120	524707	1.299
7	160	686224	1.344
8	200	894070	1.380
9	300	1301942	1.298

(Ave. RF = 1.328)
%RSD = 6.93

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.261	10.0	9.5	5.0	246097	≤ 15%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-2
Lab Number: EI01856

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 21, 1995
Analyzed: Sep 21, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	**0.50**	**0.56**
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**13**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**11**
cis-1,2-Dichloroethene	**0.50**	**4.0**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>60**
1,1,1-Trichloroethane	**0.50**	**1.3**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**19**
Trichlorofluoromethane	**0.50**	**2.0**
Vinyl chloride	1.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.
Analytes reported as ">" exceeded quantitation limits. These analytes were re-analyzed at a dilution to obtain quantitative results.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	111%

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UTM 005628

Del Mar Analytical

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-2
Lab Number: EI01856

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	13	N.D.
2-Chloroethylvinyl ether	13	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	**2.5**	**14**
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	**2.5**	**9.6**
cis-1,2-Dichloroethene	2.5	N.D.
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	**2.5**	**120**
1,1,1-Trichloroethane	2.5	N.D.
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**17**
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution Detection limits for this sample have been raised by a factor of 5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	106%

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UTM 005629

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-3
Lab Number: EI01857

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 21, 1995
Analyzed: Sep 21, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	**0.50**	**0.60**
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**1.3**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**6.5**
cis-1,2-Dichloroethene	**0.50**	**8.4**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>60**
1,1,1-Trichloroethane	**0.50**	**0.96**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**>30**
Trichlorofluoromethane	**0.50**	**4.7**
Vinyl chloride	1.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.
Analytes reported as ">" exceeded quantitation limits. These analytes were re-analyzed at a dilution to obtain quantitative results.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	113%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-3
Lab Number: EI01857

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	13	N.D.
2-Chloroethylvinyl ether	13	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	2.5	N.D.
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	2.5	N.D.
cis-1,2-Dichloroethene	**2.5**	**3.1**
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	**2.5**	**87**
1,1,1-Trichloroethane	2.5	N.D.
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**40**
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	105%

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-4
Lab Number: EI01858

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 21, 1995
Analyzed: Sep 21, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	1.0	N.D.
Bromoform	1.0	N.D.
Bromomethane	2.0	N.D.
Carbon tetrachloride	1.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	5.0	N.D.
2-Chloroethylvinyl ether	5.0	N.D.
Chloroform	1.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	1.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.
1,1-Dichloroethane	1.0	N.D.
1,2-Dichloroethane	1.0	N.D.
1,1-Dichloroethene	**1.0**	**88**
cis-1,2-Dichloroethene	1.0	N.D.
trans-1,2-Dichloroethene	1.0	N.D.
1,2-Dichloropropane	1.0	N.D.
cis-1,3-Dichloropropene	1.0	N.D.
trans-1,3-Dichloropropene	1.0	N.D.
Methylene chloride	10	N.D.
1,1,2,2-Tetrachloroethane	1.0	N.D.
Tetrachloroethene	**1.0**	**>160**
1,1,1-Trichloroethane	**1.0**	**3.0**
1,1,2-Trichloroethane	1.0	N.D.
Trichloroethene	**1.0**	**11**
Trichlorofluoromethane	1.0	N.D.
Vinyl chloride	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors the sample required dilution. Detection limits for this sample have been raised by a factor of 2.
Analytes reported as ">" exceeded quantitation limits. These analytes were re-analyzed at a dilution to obtain quantitative results.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	118%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-4
Lab Number: EI01858

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	13	N.D.
2-Chloroethylvinyl ether	13	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	2.5	N.D.
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	**2.5**	**86**
cis-1,2-Dichloroethene	2.5	N.D.
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	**2.5**	**290**
1,1,1-Trichloroethane	2.5	N.D.
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**10**
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	112%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-5
Lab Number: EI01859

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 21, 1995
Analyzed: Sep 21, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**25**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**>100**
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>60**
1,1,1-Trichloroethane	**0.50**	**36**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**13**
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.
Analytes reported as ">" exceeded quantitation limits. These analytes were re-analyzed at a dilution to obtain quantitative results.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	109%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-5
Lab Number: EI01859

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	13	N.D.
2-Chloroethylvinyl ether	13	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	**2.5**	**23**
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	**2.5**	**110**
cis-1,2-Dichloroethene	2.5	N.D.
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	**2.5**	**100**
1,1,1-Trichloroethane	**2.5**	**34**
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**12**
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	107%

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-6
Lab Number: EI01860

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 21, 1995
Analyzed: Sep 21, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**4.9**
1,2-Dichloroethane	0.50	N.D
1,1-Dichloroethene	**0.50**	**18**
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>60**
1,1,1-Trichloroethane	**0.50**	**14**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**13**
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.
Analytes reported as ">" exceeded quantitation limits. These analytes were re-analyzed at a dilution to obtain quantitative results.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	108%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-6
Lab Number: EI01860

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	13	N.D.
2-Chloroethylvinyl ether	13	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	**2.5**	**2.8**
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	**2.5**	**17**
cis-1,2-Dichloroethene	2.5	N.D.
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	**2.5**	**110**
1,1,1-Trichloroethane	**2.5**	**11**
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**12**
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	107%

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-7, Grab p. Burnie
Lab Number: EI01861

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	103%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-8 NW 3 DUP
Lab Number: EI01862

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 21, 1995
Analyzed: Sep 21, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	**0.50**	**0.62**
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	**0.50**	**1.3**
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	**0.50**	**6.4**
cis-1,2-Dichloroethene	**0.50**	**8.7**
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**>60**
1,1,1-Trichloroethane	**0.50**	**1.0**
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	**0.50**	**>60**
Trichlorofluoromethane	**0.50**	**4.6**
Vinyl chloride	1.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.
Analytes reported as ">" exceeded quantitation limits. These analytes were re-analyzed at a dilution to obtain quantitative results.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery:	
1-Chloro-3-fluorobenzene	108%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Client Project ID: 28739-04.08
UTM, City of Industry
Sample Descript: Water, MW-8 ~ w-3 n-1?
Lab Number: EI01862

Sampled: Sep 14, 1995
Received: Sep 14, 1995
Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	2.5	N.D.
Bromoform	2.5	N.D.
Bromomethane	5.0	N.D.
Carbon tetrachloride	2.5	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	13	N.D.
2-Chloroethylvinyl ether	13	N.D.
Chloroform	2.5	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	2.5	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	2.5	N.D.
1,2-Dichloroethane	2.5	N.D.
1,1-Dichloroethene	**2.5**	**4.0**
cis-1,2-Dichloroethene	**2.5**	**5.8**
trans-1,2-Dichloroethene	2.5	N.D.
1,2-Dichloropropane	2.5	N.D.
cis-1,3-Dichloropropene	2.5	N.D.
trans-1,3-Dichloropropene	2.5	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	2.5	N.D.
Tetrachloroethene	**2.5**	**140**
1,1,1-Trichloroethane	2.5	N.D.
1,1,2-Trichloroethane	2.5	N.D.
Trichloroethene	**2.5**	**66**
Trichlorofluoromethane	2.5	N.D.
Vinyl chloride	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Due to matrix effects and/or other factors, the sample required dilution. Detection limits for this sample have been raised by a factor of 5.

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	103%

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Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Method Blank

Extracted: Sep 19, 1995
Analyzed: Sep 19, 1995
Reported: Sep 22, 1995
Matrix: Water

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	106%

Results pertain only to samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Kurt Wiebe

Method Blank

Extracted: Sep 21, 1995
Analyzed: Sep 21, 1995
Reported: Sep 22, 1995
Matrix: Water

HALOGENATED VOLATILE ORGANICS by GC (EPA 5030/8010)

Analyte	Detection Limit µg/L (ppb)	Sample Result µg/L (ppb)
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	2.5	N.D.
2-Chloroethylvinyl ether	2.5	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	1.0	N.D.
1,3-Dichlorobenzene	1.0	N.D.
1,4-Dichlorobenzene	1.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

DEL MAR ANALYTICAL, IRVINE (ELAP #1197)

Gary Steube
Laboratory Director

Surrogate Standard Recovery	
1-Chloro-3-fluorobenzene	102%

Results pertain only to samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

MS/MSD DATA REPORT

EPA Method 601/602

Matrix: Water

Date: 09/21/95

Sample #: BLANK

Batch #: EI21101W

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	Mean PR	Acceptance Limits	
	ppb	ppb	ppb	ppb	%	%	%	%	RPD	Mean PR
Benzene	0	10	9.4	9.5	94	95	1.1	94	≤ 10	92 - 104
Chloroform	0	10	9.7	9.8	97	98	1.0	98	≤ 14	82 - 114
1,1-Dichloroethane	0	10	9.4	9.2	94	92	2.2	93	≤ 11	76 - 120
2-Dichloroethane	0	10	10	11	100	110	9.5	105	≤ 13	78 - 118
1,1-Dichloroethene	0	10	9.1	8.9	91	89	2.2	90	≤ 11	70 - 127
Tetrachloroethene	0	10	9.6	9.7	96	97	1.0	96	≤ 12	74 - 122
Toluene	0	10	10	10	100	100	0	100	≤ 10	86 - 110
Trichloroethene	0	10	11	11	110	110	0	110	≤ 13	70 - 126

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits..... Determined by in-house Control Charts

Del Mar Analytical

Del Mar Analytical

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MS/MSD DATA REPORT

EPA Method 601/602

Matrix: Water

Date: 09/19/95

Sample #: EI01861

Batch #: EI19101W

Analyte	R1 ppb	Sp ppb	MS ppb	MSD ppb	PR1 %	PR2 %	RPD %	Mean PR %	Acceptance Limits RPD	Acceptance Limits Mean PR
Benzene	0	10	9.9	9.6	99	96	3.1	98	≤ 10	92 - 104
Chloroform	0	10	10	10	100	100	0	100	≤ 14	82 - 114
1-Dichloroethane	0	10	10	9.8	100	98	2.0	99	≤ 11	76 - 120
-Dichloroethane	0	10	11	11	110	110	0	110	≤ 13	78 - 118
-Dichloroethene	0	10	10	9.6	100	96	4.1	98	≤ 11	70 - 127
Tetrachloroethene	0.055	10	11	11	109	109	0	109	≤ 12	74 - 122
Toluene	0.51	10	10	9.9	95	94	1.1	94	≤ 10	86 - 110
Trichloroethene	0	10	12	13	120	130	8.0	125	≤ 13	70 - 126

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits ..... Determined by in-house Control Charts

Del Mar Analytical

Harding Lawson Associates
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707
714/556-7992 – 213/617-7232
FAX: 714/662-3297

CHAIN OF CUSTODY FORM

Lab: DEL MAR
NORMAL TURN AROUND.

Samplers: JUAN FAUSTO & KEVIN MACKIE

Job Number: 28739-04.08

Name/Location: UTM. City of Industry

Project Manager: KURT WIEBE

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.
23	✓				2						95	09	14	1400	MW-2 (2x40ml VOAS)	✓						✓
														1515	MW-3 (2x40 ml VOAS	✓						
														1445	MW-4 (2x40 ml VOAS)	✓						
														1610	MW-5 (2x40 ml VOAS)	✓						
														1255	MW-6 (2x40ml VOAS	✓						
														1525	MW-7 (2x40 ml VOAS)	✓						
														1520	MW-8 (2x40 ml VOAS)	✓						

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						WTP protocols
						0.5 — 1.0 ppb detection Limit.

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 9/14/95 1042

METHOD OF SHIPMENT hand delivered intact/cool

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

6533

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CRWQCB - L.A. REGION
WELL INVESTIGATION PROGRAM
QA/QC REPORT

PREPARED FOR HARDING LAWSON ASSOCIATES
PROJECT: 28739-01.08 UTM, CITY OF INDUSTRY
SAMPLED: 9/14/95

ATTENTION: KURT WIEBE

Harding Lawson Associates
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707
714/556-7992 213/617-7232
FAX 714/662-3297

CHAIN OF CUSTODY FORM

Lab: DEL MAR
NORMAL TURN AROUND

Samplers: JUAN FAUSTO & KEVIN MACKIE

Job Number: 28139-04.08

Name/Location: UTM. City of Industry

Project Manager: KURT WEBE

Recorder: [signature] (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr Wk Seq	DATE: Yr Mo Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.
23	✓				2				950614	1400	MW-2 (2x40 ml VOAS)	✓						
										1515	MW-3 (2x40 ml VOAS	✓						
										1445	MW-4 (2x40 ml VOAS)	✓						
										1610	MW-5 (2x40 ml VOAS)	✓						
										1255	MW-6 (2x40 ml VOAS	✓						
										1525	MW-7 (2x40 ml VOAS)	✓						
										1520	MW-8 (2x40 ml VOAS)	✓						

LAB NUMBER: Yr Wk Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
				WIP Protocols
				0.5 — 1.0 ppb
				detection
				Limit

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[signature]		
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature) [signature]	DATE/TIME 9/14/95 1042

METHOD OF SHIPMENT hand delivered in ice/cool

Laboratory Copy Project Office Copy Field or Office Copy

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

LABORATORY REPORT FORM (COVER PAGE 1)

Laboratory Name: Del Mar Analytical

Address: 2852 Alton Avenue

Irvine, CA 92714

Telephone/FAX: (714) 261-1022 / (714) 261-1228

ELAP Certification No.: 1197 Expiration Date: May 31, 1996

Authorized Signature:
Name, Title (print) Debbie Ranck, Quality Assurance Officer

Signature, Date: Debbie Ranck 10/12/95

Client Name: Harding Lawson Associates

Project No.: 28739-04.08 UTM, City of Industry

Date(s) Sampled: 9/14/95 To

Date(s) Received: 9/14/95 To

Date(s) Reported: 9/22/95 To

Chain of Custody received: Yes X No

Comments:

(RWQCB LabForm; Ver 12/94)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

LABORATORY REPORT FORM (COVER PAGE 2)

Organic Analyses	# of Samples	# of Samples Subcontracted
EPA 8010	7	0

Sample Condition: Acceptable

Inorganic Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

Microbiological Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

Other Types of Analyses	# of Samples	# of Samples Subcontracted

Sample Condition:

(RWQCB LabForm; Ver 12/94)

PROJECT NO: 28739-04.08 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

DATE ANALYZED		9/19/95	9/19/95	9/19/95	9/19/95
DATE EXTRACTED		9/19/95	9/19/95	9/19/95	9/19/95
LAB SAMPLE ID		Method Blank	EI01856	EI01857	EI01858
CLIENT SAMPLE ID		n/a	MW-2	MW-3	MW-4
EXTRACTION SOLVENT		n/a	n/a	n/a	n/a
EXTRACTION METHOD		5030	5030	5030	5030
DILUTION FACTOR		1	5	5	5
COMPOUND	**CRDL**				
Bromodichloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	0.50	< 0.50	**14**	< 0.50	< 0.50
1,2-Dichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	0.50	< 0.50	**9.6**	< 0.50	**86**
cis-1,2-Dichloroethene	0.50	< 0.50	< 0.50	**3.1**	< 0.50
trans-1,2-Dichloroethene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride	1.0	< 1.0	**8.0**	**23**	**16**
1,1,2,2-Tetrachloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	0.50	< 0.50	**120**	**87**	**290**
1,1,1-Trichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene	0.50	< 0.50	**17**	**40**	**10**
Trichlorofluoromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50

SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-3-fluorobenzene	10	80-120	106	106	105	112

PROJECT NO: 28739-04.08 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

		DATE ANALYZED	9/19/95	9/19/95	9/19/95	9/19/95
		DATE EXTRACTED	9/19/95	9/19/95	9/19/95	9/19/95
		LAB SAMPLE ID	EI01859	EI01860	EI01861	EI01862
		CLIENT SAMPLE ID	MW-5	MW-6	MW-7	MW-8
		EXTRACTION SOLVENT	n/a	n/a	n/a	n/a
		EXTRACTION METHOD	5030	5030	5030	5030
		DILUTION FACTOR	5	5	1	5
COMPOUND		**CRDL**				
Bromodichloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane		1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		0.50	**23**	**2.8**	< 0.50	< 0.50
1,2-Dichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene		0.50	**110**	**17**	< 0.50	**4.0**
cis-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	**5.8**
trans-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride		1.0	**7.4**	**13**	< 1.0	**5.4**
1,1,2,2-Tetrachloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene		0.50	**100**	**110**	< 0.50	**140**
1,1,1-Trichloroethane		0.50	**34**	**11**	< 0.50	< 0.50
1,1,2-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene		0.50	**12**	**12**	< 0.50	**66**
Trichlorofluoromethane		0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl chloride		0.50	< 0.50	< 0.50	< 0.50	< 0.50
SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-3-fluorobenzene	10	80-120	107	107	103	103

PROJECT NO: 28739-04.08 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: EPA 8010 **REPORTING UNIT:** µg/L

DATE ANALYZED		9/21/95	9/21/95	9/21/95	9/21/95
DATE EXTRACTED		9/21/95	9/21/95	9/21/95	9/21/95
LAB SAMPLE ID		Method Blank	EI01856	EI01857	EI01858
CLIENT SAMPLE ID		n/a	MW-2	MW-3	MW-4
EXTRACTION SOLVENT		n/a	n/a	n/a	n/a
EXTRACTION METHOD		5030	5030	5030	5030
DILUTION FACTOR		1	1	1	2
COMPOUND	**CRDL**				
Bromodichloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon tetrachloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethylvinyl ether	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	0.50	< 0.50	**0.56**	**0.60**	< 0.50
Chloromethane	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	0.50	< 0.50	**13**	**1.3**	< 0.50
1,2-Dichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	0.50	< 0.50	**11**	**6.5**	**88**
cis-1,2-Dichloroethene	0.50	< 0.50	**4.0**	**8.4**	< 0.50
trans-1,2-Dichloroethene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride	1.0	< 1.0	< 1.0	< 1.0	**6.7**
1,1,2,2-Tetrachloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	0.50	< 0.50	**> 60**	**> 60**	**> 160**
1,1,1-Trichloroethane	0.50	< 0.50	**1.3**	**0.96**	**3.0**
1,1,2-Trichloroethane	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethene	0.50	< 0.50	**19**	**> 30**	**11**
Trichlorofluoromethane	0.50	< 0.50	**2.0**	**4.7**	< 0.50
Vinyl chloride	0.50	< 0.50	< 0.50	< 0.50	< 0.50

SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-3-fluorobenzene	10	80-120	102	111	113	118

PROJECT NO: 28739-04.08 (RWQCB LabForm 10A; Ver12/94)

ANALYTICAL RESULT FOR ORGANICS

METHOD: **EPA 8010** **REPORTING UNIT:** **µg/L**

		DATE ANALYZED	9/21/95	9/21/95	9/21/95	
		DATE EXTRACTED	9/21/95	9/21/95	9/21/95	
		LAB SAMPLE ID	EI01859	EI01860	EI01862	
		CLIENT SAMPLE ID	MW-5	MW-6	MW-8	
		EXTRACTION SOLVENT	n/a	n/a	n/a	
		EXTRACTION METHOD	5030	5030	5030	
		DILUTION FACTOR	1	1	1	
COMPOUND		**CRDL**				
Bromodichloromethane		0.50	< 0.50	< 0.50	< 0.50	
Bromoform		0.50	< 0.50	< 0.50	< 0.50	
Bromomethane		1.0	< 1.0	< 1.0	< 1.0	
Carbon tetrachloride		0.50	< 0.50	< 0.50	< 0.50	
Chlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
Chloroethane		1.0	< 1.0	< 1.0	< 1.0	
2-Chloroethylvinyl ether		1.0	< 1.0	< 1.0	< 1.0	
Chloroform		0.50	< 0.50	< 0.50	**0.62**	
Chloromethane		1.0	< 1.0	< 1.0	< 1.0	
Dibromochloromethane		0.50	< 0.50	< 0.50	< 0.50	
1,2-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene		1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane		0.50	**25**	**4.9**	**1.3**	
1,2-Dichloroethane		0.50	< 0.50	< 0.50	< 0.50	
1,1-Dichloroethene		0.50	**> 100**	**18**	**6.4**	
cis-1,2-Dichloroethene		0.50	< 0.50	< 0.50	**8.7**	
trans-1,2-Dichloroethene		0.50	< 0.50	< 0.50	< 0.50	
1,2-Dichloropropane		0.50	< 0.50	< 0.50	< 0.50	
cis-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	
trans-1,3-Dichloropropene		0.50	< 0.50	< 0.50	< 0.50	
Methylene chloride		1.0	< 1.0	< 1.0	< 1.0	
1,1,2,2-Tetrachloroethane		0.50	< 0.50	< 0.50	< 0.50	
Tetrachloroethene		0.50	**> 60**	**> 60**	**> 60**	
1,1,1-Trichloroethane		0.50	**36**	**14**	**1.0**	
1,1,2-Trichloroethane		0.50	< 0.50	< 0.50	< 0.50	
Trichloroethene		0.50	**13**	**13**	**> 60**	
Trichlorofluoromethane		0.50	< 0.50	< 0.50	**4.6**	
Vinyl chloride		0.50	< 0.50	< 0.50	< 0.50	
SURROGATE	**SPIKE CONC**	**ACCEPT LIMITS %**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**	**% RECOVERY**
1-Chloro-3-fluorobenzene	10	80-120	109	108	108	

Project Number: 28739-04.08

(RWQCB LabForm 10A; Ver12/94)

QA/QC REPORT

II. MATRIX SPIKE (MS) MATRIX SPIKE DUPLICATE (MSD)

Date Performed: 09/19/95
Batch Number: EI19101W
Lab Sample I.D.: EI01861

Analytical Method: EPA 8010
Reporting Unit: µg/L

Analyte	Sample Result	Spike Conc	MS	% MS	Spike Conc (Dup)	MSD	% MSD	RPD	MS/MSD % Limit	RPD Limit
Chloroform	0	10	10	100	10	10	100	0	80-120	≤ 20
1,1-Dichloroethane	0	10	10	100	10	9.8	98	2.0	80-120	≤ 20
1,2-Dichloroethane	0	10	11	110	10	11	110	0	80-120	≤ 20
1,1-Dichloroethene	0	10	10	100	10	9.6	96	4.1	80-120	≤ 20
Tetrachloroethene	0.055	10	11	109	10	11	109	0	80-120	≤ 20
Trichloroethene	0	10	12	120	10	13	130	8.0	80-120	≤ 20

III. LABORATORY QUALITY CONTROL CHECK SAMPLE (LCS)

Date Performed: 09/19/95
Supply Source: AccuStandard
Lot Number: 024-309
Date of Source: 7/13/95

Analytical Method: EPA 8010
Reporting Unit: µg/L
Lab LCS I.D.: LCS

Analyte	Spike Concentration	Result	% Recovery	Acceptance % Recovery Limit
Chloroform	10	10	100	80-120
1,1-Dichloroethane	10	10	100	80-120
1,2-Dichloroethane	10	11	110	80-120
1,1-Dichloroethene	10	10	100	80-120
Tetrachloroethene	10	11	110	80-120
Trichloroethene	10	11	110	80-120

Project Number: 28739-04.08

(RWQCB LabForm 10A; Ver12/94)

QA/QC REPORT

II. MATRIX SPIKE (MS) MATRIX SPIKE DUPLICATE (MSD)

Date Performed: 09/21/95
Batch Number: EI21101W
Lab Sample I.D.: BLANK

Analytical Method: EPA 8010
Reporting Unit: µg/L

Analyte	Sample Result	Spike Conc	MS	% MS	Spike Conc (Dup)	MSD	% MSD	RPD	MS/MSD % Limit	RPD Limit
Chloroform	0	10	9.7	97	10	9.8	98	1.0	80-120	≤ 20
1,1-Dichloroethane	0	10	9.4	94	10	9.2	92	2.2	80-120	≤ 20
1,2-Dichloroethane	0	10	10	100	10	11	110	9.5	80-120	≤ 20
1,1-Dichloroethene	0	10	9.1	91	10	8.9	89	2.2	80-120	≤ 20
Tetrachloroethene	0	10	9.6	96	10	9.7	97	1.0	80-120	≤ 20
Trichloroethene	0	10	11	110	10	11	110	0	80-120	≤ 20

III. LABORATORY QUALITY CONTROL CHECK SAMPLE (LCS)

Date Performed: 09/21/95
Supply Source: AccuStandard
Lot Number: 024-309
Date of Source: 7/13/95

Analytical Method: EPA 8010
Reporting Unit: µg/L
Lab LCS I.D.: LCS

Analyte	Spike Concentration	Result	% Recovery	Acceptance % Recovery Limit
Chloroform	10	11	110	80-120
1,1-Dichloroethane	10	9.9	99	80-120
1,2-Dichloroethane	10	11	110	80-120
1,1-Dichloroethene	10	9.8	98	80-120
Tetrachloroethene	10	12	120	80-120
Trichloroethene	10	11	110	80-120

Calibration data for Sequence file: **h:\data\gc10\s19p.seq**

Initial Calibration Date:	08\17\95	PID Sample File:	h:\data\gc10\p-503-p.smp	Supply Source:	Ultra Scientific
Created by:	DM/AB	ELCD Sample File:	h:\data\gc10\e-502-p.smp	Lot Number:	H-0202
Midpoint Acquire Date:	9/19/95	PID MP File:	h:\data\gc10\s19a001.rst	Standard Prep. Date	8/15/95
Date Printed:	10/10/95	ELCD MP File:	h:\data\gc10\s19b001.rst		

INITIAL CALIBRATION — DAILY MIDPOINT CALIBRATION

BROMODICHLOROMETHAN (RT = 18.73 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	58180	1.387
2	10	123166	1.500
4	50	656818	1.519
5	100	1276120	1.466
6	120	1666816	1.533
7	160	2148697	1.460
8	200	2578786	1.492
9	300	3664803	1.324

(Ave. RF = 1.460)
%RSD = 4.85

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.498	10.0	10.3	2.6	622528	≤ 15%

BROMOFORM (RT = 24.23 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	32885	0.400
4	50	236341	0.546
5	100	488320	0.561
6	120	589308	0.542
7	160	769346	0.523
8	200	965852	0.559
9	300	1499979	0.542

(Ave. RF = 0.525)
%RSD = 10.72

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.564	10.0	10.8	7.5	234472	≤ 15%

BROMOMETHANE (RT = 4.11 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	16595	0.396
2	10	36902	0.449
4	50	213603	0.494
5	100	444053	0.510
6	120	526803	0.484
7	160	700119	0.476
8	200	848210	0.491
9	300	1288896	0.466

(Ave. RF = 0.471)
%RSD = 7.54

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.423	10.0	9.0	10	175674	≤ 15%

CARBON TETRACHLORIDE (RT = 15.97 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	84475	2.014
2	10	176447	2.149
4	50	869623	2.011
5	100	1850493	2.125
6	120	2235934	2.056
7	160	2830080	1.923
8	200	3579467	2.071
9	300	5155876	1.863

(Ave. RF = 2.026)
%RSD = 4.77

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.101	10.0	10.4	3.7	873177	≤ 15%

CHLOROETHANE (RT = 4.37 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	30626	0.730
2	10	64148	0.781
4	50	339827	0.786
5	100	700563	0.805
6	120	837387	0.770
7	160	1123766	0.764
8	200	1368510	0.792
9	300	2046949	0.740

(Ave. RF = 0.771)
%RSD = 3.32

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.643	10.0	8.3	17	267194	≤ 15%

CHLOROFORM (RT = 11.87 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	88112	2.100
2	10	182623	2.224
4	50	895305	2.070
5	100	1776245	2.040

(Ave. RF = 2.016)
%RSD = 6.85

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.095	10.0	10.4	3.9	870715	≤ 15%

6	120	2179992	2.005
7	160	2767279	1.881
8	200	3524108	2.039
9	300	4897311	1.770

CHLOROMETHANE ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	18031	0.430
2	10	38682	0.471
4	50	201292	0.465
5	100	426831	0.490
6	120	511433	0.470
7	160	676391	0.460
8	200	813901	0.471
9	300	1270097	0.459

(Ave. RF = 0.465)
%RSD = 3.67

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.264	10.0	5.7	43	109549	≤ 15%

DIBROMOCHLOROMETHAN (RT = 22.07 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	37785	0.901
2	10	68274	0.831
4	50	405330	0.937
5	100	805872	0.926
6	120	984613	0.905
7	160	1272438	0.865
8	200	1540325	0.891
9	300	2370197	0.856

(Ave. RF = 0.889)
%RSD = 4.04

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.960	10.0	10.8	8.0	399030	≤ 15%

CH2BR2 (RT = 18.19 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	47449	0.578
4	50	299907	0.693
5	100	616411	0.708
6	120	753917	0.693
7	160	974918	0.663
8	200	1224176	0.708
9	300	1796923	0.649

(Ave. RF = 0.670)
%RSD = 6.94

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.611	10.0	9.1	8.9	253747	≤ 15%

MECL2 (RT = 6.63 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	118156	1.439
4	50	574343	1.328
5	100	1140431	1.310
6	120	1326624	1.220
7	160	1702666	1.157
8	200	2104089	1.217
9	300	3003800	1.085

(Ave. RF = 1.251)
%RSD = 9.40

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.257	10.0	10.0	0.47	522353	≤ 15%

1,1-DCA (RT = 8.98 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	67105	1.600
2	10	137153	1.670
4	50	703836	1.627
5	100	1411795	1.622
6	120	1665458	1.532
7	160	2145114	1.458
8	200	2673197	1.547
9	300	3810670	1.377

(Ave. RF = 1.554)
%RSD = 6.28

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.600	10.0	10.3	3.0	665013	≤ 15%

1,2-DCA (RT = 14.40 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	55983	1.335
2	10	115107	1.402
4	50	596382	1.379
5	100	1210737	1.391
6	120	1460173	1.343
7	160	1821363	1.238
8	200	2356450	1.363
9	300	3351613	1.211

(Ave. RF = 1.333)
%RSD = 5.31

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.396	10.0	10.5	4.7	580163	≤ 15%

1,1-DCE (RT = 6.29 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	67777	1.616
2	10	139620	1.700
4	50	697948	1.614
5	100	1407895	1.617
6	120	1645357	1.513
7	160	2124367	1.444
8	200	2630075	1.522
9	300	3907957	1.412

(Ave. RF = 1.555)
%RSD = 6.32

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.647	10.0	10.6	5.9	684354	≤ 15%

T-1,2-DCE (RT = 8.27 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	65393	1.559
2	10	133921	1.631
4	50	670804	1.551
5	100	1337884	1.537
6	120	1585757	1.458
7	160	2051223	1.394
8	200	2519259	1.458
9	300	3476470	1.256

(Ave. RF = 1.480)
%RSD = 7.89

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.523	10.0	10.3	2.8	632815	≤ 15%

1,2-DCP (RT = 18.42 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	60815	1.450
2	10	125364	1.527
4	50	633747	1.465
5	100	1260478	1.448
6	120	1504623	1.384
7	160	1939549	1.318
8	200	2391603	1.384
9	300	3469738	1.254

(Ave. RF = 1.404)
%RSD = 6.23

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.487	10.0	10.6	5.9	618044	≤ 15%

C1,3-DCP (RT = 20.41 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	53888	1.285
2	10	96799	1.179
4	50	550629	1.273
5	100	1064911	1.223
6	120	1329664	1.223
7	160	1690017	1.149
8	200	2044882	1.183
9	300	3023757	1.093

(Ave. RF = 1.201)
%RSD = 5.31

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.316	10.0	11.0	9.6	547103	≤ 15%

T-1,3-DCP (RT = 21.26 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	48453	1.155
2	10	83380	1.015
4	50	481882	1.114
5	100	932866	1.071
6	120	1153838	1.061
7	160	1455679	0.989
8	200	1744153	1.009
9	300	2657830	0.960

(Ave. RF = 1.047)
%RSD = 6.28

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.177	10.0	11.2	12	489051	≤ 15%

1,1,1,2-TCA (RT = 23.59 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	166228	2.024
4	50	799032	1.847
5	100	1588560	1.825
6	120	1865051	1.715
7	160	2315728	1.574
8	200	2756849	1.595

(Ave. RF = 1.763)
%RSD = 9.67

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.911	10.0	10.8	8.4	794389	≤ 15%

1,1,2,2-TCA (RT = 24.61 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	79794	0.972
4	50	418375	0.967
5	100	774154	0.889
6	120	956002	0.879
7	160	1153716	0.784

(Ave. RF = 0.883)
%RSD = 8.79

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.029	10.0	11.6	16	427562	≤ 15%

8	200	1399344	0.810

TETRACHLOROETHENE (RT = 22.70 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	177589	2.162
4	50	832388	1.924
5	100	1577830	1.812
6	120	1941906	1.786
7	160	2437844	1.657
8	200	2814503	1.628

(Ave. RF = 1.828)
%RSD = 10.73

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
2.020	10.0	11.0	10	839499	≤ 15%

1,1,1-TCA (RT = 14.70 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	66310	1.581
2	10	146710	1.786
4	50	738907	1.708
5	100	1531254	1.759
6	120	1844987	1.697
7	160	2346402	1.595
8	200	3058229	1.769
9	300	4392412	1.587

(Ave. RF = 1.685)
%RSD = 5.12

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.737	10.0	10.3	3.1	722121	≤ 15%

1,1,2-TCA (RT = 21.45 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	67832	1.617
2	10	120684	1.470
4	50	637632	1.474
5	100	1195070	1.373
6	120	1488993	1.369
7	160	1874325	1.274
8	200	2203136	1.275

(Ave. RF = 1.407)
%RSD = 8.72

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.539	10.0	10.9	9.3	639558	≤ 15%

TCE (RT = 18.61 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	90430	2.156
2	10	165500	2.015
4	50	800882	1.852
5	100	1722742	1.979
6	120	1998813	1.838
7	160	2583686	1.756
8	200	3195709	1.849
9	300	4785938	1.729

(Ave. RF = 1.897)
%RSD = 7.55

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.945	10.0	10.3	2.5	808377	≤ 15%

1,2,3-TCP (RT = 24.76 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	34622	0.825
2	10	61280	0.746
4	50	337095	0.779
5	100	629690	0.723
6	120	787922	0.725
7	160	964325	0.655
8	200	1191025	0.689
9	300	1780288	0.643

(Ave. RF = 0.723)
%RSD = 8.47

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.820	10.0	11.3	13	340921	≤ 15%

TRICHLOROFLUOROMETH (RT = 5.29 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	64353	1.534
2	10	132358	1.612
4	50	685260	1.584
5	100	1429554	1.642
6	120	1673974	1.539
7	160	2172205	1.476
8	200	2660684	1.539
9	300	3989519	1.442

(Ave. RF = 1.546)
%RSD = 4.30

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.672	10.0	10.8	8.2	694982	≤ 15%

VINYL CHLORIDE (RT = 3.54 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	31210	0.744
2	10	65359	0.796
4	50	324196	0.750
5	100	663815	0.762
6	120	786576	0.723
7	160	1023002	0.695
8	200	1220550	0.706
9	300	1913206	0.691

(Ave. RF = 0.733)
%RSD = 4.94

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.721	10.0	9.8	1.7	299537	≤ 15%

BENZENE (RT = 16.20 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	5	33556	1.713
2	10	63132	1.562
4	50	299491	1.546
5	100	607118	1.517
6	120	734852	1.563
7	160	947817	1.518
8	200	1186652	1.539
9	300	1875365	1.577

(Ave. RF = 1.567)
%RSD = 4.01

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.477	10.0	9.4	5.7	247673	≤ 15%

CHLOROBNZN (RT = 23.68 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	68388	0.833
4	50	326004	0.754
5	100	593863	0.682
6	120	760272	0.699
7	160	983092	0.668
8	200	1133453	0.656
9	300	1820084	0.658

(Ave. RF = 0.707)
%RSD = 9.17

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.764	10.0	10.8	8.1	317709	≤ 15%

1,2-DCB (RT = 26.69 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	46510	1.109
2	10	91197	1.110
4	50	446503	1.032
5	100	863705	0.992
6	120	1045565	0.961
7	160	1325148	0.901
8	200	1618794	0.937
9	300	2343163	0.847

(Ave. RF = 0.986)
%RSD = 9.58

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.021	10.0	10.4	3.5	424372	≤ 15%

1,3-DCB (RT = 26.26 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	50872	1.213
2	10	97304	1.185
4	50	472726	1.093
5	100	853003	0.980
6	120	1134326	1.043
7	160	1352673	0.919
8	200	1745782	1.010

(Ave. RF = 1.063)
%RSD = 10.08

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.028	10.0	9.7	3.3	427392	≤ 15%

1,4-DCB (RT = 26.33 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	48774	1.163
2	10	94864	1.155
4	50	436972	1.010
5	100	927460	1.065
7	160	1379776	0.938
8	200	1553680	0.899

(Ave. RF = 1.038)
%RSD = 10.57

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.111	10.0	10.7	7.0	461933	≤ 15%

ETHYLBENZENE (RT = 23.94 Minutes) PID

Calibration Levels

Level	Amount	Area	Response
1	5	28602	1.460
2	10	52763	1.305
4	50	249811	1.289
5	100	501948	1.254
6	120	611144	1.300
7	160	789375	1.264
8	200	992180	1.287

(Ave. RF = 1.306)
%RSD = 4.95

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.229	10.0	9.4	5.9	206121	≤ 15%

9	300	1531694	1.288

TOLUENE (RT = 21.74 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	72465	1.792
4	50	296615	1.531
5	100	585896	1.464
6	120	709450	1.509
7	160	911401	1.460
8	200	1145336	1.485
9	300	1765547	1.485

(Ave. RF = 1.532)
%RSD = 7.66

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.462	10.0	9.5	4.6	245177	≤ 15%

M,P-XYLENES (RT = 24.18 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	10	68339	1.744
2	20	117678	1.455
4	100	593408	1.531
5	200	1196099	1.494
6	240	1456849	1.549
7	320	1881184	1.506
8	400	2356720	1.528
9	600	3216195	1.352

(Ave. RF = 1.520)
%RSD = 7.23

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.455	20.0	19.1	4.3	487901	≤ 15%

O-XYLENE (RT = 24.59 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	30369	1.550
2	10	54247	1.342
4	50	257747	1.330
5	100	503674	1.259
6	120	635028	1.350
7	160	818960	1.312
8	200	1028568	1.334
9	300	1495294	1.257

(Ave. RF = 1.342)
%RSD = 6.83

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.220	10.0	9.1	9.0	204643	≤ 15%

N-BUTYLBENZENE (RT = 26.77 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	27669	1.413
2	10	48397	1.197
4	50	220082	1.136
5	100	450185	1.125
6	120	546883	1.163
7	160	706458	1.131
8	200	885799	1.149
9	300	1361775	1.145

(Ave. RF = 1.182)
%RSD = 8.10

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.096	10.0	9.3	7.3	183739	≤ 15%

SEC-BUTYLBENZENE (RT = 26.20 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	23005	1.174
2	10	41743	1.033
4	50	199742	1.031
5	100	446411	1.116
6	120	499656	1.062
7	160	747867	1.198
8	200	794443	1.030
9	300	1292876	1.087

(Ave. RF = 1.091)
%RSD = 6.05

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.143	10.0	10.5	4.8	191707	≤ 15%

T-BUTYLBENZENE (RT = 25.99 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	46622	1.153
4	50	195380	1.008
5	100	388429	0.971
6	120	478828	1.018
7	160	616282	0.987
8	200	770234	0.999
9	300	1197404	1.007

(Ave. RF = 1.020)
%RSD = 5.94

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.953	10.0	9.3	6.6	159748	≤ 15%

2-CVE (RT = 20.10 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	14769	0.352
2	10	29424	0.358
4	50	194612	0.450
5	100	372260	0.428
6	120	481504	0.443
7	160	603643	0.410
8	200	740719	0.429
9	300	1110114	0.401

(Ave. RF = 0.409)
%RSD = 8.97

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.438	10.0	10.7	7.1	182004	≤ 15%

2-CHLOROTOLUENE (RT = 25.55 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	27534	0.656
2	10	55999	0.682
4	50	282724	0.654
5	100	529286	0.608
6	120	692678	0.637
7	160	846469	0.575
8	200	1054411	0.610
9	300	1529108	0.553

(Ave. RF = 0.622)
%RSD = 7.02

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.621	10.0	10.0	0.21	257912	≤ 15%

4-CHLOROTOLUENE (RT = 25.63 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	27190	0.648
2	10	57124	0.696
4	50	270297	0.625
5	100	552102	0.634
6	120	643097	0.591
7	160	826983	0.562
8	200	972268	0.563
9	300	1553139	0.561

(Ave. RF = 0.610)
%RSD = 8.05

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.671	10.0	11.0	10	278858	≤ 15%

DICHLORODIFLUOROMETH (RT = 3.07 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	14532	0.346
2	10	31050	0.378
4	50	164398	0.380
5	100	347131	0.399
6	120	405976	0.373
7	160	539584	0.367
8	200	644198	0.373
9	300	1009882	0.365

(Ave. RF = 0.373)
%RSD = 3.99

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.311	10.0	8.3	17	129175	≤ 15%

CIS-1,2-DCE (RT = 10.93 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	66254	1.579
2	10	139352	1.697
4	50	716595	1.657
5	100	1429701	1.642
6	120	1703003	1.566
7	160	2215541	1.506
8	200	2763339	1.599
9	300	3923939	1.418

(Ave. RF = 1.583)
%RSD = 5.63

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.570	10.0	9.9	0.81	652583	≤ 15%

1,3-DCP (RT = 21.80 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	110823	1.349
4	50	513875	1.188
5	100	969610	1.114
6	120	1211841	1.114
7	160	1502170	1.021
8	200	1785948	1.033

(Ave. RF = 1.137)
%RSD = 10.63

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.265	10.0	11.1	11	525591	≤ 15%

2,2-DCP (RT = 12.11 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	33728	0.804
2	10	84407	1.028
4	50	411713	0.952
5	100	944580	1.085
6	120	1112195	1.023

(Ave. RF = 0.989)
%RSD = 8.76

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.879	10.0	8.9	11	365329	≤ 15%

7	160	1449488	0.985
8	200	1829984	1.059
9	300	2696010	0.974

1,1-DICHLOROPROPENE (RT = 15.50 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	57700	1.375
2	10	121043	1.474
4	50	599300	1.386
5	100	1271444	1.460
6	120	1529037	1.406
7	160	1955366	1.329
8	200	2483897	1.437
9	300	3524816	1.274

(Ave. RF = 1.393)
%RSD = 4.85

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.434	10.0	10.3	3.0	595936	≤ 15%

EDB (RT = 22.42 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	21963	0.524
2	10	43106	0.525
4	50	267717	0.619
5	100	517400	0.594
6	120	650640	0.598
7	160	826455	0.562
8	200	1008327	0.583
9	300	1518165	0.549

(Ave. RF = 0.569)
%RSD = 6.19

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.603	10.0	10.6	5.9	250556	≤ 15%

HEXACHLOROBUTADIENE (RT = 29.00 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	158023	1.924
4	50	710896	1.644
5	100	1392032	1.599
6	120	1585878	1.458
7	160	2072463	1.408
8	200	2545292	1.473

(Ave. RF = 1.584)
%RSD = 11.93

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.548	10.0	9.8	2.3	643458	≤ 15%

P-ISOPROPYLTOLUENE (RT = 26.38 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	22608	1.154
2	10	42146	1.042
4	50	200676	1.036
5	100	420592	1.051
6	120	475294	1.011
7	160	642755	1.029
8	200	779354	1.011
9	300	1234953	1.038

(Ave: RF = 1.047)
%RSD = 4.37

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.032	10.0	9.9	1.4	172985	≤ 15%

NAPHTHALENE (RT = 28.95 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	23743	1.212
2	10	38846	0.961
3	30	144742	1.232
4	50	210931	1.089
5	100	395763	0.989
6	120	526679	1.120
8	200	765747	0.993
9	300	1236813	1.040

(Ave. RF = 1.079)
%RSD = 9.51

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.049	10.0	9.7	2.8	175950	≤ 15%

N-PROPYLBENZENE (RT = 25.43 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	26765	1.366
2	10	49528	1.225
4	50	229369	1.184
5	100	477350	1.193
6	120	567913	1.208
7	160	788408	1.263
8	200	916399	1.189
9	300	1505973	1.266

(Ave. RF = 1.237)
%RSD = 4.97

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.180	10.0	9.5	4.6	197912	≤ 15%

STYRENE (RT = 24.52 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	37117	1.895
2	10	66396	1.642
4	50	317935	1.641
5	100	644472	1.610
6	120	775577	1.649
7	160	989846	1.585
8	200	1353895	1.756
9	300	2044637	1.719

(Ave. RF = 1.687)
%RSD = 5.96

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.588	10.0	9.4	5.9	266340	≤ 15%

1,2,3-TCB (RT = 29.15 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	97774	1.191
4	50	483467	1.118
5	100	931447	1.070
6	120	1082494	0.995
7	160	1393003	0.947
8	200	1782929	1.032
9	300	2446518	0.884

(Ave. RF = 1.034)
%RSD = 10.02

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.066	10.0	10.3	3.1	443154	≤ 15%

1,2,4-TCB (RT = 28.68 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	103224	1.257
4	50	496177	1.147
5	100	966351	1.110
6	120	1116438	1.027
7	160	1475540	1.003
8	200	1834907	1.062
9	300	2568455	0.928

(Ave. RF = 1.076)
%RSD = 9.95

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.117	10.0	10.4	3.8	464085	≤ 15%

1,2,4-TRIMETHYLBENZE (RT = 26.10 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	29718	1.517
2	10	54703	1.353
4	50	258297	1.333
5	100	513674	1.284
6	120	633168	1.346
7	160	822453	1.317
8	200	1024207	1.328
9	300	1794958	1.509

(Ave. RF = 1.374)
%RSD = 6.46

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.276	10.0	9.3	7.1	213959	≤ 15%

UTM 005664

Calibration data for Sequence file: **h:\data\gc10\s21p.seq**

Initial Calibration Date:	08\17\95	PID Sample File:	h:\data\gc10\p-503-p.smp	Supply Source:	Ultra Scientific
Created by:	DM/AB	ELCD Sample File:	h:\data\gc10\e-502-p.smp	Lot Number:	H-0202
Midpoint Acquire Date:	9/21/95	PID MP File:	h:\data\gc10\s21a004.rst	Standard Prep. Date:	8/15/95
Date Printed:	10/10/95	ELCD MP File:	h:\data\gc10\s21b004.rst		

INITIAL CALIBRATION — DAILY MIDPOINT CALIBRATION

BROMODICHLOROMETHAN (RT = 18.73 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	58180	1.387
2	10	123166	1.500
4	50	656818	1.519
5	100	1276120	1.466
6	120	1666816	1.533
7	160	2148697	1.460
8	200	2578786	1.492
9	300	3664803	1.324

(Ave. RF = 1.460)
%RSD = 4.85

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.428	10.0	9.8	2.2	592408	≤ 15%

BROMOFORM (RT = 24.23 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	32885	0.400
4	50	236341	0.546
5	100	488320	0.561
6	120	589308	0.542
7	160	769346	0.523
8	200	965852	0.559
9	300	1499979	0.542

(Ave. RF = 0.525)
%RSD = 10.72

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
0.551	10.0	10.5	5.0	228690	≤ 15%

BROMOMETHANE (RT = 4.11 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	16595	0.396
2	10	36902	0.449
4	50	213603	0.494
5	100	444053	0.510
6	120	526803	0.484
7	160	700119	0.476
8	200	848210	0.491
9	300	1288896	0.466

(Ave. RF = 0.471)
%RSD = 7.54

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
0.379	10.0	8.1	19	157431	≤ 15%

CARBON TETRACHLORIDE (RT = 15.97 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	84475	2.014
2	10	176447	2.149
4	50	869623	2.011
5	100	1850493	2.125
6	120	2235934	2.056
7	160	2830080	1.923
8	200	3579467	2.071
9	300	5155876	1.863

(Ave. RF = 2.026)
%RSD = 4.77

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
2.032	10.0	10.0	0.29	843144	≤ 15%

CHLOROETHANE (RT = 4.37 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	30626	0.730
2	10	64148	0.781
4	50	339827	0.786
5	100	700563	0.805
6	120	837387	0.770
7	160	1123766	0.764
8	200	1368510	0.792
9	300	2046949	0.740

(Ave. RF = 0.771)
%RSD = 3.32

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.501	10.0	6.5	35	207871	≤ 15%

CHLOROFORM (RT = 11.87 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	88112	2.100
2	10	182623	2.224
4	50	895305	2.070
5	100	1776245	2.040

(Ave. RF = 2.016)
%RSD = 6.85

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.912	10.0	9.5	5.2	793112	≤ 15%

6	120	2179992	2.005
7	160	2767279	1.881
8	200	3524108	2.039
9	300	4897311	1.770

CHLOROMETHANE

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	18031	0.430
2	10	38682	0.471
4	50	201292	0.465
5	100	426831	0.490
6	120	511433	0.470
7	160	676391	0.460
8	200	813901	0.471
9	300	1270097	0.459

(Ave. RF = 0.465)
%RSD = 3.67

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.194	10.0	4.2	58	80354	≤ 15%

DIBROMOCHLOROMETHAN (RT = 22.19 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	37785	0.901
2	10	68274	0.831
4	50	405330	0.937
5	100	805872	0.926
6	120	984613	0.905
7	160	1272438	0.865
8	200	1540325	0.891
9	300	2370197	0.856

(Ave. RF = 0.889)
%RSD = 4.04

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.928	10.0	10.4	4.4	385172	≤ 15%

CH2BR2 (RT = 18.19 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	47449	0.578
4	50	299907	0.693
5	100	616411	0.708
6	120	753917	0.693
7	160	974918	0.663
8	200	1224176	0.708
9	300	1796923	0.649

(Ave. RF = 0.670)
%RSD = 6.94

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.607	10.0	9.1	9.4	251860	≤ 15%

MECL2 (RT = 6.63 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	118156	1.439
4	50	574343	1.328
5	100	1140431	1.310
6	120	1326624	1.220
7	160	1702666	1.157
8	200	2104089	1.217
9	300	3003800	1.085

(Ave. RF = 1.251)
%RSD = 9.40

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.181	10.0	9.4	5.6	490066	≤ 15%

1,1-DCA (RT = 8.98 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	67105	1.600
2	10	137153	1.670
4	50	703836	1.627
5	100	1411795	1.622
6	120	1665458	1.532
7	160	2145114	1.458
8	200	2673197	1.547
9	300	3810670	1.377

(Ave. RF = 1.554)
%RSD = 6.28

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.485	10.0	9.6	4.5	615943	≤ 15%

1,2-DCA (RT = 14.40 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	55983	1.335
2	10	115107	1.402
4	50	596382	1.379
5	100	1210737	1.391
6	120	1460173	1.343
7	160	1821363	1.238
8	200	2356450	1.363
9	300	3351613	1.211

(Ave. RF = 1.333)
%RSD = 5.31

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.359	10.0	10.2	2.0	563666	≤ 15%

UTM 005666

1,1-DCE (RT = 6.29 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	67777	1.616
2	10	139620	1.700
4	50	697948	1.614
5	100	1407895	1.617
6	120	1645357	1.513
7	160	2124367	1.444
8	200	2630075	1.522
9	300	3907957	1.412

(Ave. RF = 1.555)
%RSD = 6.32

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.484	10.0	9.5	4.5	615718	≤ 15%

T-1,2-DCE (RT = 8.27 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	65393	1.559
2	10	133921	1.631
4	50	670804	1.551
5	100	1337884	1.537
6	120	1585757	1.458
7	160	2051223	1.394
8	200	2519259	1.458
9	300	3476470	1.256

(Ave. RF = 1.480)
%RSD = 7.89

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.410	10.0	9.5	4.7	585038	≤ 15%

1,2-DCP (RT = 18.42 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	60815	1.450
2	10	125364	1.527
4	50	633747	1.465
5	100	1260478	1.448
6	120	1504623	1.384
7	160	1939549	1.318
8	200	2391603	1.384
9	300	3469738	1.254

(Ave. RF = 1.404)
%RSD = 6.23

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.415	10.0	10.1	0.80	586937	≤ 15%

C1,3-DCP (RT = 20.41 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	53888	1.285
2	10	96799	1.179
4	50	550629	1.273
5	100	1064911	1.223
6	120	1329664	1.223
7	160	1690017	1.149
8	200	2044882	1.183
9	300	3023757	1.093

(Ave. RF = 1.201)
%RSD = 5.31

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.258	10.0	10.5	4.8	522073	≤ 15%

T-1,3-DCP (RT = 21.26 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	48453	1.155
2	10	83380	1.015
4	50	481882	1.114
5	100	932866	1.071
6	120	1153838	1.061
7	160	1455679	0.989
8	200	1744153	1.009
9	300	2657830	0.960

(Ave. RF = 1.047)
%RSD = 6.28

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.124	10.0	10.7	7.3	466128	≤ 15%

1,1,1,2-TCA (RT = 23.59 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	166228	2.024
4	50	799032	1.847
5	100	1588560	1.825
6	120	1865051	1.715
7	160	2315728	1.574
8	200	2756849	1.595

(Ave. RF = 1.763)
%RSD = 9.67

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.767	10.0	10.0	0.20	732987	≤ 15%

1,1,2,2-TCA (RT = 24.61 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	79794	0.972
4	50	418375	0.967
5	100	774154	0.889
6	120	956002	0.879
7	160	1153716	0.784

(Ave. RF = 0.883)
%RSD = 8.79

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.959	10.0	10.9	8.5	397733	≤ 15%

8	200	1399344	0.810

TETRACHLOROETHENE (RT = 22.70 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	177589	2.162
4	50	832388	1.924
5	100	1577830	1.812
6	120	1941906	1.786
7	160	2437844	1.657
8	200	2814503	1.628

(Ave. RF = 1.828)
%RSD = 10.73

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.861	10.0	10.2	1.8	771854	≤ 15%

1,1,1-TCA (RT = 14.70 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	66310	1.581
2	10	146710	1.786
4	50	738907	1.708
5	100	1531254	1.759
6	120	1844987	1.697
7	160	2346402	1.595
8	200	3058229	1.769
9	300	4392412	1.587

(Ave. RF = 1.685)
%RSD = 5.12

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.741	10.0	10.3	3.3	722105	≤ 15%

1,1,2-TCA (RT = 21.45 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	67832	1.617
2	10	120684	1.470
4	50	637632	1.474
5	100	1195070	1.373
6	120	1488993	1.369
7	160	1874325	1.274
8	200	2203136	1.275

(Ave. RF = 1.407)
%RSD = 8.72

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.453	10.0	10.3	3.3	602908	≤ 15%

TCE (RT = 18.61 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	90430	2.156
2	10	165500	2.015
4	50	800882	1.852
5	100	1722742	1.979
6	120	1998813	1.838
7	160	2583686	1.756
8	200	3195709	1.849
9	300	4785938	1.729

(Ave. RF = 1.897)
%RSD = 7.55

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.870	10.0	9.9	1.4	775954	≤ 15%

1,2,3-TCP (RT = 24.76 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	34622	0.825
2	10	61280	0.746
4	50	337095	0.779
5	100	629690	0.723
6	120	787922	0.725
7	160	964325	0.655
8	200	1191025	0.689
9	300	1780288	0.643

(Ave. RF = 0.723)
%RSD = 8.47

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.763	10.0	10.5	5.4	316409	≤ 15%

TRICHLOROFLUOROMETH (RT = 5.29 Minutes) ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	64353	1.534
2	10	132358	1.612
4	50	685260	1.584
5	100	1429554	1.642
6	120	1673974	1.539
7	160	2172205	1.476
8	200	2660684	1.539
9	300	3989519	1.442

(Ave. RF = 1.546)
%RSD = 4.30

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.566	10.0	10.1	1.3	649835	≤ 15%

VINYL CHLORIDE (RT = 3.54 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	31210	0.744
2	10	65359	0.796
4	50	324196	0.750
5	100	663815	0.762
6	120	786576	0.723
7	160	1023002	0.695
8	200	1220550	0.706
9	300	1913206	0.691

(Ave. RF = 0.733)
%RSD = 4.94

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.692	10.0	9.4	5.7	286951	≤ 15%

BENZENE (RT = 16.20 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	33556	1.713
2	10	63132	1.562
4	50	299491	1.546
5	100	607118	1.517
6	120	734852	1.563
7	160	947817	1.518
8	200	1186652	1.539
9	300	1875365	1.577

(Ave. RF = 1.567)
%RSD = 4.01

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.473	10.0	9.4	6.0	241021	≤ 15%

CHLOROBNZN (RT = 23.68 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	68388	0.833
4	50	326004	0.754
5	100	593863	0.682
6	120	760272	0.699
7	160	983092	0.668
8	200	1133453	0.656
9	300	1820084	0.658

(Ave. RF = 0.707)
%RSD = 9.17

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.759	10.0	10.7	7.3	314687	≤ 15%

1,2-DCB (RT = 26.69 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	46510	1.109
2	10	91197	1.110
4	50	446503	1.032
5	100	863705	0.992
6	120	1045565	0.961
7	160	1325148	0.901
8	200	1618794	0.937
9	300	2343163	0.847

(Ave. RF = 0.986)
%RSD = 9.58

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.000	10.0	10.1	1.4	414661	≤ 15%

1,3-DCB (RT = 26.26 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	50872	1.213
2	10	97304	1.185
4	50	472726	1.093
5	100	853003	0.980
6	120	1134326	1.043
7	160	1352673	0.919
8	200	1745782	1.010

(Ave. RF = 1.063)
%RSD = 10.08

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.941	10.0	8.8	12	390328	≤ 15%

1,4-DCB (RT = 26.33 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	48774	1.163
2	10	94864	1.155
4	50	436972	1.010
5	100	927460	1.065
7	160	1379776	0.938
8	200	1553680	0.899

(Ave. RF = 1.038)
%RSD = 10.57

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.110	10.0	10.7	6.9	460566	≤ 15%

ETHYLBENZENE (RT = 23.94 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	28602	1.460
2	10	52763	1.305
4	50	249811	1.289
5	100	501948	1.254
6	120	611144	1.300
7	160	789375	1.264
8	200	992180	1.287

(Ave. RF = 1.306)
%RSD = 4.95

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.246	10.0	9.5	4.6	203885	≤ 15%

9	300	1531694	1.288

TOLUENE (RT = 21.74 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	72465	1.792
4	50	296615	1.531
5	100	585896	1.464
6	120	709450	1.509
7	160	911401	1.460
8	200	1145336	1.485
9	300	1765547	1.485

(Ave. RF = 1.532)
%RSD = 7.66

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.481	10.0	9.7	3.4	242270	≤ 15%

M,P-XYLENES (RT = 24.18 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	10	68339	1.744
2	20	117678	1.455
4	100	593408	1.531
5	200	1196099	1.494
6	240	1456849	1.549
7	320	1881184	1.506
8	400	2356720	1.528
9	600	3216195	1.352

(Ave. RF = 1.520)
%RSD = 7.23

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.474	20.0	19.4	3.1	482227	≤ 15%

O-XYLENE (RT = 24.59 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	30369	1.550
2	10	54247	1.342
4	50	257747	1.330
5	100	503674	1.259
6	120	635028	1.350
7	160	818960	1.312
8	200	1028568	1.334
9	300	1495294	1.257

(Ave. RF = 1.342)
%RSD = 6.83

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.303	10.0	9.7	2.9	213094	≤ 15%

N-BUTYLBENZENE (RT = 26.77 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	27669	1.413
2	10	48397	1.197
4	50	220082	1.136
5	100	450185	1.125
6	120	546883	1.163
7	160	706458	1.131
8	200	885799	1.149
9	300	1361775	1.145

(Ave. RF = 1.182)
%RSD = 8.10

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.124	10.0	9.5	4.9	183931	≤ 15%

SEC-BUTYLBENZENE (RT = 26.23 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	23005	1.174
2	10	41743	1.033
4	50	199742	1.031
5	100	446411	1.116
6	120	499656	1.062
7	160	747867	1.198
8	200	794443	1.030
9	300	1292876	1.087

(Ave. RF = 1.091)
%RSD = 6.05

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.046	10.0	9.6	4.2	171134	≤ 15%

T-BUTYLBENZENE (RT = 25.99 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
2	10	46622	1.153
4	50	195380	1.008
5	100	388429	0.971
6	120	478828	1.018
7	160	616282	0.987
8	200	770234	0.999
9	300	1197404	1.007

(Ave. RF = 1.020)
%RSD = 5.94

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.977	10.0	9.6	4.3	159829	≤ 15%

2-CVE (RT = 20.10 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	14769	0.352
2	10	29424	0.358
4	50	194612	0.450
5	100	372260	0.428
6	120	481504	0.443
7	160	603643	0.410
8	200	740719	0.429
9	300	1110114	0.401

(Ave. RF = 0.409)
%RSD = 8.97

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.414	10.0	10.1	1.4	171920	≤ 15%

2-CHLOROTOLUENE (RT = 25.55 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	27534	0.656
2	10	55999	0.682
4	50	282724	0.654
5	100	529286	0.608
6	120	692678	0.637
7	160	846469	0.575
8	200	1054411	0.610
9	300	1529108	0.553

(Ave. RF = 0.622)
%RSD = 7.02

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.623	10.0	10.0	0.12	258287	≤ 15%

4-CHLOROTOLUENE (RT = 25.63 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	27190	0.648
2	10	57124	0.696
4	50	270297	0.625
5	100	552102	0.634
6	120	643097	0.591
7	160	826983	0.562
8	200	972268	0.563
9	300	1553139	0.561

(Ave. RF = 0.610)
%RSD = 8.05

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.599	10.0	9.8	1.7	248698	≤ 15%

DICHLORODIFLUOROMETH (RT = 3.07 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	14532	0.346
2	10	31050	0.378
4	50	164398	0.380
5	100	347131	0.399
6	120	405976	0.373
7	160	539584	0.367
8	200	644198	0.373
9	300	1009882	0.365

(Ave. RF = 0.373)
%RSD = 3.99

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.265	10.0	7.1	29	109844	≤ 15%

CIS-1,2-DCE (RT = 10.93 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	66254	1.579
2	10	139352	1.697
4	50	716595	1.657
5	100	1429701	1.642
6	120	1703003	1.566
7	160	2215541	1.506
8	200	2763339	1.599
9	300	3923939	1.418

(Ave. RF = 1.583)
%RSD = 5.63

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.520	10.0	9.6	4.0	630433	≤ 15%

1,3-DCP (RT = 21.80 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	110823	1.349
4	50	513875	1.188
5	100	969610	1.114
6	120	1211841	1.114
7	160	1502170	1.021
8	200	1785948	1.033

(Ave. RF = 1.137)
%RSD = 10.63

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.175	10.0	10.3	3.4	487632	≤ 15%

2,2-DCP (RT = 12.11 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	33728	0.804
2	10	84407	1.028
4	50	411713	0.952
5	100	944580	1.085
6	120	1112195	1.023

(Ave. RF = 0.989)
%RSD = 8.76

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.954	10.0	9.6	3.5	395693	≤ 15%

7	160	1449488	0.985
8	200	1829984	1.059
9	300	2696010	0.974

1,1-DICHLOROPROPENE (RT = 15.50 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	57700	1.375
2	10	121043	1.474
4	50	599300	1.386
5	100	1271444	1.460
6	120	1529037	1.406
7	160	1955366	1.329
8	200	2483897	1.437
9	300	3524816	1.274

(Ave. RF = 1.393)
%RSD = 4.85

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.383	10.0	9.9	0.67	573868	≤ 15%

EDB (RT = 22.42 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
1	5	21963	0.524
2	10	43106	0.525
4	50	267717	0.619
5	100	517400	0.594
6	120	650640	0.598
7	160	826455	0.562
8	200	1008327	0.583
9	300	1518165	0.549

(Ave. RF = 0.569)
%RSD = 6.19

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.579	10.0	10.2	1.7	240140	≤ 15%

HEXACHLOROBUTADIENE (RT = 29.00 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	158023	1.924
4	50	710896	1.644
5	100	1392032	1.599
6	120	1585878	1.458
7	160	2072463	1.408
8	200	2545292	1.473

(Ave. RF = 1.584)
%RSD = 11.93

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.687	10.0	10.6	6.5	699667	≤ 15%

P-ISOPROPYLTOLUENE (RT = 26.41 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	22608	1.154
2	10	42146	1.042
4	50	200676	1.036
5	100	420592	1.051
6	120	475294	1.011
7	160	642755	1.029
8	200	779354	1.011
9	300	1234953	1.038

(Ave. RF = 1.047)
%RSD = 4.37

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
0.995	10.0	9.5	4.9	162840	≤ 15%

NAPHTHALENE (RT = 28.95 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	23743	1.212
2	10	38846	0.961
3	30	144742	1.232
4	50	210931	1.089
5	100	395763	0.989
6	120	526679	1.120
8	200	765747	0.993
9	300	1236813	1.040

(Ave. RF = 1.079)
%RSD = 9.51

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.018	10.0	9.4	5.6	166622	≤ 15%

N-PROPYLBENZENE (RT = 25.43 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	26765	1.366
2	10	49528	1.225
4	50	229369	1.184
5	100	477350	1.193
6	120	567913	1.208
7	160	788408	1.263
8	200	916399	1.189
9	300	1505973	1.266

(Ave. RF = 1.237)
%RSD = 4.97

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.153	10.0	9.3	6.8	188560	≤ 15%

STYRENE (RT = 24.52 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	37117	1.895
2	10	66396	1.642
4	50	317935	1.641
5	100	644472	1.610
6	120	775577	1.649
7	160	989846	1.585
8	200	1353895	1.756
9	300	2044637	1.719

(Ave. RF = 1.687)
%RSD = 5.96

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.580	10.0	9.4	6.3	258522	≤ 15%

1,2,3-TCB (RT = 29.15 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	97774	1.191
4	50	483467	1.118
5	100	931447	1.070
6	120	1082494	0.995
7	160	1393003	0.947
8	200	1782929	1.032
9	300	2446518	0.884

(Ave. RF = 1.034)
%RSD = 10.02

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.136	10.0	11.0	9.9	471328	≤ 15%

1,2,4-TCB (RT = 28.68 Minutes)

ELCD

Calibration Levels

Level	Amount	Area	Response
2	10	103224	1.257
4	50	496177	1.147
5	100	966351	1.110
6	120	1116438	1.027
7	160	1475540	1.003
8	200	1834907	1.062
9	300	2568455	0.928

(Ave. RF = 1.076)
%RSD = 9.95

Daily RF	Amount	Result	% diff	Area	% diff Accep limits
1.138	10.0	10.6	5.8	472294	≤ 15%

1,2,4-TRIMETHYLBENZE (RT = 26.10 Minutes)

PID

Calibration Levels

Level	Amount	Area	Response
1	5	29718	1.517
2	10	54703	1.353
4	50	258297	1.333
5	100	513674	1.284
6	120	633168	1.346
7	160	822453	1.317
8	200	1024207	1.328
9	300	1794958	1.509

(Ave. RF = 1.374)
%RSD = 6.46

Daily RF	Amount	Result	% diff	Area	% diff Accep. limits
1.300	10.0	9.5	5.4	212677	≤ 15%

DISTRIBUTION

Groundwater Monitoring 1995
Utility Trailer Manufacturing Company
17300 East Chestnut Street
City of Industry, California

January 30, 1996

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Quality Control Reviewer

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