**Harding Lawson Associates**

Engineering and Environmental Services

# Groundwater Monitoring
# November 1993 through April 1994
# Utility Trailer Manufacturing Company
# 17300 East Chestnut Street
# City of Industry, California

UTM 004641

# Groundwater Monitoring
# November 1993 through April 1994
# 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
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HLA Project No. 25109 4


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May 12, 1994


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**TRANSMITTAL**

| | |
|---|---|
| **To:** | Ms. Rueen-Fang Wang<br>California Regional Water Quality Control Board, Los Angeles Region<br>101 Centre Plaza Drive<br>Monterey Park, California 91754-2156 |
| **From:** | Bradford C.D. Eismen BCDE |
| **Date:** | May 12, 1994 |
| **Subject:** | Groundwater Monitoring Report |
| **Project Number:** | 25109 4 |

Enclosed are three copies of Harding Lawson Associates' report entitled *Groundwater Monitoring, November 1993 through April 1994, Utility Trailer Manufacturing Company, 17300 East Chestnut Street, City of Industry, California.*

If you have any questions, please call.

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## DISTRIBUTION

## INTRODUCTION

This report presents Harding Lawson Associates' (HLA) groundwater monitoring data for the period from November 1, 1993, through April 31, 1994, for Utility Trailer Manufacturing Company, City of Industry, California (Plate 1).

## WORK CONDUCTED THIS PERIOD

### GROUNDWATER MONITORING

Site observation wells were monitored once each month for depth to groundwater using either a Solinst electric well sounder or a tape and rule coated with water-detecting paste. Monitoring data collected during this period are presented in Table 1. February monitoring data were used to produce a groundwater contour map (Plate 2).

Groundwater occurs beneath the site at an average depth below ground surface of approximately 22 feet (equivalent to an approximate elevation of 356 feet above Mean Sea Level). Contoured groundwater elevations indicate a northwesterly flow direction and a gradient with a magnitude of approximately 0.0045 foot per foot.

### GROUNDWATER SAMPLING

An HLA geologist collected groundwater samples from site observation wells (MW-2 through MW-6) on February 9, 1994, for chemical analyses. Prior to sampling, wells were purged of 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, and temperature of the purged groundwater were monitored during purging activities. Well purging data are presented in Appendix A. To minimize cross contamination between wells, purging and sampling equipment was decontaminated prior to each use with Liqui-Nox detergent solution followed by potable and distilled water rinses.

Prior to groundwater sample collection, water levels in the well casings were allowed to recover to within at least 80 percent of the original static water level observed before purging. Well MW-3 was purged dry and also was allowed to recover to at least 80 percent of the original static water level. This well has had a history of purging dry. To minimize agitation/volatilization, the samples were collected by gently lowering a stainless-steel 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. One groundwater sample was collected in duplicate (labeled MW-7) from Well MW-2 and submitted for analysis to monitor laboratory quality control. To assess the effectiveness of decontamination procedures, an equipment blank was collected (labeled MW-8) and submitted with the groundwater samples for analyses. Collected samples were analyzed for halogenated volatile organic compounds (VOCs) using EPA Method 8010.

### GROUNDWATER ANALYTICAL RESULTS

Seven halogenated compounds were detected in groundwater samples collected from site wells. The maximum concentrations for these compounds are:

- Tetrachloroethene (PCE) - 230 $\mu g/l$ in upgradient Well MW-4,

- Trichloroethene (TCE) - 60 $\mu g/l$ in upgradient Well MW-3,
- 1,1-dichloroethene (1,1-DCE) - 49 $\mu g/l$ in Well MW-5,
- 1,1,1-trichloroethane (1,1,1-TCA) - 35 $\mu g/l$ in Well MW-5,
- 1,1-dichloroethane (1,1-DCA) - 12 $\mu g/l$ in Well MW-5,
- cis 1,2-DCE - 6.3 $\mu g/l$ in Well MW-6, and
- Chloroform - 5.4 $\mu g/l$ in Well MW-5.

Groundwater analytical results are presented in Table 2. The RPDs for all analytes were greater than 30 percent. The reported concentrations of all analytes, except PCE, were less than 5 times the detection limit. DMA reviewed the results and indicated that each sample was originally analyzed two times and each analysis for the same sample was comparable. In addition, all QA/QC met acceptance criteria.

## DISCUSSION

Review of historic groundwater chemical data collected at the site and comparison with the data collected during this reporting period indicate:

- In general, concentrations have decreased for the last three sampling events (February and August 1993 and February 1994) with the exceptions of Well MW-5, which indicated an increase in all detected compounds during the current reporting period, and Well MW-3, which indicated an increase in TCE during the last two reporting periods.
- Consistently, maximum concentrations of VOCs are detected in the two upgradient wells, MW-3 and MW-4, and in Well MW-2, located within the runoff collection area at the north end of the drainage conduit (Table 4).
- The highest concentrations of PCE have been detected in the upgradient Well MW-4 and downgradient Well MW-2.
- The highest concentrations of TCE have consistently been detected in upgradient Well MW-3.
- The highest concentrations of 1,1,1-TCA have been detected in Well MW-6 at levels well below all applicable maximum contaminant levels (MCLs).
- The highest concentrations of 1,1-DCE have been detected in upgradient Well MW-4 and downgradient Well MW-2.

Isoconcentration contour maps prepared for the two most recent sampling events (August 1993 and February 1994) are presented on Plates 4 through 7. A contour map for 1,1,1-TCA (August 1993) was not prepared because the compound was not detected in any samples.

- Elevated concentrations of PCE detected in Well MW-4 indicate an upgradient and offsite source. In general, there is a steep negative PCE concentration gradient towards the center of the site (constrained by Wells MW-5 and MW-6) with elevated PCE concentrations in Well MW-2 separated from those of Well MW-4 by much lower concentrations across the site.
- Consistently elevated concentrations of TCE are detected in Well MW-3, concentrations in all other wells are consistently lower. This historically consistent concentration distribution indicates an upgradient and offsite source for TCE.

- The February 1994 data indicate a downgradient migration of maximum 1,1-DCE concentrations from Well MW-4 towards Well MW-5.

The concentration and equivalent water elevation versus time plot for Well MW-4 indicates a maximum PCE concentration coinciding with the relatively rapid rise in water levels following the wetter than normal winter of 1992-1993 (samples collected February 1993). This suggests a nearby source upgradient of the well. The plot also shows an increase in the concentrations of TCE and 1,1-DCE in the sampling event following the February 1993 event (August 1993). The increased concentrations of these compounds may be related to breakdown of the PCE. The plot for Well MW-3 indicates a delayed increase in the concentrations following the rise in water levels and also suggests an upgradient source. The plot for Well MW-5 indicates similar trends for all principal compounds detected this monitoring period.

Concentration and equivalent water elevation versus time plots for all wells are presented on Plates 8 through 12.

TABLES

Table 1. Groundwater Monitoring Data
Utility Trailer Manufacturing Company



| WELL NUMBER | SURVEYED ELEVATION (FEET MSL)* | DATE | DEPTH TO GROUNDWATER (FEET)** | EQUIVALENT GROUNDWATER ELEVATION (FEET MSL) |
|---|---|---|---|---|
| MW-2 | 377.16 | 06/01/89 | 23.45 | 353.71 |
| | | 08/28/89 | 23.53 | 353.63 |
| | | 09/15/89 | 23.55 | 353.61 |
| | | 10/11/89 | 23.63 | 353.53 |
| | | 11/16/89 | 23.70 | 353.46 |
| | | 12/11/89 | 23.75 | 353.41 |
| | | 01/15/90 | 23.76 | 353.40 |
| | | 02/12/90 | 23.66 | 353.50 |
| | | 03/09/90 | 23.57 | 353.59 |
| | | 04/12/90 | 23.45 | 353.71 |
| | | 05/14/90 | 23.98 | 353.18 |
| | | 06/07/90 | 23.92 | 353.24 |
| | | 07/10/90 | 23.85 | 353.31 |
| | | 08/16/90 | 24.30 | 352.86 |
| | | 09/11/90 | 23.97 | 353.19 |
| | | 01/31/91 | 24.78 | 352.38 |
| | | 02/27/91 | 25.02 | 352.14 |
| | | 03/07/91 | 24.30 | 352.86 |
| | | 04/08/91 | 23.86 | 353.30 |
| | | 05/07/91 | 24.10 | 353.06 |
| | | 06/07/91 | 24.26 | 352.90 |
| | | 07/10/91 | 24.54 | 352.62 |
| | | 08/08/91 | 24.72 | 352.44 |
| | | 09/06/91 | 24.52 | 352.64 |
| | | 10/07/91 | 24.27 | 352.89 |
| | | 11/06/91 | 24.50 | 352.66 |
| | | 12/05/91 | 24.60 | 352.56 |
| | | 04/09/92 | 23.66 | 353.50 |
| | | 05/07/92 | 23.62 | 353.54 |
| | | 06/09/92 | 23.25 | 353.91 |
| | | 07/07/92 | 23.40 | 353.76 |
| | | 08/07/92 | 24.07 | 353.09 |
| | | 09/08/92 | 24.00 | 353.16 |
| | | 10/07/92 | 24.17 | 352.99 |
| | | 11/04/92 | 24.16 | 353.00 |
| | | 12/04/92 | 24.15 | 353.01 |
| | | 01/08/93 | 23.11 | 354.05 |
| | | 02/05/93 | 22.00 | 355.16 |
| | | 03/04/93 | 21.49 | 355.67 |
| | | 04/07/93 | 21.92 | 355.24 |
| | | 05/04/93 | 22.10 | 355.06 |
| | | 06/04/93 | 22.05 | 355.11 |
| | | 07/06/93 | 22.10 | 355.06 |
| | | 08/02/93 | 22.46 | 354.70 |
| | | 09/07/93 | 22.24 | 354.92 |
| | | 10/04/93 | 22.33 | 354.83 |
| | | 11/04/93 | 22.36 | 354.80 |
| | | 12/03/93 | 22.88 | 354.28 |
| | | 01/10/94 | 22.93 | 354.23 |
| | | 02/09/94 | 22.90 | 354.26 |
| | | 03/15/94 | 23.05 | 354.11 |
| | | 04/08/94 | 22.95 | 354.21 |

Notes: MSL = Mean Sea Level
* Elevation surveyed to top of well box
** Depth to ground water referenced to top of well box

Table 1. Groundwater Monitoring Data
Utility Trailer Manufacturing Company

| WELL NUMBER | SURVEYED ELEVATION (FEET MSL)* | DATE | DEPTH TO GROUNDWATER (FEET)** | EQUIVALENT GROUNDWATER ELEVATION (FEET MSL) |
|---|---|---|---|---|
| MW-3 | 378.56 | 06/01/89 | 22.30 | 356.26 |
| | | 08/28/89 | 22.35 | 356.21 |
| | | 09/15/89 | 22.41 | 356.15 |
| | | 10/11/89 | 22.48 | 356.08 |
| | | 11/16/89 | 22.55 | 356.01 |
| | | 12/11/89 | 22.57 | 355.99 |
| | | 01/15/90 | 22.57 | 355.99 |
| | | 02/12/90 | 22.47 | 356.09 |
| | | 03/09/90 | 22.30 | 356.26 |
| | | 04/12/90 | 22.27 | 356.29 |
| | | 05/14/90 | 22.68 | 355.88 |
| | | 06/07/90 | 22.63 | 355.93 |
| | | 07/10/90 | 22.62 | 355.94 |
| | | 08/16/90 | 22.92 | 355.64 |
| | | 09/11/90 | 22.69 | 355.87 |
| | | 01/31/91 | 23.27 | 355.29 |
| | | 02/27/91 | 23.45 | 355.11 |
| | | 03/07/91 | 22.86 | 355.70 |
| | | 04/08/91 | 22.46 | 356.10 |
| | | 05/07/91 | 22.68 | 355.88 |
| | | 06/07/91 | 22.99 | 355.57 |
| | | 07/10/91 | 23.07 | 355.49 |
| | | 08/08/91 | 23.20 | 355.36 |
| | | 09/06/91 | 23.08 | 355.48 |
| | | 10/07/91 | 22.90 | 355.66 |
| | | 11/06/91 | 22.93 | 355.63 |
| | | 12/05/91 | 23.14 | 355.42 |
| | | 04/09/92 | 22.36 | 356.20 |
| | | 05/07/92 | 22.50 | 356.06 |
| | | 06/09/92 | 21.94 | 356.62 |
| | | 07/07/92 | 22.04 | 356.52 |
| | | 08/07/92 | 22.75 | 355.81 |
| | | 09/08/92 | 22.69 | 355.87 |
| | | 10/07/92 | 22.82 | 355.74 |
| | | 11/04/92 | 22.83 | 355.73 |
| | | 12/04/92 | 22.83 | 355.73 |
| | | 01/08/93 | 22.07 | 356.49 |
| | | 02/05/93 | 21.01 | 357.55 |
| | | 03/04/93 | 20.58 | 357.98 |
| | | 04/07/93 | 20.88 | 357.68 |
| | | 05/14/93 | 21.08 | 357.48 |
| | | 06/04/93 | 21.07 | 357.49 |
| | | 07/06/93 | 21.08 | 357.48 |
| | | 08/02/93 | 21.42 | 357.14 |
| | | 09/07/93 | 21.18 | 357.38 |
| | | 10/04/93 | 21.27 | 357.29 |
| | | 11/04/93 | 21.32 | 357.24 |
| | | 12/03/93 | 21.90 | 356.66 |
| | | 01/10/94 | 21.97 | 356.59 |
| | | 02/09/94 | 21.98 | 356.58 |
| | | 03/15/94 | 22.05 | 356.51 |
| | | 04/08/94 | 21.96 | 356.60 |

Notes: MSL = Mean Sea Level
* Elevation surveyed to top of well box
** Depth to ground water referenced to top of well box

Table 1. Groundwater Monitoring Data
Utility Trailer Manufacturing Company

| WELL NUMBER | SURVEYED ELEVATION (FEET MSL)* | DATE | DEPTH TO GROUNDWATER (FEET)** | EQUIVALENT GROUNDWATER ELEVATION (FEET MSL) |
|---|---|---|---|---|
| MW-4 | 383.57 | 06/01/89 | 27.70 | 355.87 |
| | | 08/28/89 | 27.77 | 355.80 |
| | | 09/15/89 | 27.79 | 355.78 |
| | | 10/11/89 | 27.85 | 355.72 |
| | | 11/16/89 | 27.94 | 355.63 |
| | | 12/11/89 | 28.01 | 355.56 |
| | | 01/15/90 | 28.04 | 355.53 |
| | | 02/12/90 | 27.97 | 355.60 |
| | | 03/09/90 | 27.83 | 355.74 |
| | | 04/12/90 | 27.92 | 355.65 |
| | | 05/14/90 | 28.25 | 355.32 |
| | | 06/07/90 | 28.30 | 355.27 |
| | | 07/10/90 | 28.29 | 355.28 |
| | | 08/16/90 | 28.50 | 355.07 |
| | | 09/11/90 | 28.42 | 355.15 |
| | | 01/31/91 | 28.92 | 354.65 |
| | | 02/27/91 | 29.13 | 354.44 |
| | | 03/07/91 | 28.55 | 355.02 |
| | | 04/08/91 | 28.06 | 355.51 |
| | | 05/07/91 | 28.30 | 355.27 |
| | | 06/07/91 | 28.63 | 354.94 |
| | | 07/10/91 | 28.75 | 354.82 |
| | | 08/08/91 | 28.84 | 354.73 |
| | | 09/06/91 | 28.88 | 354.69 |
| | | 10/07/91 | 28.73 | 354.84 |
| | | 11/06/91 | 28.80 | 354.77 |
| | | 12/05/91 | 28.92 | 354.65 |
| | | 04/09/92 | 27.97 | 355.60 |
| | | 05/07/92 | 28.14 | 355.43 |
| | | 06/09/92 | 27.69 | 355.88 |
| | | 07/07/92 | 27.89 | 355.68 |
| | | 08/07/92 | 28.45 | 355.12 |
| | | 09/08/92 | 28.35 | 355.22 |
| | | 10/07/92 | 28.50 | 355.07 |
| | | 11/04/92 | 28.56 | 355.01 |
| | | 12/04/92 | 28.54 | 355.03 |
| | | 01/08/93 | 27.55 | 356.02 |
| | | 02/05/93 | 26.24 | 357.33 |
| | | 03/04/93 | 25.71 | 357.86 |
| | | 04/07/93 | 26.11 | 357.46 |
| | | 05/14/93 | 26.36 | 357.21 |
| | | 06/04/93 | 26.32 | 357.25 |
| | | 07/06/93 | 26.38 | 357.19 |
| | | 08/02/93 | 26.59 | 356.98 |
| | | 09/07/93 | 26.58 | 356.99 |
| | | 10/04/93 | 26.71 | 356.86 |
| | | 11/04/93 | 27.26 | 356.31 |
| | | 12/03/93 | 27.18 | 356.39 |
| | | 01/10/94 | 27.26 | 356.31 |
| | | 02/09/94 | 27.28 | 356.29 |
| | | 03/15/94 | 27.40 | 356.17 |
| | | 04/08/94 | 27.25 | 356.32 |

Notes: MSL = Mean Sea Level
* Elevation surveyed to top of well box
** Depth to ground water referenced to top of well box

Table 1. Groundwater Monitoring Data
Utility Trailer Manufacturing Company

| WELL NUMBER | SURVEYED ELEVATION (FEET MSL)* | DATE | DEPTH TO GROUNDWATER (FEET)** | EQUIVALENT GROUNDWATER ELEVATION (FEET MSL) |
|---|---|---|---|---|
| MW-5 | 381.15 | 06/01/89 | 26.25 | 354.90 |
| | | 08/28/89 | 26.22 | 354.93 |
| | | 09/15/89 | 26.26 | 354.89 |
| | | 10/11/89 | 26.30 | 354.85 |
| | | 11/16/89 | 26.41 | 354.74 |
| | | 12/11/89 | 26.50 | 354.65 |
| | | 01/15/90 | 26.52 | 354.63 |
| | | 02/12/90 | 26.46 | 354.69 |
| | | 03/09/90 | 26.35 | 354.80 |
| | | 04/12/90 | 26.42 | 354.73 |
| | | 05/14/90 | 26.79 | 354.36 |
| | | 06/07/90 | 26.85 | 354.30 |
| | | 07/10/90 | 26.82 | 354.33 |
| | | 08/16/90 | 27.12 | 354.03 |
| | | 09/11/90 | 26.94 | 354.21 |
| | | 01/31/91 | 27.51 | 353.64 |
| | | 02/27/91 | 27.71 | 353.44 |
| | | 03/07/91 | 27.08 | 354.07 |
| | | 04/08/91 | 26.65 | 354.50 |
| | | 05/07/91 | 26.83 | 354.32 |
| | | 06/07/91 | 27.16 | 353.99 |
| | | 07/10/91 | 27.29 | 353.86 |
| | | 08/08/91 | 27.14 | 354.01 |
| | | 09/06/91 | 27.44 | 353.71 |
| | | 10/07/91 | 27.31 | 353.84 |
| | | 11/06/91 | 27.37 | 353.78 |
| | | 12/05/91 | 27.46 | 353.69 |
| | | 04/09/92 | 26.44 | 354.71 |
| | | 05/07/92 | 26.62 | 354.53 |
| | | 06/09/92 | 25.96 | 355.19 |
| | | 07/07/92 | 26.17 | 354.98 |
| | | 08/07/92 | 26.97 | 354.18 |
| | | 09/08/92 | 26.85 | 354.30 |
| | | 10/07/92 | 26.98 | 354.17 |
| | | 11/04/92 | 27.07 | 354.08 |
| | | 12/04/92 | 27.03 | 354.12 |
| | | 01/08/93 | 25.97 | 355.18 |
| | | 02/05/93 | 24.63 | 356.52 |
| | | 03/04/93 | 24.08 | 357.07 |
| | | 04/07/93 | 24.57 | 356.58 |
| | | 05/14/93 | 24.81 | 356.34 |
| | | 06/04/93 | 24.52 | 356.63 |
| | | 07/06/93 | 24.87 | 356.28 |
| | | 08/02/93 | 25.14 | 356.01 |
| | | 09/07/93 | 24.82 | 356.33 |
| | | 10/04/93 | 24.96 | 356.19 |
| | | 11/04/93 | 25.02 | 356.13 |
| | | 12/03/93 | 25.60 | 355.55 |
| | | 01/10/94 | 25.70 | 355.45 |
| | | 02/09/94 | 25.72 | 355.43 |
| | | 03/15/94 | 25.83 | 355.32 |
| | | 04/08/94 | 25.69 | 355.46 |

Notes: MSL = Mean Sea Level
* Elevation surveyed to top of well box
** Depth to ground water referenced to top of well box

Table 1. Groundwater Monitoring Data
Utility Trailer Manufacturing Company

| WELL NUMBER | SURVEYED ELEVATION (FEET MSL)* | DATE | DEPTH TO GROUNDWATER (FEET)** | EQUIVALENT GROUNDWATER ELEVATION (FEET MSL) |
|---|---|---|---|---|
| MW-6 | 380.20 | 06/01/89 | 24.45 | 355.75 |
| | | 08/28/89 | 24.48 | 355.72 |
| | | 09/15/89 | 24.53 | 355.67 |
| | | 10/11/89 | 24.63 | 355.57 |
| | | 11/16/89 | 24.67 | 355.53 |
| | | 12/11/89 | 24.75 | 355.45 |
| | | 01/15/90 | 24.76 | 355.44 |
| | | 02/12/90 | 24.67 | 355.53 |
| | | 03/09/90 | 24.52 | 355.68 |
| | | 04/12/90 | 24.55 | 355.65 |
| | | 05/14/90 | 24.93 | 355.27 |
| | | 06/07/90 | 24.95 | 355.25 |
| | | 07/10/90 | 24.92 | 355.28 |
| | | 08/16/90 | 25.18 | 355.02 |
| | | 09/11/90 | 25.04 | 355.16 |
| | | 01/31/91 | 25.61 | 354.59 |
| | | 02/27/91 | 25.79 | 354.41 |
| | | 03/07/91 | 25.18 | 355.02 |
| | | 04/08/91 | 24.76 | 355.44 |
| | | 05/07/91 | 24.95 | 355.25 |
| | | 06/07/91 | 25.29 | 354.91 |
| | | 07/10/91 | 25.39 | 354.81 |
| | | 08/08/91 | 25.33 | 354.87 |
| | | 09/06/91 | 25.47 | 354.73 |
| | | 10/07/91 | 25.30 | 354.90 |
| | | 11/06/91 | 25.38 | 354.82 |
| | | 12/05/91 | 25.52 | 354.68 |
| | | 04/09/92 | 24.63 | 355.57 |
| | | 05/07/92 | 24.80 | 355.40 |
| | | 06/09/92 | 24.34 | 355.86 |
| | | 07/07/92 | 24.50 | 355.70 |
| | | 08/07/92 | 25.06 | 355.14 |
| | | 09/08/92 | 24.56 | 355.64 |
| | | 10/07/92 | 25.13 | 355.07 |
| | | 11/04/92 | 25.20 | 355.00 |
| | | 12/04/92 | 25.16 | 355.04 |
| | | 01/08/93 | 24.36 | 355.84 |
| | | 02/05/93 | 23.08 | 357.12 |
| | | 03/04/93 | 22.60 | 357.60 |
| | | 04/07/93 | 22.96 | 357.24 |
| | | 05/14/93 | 23.20 | 357.00 |
| | | 06/04/93 | 23.17 | 357.03 |
| | | 07/06/93 | 23.17 | 357.03 |
| | | 08/02/93 | 23.45 | 356.75 |
| | | 09/07/93 | 23.39 | 356.81 |
| | | 10/04/93 | 23.50 | 356.70 |
| | | 11/04/93 | 23.55 | 356.65 |
| | | 12/03/93 | 23.98 | 356.22 |
| | | 01/10/94 | 23.95 | 356.25 |
| | | 02/09/94 | 24.10 | 356.10 |
| | | 03/15/94 | 24.17 | 356.03 |
| | | 04/08/94 | 24.05 | 356.15 |

Notes MSL = Mean Sea Level
* Elevation surveyed to top of well box
** Depth to ground water referenced to top of well box

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



| Well No. | Date | 1,1-DCE (ug/L) | 1,1-DCA (ug/L) | cis-1,2-DCE (ug/L) | 1,2-DCA (ug/L) | 1,1,1-TCA (ug/L) | TCE (ug/L) | PCE (ug/L) | 1,2-DCP (ug/L) | Chloroform (ug/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-02 | 8/02/93 | 46 | 29 | (10) | (10) | (10) | 37 | 420 | (10) | (10) |
| MW-07 (MW-02 Duplicate) | 8/02/93 | 50 | 25 | 6.9 | 1.1 | (1) | 34 | 390 | (1) | (1) |
| MW-02 | 02/09/94 | 11 | 8.9 | 5.3 | (0.5) | 5.7 | 22 | 160 | (0.5) | (0.5) |
| MW-07 (MW-02 Duplicate) | 02/09/94 | 15 | 14 | 8 | (2.5) | 8.5 | 30 | 220 | (2.5) | (2.5) |
| MW-03 | 8/02/93 | 5.3 | (5) | (5) | (5) | (5) | 69 | 150 | 15 | 12 |
| MW-03 | 02/09/94 | 4.6 | 2.4 | 6.3 | (0.5) | 4.4 | 60 | 120 | (0.5) | (0.5) |
| MW-04 | 8/02/93 | 92 | (5) | (5) | (5) | (5) | 18 | 500 | (5) | 12 |
| MW-04 | 02/09/94 | 32 | (2.5) | (2.5) | (2.5) | 3.9 | 11 | 230 | (2.5) | (2.5) |
| MW-05 | 8/02/93 | 18 | (5) | (5) | (5) | (5) | 6.7 | 26 | (5) | 10 |
| MW-05 | 02/09/94 | 49 | 12 | 0.61 | (0.5) | 35 | 12 | 65 | (0.5) | 5.4 |
| MW-06 | 8/02/93 | 22 | 6 | (1) | (1) | (1) | 22 | 94 | (1) | (1) |
| MW-06 | 02/09/94 | 9.8 | 4.3 | (1.3) | (1.3) | 16 | 14 | 68 | (1.3) | (1.3) |
| MW-08 (equipment blank) | 8/02/93 | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| MW-08 (equipment blank) | 02/09/94 | (0.50) | (0.50) | (0.50) | (0.50) | 0.59 | (0.50) | (0.50) | (0.50) | (0.50) |
| California MCL | | 6 | 5 | 6 | 0.5 | 200 | 5 | 5 | 5 | 100* |

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

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

| Well No | Date | 1,1-DCE (ug/L) | 1,1-DCA (ug/L) | cis-1,2-DCE (ug/L) | 1,1,1-TCA (ug/L) | TCE (ug/L) | PCE (ug/L) |
|---|---|---|---|---|---|---|---|
| MW-02 | 02/09/94 | 11 | 8.9 | 5.3 | 5.7 | 22 | 160 |
| MW-07 (MW-02 Duplicate) | 02/09/94 | 15 | 14 | 8 | 8.5 | 30 | 220 |
| RPD | | 30.8 | 44.5 | 40.6 | 39.4 | 30.8 | 31.6 |

( ) indicates compound not detected at or above enclosed reporting limit. ug/L=micrograms per liter.
DCE=dichloroethene; DCA=dichloroethane; TCA=trichloroethane; TCE=trichloroethene; PCE=tetrachloroethene

Table 4. Summary of Monitoring Well Data
Utility Trailer Manufacturing Company

| Compound | MW-3 SITE BOUNDARY - UPGRADIENT | | | | | MW-4 SITE BOUNDARY - UPGRADIENT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean (ppb) | Std Dev (ppb) | Min (ppb) | Max (ppb) | Count | Mean (ppb) | Std Dev (ppb) | Min (ppb) | Max (ppb) | Count |
| 1,1,1-TCA | 9.5 | 12.6 | ND | 53.0 | 14 | 10.2 | 6.0 | ND | 20.0 | 14 |
| 1,1-DCA | 7.4 | 7.2 | ND | 20.0 | 5 | 1.0 | 0.0 | ND | 1.0 | 1 |
| 1,1-DCE | 16.3 | 23.6 | ND | 97.0 | 14 | 30.2 | 23.4 | ND | 92.0 | 12 |
| cis-1,2-DCE | 9.3 | 3.2 | ND | 13.0 | 6 | ND | ND | ND | ND | 0 |
| Chloroform | 2.6 | 0.4 | ND | 3.3 | 4 | ND | ND | ND | ND | 0 |
| PCE | 309.4 | 108.0 | 120.0 | 530.0 | 16 | 191.9 | 148.2 | 73.0 | 580.0 | 16 |
| trans-1,2-DCE | ND | ND | ND | ND | 0 | ND | ND | ND | ND | 0 |
| TCE | 49.9 | 22.4 | ND | 100.0 | 15 | 9.6 | 6.5 | ND | 23.0 | 11 |
| Methylene Chloride | ND | ND | ND | ND | 0 | ND | ND | ND | ND | 0 |
| Freon-12 | ND | ND | ND | ND | 0 | ND | ND | ND | ND | 0 |
| Freon-11 | 18.8 | 6.0 | ND | 31.0 | 6 | ND | ND | ND | ND | 0 |

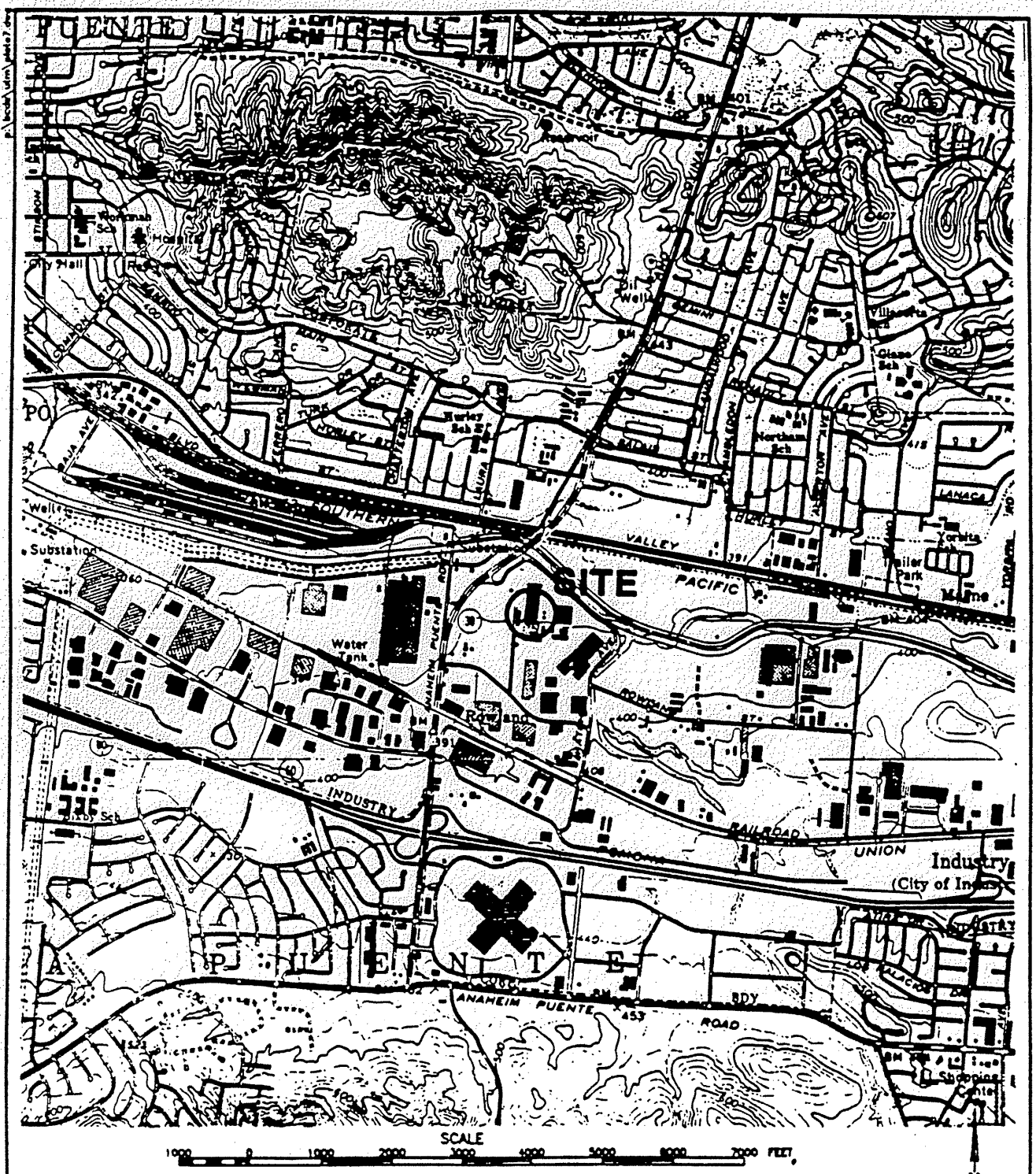
| Compound | MW-5 ONSITE - DOWNGRADIENT | | | | | MW-6 ONSITE - DOWNGRADIENT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean (ppb) | Std Dev (ppb) | Min (ppb) | Max (ppb) | Count | Mean (ppb) | Std Dev (ppb) | Min (ppb) | Max (ppb) | Count |
| 1,1,1-TCA | 21.4 | 6.7 | 5.0 | 35.0 | 17 | 48.0 | 21.8 | ND | 89.0 | 15 |
| 1,1-DCA | 4.2 | 3.0 | ND | 12.0 | 10 | 7.3 | 3.3 | ND | 14.0 | 11 |
| 1,1-DCE | 16.7 | 10.5 | ND | 49.0 | 16 | 35.1 | 14.1 | ND | 65.0 | 15 |
| cis-1,2-DCE | 1.0 | 0.0 | ND | 1.1 | 3 | 2.5 | 0.9 | ND | 3.1 | 4 |
| Chloroform | 5.5 | 3.7 | ND | 10.0 | 3 | ND | ND | ND | ND | 0 |
| PCE | 42.4 | 10.0 | 26.0 | 65.0 | 17 | 98.3 | 32.5 | 62.0 | 190.0 | 16 |
| trans-1,2-DCE | ND | ND | ND | ND | 0 | ND | ND | ND | ND | 0 |
| TCE | 12.5 | 20.9 | ND | 92.0 | 16 | 23.3 | 16.3 | ND | 63.0 | 15 |
| Methylene Chloride | ND | ND | ND | ND | 0 | ND | ND | ND | ND | 0 |
| Freon-12 | ND | ND | ND | ND | 0 | ND | ND | ND | ND | 0 |
| Freon-11 | ND | ND | ND | ND | 0 | ND | ND | ND | ND | 0 |

| Compound | MW-2 ONSITE - DRAINAGE COLLECTION AREA | | | | |
|---|---|---|---|---|---|
| | Mean (ppb) | Std Dev (ppb) | Min (ppb) | Max (ppb) | Count |
| 1,1,1-TCA | 65.0 | 19.2 | 1.0 | 70.0 | 23 |
| 1,1-DCA | 19.1 | 13.5 | ND | 56.0 | 21 |
| 1,1-DCE | 56.0 | 31.6 | 11.0 | 120.0 | 22 |
| cis-1,2-DCE | 7.8 | 2.1 | ND | 12.0 | 13 |
| Chloroform | 1.9 | 1.3 | ND | 5.0 | 7 |
| PCE | 573.5 | 318.1 | 150.0 | 1500.0 | 23 |
| trans-1,2-DCE | ND | ND | ND | ND | 0 |
| TCE | 37.9 | 18.9 | 18.0 | 96.0 | 22 |
| Methylene Chloride | ND | ND | ND | ND | 0 |
| Freon-12 | ND | ND | ND | ND | 0 |
| Freon-11 | 4.3 | 1.5 | ND | 8.0 | 9 |

Note: Concentrations reported for Mean and Std Dev are based on reported values at or above the detection limit. All ND values were omitted from the calculations, yielding conservative, worst-case results. The count value represents the total number of values included in the calculations. The difference between the largest count value and any particular count value for a well represents the number of ND points omitted from the calculations.

ILLUSTRATIONS

UTM 004657




Reference: USGS 7.5-minute quadrangles, Baldwin Park and La Habra, California (photorevised 1981)

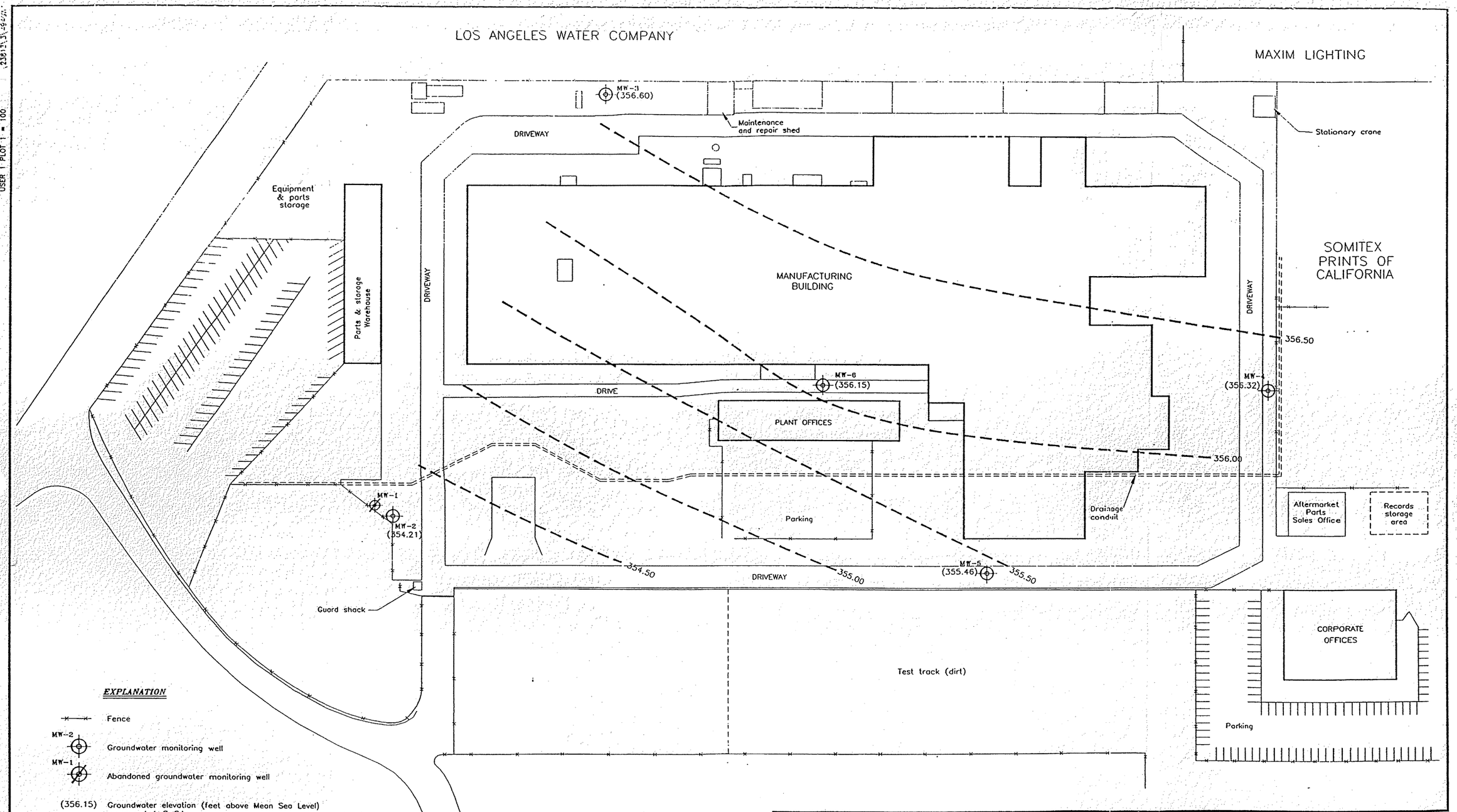
Harding Lawson Associates
Engineering and Environmental Services

**VICINITY MAP**
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 1

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| JTL | 25109-4 | BCDE | 5/94 | | |

UTM 004658




Harding Lawson Associates
Engineering and Environmental Services

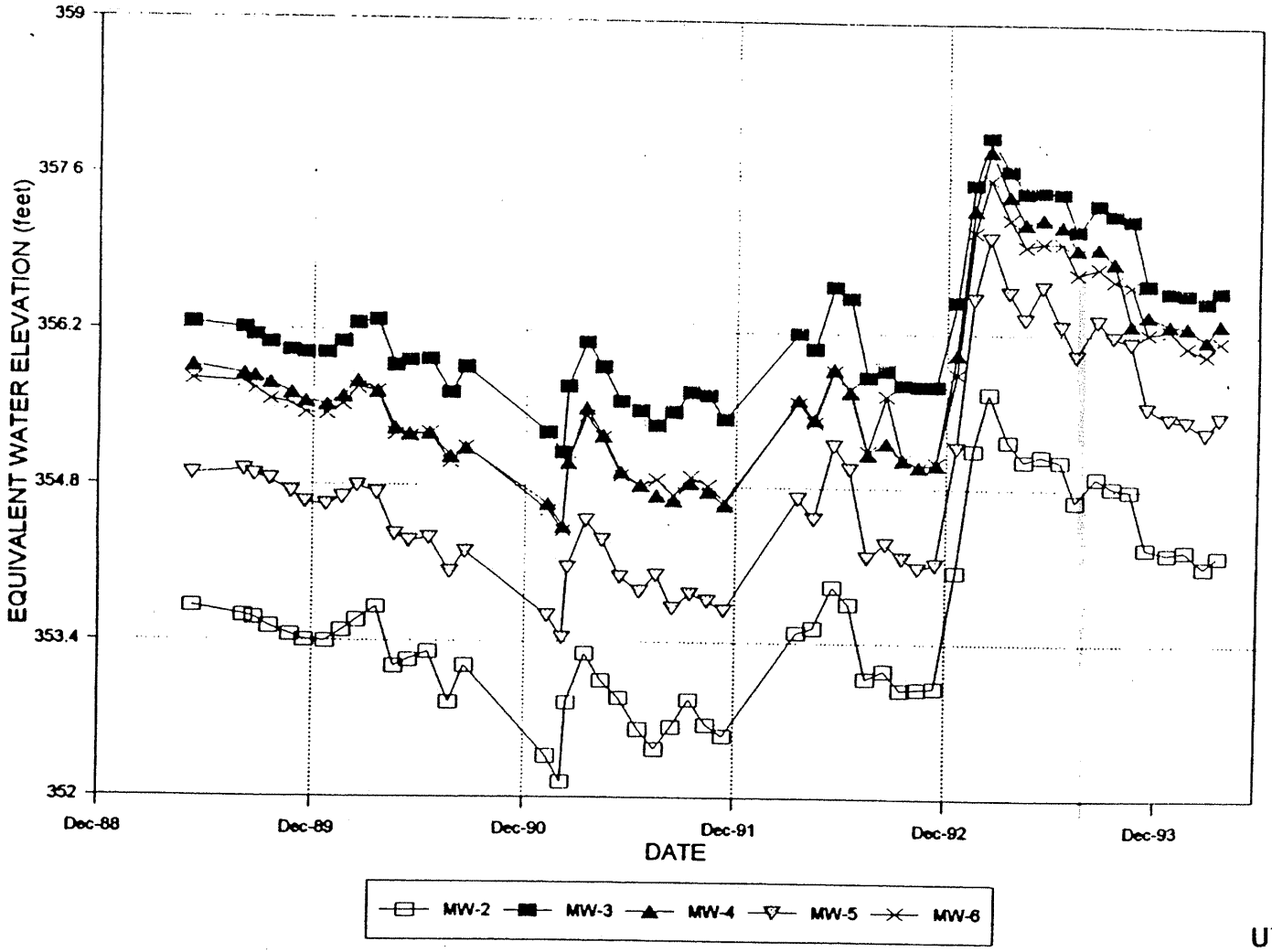
GROUNDWATER ELEVATION CONTOUR MAP
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 2

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| JTL | 23813-3 | | 4/94 | | |

UTM 004659

d:\25109\hydrgrph.dwg



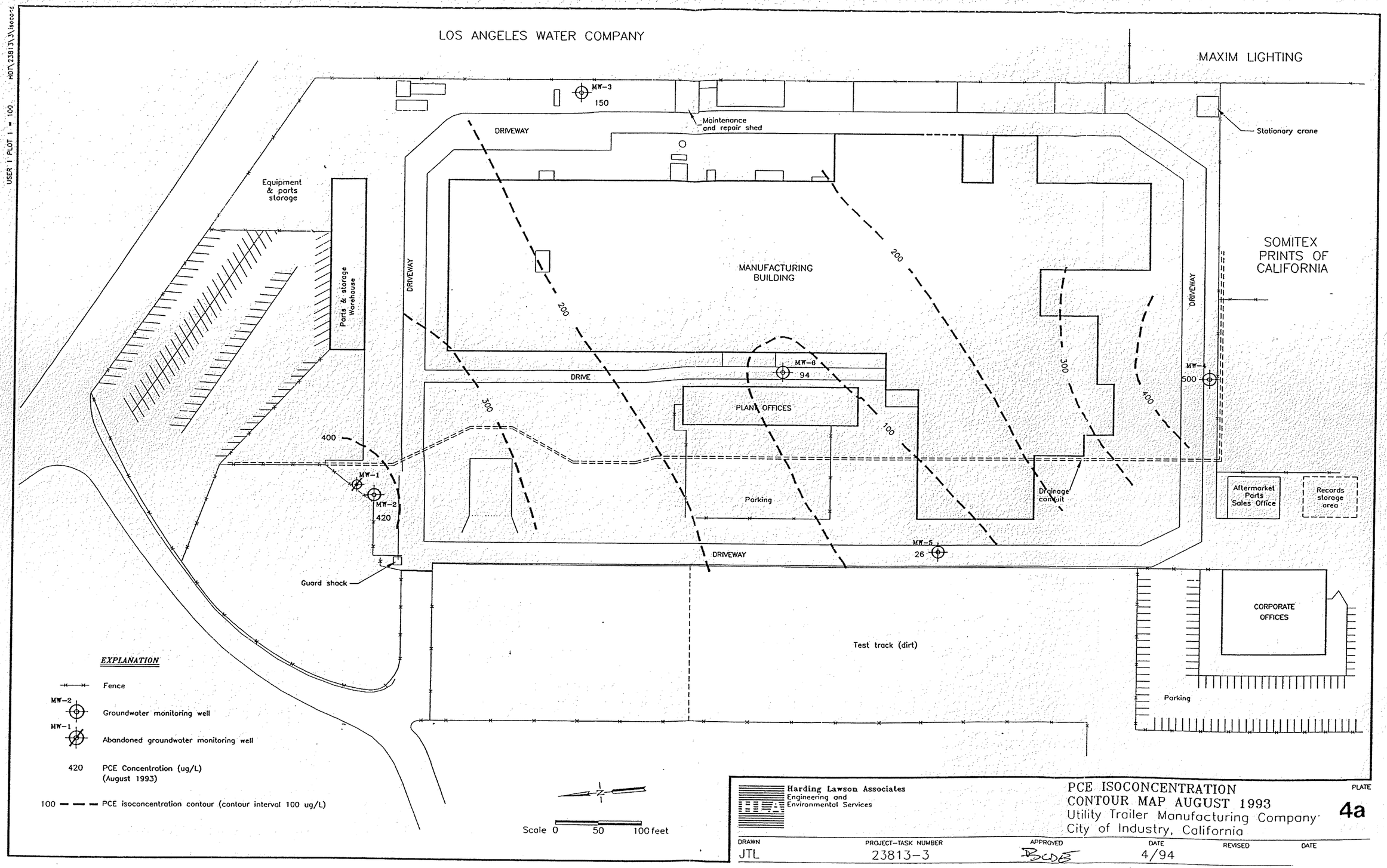

UTM 004660

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 |
|---|---|---|---|---|---|
| be | 25109 | BeDE | 5/94 | | |


LOS ANGELES WATER COMPANY
MAXIM LIGHTING
SOMITEX PRINTS OF CALIFORNIA
MW-3
150
Maintenance and repair shed
Stationary crane
DRIVEWAY
Equipment & parts storage
Parts & storage Warehouse
MANUFACTURING BUILDING
200
300
400
100
MW-6
94
DRIVE
PLANT OFFICES
MW-4
500
Parking
Drainage conduit
Aftermarket Parts Sales Office
Records storage area
MW-1
MW-2
420
MW-5
26
Guard shack
CORPORATE OFFICES
Test track (dirt)
Parking
EXPLANATION
Fence
MW-2 Groundwater monitoring well
MW-1 Abandoned groundwater monitoring well
420 PCE Concentration (ug/L) (August 1993)
100 PCE isoconcentration contour (contour interval 100 ug/L)
Scale 0 50 100 feet
Harding Lawson Associates
Engineering and Environmental Services
PCE ISOCONCENTRATION
CONTOUR MAP AUGUST 1993
Utility Trailer Manufacturing Company
City of Industry, California
PLATE
4a
DRAWN
JTL
PROJECT-TASK NUMBER
23813-3
APPROVED
DATE
4/94
REVISED
DATE

UTM 004661

USER: 1 PLOT 1 = 100' HOT\23813\3\isocon

LOS ANGELES WATER COMPANY

MAXIM LIGHTING

SOMITEX PRINTS OF CALIFORNIA

MW-3
120

Maintenance and repair shed

Stationary crane

DRIVEWAY

Equipment & parts storage

Parts & storage Warehouse

DRIVEWAY

MANUFACTURING BUILDING

100

150

DRIVEWAY

MW-4
230

MW-6
68

DRIVE

PLANT OFFICES

150

200

MW-1

MW-2
160

Parking

Drainage conduit

Aftermarket Parts Sales Office

Records storage area

MW-5
65

DRIVEWAY

Guard shack

CORPORATE OFFICES

Test track (dirt)

Parking

***EXPLANATION***

Fence

MW-2 Groundwater monitoring well

MW-1 Abandoned groundwater monitoring well

160 PCE Concentration (ug/L) (February 1994)

100 PCE isoconcentration contour (contour interval 50 ug/L)

N

Scale 0 50 100 feet

Harding Lawson Associates
Engineering and Environmental Services

PCE ISOCONCENTRATION
CONTOUR MAP FEBRUARY 1994
Utility Trailer Manufacturing Company
City of Industry, California

PLATE **4b**

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| JTL | 23813-3 | | 4/94 | | |

UTM 004662

USER 1 PLOT 1 = 100 HDT\23813\3\isocons

LOS ANGELES WATER COMPANY

MAXIM LIGHTING

SOMITEX PRINTS OF CALIFORNIA

MW-3
67

Maintenance and repair shed

Stationary crane

DRIVEWAY

60

50

40

30

20

10

Equipment & parts storage

Parts & storage Warehouse

DRIVEWAY

MANUFACTURING BUILDING

DRIVEWAY

MW-6
22

DRIVE

MW-4
18

PLANT OFFICES

MW-1

MW-2
37

Parking

Drainage conduit

Aftermarket Parts Sales Office

Records storage area

MW-5
6.7

DRIVEWAY

Guard shack

Test track (dirt)

CORPORATE OFFICES

Parking

***EXPLANATION***

Fence

MW-2 Groundwater monitoring well

MW-1 Abandoned groundwater monitoring well

37 TCE Concentration (ug/L) (August 1993)

10 TCE isoconcentration contour (contour interval 10 ug/L)

N

Scale 0 50 100 feet

Harding Lawson Associates
Engineering and Environmental Services

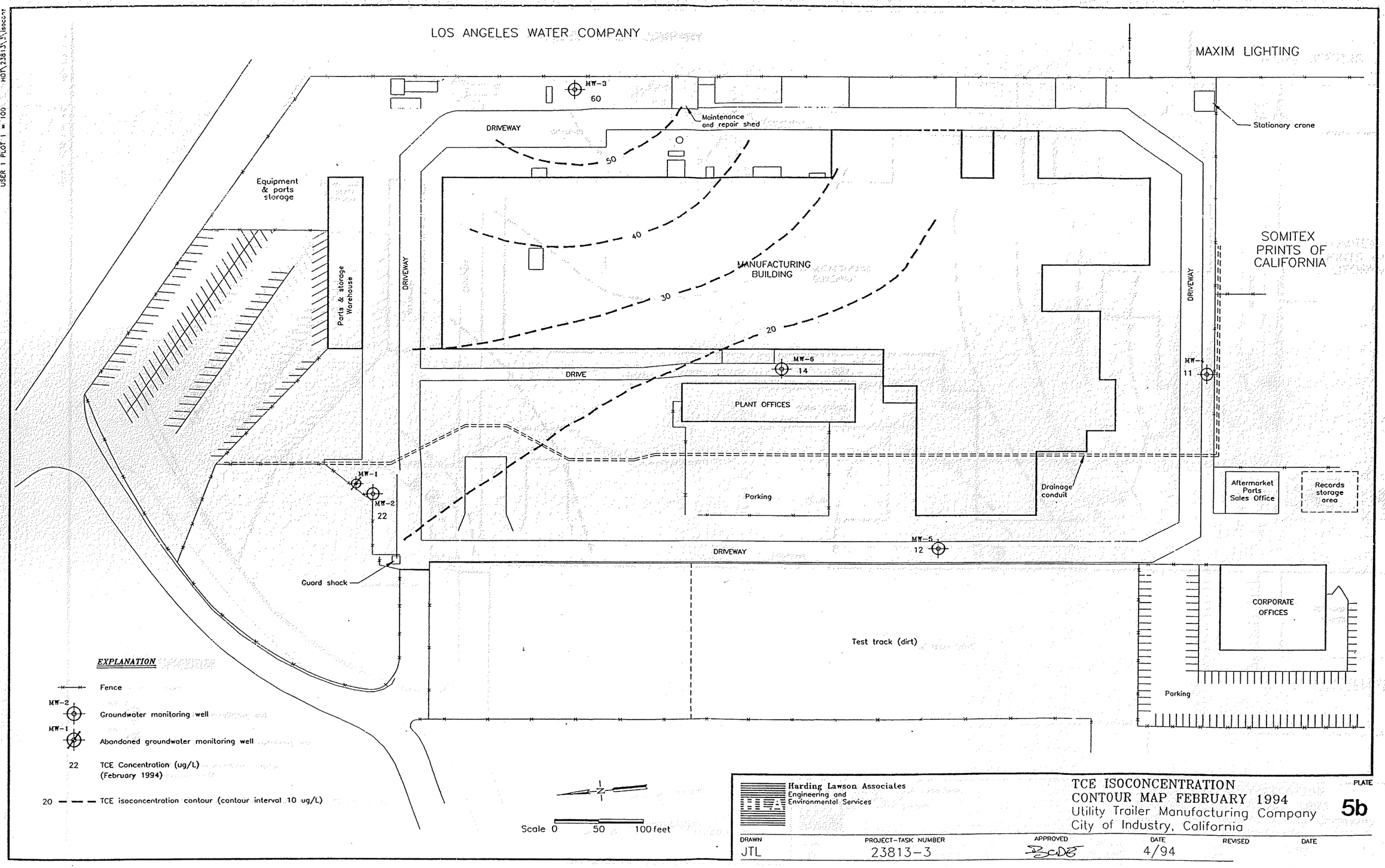
TCE ISOCONCENTRATION CONTOUR MAP AUGUST 1993
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 5a

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| JTL | 23813-3 | BaDE | 4/94 | | |

UTM 004663

USER 1 PLOT 1 = 100 HOT\23813\3\isocon




Harding Lawson Associates
Engineering and Environmental Services

TCE ISOCONCENTRATION
CONTOUR MAP FEBRUARY 1994
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 5b

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| JTL | 23813-3 | BCDB | 4/94 | | |

UTM 004664

USER 1 PLOT 1 = 100 HDT\23813\3\isocons

LOS ANGELES WATER COMPANY

MAXIM LIGHTING

SOMITEX PRINTS OF CALIFORNIA

MW-3
4.6

DRIVEWAY

Maintenance and repair shed

Stationary crane

Equipment & parts storage

Parts & storage Warehouse

DRIVEWAY

MANUFACTURING BUILDING

DRIVEWAY

MW-6
9.8

DRIVE

PLANT OFFICES

MW-4
32

10

20

30

40

Parking

Drainage conduit

Aftermarket Parts Sales Office

Records storage area

MW-1

MW-2
11

DRIVEWAY

MW-5
49

Guard shack

Test track (dirt)

CORPORATE OFFICES

Parking

***EXPLANATION***

Fence

MW-2 Groundwater monitoring well

MW-1 Abandoned groundwater monitoring well

11 1,1-DCE Concentration (ug/L) (February 1994)

10 1,1-DCE isoconcentration contour (contour interval 10 ug/L)

N

Scale 0 50 100 feet

Harding Lawson Associates
Engineering and Environmental Services

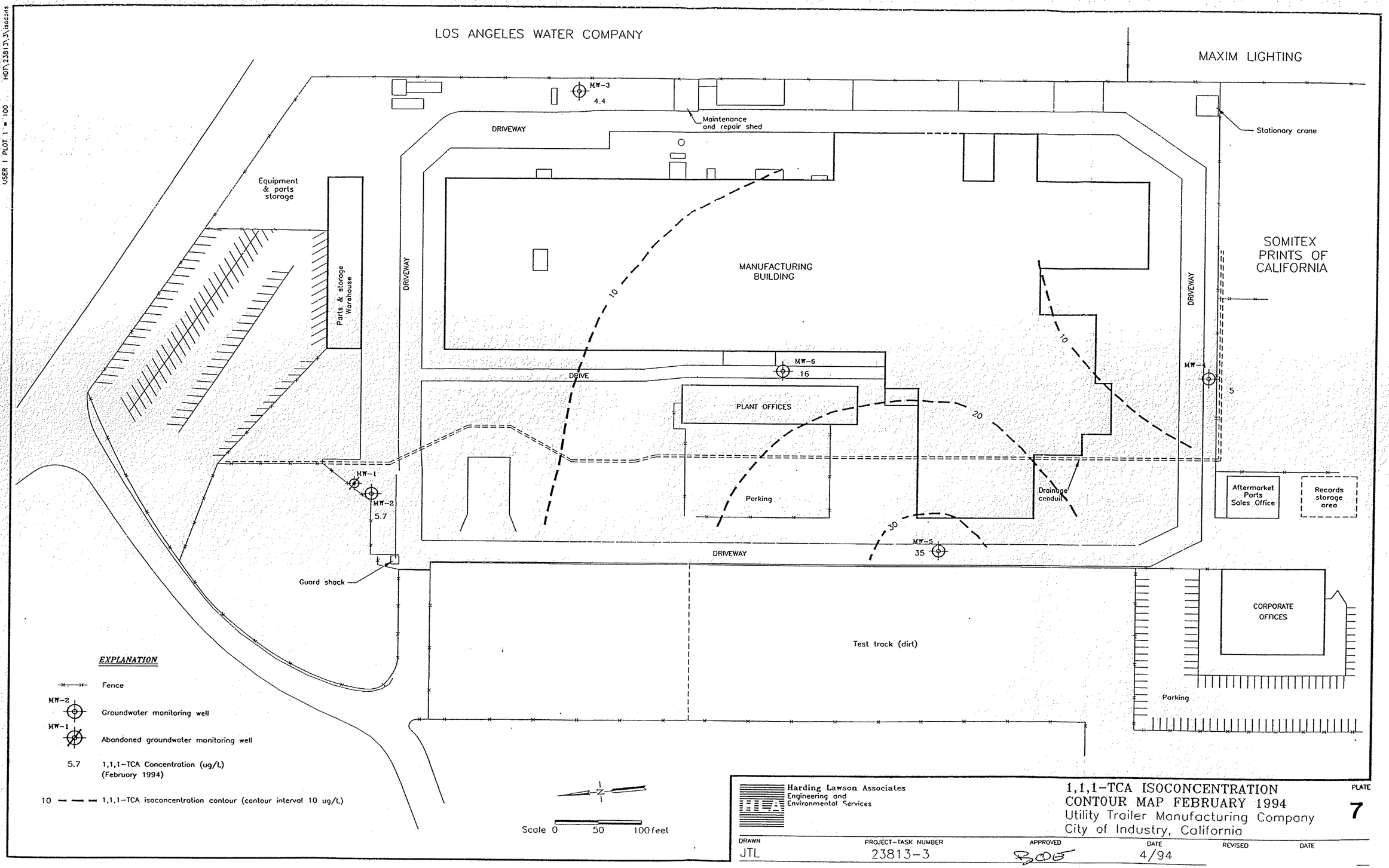
**1,1-DCE ISOCONCENTRATION CONTOUR MAP FEBRUARY 1994**
Utility Trailer Manufacturing Company
City of Industry, California

PLATE **6b**

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| JTL | 23813-3 | DDE | 4/94 | | |

UTM 004666

USER 1 PLOT 1 = 100 HDR 23813\3\isocons




Harding Lawson Associates
Engineering and Environmental Services

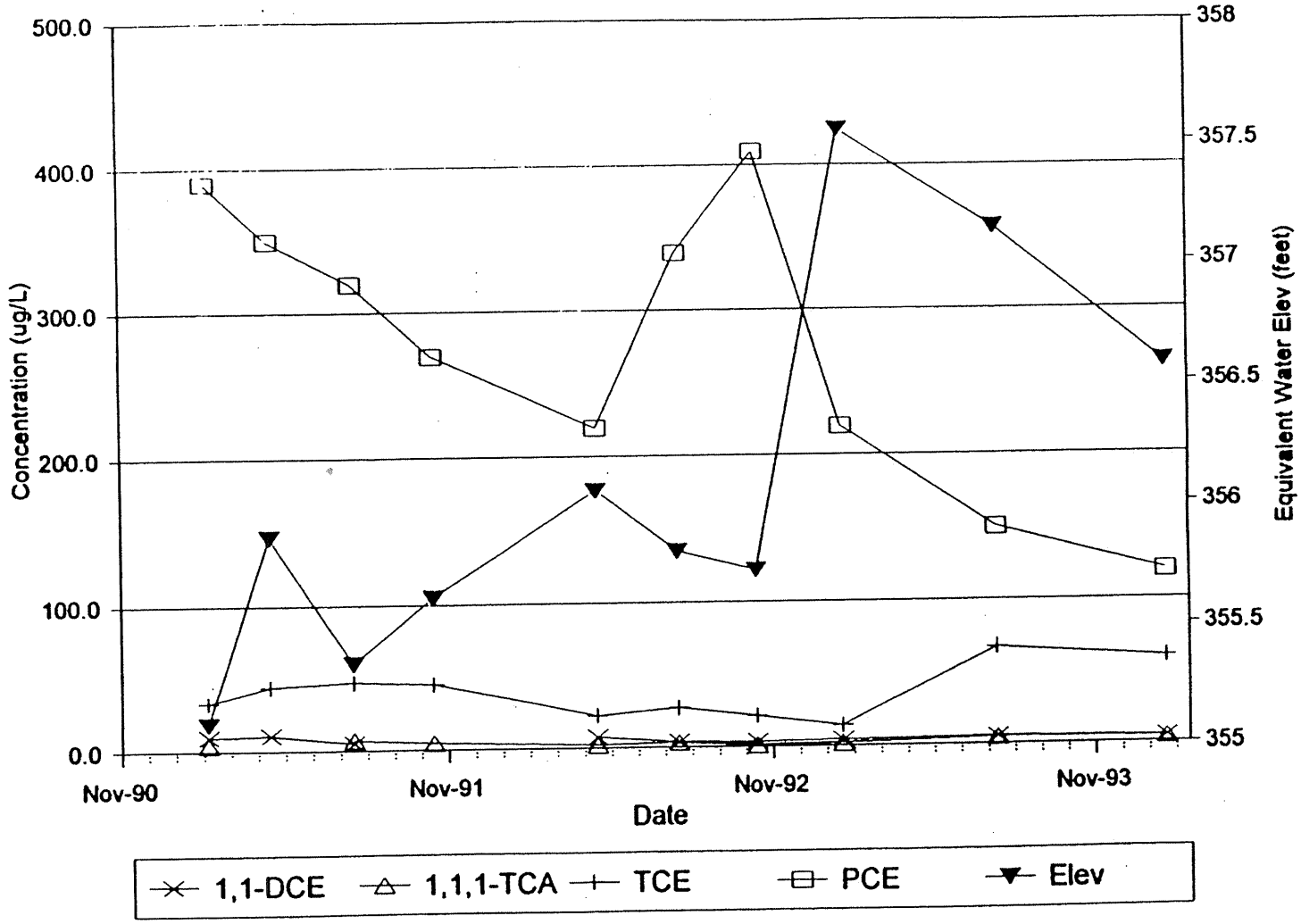
**1,1,1-TCA ISOCONCENTRATION CONTOUR MAP FEBRUARY 1994**
Utility Trailer Manufacturing Company
City of Industry, California

PLATE 7

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| JTL | 23813-3 | BCOE | 4/94 | | |

UTM 004667

HDT 25109\mwplot dwg




Harding Lawson Associates
Engineering and Environmental Services

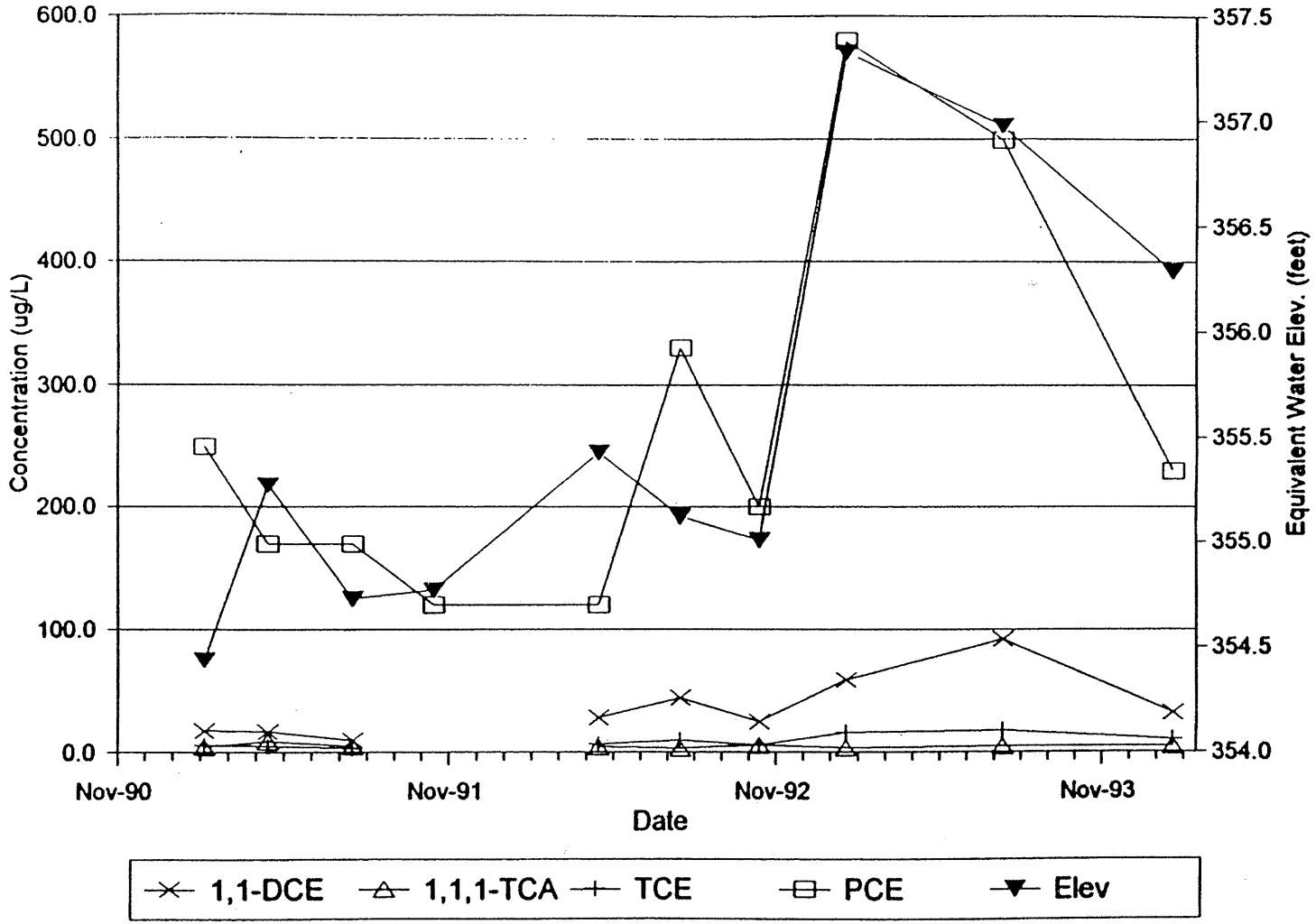
CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME – WELL MW-3
UTILITY TRAILER MANUFACTURING COMPANY
CITY OF INDUSTRY, CALIFORNIA

PLATE 8

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| be | 25109-4 | ECDB | 5/94 | | |

UTM 004668

HDT 25109\mwplot.dwg




Harding Lawson Associates
Engineering and Environmental Services

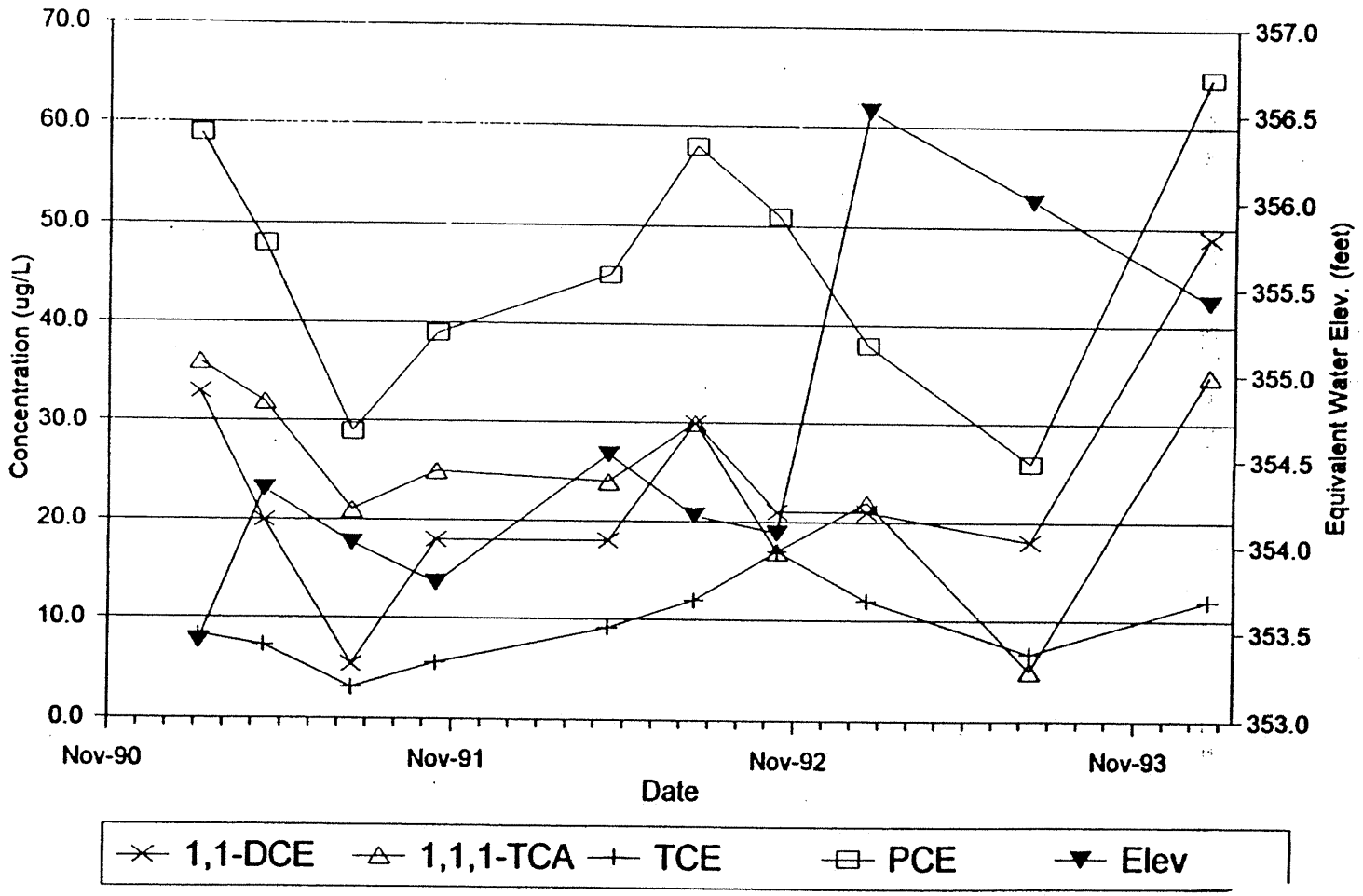
**CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME - WELL MW-4**
UTILITY TRAILER MANUFACTURING COMPANY
CITY OF INDUSTRY, CALIFORNIA

PLATE 9

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| be | 25109-4 | | 5/94 | | |

UTM 004669

HDT 25109\meplot dwg




Harding Lawson Associates
Engineering and Environmental Services

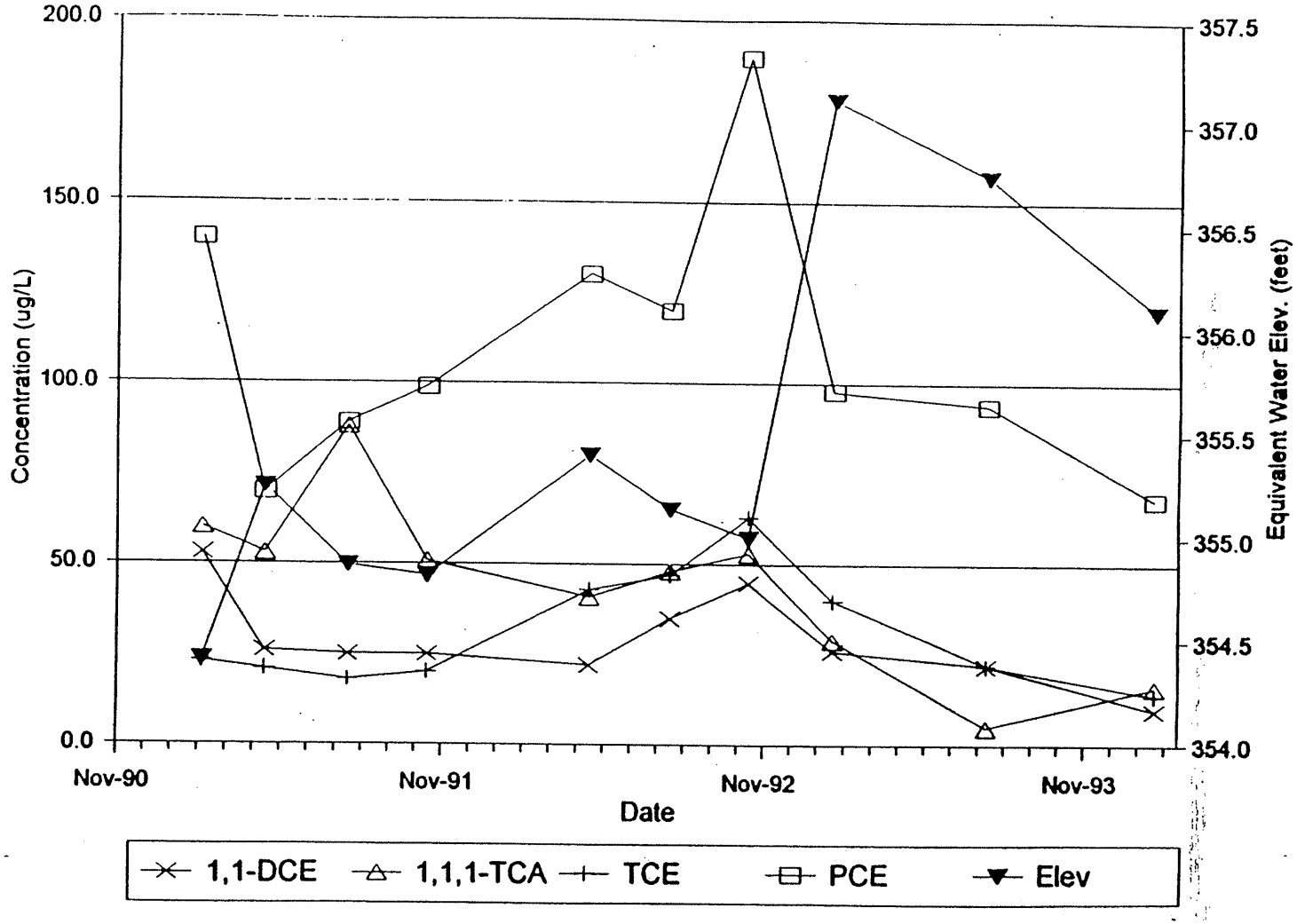
CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME - WELL MW-5
UTILITY TRAILER MANUFACTURING COMPANY
CITY OF INDUSTRY, CALIFORNIA

PLATE 10

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| be | 25109-4 | | 5/94 | | |

UTM 004670

HOT 25109\mwplot dwg




Harding Lawson Associates
Engineering and Environmental Services

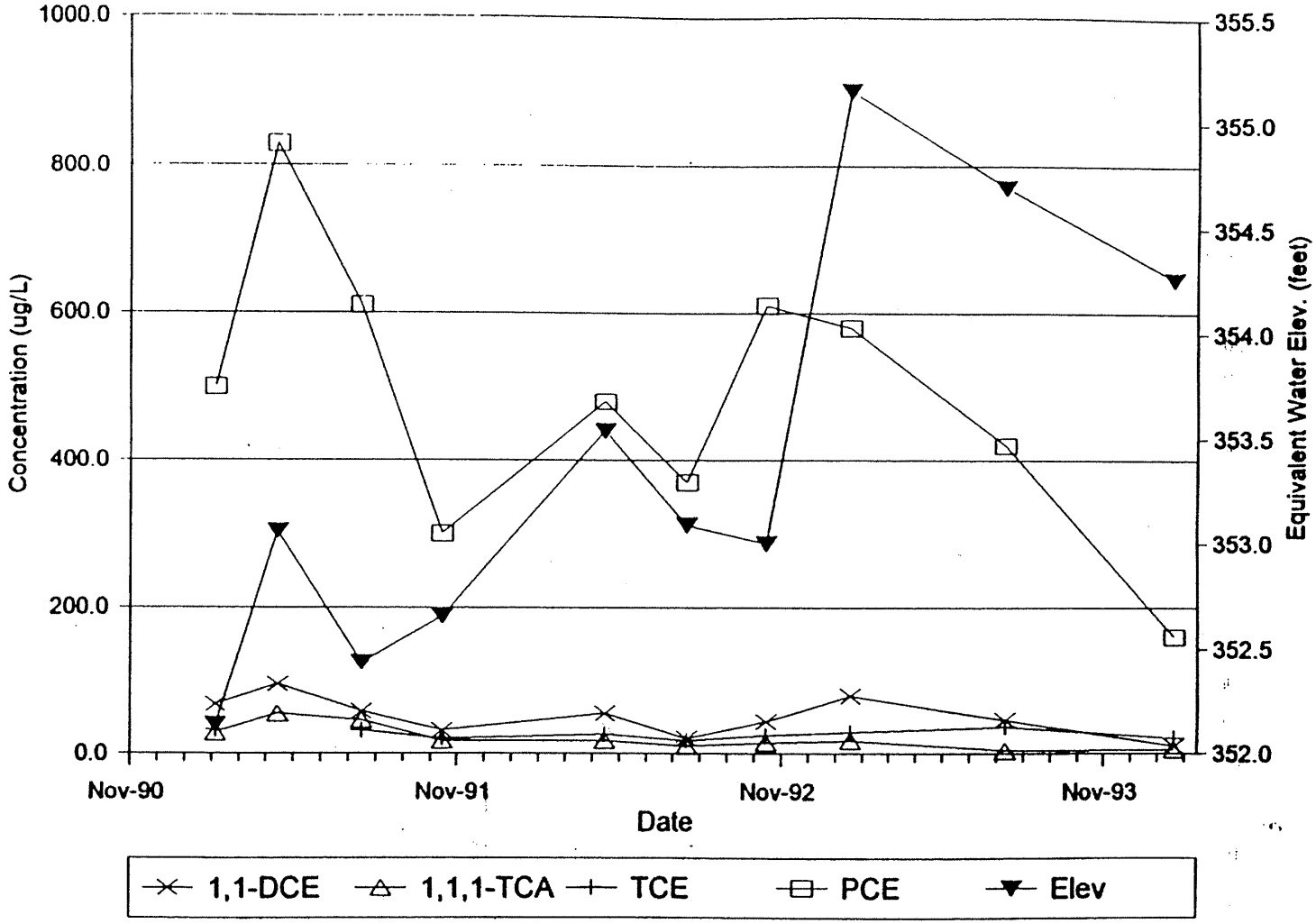
CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME – WELL MW-6
UTILITY TRAILER MANUFACTURING COMPANY
CITY OF INDUSTRY, CALIFORNIA

PLATE 11

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| be | 25109-4 | BCD | 5/94 | | |

UTM 004671

HDT 25109\mwplot.dwg




Harding Lawson Associates
Engineering and Environmental Services

CONCENTRATION AND GROUNDWATER ELEVATION VERSUS TIME – WELL MW-2
UTILITY TRAILER MANUFACTURING COMPANY
CITY OF INDUSTRY, CALIFORNIA

PLATE 12

| DRAWN | PROJECT-TASK NUMBER | APPROVED | DATE | REVISED | DATE |
|---|---|---|---|---|---|
| be | 25109-4 | BCDB | 5/94 | | |

UTM 004672

APPENDIX A

# APPENDIX A

# WELL PURGING DATA

Harding Lawson Associates
Engineering and
Environmental Services

# GROUND-WATER SAMPLING FORM

Well No. MW-2

Job Name Utility Trailer

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Job Number 25109-3

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 2/9/94 Time

Recorded by Marc Beasley (Signature)

Sampled by JNB (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): 43.50

Water Level Depth (WL in feet BTOC): 22.90

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

$(43.50 - 22.90) \times 4^2 \times 4 \times 0.0408 = 53.8$ gallons

TD (feet) − WL (feet) × D (inches)² × # Vols × 0.0408 = Calculated Purge Volume

### PURGE TIME

1120 Start 1126 Stop 6 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 |
|---|---|---|---|---|
| Initial | 7.12 | 2090 | 77.0 | clear |
| 1 | 6.91 | 2060 | 75.0 | 10 gal |
| 2 | 6.78 | 2040 | 74.2 | 20 " |
| 3 | 6.70 | 2070 | 73.6 | 30 " |
| 4 | 6.74 | 2040 | 73.8 | 40 " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T ☐ °C ☐ °F | Other |
|---|---|---|---|---|
| 6 | 6.78 | 2020 | 73.5 | 55 gal |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Good, not turbid, clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other drum

## WELL SAMPLING

### SAMPLING METHOD

☒ Bailer - Type: 1" x 2' S.S.
☐ 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-2 | 2 x 40ml | 8010 | HCl | Del Mar | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

### QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---|---|
| MW-2 | MW-7 |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|---|---|
| Equip. | MW-8 |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|---|---|
| | |
| | |
| | |
| | |

RL004

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UTM 004675

**Harding Lawson Associates**
Engineering and
Environmental Services

# GROUND-WATER SAMPLING FORM

Well No. MW-3

Job Name Utility Trailer

Well Type: ☒ Monitor ☐ Extraction ☐ Other

Job Number 25109-3

Well Material: ☒ PVC ☐ St. Steel ☐ Other

Date 2/9/94 Time

Recorded by [signature] (Signature)

Sampled by JNB/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): 38.20

Water Level Depth (WL in feet BTOC): 21.98

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

$(38.20 - 21.98) \times 4^2 \times 4 \times 0.0408 = 42.4$ gallons

TD (feet) − WL (feet) × D (inches)² × # Vols × 0.0408 = Calculated Purge Volume

### PURGE TIME

1009 Start 1019 Stop 10 Elapsed

### PURGE RATE

Initial gpm Final gpm

### ACTUAL PURGE VOLUME

20 gallons

### FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T ☐ °C ☐ °F | Other |
|---|---|---|---|---|
| Initial | 7.10 | 1950 | 71.8 | cloudy |
| 1 | pumped dry | | | |
| 9 | 7.17 | 1910 | 72.0 | sl. cloudy |
| 10 | pumped dry | | | |
| | | | | |

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

Observations During Purging (Well Condition, Turbidity, Color, Odor): Good, sl. turbid, pale brn, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other drum

## WELL SAMPLING

### SAMPLING METHOD

☒ Bailer - Type: 1" x 2' S.S.
☐ 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-3 | 2 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 004676

**Harding Lawson Associates**
Engineering and
Environmental Services

# GROUND-WATER SAMPLING FORM

Job Name: Utility Trailer
Job Number: 25109-3
Recorded by: Neal Beatty (Signature)

Well No.: MW-4
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 2/9/94 Time:
Sampled by: JNB (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): 53.90
Water Level Depth (WL in feet BTOC): 27.28
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

$(53.90 - 27.28) \times 4^2 \times 4 \times 0.0408 = 69.5$ gallons

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

### PURGE TIME

1212 Start 1220 Stop 8 Elapsed

### PURGE RATE

Initial gpm Final gpm

### ACTUAL PURGE VOLUME

75 gallons

### FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T ☐ °C ☐ °F | Other |
|---|---|---|---|---|
| Initial | 7.02 | 2440 | 71.9 | clear |
| 2 | 6.98 | 1880 | 69.8 | |
| 3 | 6.91 | 1730 | 68.9 | |
| 5 | 6.85 | 1720 | 68.5 | |
| 6 | 6.82 | 1675 | 68.4 | |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T ☐ °C ☐ °F | Other |
|---|---|---|---|---|
| 8 | 6.79 | 1720 | 68.0 | 75 gal |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Good, not turbid, clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other drum

## WELL SAMPLING

### SAMPLING METHOD

☒ Bailer - Type: 1" x 2' S.S.
☐ 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-4 | 2 x 40ml | 8010 | HCL | Del Mar | |
| | | | | | |
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| | | | | | |
| | | | | | |

### QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---|---|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|---|---|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|---|---|
| | |
| | |
| | |
| | |

**Harding Lawson Associates**
Engineering and
Environmental Services

# GROUND-WATER SAMPLING FORM

Job Name: Utility Trailer
Job Number: 25109-3
Recorded by: Marie Beatty (Signature)

Well No.: MW-5
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 2/9/94 Time:
Sampled by: JNB (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): 44.78
Water Level Depth (WL in feet BTOC): 25.72
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

(44.78 - 25.72) X 4$^2$ X 4 X 0.0408 = 54.8 gallons

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

### PURGE TIME

0817 Start 0823 Stop 6 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 |
|---|---|---|---|---|
| Initial | 7.62 | 1529 | 59.3 | clear |
| 2 | 7.64 | 1560 | 62.4 | 18 gal |
| 3 | 7.68 | 1586 | 62.9 | 26 " |
| 4 | 7.42 | 1572 | 62.2 | 35 " |
| 5 | 7.21 | 1524 | 63.6 | 46 " |

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T ☐ °C ☐ °F | Other |
|---|---|---|---|---|
| 6 | 7.17 | 1503 | 63.9 | 55 gal |
| | | | | |
| | | | | |
| | | | | |
| Meter Nos. | | | | |

Observations During Purging (Well Condition, Turbidity, Color, Odor): Good, not turbid, pale brn, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other drum

## WELL SAMPLING

### SAMPLING METHOD

☐ Same As Above
☒ Bailer - Type: 1" x 2' S.S.
☐ Grab - Type:
☐ Submersible ☐ Centrifugal ☐ Bladder; Pump No.:
☐ Other - Type:

### SAMPLING DISTRIBUTION

Sample Series:

| Sample No. | Volume/Cont. | Analysis Requested | Preservatives | Lab | Comments |
|---|---|---|---|---|---|
| MW-5 | 2 x 40ml | 8010 | HCL | Del Mar | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |

### QUALITY CONTROL SAMPLES

Duplicate Samples

| Original Sample No. | Duplicate Sample No. |
|---|---|
| | |
| | |
| | |
| | |

Blank Samples

| Type | Sample No. |
|---|---|
| | |
| | |
| | |
| | |

Other Samples

| Type | Sample No. |
|---|---|
| | |
| | |
| | |
| | |

**Harding Lawson Associates**
Engineering and
Environmental Services

# GROUND-WATER SAMPLING FORM

Job Name: Utility Trailer
Job Number: 25109-3
Recorded by: [signature] (Signature)

Well No.: MW-6
Well Type: ☒ Monitor ☐ Extraction ☐ Other
Well Material: ☒ PVC ☐ St. Steel ☐ Other
Date: 2/9/94 Time:
Sampled by: JNB/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): 39.70
Water Level Depth (WL in feet BTOC): 24.10
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:

$(39.70 - 24.10) \times 4^2 \times 4 \times 0.0408 = 40.7$ gallons

TD (feet) − WL (feet) × D (inches)² × # Vols × 0.0408 = Calculated Purge Volume

### PURGE TIME

0908 Start 0913 Stop Elapsed

### PURGE RATE

Initial gpm Final gpm

### ACTUAL PURGE VOLUME

45 gallons

### FIELD PARAMETER MEASUREMENT

| Minutes Since Pumping Began | pH | Cond. (µmhos/cm) | T ☐ °C ☐ °F | Other |
|---|---|---|---|---|
| Initial | 7.08 | 1463 | 60.1 | clear |
| 2 | 6.97 | 1571 | 64.6 | 20 gal |
| 3 | 6.92 | 1546 | 65.0 | 30 " |
| 4 | 6.90 | 1555 | 65.5 | 39 " |
| 5 | 6.83 | 1560 | 65.5 | 45 |

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

Observations During Purging (Well Condition, Turbidity, Color, Odor): Good, not turbid, clear, no odor

Discharge Water Disposal: ☐ Sanitary Sewer ☐ Storm Sewer ☒ Other drum

## WELL SAMPLING

### SAMPLING METHOD

☒ Bailer - Type: 1" x 2' S.S.
☐ 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-6 | 2 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. |
|---|---|
| | |
| | |
| | |
| | |

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UTM 004679

APPENDIX B

# APPENDIX B

## LABORATORY REPORTS/QUALITY ASSURANCE-QUALITY CONTROL DATA, LETTER OF EXPLANATION CHAIN-OF-CUSTODY DOCUMENTATION

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
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
943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

May 2, 1994

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707

Attention: Brad Eismen

Subject: HLA Project: 25109-3, Utility Trailer

Dear Mr. Eismen:

Per your request, I reviewed the data for HLA project Utility Trailer, sampled February 9, 1994. It was indicated on the chain of custody form that detection limits of 1.0 ppb must be achieved for this project. The samples were analyzed and reported in a manner which would achieve the lowest detection limits possible, yet allow the analytes present in the samples at high concentrations to fall within calibration and QA/QC limits. When samples must be diluted to analyze high concentration analytes, low level analytes may be diluted below detectable levels. Most of the Utility Trailer samples contained analytes at high concentrations and were therefore diluted to accurately quantitate the results. However, many of the samples were analyzed twice, once with no dilution or a small dilution, and again at the dilution which was initially reported to Harding Lawson Associates. The report has been modified to include the results of the other analyses. Please note that in most of the samples, no additional analytes were detected at the lower detection limits.

I also inspected the results for samples MW-2 and MW-7 which were supposedly duplicate samples. The samples had the same analytes detected, however the RPD between samples for tetrachloroethene exceeded acceptable levels. MW-2 and MW-7 were each analyzed twice. The results for each sample were consistent with each other and all of the QA/QC met the acceptance criteria. There is no apparent explanation for the high RPD for tetrachloroethene between MW-2 and MW-7.

If there are any questions please call me at (714) 261-1022.

Sincerely,

DEL MAR ANALYTICAL

Mark Weiner

Mark Weiner
Laboratory Supervisor

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
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
943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Brad Eisman

Client Project ID: 25109-3
Utility Trailer
Sample Descript: Water, MW-2
Lab Number: DB01049

Sampled: Feb 9, 1994
Received: Feb 10, 1994
Analyzed: Feb 13, 1994
Reported: Feb 15, 1994

## 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** | **8.9** |
| 1,2-Dichloroethane | 0.50 | N.D. |
| **1,1-Dichloroethene** | **0.50** | **11** |
| **cis-1,2-Dichloroethene** | **0.50** | **5.3** |
| 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** | **160** |
| **1,1,1-Trichloroethane** | **0.50** | **5.7** |
| 1,1,2-Trichloroethane | 0.50 | N.D. |
| **Trichloroethene** | **0.50** | **22** |
| Trichlorofluoromethane | 0.50 | N.D. |
| Vinyl chloride | 1.0 | N.D. |

Multiple dilutions of the sample were analyzed to obtain the reported results.

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: | |
|---|---|
| 4-Bromofluorobenzene | 99% |

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
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
943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Brad Eisman

Client Project ID: 25109-3
Utility Trailer
Sample Descript: Water, MW-3
Lab Number: DB01050

Sampled: Feb 9, 1994
Received: Feb 10, 1994
Analyzed: Feb 13, 1994
Reported: Feb 15, 1994

## 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** | **2.4** |
| 1,2-Dichloroethane | 0.50 | N.D. |
| **1,1-Dichloroethene** | **0.50** | **4.6** |
| **cis-1,2-Dichloroethene** | **0.50** | **6.3** |
| 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** | **120** |
| **1,1,1-Trichloroethane** | **0.50** | **4.4** |
| 1,1,2-Trichloroethane | 0.50 | N.D. |
| **Trichloroethene** | **0.50** | **60** |
| Trichlorofluoromethane | 0.50 | N.D. |
| Vinyl chloride | 1.0 | N.D. |

Multiple dilutions of the sample were analyzed to obtain the reported results.

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: | |
|---|---|
| 4-Bromofluorobenzene | 99% |

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
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
943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Brad Eisman

Client Project ID: 25109-3
Utility Trailer
Sample Descript: Water, MW-4
Lab Number: DB01051

Sampled: Feb 9, 1994
Received: Feb 10, 1994
Analyzed: Feb 13, 1994
Reported: Feb 15, 1994

## 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** | **32** |
| 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** | **230** |
| **1,1,1-Trichloroethane** | **2.5** | **3.9** |
| 1,1,2-Trichloroethane | 2.5 | N.D. |
| **Trichloroethene** | **2.5** | **11** |
| Trichlorofluoromethane | 2.5 | N.D. |
| Vinyl chloride | 5.0 | N.D. |

Multiple dilutions of the sample were analyzed to obtain the reported results.

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: | |
|---|---|
| 4-Bromofluorobenzene | 107% |

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943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Brad Eisman

Client Project ID: 25109-3
Utility Trailer
Sample Descript: Water, MW-5
Lab Number: DB01052

Sampled: Feb 9, 1994
Received: Feb 10, 1994
Analyzed: Feb 13, 1994
Reported: Feb 15, 1994

## 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** | **5.4** |
| 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** | **12** |
| 1,2-Dichloroethane | 0.50 | N.D. |
| **1,1-Dichloroethene** | **0.50** | **49** |
| **cis-1,2-Dichloroethene** | **0.50** | **0.61** |
| 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** | **65** |
| **1,1,1-Trichloroethane** | **0.50** | **35** |
| 1,1,2-Trichloroethane | 0.50 | N.D. |
| **Trichloroethene** | **0.50** | **12** |
| Trichlorofluoromethane | 0.50 | N.D. |
| Vinyl chloride | 1.0 | N.D. |

Multiple dilutions of the sample were analyzed to obtain the reported results.

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: | |
|---|---|
| 4-Bromofluorobenzene | 90% |

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Brad Eisman

Client Project ID: 25109-3
Utility Trailer
Sample Descript: Water, MW-6
Lab Number: DB01053

Sampled: Feb 9, 1994
Received: Feb 10, 1994
Analyzed: Feb 13, 1994
Reported: Feb 15, 1994

## 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** | **4.3** |
| 1,2-Dichloroethane | 1.3 | N.D. |
| **1,1-Dichloroethene** | **1.3** | **9.8** |
| 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** | **68** |
| **1,1,1-Trichloroethane** | **1.3** | **16** |
| 1,1,2-Trichloroethane | 1.3 | N.D. |
| **Trichloroethene** | **1.3** | **14** |
| Trichlorofluoromethane | 1.3 | N.D. |
| Vinyl chloride | 2.5 | N.D. |

No other dilutions of this sample were analyzed.

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: | |
|---|---|
| 4-Bromofluorobenzene | 98% |

DB01049.HLA <13 of 16>

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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Brad Eisman

Client Project ID: 25109-3
Utility Trailer
Sample Descript: Water, MW-7
Lab Number: DB01054

Sampled: Feb 9, 1994
Received: Feb 10, 1994
Analyzed: Feb 13, 1994
Reported: Feb 15, 1994

## 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** | **14** |
| 1,2-Dichloroethane | 2.5 | N.D. |
| **1,1-Dichloroethene** | **2.5** | **15** |
| **cis-1,2-Dichloroethene** | **2.5** | **8.0** |
| 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** | **220** |
| **1,1,1-Trichloroethane** | **2.5** | **8.5** |
| 1,1,2-Trichloroethane | 2.5 | N.D. |
| **Trichloroethene** | **2.5** | **30** |
| Trichlorofluoromethane | 2.5 | N.D. |
| Vinyl chloride | 5.0 | N.D. |

Multiple dilutions of the sample were analyzed to obtain the reported results.

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: | |
|---|---|
| 4-Bromofluorobenzene | 104% |

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943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

| | | | |
|---|---|---|---|
| Harding Lawson Associates | Client Project ID: | 25109-3 | Sampled: Feb 9, 1994 |
| 3 Hutton Centre, Suite 300 | | Utility Trailer | Received: Feb 10, 1994 |
| Santa Ana, CA 92707 | Sample Descript: | Water, MW-8 | Analyzed: Feb 13, 1994 |
| Attention: Brad Eisman | Lab Number: | DB01055 | Reported: Feb 15, 1994 |

## 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** | **0.59** |
| 1,1,2-Trichloroethane | 0.50 | N.D. |
| Trichloroethene | 0.50 | N.D. |
| Trichlorofluoromethane | 0.50 | N.D. |
| Vinyl chloride | 1.0 | N.D. |

No other dilutions of this sample were analyzed.

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: | |
|---|---|
| 4-Bromofluorobenzene | 93% |

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943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Harding Lawson Associates
3 Hutton Centre, Suite 300
Santa Ana, CA 92707
Attention: Brad Eisman

**Method Blank**

Analyzed: Feb 13, 1994
Reported: Feb 15, 1994
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: | |
|---|---|
| 4-Bromofluorobenzene | 101% |

Del Mar Analytical

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943 South 48th St., Suite 114, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

# QC DATA REPORT

**EPA METHOD 601/602**
matrix: water

**DATE:** 2/13/94

**SAMPLE #** Blank

| Analyte | R1 | Sp | MS | MSD | PR1 | PR2 | RPD | MEAN PR |
|---|---|---|---|---|---|---|---|---|
| | ppb | ppb | ppb | ppb | % | % | % | % |
| 1,1-Dichloroethene | 0 | 10 | 9.2 | 10 | 92% | 100% | 8.3% | 96% |
| 1,1,1-Trichloroethane | 0 | 10 | 9.4 | 8.6 | 94% | 86% | 8.9% | 90% |
| Trichloroethene | 0 | 10 | 9.9 | 11 | 99% | 110% | 10.5% | 105% |
| Chlorobenzene | 0 | 10 | 11 | 11 | 110% | 110% | 0.0% | 110% |
| Benzene | 0 | 10 | 10 | 9.4 | 100% | 94% | 6.2% | 97% |
| Toluene | 0 | 10 | 10 | 9.5 | 100% | 95% | 5.1% | 98% |

**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

**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

Samplers: Neal Beaty, Juan Fausto

Job Number: 25109-3

Name/Location: Utility Trailer

Project Manager: Brad Eisman

Recorder: Neal Beaty (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 | ANALYSIS REQUESTED: EPA 601/8010 | EPA 602/8020 | EPA 624/8240 | EPA 625/8270 | Priority Pllnt. Metals | Benzene/Toluene/Xylene | Total Petrol. Hydrocarb. 5010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | X | | | | | | | X | | | | | | 94 | 02 | 09 | 1130 | mw-2 | | | | | | | X |
| | X | | | | | | | X | | | | | | | | | 1040 | mw-3 | | | | | | | X |
| | X | | | | | | | X | | | | | | | | | 1230 | mw-4 | | | | | | | X |
| | X | | | | | | | X | | | | | | | | | 0836 | mw-5 | | | | | | | X |
| | X | | | | | | | X | | | | | | | | | 0926 | mw-6 | | | | | | | X |
| X | X | | | | | | | X | | | | | | | | | 1200 | mw-7 | | | | | | | X |
| 23 | X | | | | | | | X | | | | | | 94 | 02 | 09 | 1240 | mw-8 | | | | | | | X |

| LAB NUMBER: Yr | Wk | Seq | DEPTH IN FEET | COL MTD CD | QA CODE | MISCELLANEOUS |
|---|---|---|---|---|---|---|
| | | | | | | • Detection limits must achieve 1.0 ppb. |
| | | | | | | • Normal TAT |
| | | | | | | • WIP Requirements |
| | | | | | | ultra it / on ice |

## CHAIN OF CUSTODY RECORD

| RELINQUISHED BY: (Signature) | RECEIVED BY: (Signature) | DATE/TIME |
|---|---|---|
| Neal Beaty | [illegible] | 2/10/94 9:30 |
| [illegible] | [illegible] | 2/10/94 9:40 |
| | | |
| | | |

| DISPATCHED BY: (Signature) | DATE/TIME | RECEIVED FOR LAB BY: (Signature) | DATE/TIME |
|---|---|---|---|
| | | [illegible] | 2/10/94 9:40 |

METHOD OF SHIPMENT: hand delivered

UTM 004692

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

6533

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

PREPARED FOR HARDING LAWSON ASSOCIATES
PROJECT: 25109-3 UTILITY TRAILER
RECEIVED: 2/10/94

**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

Samplers: Neal Beaty, Juan Fausto

Job Number: 25109-3

Name/Location: Utility Trailer

Project Manager: Brad Eimen

Recorder: Neal Beaty (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. | 8010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | X | | | | | | | X | | | | 94 | 02 | 07 | 1130 | MW-2 | | | | | | | | X |
| | X | | | | | | | X | | | | | | | 1040 | MW-3 | | | | | | | | X |
| | X | | | | | | | X | | | | | | | 1230 | MW-4 | | | | | | | | X |
| | X | | | | | | | X | | | | | | | 0936 | MW-5 | | | | | | | | X |
| | X | | | | | | | X | | | | | | | 0926 | MW-6 | | | | | | | | X |
| X | X | | | | | | | X | | | | | | | 1206 | MW-7 | | | | | | | | X |
| 23 | X | | | | | | | X | | | | 94 | 02 | 07 | 1240 | MW-8 | | | | | | | | X |

| LAB NUMBER: Yr | Wk | Seq | DEPTH IN FEET | COL MTD CD | QA CODE | MISCELLANEOUS |
|---|---|---|---|---|---|---|
| | | | | | | • Detection limits must achieve... 1.0 ppb. |
| | | | | | | • Normal TAT |
| | | | | | | • WIP Requirements |
| | | | | | | wet ice |

## CHAIN OF CUSTODY RECORD

| RELINQUISHED BY: (Signature) | RECEIVED BY: (Signature) | DATE/TIME |
|---|---|---|
| Neal Beaty | [illegible] | 2/10/94 9:30 |
| [illegible] | [illegible] | 2/10/94 9:40 |
| | | |
| | | |

DISPATCHED BY: (Signature) DATE/TIME

RECEIVED FOR LAB BY: (Signature) [illegible] DATE/TIME 2/10/94 9:40

METHOD OF SHIPMENT hand delivered

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

UTM 004694

6533

Del Mar Analytical

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# CASE NARRATIVE

CLIENT: HLA
PROJECT: Utility Trailer

DATE SAMPLED: 2/9/94
DATE RECEIVED: 2/10/94

| SAMPLE DESCRIPTION | LABORATORY NUMBER | SAMPLE MATRIX | EPA ANALYSES |
|---|---|---|---|
| MW-2 | DB01049 | WATER | EPA 8010 |
| MW-3 | DB01050 | WATER | EPA 8010 |
| MW-4 | DB01051 | WATER | EPA 8010 |
| MW-5 | DB01052 | WATER | EPA 8010 |
| MW-6 | DB01053 | WATER | EPA 8010 |
| MW-7 | DB01054 | WATER | EPA 8010 |
| MW-8 | DB01055 | WATER | EPA 8010 |

SAMPLE RECEIPT: The samples were received intact, on ice and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

SAMPLE PREPARATION: EPA 8010 analyses were performed using 2.0 grams of sample per analysis.

INSTRUMENTATION: EPA 8010 analyses were performed on a HP 5890 Series II gas chromatograph with PID and ELCD detectors in series. The primary column was a 105 m, 0.53 u, Rtx-502.2. The confirmation column was a 105 m, 0.53 u, Rtx-1.

PROBLEMS ENCOUNTERED: No problems were encountered during sample analysis.

QA/QC CRITERIA: QA/QC criteria were met.

OBSERVATIONS: The laboratory background concentration of dichloromethane (methylene chloride) fluctuated between 0.5-5.5 ug/L throughout the day that the samples were analyzed. The methylene chloride reported in the samples was most likely laboratory contamination. The second set of LARWQCB report forms provided contain the results which were not initially reported due to dilutions of the samples. Results which met QA/QC criteria and were reported on the first set of forms are listed on the second forms as **. The results reported on the second forms may not be reproducible due to the presence of analytes which saturated the detector during sample analysis.

DEL MAR ANALYTICAL

Mark Weiner
QA/QC Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**LOS ANGELES REGION**

**LABORATORY REPORT FORM**

Laboratory Name: Del Mar Analytical
Address: 2852 Alton Avenue Irvine, CA 92714
Telephone: (714) 261-1022

Laboratory Certification (ELAP) No.: 1197 Expiration Date: May 31, 1994

Laboratory Director's Name: Gary Sneube
Laboratory Director's Signature:

Client: Harding Lawson Associates
Project No.: 25109-3 Utility Trailer

| Analytical Method: (Circle One) | EPA 502.1 | EPA 503.1 | EPA 502.2 | EPA 524.1 |
|---|---|---|---|---|
| | | | | EPA 524.2 |
| | EPA 601 | EPA 602 | | EPA 624 |
| | EPA 8010 | EPA 8020 | EPA 8021 | EPA 8240 |
| | | | | EPA 8260 |
| Other | | | | |
| Date Sampled: | 2/9/94 | | | |
| Date Received: | 2/10/94 | | | |
| Date Reported: | 2/15/94 | | | |
| Sample Matrix: | water | | | |
| Extraction Method: | 5030 | | | |
| Extraction Material: | water | | | |

Chain of Custody Received: Yes No
Sample Condition: intact, on ice

-- Sample Headspace Description (%): no headspace
-- Sample Container Material: 40 ml voa vials

(RWQCB LabForm10B;Ves11/92)

UTM 004696

## Analytical Test Result

Reporting Unit (Circle One): µg/kg **µg/l**

| | | | | | |
|---|---|---|---|---|---|
| DATE ANALYZED | | 2/13/94 | 2/13/94 | 2/13/94 | 2/13/94 |
| DATE EXTRACTED | | 2/13/94 | 2/13/94 | 2/13/94 | 2/13/94 |
| DILUTION FACTOR | | 1 | 5 | 5 | 10 |
| LAB SAMPLE I.D. | | BLANK | DB01049 | DB01050 | DB01051 |
| CLIENT SAMPLE I.D. | | N/A | MW-2 | MW-3 | MW-4 |
| COMPOUND | MDL | MB | | | |
| Bromobenzene | | NA | NA | NA | NA |
| Bromodichloromethane | 0.50 | ND | ND | ND | ND |
| Bromoform | 0.50 | ND | ND | ND | ND |
| Bromomethane | 0.50 | ND | ND | ND | ND |
| Carbon tetrachloride | 0.50 | ND | ND | ND | ND |
| Chloroethane | 1.0 | ND | ND | ND | ND |
| Chloroform | 0.50 | ND | ND | ND | ND |
| 1-Chlorohexane | | NA | NA | NA | NA |
| Chloromethane | 0.50 | ND | ND | ND | ND |
| Dibromochloromethane | 0.50 | ND | ND | ND | ND |
| Dibromomethane | | NA | NA | NA | NA |
| Dichlorodifluoromethane | | NA | NA | NA | NA |
| 1,1-Dichloroethane (1,1-DCA) | 0.50 | ND | **8.9** | ND | ND |
| 1,2-Dichloroethane (1,2-DCA) | 0.50 | ND | ND | ND | ND |
| 1,1-Dichloroethylene (1,1-DCE) | 0.50 | ND | **11** | **4.6** | **32** |
| trans-1,2-Dichloroethylene | 0.50 | ND | ND | ND | ND |
| Dichloromethane | 1.0 | **5.1** | **8.4** | **11** | **18** |
| 1,2-Dichloropropane | 0.50 | ND | ND | ND | ND |
| cis-1,3-Dichloropropylene | 0.50 | ND | ND | ND | ND |
| trans-1,3-Dichloropropylene | 0.50 | ND | ND | ND | ND |
| 1,1,1,2-Tetrachloroethane | | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 0.50 | ND | ND | ND | ND |
| Tetrachloroethylene (PCE) | 0.50 | ND | **160** | **120** | **230** |
| 1,1,1-Trichloroethane (111-TCA) | 0.50 | ND | **5.7** | **4.4** | ND |
| 1,1,2-Trichloroethane (112-TCA) | 0.50 | ND | ND | ND | ND |
| Trichloroethylene (TCE) | 0.50 | ND | **22** | **60** | **11** |
| 1,2,3-Trichloropropane | | NA | NA | NA | NA |
| Trichlorofluoromethane | 0.50 | ND | ND | ND | ND |
| Vinyl chloride | 1.0 | ND | ND | ND | ND |
| Benzene | 0.50 | ND | ND | ND | ND |
| Chlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| Ethyl benzene | 0.50 | ND | ND | ND | ND |
| Toluene | 0.50 | ND | ND | ND | ND |

## Analytical Test Result

Reporting Unit (Circle One): µg/kg **µg/l**

| | | | | | |
|---|---|---|---|---|---|
| DATE ANALYZED | | 2/13/94 | 2/13/94 | 2/13/94 | 2/13/94 |
| DATE EXTRACTED | | 2/13/94 | 2/13/94 | 2/13/94 | 2/13/94 |
| DILUTION FACTOR | | 1 | 1 | 1 | 5 |
| LAB SAMPLE I.D. | | BLANK | DB01049 | DB01050 | DB01051 |
| CLIENT SAMPLE I.D. | | N/A | MW-2 | MW-3 | MW-4 |
| COMPOUND | MDL | MB | | | |
| Bromobenzene | | NA | NA | NA | NA |
| Bromodichloromethane | 0.50 | ND | ND | ND | ND |
| Bromoform | 0.50 | ND | ND | ND | ND |
| Bromomethane | 0.50 | ND | ND | ND | ND |
| Carbon tetrachloride | 0.50 | ND | ND | ND | ND |
| Chloroethane | 1.0 | ND | ND | ND | ND |
| Chloroform | 0.50 | ND | ND | ND | ND |
| 1-Chlorohexane | | NA | NA | NA | NA |
| Chloromethane | 0.50 | ND | ND | ND | ND |
| Dibromochloromethane | 0.50 | ND | ND | ND | ND |
| Dibromomethane | | NA | NA | NA | NA |
| Dichlorodifluoromethane | | NA | NA | NA | NA |
| 1,1-Dichloroethane (1,1-DCA) | 0.50 | ND | ** | 2.4 | ND |
| 1,2-Dichloroethane (1,2-DCA) | 0.50 | ND | ND | ND | ND |
| 1,1-Dichloroethylene (1,1-DCE) | 0.50 | ND | ** | ** | ** |
| trans-1,2-Dichloroethylene | 0.50 | ND | ND | ND | ND |
| Dichloromethane | 1.0 | ** | ** | ** | ** |
| 1,2-Dichloropropane | 0.50 | ND | ND | ND | ND |
| cis-1,3-Dichloropropylene | 0.50 | ND | ND | ND | ND |
| trans-1,3-Dichloropropylene | 0.50 | ND | ND | ND | ND |
| 1,1,1,2-Tetrachloroethane | | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 0.50 | ND | ND | ND | ND |
| Tetrachloroethylene (PCE) | 0.50 | ND | ** | ** | ** |
| 1,1,1-Trichloroethane (111-TCA) | 0.50 | ND | ** | ** | 3.9 |
| 1,1,2-Trichloroethane (112-TCA) | 0.50 | ND | ND | ND | ND |
| Trichloroethylene (TCE) | 0.50 | ND | ** | ** | ** |
| 1,2,3-Trichloropropane | | NA | NA | NA | NA |
| Trichlorofluoromethane | 0.50 | ND | ND | ND | ND |
| Vinyl chloride | 1.0 | ND | ND | ND | ND |
| Benzene | 0.50 | ND | ND | ND | ND |
| Chlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| Ethyl benzene | 0.50 | ND | ND | ND | ND |
| Toluene | 0.50 | ND | ND | ND | ND |

**ANALYTICAL TEST RESULT (cont'd)**

| COMPOUND | | MDL | MB | | | |
|---|---|---|---|---|---|---|
| m,p-Xylenes | | 0.50 | ND | ND | ND | ND |
| o-Xylene | | 0.50 | ND | ND | ND | ND |
| Acetone | | | NA | NA | NA | NA |
| Acrolein | | | NA | NA | NA | NA |
| Acrylonitrile | | | NA | NA | NA | NA |
| Bromochloromethane | | | NA | NA | NA | NA |
| n-Butylbenzene | | | NA | NA | NA | NA |
| sec-Butylbenzene | | | NA | NA | NA | NA |
| tert-Butylbenzene | | | NA | NA | NA | NA |
| 2-Chloroethylvinyl ether | | 1.0 | ND | ND | ND | ND |
| 2-Chlorotoluene | | | NA | NA | NA | NA |
| 4-Chlorotoluene | | | NA | NA | NA | NA |
| Dichlorodifluoromethane | | | NA | NA | NA | NA |
| cis-1,2-Dichloroethylene | | 0.50 | ND | 5.3 | 6.3 | ND |
| 1,3-Dichloropropane | | | NA | NA | NA | NA |
| 2,2-Dichloropropane | | | NA | NA | NA | NA |
| 1,1-Dichloropropylene | | | NA | NA | NA | NA |
| Ethylene dibromide (EDB) | | | NA | NA | NA | NA |
| Hexachlorobutadiene | | | NA | NA | NA | NA |
| Isopropylbenzene | | | NA | NA | NA | NA |
| p-Isopropyltoluene | | | NA | NA | NA | NA |
| Methyl Ethyl Ketone | | | NA | NA | NA | NA |
| Methyl Isobutyl Ketone | | | NA | NA | NA | NA |
| Naphthalene | | | NA | NA | NA | NA |
| n-Propylbenzene | | | NA | NA | NA | NA |
| Styrene | | | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | | | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | | | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | | | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | | | NA | NA | NA | NA |
| 1,1,2-Trichloro-trifluoroethane | | | NA | NA | NA | NA |
| **Surrogate** | **SPK CONC** | **ACP% %RC** | **MB** | **%RC** | **%RC** | **%RC** |
| 4-Bromofluorobenzene | 10 | 80-120 | 101 | 99 | 99 | 107 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

a = Report Any Value > or = MDL; b = Listed Compounds Are Ordered by Laboratory Analytical Methods: Halogenated, Aromatic, then Remaining Compounds Identified by GC/MS.
SPK CONC = Spiking Concentration (< or = 5 x PQL); ACP % = Acceptable Range of Percent; %RC = % Recovery
MDL = Method Detection Limit; MB = Method Blank; ND = Not Detected (Below MDL); NA = Not Analyzed

**ANALYTICAL TEST RESULT (cont'd)**

| COMPOUND | MDL | MB | | | |
|---|---|---|---|---|---|
| m,p-Xylenes | 0.50 | ND | ND | ND | ND |
| o-Xylene | 0.50 | ND | ND | ND | ND |
| Acetone | | NA | NA | NA | NA |
| Acrolein | | NA | NA | NA | NA |
| Acrylonitrile | | NA | NA | NA | NA |
| Bromochloromethane | | NA | NA | NA | NA |
| n-Butylbenzene | | NA | NA | NA | NA |
| sec-Butylbenzene | | NA | NA | NA | NA |
| tert-Butylbenzene | | NA | NA | NA | NA |
| 2-Chloroethylvinyl ether | 1.0 | ND | ND | ND | ND |
| 2-Chlorotoluene | | NA | NA | NA | NA |
| 4-Chlorotoluene | | NA | NA | NA | NA |
| Dichlorodifluoromethane | | NA | NA | NA | NA |
| cis-1,2-Dichloroethylene | 0.50 | ND | ** | ** | ND |
| 1,3-Dichloropropane | | NA | NA | NA | NA |
| 2,2-Dichloropropane | | NA | NA | NA | NA |
| 1,1-Dichloropropylene | | NA | NA | NA | NA |
| Ethylene dibromide (EDB) | | NA | NA | NA | NA |
| Hexachlorobutadiene | | NA | NA | NA | NA |
| Isopropylbenzene | | NA | NA | NA | NA |
| p-Isopropyltoluene | | NA | NA | NA | NA |
| Methyl Ethyl Ketone | | NA | NA | NA | NA |
| Methyl Isobutyl Ketone | | NA | NA | NA | NA |
| Naphthalene | | NA | NA | NA | NA |
| n-Propylbenzene | | NA | NA | NA | NA |
| Styrene | | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | | NA | NA | NA | NA |
| 1,1,2-Trichloro-trifluoroethane | | NA | NA | NA | NA |

| Surrogate | SPK CONC | ACP% %RC | MB | %RC | %RC | %RC |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 10 | 80-120 | 101 | 91 | 94 | 75 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

a = Report Any Value > or = MDL; b = Listed Compounds Are Ordered by Laboratory Analytical Methods: Halogenated, Aromatic, then Remaining Compounds Identified by GC/MS.
SPK CONC = Spiking Concentration (< or = 5 x PQL); ACP % = Acceptable Range of Percent; %RC = % Recovery
MDL = Method Detection Limit; MB = Method Blank; ND = Not Detected (Below MDL); NA = Not Analyzed

## Analytical Test Result

Reporting Unit (Circle One): µg/kg **µg/l**

| | | | | | |
|---|---|---|---|---|---|
| | DATE ANALYZED | 2/13/94 | 2/13/94 | 2/13/94 | 2/13/94 |
| | DATE EXTRACTED | 2/13/94 | 2/13/94 | 2/13/94 | 2/13/94 |
| | DILUTION FACTOR | 1 | 5 | 2.5 | 10 |
| | LAB SAMPLE I.D. | BLANK | DB01052 | DB01053 | DB01054 |
| | CLIENT SAMPLE I.D. | N/A | MW-5 | MW-6 | MW-7 |
| COMPOUND | MDL | MB | | | |
| Bromobenzene | | NA | NA | NA | NA |
| Bromodichloromethane | 0.50 | ND | ND | ND | ND |
| Bromoform | 0.50 | ND | ND | ND | ND |
| Bromomethane | 0.50 | ND | ND | ND | ND |
| Carbon tetrachloride | 0.50 | ND | ND | ND | ND |
| Chloroethane | 1.0 | ND | ND | ND | ND |
| Chloroform | 0.50 | ND | **5.4** | ND | ND |
| 1-Chlorohexane | | NA | NA | NA | NA |
| Chloromethane | 0.50 | ND | ND | ND | ND |
| Dibromochloromethane | 0.50 | ND | ND | ND | ND |
| Dibromomethane | | NA | NA | NA | NA |
| Dichlorodifluoromethane | | NA | NA | NA | NA |
| 1,1-Dichloroethane (1,1-DCA) | 0.50 | ND | **12** | **4.3** | **14** |
| 1,2-Dichloroethane (1,2-DCA) | 0.50 | ND | ND | ND | ND |
| 1,1-Dichloroethylene (1,1-DCE) | 0.50 | ND | **49** | **9.8** | **15** |
| trans-1,2-Dichloroethylene | 0.50 | ND | ND | ND | ND |
| Dichloromethane | 1.0 | **5.1** | **20** | **13** | **15** |
| 1,2-Dichloropropane | 0.50 | ND | ND | ND | ND |
| cis-1,3-Dichloropropylene | 0.50 | ND | ND | ND | ND |
| trans-1,3-Dichloropropylene | 0.50 | ND | ND | ND | ND |
| 1,1,1,2-Tetrachloroethane | | NA | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 0.50 | ND | ND | ND | ND |
| Tetrachloroethylene (PCE) | 0.50 | ND | **65** | **68** | **220** |
| 1,1,1-Trichloroethane (111-TCA) | 0.50 | ND | **35** | **16** | **8.5** |
| 1,1,2-Trichloroethane (112-TCA) | 0.50 | ND | ND | ND | ND |
| Trichloroethylene (TCE) | 0.50 | ND | **12** | **14** | **30** |
| 1,2,3-Trichloropropane | | NA | NA | NA | NA |
| Trichlorofluoromethane | 0.50 | ND | ND | ND | ND |
| Vinyl chloride | 1.0 | ND | ND | ND | ND |
| Benzene | 0.50 | ND | ND | ND | ND |
| Chlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 0.50 | ND | ND | ND | ND |
| Ethyl benzene | 0.50 | ND | ND | ND | ND |
| Toluene | 0.50 | ND | ND | ND | ND |

## Analytical Test Result

Reporting Unit (Circle One): µg/kg **µg/l**

| | | | | | |
|---|---|---|---|---|---|
| **DATE ANALYZED** | | 2/13/94 | 2/13/94 | 2/13/94 | |
| **DATE EXTRACTED** | | 2/13/94 | 2/13/94 | 2/13/94 | |
| **DILUTION FACTOR** | | 1 | 1 | 5 | |
| **LAB SAMPLE I.D.** | | BLANK | DB01052 | DB01054 | |
| **CLIENT SAMPLE I.D.** | | N/A | MW-5 | MW-7 | |
| **COMPOUND** | **MDL** | **MB** | | | |
| Bromobenzene | | NA | NA | NA | |
| Bromodichloromethane | 0.50 | ND | ND | ND | |
| Bromoform | 0.50 | ND | ND | ND | |
| Bromomethane | 0.50 | ND | ND | ND | |
| Carbon tetrachloride | 0.50 | ND | ND | ND | |
| Chloroethane | 1.0 | ND | ND | ND | |
| Chloroform | 0.50 | ND | ** | ND | |
| 1-Chlorohexane | | NA | NA | NA | |
| Chloromethane | 0.50 | ND | ND | ND | |
| Dibromochloromethane | 0.50 | ND | ND | ND | |
| Dibromomethane | | NA | NA | NA | |
| Dichlorodifluoromethane | | NA | NA | NA | |
| 1,1-Dichloroethane (1,1-DCA) | 0.50 | ND | ** | ** | |
| 1,2-Dichloroethane (1,2-DCA) | 0.50 | ND | ND | ND | |
| 1,1-Dichloroethylene (1,1-DCE) | 0.50 | ND | ** | ** | |
| trans-1,2-Dichloroethylene | 0.50 | ND | ND | ND | |
| Dichloromethane | 1.0 | ** | ** | ** | |
| 1,2-Dichloropropane | 0.50 | ND | ND | ND | |
| cis-1,3-Dichloropropylene | 0.50 | ND | ND | ND | |
| trans-1,3-Dichloropropylene | 0.50 | ND | ND | ND | |
| 1,1,1,2-Tetrachloroethane | | NA | NA | NA | |
| 1,1,2,2-Tetrachloroethane | 0.50 | ND | ND | ND | |
| Tetrachloroethylene (PCE) | 0.50 | ND | ** | ** | |
| 1,1,1-Trichloroethane (111-TCA) | 0.50 | ND | ** | ** | |
| 1,1,2-Trichloroethane (112-TCA) | 0.50 | ND | ND | ND | |
| Trichloroethylene (TCE) | 0.50 | ND | ** | ** | |
| 1,2,3-Trichloropropane | | NA | NA | NA | |
| Trichlorofluoromethane | 0.50 | ND | ND | ND | |
| Vinyl chloride | 1.0 | ND | ND | ND | |
| Benzene | 0.50 | ND | ND | ND | |
| Chlorobenzene | 0.50 | ND | ND | ND | |
| 1,2-Dichlorobenzene | 0.50 | ND | ND | ND | |
| 1,3-Dichlorobenzene | 0.50 | ND | ND | ND | |
| 1,4-Dichlorobenzene | 0.50 | ND | ND | ND | |
| Ethyl benzene | 0.50 | ND | ND | ND | |
| Toluene | 0.50 | ND | ND | ND | |

**ANALYTICAL TEST RESULT (cont'd)**

| COMPOUND | | MDL | MB | | | |
|---|---|---|---|---|---|---|
| m,p-Xylenes | | 0.50 | ND | ND | ND | ND |
| o-Xylene | | 0.50 | ND | ND | ND | ND |
| Acetone | | | NA | NA | NA | NA |
| Acrolein | | | NA | NA | NA | NA |
| Acrylonitrile | | | NA | NA | NA | NA |
| Bromochloromethane | | | NA | NA | NA | NA |
| n-Butylbenzene | | | NA | NA | NA | NA |
| sec-Butylbenzene | | | NA | NA | NA | NA |
| tert-Butylbenzene | | | NA | NA | NA | NA |
| 2-Chloroethylvinyl ether | | 1.0 | ND | ND | ND | ND |
| 2-Chlorotoluene | | | NA | NA | NA | NA |
| 4-Chlorotoluene | | | NA | NA | NA | NA |
| Dichlorodifluoromethane | | | NA | NA | NA | NA |
| cis-1,2-Dichloroethylene | | 0.50 | ND | ND | ND | **8.0** |
| 1,3-Dichloropropane | | | NA | NA | NA | NA |
| 2,2-Dichloropropane | | | NA | NA | NA | NA |
| 1,1-Dichloropropylene | | | NA | NA | NA | NA |
| Ethylene dibromide (EDB) | | | NA | NA | NA | NA |
| Hexachlorobutadiene | | | NA | NA | NA | NA |
| Isopropylbenzene | | | NA | NA | NA | NA |
| p-Isopropyltoluene | | | NA | NA | NA | NA |
| Methyl Ethyl Ketone | | | NA | NA | NA | NA |
| Methyl Isobutyl Ketone | | | NA | NA | NA | NA |
| Naphthalene | | | NA | NA | NA | NA |
| n-Propylbenzene | | | NA | NA | NA | NA |
| Styrene | | | NA | NA | NA | NA |
| 1,2,3-Trichlorobenzene | | | NA | NA | NA | NA |
| 1,2,4-Trichlorobenzene | | | NA | NA | NA | NA |
| 1,2,4-Trimethylbenzene | | | NA | NA | NA | NA |
| 1,3,5-Trimethylbenzene | | | NA | NA | NA | NA |
| 1,1,2-Trichloro-trifluoroethane | | | NA | NA | NA | NA |
| **Surrogate** | **SPK CONC** | **ACP% %RC** | **MB** | **%RC** | **%RC** | **%RC** |
| 4-Bromofluorobenzene | 10 | 80-120 | 101 | 90 | 98 | 104 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

a = Report Any Value > or = MDL; b = Listed Compounds Are Ordered by Laboratory Analytical Methods: Halogenated, Aromatic, then Remaining Compounds Identified by GC/MS.
SPK CONC = Spiking Concentration (< or = 5 x PQL); ACP % = Acceptable Range of Percent; %RC = % Recovery
MDL = Method Detection Limit; MB = Method Blank; ND = Not Detected (Below MDL); NA = Not Analyzed

**ANALYTICAL TEST RESULT (cont'd)**

| COMPOUND | MDL | MB | | | |
|---|---|---|---|---|---|
| m,p-Xylenes | 0.50 | ND | ND | ND | |
| o-Xylene | 0.50 | ND | ND | ND | |
| Acetone | | NA | NA | NA | |
| Acrolein | | NA | NA | NA | |
| Acrylonitrile | | NA | NA | NA | |
| Bromochloromethane | | NA | NA | NA | |
| n-Butylbenzene | | NA | NA | NA | |
| sec-Butylbenzene | | NA | NA | NA | |
| tert-Butylbenzene | | NA | NA | NA | |
| 2-Chloroethylvinyl ether | 1.0 | ND | ND | ND | |
| 2-Chlorotoluene | | NA | NA | NA | |
| 4-Chlorotoluene | | NA | NA | NA | |
| Dichlorodifluoromethane | | NA | NA | NA | |
| cis-1,2-Dichloroethylene | 0.50 | ND | 0.61 | ** | |
| 1,3-Dichloropropane | | NA | NA | NA | |
| 2,2-Dichloropropane | | NA | NA | NA | |
| 1,1-Dichloropropylene | | NA | NA | NA | |
| Ethylene dibromide (EDB) | | NA | NA | NA | |
| Hexachlorobutadiene | | NA | NA | NA | |
| Isopropylbenzene | | NA | NA | NA | |
| p-Isopropyltoluene | | NA | NA | NA | |
| Methyl Ethyl Ketone | | NA | NA | NA | |
| Methyl Isobutyl Ketone | | NA | NA | NA | |
| Naphthalene | | NA | NA | NA | |
| n-Propylbenzene | | NA | NA | NA | |
| Styrene | | NA | NA | NA | |
| 1,2,3-Trichlorobenzene | | NA | NA | NA | |
| 1,2,4-Trichlorobenzene | | NA | NA | NA | |
| 1,2,4-Trimethylbenzene | | NA | NA | NA | |
| 1,3,5-Trimethylbenzene | | NA | NA | NA | |
| 1,1,2-Trichloro-trifluoroethane | | NA | NA | NA | |

| Surrogate | SPK CONC | ACP% %RC | MB | %RC | %RC | %RC |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 10 | 80-120 | 101 | 92 | 87 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

a = Report Any Value > or = MDL; b = Listed Compounds Are Ordered by Laboratory Analytical Methods: Halogenated, Aromatic, then Remaining Compounds Identified by GC/MS.
SPK CONC = Spiking Concentration (< or = 5 x PQL); ACP % = Acceptable Range of Percent; %RC = % Recovery
MDL = Method Detection Limit; MB = Method Blank; ND = Not Detected (Below MDL); NA = Not Analyzed

## Analytical Test Result

Reporting Unit (Circle One): µg/kg **µg/l**

| | | | | | |
|---|---|---|---|---|---|
| DATE ANALYZED | | 2/13/94 | 2/13/94 | | |
| DATE EXTRACTED | | 2/13/94 | 2/13/94 | | |
| DILUTION FACTOR | | 1 | 1 | | |
| LAB SAMPLE I.D. | | BLANK | DB01055 | | |
| CLIENT SAMPLE I.D. | | N/A | MW-8 | | |
| COMPOUND | MDL | MB | | | |
| Bromobenzene | | NA | NA | | |
| Bromodichloromethane | 0.50 | ND | ND | | |
| Bromoform | 0.50 | ND | ND | | |
| Bromomethane | 0.50 | ND | ND | | |
| Carbon tetrachloride | 0.50 | ND | ND | | |
| Chloroethane | 1.0 | ND | ND | | |
| Chloroform | 0.50 | ND | ND | | |
| 1-Chlorohexane | | NA | NA | | |
| Chloromethane | 0.50 | ND | ND | | |
| Dibromochloromethane | 0.50 | ND | ND | | |
| Dibromomethane | | NA | NA | | |
| Dichlorodifluoromethane | | NA | NA | | |
| 1,1-Dichloroethane (1,1-DCA) | 0.50 | ND | ND | | |
| 1,2-Dichloroethane (1,2-DCA) | 0.50 | ND | ND | | |
| 1,1-Dichloroethylene (1,1-DCE) | 0.50 | ND | ND | | |
| trans-1,2-Dichloroethylene | 0.50 | ND | ND | | |
| Dichloromethane | 1.0 | **5.1** | **3.8** | | |
| 1,2-Dichloropropane | 0.50 | ND | ND | | |
| cis-1,3-Dichloropropylene | 0.50 | ND | ND | | |
| trans-1,3-Dichloropropylene | 0.50 | ND | ND | | |
| 1,1,1,2-Tetrachloroethane | | NA | NA | | |
| 1,1,2,2-Tetrachloroethane | 0.50 | ND | ND | | |
| Tetrachloroethylene (PCE) | 0.50 | ND | ND | | |
| 1,1,1-Trichloroethane (111-TCA) | 0.50 | ND | **0.59** | | |
| 1,1,2-Trichloroethane (112-TCA) | 0.50 | ND | ND | | |
| Trichloroethylene (TCE) | 0.50 | ND | ND | | |
| 1,2,3-Trichloropropane | | NA | NA | | |
| Trichlorofluoromethane | 0.50 | ND | ND | | |
| Vinyl chloride | 1.0 | ND | ND | | |
| Benzene | 0.50 | ND | ND | | |
| Chlorobenzene | 0.50 | ND | ND | | |
| 1,2-Dichlorobenzene | 0.50 | ND | ND | | |
| 1,3-Dichlorobenzene | 0.50 | ND | ND | | |
| 1,4-Dichlorobenzene | 0.50 | ND | ND | | |
| Ethyl benzene | 0.50 | ND | ND | | |
| Toluene | 0.50 | ND | ND | | |

**ANALYTICAL TEST RESULT (cont'd)**

| COMPOUND | MDL | MB | | | |
|---|---|---|---|---|---|
| m,p-Xylenes | 0.50 | ND | ND | | |
| o-Xylene | 0.50 | ND | ND | | |
| Acetone | | NA | NA | | |
| Acrolein | | NA | NA | | |
| Acrylonitrile | | NA | NA | | |
| Bromochloromethane | | NA | NA | | |
| n-Butylbenzene | | NA | NA | | |
| sec-Butylbenzene | | NA | NA | | |
| tert-Butylbenzene | | NA | NA | | |
| 2-Chloroethylvinyl ether | 1.0 | ND | ND | | |
| 2-Chlorotoluene | | NA | NA | | |
| 4-Chlorotoluene | | NA | NA | | |
| Dichlorodifluoromethane | | NA | NA | | |
| cis-1,2-Dichloroethylene | 0.50 | ND | ND | | |
| 1,3-Dichloropropane | | NA | NA | | |
| 2,2-Dichloropropane | | NA | NA | | |
| 1,1-Dichloropropylene | | NA | NA | | |
| Ethylene dibromide (EDB) | | NA | NA | | |
| Hexachlorobutadiene | | NA | NA | | |
| Isopropylbenzene | | NA | NA | | |
| p-Isopropyltoluene | | NA | NA | | |
| Methyl Ethyl Ketone | | NA | NA | | |
| Methyl Isobutyl Ketone | | NA | NA | | |
| Naphthalene | | NA | NA | | |
| n-Propylbenzene | | NA | NA | | |
| Styrene | | NA | NA | | |
| 1,2,3-Trichlorobenzene | | NA | NA | | |
| 1,2,4-Trichlorobenzene | | NA | NA | | |
| 1,2,4-Trimethylbenzene | | NA | NA | | |
| 1,3,5-Trimethylbenzene | | NA | NA | | |
| 1,1,2-Trichloro-trifluoroethane | | NA | NA | | |

| Surrogate | SPK CONC | ACP% %RC | MB | %RC | %RC | %RC |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 10 | 80-120 | 101 | 93 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

a = Report Any Value > or = MDL; b = Listed Compounds Are Ordered by Laboratory Analytical Methods: Halogenated, Aromatic, then Remaining Compounds Identified by GC/MS.
SPK CONC = Spiking Concentration (< or = 5 x PQL); ACP % = Acceptable Range of Percent; %RC = % Recovery
MDL = Method Detection Limit; MB = Method Blank; ND = Not Detected (Below MDL); NA = Not Analyzed

## QA/QC REPORT

**Reporting Unit (Circle One): µg/kg** **µg/l**

### I. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

DATE PERFORMED: 2/13/94

BATCH #: N/A

LAB SAMPLE I. D.: Blank

| ANALYTE | SPK CONC | MS | % MS | MSD | % MSD | RPD | ACP %MS | ACP RPD |
|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 10 | 9.2 | 92% | 10 | 100% | 8.3% | 80-120 | 20% |
| 1,1,1-Trichloroethane | 10 | 9.4 | 94% | 8.6 | 86% | 8.9% | 80-120 | 20% |
| Trichloroethene | 10 | 9.9 | 99% | 11 | 110% | 11% | 80-120 | 20% |
| Chlorobenzene | 10 | 13 | 130% | 12 | 120% | 8.0% | 80-120 | 20% |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

### II. Laboratory Quality Control Check Sample

DATE PERFORMED: 2/13/94

BATCH #: N/A

LAB SAMPLE I. D.: LCS

| ANALYTE | SPK CONC | RESULT | %RECOVERY | ACP % |
|---|---|---|---|---|
| 1,1-Dichloroethene | 10 | 9.3 | 93% | 80-120 |
| 1,1,1-Trichloroethane | 10 | 9.1 | 91% | 80-120 |
| Trichloroethene | 10 | 11 | 110% | 80-120 |
| Chlorobenzene | 10 | 8.7 | 87% | 80-120 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

ANALYST: DM DATE: 2/25/94

QA/QC REPORT

III. **Calibration Standard**

MOST RECENT INITIAL CALIBRATION DATE: 1/20/94

DAILY CALIBRATION DATE: 2/13/94

SUPPLY SOURCE: Supelco, Inc.

| COMPOUND [c] | INITIAL RF [ave] | %RSD [d] | DAILY RF | %DIFF [e] w/RF [ave] |
|---|---|---|---|---|
| Bromobenzene | | | | |
| Bromochloromethane | | | | |
| Bromodichloromethane | 1.2 | 7.4 | 1.2 | 1.7 |
| Bromoform | 0.52 | 10 | 0.46 | 13 |
| Bromomethane | 0.26 | 35 | 0.28 | 5.1 |
| Carbon tetrachloride | 1.8 | 3.5 | 1.5 | 14 |
| Chloroethane | 1.2 | 12 | 1.4 | 16 |
| Chloroform* | 2.2 | 11 | 2.2 | 0.44 |
| 1-Chlorohexane | | | | |
| Chloromethane | 0.64 | 11 | 0.55 | 14 |
| Dibromochloromethane | 0.84 | 13 | 0.87 | 4.1 |
| Dibromomethane | | | | |
| Dichloromethane (Methylene chloride) | 2.9 | 33 | 3.5 | 21 |
| 1,1-Dichloroethane (1,1-DCA) | 1.4 | 8.0 | 1.4 | 3.0 |
| 1,2-Dichloroethane (1,2-DCA) | 1.4 | 5.6 | 1.7 | 15 |
| 1,1-Dichloroethylene* (1,1-DCE) | 1.2 | 8.0 | 0.99 | 16 |
| trans-1,2-Dichloroethylene | 1.4 | 6.7 | 1.3 | 7.6 |
| 1,2-Dichloropropane* | 1.3 | 7.1 | 1.4 | 8.6 |
| cis-1,3-Dichloropropylene | 1.2 | 6.8 | 1.4 | 16 |
| trans-1,3-Dichloropropylene | 1.1 | 7.1 | 1.2 | 6.6 |
| 1,1,1,2-Tetrachloroethane | | | | |
| 1,1,2,2-Tetrachloroethane | 1.1 | 20 | 1.2 | 11 |
| Tetrachloroethylene (PCE) | 1.7 | 9.1 | 1.5 | 10 |

III. Calibration Standard (cont'd)

| COMPOUND | INITIAL RF | %RSD | DAILY RF | %DIFF w/RF |
|---|---|---|---|---|
| 1,1,1-Trichloroethane (1,1,1-TCA) | 1.6 | 4.2 | 1.3 | 17 |
| 1,1,2-Trichloroethane (1,1,2-TCA) | 1.5 | 9.6 | 1.5 | 3.3 |
| Trichloroethylene (TCE) | 1.5 | 5.4 | 1.6 | 4.4 |
| 1,2,3-Trichloropropane | | | | |
| Trichlorofluoromethane | | | | |
| Vinyl chloride* (VC) | 0.96 | 6.9 | 0.99 | 3.5 |
| Benzene | 1.5 | 5.1 | 1.4 | 5.7 |
| Chlorobenzene | 1.4 | 6.6 | 1.5 | 5.0 |
| 1,2-Dichlorobenzene | 0.90 | 13 | 1.1 | 25 |
| 1,3-Dichlorobenzene | 1.2 | 9.1 | 1.4 | 20 |
| 1,4-Dichlorobenzene | 0.94 | 13 | 0.73 | 27 |
| Ethyl benzene* | 1.2 | 4.9 | 1.1 | 12 |
| Toluene* | 1.4 | 4.9 | 1.3 | 4.9 |
| m,p-Xylenes | 0.85 | 12 | 0.71 | 17 |
| o-Xylene | 0.84 | 13 | 1.1 | 25 |
| Acetone | | | | |
| Acrolein | | | | |
| Acrylonitrile | | | | |
| n-Butylbenzene | | | | |
| sec-Butylbenzene | | | | |
| tert-Butylbenzene | | | | |
| 2-Chloroethylvinyl ether | 0.44 | 14 | 0.45 | 0.94 |
| 2-Chlorotoluene | | | | |
| 4-Chlorotoluene | | | | |
| Dichloro-difluoromethane | | | | |
| cis-1,2-Dichloroethylene | 1.4 | 5.0 | 1.4 | 0.37 |
| trans-1,2-Dichloroethylene | 1.4 | 6.7 | 1.3 | 7.6 |
| 1,3-Dichloropropane | | | | |
| 2,2-Dichloropropane | | | | |
| 1,1-Dichloropropylene | | | | |
| Ethylene dibromide(EDB) | 0.54 | 24 | 0.59 | 8.2 |
| Hexachlorobutadiene | | | | |
| Isopropylbenzene | | | | |

III. Calibration Standard (cont'd)

| COMPOUND [c] | INITIAL RF ave. | %RSD [d] | DAILY RF | %DIFF [e] w/RF ave |
|---|---|---|---|---|
| p-Isopropyltoluene | | | | |
| Methyl Ethyl Ketone | | | | |
| Methyl Isobutyl Ketone | | | | |
| Naphthalene | | | | |
| n-Propylbenzene | | | | |
| Styrene | | | | |
| 1,2,3-Trichlorobenzene | | | | |
| 1,2,4-Trichlorobenzene | | | | |
| 1,2,4-Trimethylbenzene | | | | |
| 1,3,5-Trimethylbenzene | | | | |
| 1,1,2-Trichloro-trifluoroethane | | | | |

SPK CONC = Spiking Concentration (< or = 5 X PQL); PQL = Practical Quantitation Limit

%MS = Percent Recovery of MS; %MSD = Percent Recovery of MSD; RPD = Relative Percent Difference;

ACP = Acceptable Range of Percent; INITIAL RF ave = Average Response Factor From Initial Calibration;

DAILY RF = Response Factor From Daily Calibration; %RSD = Percent Relative Standard Deviation;

%DIFF = Percent Difference; c = Listed Compounds are Ordered by Laboratory Analytical Methods: Halogenated, Aromatic, then Remaining Compounds Identified by GC/MS.

d = Value < or = 10% for GC EPA Methods 500 & 600 Series, < or = 20% for GC EPA Methods 8000 Series, < or = 30% for GC/MS Methods.

e = Value < or = 20% for GC EPA Methods 500 & 600 Series, < or = 15% for GC EPA Methods 8000 Series, < or = 25% for GC/MS Methods.

* = Calibration Check Compounds (CCC) for GC/MS Method;

= System Performance Check Compounds (SPCC) for GC/MS Method

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## REQUIREMENT

1. Indicate any modification made to the EPA Methods (e.g., testing constituent list, columns).
2. Provide details of corrective actions in any out of control events (e.g., re-calibration, blank contamination, etc.).
3. Co-elution must be resolved prior to reporting, except for xylenes.
4. Second column or MS confirmation must be performed for all compounds detected.
5. Analytical results are not to be blank adjusted.
6. Chemical standards for QC check samples and calibration should be obtained from different supply sources.
7. Any change of column, detector, chemical standard, etc. shall result in a new initial calibration.
8. Lowest concentration injected for inital calibration should not exceed three times of laboratory method detection limits.
9. Re-calibration is required whenever the RF from daily calibration is not within the range specified in item "e" above from initial calibration RFave.
10. Tentative identified compounds and all unidentified peaks must be reported.
11. Chromatogram for calibration standards, quality control check samples, and selected environmental samples must be submitted upon request.

Sample File : H:\DATA\GC11A\ELCD-11E.SMP
Created by : on : 1/23/91 8:42 AM
Edited by : on : 1/20/94 12:51 PM
Number Of Times Edited : 409

**ample Description :**

Default Injection Volume : 1.0000 ul
Quantitation Units : ng
Void Time : 0.000 min
Correct Amounts During Calibration : YES
Reject Outliers During Calibration : NO
An Internal Standard Calibration Will Be Used
Unknown Peaks Will Be Quantitated Using A Response Factor of 1000000.000000

**omponent Information :**

CHLOROMETHANE

Component Type : Single Peak Component
Retention Time : 5.490 min Search Window: 1.60 s, 1.30 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 20.0000 | 66999.00 | 6942.61 | 0.29895 | 0.40000 | 1 |
| 3 | 80.0000 | 291448.41 | 30160.01 | 0.90567 | 1.60000 | 1 |
| 4 | 120.0000 | 415980.80 | 42567.13 | 1.57394 | 2.40000 | 1 |
| 5 | 160.0000 | 585143.24 | 57388.21 | 1.94634 | 3.20000 | 1 |
| 6 | 200.0000 | 775066.78 | 79976.70 | 2.53560 | 4.00000 | 1 |

Average Calibration Factor = 0.6423 (%RSD = 10.52)

VINYL CHLORIDE

Component Type : Single Peak Component
Retention Time : 5.700 min Search Window: 2.30 s, 1.80 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 20.0000 | 93743.00 | 6134.90 | 0.41828 | 0.40000 | 1 |
| 2 | 40.0000 | 217365.66 | 10027.16 | 0.71454 | 0.80000 | 1 |
| 3 | 80.0000 | 476408.09 | 28431.71 | 1.48043 | 1.60000 | 1 |
| 4 | 120.0000 | 618149.70 | 40596.69 | 2.33888 | 2.40000 | 1 |

Average Calibration Factor = 0.9597 (%RSD = 6.92)

BROMOMETHANE

Component Type : Single Peak Component
Retention Time : 6.959 min Search Window: 2.70 s, 0.80 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 20.0000 | 9924.82 | 2429.42 | 0.04428 | 0.40000 | 1 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 80.0000 | 126173.61 | 18957.36 | 0.39208 | 1.60000 | 1 |
| 4 | 120.0000 | 209806.27 | 27462.61 | 0.79384 | 2.40000 | 1 |
| 5 | 160.0000 | 273371.90 | 37831.26 | 0.90931 | 3.20000 | 1 |
| 6 | 200.0000 | 415872.41 | 51588.69 | 1.36051 | 4.00000 | 1 |

Average Calibration Factor = 0.2622 (%RSD = 35.42)

CHLOROETHANE

Component Type : Single Peak Component
Retention Time : 7.085 min Search Window: 2.00 s, 0.90 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 20.0000 | 126092.18 | 10868.70 | 0.56263 | 0.40000 | 1 |
| 2 | 40.0000 | 236598.88 | 14476.48 | 0.77777 | 0.80000 | 1 |
| 3 | 80.0000 | 586276.66 | 49131.56 | 1.82185 | 1.60000 | 1 |
| 4 | 120.0000 | 717717.93 | 64268.77 | 2.71561 | 2.40000 | 1 |
| 5 | 160.0000 | 1164375.82 | 95129.25 | 3.87302 | 3.20000 | 1 |
| 6 | 200.0000 | 1383778.95 | 120229.24 | 4.52697 | 4.00000 | 1 |

Average Calibration Factor = 1.1652 (%RSD = 12.17)

TRICHLOROFLUOROMETHA

Component Type : Single Peak Component
Retention Time : 7.790 min Search Window: 3.00 s, 2.00 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 52557.00 | 4810.27 | 0.23451 | 0.20000 | 1 |
| 2 | 20.0000 | 130905.12 | 5250.49 | 0.43032 | 0.40000 | 1 |
| 3 | 40.0000 | 313861.72 | 22284.08 | 0.97532 | 0.80000 | 1 |
| 4 | 60.0000 | 408423.31 | 30044.78 | 1.54534 | 1.20000 | 1 |
| 5 | 80.0000 | 619115.18 | 45017.47 | 2.05934 | 1.60000 | 1 |
| 6 | 100.0000 | 815368.63 | 54541.29 | 2.66744 | 2.00000 | 1 |

Average Calibration Factor = 1.2294 (%RSD = 7.68)

FREON

Component Type : Single Peak Component
Retention Time : 9.469 min Search Window: 1.50 s, 1.50 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 20.0000 | 95974.50 | 0.00 | 0.42824 | 0.40000 | 0 |
| 2 | 60.0000 | 288602.00 | 0.00 | 0.94871 | 1.20000 | 0 |

Average Calibration Factor = 0.9306 (%RSD = 21.28)

1,1-DCE

Component Type : Single Peak Component
Retention Time : 9.993 min Search Window: 0.60 s, 1.00 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
U e Average Calibration Factor (Area Ratic / Amount Ratio)

Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 50526.00 | 4934.69 | 0.22545 | 0.20000 | 1 |
| 2 | 20.0000 | 123946.64 | 11968.82 | 0.53257 | 0.40000 | 1 |
| 3 | 40.0000 | 280459.00 | 26693.59 | 0.87152 | 0.80000 | 1 |
| 4 | 60.0000 | 355959.00 | 34412.90 | 1.34683 | 1.20000 | 1 |
| 5 | 80.0000 | 607481.50 | 55882.14 | 2.02064 | 1.60000 | 1 |
| 6 | 100.0000 | 706787.50 | 66030.42 | 2.31222 | 2.00000 | 1 |

Average Calibration Factor = 1.1294 (%RSD = 7.13)

METHYLENE CHLORIDE

Component Type : Single Peak Component
Retention Time : 11.606 min Search Window: 3.00 s, 2.00 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 2 | 20.0000 | 554008.47 | 32814.60 | 1.82118 | 0.40000 | 1 |
| 3 | 40.0000 | 705909.50 | 88335.09 | 2.19361 | 0.80000 | 1 |
| 4 | 60.0000 | 783677.00 | 99363.05 | 2.96518 | 1.20000 | 1 |
| 5 | 80.0000 | 1197251.00 | 145862.21 | 3.98237 | 1.60000 | 1 |
| 6 | 100.0000 | 1362467.00 | 165836.53 | 4.45725 | 2.00000 | 1 |

Average Calibration Factor = 2.8967 (%RSD = 32.57)

T-1,2-DCE

Component Type : Single Peak Component
Retention Time : 12.818 min Search Window: 1.00 s, 1.00 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 54965.00 | 7698.61 | 0.24526 | 0.20000 | 1 |
| 2 | 20.0000 | 179470.53 | 23210.21 | 0.58997 | 0.40000 | 1 |
| 3 | 40.0000 | 340135.00 | 44921.10 | 1.05697 | 0.80000 | 1 |
| 4 | 60.0000 | 430417.00 | 57503.65 | 1.62856 | 1.20000 | 1 |
| 5 | 80.0000 | 699999.50 | 90805.00 | 2.32838 | 1.60000 | 1 |
| 6 | 100.0000 | 833403.00 | 110002.70 | 2.72644 | 2.00000 | 1 |

Average Calibration Factor = 1.3663 (%RSD = 6.66)

1,1-DCA

Component Type : Single Peak Component
Retention Time : 14.243 min Search Window: 1.00 s, 1.00 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 52442.00 | 6347.59 | 0.23400 | 0.20000 | 1 |
| 2 | 20.0000 | 178216.00 | 20028.58 | 0.58584 | 0.40000 | 1 |
| 3 | 40.0000 | 343396.00 | 38103.34 | 1.06710 | 0.80000 | 1 |
| 4 | 60.0000 | 437986.00 | 48647.17 | 1.65720 | 1.20000 | 1 |
| 5 | 80.0000 | 703868.50 | 77154.43 | 2.34125 | 1.60000 | 1 |
| 6 | 100.0000 | 847945.50 | 93327.11 | 2.77402 | 2.00000 | 1 |

Average Calibration Factor = 1.3666 (%RSD = 7.97)

CIS-1,2-DCE

Component Type : Single Peak Component

Retention Time : 15.979 min Search Window: 0.90 s, 0.90 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 59449.81 | 8241.12 | 0.26527 | 0.20000 | 1 |
| 2 | 20.0000 | 185209.99 | 25760.60 | 0.60884 | 0.40000 | 1 |
| 3 | 40.0000 | 354792.60 | 49831.39 | 1.10251 | 0.80000 | 1 |
| 4 | 60.0000 | 462247.23 | 64959.28 | 1.74899 | 1.20000 | 1 |
| 5 | 80.0000 | 713201.58 | 98961.66 | 2.37230 | 1.60000 | 1 |
| 6 | 100.0000 | 871955.33 | 122624.38 | 2.85256 | 2.00000 | 1 |

Average Calibration Factor = 1.4322 (%RSD = 4.98)

CHLOROFORM
Component Type : Single Peak Component
Retention Time : 16.602 min Search Window: 0.90 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 116546.96 | 14802.34 | 0.52004 | 0.20000 | 1 |
| 2 | 20.0000 | 275762.62 | 34868.52 | 0.90651 | 0.40000 | 1 |
| 3 | 40.0000 | 510747.84 | 65071.45 | 1.58714 | 0.80000 | 1 |
| 4 | 60.0000 | 649510.06 | 82603.51 | 2.45754 | 1.20000 | 1 |
| 5 | 80.0000 | 985031.18 | 124381.55 | 3.27647 | 1.60000 | 1 |
| 6 | 100.0000 | 1196302.26 | 152529.37 | 3.91365 | 2.00000 | 1 |

Average Calibration Factor = 2.1505 (%RSD = 11.43)

BROMOCHLOROMETHAN
Component Type : Single Peak Component
Retention Time : 16.927 min Search Window: 1.00 s, 1.00 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard :
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 50.0000 | 224113.24 | 32864.61 | 1.00000 | 1.00000 | 1 |
| 2 | 50.0000 | 304203.39 | 44681.90 | 1.00000 | 1.00000 | 1 |
| 3 | 50.0000 | 321803.06 | 46570.85 | 1.00000 | 1.00000 | 1 |
| 4 | 50.0000 | 264293.21 | 37001.70 | 1.00000 | 1.00000 | 1 |
| 5 | 50.0000 | 300637.74 | 42469.99 | 1.00000 | 1.00000 | 1 |
| 6 | 50.0000 | 305674.41 | 42629.07 | 1.00000 | 1.00000 | 1 |

Average Calibration Factor = 1.0000 (%RSD = 0.00)

1,1,1-TCA
Component Type : Single Peak Component
Retention Time : 17.630 min Search Window: 0.90 s, 0.90 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 73712.50 | 7781.76 | 0.32891 | 0.20000 | 1 |
| 2 | 20.0000 | 209069.00 | 21442.41 | 0.68727 | 0.40000 | 1 |
| 3 | 40.0000 | 400243.50 | 41769.18 | 1.24305 | 0.80000 | 1 |
| 4 | 60.0000 | 512177.50 | 53458.13 | 1.93791 | 1.20000 | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | 80.0000 | 787987.00 | 81663.81 | 2.62105 | 1.60000 | 1 |
| 6 | 100.0000 | 936539.00 | 97289.11 | 3.06384 | 2.00000 | 1 |

Average Calibration Factor = 1.6171 (%RSD = 4.15)

CARBON TETRACHLORIDE

Component Type : Single Peak Component
Retention Time : 18.501 min Search Window: 0.70 s, 0.70 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 80725.41 | 9138.81 | 0.36020 | 0.20000 | 1 |
| 2 | 20.0000 | 228587.75 | 25231.79 | 0.75143 | 0.40000 | 1 |
| 3 | 40.0000 | 447672.67 | 49918.98 | 1.39114 | 0.80000 | 1 |
| 4 | 60.0000 | 570728.62 | 63890.71 | 2.15945 | 1.20000 | 1 |
| 5 | 80.0000 | 886475.89 | 98749.20 | 2.94868 | 1.60000 | 1 |
| 6 | 100.0000 | 1047102.07 | 116844.76 | 3.42558 | 2.00000 | 1 |

Average Calibration Factor = 1.7956 (%RSD = 3.45)

1,2-DCA

Component Type : Single Peak Component
Retention Time : 18.752 min Search Window: 0.80 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 62635.09 | 9294.43 | 0.27948 | 0.20000 | 1 |
| 2 | 20.0000 | 193340.25 | 29046.47 | 0.63556 | 0.40000 | 1 |
| 3 | 40.0000 | 357265.80 | 51637.02 | 1.11020 | 0.80000 | 1 |
| 4 | 60.0000 | 467440.67 | 68676.83 | 1.76864 | 1.20000 | 1 |
| 5 | 80.0000 | 706278.09 | 104879.99 | 2.34927 | 1.60000 | 1 |
| 6 | 100.0000 | 838543.72 | 125326.69 | 2.74326 | 2.00000 | 1 |

Average Calibration Factor = 1.4480 (%RSD = 5.61)

TCE

Component Type : Single Peak Component
Retention Time : 20.466 min Search Window: 1.00 s, 1.00 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 64156.03 | 9968.42 | 0.28627 | 0.20000 | 1 |
| 2 | 20.0000 | 199227.92 | 30792.70 | 0.65492 | 0.40000 | 1 |
| 3 | 40.0000 | 385225.55 | 60189.71 | 1.19708 | 0.80000 | 1 |
| 4 | 60.0000 | 495739.58 | 76435.91 | 1.87572 | 1.20000 | 1 |
| 5 | 80.0000 | 786349.69 | 122210.56 | 2.61561 | 1.60000 | 1 |
| 6 | 100.0000 | 910804.87 | 140613.18 | 2.97966 | 2.00000 | 1 |

Average Calibration Factor = 1.5421 (%RSD = 5.44)

1,2-DCP

Component Type : Single Peak Component
Retention Time : 20.927 min Search Window: 0.80 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN

Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 51152.47 | 7370.20 | 0.22824 | 0.20000 | 1 |
| 2 | 20.0000 | 168030.58 | 23013.23 | 0.55236 | 0.40000 | 1 |
| 3 | 40.0000 | 318799.45 | 44175.79 | 0.99067 | 0.80000 | 1 |
| 4 | 60.0000 | 416973.42 | 58566.36 | 1.57769 | 1.20000 | 1 |
| 5 | 80.0000 | 659084.31 | 92564.05 | 2.19229 | 1.60000 | 1 |
| 6 | 100.0000 | 768242.13 | 108295.46 | 2.51327 | 2.00000 | 1 |

Average Calibration Factor = 1.2837 (%RSD = 7.05)

BROMODICHLOROMETHAN

Component Type : Single Peak Component
Retention Time : 21.534 min Search Window: 0.80 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 49118.00 | 7592.68 | 0.21917 | 0.20000 | 1 |
| 2 | 20.0000 | 147058.50 | 22175.62 | 0.48342 | 0.40000 | 1 |
| 3 | 40.0000 | 277323.50 | 41255.87 | 0.86178 | 0.80000 | 1 |
| 4 | 60.0000 | 389426.00 | 59544.74 | 1.47346 | 1.20000 | 1 |
| 5 | 80.0000 | 631336.00 | 97099.68 | 2.09999 | 1.60000 | 1 |
| 6 | 100.0000 | 731215.00 | 112920.01 | 2.39214 | 2.00000 | 1 |

Average Calibration Factor = 1.1863 (%RSD = 7.38)

2-CVE

Component Type : Single Peak Component
Retention Time : 22.300 min Search Window: 0.80 s, 0.90 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 2 | 20.0000 | 65759.00 | 10303.80 | 0.21617 | 0.40000 | 1 |
| 3 | 40.0000 | 100615.00 | 16022.44 | 0.31266 | 0.80000 | 1 |
| 4 | 60.0000 | 135696.00 | 21854.67 | 0.51343 | 1.20000 | 1 |
| 5 | 80.0000 | 218940.00 | 36069.20 | 0.72825 | 1.60000 | 1 |
| 6 | 100.0000 | 241464.00 | 39928.69 | 0.78994 | 2.00000 | 1 |

Average Calibration Factor = 0.4418 (%RSD = 13.81)

T-1,3-DCP

Component Type : Single Peak Component
Retention Time : 22.923 min Search Window: 0.90 s, 0.90 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 45195.00 | 7622.00 | 0.20166 | 0.20000 | 1 |
| 2 | 20.0000 | 145855.50 | 24173.29 | 0.47947 | 0.40000 | 1 |
| 3 | 40.0000 | 271533.00 | 46999.83 | 0.84379 | 0.80000 | 1 |
| 4 | 60.0000 | 360392.00 | 61890.86 | 1.36361 | 1.20000 | 1 |
| 5 | 80.0000 | 581872.00 | 99428.50 | 1.93546 | 1.60000 | 1 |
| 6 | 100.0000 | 669988.50 | 115066.98 | 2.19184 | 2.00000 | 1 |

Average Calibration Factor = 1.1173 (%RSD = 7.13)

C-1,3-DCI

Component Type : Single Peak Component
Retention Time : 24.181 min Search Window: 0.80 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 47971.86 | 8276.22 | 0.21405 | 0.20000 | 1 |
| 2 | 20.0000 | 156867.63 | 28104.97 | 0.51567 | 0.40000 | 1 |
| 3 | 40.0000 | 285949.00 | 52811.03 | 0.88858 | 0.80000 | 1 |
| 4 | 60.0000 | 375446.32 | 68639.48 | 1.42057 | 1.20000 | 1 |
| 5 | 80.0000 | 608140.00 | 113863.72 | 2.02283 | 1.60000 | 1 |
| 6 | 100.0000 | 700449.50 | 131470.81 | 2.29149 | 2.00000 | 1 |
| 7 | 100.0000 | 593407.79 | 113032.00 | 2.26979 | 2.00000 | 1 |

Average Calibration Factor = 1.1983 (%RSD = 8.02)

1,1,2-TCA

Component Type : Single Peak Component
Retention Time : 24.586 min Search Window: 0.60 s, 0.60 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 63427.64 | 10272.25 | 0.28302 | 0.20000 | 1 |
| 2 | 20.0000 | 208977.87 | 33532.87 | 0.68697 | 0.40000 | 1 |
| 3 | 40.0000 | 344447.00 | 56740.66 | 1.07037 | 0.80000 | 1 |
| 4 | 60.0000 | 460977.68 | 75824.42 | 1.74419 | 1.20000 | 1 |
| 5 | 80.0000 | 734304.00 | 120983.56 | 2.44249 | 1.60000 | 1 |
| 6 | 100.0000 | 823819.50 | 137177.19 | 2.69509 | 2.00000 | 1 |

Average Calibration Factor = 1.4663 (%RSD = 9.65)

TETRACHLOROETHLYENE

Component Type : Single Peak Component
Retention Time : 25.426 min Search Window: 0.90 s, 0.90 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 81320.44 | 12754.02 | 0.36285 | 0.20000 | 1 |
| 2 | 20.0000 | 221126.16 | 35675.63 | 0.72690 | 0.40000 | 1 |
| 3 | 40.0000 | 372766.25 | 61118.96 | 1.15837 | 0.80000 | 1 |
| 4 | 60.0000 | 522362.32 | 85988.61 | 1.97645 | 1.20000 | 1 |
| 5 | 80.0000 | 853014.71 | 142117.62 | 2.83735 | 1.60000 | 1 |
| 6 | 100.0000 | 951148.75 | 157355.67 | 3.11164 | 2.00000 | 1 |

Average Calibration Factor = 1.6759 (%RSD = 9.08)

DIBROMOCHLOROMETHAN

Component Type : Single Peak Component
Retention Time : 25.913 min Search Window: 0.80 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 30242.06 | 5335.28 | 0.13494 | 0.20000 | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | 20.0000 | 114391.84 | 17167.67 | 0.37604 | 0.40000 | 1 |
| 3 | 40.0000 | 188319.75 | 30099.10 | 0.58520 | 0.80000 | 1 |
| 4 | 60.0000 | 278762.68 | 46003.81 | 1.05475 | 1.20000 | 1 |
| 5 | 80.0000 | 453950.29 | 76077.05 | 1.50996 | 1.60000 | 1 |
| 6 | 100.0000 | 513049.25 | 86780.06 | 1.68496 | 2.00000 | 1 |

Average Calibration Factor = 0.8352 (%RSD = 13.25)

EDB

Component Type : Single Peak Component
Retention Time : 26.428 min Search Window: 0.80 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 14183.50 | 2089.60 | 0.06329 | 0.20000 | 1 |
| 2 | 20.0000 | 81479.00 | 13064.80 | 0.26784 | 0.40000 | 1 |
| 3 | 40.0000 | 122910.00 | 20365.12 | 0.38194 | 0.80000 | 1 |
| 4 | 60.0000 | 187152.50 | 31475.83 | 0.70812 | 1.20000 | 1 |
| 5 | 80.0000 | 305042.00 | 53050.44 | 1.01465 | 1.60000 | 1 |
| 6 | 100.0000 | 347526.00 | 60519.64 | 1.13692 | 2.00000 | 1 |

Average Calibration Factor = 0.5427 (%RSD = 23.72)

CHLOROBNZN

Component Type : Single Peak Component
Retention Time : 27.466 min Search Window: 0.80 s, 0.80 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 20098.50 | 3340.52 | 0.08968 | 0.20000 | 1 |
| 2 | 20.0000 | 81747.50 | 13160.82 | 0.26873 | 0.40000 | 1 |
| 3 | 40.0000 | 136587.00 | 24900.26 | 0.42444 | 0.80000 | 1 |
| 4 | 60.0000 | 201511.00 | 34497.74 | 0.76245 | 1.20000 | 1 |
| 5 | 80.0000 | 310806.00 | 57573.76 | 1.03382 | 1.60000 | 1 |
| 6 | 100.0000 | 374916.50 | 65083.53 | 1.22652 | 2.00000 | 1 |

Average Calibration Factor = 0.5909 (%RSD = 14.36)

BROMOFORM

Component Type : Single Peak Component
Retention Time : 29.922 min Search Window: 0.60 s, 0.20 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 2 | 20.0000 | 69991.42 | 11647.09 | 0.23008 | 0.40000 | 1 |
| 3 | 40.0000 | 113766.62 | 19624.21 | 0.35353 | 0.80000 | 1 |
| 4 | 60.0000 | 165255.13 | 28671.22 | 0.62527 | 1.20000 | 1 |
| 5 | 80.0000 | 271900.67 | 48302.82 | 0.90441 | 1.60000 | 1 |
| 6 | 100.0000 | 316928.77 | 57110.87 | 1.03682 | 2.00000 | 1 |

Average Calibration Factor = 0.5244 (%RSD = 10.05)

1,1,2,2-TCA

Component Type : Single Peak Component
Retention Time : 30.243 min Search Window: 0.70 s, 0.20 %
Reference Component:
Find Peak Closest to Expected RT in Window

Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 45068.42 | 7826.02 | 0.20110 | 0.20000 | 1 |
| 2 | 20.0000 | 187770.18 | 32832.31 | 0.61725 | 0.40000 | 1 |
| 3 | 40.0000 | 249818.71 | 43631.77 | 0.77631 | 0.80000 | 1 |
| 4 | 60.0000 | 342920.26 | 60713.73 | 1.29750 | 1.20000 | 1 |
| 5 | 80.0000 | 515315.52 | 90148.80 | 1.71407 | 1.60000 | 1 |
| 6 | 100.0000 | 597601.92 | 106360.10 | 1.95503 | 2.00000 | 1 |

Average Calibration Factor = 1.1082 (%RSD = 19.68)

4-BFB

Component Type : Single Peak Component
Retention Time : 30.500 min Search Window: 0.40 s, 0.40 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 50.0000 | 74950.58 | 12063.22 | 0.33443 | 1.00000 | 1 |
| 2 | 50.0000 | 108220.40 | 16070.21 | 0.35575 | 1.00000 | 1 |
| 3 | 50.0000 | 120491.67 | 17669.14 | 0.37443 | 1.00000 | 1 |
| 4 | 50.0000 | 105153.11 | 13879.80 | 0.39787 | 1.00000 | 1 |
| 5 | 50.0000 | 127349.81 | 17168.30 | 0.42360 | 1.00000 | 1 |
| 6 | 50.0000 | 122513.81 | 16090.37 | 0.40080 | 1.00000 | 1 |

Average Calibration Factor = 0.3811 (%RSD = 8.57)

1,3-DICHLOROBNZN

Component Type : Single Peak Component
Retention Time : 33.284 min Search Window: 0.40 s, 0.30 %
Reference Component:
Find Largest Peak in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 28594.16 | 5159.87 | 0.12759 | 0.20000 | 1 |
| 2 | 20.0000 | 65268.62 | 11818.18 | 0.21456 | 0.40000 | 1 |
| 3 | 40.0000 | 193025.00 | 37212.12 | 0.59982 | 0.80000 | 1 |
| 4 | 60.0000 | 265647.44 | 50990.54 | 1.00512 | 1.20000 | 1 |
| 5 | 80.0000 | 389207.32 | 75471.47 | 1.29461 | 1.60000 | 1 |
| 6 | 100.0000 | 458625.05 | 89062.83 | 1.50037 | 2.00000 | 1 |

Average Calibration Factor = 0.7202 (%RSD = 15.71)

1,4-DICHLOROBNZN

Component Type : Single Peak Component
Retention Time : 33.539 min Search Window: 0.40 s, 0.30 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 34656.84 | 5532.92 | 0.15464 | 0.20000 | 1 |
| 2 | 20.0000 | 71925.38 | 11744.59 | 0.23644 | 0.40000 | 1 |
| 3 | 40.0000 | 203866.50 | 35412.86 | 0.63351 | 0.80000 | 1 |
| 4 | 60.0000 | 272546.56 | 48381.29 | 1.03123 | 1.20000 | 1 |
| 5 | 80.0000 | 398527.18 | 71429.68 | 1.32561 | 1.60000 | 1 |
| 6 | 100.0000 | 455860.95 | 83922.58 | 1.49133 | 2.00000 | 1 |

Average Calibration Factor = 0.7650 (%RSD = 12.31)

1,2-DICHLOROBNZN

Component Type : Single Peak Component
Retention Time : 34.367 min Search Window: 0.60 s, 0.60 %
Reference Component:
Find Peak Closest to Expected RT in Window
Internal Standard : BROMOCHLOROMETHAN
Use Average Calibration Factor (Area Ratio / Amount Ratio)
Calibration Levels:

| Level Name | Amount | Area | Height | ISTD Resp. | ISTD Amt. | # Replicates |
|---|---|---|---|---|---|---|
| 1 | 10.0000 | 32774.00 | 5749.53 | 0.14624 | 0.20000 | 1 |
| 2 | 20.0000 | 69657.00 | 12429.62 | 0.22898 | 0.40000 | 1 |
| 3 | 40.0000 | 209433.50 | 38415.57 | 0.65081 | 0.80000 | 1 |
| 4 | 60.0000 | 288607.50 | 53084.98 | 1.09200 | 1.20000 | 1 |
| 5 | 80.0000 | 422387.00 | 77585.83 | 1.40497 | 1.60000 | 1 |
| 6 | 100.0000 | 498334.00 | 92706.29 | 1.63028 | 2.00000 | 1 |

Average Calibration Factor = 0.7867 (%RSD = 15.47)

# SAMPLE TRACK SHEET (8010/8020)

DATE: 2/13/94 ANALYST: DM INSTRUMENT: #11A
CALIBRATION DATE:

| FILE | PORT | CLIENT | SAMPLE # | AMT | MATRIX | COMMENTS | DUPLICATE |
|---|---|---|---|---|---|---|---|
| 1 | 1 | | MPIW | 5 ml | $H_2O$ | | |
| 2 | 2 | | MBIW | | | | |
| 3 | 3 | HLA | 1103 | | | 2 ml #13 | |
| 4 | 4 | | 1104 | | | 1 ml #14 | |
| 5 | 5 | | 1105 | | | 1 ml #15 | |
| 6 | 6 | | 0728 | 2g | Soil | | |
| 7 | 7 | | 0729 | | | | |
| 8 | 8 | | 0730 | | | | |
| 9 | 9 | | 0731 | | | | |
| 10 | 11 | DLA | 0604 | 10g/25ml | Ext | | |
| 11 | 12 | | 0605 | 10g/20ml | | | |
| 12 | 13 | | 0606 | 10g/10ml | | #16 | |
| 13 | 16 | HLA | 1103 | 2 ml | $H_2O$ | | |
| 14 | 1 | | 1104 | 1 ml | | | |
| 15 | 2 | | 1105 | 1 ml | | | |
| 16 | 3 | DLA | 0606 | 10g/100ml | Ext | | |
| 17 | 4 | DMP | 0336 | 100µl | $H_2O$ | | |
| 18 | 6 ~~8~~ | HLA | 1049 | 5 ml | $H_2O$ | 1 ml #33 | |
| 19 | 7 ~~6~~ | | 1050 | 5 ml | | 1 ml #34 | |
| 20 | 8 ~~7~~ | | 1051 | 1 ml | | 0.5 ml #35 | |
| 21 | 9 ~~8~~ | | 1052 | 5 ml | | 1 ml #36 | |
| 22 | 10 ~~9~~ | | 1053 | 2 ml | | | |
| 23 | 11 ~~10~~ | | 1054 | 1 ml | | 0.5 ml #37 | |
| 24 | 12 ~~11~~ | | 1055 (1 ml) | ~~5~~ ml | | 5 ml #41 | |
| 25 | 16 ~~12~~ | | MS1W | 5 ml | $H_2O$ | | |
| 26 | 1 | | MSD1W | | | | |
| 27 | 2 | | LCS1W | | | | |
| 28 | 3 | | MS1S | 2g | $Na_2SO_4$ | | |
| 29 | 4 | | MSD1S | | | | |

UTM 004721

Page 2. SAMPLE TRACK SHEET (8010/8020)

DATE: _____

| FILE | PORT | CLIENT | SAMPLE # | AMT | MATRIX | COMMENTS | DUPLICATE |
|---|---|---|---|---|---|---|---|
| 30 | 5 | DMP | 1190 | 5ml | $H_2O$ | | |
| 31 | 6 | | 1191 | 0.5ml | | | |
| 32 | 7 | | 1192 | 5ml | | | |
| 33 | 8 | HLA | 1049 | 1ml | $H_2O$ | | |
| 34 | 9 | | 1050 | 1ml | | | |
| 35 | 10 | | 1051 | 0.5ml | | | |
| 36 | 11 | | 1052 | 1ml | | | |
| 37 | 12 | | 1054 | 0.5ml | | | |
| 38 | 13 | | — | — | — | | |
| 39 | 14 | | — | — | — | | |
| 40 | 15 | | — | — | — | | |
| 41 | 16 | HLA | 1055 | 5ml | $H_2O$ | I/S 1 #44 | |
| 42 | 1 | | 0915 | 5ml | | | |
| 43 | 2 | GLT | 0683 | 5ml | | | |
| 44 | 16 | HLA | 1055 | 5ml | $H_2O$ | | |
| 45 | | | | | | | |
| 46 | | | | | | | |
| 47 | | | | | | | |
| 48 | | | | | | | |
| 49 | | | | | | | |
| 50 | | | | | | | |
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| 59 | | | | | | | |
| 60 | | | | | | | |

UTM 004722

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ɔftware Version: 3.3 <4B11>

Sample Name : MP1W
Sample Number: MP1W
ɔerator : DM

Time : 2/16/94 11:00 AM
Study : 8010/8020

Instrument : 0I-2A/GC11A
ıtoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

ıterface Serial # : 1317574217 Data Acquisition Time: 2/14/94 6:39 PM
Delay Time : 0.00 min.
End Time : 38.00 min.
ampling Rate : 1.0000 pts/sec

Raw Data File : H:\DATA\GC11A\13BF001.RAW
esult File : H:\DATA\GC11A\13BF001.RST
Instrument File: H:\DATA\GC11A\11A.ins
Process File : H:\DATA\GC11A\ELCD-11A.prc
ample File : H:\DATA\GC11A\ELCD-11E.smp
Sequence File : H:\DATA\GC11A\13BP.SEQ

nj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

==========

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

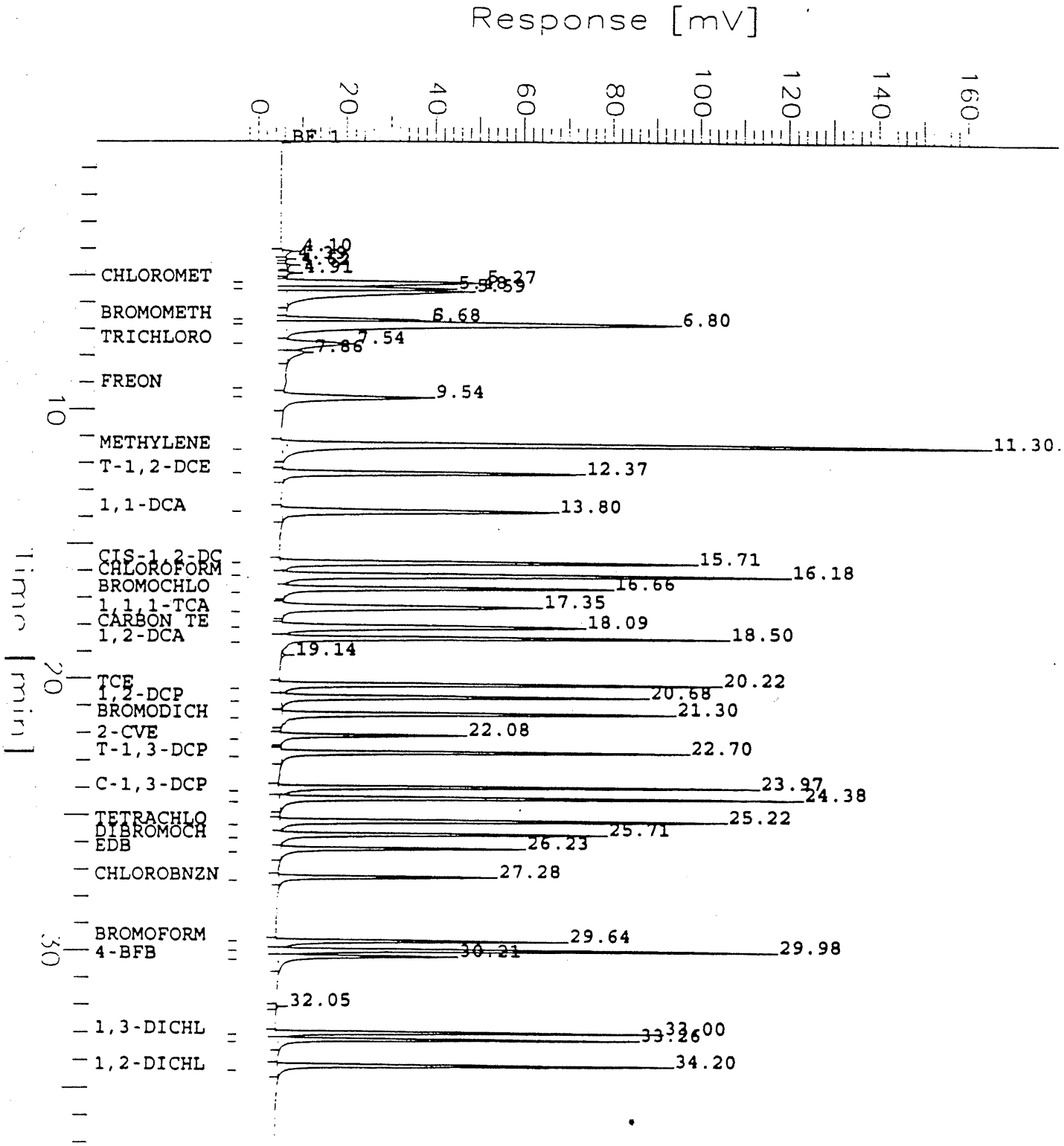
| Peak | Component Name | Time [min] | Area [uV*sec] | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 5 | CHLOROMETHANE | 5.267 | 444996.00 | 1.0994 | 1.7117 | 85.5839 | 17.1168 | |
| 6 | VINYL CHLORIDE | 5.589 | 803948.00 | 1.9862 | 2.0696 | 103.4809 | 20.6962 | |
| 7 | BROMOMETHANE | 6.683 | 222967.00 | 0.5508 | 2.1011 | 105.0568 | 21.0114 | |
| 8 | CHLOROETHANE | 6.803 | 1097354.00 | 2.7110 | 2.3267 | 116.3360 | 23.2672 | |
| 9 | TRICHLOROFLUOROMETHA | 7.536 | 406067.00 | 1.0032 | 0.8160 | 40.8016 | 8.1603 | |
| 10 | 1,1-DCE | 9.539 | 402306.00 | 0.9939 | 0.8800 | 43.9996 | 8.7999 | |
| 11 | METHYLENE CHLORIDE | 11.302 | 1423260.00 | 3.5162 | 1.2138 | 60.6925 | 12.1385 | |
| 12 | T-1,2-DCE | 12.365 | 511251.00 | 1.2630 | 0.9244 | 46.2203 | 9.2441 | |
| 13 | 1,1-DCA | 13.796 | 569606.00 | 1.4072 | 1.0297 | 51.4849 | 10.2970 | |
| 14 | CIS-1,2-DCE | 15.706 | 577577.00 | 1.4269 | 0.9963 | 49.8161 | 9.9632 | |
| 15 | CHLOROFORM | 16.183 | 874305.00 | 2.1600 | 1.0044 | 50.2205 | 10.0441 | |
| 16 | BROMOCHLOROMETHAN | 16.658 | 404776.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 17 | 1,1,1-TCA | 17.348 | 546110.00 | 1.3492 | 0.8343 | 41.7164 | 8.3433 | |
| 18 | CARBON TETRACHLORIDE | 18.094 | 622328.33 | 1.5375 | 0.8562 | 42.8115 | 8.5623 | |
| 19 | 1,2-DCA | 18.499 | 673054.67 | 1.6628 | 1.1484 | 57.4176 | 11.4835 | |
| 21 | TCE | 20.223 | 651890.00 | 1.6105 | 1.0443 | 52.2173 | 10.4435 | |
| 22 | 1,2-DCP | 20.682 | 564130.50 | 1.3937 | 1.0857 | 54.2852 | 10.8570 | |
| 23 | BROMODICHLOROMETHAN | 21.297 | 488148.00 | 1.2060 | 1.0165 | 50.8273 | 10.1655 | |
| 24 | 2-CVE | 22.076 | 180522.00 | 0.4460 | 1.0094 | 50.4678 | 10.0936 | |
| 25 | T-1,3-DCP | 22.702 | 482131.00 | 1.1911 | 1.0661 | 53.3042 | 10.6608 | |
| 26 | C-1,3-DCP | 23.972 | 549289.00 | 1.3570 | 1.1325 | 56.6242 | 11.3248 | |
| 27 | 1,1,2-TCA | 24.379 | 613119.50 | 1.5147 | 1.0330 | 51.6494 | 10.3299 | |
| 28 | TETRACHLOROETHLYENE | 25.221 | 610426.00 | 1.5081 | 0.8998 | 44.9912 | 8.9982 | |
| 29 | DIBROMOCHLOROMETHAN | 25.710 | 351877.00 | 0.8693 | 1.0408 | 52.0395 | 10.4079 | |
| 30 | EDB | 26.228 | 237755.00 | 0.5874 | 1.0823 | 54.1161 | 10.8232 | |
| 31 | CHLOROBNZN | 27.279 | 237131.00 | 0.5858 | 0.9914 | 49.5692 | 9.9138 | |
| 32 | BROMOFORM | 29.635 | 184637.13 | 0.4561 | 0.8699 | 43.4949 | 8.6990 | |
| 33 | 1,1,2,2-TCA | 29.979 | 498676.20 | 1.2320 | 1.1117 | 55.5859 | 11.1172 | |
| 34 | 4-BFB | 30.210 | 154223.47 | 0.3810 | 0.9996 | 49.9822 | 9.9964 | |
| 36 | 1,3-DICHLOROBNZN | 33.001 | 350135.50 | 0.8650 | 1.2011 | 60.0559 | 12.0112 | |
| 37 | 1,4-DICHLOROBNZN | 33.257 | 296778.84 | 0.7332 | 0.9585 | 47.9241 | 9.5848 | |
| 38 | 1,2-DICHLOROBNZN | 34.198 | 354354.50 | 0.8754 | 1.1127 | 55.6372 | 11.1274 | |
| | | | 16385130.64 | 40.4795 | 36.5682 | 1778.4101 | 355.6820 | |

# Chromatogram

Sample Name : MP1W
FileName : H:\DATA\GC11A\13BF001.RAW
Method : 11A.ins
Start Time : 0.02 min End Time : 38.00 min
Scale Factor: 0.0 Plot Offset: -3 mV

Sample #: MP1W
Date : 2/15/94 6:33 PM
Time of Injection: 2/14/94 6:39 PM
Low Point : -3.17 mV High Point : 1
Plot Scale: 166.7 mV






UTM 004724

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oftware Version: 3.3 <4B11>

Sample Name : MB1W
Sample Number: MB1W
perator : DM

Time : 2/14/94 9:05 AM
Study : 8010/8020

nstrument : OI-2A/GC11A
utoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

nterface Serial # : 1317574217 Data Acquisition Time: 2/13/94 7:13 PM
Delay Time : 0.00 min.
nd Time : 38.00 min.
ampling Rate : 1.0000 pts/sec

aw Data File : H:\DATA\GC11A\13BF002.RAW
esult File : H:\DATA\GC11A\13BF002.RST
Instrument File: H:\DATA\GC11A\11A.ins
rocess File : H:\DATA\GC11A\ELCD-11A
ample File : H:\DATA\GC11A\ELCD-11E
Sequence File : H:\DATA\GC11A\13BP.SEQ

nj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

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# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| eak # | Component Name | Time [min] | Area [uV*sec] | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 5 | METHYLENE CHLORIDE | 11.303 | 714673.00 | 1.4896 | 0.5142 | 25.7117 | ~~5.1423~~ | L.C. |
| 6 | CHLOROFORM | 16.185 | 39925.00 | 0.0832 | 0.0387 | 1.9348 | ~~0.3870~~ | ND |
| 7 | BROMOCHLOROMETHAN | 16.652 | 479779.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 9 | TCE | 20.225 | 1182.00 | 0.0025 | 0.0016 | 0.0799 | ~~0.0160~~ | |
| 10 | BROMODICHLOROMETHAN | 21.441 | 2451.00 | 0.0051 | 0.0043 | 0.2153 | ~~0.0431~~ | ND |
| 11 | 4-BFB | 30.208 | 185196.00 | 0.3860 | 1.0127 | 50.6372 | 10.1274 | |
| | | | 1423206.00 | 2.9664 | 2.5716 | 78.5789 | 15.7158 | |

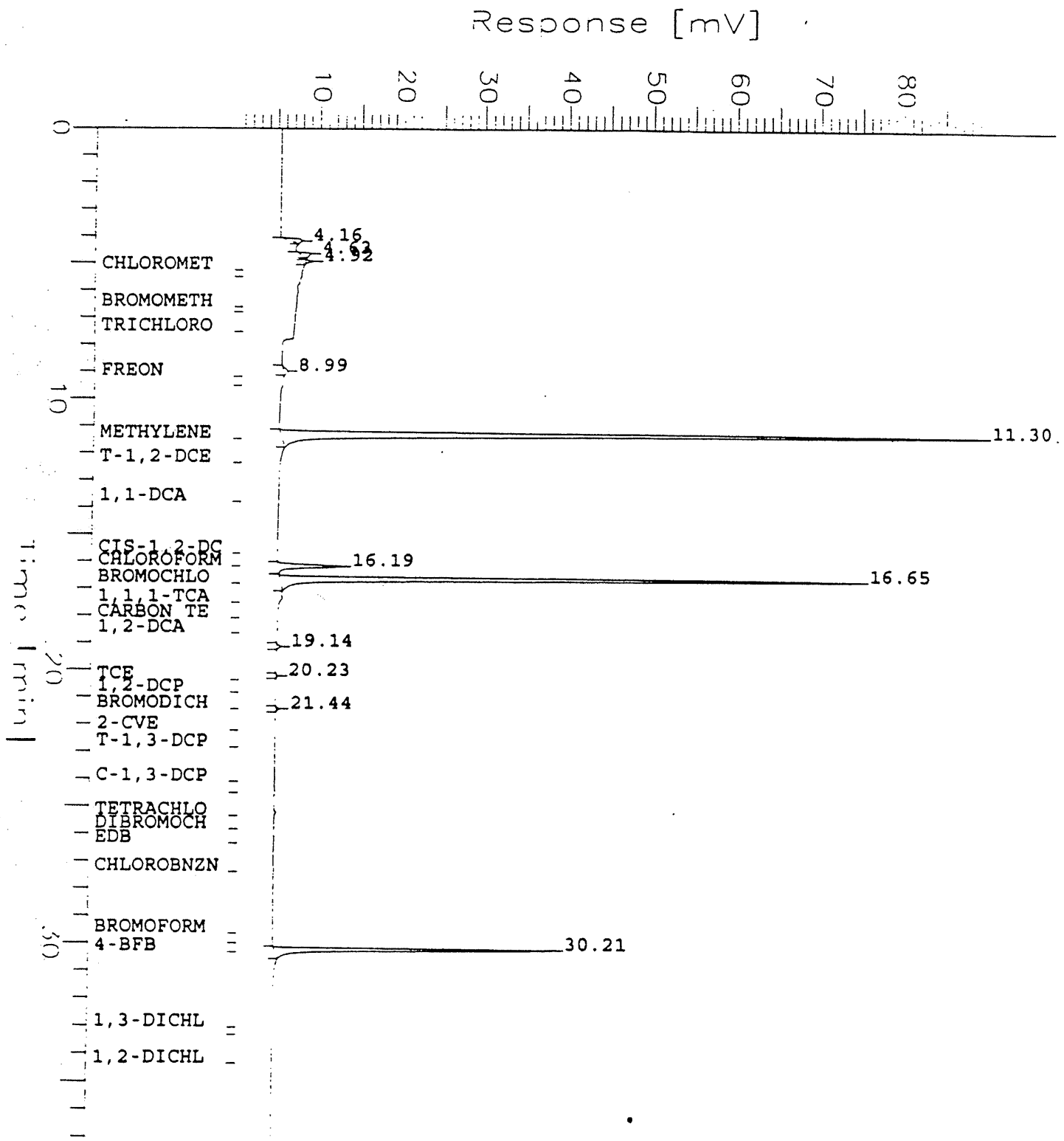
to 17

# Chromatogram

Sample Name : MB1W
FileName : h:\data\gc11a\13BF002.raw
Method : 11A.ins
Start Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: 1 mV

Sample #: MB1W
Date : 2/13/94 7:51 PM
Time of Injection: 2/13/94 7:13 PM
Low Point : 0.99 mV High Point : 8
Plot Scale: 88.3 mV






UTM 004726

oftware Version: 3.3 <4B11>

Sample Name : HLA 1053 2ML
Sample Number: DB01053
perator : DM

Time : 2/14/94 4:32 PM
Study : 8010/8020

Instrument : 0I-2A/GC11A
utoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

nterface Serial # : 1317574217 Data Acquisition Time: 2/14/94 3:43 PM
Delay Time : 0.00 min.
End Time : 38.00 min.
ampling Rate : 1.0000 pts/sec

Raw Data File : H:\DATA\GC11A\13BF022.RAW
esult File : H:\DATA\GC11A\13BF022.RST
nstrument File: H:\DATA\GC11A\11A.ins
Process File : H:\DATA\GC11A\ELCD-11A
ample File : H:\DATA\GC11A\ELCD-11E
Sequence File : H:\DATA\GC11A\13BP.SEQ

nj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| Peak # | Component Name | Time (min) | Area (uV*sec) | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 4 | 1,1-DCE | 9.537 | 216468.00 | 0.4406 | 0.3901 | 19.5059 | 9.7529 | Y.C. |
| 5 | METHYLENE CHLORIDE | 11.306 | 759957.00 | 1.5469 | 0.5340 | 26.7005 | ~~13.3502~~ | L.C. |
| 6 | 1,1-DCA | 13.800 | 115717.50 | 0.2355 | 0.1724 | 8.6175 | 4.3088 | Y.C. |
| 7 | CIS-1,2-DCE | 15.716 | 13781.00 | 0.0281 | 0.0196 | 0.9793 | ~~0.4897~~ | ND |
| 8 | CHLOROFORM | 16.196 | 21958.50 | 0.0447 | 0.0208 | 1.0392 | ~~0.5196~~ | YC BDL |
| 9 | BROMOCHLOROMETHAN | 16.667 | 491286.90 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 10 | 1,1,1-TCA | 17.379 | 518064.10 | 1.0545 | 0.6521 | 32.6055 | 16.3027 | YC |
| 11 | 1,2-DCA | 18.514 | 2951.00 | 0.0060 | 0.0041 | 0.2074 | ~~0.1037~~ | ND |
| 13 | TCE | 20.236 | 436465.50 | 0.8884 | 0.5761 | 28.8051 | 14.4026 | YC |
| 14 | BROMODICHLOROMETHAN | 21.459 | 2644.00 | 0.0054 | 0.0045 | 0.2268 | ~~0.1134~~ | |
| 15 | 1,1,2-TCA | 24.390 | 901.50 | 0.0018 | 0.0013 | 0.0626 | ~~0.0313~~ | |
| 16 | TETRACHLOROETHLYENE | 25.227 | 2226349.00 | 4.5317 | 2.7039 | 135.1971 | 67.5985 | YC. |
| 17 | 4-BFB | 30.215 | 183265.50 | 0.3730 | 0.9787 | 48.9356 | 24.4678 | |
| 18 | 1,2-DICHLOROBNZN | 34.220 | 629.50 | 0.0013 | 0.0016 | 0.0814 | ~~0.0407~~ | ND |
| | | | 4990439.00 | 10.1579 | 7.0593 | 302.9639 | 151.4820 | |

(DL x 2.5)

98%

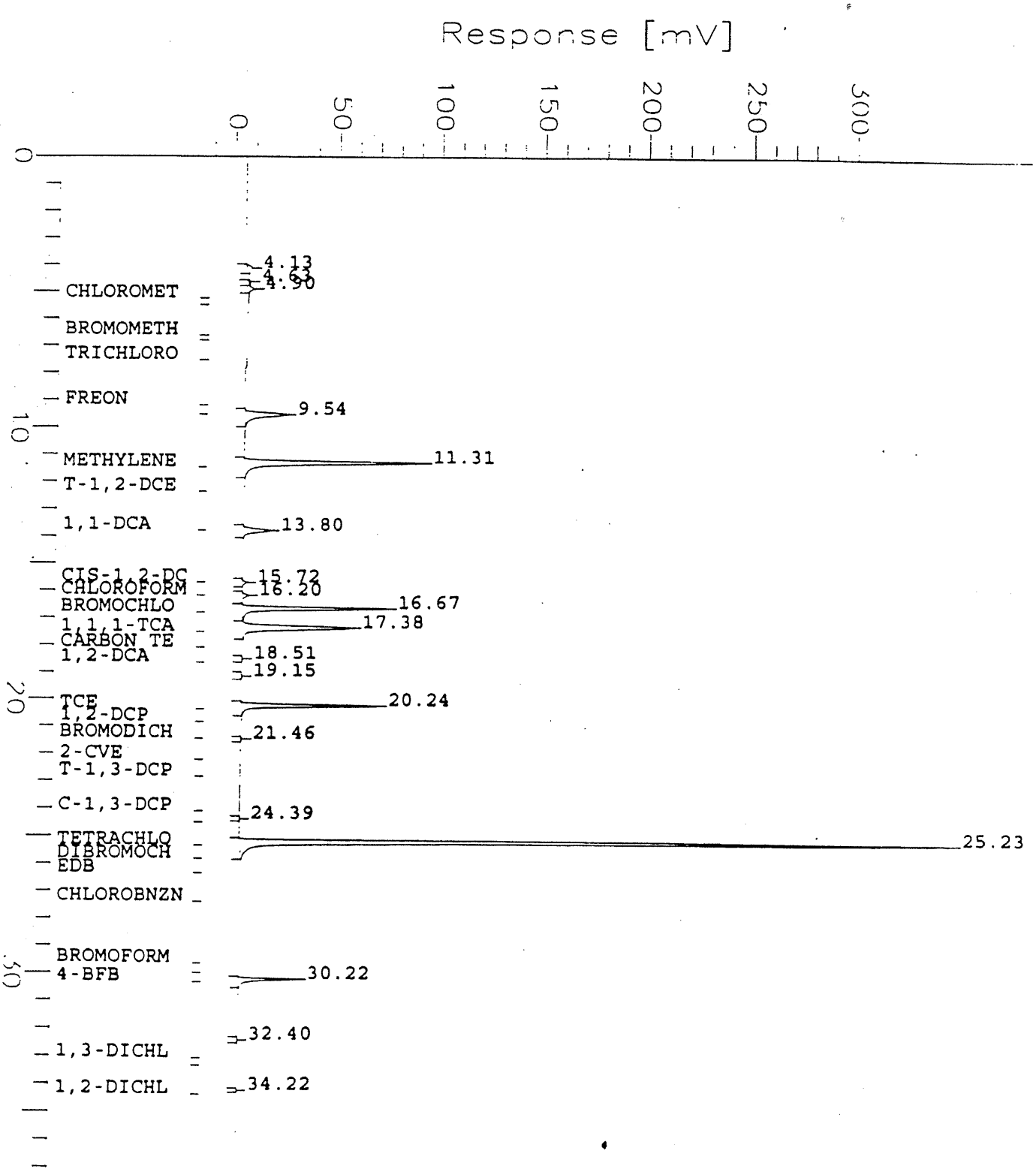
UTM 004727

# Chromatogram

Sample Name : HLA 1053 2ML
ileName : h:\data\gc11a\13BF022.raw
ethod : 11A.ins
tart Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: -12 mV

Sample #: DB01053
Date : 2/14/94 4:21 PM
Time of Injection: 2/14/94 3:43 PM
Low Point : -12.07 mV High Point : 3
Plot Scale: 360.8 mV






UTM 004728

Software Version: 3.3 <4B11>

Sample Name : MS1W
Sample Number: 25
Operator : DM

Time : 2/15/94 6:39 PM
Study : 8010/8020

Instrument : OI-2A/GC11A
AutoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

Interface Serial # : 1317574217 Data Acquisition Time: 2/14/94 5:55 PM
Delay Time : 0.00 min.
End Time : 38.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : H:\DATA\GC11A\13BF025.RAW
Result File : H:\DATA\GC11A\13BF025.RST
Instrument File: H:\DATA\GC11A\11A.ins
Process File : H:\DATA\GC11A\ELCD-11A.PRC
Sample File : H:\DATA\GC11A\ELCD-11E.smp
Sequence File : H:\DATA\GC11A\13BP.SEQ

Inj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

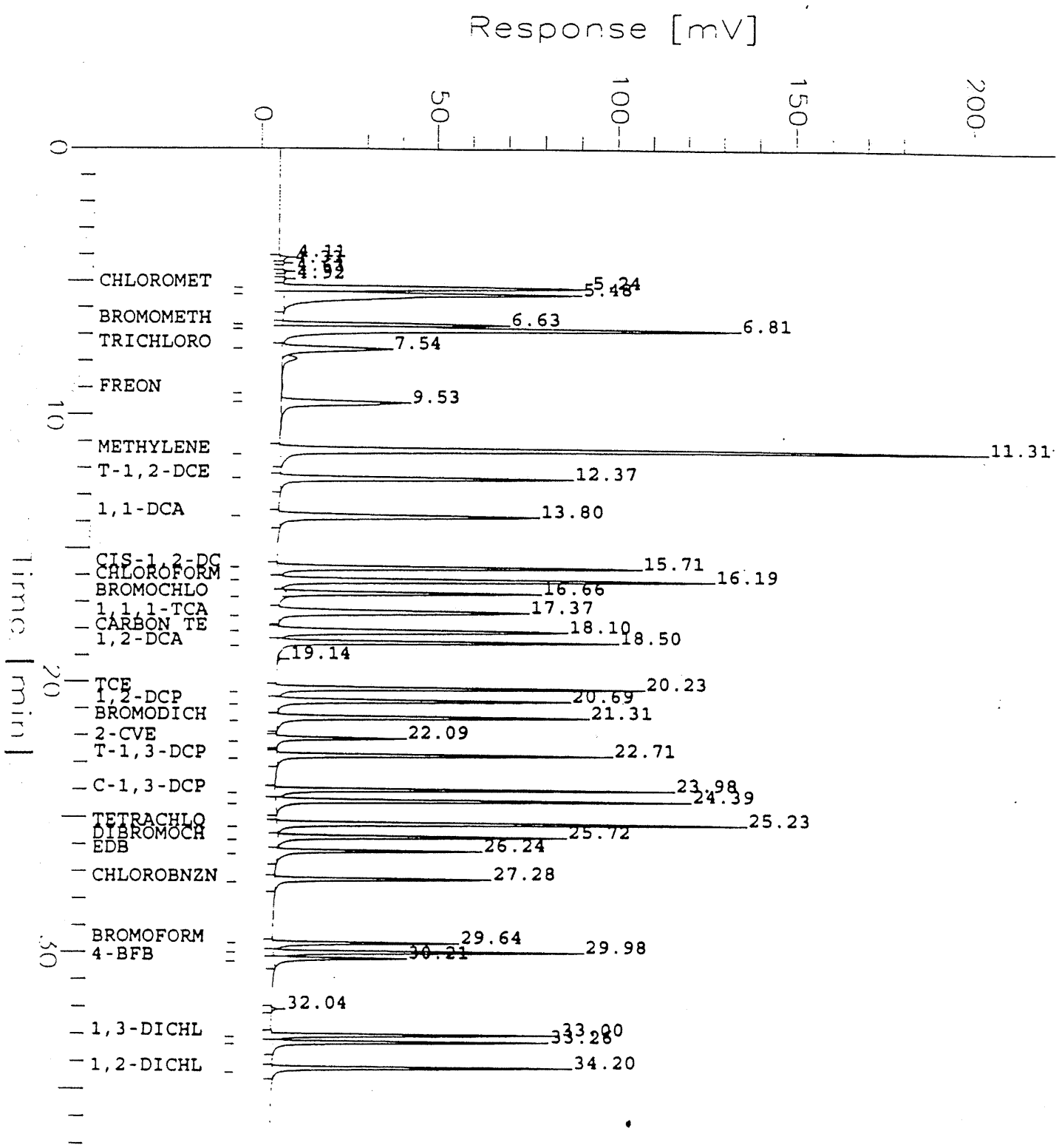
| Peak # | Component Name | Time (min) | Area (uV*sec) | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 5 | CHLOROMETHANE | 5.237 | 745583.98 | 1.6874 | 2.6272 | 131.3622 | 26.2724 | |
| 6 | VINYL CHLORIDE | 5.483 | 933937.02 | 2.1137 | 2.2025 | 110.1255 | 22.0251 | |
| 7 | BROMOMETHANE | 6.625 | 438179.97 | 0.9917 | 3.7827 | 189.1359 | 37.8272 | |
| 8 | CHLOROETHANE | 6.805 | 1250068.69 | 2.8292 | 2.4281 | 121.4057 | 24.2811 | |
| 9 | TRICHLOROFLUOROMETHA | 7.536 | 336152.34 | 0.7608 | 0.6188 | 30.9424 | 6.1885 | |
| 10 | 1,1-DCE | 9.533 | 460803.00 | 1.0429 | 0.9234 | 46.1685 | 9.2337 | |
| 11 | METHYLENE CHLORIDE | 11.305 | 1649335.00 | 3.7328 | 1.2886 | 64.4314 | 12.8863 | |
| 12 | T-1,2-DCE | 12.370 | 636269.00 | 1.4400 | 1.0539 | 52.6960 | 10.5392 | |
| 13 | 1,1-DCA | 13.797 | 673049.00 | 1.5232 | 1.1146 | 55.7301 | 11.1460 | |
| 14 | CIS-1,2-DCE | 15.710 | 742253.75 | 1.6799 | 1.1730 | 58.6476 | 11.7295 | |
| 15 | CHLOROFORM | 16.187 | 950745.25 | 2.1517 | 1.0006 | 50.0288 | 10.0058 | |
| 16 | BROMOCHLOROMETHAN | 16.663 | 441852.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 17 | 1,1,1-TCA | 17.373 | 671062.00 | 1.5187 | 0.9392 | 46.9600 | 9.3920 | |
| 18 | CARBON TETRACHLORIDE | 18.099 | 732859.75 | 1.6586 | 0.9237 | 46.1849 | 9.2370 | |
| 19 | 1,2-DCA | 18.503 | 633084.25 | 1.4328 | 0.9895 | 49.4759 | 9.8952 | |
| 21 | TCE | 20.230 | 675456.45 | 1.5287 | 0.9913 | 49.5650 | 9.9130 | |
| 22 | 1,2-DCP | 20.692 | 587365.05 | 1.3293 | 1.0356 | 51.7783 | 10.3557 | |
| 23 | BROMODICHLOROMETHAN | 21.307 | 577358.00 | 1.3067 | 1.1014 | 55.0717 | 11.0143 | |
| 24 | 2-CVE | 22.086 | 208028.00 | 0.4708 | 1.0656 | 53.2775 | 10.6555 | |
| 25 | T-1,3-DCP | 22.712 | 547038.00 | 1.2381 | 1.1081 | 55.4054 | 11.0811 | |
| 26 | C-1,3-DCP | 23.983 | 602083.04 | 1.3626 | 1.1372 | 56.8585 | 11.3717 | |
| 27 | 1,1,2-TCA | 24.389 | 719702.96 | 1.6288 | 1.1108 | 55.5407 | 11.1081 | |
| 28 | TETRACHLOROETHLYENE | 25.231 | 800361.00 | 1.8114 | 1.0808 | 54.0404 | 10.8081 | |
| 29 | DIBROMOCHLOROMETHAN | 25.720 | 485261.00 | 1.0982 | 1.3149 | 65.7439 | 13.1488 | |
| 30 | EDB | 26.236 | 327561.00 | 0.7413 | 1.3660 | 68.3010 | 13.6602 | |
| 31 | CHLOROBNZN | 27.282 | 345339.50 | 0.7816 | 1.3226 | 66.1314 | 13.2263 | |
| 32 | BROMOFORM | 29.635 | 295919.27 | 0.6697 | 1.2772 | 63.8602 | 12.7720 | |
| 33 | 1,1,2,2-TCA | 29.977 | 493780.15 | 1.1175 | 1.0084 | 50.4217 | 10.0843 | |
| 34 | 4-BFB | 30.209 | 215697.08 | 0.4882 | 1.2808 | 64.0394 | 12.8079 | |
| 36 | 1,3-DICHLOROBNZN | 33.002 | 409227.15 | 0.9262 | 1.2860 | 64.3016 | 12.8603 | |
| 37 | 1,4-DICHLOROBNZN | 33.261 | 408539.85 | 0.9246 | 1.2087 | 60.4357 | 12.0871 | |
| 38 | 1,2-DICHLOROBNZN | 34.201 | 439525.00 | 0.9947 | 1.2644 | 63.2192 | 12.6438 | |
| | | | 19433477.50 | 43.9819 | 42.0257 | 2051.2863 | 410.2573 | |

# Chromatogram

Sample Name : MS1W
FileName : H:\DATA\GC11A\13BF025.RAW
Method : 11A.ins
Start Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: -5 mV

Sample #: 25
Date : 2/15/94 6:39 PM
Time of Injection: 2/14/94 5:55 PM
Low Point : -4.72 mV High Point : 2
Plot Scale: 206.6 mV






UTM 004730

oftware Version: 3.3 <4B11>

Sample Name : MSD1W
Sample Number: 26
perator : DM

Time : 2/15/94 6:43 PM
Study : 8010/8020

nstrument : 0I-2A/GC11A
utoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

nterface Serial # : 1317574217 Data Acquisition Time: 2/14/94 6:39 PM
Delay Time : 0.00 min.
nd Time : 38.00 min.
ampling Rate : 1.0000 pts/sec

aw Data File : H:\DATA\GC11A\13BF026.RAW
esult File : H:\DATA\GC11A\13BF026.RST
Instrument File: H:\DATA\GC11A\11A.ins
rocess File : H:\DATA\GC11A\ELCD-11A.PRC
ample File : H:\DATA\GC11A\ELCD-11E.smp
Sequence File : H:\DATA\GC11A\13BP.SEQ

nj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

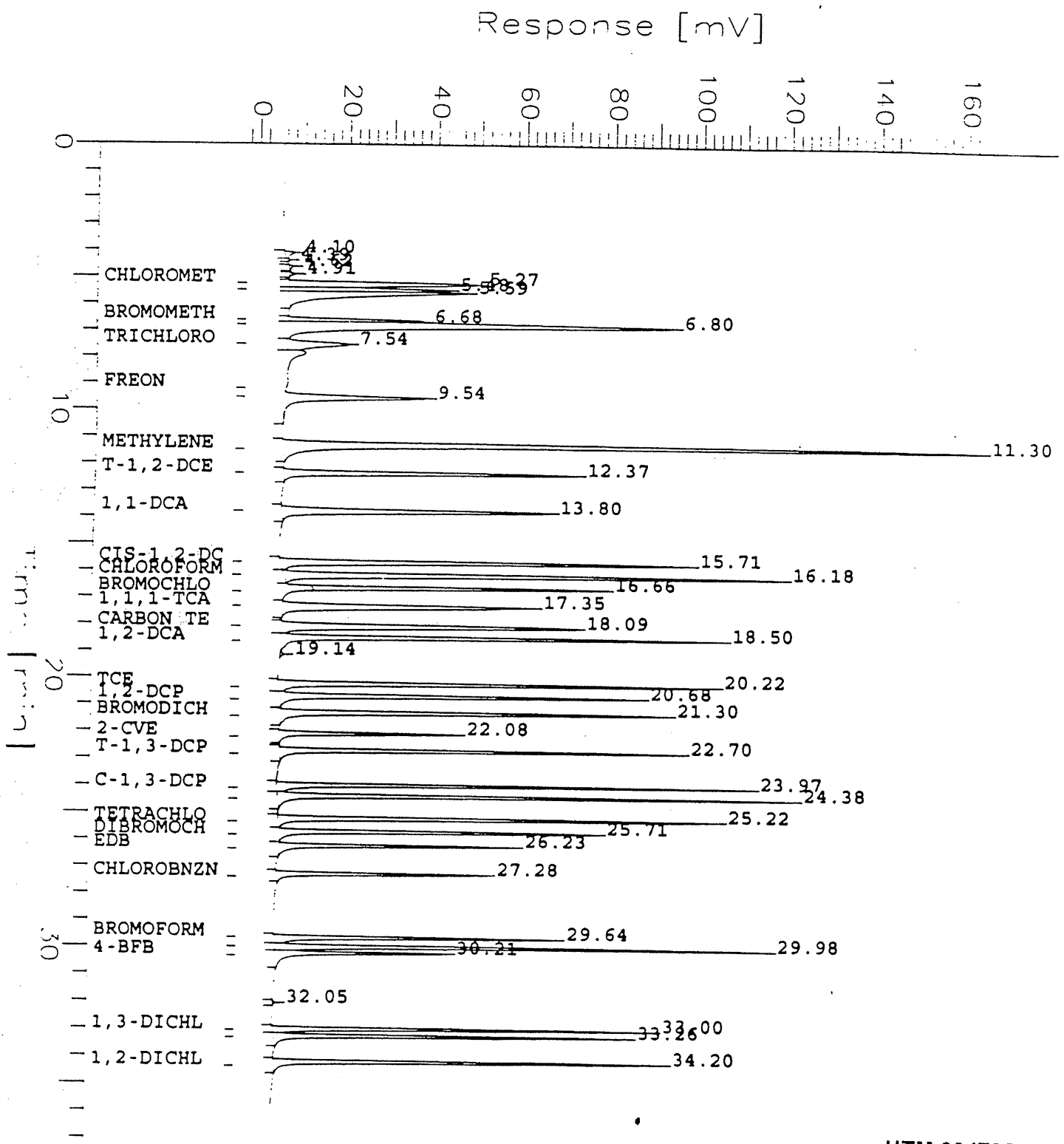
| eak # | Component Name | Time (min) | Area (uV*sec) | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 5 | CHLOROMETHANE | 5.267 | 420466.31 | 1.0763 | 1.6757 | 83.7852 | 16.7570 | |
| 7 | VINYL CHLORIDE | 5.589 | 435917.00 | 1.1158 | 1.1627 | 58.1348 | 11.6270 | |
| 8 | BROMOMETHANE | 6.683 | 206523.89 | 0.5286 | 2.0164 | 100.8217 | 20.1643 | |
| 9 | CHLOROETHANE | 6.803 | 1050789.67 | 2.6897 | 2.3084 | 115.4206 | 23.0841 | |
| 10 | TRICHLOROFLUOROMETHA | 7.536 | 182304.10 | 0.4666 | 0.3796 | 18.9791 | 3.7958 | |
| 11 | 1,1-DCE | 9.539 | 441243.35 | 1.1294 | 1.0000 | 50.0001 | 10.0000 | |
| 12 | METHYLENE CHLORIDE | 11.302 | 1423260.00 | 3.6431 | 1.2577 | 62.8832 | 12.5766 | |
| 13 | T-1,2-DCE | 12.365 | 511251.00 | 1.3086 | 0.9578 | 47.8887 | 9.5777 | |
| 14 | 1,1-DCA | 13.796 | 569606.00 | 1.4580 | 1.0669 | 53.3433 | 10.6687 | |
| 15 | CIS-1,2-DCE | 15.706 | 682583.47 | 1.7472 | 1.2200 | 60.9981 | 12.1996 | |
| 16 | CHLOROFORM | 16.183 | 883412.03 | 2.2613 | 1.0515 | 52.5752 | 10.5150 | |
| 17 | BROMOCHLOROMETHAN | 16.658 | 390674.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 18 | 1,1,1-TCA | 17.348 | 546110.00 | 1.3979 | 0.8644 | 43.2223 | 8.6445 | |
| 19 | CARBON TETRACHLORIDE | 18.094 | 622328.33 | 1.5930 | 0.8871 | 44.3568 | 8.8714 | |
| 20 | 1,2-DCA | 18.499 | 673054.67 | 1.7228 | 1.1898 | 59.4901 | 11.8980 | |
| 22 | TCE | 20.223 | 651890.00 | 1.6686 | 1.0820 | 54.1021 | 10.8204 | |
| 23 | 1,2-DCP | 20.682 | 564130.50 | 1.4440 | 1.1249 | 56.2447 | 11.2489 | |
| 24 | BROMODICHLOROMETHAN | 21.297 | 583994.00 | 1.4948 | 1.2600 | 63.0019 | 12.6004 | |
| 25 | 2-CVE | 22.076 | 244264.00 | 0.6252 | 1.4151 | 70.7529 | 14.1506 | |
| 26 | T-1,3-DCP | 22.702 | 530207.00 | 1.3572 | 1.2147 | 60.7355 | 12.1471 | |
| 27 | C-1,3-DCP | 23.972 | 596954.86 | 1.5280 | 1.2752 | 63.7592 | 12.7518 | |
| 28 | 1,1,2-TCA | 24.379 | 712905.14 | 1.8248 | 1.2445 | 62.2232 | 12.4446 | |
| 29 | TETRACHLOROETHLYENE | 25.221 | 610426.00 | 1.5625 | 0.9323 | 46.6152 | 9.3230 | |
| 30 | DIBROMOCHLOROMETHAN | 25.710 | 434490.00 | 1.1122 | 1.3315 | 66.5767 | 13.3153 | |
| 31 | EDB | 26.228 | 314531.50 | 0.8051 | 1.4835 | 74.1756 | 14.8351 | |
| 32 | CHLOROBNZN | 27.279 | 270213.00 | 0.6917 | 1.1705 | 58.5234 | 11.7047 | |
| 33 | BROMOFORM | 29.635 | 372886.70 | 0.9545 | 1.8202 | 91.0115 | 18.2023 | |
| 34 | 1,1,2,2-TCA | 29.979 | 651376.27 | 1.6673 | 1.5046 | 75.2278 | 15.0456 | |
| 35 | 4-BFB | 30.210 | 254489.53 | 0.6514 | 1.7091 | 85.4545 | 17.0909 | |
| 37 | 1,3-DICHLOROBNZN | 33.001 | 457912.64 | 1.1721 | 1.6275 | 81.3772 | 16.2754 | |
| 38 | 1,4-DICHLOROBNZN | 33.257 | 413639.36 | 1.0588 | 1.3841 | 69.2059 | 13.8412 | |
| 39 | 1,2-DICHLOROBNZN | 34.198 | 479509.00 | 1.2274 | 1.5601 | 78.0053 | 15.6011 | |
| | | | 17183343.31 | 43.9838 | 41.1778 | 2008.8920 | 401.7784 | |

# Chromatogram

Sample Name : MSD1W
FileName : H:\DATA\GC11A\13BF026.RAW
Method : 11A.ins
Start Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: -3 mV

Sample #: 26
Date : 2/15/94 6:43 PM
Time of Injection: 2/14/94 6:39 PM
Low Point : -2.75 mV High Point : 1
Plot Scale: 166.3 mV






UTM 004732

==========

oftware Version: 3.3 <4B11>

Sample Name : LCS1W
ample Number: 27
perator : DM

Time : 2/15/94 7:00 PM
Study : 8010/8020

nstrument : 0I-2A/GC11A
utoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

nterface Serial # : 1317574217 Data Acquisition Time: 2/14/94 7:23 PM
Delay Time : 0.00 min.
nd Time : 38.00 min.
ampling Rate : 1.0000 pts/sec

aw Data File : H:\DATA\GC11A\13BF027.RAW
esult File : H:\DATA\GC11A\13BF027.RST
Instrument File: H:\DATA\GC11A\11A.ins
rocess File : H:\DATA\GC11A\ELCD-11A.PRC
ample File : H:\DATA\GC11A\ELCD-11E.smp
Sequence File : H:\DATA\GC11A\13BP.SEQ

nj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

==========

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

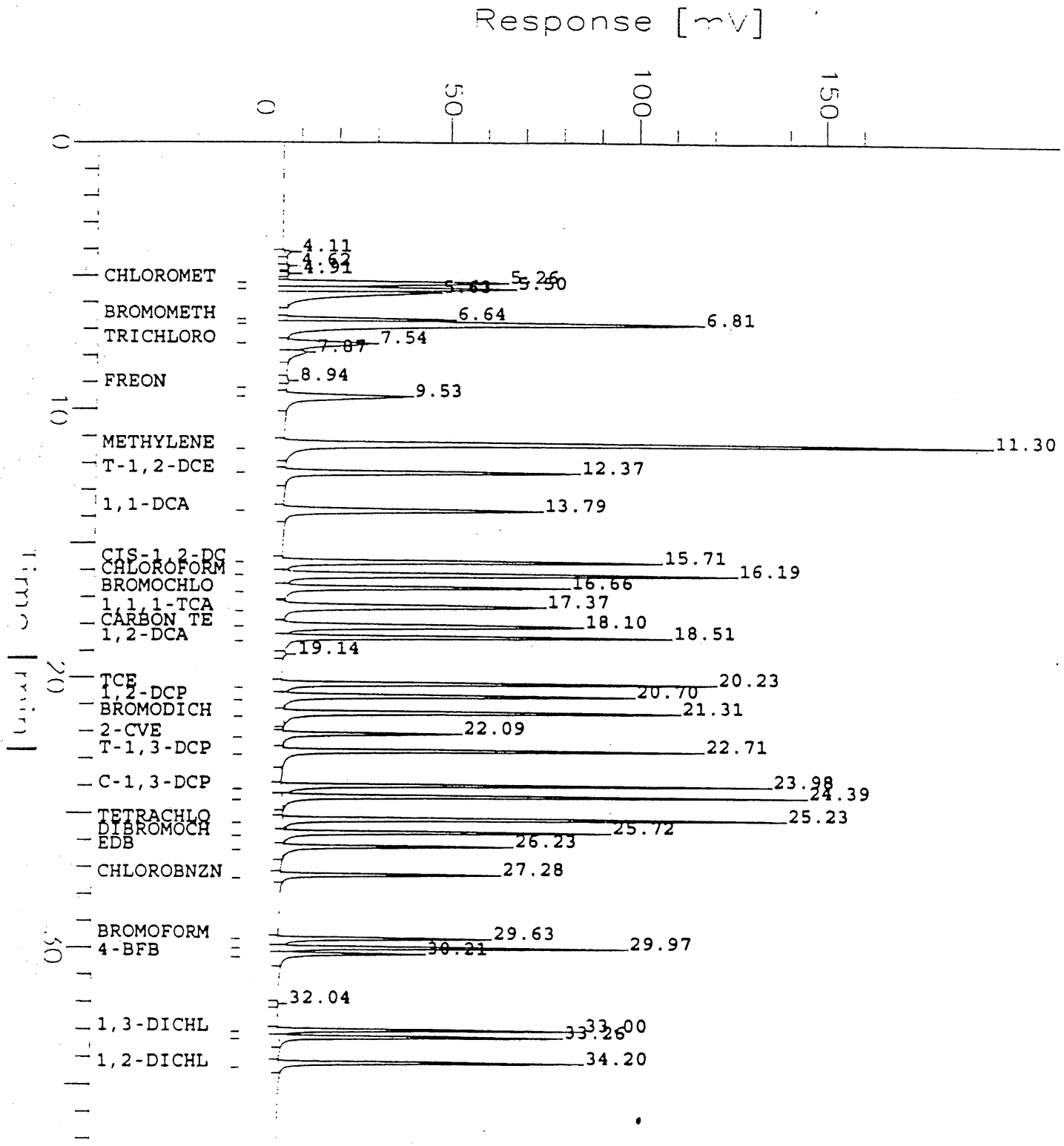
| ak # | Component Name | Time (min) | Area (uV*sec) | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 4 | CHLOROMETHANE | 5.259 | 559729.00 | 1.2284 | 1.9126 | 95.6307 | 19.1261 | |
| 5 | VINYL CHLORIDE | 5.497 | 953616.00 | 2.0929 | 2.1808 | 109.0408 | 21.8082 | |
| 6 | BROMOMETHANE | 6.644 | 314111.00 | 0.6894 | 2.6295 | 131.4771 | 26.2954 | |
| 7 | CHLOROETHANE | 6.805 | 1279072.00 | 2.8071 | 2.4092 | 120.4608 | 24.0922 | |
| 8 | TRICHLOROFLUOROMETHA | 7.536 | 491511.00 | 1.0787 | 0.8775 | 43.8729 | 8.7746 | |
| 9 | 1,1-DCE | 9.528 | 479829.00 | 1.0531 | 0.9324 | 46.6189 | 9.3238 | |
| 10 | METHYLENE CHLORIDE | 11.302 | 1598246.00 | 3.5076 | 1.2109 | 60.5449 | 12.1090 | |
| 11 | T-1,2-DCE | 12.366 | 599982.00 | 1.3168 | 0.9637 | 48.1859 | 9.6372 | |
| 12 | 1,1-DCA | 13.794 | 631130.50 | 1.3851 | 1.0135 | 50.6766 | 10.1353 | |
| 13 | CIS-1,2-DCE | 15.709 | 731579.97 | 1.6056 | 1.1211 | 56.0538 | 11.2108 | |
| 14 | CHLOROFORM | 16.186 | 936510.03 | 2.0553 | 0.9557 | 47.7874 | 9.5575 | |
| 15 | BROMOCHLOROMETHAN | 16.662 | 455650.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 16 | 1,1,1-TCA | 17.372 | 668339.00 | 1.4668 | 0.9071 | 45.3531 | 9.0706 | |
| 17 | CARBON TETRACHLORIDE | 18.104 | 737397.91 | 1.6183 | 0.9013 | 45.0636 | 9.0127 | |
| 18 | 1,2-DCA | 18.505 | 690954.47 | 1.5164 | 1.0473 | 52.3633 | 10.4727 | |
| 20 | TCE | 20.233 | 754884.62 | 1.6567 | 1.0743 | 53.7160 | 10.7432 | |
| 21 | 1,2-DCP | 20.695 | 667593.38 | 1.4651 | 1.1414 | 57.0686 | 11.4137 | |
| 22 | BROMODICHLOROMETHAN | 21.307 | 709241.00 | 1.5565 | 1.3121 | 65.6028 | 13.1206 | |
| 23 | 2-CVE | 22.086 | 190896.00 | 0.4190 | 0.9482 | 47.4094 | 9.4819 | |
| 24 | T-1,3-DCP | 22.712 | 552865.00 | 1.2134 | 1.0860 | 54.2999 | 10.8600 | |
| 25 | C-1,3-DCP | 23.980 | 588135.00 | 1.2908 | 1.0772 | 53.8594 | 10.7719 | |
| 26 | 1,1,2-TCA | 24.386 | 717040.00 | 1.5737 | 1.0732 | 53.6595 | 10.7319 | |
| 27 | TETRACHLOROETHLYENE | 25.227 | 704627.00 | 1.5464 | 0.9227 | 46.1357 | 9.2271 | |
| 28 | DIBROMOCHLOROMETHAN | 25.715 | 405816.00 | 0.8906 | 1.0663 | 53.3156 | 10.6631 | |
| 29 | EDB | 26.230 | 254771.00 | 0.5591 | 1.0303 | 51.5146 | 10.3029 | |
| 30 | CHLOROBNZN | 27.276 | 234548.00 | 0.5148 | 0.8711 | 43.5550 | 8.7110 | |
| 31 | BROMOFORM | 29.630 | 222366.00 | 0.4880 | 0.9307 | 46.5340 | 9.3068 | |
| 32 | 1,1,2,2-TCA | 29.973 | 425632.00 | 0.9341 | 0.8429 | 42.1467 | 8.4293 | |
| 33 | 4-BFB | 30.205 | 126976.00 | 0.2787 | 0.7311 | 36.5569 | 7.3114 | |
| 34 | 1,3-DICHLOROBNZN | 32.999 | 326280.00 | 0.7161 | 0.9943 | 49.7157 | 9.9431 | |
| 35 | 1,4-DICHLOROBNZN | 33.258 | 300542.00 | 0.6596 | 0.8623 | 43.1131 | 8.6226 | |
| 36 | 1,2-DICHLOROBNZN | 34.201 | 328527.00 | 0.7210 | 0.9165 | 45.8228 | 9.1646 | |
| | | | 18638397.88 | 40.9051 | 36.9431 | 1797.1560 | 359.4312 | |

# Chromatogram

Sample Name : LCS1W
leName : h:\data\gc11a\13BF027.raw
thod : 11A.ins
Start Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: -4 mV

Sample #: 27
Date : 2/14/94 8:01 PM
Time of Injection: 2/14/94 7:23 PM
Low Point : -4.23 mV High Point : 1
Plot Scale: 196.7 mV






UTM 004734

f ftware Version: 3.3 <4B11>

Sample Name : HLA 1049 1ML
S mple Number: DB01049
C erator : DM

Time : 2/15/94 9:54 AM
Study : 8010/8020

I strument : OI-2A/GC11A
A toSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

I terface Serial # : 1317574217 Data Acquisition Time: 2/14/94 11:46 PM
Delay Time : 0.00 min.
E d Time : 38.00 min.
S mpling Rate : 1.0000 pts/sec

R w Data File : H:\DATA\GC11A\13BF033.RAW
R sult File : H:\DATA\GC11A\13BF033.RST
Instrument File: H:\DATA\GC11A\11A.ins
P ocess File : H:\DATA\GC11A\ELCD-11A.prc
S mple File : H:\DATA\GC11A\ELCD-11E.smp
Sequence File : H:\DATA\GC11A\13BP.SEQ

I . Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

## VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| # | Component Name | Time (min) | Area (uV*sec) | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 4 | 1,1-DCE | 9.586 | 130881.00 | 0.2563 | 0.2269 | 11.3467 | 11.3467 | Y.C. |
| 5 | METHYLENE CHLORIDE | 11.315 | 247943.00 | 0.4856 | 0.1676 | 8.3811 | ~~8.3811~~ | L.C. |
| 6 | 1,1-DCA | 13.811 | 123837.00 | 0.2425 | 0.1775 | 8.8727 | 8.8727 | |
| 7 | CIS-1,2-DCE | 15.720 | 77847.00 | 0.1525 | 0.1064 | 5.3223 | 5.3223 | Y.C. |
| 8 | CHLOROFORM | 16.199 | 37157.00 | 0.0728 | 0.0338 | 1.6918 | ~~1.6918~~ | BDL |
| 9 | BROMOCHLOROMETHAN | 16.669 | 510639.14 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 0 | 1,1,1-TCA | 17.381 | 94153.86 | 0.1844 | 0.1140 | 5.7012 | 5.7012 | Y.C |
| 1 | 1,2-DCA | 18.514 | 4495.00 | 0.0088 | 0.0061 | 0.3040 | ~~0.3040~~ | ND |
| 3 | TCE | 20.232 | 349550.00 | 0.6845 | 0.4439 | 22.1947 | 22.1947 | YC |
| 4 | BROMODICHLOROMETHAN | 21.452 | 2481.00 | 0.0049 | 0.0041 | 0.2048 | ~~0.2048~~ | ND |
| 5 | TETRACHLOROETHLYENE | 25.224 | 2660888.00 | 5.2109 | 3.1092 | 155.4611 | 155.4611 | Y.C. |
| 6 | 4-BFB | 30.212 | 191837.00 | 0.3757 | 0.9857 | 49.2831 | 49.2831 | |
| | | | 4431709.00 | 8.6787 | 6.3753 | 268.7636 | 268.7636 | |

(DL x 5)

99%

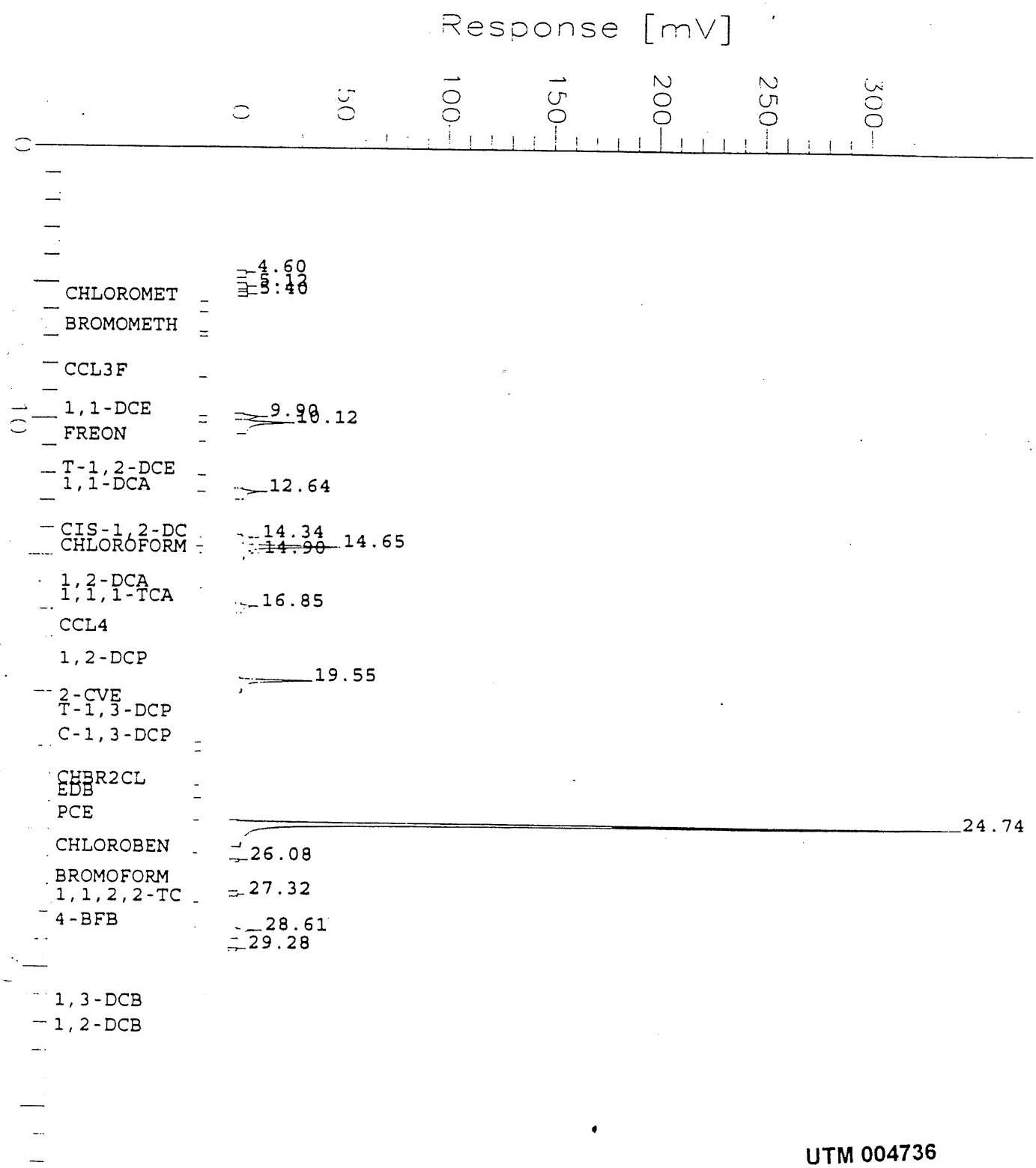
UTM 004735

# Halogenated Voltatile Organics

Sample Name : HLA 1049 1ML
ileName : h:\data\gc11\13BD033.raw
ethod : GC-11.ins
Start Time : 0.00 min End Time : 37.66 min
Scale Factor: 1.0 Plot Offset: -13 mV

Sample #: DB01049
Date : 2/15/94 12:23 AM
Time of Injection: 2/14/94 11:45 PM
Low Point : -12.93 mV High Point : 3
Plot Scale: 354.0 mV






UTM 004736

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Software Version: 3.3 <4B11>

Sample Name : HLA 1050 1ML  Time : 2/15/94 9:55 AM

Sample Number: DB01050  Study : 8010/8020

Operator : DM

Instrument : OI-2A/GC11A  Channel : B  A/D mV Range : 1000

AutoSampler : NONE

Rack/Vial : 0/0

Interface Serial # : 1317574217  Data Acquisition Time: 2/15/94 12:29 AM

Delay Time : 0.00 min.

End Time : 38.00 min.

Sampling Rate : 1.0000 pts/sec

Raw Data File : H:\DATA\GC11A\13BF034.RAW

Result File : H:\DATA\GC11A\13BF034.RST

Instrument File: H:\DATA\GC11A\11A.ins

Process File : H:\DATA\GC11A\ELCD-11A.prc

Sample File : H:\DATA\GC11A\ELCD-11E.smp

Sequence File : H:\DATA\GC11A\13BP.SEQ

Inj. Volume : 1 ul  Area Reject : 300.000000

Sample Amount : 1.0000  Dilution Factor : 1.00

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# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| Peak # | Component Name | Time [min] | Area [uV*sec] | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 4 | TRICHLOROFLUOROMETHA | 7.567 | 721.00 | 0.0016 | 0.0013 | 0.0662 | ~~0.0662~~ | ND |
| 5 | 1,1-DCE | 9.548 | 45608.50 | 0.1030 | 0.0912 | 4.5596 | 4.5596 | Y.C |
| 6 | METHYLENE CHLORIDE | 11.315 | 275483.00 | 0.6221 | 0.2148 | 10.7384 | ~~10.7384~~ | L.C |
| 7 | 1,1-DCA | 13.809 | 24602.00 | 0.0556 | 0.0407 | 2.0327 | ~~2.0327~~ | BDL |
| 8 | CIS-1,2-DCE | 15.718 | 79712.90 | 0.1800 | 0.1257 | 6.2847 | 6.2847 | |
| 9 | CHLOROFORM | 16.197 | 43711.10 | 0.0987 | 0.0459 | 2.2951 | ~~2.2951~~ | BDL |
| 10 | BROMOCHLOROMETHAN | 16.669 | 442815.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 11 | 1,1,1-TCA | 17.381 | 63092.00 | 0.1425 | 0.0881 | 4.4055 | 4.4055 | |
| 13 | TCE | 20.236 | 824559.00 | 1.8621 | 1.2075 | 60.3746 | 60.3746 | |
| 14 | BROMODICHLOROMETHAN | 21.459 | 2812.00 | 0.0064 | 0.0054 | 0.2676 | ~~0.2676~~ | ND |
| 15 | TETRACHLOROETHLYENE | 25.229 | 1769329.00 | 3.9956 | 2.3841 | 119.2053 | 119.2053 | Y.C. |
| 17 | 4-BFB | 30.211 | 167300.00 | 0.3778 | 0.9912 | 49.5625 | 49.5625 | |
| | | | 3739745.50 | 8.4454 | 6.1958 | 259.7921 | 259.7921 | |

DL x 5

99%

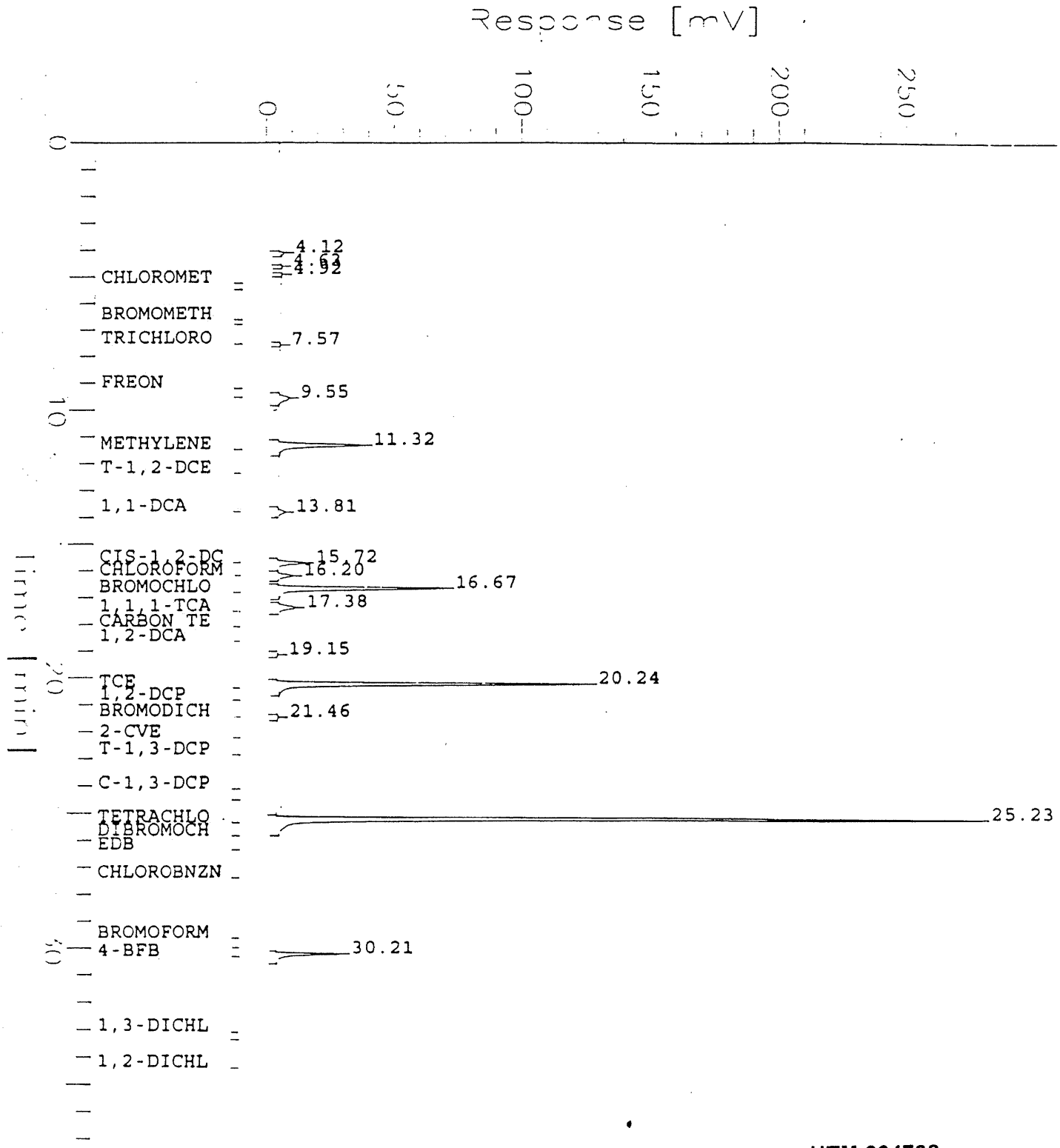
UTM 004737

# Chromatogram

Sample Name : HLA 1050 1ML
FileName : h:\data\gc11a\13BF034.raw
Method : 11A.ins
Start Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: -9 mV

Sample #: DB01050
Date : 2/15/94 1:07 AM
Time of Injection: 2/15/94 12:29 AM
Low Point : -8.62 mV High Point : 2
Plot Scale: 288.8 mV






UTM 004738

oftware Version: 3.3 <4B11>

Sample Name : HLA 1051 0.5ML
Sample Number: DB01051
perator : DM

Time : 2/15/94 1:51 AM
Study : 8010/8020

Instrument : 0I-2A/GC11A
utoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

nterface Serial # : 1317574217 Data Acquisition Time: 2/15/94 1:13 AM
Delay Time : 0.00 min.
End Time : 38.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : H:\DATA\GC11A\13BF035.RAW
Result File : H:\DATA\GC11A\13BF035.RST
Instrument File: H:\DATA\GC11A\11A.ins
Process File : H:\DATA\GC11A\ELCD-11A
Sample File : H:\DATA\GC11A\ELCD-11E
Sequence File : H:\DATA\GC11A\13BP.SEQ

Inj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

## VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| Peak # | Component Name | Time (min) | Area (uV*sec) | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 5 | 1,1-DCE | 9.541 | 142523.00 | 0.3580 | 0.3170 | 15.8501 | 31.7002 | XC. |
| 6 | METHYLENE CHLORIDE | 11.307 | 202990.00 | 0.5099 | 0.1760 | 8.8020 | ~~13.6039~~ | LC |
| 7 | CHLOROFORM | 16.194 | 24894.50 | 0.0625 | 0.0291 | 1.4540 | ~~2.0041~~ | BDL |
| 8 | BROMOCHLOROMETHAN | 16.667 | 398071.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 9 | 1,1,1-TCA | 17.379 | 21102.50 | 0.0530 | 0.0328 | 1.6391 | ~~2.2703~~ | BDL |
| 10 | TCE | 20.236 | 65926.00 | 0.1656 | 0.1074 | 5.3697 | 10.7394 | Y.C. |
| 11 | BROMODICHLOROMETHAN | 21.461 | 1803.50 | 0.0045 | 0.0038 | 0.1909 | ~~0.2610~~ | ND |
| 12 | TETRACHLOROETHLYENE | 25.233 | 1507826.00 | 3.7878 | 2.2601 | 113.0056 | 226.0112 | Y.C. |
| 13 | 4-BFB | 30.220 | 162372.50 | 0.4079 | 1.0702 | 53.5096 | 107.0191 | |
| | | | 2527509.00 | 6.3494 | 4.9964 | 199.8210 | 399.6421 | |

(DL x 10)

107%

UTM 004739

# Chromatogram

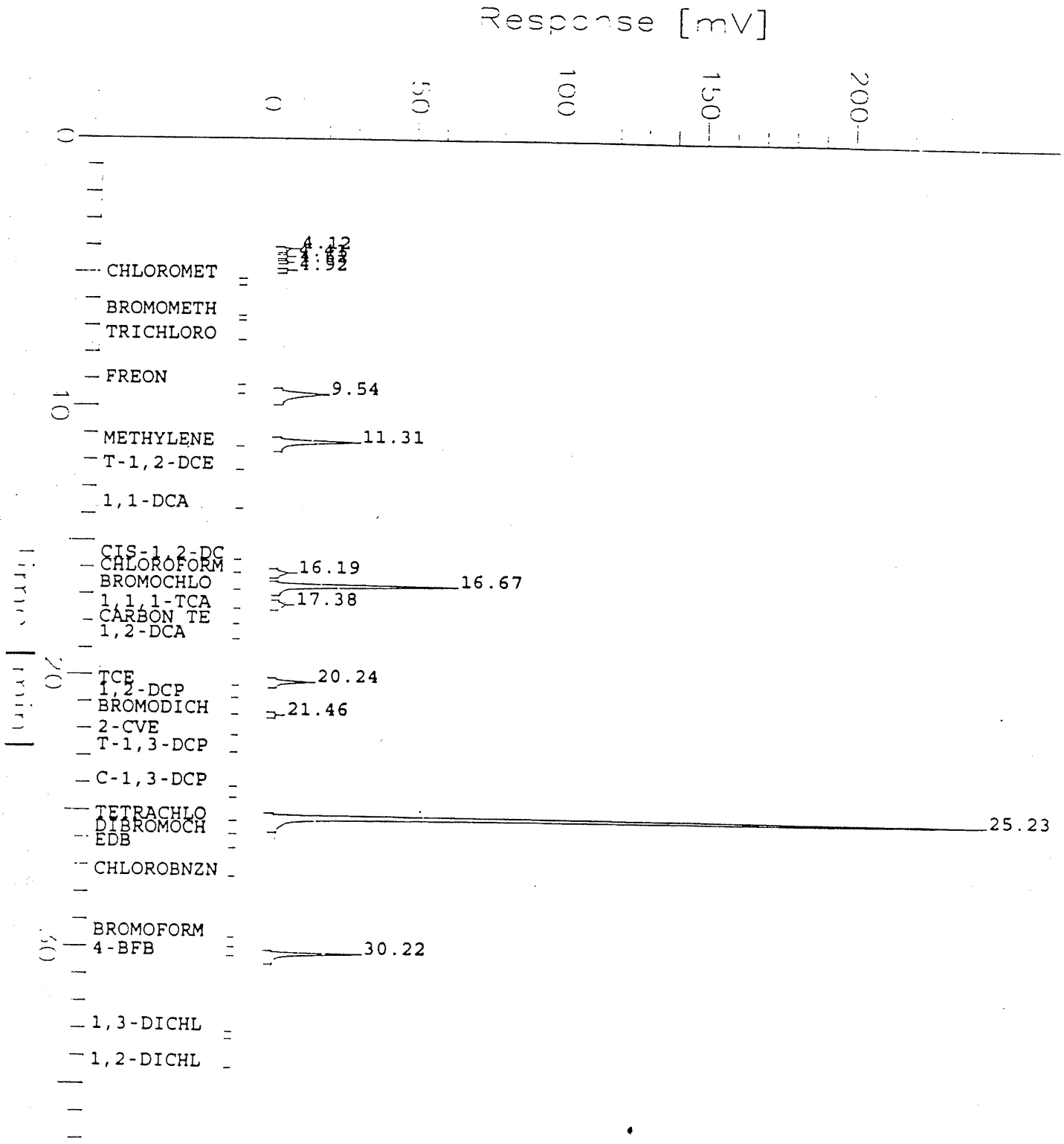
Sample Name : HLA 1051 0.5ML
FileName : h:\data\gc11a\13BF035.raw
Method : 11A.ins
Start Time : 0.00 min
Scale Factor: 1.0

End Time : 38.00 min
Plot Offset: -7 mV

Sample #: DB01051
Date : 2/15/94 1:51 AM
Time of Injection: 2/15/94 1:13 AM
Low Point : -6.94 mV
Plot Scale: 253.0 mV



High Point : 2




UTM 004740

cftware Version: 3.3 <4B11>

Sample Name : HLA 1052 1ML
Sample Number: DB01052
perator : DM

Time : 2/15/94 2:35 AM
Study : 8010/8020

nstrument : 0I-2A/GC11A
utoSampler : NONE
Rack/Vial : 0/0

Channel : B A/D mV Range : 1000

nterface Serial # : 1317574217 Data Acquisition Time: 2/15/94 1:57 AM
Delay Time : 0.00 min.
nd Time : 38.00 min.
ampling Rate : 1.0000 pts/sec

aw Data File : H:\DATA\GC11A\13BF036.RAW
esult File : H:\DATA\GC11A\13BF036.RST
Instrument File: H:\DATA\GC11A\11A.ins
rocess File : H:\DATA\GC11A\ELCD-11A
ample File : H:\DATA\GC11A\ELCD-11E
Sequence File : H:\DATA\GC11A\13BP.SEQ

nj. Volume : 1 ul
Sample Amount : 1.0000

Area Reject : 300.000000
Dilution Factor : 1.00

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| eak # | Component Name | Time [min] | Area [uV*sec] | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 4 | 1,1-DCE | 9.531 | 491588.00 | 1.1053 | 0.9786 | 48.9303 | 48.9303 | yc |
| 5 | METHYLENE CHLORIDE | 11.300 | 513161.50 | 1.1538 | 0.3983 | 19.9154 | ~~19.9154~~ | L.c. |
| 6 | 1,1-DCA | 13.795 | 150235.00 | 0.3378 | 0.2472 | 12.3583 | 12.3583 | yc |
| 7 | CIS-1,2-DCE | 15.708 | 8832.00 | 0.0199 | 0.0139 | 0.6933 | ~~0.6933~~ | ND |
| 8 | CHLOROFORM | 16.186 | 103262.00 | 0.2322 | 0.1080 | 5.3981 | 5.3981 | yc |
| 9 | BROMOCHLOROMETHAN | 16.659 | 444765.00 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 10 | 1,1,1-TCA | 17.368 | 498594.00 | 1.1210 | 0.6932 | 34.6624 | 34.6624 | |
| 12 | TCE | 20.228 | 159777.00 | 0.3592 | 0.2330 | 11.6477 | 11.6477 | yc |
| 13 | BROMODICHLOROMETHAN | 21.449 | 1524.00 | 0.0034 | 0.0029 | 0.1444 | ~~0.1444~~ | ND |
| 14 | TETRACHLOROETHLYENE | 25.230 | 971720.00 | 2.1848 | 1.3036 | 65.1808 | 65.1808 | yc |
| 15 | 4-BFB | 30.221 | 152222.00 | 0.3423 | 0.8980 | 44.8979 | 44.8979 | |
| | | | 3495680.50 | 7.8596 | 5.8766 | 243.8286 | 243.8286 | |

(DL x 5)

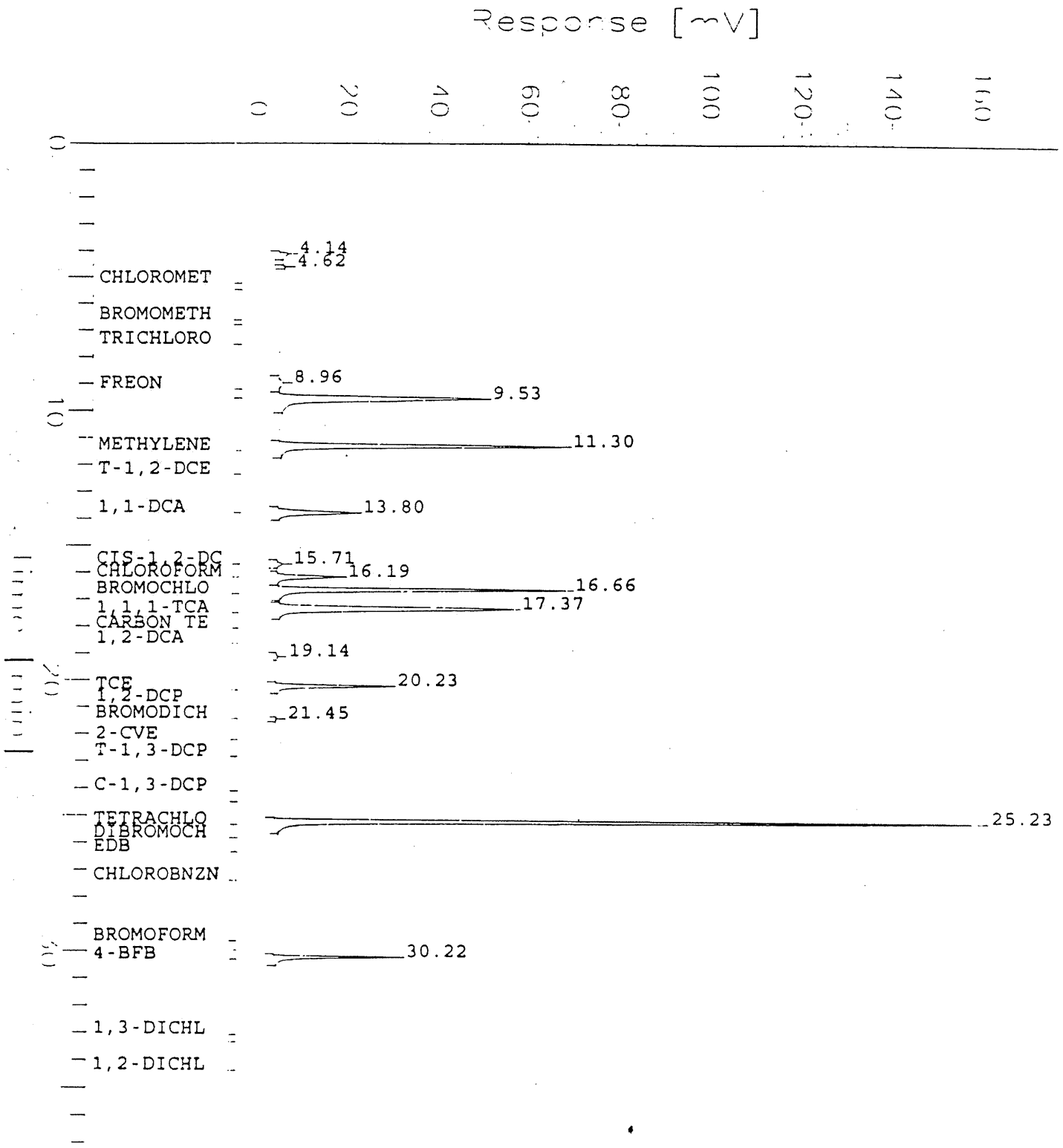
90%

# Chromatogram

Sample Name : HLA 1052 1ML
ileName : h:\data\gc11a\13BF036.raw
ethod : 11A.ins
Start Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: -3 mV

Sample #: DB01052
Date : 2/15/94 2:35 AM
Time of Injection: 2/15/94 1:57 AM
Low Point : -2.66 mV High Point : 1
Plot Scale: 163.4 mV





==========

oftware Version: 3.3 <4B11>

Sample Name : HLA 1054 0.5ML  Time : 2/15/94 9:56 AM

Sample Number: DB01054  Study : 8010/8020

perator : DM

Instrument : OI-2A/GC11A  Channel : B  A/D mV Range : 1000

utoSampler : NONE

Rack/Vial : 0/0

nterface Serial # : 1317574217  Data Acquisition Time: 2/15/94 2:41 AM

Delay Time : 0.00 min.

End Time : 38.00 min.

ampling Rate : 1.0000 pts/sec

Raw Data File : H:\DATA\GC11A\13BF037.RAW

esult File : H:\DATA\GC11A\13BF037.RST

Instrument File: H:\DATA\GC11A\11A.ins

Process File : H:\DATA\GC11A\ELCD-11A.prc

ample File : H:\DATA\GC11A\ELCD-11E.smp

Sequence File : H:\DATA\GC11A\13BP.SEQ

nj. Volume : 1 ul  Area Reject : 300.000000

Sample Amount : 1.0000  Dilution Factor : 1.00

==========

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| Peak # | Component Name | Time (min) | Area (uV*sec) | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 4 | 1,1-DCE | 9.546 | 92950.00 | 0.1716 | 0.1520 | 7.5977 | 15.1954 | YC |
| 5 | METHYLENE CHLORIDE | 11.318 | 233750.50 | 0.4316 | 0.1490 | 7.4498 | ~~14.8996~~ | LC |
| 6 | 1,1-DCA | 13.815 | 103669.50 | 0.1914 | 0.1401 | 7.0032 | 14.0064 | YC |
| 7 | CIS-1,2-DCE | 15.723 | 61995.19 | 0.1145 | 0.0799 | 3.9963 | 7.9926 | |
| 8 | CHLOROFORM | 16.204 | 54489.81 | 0.1006 | 0.0468 | 2.3392 | ~~4.6786~~ | BDL |
| 9 | BROMOCHLOROMETHAN | 16.673 | 541592.80 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 10 | 1,1,1-TCA | 17.384 | 74636.20 | 0.1378 | 0.0852 | 4.2611 | 8.5221 | YC |
| 11 | 1,2-DCA | 18.512 | 2356.50 | 0.0044 | 0.0030 | 0.1502 | ~~0.3005~~ | ND |
| 13 | TCE | 20.234 | 251759.00 | 0.4648 | 0.3014 | 15.0719 | 30.1437 | YC |
| 14 | BROMODICHLOROMETHAN | 21.453 | 2107.00 | 0.0039 | 0.0033 | 0.1640 | ~~0.3279~~ | ND |
| 15 | TETRACHLOROETHLYENE | 25.227 | 2025448.00 | 3.7398 | 2.2315 | 111.5726 | 223.1452 | YC |
| 16 | 4-BFB | 30.215 | 214868.00 | 0.3967 | 1.0409 | 52.0449 | 104.0899 | |
| | | | 3659622.50 | 6.7571 | 5.2330 | 211.6510 | 423.3019 | |

(DL x 10)

104%

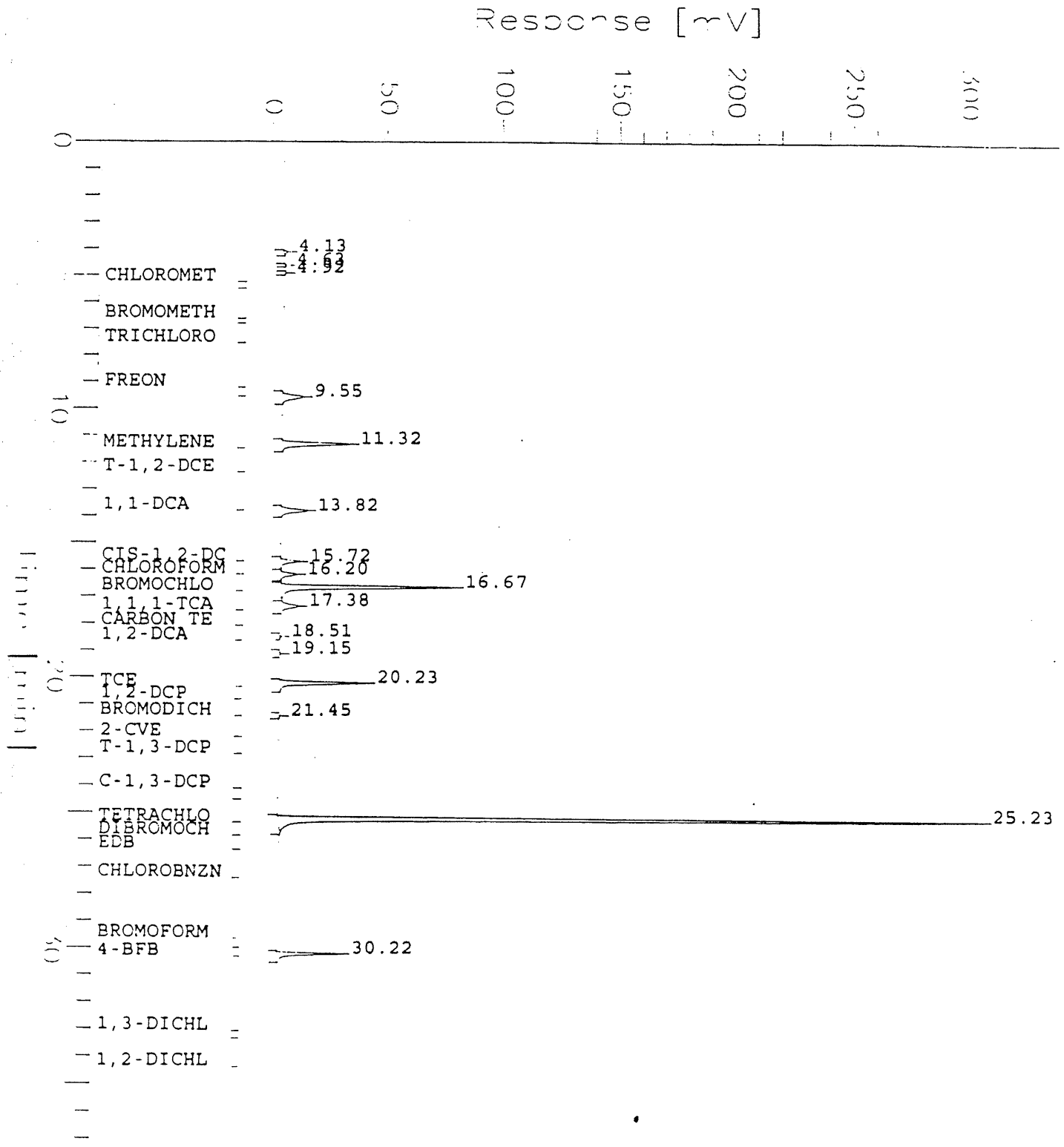
UTM 004743

# Chromatogram

Sample Name : HLA 1054 0.5ML
ileName : h:\data\gc11a\13BF037.raw
ethod : 11A.ins
Start Time : 0.00 min End Time : 38.00 min
Scale Factor: 1.0 Plot Offset: -10 mV

Sample #: DB01054
Date : 2/15/94 3:19 AM
Time of Injection: 2/15/94 2:41 AM
Low Point : -10.02 mV High Point : 3
Plot Scale: 318.0 mV






UTM 004744

Software Version: 3.3 <4B11>

Sample Name : HLA 1055 5ML  Time : 2/15/94 8:50 AM
Sample Number: DB01055  Study : 8010/8020
Operator : DM

Instrument : OI-2A/GC11A  Channel : B  A/D mV Range : 1000
AutoSampler : NONE
Rack/Vial : 0/0

Interface Serial # : 1317574217  Data Acquisition Time: 2/15/94 8:12 AM
Delay Time : 0.00 min.
End Time : 38.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : H:\DATA\GC11A\13BF044.RAW
Result File : H:\DATA\GC11A\13BF044.RST
Instrument File: H:\DATA\GC11A\11A.ins
Process File : H:\DATA\GC11A\ELCD-11A
Sample File : H:\DATA\GC11A\ELCD-11E
Sequence File : H:\DATA\GC11A\13BP.SEQ

Inj. Volume : 1 ul  Area Reject : 300.000000
Sample Amount : 1.0000  Dilution Factor : 1.00

# VOLATILE HALOGENATED ORGANICS BY ELCD-GC#11A

| Peak # | Component Name | Time [min] | Area [uV*sec] | ISTD Resp Ratio | ISTD Amt. Ratio | Raw Amount | Adjusted Amount | Cal. Range |
|---|---|---|---|---|---|---|---|---|
| 5 | METHYLENE CHLORIDE | 11.321 | 571075.50 | 1.0938 | 0.3776 | 18.8798 | ~~3.7760~~ | L.C. |
| 6 | CHLOROFORM | 16.201 | 44582.50 | 0.0854 | 0.0397 | 1.9853 | ~~0.3971~~ | ND |
| 7 | BROMOCHLOROMETHAN | 16.669 | 522109.79 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | |
| 8 | 1,1,1-TCA | 17.382 | 50112.21 | 0.0960 | 0.0594 | 2.9677 | $\boxed{0.5935}$ | Y.C. |
| 11 | BROMODICHLOROMETHAN | 21.453 | 1925.00 | 0.0037 | 0.0031 | 0.1554 | ~~0.0311~~ | |
| 12 | TETRACHLOROETHLYENE | 25.238 | 5373.00 | 0.0103 | 0.0061 | 0.3070 | ~~0.0614~~ | ND |
| 13 | DIBROMOCHLOROMETHAN | 25.730 | 2002.50 | 0.0038 | 0.0046 | 0.2296 | ~~0.0458~~ | |
| 14 | BROMOFORM | 29.659 | 896.00 | 0.0017 | 0.0033 | 0.1636 | ~~0.0327~~ | |
| 15 | 4-BFB | 30.224 | 185578.50 | 0.3554 | 0.9326 | 46.6278 | 9.3256 | |
| | | | 1383655.00 | 2.6501 | 2.4263 | 71.3163 | 14.2633 | |

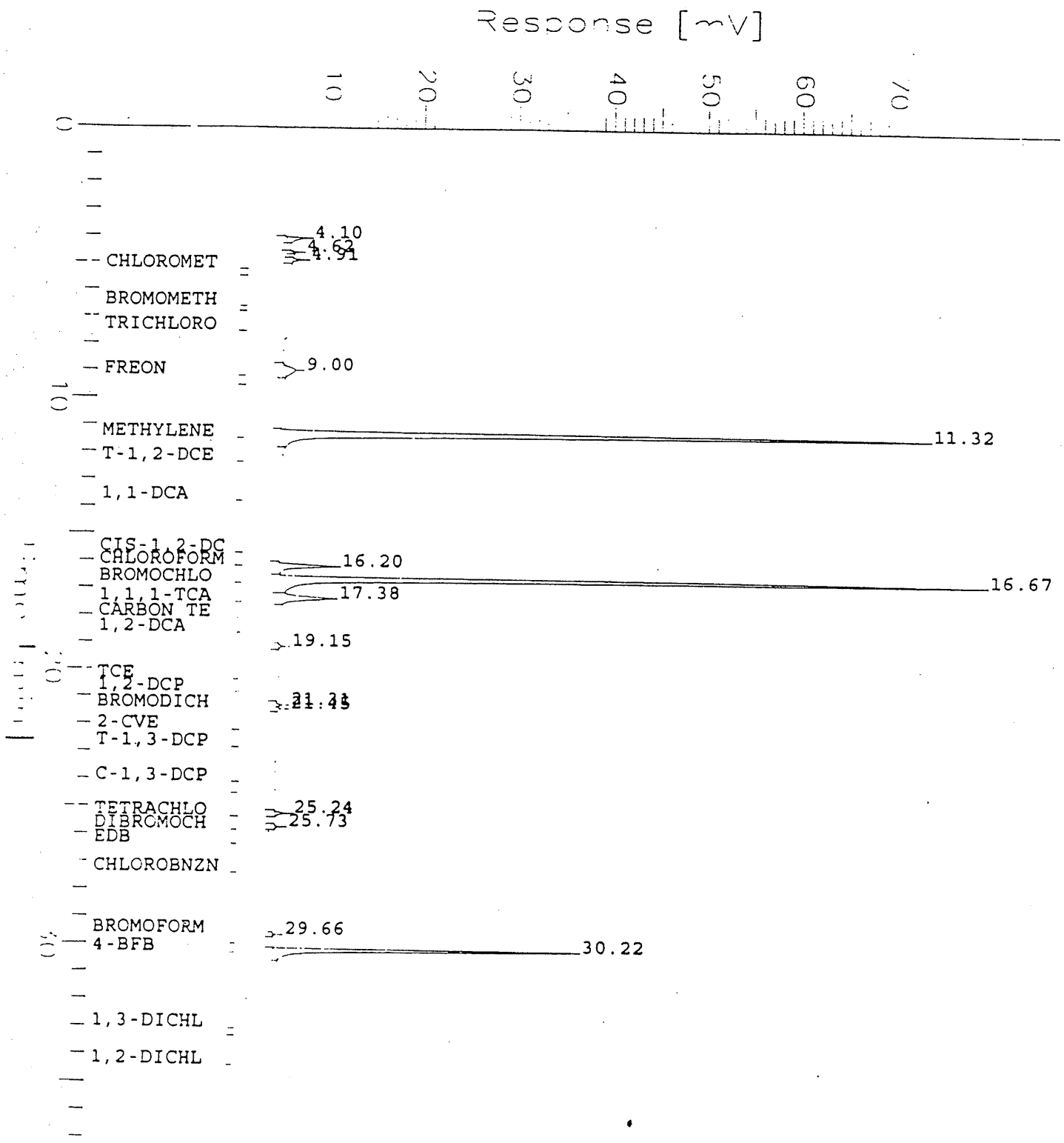
93%

# Chromatogram

Sample Name : HLA 1055 5ML
FileName : h:\data\gc11a\13BF044.raw
Method : 11A.ins
Start Time : 0.00 min  End Time : 38.00 min
Scale Factor: 1.0  Plot Offset: 1 mV

Sample #: DB01055
Date : 2/15/94 8:50 AM
Time of Injection: 2/15/94 8:12 AM
Low Point : 1.35 mV  High Point : 7
Plot Scale: 78.0 mV





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Groundwater Monitoring Report
November 1993 through April 1994
Utility Trailer Manufacturing Company
17300 East Chestnut Street
City of Industry, California

May 12, 1994

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Quality Control Reviewer

Donald A. Pape
Associate Hydrogeologist

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