

## LAKEWOOD/PLAZA CLEANERS ROUND VIII, APRIL 18-20, 1994

### Introduction

This document is one of a series describing the results of ground water sampling at Lakewood/Plaza Cleaners. The sampling program was designed by U.S. Environmental Protection Agency's contractor, CH2M Hill, as part of the Lakewood Remedial Action (CH2M Hill 1990a&b). Ecology has conducted the semi-annual ground water sampling at the site since 1991. The objective of this sampling is to collect ground water quality data for the Toxics Cleanup Program to evaluate the effectiveness of Lakewood supply wells H1 and H2 (Figure 1) to contain and remove contaminated ground water caused by Plaza Cleaners. Samples were collected on April 18-20, 1994 from twelve monitoring wells: MW-13B, MW-16A, MW-19A, MW-19B, MW-20A, MW-20B, MW-21, MW-27, MW-31, MW-32, MW-40, and MW-41 (Figure 1). All samples were analyzed for volatile organics (VOA's). The quality assurance review and laboratory reporting sheets are presented in Appendix A.

### Results

#### Field Observations

Table 1 lists field observation data; static water level, pH, specific conductance, temperature, purged volume, well depth, and the geologic unit for each of the sampled wells. Well MW-20A had a pH reading of 9.1 standard units, which is consistent with previous measurements. The high pH readings in MW-20A are most likely related to well construction. The specific conductance (590 umhos/cm) in well MW-20B, which is screened in a fine-grained till unit, was two to three times greater than the other wells. A higher specific conductance is expected for water from a fine-grained unit.

During this sample round I also inventoried all the remaining monitoring wells to assess the condition of the wells and dedicated pumps. Part of the protective casing for MW-21 had been removed and filled with gravel. A protective casing should be re-installed. MW-13A and MW-13B, which are located on McChord AFB, are in the way of a road expansion (Burdette,

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by Pamela B. Marti  
December 1994

Waterbody No. WA-12-1115GW  
(Segment No. 05-12-GW)

Ecology Report #94-198

1994). These wells should be refurbished or decommissioned. I could not locate wells MW-34, MW-35, and MW-36 behind Plaza Cleaners. I suspect these wells have been covered with fill during a parking lot regrading. I was also unable to locate MW-30 which is in a residential area. Wells MW-30, MW-34, MW-35, and MW-36 should be located and either refurbished or decommissioned.

## **Laboratory Results**

Table 2 summarizes laboratory results. The highest concentrations of tetrachloroethylene (PERC), trichloroethylene (TCE) and cis-1,2-dichloroethylene (cis-1,2-DCE) occurred in well MW-20B with 472 ppb, 8.6 ppb, and 12.6 ppb, respectively. PERC and cis-1,2-DCE were detected in wells MW-16A, MW-20A, MW-21, MW-31, and MW-32 at concentrations near the practical quantitation limit of 0.2 ppb. TCE was detected in wells MW-16A, MW-21, and upgradient well MW-19A near the quantitation limit of 0.2 ppb. Carbon tetrachloride was detected in wells MW-19A and MW-20A at concentrations below the quantitation limit of 0.2 ppb.

Upgradient wells MW-13B and MW-19B were also sampled this round. Both wells are screened in the Vashon Till. PERC was detected in MW-19B below the quantitation limit and TCE was detected in MW-13B near the quantitation limit.

Table 3 shows PERC, TCE, and cis-1,2-DCE concentrations for January 1991 through April 1994. PERC and cis-1,2-DCE continue to be detected at or near the detection limit in most of the wells screened in the Advance Outwash. Well MW-20B, which is screened in the Vashon Till, continues to have the highest concentrations. Figures 2 and 3 show PERC concentrations at wells MW-20B and MW-16A between 1984 and 1994, respectively. Since 1984 PERC concentrations in both wells have varied substantially. PERC concentrations decreased initially in MW-20B from March 1985 (4800 ppb) to May 1985 (570 ppb). After May 1985 concentrations ranged between 120 ppb to 1200 ppb. Over the monitoring period PERC concentrations in MW-16A varied between 3 ppb and 110 ppb.

## **Methods**

### **Ground Water Sampling**

Samples were collected on April 18-20, 1994 from MW-13B, MW-16A, MW-19A, MW-19B, MW-20A, MW-20B, MW-21, MW-27, MW-31, MW-32, MW-40, and MW-41. Prior to sample collection, static water level measurements were obtained using an electronic water level indicator. The meter was rinsed with deionized water after each use. All monitoring wells were purged a minimum of three well volumes and until pH, temperature, and specific conductance readings stabilized. Purge water was discharged to storm drains or to the ground near each monitoring well. All wells were purged and sampled using dedicated bladder

pumps, except for MW-19B and MW-20B. Wells MW-19B and MW-20B were purged and sampled with decontaminated teflon bailers.

Wells were sampled from the least to most contaminated. Samples collected for volatile organics were free of headspace and preserved with two drops of 1:1 hydrochloric acid. Volatile organic samples were analyzed using EPA SW-846 Method 8260 (EPA, 1986).

The bailer was pre-cleaned with a Liquinox® wash and sequential rinses of hot tap water, 10% nitric acid, distilled/deionized water, and pesticide-grade acetone. After cleaning the bailer was air-dried and wrapped in aluminum foil. Chain-of-custody procedures were followed in accordance with Manchester Laboratory protocol (Ecology, 1994).

Data were managed using the ENVIS database software package.

### **Quality Assurance Samples**

In general the quality of the data is acceptable for use.

Quality control samples collected in the field for the ground water monitoring consisted of a transfer blank, a blind duplicate, and a replicate sample. A transfer blank was collected by pouring organic-free water through a decontaminated bailer. A blind duplicate sample was collected from well MW-16A. Duplicate samples are two sets of samples collected from a well simultaneously and submitted to the laboratory with different identification. A replicate sample was collected from well MW-20A. Replicate samples are two sets of samples collected from a well at different times. In addition to quality control samples collected in the field, laboratory quality assurance samples consisted of matrix spikes, matrix spike duplicates and surrogate compound recoveries.

Volatile organic analyses were performed by the Manchester Laboratory. Dickey Huntamer of the Manchester Laboratory conducted the quality assurance review. Low levels of common laboratory solvents such as acetone and methylene chloride were detected in the laboratory blanks. However, these analytes were not detected in the field samples.

Duplicate samples collected at MW-16A provide an estimate of combined sampling and laboratory precision. The numeric comparison of duplicate results is expressed as the relative percent difference or RPD. RPDs are the ratio of the difference and the mean of the duplicate results expressed as a percentage. The RPDs for tetrachloroethylene, trichloroethylene and cis-1,2-dichloroethylene were 1%, 10%, and 13%, respectively. Matrix spike and spike duplicate recoveries for volatile organics are within the QC limits of  $\pm 25\%$  for water sample analysis.

## **References**

- Burdette, D., 1994. McChord Air Force Base, IRP Project Manager. Personal communication, April 1994.
- CH2M HILL, 1990a. Sampling and Analysis Plan Remedial Action - Lakewood RA.
- CH2M HILL, 1990b. Technical Memorandum from Lisa Dally Wilson to Ann Williamson RE: Groundwater Sampling at Lakewood (April 1990). Project No. SEA69018RA.FQ.
- U.S. Environmental Protection Agency, 1986. Test Methods for Evaluating Solid Waste, SW-846. Office of Emergency Response, Washington , D.C., 1986.
- Washington State Department of Ecology, 1994. Manchester Environmental Laboratory - Laboratory Users Manual. Edited by D. Huntamer and J. Hyre.

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## **Contacts**

Pam Marti                    Washington State Department of Ecology  
                                    Environmental Investigations and Laboratory Services  
                                    Toxics Investigations Section  
                                    (206) 407-6768

If you have special accommodation needs, please contact Joan LeTourneau at (206) 407-6696 (voice). Ecology's telecommunications device for the deaf (TDD) number at Ecology Headquarters is (206) 407-6006.

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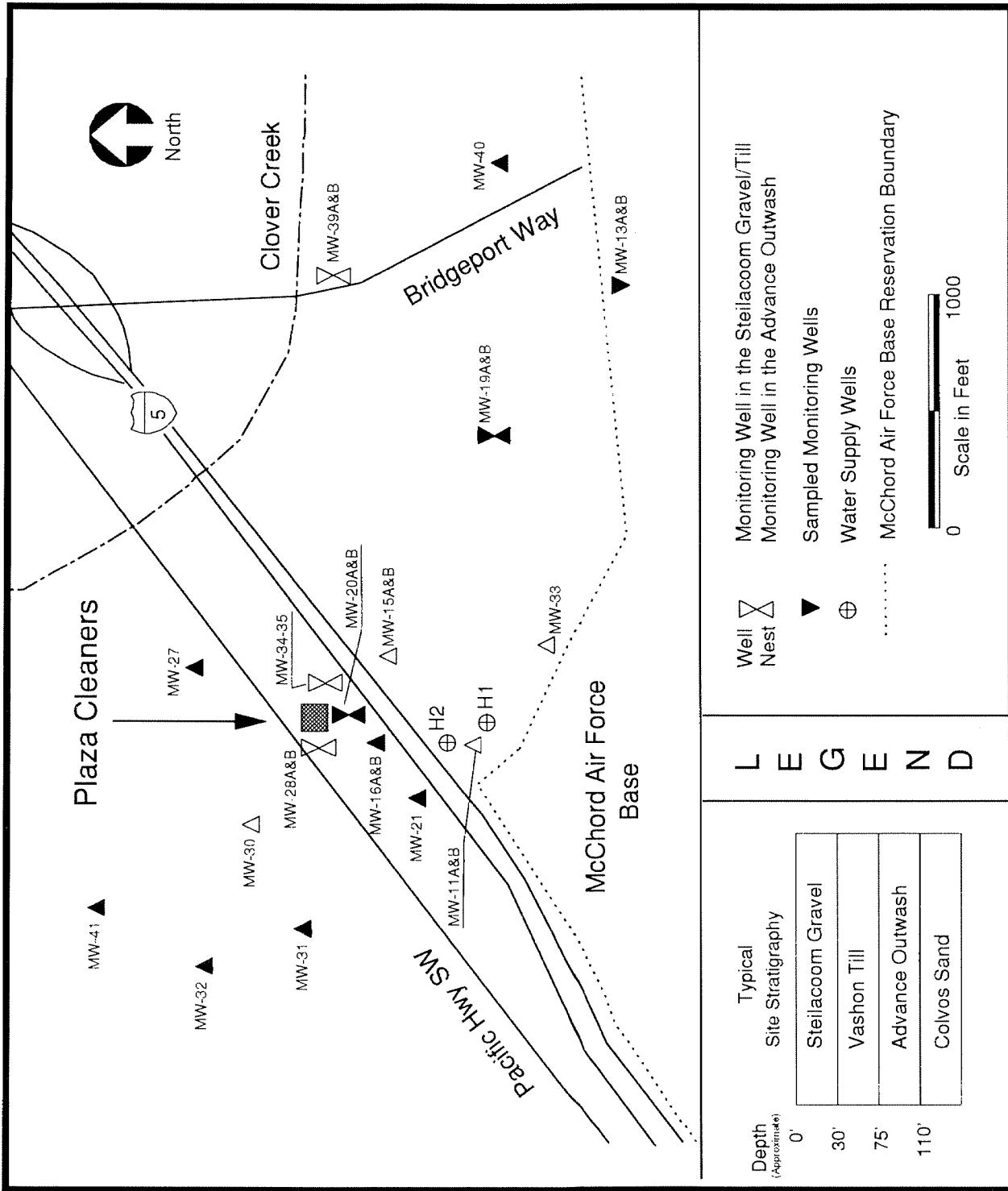


Figure 1: Well Location Map - Lakewood/Plaza Cleaners

Figure 2: PERC Concentrations for Well MW-20B from 1984 to 1994

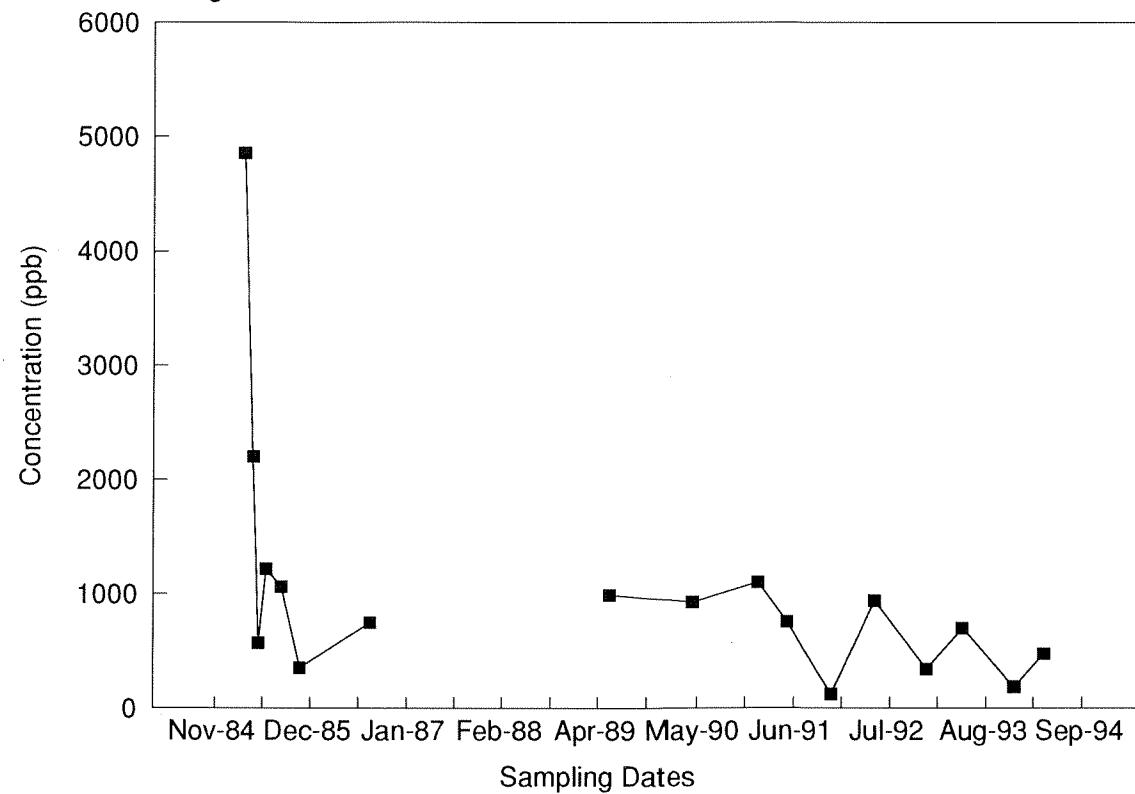


Figure 3: PERC Concentrations for Well MW-16A from 1984 to 1994

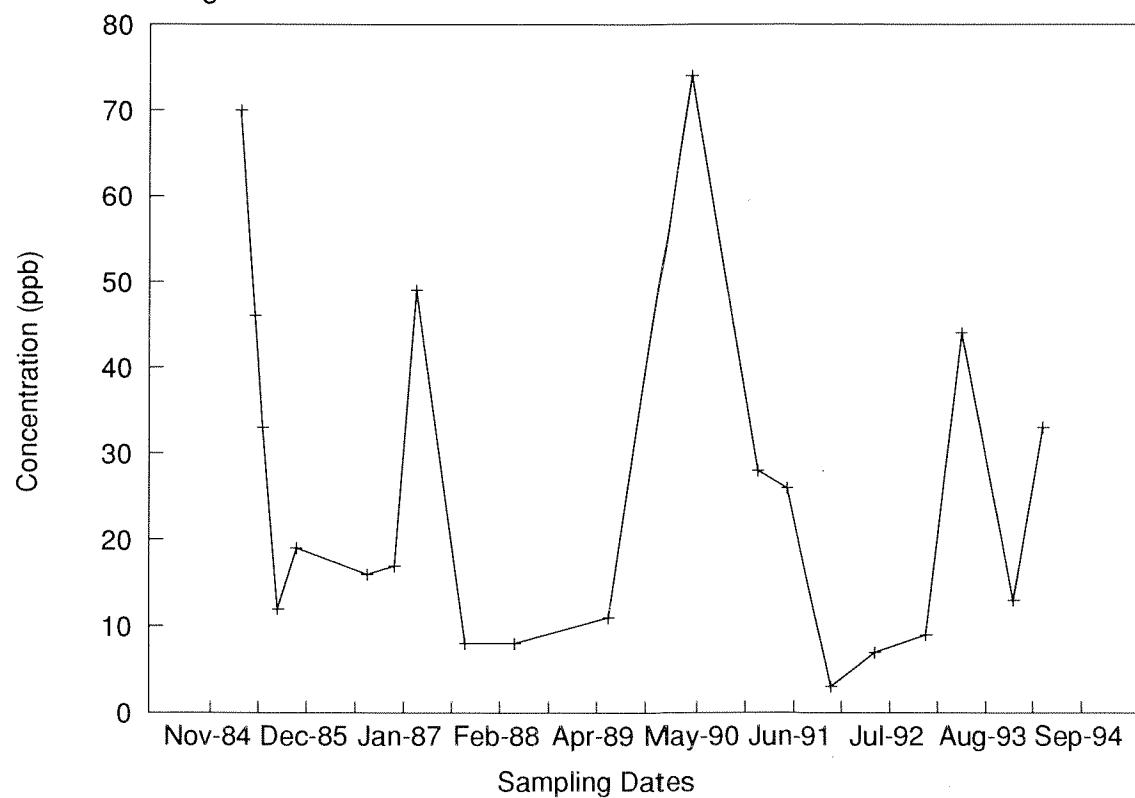


Table 1: Field Parameter Results for April 18–20, 1994

Monitoring Well	Total Depth From Top of PVC Casing As Measured	Geologic Unit Screened	Depth to Water (Feet)	pH (st. units)	Specific Conductance (µmhos/cm)	Temperature (°C)	Purge Volume (gallons)
MW-40	75.1	Advance Outwash	34.20	7.5	260	11.1	21
MW-19A	97.5	Advance Outwash	38.62	6.9	200	11.8	30
MW-19B	61.2	Vashon Till	37.16	6.5	158	12.4	12
MW-41	96.8	Advance Outwash	29.40	7.1	202	11.6	33
MW-27	96.4	Advance Outwash	++	6.9	180	12.2	24
MW-20A	97.3	Advance Outwash	33.27	9.1	200	12.9	33
MW-32	114.4	Advance Outwash	61.44	7.1	188	11.9	27
MW-31	91.5	Advance Outwash	++	6.9	161	11.4	26
MW-21	92.1	Advance Outwash	40.09	7.0	190	12.6	26
MW-16A	109	Advance Outwash	41.67	7.3	218	12.7	132
MW-20B	50.4	Vashon Till	35.49	6.8	590	14.3	7.5
MW-13B	55.7	Vashon Till	37.0	6.7	220	11.6	11

++ = Dedicated pump obstructs water-level measurement.

Table 2: Summary of Analytes Detected in Samples Collected During April 18–20, 1994

Geologic Unit Screened	Vashon Till						Advance Outwash					
	Upgradient Wells			MW-16A	MW-20A	MW-21	MW-27	MW-31	MW-32	MW-41	MW-19A	Upgradient Wells
Monitoring Well	MW-13B	MW-19B	MW-20B	MW-16A	MW-20A	MW-21	MW-27	MW-31	MW-32	MW-41	MW-19A	MW-40
<b>Volatile Organics: (ug/L)</b>												
Tetrachloroethylene (PERC)	0.2 U	0.07 J	472	32.8	0.37	1.5	0.2 U	0.69	0.72	0.2 U	0.2 U	0.2 U
Trichloroethylene (TCE)	0.98	0.2 U	8.6 J	0.56	0.2 U	0.17 J	0.2 U	0.2 U	0.2 U	0.2 U	0.52	0.2 U
cis-1,2-Dichloroethylene (cis-1,2-DCE)	0.2 U	0.2 U	12.6	1.4	0.2 U	0.29	0.2 U	1.0	0.6	0.2 U	0.2 U	0.2 U
Carbon Tetrachloride	0.2 U	0.2 U	10 U	0.2 U	0.11 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.18 J	0.2 U

U = The analyte was not detected at or above the reported value.

J = The analyte was positively identified. The associated numerical result is an estimate.

**Table 3: Summary of Sampling Results from January 1991 to April 1994**

Well Number	January 1991			May 1991			November 1991			May 1992			December 1992			May 1993		
	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE
MW-16A	<b>28</b>	<b>1 J</b>	<b>24 J</b>	<b>26</b>	<b>0.6 J</b>	<b>2</b>	<b>27 J</b>	<b>1 U</b>	<b>0.6 J</b>	<b>7</b>	<b>1 U</b>	<b>1</b>	<b>9 J</b>	<b>0.3 J</b>	<b>0.8 J</b>	<b>44</b>	<b>10 U</b>	<b>2 J</b>
MW-20A	1 U	1 U	1 U	0.4 J	1 U	0.4 J	0.4 J	1 U	0.4 J	1 U	1 U	0.8 J	1 UJ	1 UJ	10 U	10 U	10 U	
MW-20B	<b>1100 D</b>	<b>18</b>	<b>33</b>	<b>752</b>	<b>16</b>	<b>30</b>	<b>120</b>	<b>26 J</b>	<b>67</b>	<b>940</b>	<b>13</b>	<b>32</b>	<b>340 J</b>	<b>14 J</b>	<b>20 J</b>	<b>780 D</b>	<b>12</b>	<b>21</b>
MW-21	<b>21 J</b>	<b>1 U</b>	<b>1 J</b>	<b>2</b>	<b>1 U</b>	<b>0.7 J</b>	<b>22 J</b>	<b>1 U</b>	<b>10 J</b>	<b>2</b>	<b>1 U</b>	<b>0.6 J</b>	<b>2</b>	<b>0.2 J</b>	<b>0.3 J</b>	<b>1 J</b>	<b>10 U</b>	<b>10 U</b>
MW-27	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	10 U	10 U	10 U	
MW-31	<b>1 J</b>	<b>1 U</b>	<b>1.9 J</b>	<b>0.6 J</b>	<b>1 U</b>	<b>2</b>	<b>0.9 J</b>	<b>1 U</b>	<b>22 J</b>	<b>0.8 J</b>	<b>1 U</b>	<b>1</b>	<b>0.5 J</b>	<b>1 UU</b>	<b>0.9 J</b>	<b>10 U</b>	<b>10 U</b>	<b>10 U</b>
MW-32	<b>1 J</b>	<b>1 U</b>	<b>1.1 J</b>	<b>1</b>	<b>1 U</b>	<b>2</b>	<b>0.6 J</b>	<b>1 U</b>	<b>0.6 J</b>	<b>0.7 J</b>	<b>1 U</b>	<b>1</b>	<b>0.7 J</b>	<b>1 UJ</b>	<b>0.5 J</b>	<b>10 U</b>	<b>10 U</b>	<b>10 U</b>
MW-41	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	10 U	10 U	10 U
MW-19A	--	--	--	--	--	--	1 U	<b>0.5 J</b>	1 U	--	--	--	1 U	1 UJ	1 UJ	--	--	--
MW-40	1 U	1 U	1 U	--	--	--	1 U	1 U	1 U	--	--	1 U	1 UJ	1 UJ	--	--	--	--

Well Number	December 1993			April 1994														
	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE	PERC	TCE	1,2-DCE
MW-16A	<b>13</b>	<b>0.3 J</b>	<b>0.7 J</b>	<b>33</b>	<b>0.6</b>	<b>1.4</b>												
MW-20A	<b>0.3 J</b>	<b>1 U</b>	<b>1 U</b>	<b>0.4</b>	<b>0.2 U</b>	<b>0.2 U</b>												
MW-20B	<b>187</b>	<b>50 U</b>	<b>8.2 J</b>	<b>472</b>	<b>8.6 J</b>	<b>12.6</b>												
MW-21	<b>1.6</b>	<b>1 U</b>	<b>0.4 J</b>	<b>1.5</b>	<b>0.2 J</b>	<b>0.3</b>												
MW-27	<b>1 U</b>	<b>1 U</b>	<b>1 U</b>	<b>0.2 U</b>	<b>0.2 U</b>	<b>0.2 U</b>												
MW-31	<b>0.8 J</b>	<b>1 U</b>	<b>1.2 J</b>	<b>0.7</b>	<b>0.2 U</b>	<b>1.0</b>												
MW-32	<b>0.7 J</b>	<b>1 U</b>	<b>0.6 J</b>	<b>0.7</b>	<b>0.2 U</b>	<b>0.6</b>												
MW-41	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2	0.2 U	0.2 U	0.2	0.2 U	0.2 U	0.2	0.2 U	0.2 U	0.2	0.2 U	0.2 U
MW-19A	1 U	1 U	0.4	1 U	0.2 U	0.5												
MW-40	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U												

U = The analyte was not detected at or above the reported result.

J = The analyte was positively identified. The associated numerical result is an estimate.

UJ = The analyte was not detected at or above the reported estimated result.

D = Analysis performed at secondary dilution.

-- = Not Tested

# **APPENDIX A**

Analytical Results  
Lakewood/Plaza Cleaners  
April 18–20, 1994

**MANCHESTER ENVIRONMENTAL LABORATORY**  
7411 Beach Drive E , Port Orchard Washington 98366

**CASE NARRATIVE**

**May 25, 1994**

Subject: Lakewood Plaza Cleaners

Samples: 94 - 168080 to -168094

Case No. DOE-083X

Officer: Pam Marti

By: Dickey D. Huntamer  
Organics Analysis Unit

**VOLATILE ORGANIC ANALYSIS**

**ANALYTICAL METHODS:**

Volatile organic compounds were analyzed using Manchester modification of the EPA SW 846 Method 8260 purge-trap procedure with capillary GC/MS analysis. Normal QA/QC procedures were performed on the samples.

**BLANKS:**

Low levels of the common laboratory solvents acetone and methylene chloride were detected in the laboratory blanks along with traces of some other compounds. The EPA five times rule was applied to all target compounds which were found in the blank. Compounds that were found in the sample and in the blank were considered real and not the result of contamination if the levels in the sample are greater than or equal to five times the amount of compounds in the associated method blank.

**SURROGATES:**

Surrogate recoveries were within acceptable limits for water samples.

**HOLDING TIMES:**

Both the water and soil samples were analyzed within the recommended 14 day holding time.

**MATRIX SPIKE AND MATRIX SPIKE DUPLICATE:**

Water matrix spikes were within acceptable QC limits for both percent recovery and Relative Percent Differences (RPD) for most compounds. Tetrachloroethene was outside due to high native concentrations, while cis and trans -1,3-dichloropropene and m+p xylene had low recoveries and the "J" qualifier was added to the results for these compounds.

**ANALYTICAL COMMENTS:**

No analytical problems were encountered in the analysis. The data is acceptable for use as qualified.

**DATA QUALIFIER CODES:**

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an <u>estimate</u> .
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are <u>unusable</u> for all purposes.
EXP	-	The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals $3 \times 10^6$ .
NAF	-	Not analyzed for.
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
*	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

Laboratory: Ecology, Manchester

GUNNAR NO: 81 168080

Description: MW = 10

BEGITI DACE . 3 / 04 / 19

THEORY AND PRACTICE

Project: DOE-083X LAKEWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168081 Description: MW-19A

Begin Date: 94/04/18

	VOA - PP Scan	Water-Total	VOA - PP Scan	Water-Total	Result	Units	VOA - PP Scan	Water-Total	Result	Units	VOA - PP Scan	Water-Total	Result	Units
Carbon Tetrachloride	0.18J*	ug/1	1, 3, 5-Trimethylbenzene	0.20U	ug/1									
Acetone	10.0U	ug/1	Bromobenzene	0.20U	ug/1									
Chloroform	0.20U	ug/1	Toluene	1.0U	ug/1									
Benzene	1.0U	ug/1	Chlorobenzene	1.0U	ug/1									
1, 1, 1-Trichloroethane	1.0U	ug/1	1, 2, 4-Trichlorobenzene	1.0U	ug/1									
Bromomethane	5.0U	ug/1	Dibromochloromethane	0.20U	ug/1									
Chloromethane	1.0U	ug/1	Tetrachloroethene	0.20U	ug/1									
Dibromomethane	0.20U	ug/1	Sec-Butylbenzene	0.20U	ug/1									
Bromo-chloromethane	1.0U	ug/1	1, 3-Dichloropropane	0.20U	ug/1									
Chloroethane	1.0U	ug/1	Cis-1, 2-Dichloroethene	0.20U	ug/1									
Vinyl Chloride	1.0U	ug/1	trans-1, 2-Dichloroethene+	0.20U	ug/1									
Methylene Chloride	10.0U	ug/1	1, 3-Dichlorobenzene	0.20U	ug/1									
Carbon Disulfide	2.0U	ug/1	1, 1-Dichloropropene	0.20U	ug/1									
Bromoform	1.0U	ug/1	2-Hexanone	1.0U	ug/1									
Bromodichloromethane	0.20U	ug/1	2, 2-Dichloropropane	0.20U	ug/1									
1, 1-Dichloroethane	0.20U	ug/1	Ethane, 1, 1, 2-Tetrac+	0.20U	ug/1									
Trichlorofluoromethane	1.0U	ug/1	Total Xylenes	0.60U	ug/1									
Methane, Dichlorodiflu+	1.0U	ug/1	m-P-XYLENE	0.40U	ug/1									
1, 2-Dichloropropane	0.20U	ug/1	cis-1, 3-Dichloropropene	0.11U	ug/1									
2-Butanone	1.0U	ug/1	trans-1, 3-Dichloroprop+	0.094U	ug/1									
1, 1, 2-Trichloroethane	0.20U	ug/1	p-BROMOFLUOROBENZENE	9.8	% Recov									
Ethene, trichloro-	0.52*	ug/1	FLUOROBENZENE	10.0	% Recov									
ETHANE, 1, 1, 2, 2-TETRAC+	0.20U	ug/1	TOLUENE-D8	10.2	% Recov									
1, 1, 2, 3-Trichlorobenzene	0.20U	ug/1	1, 2-DICHLOROBENZENE-D4	9.9	% Recov									
Hexachlorobutadiene	0.20U	ug/1	1, 2-DICHLOROETHANE-D4	10.1	% Recov									
Naphthalene	0.20U	ug/1												
O-XYLENE	0.20U	ug/1												
2-Chlorotoluene	0.20U	ug/1												
1, 2-Dichlorobenzene	0.20U	ug/1												
1, 2, 4-Trimethylbenzene	0.20U	ug/1												
1, 2-Dibromo-3-chloropr+	1.0U	ug/1												
1, 2, 3-Trichloropropane	1.0U	ug/1												
Tert-Butylbenzene	0.20U	ug/1												
Isopropylbenzene (Cum+	1.0U	ug/1												
p-Isopropyltoluene	0.20U	ug/1												
Ethybenzene	0.20U	ug/1												
BENZENE, ETHENYL-(STYR+	0.20U	ug/1												
BENZENE, PROPYL-	0.20U	ug/1												
Butylbenzene	0.20U	ug/1												
4-Chlorotoluene	0.20U	ug/1												
1, 4-Dichlorobenzene	0.20U	ug/1												
1, 2-Dibromoethane (EDB)	0.20U	ug/1												
1, 2-Dichloroethane	0.20U	ug/1												
4-Methyl-2-Pentanone (M+	1.0U	ug/1												

Source: Well (Test/Observation)

Project: DOE-083X LAKWOOD PLAZA CLEANERS  
Laboratory: Ecology, Manchester

Sample No.: 94-168082

Description: MW-19B

Begin Date: 94/04/18

	VOA - PP Scan	Water-Total	VOA - PP Scan	Water-Total	Result	Units	VOA - PP Scan	Water-Total	Result	Units	Continued ***	Result	Units
Carbon Tetrachloride	0.200	ug/1										1, 3, 5-Trimethylbenzene	0.200 ug/1
Acetone	10.00	ug/1										Bromobenzene	0.200 ug/1
Chloroform	0.200	ug/1										Toluene	0.200 ug/1
Benzene	1.00	ug/1										Chlorobenzene	1.00 ug/1
1, 1, 1-Trichloroethane	1.00	ug/1										1, 2, 4-Trichlorobenzene	0.200 ug/1
Bromomethane	5.00	ug/1										Dibromo-chloromethane	0.200 ug/1
chloromethane	1.00	ug/1										Tetrachloroethene	0.070J* ug/1
Dibromomethane	0.200	ug/1										Sec-Butylbenzene	0.200 ug/1
Bromo-chloromethane	1.00	ug/1										1, 3-Dichloropropane	0.200 ug/1
chloroethane	1.00	ug/1										Cis-1, 2-Dichloroethene	0.200 ug/1
Vinyl Chloride	1.00	ug/1										trans-1, 2-Dichloroethene	0.200 ug/1
Methylene Chloride	10.00	ug/1										1, 3-Dichlorobenzene	0.200 ug/1
Carbon Disulfide	2.00	ug/1										1, 1-Dichloropropane	0.200 ug/1
Hydroform	1.00	ug/1										2-Hexanone	1.00 ug/1
Bromo-dichloromethane	0.200	ug/1										2, 2-Dichloropropane	1.00 ug/1
1, 1-Dichloroethene	0.200	ug/1										Ethane, 1, 1, 1, 2-Tetrac-	0.200 ug/1
1, 1, 1-Dichloroethene	1.00	ug/1										Total Xylenes	0.600 ug/1
Trichlorofluoromethane	1.00	ug/1										m p-XYLENE	0.400 ug/1
Methane, Dichlorodiflu-	1.00	ug/1										cis-1, 3-Dichloropropene	0.110 ug/1
1, 2-Dichloropropane	0.200	ug/1										trans-1, 3-Dichloroprop-	0.094U ug/1
2-Butanone	0.200	ug/1										p-BROMOFLUOROBENZENE	9.8 % Recov
1, 1, 2-Trichloroethane	0.200	ug/1										FLUOROBENZENE	10.2 % Recov
Ethene, trichloro-	0.200	ug/1										TOLUENE-D <sub>8</sub>	10.1 % Recov
ETHANE, 1, 1, 2, 2-TETRAC+	0.200	ug/1										1, 2-DICHLOROBENZENE-D <sub>4</sub>	9.9 % Recov
1, 2, 3-Trichlorobenzene	0.200	ug/1										1, 2-DICHLOROETHANE-D <sub>4</sub>	10.2 % Recov
Hexachlorobutadiene	0.200	ug/1										Naphthalene	0.200 ug/1
o-XYLENE	0.200	ug/1										o-XYLENE	0.200 ug/1
2-Chlorotoluene	0.200	ug/1										1, 2-Dichlorobenzene	0.200 ug/1
1, 2-Dichlorobenzene	0.200	ug/1										1, 2, 4-Trimethylbenzene	0.200 ug/1
1, 2, 4-Trimethylbenzene	0.200	ug/1										1, 2-Dibromo-3-chloropro-	1.00 ug/1
1, 2, 3-Trichloropropane	1.00	ug/1										1, 2, 3-Trichloropropane	1.00 ug/1
Tert-Butylbenzene	0.200	ug/1										Tert-Butylbenzene	0.200 ug/1
Isopropylbenzene (cum+	1.00	ug/1										Isopropylbenzene	1.00 ug/1
p-Isopropyltoluene	0.200	ug/1										p-Isopropyltoluene	0.200 ug/1
Ethylbenzene	0.200	ug/1										Ethylbenzene	0.200 ug/1
BENZENE, ETHENYL-(STYR+	0.200	ug/1										BENZENE, PROPYL-	0.200 ug/1
Butylbenzene	0.200	ug/1										Butylbenzene	0.200 ug/1
4-Chlorotoluene	0.200	ug/1										4-Chlorotoluene	0.200 ug/1
1, 4-Dichlorobenzene	0.200	ug/1										1, 2-Dibromoethane (EDB)	0.200 ug/1
1, 2-Dibromoethane	0.200	ug/1										1, 2-Dichloroethane	0.200 ug/1
4-Methyl-2-Pentanone (M+	1.00	ug/1										4-Methyl-2-Pentanone (M+)	1.00 ug/1

(Sample Complete)

Source: Well (Test/Observation)

Project: DOE-083X LAKWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168083

Description: MW-41

Begin Date: 94/04/18

	VOA	PP	Scan	Water-Totals	VOA	PP	Scan	Water-Totals	Result	Units	Result	Units	Result	Units
	Result	Units	Result	Units	Result	Units	Result	Units	***	Continued	***	Continued	***	Continued
Carbon Tetrachloride	0.20U	ug/1			1.0	0.0	ug/1	1, 3, 5-Trimethylbenzene	0.20U	ug/1				
Acetone			0.20U	ug/1				Bromobenzene	0.20U	ug/1				
Chloroform			0.20U	ug/1				Toluene	0.20U	ug/1				
Benzene			1.0U	ug/1				Chlorobenzene	1.0U	ug/1				
1, 1, 1-Trichloroethane			1.0U	ug/1				1, 2, 4-Trichlorobenzene	0.20U	ug/1				
Bromomethane			5.0U	ug/1				Dibromochloromethane	0.20U	ug/1				
Chloromethane			1.0U	ug/1				Tetrachloroethene	0.20U	ug/1				
Dibromochloromethane			0.20U	ug/1				Sec-Butylbenzene	0.20U	ug/1				
Bromoform			1.0U	ug/1				1, 3-Dichloropropane	0.20U	ug/1				
Chloroethane			1.0U	ug/1				Cis-1, 2-Dichloroethene	0.20U	ug/1				
Vinyl Chloride			1.0U	ug/1				trans-1, 2-Dichloroethene	0.20U	ug/1				
Methylene Chloride			10.0U	ug/1				1, 3-Dichlorobenzene	0.20U	ug/1				
Carbon Disulfide			2.0U	ug/1				1, 1-Dichloropropene	0.20U	ug/1				
Bromoform			1.0U	ug/1				2-Hexanone	1.0U	ug/1				
Bromodichloromethane			0.20U	ug/1				2, 2-Dichloropropane	1.0U	ug/1				
1, 1-Dichloroethane			0.20U	ug/1				Ethane, 1, 1, 1, 2-Tetrac+	0.20U	ug/1				
1, 1-Dichlorofluoromethane			1.0U	ug/1				Total Xylenes	0.60U	ug/1				
Methane, Dichlorodiflu+			1.0U	ug/1				m p-XYLENE	0.40U	ug/1				
1, 2-Dichloropropane			0.20U	ug/1				cis-1, 3-Dichloropropene	0.11U	ug/1				
2 Butanone			1.0U	ug/1				trans-1, 3-Dichloroprop-	0.094U	ug/1				
1, 1, 2-Trichloroethane			0.20U	ug/1				p-BROMOFLUOROBENZENE	99	\$ Recov				
Ethene, trichloro-			0.20U	ug/1				FLUOROBENZENE	101	\$ Recov				
ETHANE, 1, 1, 2, 2-TETRA-			0.20U	ug/1				TOLUENE-D8	103	\$ Recov				
1, 2, 3-Trichlorobenzene			0.20U	ug/1				1, 2-DICHLOROBENZENE-D4	101	\$ Recov				
Hexachlorobutadiene			0.20U	ug/1				1, 2-DICHLOROETHANE-D4	100	\$ Recov				
Naphthalene			0.20U	ug/1										
O-XYLENE			0.20U	ug/1										
2-Chlorotoluene			0.20U	ug/1										
1, 2-Dichlorobenzene			0.20U	ug/1										
1, 2, 4-Trimethylbenzene			0.20U	ug/1										
1, 2-Dibromo-3-chloropr+			1.0U	ug/1										
1, 2, 3-Trichloropropane			1.0U	ug/1										
Tert-Butylbenzenes			0.20U	ug/1										
Isopropylbenzene (Cumene)			1.0U	ug/1										
p-Isopropyltoluene			0.20U	ug/1										
Ethybenzene			0.20U	ug/1										
BENZENE, ETHENYL-(STYR+)			0.20U	ug/1										
BENZENE, PROPYL-			0.20U	ug/1										
Butylbenzene			0.20U	ug/1										
4-Chlorotoluene			0.20U	ug/1										
1, 4-Dichlorobenzene			0.20U	ug/1										
1, 2-Dibromoethane (EDB)			0.20U	ug/1										
1, 2-Dichloroethane			0.20U	ug/1										
4-Methyl-2-Pentanone (M+			1.0U	ug/1										

Source: Well (Test/Observation)

(Sample Complete)

Project : DOE-083X LAKWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168084 Description: MW-27

Begin Date: 94/04/18 :

	VOA - PP Scan	Water-Total	VOA - PP Scan	***	Continued	Water-Total	Result	Units
	Result	Units	Result	Units		Result	Units	
Carbon Tetrachloride	0.200	ug/1	1, 3, 5-Trimethylbenzene			0.200	ug/1	
Acetone	10.00	ug/1	Bromobenzene			0.200	ug/1	
Chloroform	0.200	ug/1	Toluene			0.200	ug/1	
Benzene	1.00	ug/1	Chlorobenzene			1.00	ug/1	
1, 1, 1-Trichloroethane	5.00	ug/1	1, 2, 4-Trichlorobenzene			0.200	ug/1	
Bromomethane	5.00	ug/1	Dibromochloromethane			0.200	ug/1	
Chloromethane	1.00	ug/1	Tetrachloroethene			0.200	ug/1	
Dibromomethane	0.200	ug/1	Sec-Butylbenzene			0.200	ug/1	
Bromo-chloromethane	1.00	ug/1	1, 3-Dichloropropane			0.200	ug/1	
Chloroethane	1.00	ug/1	Cis-1, 2-Dichloroethene			0.200	ug/1	
Vinyl Chloride	1.00	ug/1	trans-1, 2-Dichloroethene			0.200	ug/1	
Methylene Chloride	10.00	ug/1	1, 3-Dichlorobenzene			0.200	ug/1	
Carbon Disulfide	2.00	ug/1	1, 1-Dichloropropane			0.200	ug/1	
Bromoform	1.00	ug/1	2-Hexanone			1.00	ug/1	
Bromo-dichloromethane	0.200	ug/1	2, 2-Dichloropropane			1.00	ug/1	
1, 1-Dichloroethane	0.200	ug/1	Ethane, 1, 1, 1, 2-Tetrachloroethane			0.200	ug/1	
Trichloro-fluoromethane	1.00	ug/1	Total Xylenes			0.600	ug/1	
Methane, Dichlorodifluoromethane	1.00	ug/1	m-p-XYLENE			0.400	ug/1	
1, 2-Dichloropropane	0.200	ug/1	cis-1, 3-Dichloropropene			0.110	ug/1	
2-Butanone	1.00	ug/1	trans-1, 3-Dichloropropene			0.0940	ug/1	
1, 1, 2-Trichloroethane	0.200	ug/1	p-BROMOFLUOROBENZENE			9.9	% Recov	
Ethene, trichloro-Ethane, 1, 1, 2, 2-TETRAC+ 1, 2, 3-Trichlorobenzene	0.200	ug/1	FLUOROBENZENE			10.1	% Recov	
Hexachlorobutadiene	0.200	ug/1	TOLUENE-D8			10.2	% Recov	
Naphthalene	0.200	ug/1	1, 2-DICHLOROBENZENE-D4			10.0	% Recov	
O-XYLENE	0.200	ug/1	1, 2-DICHLOROETHANE-D4			10.3	% Recov	
2-Chlorotoluene	0.200	ug/1	+ Tent Ident - VOA Sca					
1, 2-Dichlorobenzene	0.200	ug/1	+ Water-Total					
1, 2, 4-Trimethylbenzene	0.200	ug/1	Result					
1, 2, 3-Chlorotoluene	1.00	ug/1	Units					
Isopropylbenzene (Cumene)	1.00	ug/1	4.4 NJ *					
p-Isopropyltoluene	0.200	ug/1	ug/1					
Ethybenzene	0.200	ug/1						
BENZENE, ETHENYL-(STYR+ BENZENE, PROPYL-	0.200	ug/1						
Butylbenzene	0.200	ug/1						
4-Chlorotoluene	0.200	ug/1						
1, 4-Dichlorobenzene	0.200	ug/1						
1, 2-Dibromoethane (EDB)	0.200	ug/1						
1, 2-Dichloroethane	0.200	ug/1						
4-Methyl-2-Pentanone (M+)	1.00	ug/1						

(Sample Complete)

Account : D3P11

Officer: PZM

Source: Well (Test/Observation)

36 MAY - 94  
10 : 58 : 56

Washington State Department of Ecology  
Sample/Project Analysis Results

Project: DOE-083X LAKEWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168085

Description: MW-20A

Begin Date: 94/04/18 :

Source: Well (Test/Observation)

Officer: PZM

Account: D3P11

	VOA	PP Scan	Water-Total	VOA	PP Scan	Water-Total	Result	Units	Result	Continued	Water-Total	Result	Units
Carbon Tetrachloride	0.11J*	ug/1				1, 3, 5-Trimethylbenzene	0.20U	ug/1					
Acetone	10.0U	ug/1				Bromobenzene	0.20U	ug/1					
Chloroform	0.20U	ug/1				Toluene	0.20U	ug/1					
Benzene	1.0U	ug/1				Chlorobenzene	1.0U	ug/1					
1, 1, 1-Trichloroethane	1.0U	ug/1				1, 2, 4-Trichlorobenzene	0.20U	ug/1					
Bromomethane	5.0U	ug/1				Dibromochloromethane	0.20U	ug/1					
Chloromethane	1.0U	ug/1				Tetrachloroethene	0.37*	ug/1					
Methylene Chloride	1.0U	ug/1				Sec-Butylbenzene	0.20U	ug/1					
Dibromomethane	0.20U	ug/1				1, 3-Dichloropropane	0.20U	ug/1					
Bromoform	1.0U	ug/1				Cis-1, 2-Dichloroethene	0.20U	ug/1					
Chloroethane	1.0U	ug/1				trans-1, 2-Dichloroethene	0.20U	ug/1					
Vinyl Chloride	1.0U	ug/1				2.0U	ug/1	1, 3-Dichlorobenzene	0.20U	*			
Methylene Chloride	10.0U	ug/1				1.1-Dichloropropene	0.20U	ug/1					
Carbon Disulfide	2.0U	ug/1				2-Hexanone	1.0U	ug/1					
Bromoform	1.0U	ug/1				2, 2-Dichloropropane	1.0U	ug/1					
Bromodichloromethane	0.20U	ug/1				Ethane, 1, 1, 1, 2-Tetrac+	0.20U	ug/1					
1, 1-Dichloroethene	0.20U	ug/1				Total Xylenes	0.60U	ug/1					
Trichlorofluoromethane	1.0U	ug/1				m-p-XYLENE	0.40U	ug/1					
Methane, Dichlorodiflu+	1.0U	ug/1				cis-1, 3-Dichloropropene	0.11U	ug/1					
1, 2-Dichloropropane	0.20U	ug/1				trans-1, 3-Dichloroprop+	0.094U	ug/1					
1, 2-Butanone	1.0U	ug/1				P-BROMOFLUOROBENZENE	96	% Recov					
1, 1, 2-Trichloroethane	0.20U	ug/1				FLUOROBENZENE	101	% Recov					
Ethene, trichloro-	0.20U	ug/1				TOLUENE-D8	102	% Recov					
ETHANE, 1, 1, 2, 2-TETRAC+	0.20U	ug/1				1, 2-DICHLOROBENZENE-D4	102	% Recov					
1, 2, 3-Trichlorobenzene	0.20U	ug/1				1, 2-DICHLOROETHANE-D4	100	% Recov					
Hexachlorobutadiene	0.20U	ug/1											
Naphthalene	0.20U	ug/1											
O-XYLINE	0.20U	ug/1											
2-Chlorotoluene	0.20U	ug/1											
1, 2-Dichlorobenzene	0.20U	ug/1											
1, 2, 4-Trimethylbenzene	0.20U	ug/1											
1, 2-Dibromo-3-chloropr+	1.0U	ug/1											
1, 2, 3-Trichloropropane	1.0U	ug/1											
Tert-Butylbenzene	0.20U	ug/1											
Isopropylbenzene (Cum+	1.0U	ug/1											
p-Isopropyltoluene	0.20U	ug/1											
Ethybenzene	0.20U	ug/1											
BENZENE, ETHENYL-(STYR+	0.20U	ug/1											
BENZENE, PROPYL-	0.20U	ug/1											
Butylbenzene	0.20U	ug/1											
4-Chlorotoluene	0.20U	ug/1											
1, 4-Dichlorobenzene	0.20U	ug/1											
1, 2-Dibromoethane (EDB)	0.20U	ug/1											
1, 2-Dichloroethane	0.20U	ug/1											
4-Methyl-2-Pentanone (M+	1.0U	ug/1											

(Sample Complete)

26-MAY-94  
10:58:56

Washington State Department of Ecology  
Sample/Project Analysis Results

Project: DOE-083X LAKWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168086

Description: MW-32

Begin Date: 94/04/18

	VOA - PP Scan	Water-Total Result Units	VOA - PP Scan	Water-Total Result Units	Continued ***	Water-Total Result Units	Water-Total Result Units
Carbon Tetrachloride	0.200 ug/1						
Acetone	10.00 ug/1						
Chloroform	0.200 ug/1						
Benzene	1.00 ug/1						
1,1,1-Trichloroethane	1.00 ug/1						
Bromomethane	5.00 ug/1						
Chloromethane	1.00 ug/1						
Dibromochloromethane	0.200 ug/1						
Bromoethane	1.00 ug/1						
Chloroethane	1.00 ug/1						
Vinyl Chloride	1.00 ug/1						
Methylene Chloride	10.00 ug/1						
Carbon Disulfide	2.00 ug/1						
Bromoform	1.00 ug/1						
Bromodichloromethane	0.200 ug/1						
1,1-Dichloroethane	0.200 ug/1						
1,1-Dichloroethene	1.00 ug/1						
Trichlorofluoromethane	1.00 ug/1						
Methane, Dichlorodiflu+	1.00 ug/1						
1,2-Dichloropropane	0.200 ug/1						
2-Butanone	1.00 ug/1						
1,1,2-Trichloroethane	0.200 ug/1						
Ethene, trichloro-	0.200 ug/1						
ETHANE, 1,1,2,2-TETRA+	0.200 ug/1						
1,2,3-Trichlorobenzene	0.200 ug/1						
Hexachlorobutadiene	0.200 ug/1						
Naphthalene	0.200 ug/1						
O-XYLENE	0.200 ug/1						
2-Chlorotoluene	0.200 ug/1						
1,2-Dichlorobenzene	0.200 ug/1						
1,2,4-Trimethylbenzene	0.200 ug/1						
1,2-Dibromo-3-chloroprop-	1.00 ug/1						
1,2,3-Trichloropropane	1.00 ug/1						
Tert-Butylbenzenes	0.200 ug/1						
Isopropylbenzene (Cum+	1.00 ug/1						
p-Isopropyltoluene	0.200 ug/1						
Ethybenzene	0.200 ug/1						
BENZENE, ETHENYL-(STYR+	0.200 ug/1						
BENZENE, PROPYL-	0.200 ug/1						
Butylbenzene	0.200 ug/1						
4-Chlorotoluene	0.200 ug/1						
1,4-Dichlorobenzene	0.200 ug/1						
1,2-Dibromoethane (EDB)	0.200 ug/1						
1,2-Dichloroethane	0.200 ug/1						
4-Methyl-2-Pentanone (M+	1.00 ug/1						

(Sample Complete)

Source: Well (Test/Observation)

Officer: PZM

Account: D3P11

Project : DOE-083X LAKWOOD PLAZA CLEANERS

Officer : PZM Account : D3P11

Laboratory: Ecology, Manchester

Sample No.: 94 168087

Description: MW-31

Begin Date: 94/04/19

	VOA	PP Scan	Water-Total	VOA	PP Scan	Water-Total	Result	Units	***	Continued	Result	Units
Carbon Tetrachloride	0.20U	ug/1				1, 3 , 5 -Trimethylbenzene	0.20U	ug/1				
Acetone	10.0U	ug/1				Bromobenzene	0.20U	ug/1				
Chloroform	0.20U	ug/1				Toluene	0.20U	ug/1				
Benzene	1.0U	ug/1				Chlorobenzene	1.0U	ug/1				
1 , 1 , 1 -Trichloroethane	1.0U	ug/1				1 , 2 , 4 -Trichlorobenzene	0.20U	ug/1				
Bromomethane	5.0U	ug/1				Dibromochloromethane	0.20U	ug/1				
Chloromethane	1.0U	ug/1				Tetrachloroethene	0.69 *	ug/1				
Dibromomethane	0.20U	ug/1				Sec-Butylbenzene	0.20U	ug/1				
Bromoform	1.0U	ug/1				1 , 3 -Dichloropropane	0.20U	ug/1				
Chloroethane	1.0U	ug/1				Cis-1 , 2 -Dichloroethene	1.0 *	ug/1				
Vinyl Chloride	1.0U	ug/1				trans-1 , 2 -Dichloroethene	0.20U	ug/1				
Methylene Chloride	10.0U	ug/1				2.0U	ug/1	ug/1				
Carbon Disulfide	2.0U	ug/1				1 , 3 -Dichlorobenzene	0.20U	ug/1				
Bromoform	1.0U	ug/1				1 , 1 -Dichloropropene	0.20U	ug/1				
1 , 1 -Dichloroethane	0.20U	ug/1				2 -Hexanone	1.0U	ug/1				
Bromodichloromethane	0.20U	ug/1				2 , 2 -Dichloropropane	1.0U	ug/1				
1 , 1 , 1 -Trichloroethene	1.0U	ug/1				Ethane, 1 , 1 , 1 , 2 -Tetrac +	0.20U	ug/1				
Trichlorofluoromethane	1.0U	ug/1				Total Xylenes	0.60U	ug/1				
Methane, Dichlorodiflu+	1.0U	ug/1				m p -XYLENE	0.40U	ug/1				
1 , 2 -Dichloropropane	0.20U	ug/1				cis-1 , 3 -Dichloropropene	0.11U	ug/1				
2 -Butanone	1.0U	ug/1				trans-1 , 3 -Dichloroprop +	0.094U	ug/1				
1 , 1 , 2 -Trichloroethane	0.20U	ug/1				p -BROMOFLUOROBENZENE	98 % Recov					
Ethene, trichloro-	0.20U	ug/1				FLUOROBENZENE	101 % Recov					
ETHANE, 1 , 1 , 2 , 2 -TETRAC +	0.20U	ug/1				TOLUENE-D8	103 % Recov					
1 , 2 , 3 -Trichlorobenzene	0.20U	ug/1				1 , 2 -DICHLOROBENZENE-D4	101 % Recov					
Hexachlorobutadiene	0.20U	ug/1				1 , 2 -DICHLOROETHANE-D4	102 % Recov					
Naphthalene	0.20U	ug/1										
O XYLENE	0.20U	ug/1										
2 -Chlorotoluene	0.20U	ug/1										
1 , 2 -Dichlorobenzene	0.20U	ug/1										
1 , 2 , 4 -Trimethylbenzene	0.20U	ug/1										
1 , 2 , 3 -Dibromo-3 -chloropropane	1.0U	ug/1										
Tert -Butylbenzene	0.20U	ug/1										
Isopropylbenzene (Cum +	1.0U	ug/1										
p -Isopropyltoluene	0.20U	ug/1										
Ethybenzene	0.20U	ug/1										
BENZENE, ETHENYL -(STYR +	0.20U	ug/1										
BENZENE, PROPYL -	0.20U	ug/1										
Butylbenzene	0.20U	ug/1										
4 -Chlorotoluene	0.20U	ug/1										
1 , 4 -Dichlorobenzene (EDB)	0.20U	ug/1										
1 , 2 -Dibromoethane	0.20U	ug/1										
4 -Methyl -2 -Pentanone (M +	1.0U	ug/1										

Source: Well (Test/Observation)

(Sample Complete)

Project: DOE-083X LAKEWOOD PLAZA CLEANERS

Officer: PZM

Account: D3P11

Laboratory: Ecology, Manchester

Sample No: 94 168088

Description: MW-21

Begin Date: 94/04/19

	VOA - PP Scan	Water-Total	VOA - PP Scan	PP Scan	Continued ***	Water-Total	
	Result	Units	Result	Units	Result	Units	
Carbon Tetrachloride	0.200	ug/1	+ 1,3,5-Trimethylbenzene	0.200	ug/1		
Acetone	10.00	ug/1	Bromobenzene	0.200	ug/1		
Chloroform	0.200	ug/1	Toluene	0.200	ug/1		
Benzene	1.00	ug/1	Chlorobenzene	1.00	ug/1		
1,1,1-Trichloroethane	1.00	ug/1	1,2,4-Trichlorobenzene	0.200	ug/1		
Bromomethane	5.00	ug/1	Dibromochloromethane	0.200	ug/1		
Chloromethane	1.00	ug/1	Tetrachloroethene	1.5 *	ug/1		
Dibromomethane	0.200	ug/1	Sec-Butylbenzene	0.200	ug/1		
Bromoform	1.00	ug/1	1,3-Dichloropropane	0.200	ug/1		
Chloroethane	1.00	ug/1	Cis-1,2-Dichloroethene	0.29 *	ug/1		
Vinyl Chloride	1.00	ug/1	trans-1,2-Dichloroethene+	0.200	ug/1		
Methylene Chloride	10.00	ug/1	1,3-Dichlorobenzene	0.200	ug/1		
Carbon Disulfide	2.00	ug/1	1,1-Dichloropropane	0.200	ug/1		
Hydroform	1.00	ug/1	2-Hexanone	1.00	ug/1		
Bromodichloromethane	0.200	ug/1	2,2-Dichloropropane	1.00	ug/1		
1,1-Dichloroethane	0.200	ug/1	Ethane, 1,1,1,2-Tetrac+	0.200	ug/1		
Trichlorofluoromethane	1.00	ug/1	Total Xylenes	0.600	ug/1		
Methane, Dichlorodiflu+	1.00	ug/1	m p-XYLENE	0.400	ug/1		
1,2-Dichloropropane	0.200	ug/1	cis-1,3-Dichloropropene	0.110	ug/1		
2-Butanone	1.00	ug/1	trans-1,3-Dichloropropene+	0.0940	ug/1		
1,1,2-Trichloroethane	0.200	ug/1	p-BROMOFLUOROBENZENE	9.6	% Recov		
Ethene, trichloro-	0.175*	ug/1	FLUOROBENZENE	10.1	% Recov		
ETHANE, 1,1,2,2-TETRAC+	0.200	ug/1	TOLUENE-D8	10.2	% Recov		
1,2,3-Trichlorobenzene	0.200	ug/1	1,2-DICHLOROBENZENE-D4	10.1	% Recov		
Hexachlorobutadiene	0.200	ug/1	1,2-DICHLOROETHANE-D4	10.1	% Recov		
Naphthalene	0.200	ug/1					
O-XYLENE	0.200	ug/1					
2-Chlorotoluene	0.200	ug/1	Tent Ident - VOA Sca		Water-Total		
1,2-Dichlorobenzene	0.200	ug/1	+ + +		Result		
1,2,4-Trimethylbenzene	0.200	ug/1			Units		
Isopropylbenzene (Cume+)	0.200	ug/1					
p-Isopropyltoluene	0.200	ug/1	2-BUTENOIC ACID, METHY+	4.5NU*	ug/1		
Ethybenzene	0.200	ug/1					
BENZENE, ETHENYL-(STYR+	0.200	ug/1					
BENZENE, PROPYL-	0.200	ug/1					
Butylbenzene	0.200	ug/1					
4-Chlorotoluene	0.200	ug/1					
1,4-Dichlorobenzene	0.200	ug/1					
1,2-Dibromoethane (EDB)	0.200	ug/1					
1,2-Dichloroethane	0.200	ug/1					
4-Methyl-2-Pentanone(M+	1.00	ug/1					

(Sample Complete)

Project: DOE-083X LAKEWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168089

Description: MW-13B

Begin Date: 94/04/19 :

	VOA - PP Scan	Water-Totals	VOA - PP Scan	Water-Totals	Result	Units	Result	Units
	Result	Total	Result	Total	***	Continued	Result	Units
Carbon Tetrachloride	0.200	ug/1			1, 3, 5-Trimethylbenzene	0.200	ug/1	
Acetone	10.00	ug/1	0.200	ug/1	Bromobenzene	0.200	ug/1	
Chloroform			1.00	ug/1	Toluene	0.200	ug/1	
Benzene			1.00	ug/1	Chlorobenzene	1.00	ug/1	
1, 1, 1-Trichloroethane			5.00	ug/1	1, 2, 4-Trichlorobenzene	0.200	ug/1	
Bromomethane			1.00	ug/1	Dibromochloromethane	0.200	ug/1	
Chloromethane			0.200	ug/1	Tetrachloroethene	0.200	ug/1	
Dibromomethane			1.00	ug/1	Sec-Butylbenzene	0.200	ug/1	
Bromo-chloromethane			1.00	ug/1	1, 3-Dichloropropane	0.200	ug/1	
Chloroethane			1.00	ug/1	Cis-1, 2-Dichloroethene	0.200	ug/1	
Vinyl Chloride			10.00	ug/1	trans-1, 2-Dichloroethene+	0.200	ug/1	
Methylene Chloride			2.00	ug/1	1, 3-Dichlorobenzene	0.200	ug/1	
Carbon Disulfide			1.00	ug/1	1, 1-Dichloropropene	0.200	ug/1	
Bromoform			0.200	ug/1	2-Hexanone	1.00	ug/1	
Bromodichloromethane			1.00	ug/1	2, 2-Dichloropropane	1.00	ug/1	
1, 1, 1-Dichloroethane			0.200	ug/1	Ethane, 1, 1, 1, 2-Tetrac+	0.200	ug/1	
Trichlorofluoromethane			1.00	ug/1	Total Xylenes	0.600	ug/1	
Methane, Dichlorodiflu+			1.00	ug/1	m p-XYLENE	0.400	ug/1	
1, 2-Dichloropropane			0.200	ug/1	cis-1, 3-Dichloropropene	0.110	ug/1	
2-Butanone			1.00	ug/1	trans-1, 3-Dichloropropene	0.0940	ug/1	
1, 1, 2-Trichloroethane			0.200	ug/1	p-BROMOFLUOROBENZENE	95	% Recov	
Ethene, trichloro-			0.98	*	FLUOROBENZENE	10.2	% Recov	
ETHANE, 1, 1, 2, 2-TETRA+			0.200	ug/1	TOLUENE-D <sub>8</sub>	10.1	% Recov	
1, 2, 3-Trichlorobenzene			0.200	ug/1	1, 2-DICHLOROBENZENE-D <sub>4</sub>	10.2	% Recov	
Hexachlorobutadiene			0.200	ug/1	1, 2-DICHLOROETHANE-D <sub>4</sub>	10.1	% Recov	
Naphthalene			0.200	ug/1				
O-XYLENE			0.200	ug/1				
2-Chlorotoluene			0.200	ug/1				
1, 2-Dichlorobenzene			0.200	ug/1				
1, 2, 4-Trimethylbenzene			0.200	ug/1				
1, 2-Dibromo-3-chloropr+			1.00	ug/1				
1, 2, 3-Trichloropropane			1.00	ug/1				
tert-Butylbenzene			0.200	ug/1				
Isopropylbenzene (Cumene+)			1.00	ug/1				
p-Isopropyltoluene			0.200	ug/1				
Ethylibenzene			0.200	ug/1				
BENZENE, ETHENYL-(STYR+)			0.200	ug/1				
BENZENE, PROPYL-			0.200	ug/1				
Butylbenzene			0.200	ug/1				
4-Chlorotoluene			0.200	ug/1				
1, 4-Dichlorobenzene			0.200	ug/1				
1, 2-Dibromoethane (EDB)			0.200	ug/1				
1, 2-Dichloroethane			0.200	ug/1				
4-Methyl-2-Pentanone (M+			1.00	ug/1				

(Sample Complete)

Project : DOE-083X LAKWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168090 Description: MW-20B

Begin Date: 94/04/19

	VOA - PP Scan	Water-Total	Result	Units	VOA - PP Scan	Water-Total	Result	Units	VOA - PP Scan	Water-Total	Result	Units
					*** Continued ***				Matrix Spike #1			
Carbon Tetrachloride	10.00 ug/1	10.00 ug/1	1,3,5-Trimethylbenzene	10.00 ug/1	Bromodichloromethane	90.82	% Recov					
Acetone	5000 ug/1	5000 ug/1	Bromobenzene	10.00 ug/1	1,1-Dichloroethane	94.55	% Recov					
Chloroform	10.00 ug/1	10.00 ug/1	Toluene	10.00 ug/1	1,1-Dichloroethene	101.79	% Recov					
Benzene	50.00 ug/1	50.00 ug/1	Chlorobenzene	50.00 ug/1	Trichlorofluoromethane	81.09	% Recov					
1,1,1-Trichloroethane	50.00 ug/1	50.00 ug/1	1,2,4-Trichlorobenzene	10.00 ug/1	Methane, Dichlorodifluoromethane	86.85	% Recov					
Bromoform	2500 ug/1	2500 ug/1	Dibromochloromethane	10.00 ug/1	1,2-Dichloropropane	97.51	% Recov					
Chloromethane	50.00 ug/1	50.00 ug/1	Tetrachloroethene	4.72 *	2-Butanone	80.87	% Recov					
Bibromomethane	10.00 ug/1	10.00 ug/1	Sec-Butylbenzene	10.00 ug/1	1,1,2-Trichloroethane	96.98	% Recov					
Bromochloromethane	50.00 ug/1	50.00 ug/1	1,3-Dichloropropane	10.00 ug/1	Ethene, Trichloro-Ethane	98.58	% Recov					
Chloroethane	50.00 ug/1	50.00 ug/1	Cis-1,2-Dichloroethene	12.6 *	1,1,2,2-TETRAC+	92.50	% Recov					
Vinyl Chloride	50.00 ug/1	50.00 ug/1	trans-1,2-Dichloroethene+	10.00 ug/1	1,2,3-Trichlorobenzene	93.28	% Recov					
Methylene Chloride	5000 ug/1	5000 ug/1	1,3-Dichlorobenzene	10.00 ug/1	Hexachlorobutadiene	83.22	% Recov					
Carbon Disulfide	1000 ug/1	1000 ug/1	1,1-Dichloropropane	10.00 ug/1	Naphthalene	93.43	% Recov					
Bromoform	50.00 ug/1	50.00 ug/1	2-Hexanone	50.00 ug/1	O-XYLENE	93.48	% Recov					
Bromodichloromethane	10.00 ug/1	10.00 ug/1	2,2-Dichloropropane	50.00 ug/1	2-Chlorotoluene	93.83	% Recov					
1,1-Dichloroethane	50.00 ug/1	50.00 ug/1	Ethane, 1,1,1,2-TETRAC+	10.00 ug/1	1,2-Dichlorobenzene	97.81	% Recov					
1,1-Dichloroethene	50.00 ug/1	50.00 ug/1	Total Xylenes	30.00 ug/1	1,2,4-Trimethylbenzene	94.76	% Recov					
Trichlorofluoromethane	50.00 ug/1	50.00 ug/1	m-p-XYLENE	20.00 ug/1	1,2-Dibromo-3-chloroprop+	80.61	% Recov					
Methane, Dichlorodifluoromethane	50.00 ug/1	50.00 ug/1	cis-1,3-Dichloropropene	5.30 ug/1	1,2,3-Trichloropropane	102.02	% Recov					
1,1,2-Dichloropropane	10.00 ug/1	10.00 ug/1	trans-1,3-Dichloroprop+	4.70 ug/1	Tert-Butylbenzene	90.82	% Recov					
2-Butanone	50.00 ug/1	50.00 ug/1	p-BROMOFLUOROBENZENE	9.6 % Recov	Isopropylbenzene (Cumene)	98.10	% Recov					
1,1,2-Trichloroethane	10.00 ug/1	10.00 ug/1	FLUORENE	10.1 % Recov	p-Isopropyltoluene	90.82	% Recov					
Bethene, trichloro-Ethane	8.6J*	8.6J*	TOLUENE-D8	10.2 % Recov	Ethylbenzene	93.56	% Recov					
ETHANE, 1,1,2,2-TETRAC+	10.00 ug/1	10.00 ug/1	1,2-DICHLOROBENZENE-D4	10.1 % Recov	BENZENE, ETHENYL-(STYR+)	88.20	% Recov					
1,2,3-Trichlorobenzene	10.00 ug/1	10.00 ug/1	1,2-DICHLOROETHANE-D4	10.0 % Recov	PROPYLENENE, PROPYL-	96.81	% Recov					
Hexachlorobutadiene	10.00 ug/1	10.00 ug/1	Naphthalene	9.92 % Recov	Butylbenzene	90.23	% Recov					
O-XYLENE	10.00 ug/1	10.00 ug/1	o-XYLENE	9.3 % Recov	4-Chlorotoluene	93.83	% Recov					
2-Chlorotoluene	10.00 ug/1	10.00 ug/1	2-Chlorobenzene	9.6 % Recov	1,4-Dichlorobenzene	96.60	% Recov					
1,2-Dichlorobenzene	10.00 ug/1	10.00 ug/1	1,2,4-Trimethylbenzene	9.4.14 % Recov	1,2-Dibromoethane (EDB)	94.14	% Recov					
1,2,4-Trimethylbenzene	10.00 ug/1	10.00 ug/1	Acetone	9.4.97 % Recov	1,2-Dichloroethane	94.97	% Recov					
1,2-Dibromo-3-chloropropane	50.00 ug/1	50.00 ug/1	Chloroform	9.4.97 % Recov	4-Methyl-2-Pentanone (M+	96.95	% Recov					
1,2,3-Trichloropropane	50.00 ug/1	50.00 ug/1	Benzene	96.95 % Recov	1,3,5-Trimethylbenzene	94.14	% Recov					
Tert-Butylbenzene	10.00 ug/1	10.00 ug/1	Chloroethane	97.36 % Recov	Tetrachloroethene	288.62	% Recov					
Isopropylbenzene (Cumene)	50.00 ug/1	50.00 ug/1	Bromochloromethane	98.73 % Recov	Sec-Butylbenzene	95.43	% Recov					
p-Isopropyltoluene	10.00 ug/1	10.00 ug/1	Chloromethane	91.38 % Recov	Toluene	94.50	% Recov					
Ethylbenzene	10.00 ug/1	10.00 ug/1	1,1,1-Trichloroethane	101.11 % Recov	Chlorobenzene	94.12 % Recov						
BENZENE, ETHENYL-(STYR+)	10.00 ug/1	10.00 ug/1	Bromomethane	121.93 % Recov	1,2,4-Trichlorobenzene	90.42 % Recov						
BENZENE, PROPYL-	10.00 ug/1	10.00 ug/1	Chloroethane	92.84 % Recov	Dibromochloromethane	87.70 % Recov						
Butylbenzene	10.00 ug/1	10.00 ug/1	Dibromomethane	96.65 % Recov	Tetrachloroethene	288.62 % Recov						
4-Chlorotoluene	10.00 ug/1	10.00 ug/1	Bromochloromethane	98.73 % Recov	Sec-Butylbenzene	94.39 % Recov						
1,4-Dichlorobenzene	10.00 ug/1	10.00 ug/1	Chloroethane	99.26 % Recov	1,3-Dichloropropane	94.12 % Recov						
1,2-Dibromoethane (EDB)	10.00 ug/1	10.00 ug/1	Vinyl Chloride	115.09 % Recov	Cis-1,2-Dichloroethene	104.99 % Recov						
1,2-Dichloroethane	10.00 ug/1	10.00 ug/1	Methylene Chloride	86.24 % Recov	trans-1,2-Dichloroethene	89.37 % Recov						
Carbon Disulfide	10.00 ug/1	10.00 ug/1	Carbon Disulfide	97.25 % Recov	p-BROMOFLUOROBENZENE	97.25 % Recov						
Bromoform	50.00 ug/1	50.00 ug/1	Bromoform	85.28 % Recov	FLUOROBENZENE	101.00 % Recov						

(Continued on next page)

Officer: PZM Account: D3P11

Source: Well (Test/Observation)

Project: DOE-083X LAKWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94-168090

Description: MW-20B

Begin Date: 94/04/19

VOA - PP Scan		Water-Total		VOA - PP Scan		Water-Total	
Matrix Spike #1		Result	Units	Matrix Spike #2	Result	Units	
1, 3-Dichlorobenzene	97.08	% Recov		O-XYLENE		93.01	% Recov
1, 1-Dichloropropane	95.09	% Recov		2-Chlorotoluene		91.91	% Recov
1-Hexanone	72.53	% Recov		1, 2-Dichlorobenzene		94.48	% Recov
2, 2-Dichloropropane	75.69	% Recov		1, 2, 4-Trimethylbenzene		90.87	% Recov
Ethane, 1,1,1,2-Tetrac+	88.27	% Recov		1, 2-Dibromo-3-chloroprop-		85.05	% Recov
Total Xylenes	30.70	% Recov		1, 2, 3-Trichloropropane		96.35	% Recov
TOLUENE-D <sub>8</sub>	102.52	% Recov		TERT-Butylbenzene		90.95	% Recov
1, 2-DICHLOROBENZENE-D <sub>4</sub>	100.99	% Recov		Isopropylbenzeno (Cumene)		96.64	% Recov
cis-1, 3-Dichloropropene	175.34	% Recov		p-Isopropyltoluene		90.95	% Recov
trans-1, 3-Dichloroprop-	175.33	% Recov		Ethylbenzene		95.41	% Recov
1, 2-DICHLORETHANE-D <sub>4</sub>	98.52	% Recov		BENZENE, ETHENYL- (STYR+)		89.71	% Recov
m-p-XYLENE	45.71	% Recov		BENZENE, PROPYL-		95.20	% Recov
				Butylbenzene		90.72	% Recov
				4-Chlorotoluene		93.70	% Recov
				1, 4-Dichlorobenzene		93.51	% Recov
				1, 2-Dibromoethane (EDBE)		96.36	% Recov
				1, 2-Dichloroethane		94.98	% Recov
				4-Methyl-2-Pentanone (M+		94.93	% Recov
Carbon Tetrachloride	88.83	% Recov		1, 3, 5-Trimethylbenzene		91.46	% Recov
Acetone	78.34	% Recov		Bromobenzene		94.01	% Recov
chloroform	95.05	% Recov		Toluene		95.88	% Recov
Benzene	99.47	% Recov		Chlorobenzene		96.60	% Recov
1, 1, 1-Trichloroethane	100.28	% Recov		1, 2, 4-Trichlorobenzene		90.36	% Recov
Bromomethane	124.51	% Recov		Dibromochloromethane		84.37	% Recov
Chloromethane	90.37	% Recov		Tetrachloroethene		28.46	% Recov
Dibromomethane	92.44	% Recov		sec-Butylbenzene		91.72	% Recov
Bromo-chloroethane	96.82	% Recov		1, 3-Dichloropropene		94.06	% Recov
Chloroethane	104.85	% Recov		Cis-1, 2-Dichloroethene		99.99	% Recov
Vinyl Chloride	103.75	% Recov		trans-1, 2-Dichloroethene+		84.11	% Recov
Methylene Chloride	110.53	% Recov		p-BROMOFLUOROBENZENE		97.15	% Recov
Carbon Disulfide	88.14	% Recov		FLUOROBENZENE		101.07	% Recov
Bromoform	86.24	% Recov		1, 3-Dichlorobenzene		94.48	% Recov
Bromodichloromethane	93.60	% Recov		1, 1-Dichloropropene		96.58	% Recov
1, 1-Dichloroethane	96.70	% Recov		2-Hexanone		81.07	% Recov
1, 1-Dichloroethene	101.09	% Recov		2, 2-Dichloropropane		80.28	% Recov
Trichlorofluoromethane	84.88	% Recov		Ethane, 1, 1, 1, 2-Tetrac+		90.12	% Recov
Methane, Dichlorodiflu+	88.92	% Recov		Total Xylenes		30.98	% Recov
1, 2-Dichloropropane	102.39	% Recov		TOLUENE-D <sub>8</sub>		101.96	% Recov
2-Butanone	83.42	% Recov		1, 2-DICHLOROBENZENE-D <sub>4</sub>		100.14	% Recov
1, 1, 2-Trichloroethane	95.61	% Recov		cis-1, 3-Dichloropropene		168.14	% Recov
Ethane, trichloro-	100.18	% Recov		trans-1, 3-Dichloroprop-		188.56	% Recov
ETHANE, 1,1,2,2-TETRAC+	97.39	% Recov		1, 2-DICHLOROETHANE-D <sub>4</sub>		98.53	% Recov
1, 2, 3-Trichlorobenzene	91.83	% Recov		m-p-XYLENE		46.45	% Recov
Hexachlorobutadiene	86.84	% Recov					
Naphthalene	94.29	% Recov					

(Sample Complete)

Source: Well (Test/observation)

Officer: PZM Account: D3P11

Project : DOE-083X LAKEWOOD PLAZA CLEANERS

Officer: PZM

Account: D3P11

Laboratory: Ecology, Manchester

Sample No: 94 168091

Description: MW-20A\*\*

Begin Date: 94/04/19

Source: Well (Test/Observation)

	VOA - PP Scan	Water-Totals	VOA - PP Scan	Continued	Water-Totals	Result	Units
	Result	Units	Result	***	Result	***	Result
Carbon Tetrachloride	0.20	ug/l	10.00	ug/l	1, 3, 5-Trimethylbenzene	0.200	ug/l
Acetone	0.200	ug/l	0.200	ug/l	Bromobenzene	0.200	ug/l
Chloroform	1.00	ug/l	1.00	ug/l	Toluene	0.200	ug/l
Benzene	5.00	ug/l	5.00	ug/l	Chlorobenzene	1.00	ug/l
1, 1, 1-Trichloroethane	5.00	ug/l	5.00	ug/l	1, 2, 4-Trichlorobenzene	0.200	ug/l
Bromomethane	1.00	ug/l	1.00	ug/l	Dibromo-chloromethane	0.200	ug/l
Chloromethane	1.00	ug/l	1.00	ug/l	Tetrachloroethene	0.31 *	ug/l
Dibromomethane	0.200	ug/l	1.00	ug/l	Sec-Butylbenzene	0.200	ug/l
Bromo-chloromethane	1.00	ug/l	1.00	ug/l	1, 3-Dichloropropane	0.200	ug/l
Chloroethane	1.00	ug/l	1.00	ug/l	Cis-1, 2-Dichloroethene	0.200	ug/l
Vinyl Chloride	1.00	ug/l	1.00	ug/l	trans-1, 2-Dichloroethene	0.200	ug/l
Methylene Chloride	10.00	ug/l	10.00	ug/l	trans-1, 2-Dichlorobenzene	0.200	ug/l
Carbon Disulfide	2.00	ug/l	1.00	ug/l	1, 3-Dichlorobenzene	0.200	ug/l
Bromoform	1.00	ug/l	0.200	ug/l	1, 1-Dichloropropene	0.200	ug/l
Bromodichloromethane	0.200	ug/l	0.200	ug/l	2-Hexanone	1.00	ug/l
1, 1-Dichloroethane	0.200	ug/l	0.200	ug/l	trans-1, 2-Dichloropropane	1.00	ug/l
1, 1-Dichlorofluoromethane	1.00	ug/l	1.00	ug/l	Ethane, 1, 1, 1, 2-Tetrachloroethane	0.200	ug/l
Methane, Dichlorodifluoromethane	1.00	ug/l	1.00	ug/l	Total Xylenes	0.600	ug/l
1, 2-Dichloropropane	0.200	ug/l	0.200	ug/l	m p-XYLENE	0.400	ug/l
2-Butanone	1.00	ug/l	1.00	ug/l	cis-1, 3-Dichloropropene	0.110	ug/l
1, 1, 2-Trichloroethane	0.200	ug/l	0.200	ug/l	trans-1, 3-Dichloropropene	0.0940	ug/l
Ethene, trichloro-Ethane, 1, 1, 2, 2, 2-TETRAC+	0.200	ug/l	0.200	ug/l	p-BROMOFLUOROBENZENE	97	% Recov
1, 2, 3-Trichlorobenzene	0.200	ug/l	0.200	ug/l	FLUOROBENZENE	100	% Recov
Hexachlorobutadiene	0.200	ug/l	0.200	ug/l	TOLUENE-D8	101	% Recov
Naphthalene	0.200	ug/l	0.200	ug/l	1, 2-DICHLOROBENZENE-D4	99	% Recov
o-Xylene	0.200	ug/l	0.200	ug/l	1, 2-DICHLOROETHANE-D4	100	% Recov
2-Chlorotoluene	0.200	ug/l	0.200	ug/l			
1, 2-Dichlorobenzene	0.200	ug/l	0.200	ug/l			
1, 2, 4-Trimethylbenzene	0.200	ug/l	0.200	ug/l			
1, 2-Dibromo-3-chloropropane	1.00	ug/l	1.00	ug/l			
1, 2, 3-Trichloropropane	1.00	ug/l	1.00	ug/l			
Tert-Butylbenzene	0.200	ug/l	0.200	ug/l			
Isopropylbenzene (Cumene)	1.00	ug/l	1.00	ug/l			
p-Isopropyltoluene	0.200	ug/l	0.200	ug/l			
Ethylnbenzene	0.200	ug/l	0.200	ug/l			
BENZENE, ETHENYL-(STYR+)	0.200	ug/l	0.200	ug/l			
BENZENE, PROPYL-	0.200	ug/l	0.200	ug/l			
Butylbenzene	0.200	ug/l	0.200	ug/l			
4-Chlorotoluene	0.200	ug/l	0.200	ug/l			
1, 4-Dichlorobenzene	0.200	ug/l	0.200	ug/l			
1, 2-Dibromoethane (EDB)	0.200	ug/l	0.200	ug/l			
1, 2-Dichloroethane	0.200	ug/l	0.200	ug/l			
4-Methyl-2-Pentanone (M+)	1.00	ug/l					

(Sample Complete)

Project: DOE-083X LAKEWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168092 Description: MW-16A

Begin Date: 94/04/20

VOA - PP Scan Water-Total Result Units VOA - PP Scan Result Units Water-Total

	Water-Total	Result	Units	VOA - PP Scan	***	Continued ***	Result	Units	Water-Total
Carbon Tetrachloride	0.20U	ug/1		1, 3, 5-Trimethylbenzene			0.20U	ug/1	
Acetone	10.0U	ug/1		Bromobenzene			0.20U	ug/1	
Chloroform	0.20U	ug/1		Toluene			0.20U	ug/1	
Benzene	1.0U	ug/1		Chlorobenzene			1.0U	ug/1	
1, 1, 1-Trichloroethane	5.0U	ug/1		1, 2, 4-Trichlorobenzene			0.20U	ug/1	
Bromomethane	5.0U	ug/1		Dibromochloromethane			0.20U	ug/1	
Chloromethane	1.0U	ug/1		Tetrachloroethene			32.8*	ug/1	
Dibromomethane	0.20U	ug/1		Sec-Butylbenzene			0.20U	ug/1	
Bromoform	1.0U	ug/1		1, 3-Dichloropropane			0.20U	ug/1	
Chloroethane	1.0U	ug/1		Cis-1, 2-Dichloroethene			1.4*	ug/1	
Vinyl Chloride	1.0U	ug/1		trans-1, 2-Dichloroethene+			0.20U	ug/1	
Methylene Chloride	10.0U	ug/1		2, 0-U	ug/1	1, 3-Dichlorobenzene	0.20U	ug/1	
Carbon Disulfide	2.0U	ug/1		1.0U	ug/1	1, 1-Dichloropropane	0.20U	ug/1	
Bromoform	0.20U	ug/1		0.20U	ug/1	2-Hexanone	1.0U	ug/1	
Bromodichloromethane	0.20U	ug/1		0.20U	ug/1	2, 2-Dichloropropane	1.0U	ug/1	
1, 1-Dichloroethane	1.0U	ug/1		1.0U	ug/1	Ethane, 1, 1, 2-Tetrach+	0.20U	ug/1	
1, 1, 1-Dichloroethene	1.0U	ug/1		1.0U	ug/1	Total Xylenes	0.60U	ug/1	
Trichlorofluoromethane	0.20U	ug/1		m p-XYLENE			0.40U	ug/1	
Methane, Dichlorodiflu+	1.0U	ug/1		cis-1, 3-Dichloropropene			0.11U	ug/1	
1, 2-Dichloropropane	0.20U	ug/1		trans-1, 3-Dichloroprop+			0.094U	ug/1	
2-Butanone	1.0U	ug/1		p-BROMOFLUOROBENZENE			9.6	% Recov	
1, 1, 2-Trichloroethane	0.20U	ug/1		FLUOROBENZENE			10.3	% Recov	
Ethene, trichloro-	0.56*	ug/1		TOLUENE-D8			10.2	% Recov	
ETHANE, 1, 1, 2, 2-TETRAC+	0.20U	ug/1		1, 2-DICHLOROBENZENE-D4			10.1	% Recov	
1, 2, 3-Trichlorobenzene	0.20U	ug/1		1, 2-DICHLOROETHANE-D4			10.2	% Recov	
Hexachlorobutadiene	0.20U	ug/1							
Naphthalene	0.20U	ug/1							
O-XYLENE	0.20U	ug/1							
2-Chlorotoluene	0.20U	ug/1							
1, 2-Dichlorobenzene	0.20U	ug/1							
1, 2, 4-Trimethylbenzene	0.20U	ug/1							
1, 2, 3-chloropropr+	1.0U	ug/1							
1, 2, 3-Trichloropropane	1.0U	ug/1							
Tert-Butylbenzene	0.20U	ug/1							
Isopropylbenzene (Cum+	1.0U	ug/1							
p-Isopropyltoluene	0.20U	ug/1							
Ethybenzene	0.20U	ug/1							
BENZENE, ETHENYL-(STYR+	0.20U	ug/1							
BENZENE, PROPYL-	0.20U	ug/1							
Butylbenzene	0.20U	ug/1							
4-Chlorotoluene	0.20U	ug/1							
1, 4-Dichlorobenzene	0.20U	ug/1							
1, 2-Dibromoethane (EDB)	0.20U	ug/1							
1, 2-Dichloroethane	0.20U	ug/1							
4-Methyl-2-Pentanone (M+	1.0U	ug/1							

(Sample Complete)

Source: Well (Test/Observation)

Officer: PZM Account: D3P11

Project: DOE-083X LAKEWOOD PLAZA CLEANERS

Laboratory: Ecology, Manchester

Sample No: 94 168093

Description: MW-16B

Begin Date: 94/04/20

	VOA	PP Scan	Water-Total	VOA	PP Scan	** Continued	Water-Totals
	Result	Units	Result	Units	Result	Units	Result
Carbon Tetrachloride	0.200	ug/l	10.00	ug/l	1,3,5-Trimethylbenzene	0.200	ug/l
Acetone	0.200	ug/l	0.200	ug/l	Bromobenzene	0.200	ug/l
Chloroform	0.00	ug/l	1.00	ug/l	Toluene	0.200	ug/l
Benzene	1.00	ug/l	5.00	ug/l	Chlorobenzene	1.00	ug/l
1,1,1-Trichloroethane	1.00	ug/l	5.00	ug/l	1,2,4-Trichlorobenzene	0.200	ug/l
Bromomethane	1.00	ug/l	1.00	ug/l	Dibromochloromethane	0.200	ug/l
Chloromethane	1.00	ug/l	0.200	ug/l	Tetrachloroethene	33.2 *	ug/l
Dibromomethane	1.00	ug/l	1.00	ug/l	Sec-Butylbenzene	0.200	ug/l
Bromoform	1.00	ug/l	1.00	ug/l	1,3-Dichloropropane	0.200	ug/l
Chloroethane	1.00	ug/l	1.00	ug/l	Cis-1,2-Dichloroethene	1.6 *	ug/l
Vinyl Chloride	1.00	ug/l	10.00	ug/l	trans-1,2-Dichloroethene	0.200	ug/l
Methylene Chloride	2.00	ug/l	2.00	ug/l	1,3-Dichlorobenzene	0.200	ug/l
Carbon Disulfide	1.00	ug/l	1.00	ug/l	1,1-Dichloropropane	0.200	ug/l
Bromoform	0.200	ug/l	0.200	ug/l	2-Hexanone	1.00	ug/l
Bromodichloromethane	0.200	ug/l	0.200	ug/l	2,2-Dichloropropane	1.00	ug/l
1,1,1-Dichloroethane	1.00	ug/l	1.00	ug/l	Ethane, 1,1,1,2-Tetrac+	0.200	ug/l
Trichlorofluoromethane	1.00	ug/l	1.00	ug/l	Total Xylenes	0.600	ug/l
Methane, Dichlorodiflu+	0.200	ug/l	0.200	ug/l	m-P-Xylene	0.400	ug/l
1,1,2-Dichloropropane	0.200	ug/l	0.200	ug/l	cis-1,3-Dichloropropene	0.110	ug/l
2-Butanone	1.00	ug/l	1.00	ug/l	trans-1,3-Dichloropropene	0.0940	ug/l
1,1,2-Trichloroethane	0.200	ug/l	0.62 *	ug/l	p-BROMOFLUOROBENZENE	96	% Recov
Ethene, trichloro-	0.200	ug/l	0.200	ug/l	FLUOROBENZENE	102	% Recov
ETHANE, 1,1,2,2-TETRA+	0.200	ug/l	0.200	ug/l	TOLUENE-D <sub>8</sub>	102	% Recov
1,1,2,3-Trichlorobenzene	0.200	ug/l	0.200	ug/l	1,2-DICHLOROBENZENE-D <sub>4</sub>	101	% Recov
Hexachlorobutadiene	0.200	ug/l	0.200	ug/l	1,2-DICHLOROETHANE-D <sub>4</sub>	101	% Recov
Naphthalene	0.200	ug/l	0.200	ug/l			
o-XYLENE	0.200	ug/l	0.200	ug/l			
2-Chlorotoluene	0.200	ug/l	0.200	ug/l			
1,2-Dichlorobenzene	0.200	ug/l	0.200	ug/l			
1,2,4-Trimethylbenzene	0.200	ug/l	1.00	ug/l			
1,2-Dibromo-3-chloropr+	1.00	ug/l	1.00	ug/l			
1,2,3-Trichloropropane	1.00	ug/l	0.200	ug/l			
Tert-Butylbenzene	0.200	ug/l	1.00	ug/l			
Isopropylibenzene (Cum+	0.200	ug/l	0.200	ug/l			
p-Isopropyltoluene	0.200	ug/l	0.200	ug/l			
Ethylbenzene	0.200	ug/l	0.200	ug/l			
BENZENE, ETHENYL-(STYR+	0.200	ug/l	0.200	ug/l			
BENZENE, PROPYL-	0.200	ug/l	0.200	ug/l			
Butylbenzene	0.200	ug/l	0.200	ug/l			
4-Chlorotoluene	0.200	ug/l	0.200	ug/l			
1,4-Dichlorobenzene	0.200	ug/l	0.200	ug/l			
1,2-Dibromoethane (EDB)	0.200	ug/l	0.200	ug/l			
1,2-Dichloroethane	0.200	ug/l	1.00	ug/l			
4-Methyl-2-Pentanone (M+							

(Sample Complete)

Source: Well (Test/Observation)

Officer: PZM Account: D3P11

Project: DOE-083X LAKWOOD PLAZA CLEANERS

Source: Water (General)

Laboratory: Ecology, Manchester

Sample No.: 94 168094

Description: TRANSFER

Begin Date: 94/04/20 :

	VOA - PP Scan	Water-Total	Result	Units	VOA - PP Scan	Water-Total	Result	Units
Carbon Tetrachloride	0.200	ug/l			1, 3, 5-Trimethylbenzene	0.200	ug/l	
Acetone	180 *	ug/l			Bromobenzene	0.200	ug/l	
Chloroform	0.200	ug/l			Toluene	0.200	ug/l	
Benzene	1.00	ug/l			Chlorobenzene	1.00	ug/l	
1, 1, 1-Trichloroethane	1.00	ug/l			1, 2, 4-Trichlorobenzene	0.200	ug/l	
Bromomethane	5.00	ug/l			Dibromochloromethane	0.200	ug/l	
Chloromethane	1.00	ug/l			Tetrachloroethene	0.200	ug/l	
Chloroform	0.200	ug/l			Sec-Butylbenzene	0.200	ug/l	
Dibromomethane	1.00	ug/l			1, 3-Dichloropropane	0.200	ug/l	
Bromoform	1.00	ug/l			Cis-1, 2-Dichloroethene	0.200	ug/l	
Vinyl Chloride	1.00	ug/l			trans-1, 2-Dichloroethene	0.200	ug/l	
Methylene Chloride	10.00	ug/l			1, 3-Dichlorobenzene	0.200	ug/l	
Carbon Disulfide	2.00	ug/l			1, 1-Dichloropropene	0.200	ug/l	
Iodomethane	1.00	ug/l			2, 2-Dichloropropane	8.8 *	ug/l	
Bromodichloromethane	0.200	ug/l			Ethane, 1, 1, 1, 2-Tetrac+	1.00	ug/l	
1, 1-Dichloroethene	1.00	ug/l			Total Xylenes	0.200	ug/l	
Trichlorofluoromethane	1.00	ug/l			m-p-XYLENE	0.400	ug/l	
Methane, Dichlorodiflu+	1.00	ug/l			cis-1, 3-Dichloropropene	0.110	ug/l	
1, 2-Dichloropropane	0.200	ug/l			trans-1, 3-Dichloroprop-	0.0940	ug/l	
2-Butanone	50.1 *	ug/l			p-BROMOFLUOROBENZENE	9.8	% Recov	
1, 1, 2-Trichloroethane	0.200	ug/l			FLUOROBENZENE	10.1	% Recov	
Ethene, trichloro-	0.200	ug/l			TOLUENE, D <sub>8</sub>	10.0	% Recov	
ETHANE, 1, 1, 2, 2-TETRAC+	0.200	ug/l			1, 2-DICHLOROBENZENE-D <sub>4</sub>	10.1	% Recov	
1, 2, 3-Trichlorobenzene	0.200	ug/l			1, 2-DICHLOROETHANE-D <sub>4</sub>	10.1	% Recov	
Hexachlorobutadiene	0.200	ug/l			Naphthalene			
Naphthalene	0.200	ug/l			O-XYLENE			
O-XYLENE	0.200	ug/l			2-Chlorotoluene			
2-Chlorotoluene	0.200	ug/l			1, 2-Dichlorobenzene			
1, 2-Dichlorobenzene	0.200	ug/l			1, 3, 4-Trimethylbenzene			
1, 2, 3, 4-Trimethylbenzene	0.200	ug/l			1, 2-Dibromo-3-chloropro-			
1, 2, 3-Trichloropropane	1.00	ug/l			1, 2, 3-DIMETHYL-			
Tert-Butylbenzene	1.00	ug/l			2-BUTANONE, 3, 3-DIMETH+			
Isopropylbenzene (Cumene)	1.00	ug/l			3-HEPTANONE			
p-Isopropyltoluene	0.200	ug/l			2-PENTANONE			
Ethylbenzene	0.200	ug/l			Cyclohexane			
BENZENE, ETHENYL-(STYR+)	0.200	ug/l			3-HEXANONE			
BENZENE, PROPYL-	0.200	ug/l			2-BUTENOIC ACID, METHY+			
Butylbenzene	0.200	ug/l			Butanedial			
4-Chlorotoluene	0.200	ug/l			2-NONANONE			
1, 4-Dichlorobenzene	0.200	ug/l			UNKNOWN HYDROCARBON 1			
1, 2-Dibromoethane (EDB)	0.200	ug/l			UNKNOWN HYDROCARBON 3			
1, 2-Dichloroethane	0.200	ug/l			0.97J *	ug/l		
4-Methyl-2-Pentanone (M+)	0.96J *	ug/l						

(Sample Complete)

Project: DOE-083X LAKWOOD PLAZA CLEANERS

Blank ID: vbw4111

	VOA - PP Scan	Water-Total	VOA - PP Scan	Water-Total
	Blank #1	Result Units	Blank #1	Result Units
Carbon Tetrachloride	0.200 ug/1	+ 2.7J*	1,3,5-Trimethylbenzene	0.20 ug/1
Acetone	0.20 ug/1	+ 1.00 ug/1	Bromobenzene	0.20 ug/1
Chloroform	0.20 ug/1	+ 1.00 ug/1	Toluene	0.20 ug/1
Benzene	0.17J* ug/1	+ 0.17J* ug/1	Chlorobenzene	1.00 ug/1
1,1,1-Trichloroethane	5.00 ug/1	+ 1,2,4-Trichlorobenzene	0.20 ug/1	
Bromomethane	1.00 ug/1	+ Dibromochloromethane	0.20 ug/1	
Chloromethane	0.20 ug/1	+ Tetrahydroethene	0.20 ug/1	
Dibromomethane	1.00 ug/1	+ Sec-Butylbenzene	0.20 ug/1	
Bromochloromethane	1.00 ug/1	+ 1,3-Dichloroproppane	0.20 ug/1	
Chloroethane	1.00 ug/1	+ Cis-1,2-Dichloroethene	0.20 ug/1	
Vinyl Chloride	1.00 ug/1	+ trans-1,2-Dichloroethene+	0.20 ug/1	
Methylene Chloride	1.1J* ug/1	+ 1,3-Dichlorobenzene	0.20 ug/1	
Carbon Disulfide	2.00 ug/1	+ 1,1-Dichloropropane	0.20 ug/1	
Bromoform	1.00 ug/1	+ 2-Hexanone	1.00 ug/1	
Bromodichloromethane	0.200 ug/1	+ 2,2-Dichloropropane	1.00 ug/1	
1,1-Dichloroethane	1.00 ug/1	+ Ethane, 1,1,1,2-Tetrac+	0.20 ug/1	
1,1-Dichloroethene	1.00 ug/1	+ Total Xylenes	0.60 ug/1	
Trichlorofluoromethane	1.00 ug/1	+ m-p-Xylene	0.20 ug/1	
Methane, Dichlorodiflu+	1.00 ug/1	+ cis-1,3-Dichloropropene	0.11 ug/1	
1,2-Dichloropropane	0.200 ug/1	+ trans-1,3-Dichloropropene	0.094 ug/1	
2-Butanone	1.00 ug/1	+ p-BROMOFLUOROBENZENE	9.8 % Recov	
1,1,2-Trichloroethane	0.200 ug/1	+ FLUOROBENZENE	100 % Recov	
Ethene, trichloro-	0.200 ug/1	+ TOLUENE-D8	100 % Recov	
ETHANE, 1,1,2,2-TETRA-C+	0.200 ug/1	+ 1,2-DICHLOROBENZENE-D4	101 % Recov	
1,2,3-Trichlorobenzeno	0.200 ug/1	+ 1,2-DICHLOROETHANE-D4	101 % Recov	
Hexachlorobutadiene	0.200 ug/1	+ Naphthalene		
O-XYLENE	0.200 ug/1	+ 2-Chlorotoluene		
2-Chlorobenzene	0.200 ug/1	+ 1,2-Dichlorobenzene		
1,2,4-Trimethylbenzene	0.073J* ug/1	+ 1,2,3-Trichloropropane		
p-Isopropyltoluene	0.073J* ug/1	+ Tert-Butylbenzene		
ethylbenzene	1.00 ug/1	+ Isopropylbenzene (Cumene)		
BENZENE, ETHENYL-(STYR+)	1.00 ug/1	+ p-Isopropyltoluene		
BENZENE, PROPYL-	0.200 ug/1	+ 1,2-Dibromo-3-chloropr+		
Butylbenzene	0.20 ug/1	+ 1,2-Dibromocethane (EDB)		
4-Chlorotoluene	0.200 ug/1	+ 1,2-Dichloroethane		
1,4-Dichlorobenzene	0.200 ug/1	+ 2-Butenoic acid, methy+	2.6 NJ* ug/1	
1,2-Dibromocethane (EDB)	0.200 ug/1	+ 4-Methyl-2-Pentanone (M+)		
1,2-Dichloroethane	0.200 ug/1	+ 1.00 ug/1		

(Sample Complete)