SUPPLEMENTAL GROUNDWATER SAMPLING

L.E. CARPENTER

WHARTON, NEW JERSEY

3 July 1991 and 9 July 1991

Prepared For: L.E. Carpenter

Prepared By: Dave Benfer

346105

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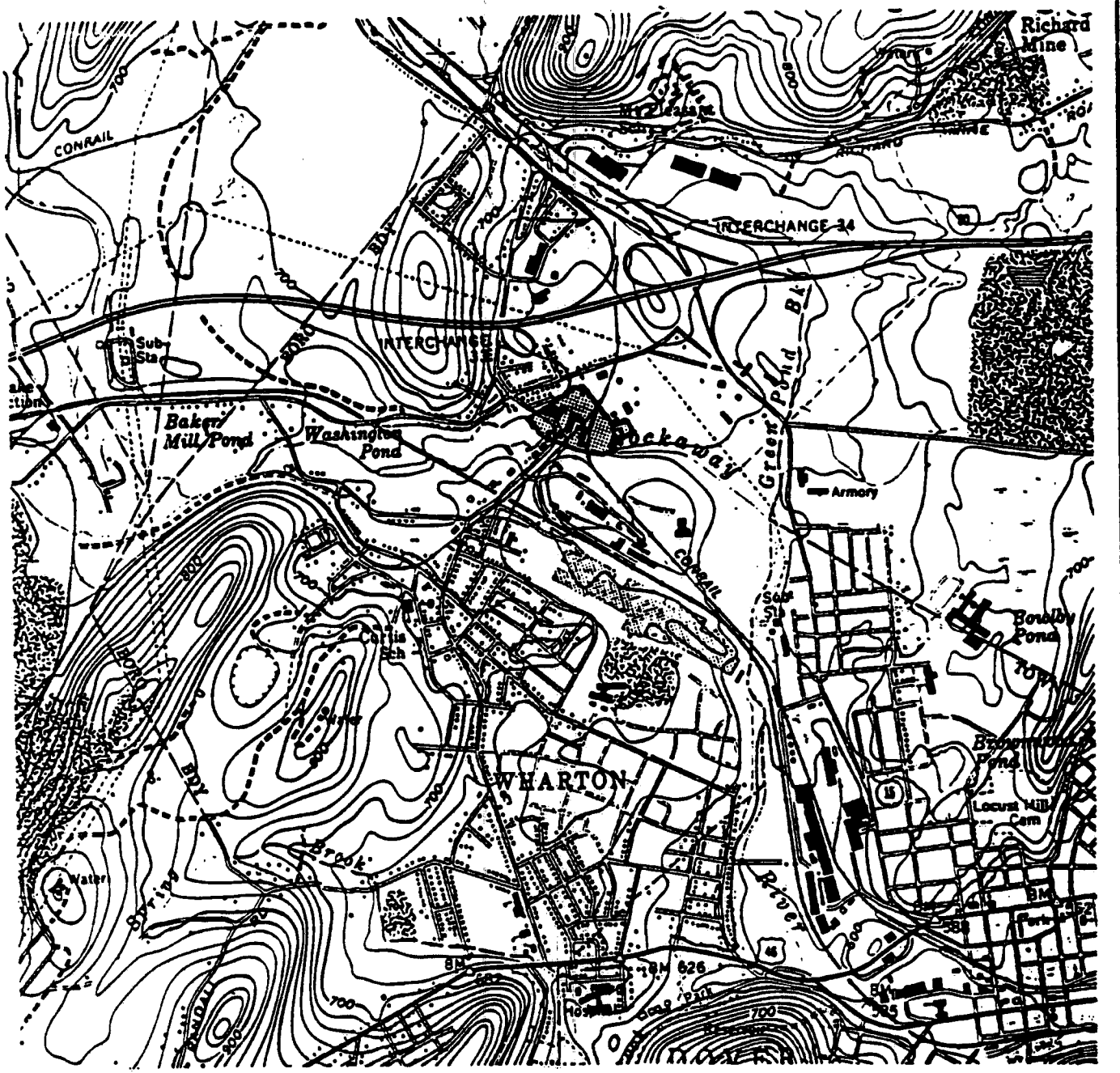
WESTON

SECTION 1.0

INTRODUCTION

On 3 July 1991, additional groundwater sampling was conducted at the L.E. Carpenter site in Wharton, New Jersey (see Figure 1-1). Monitoring wells MW-19 and MW-20 were sampled in accordance with the New Jersey Department of Environmental Protection (NJDEP) approved Tank Closure Plan, dated January 1991. The Tank Closure Plan was prepared by Roy F. Weston, Inc. (WESTON) in accordance with NJDEP Bureau of Underground Storage Tanks guidelines entitled "Interim Closure Requirements for Underground Storage Tank Systems." Monitoring well MW-21 located approximately 290 feet east of the L.E. Carpenter property was also sampled in order to further delineate the extent of groundwater contamination and to supplement the Remedial Investigation currently being completed at the L.E. Carpenter site. The locations of these wells is presented in Figure 1-2 located in the back pocket.

An additional groundwater sampling event was conducted on 9 July 1991 at the Air Products facility east of the L.E. Carpenter site. Monitoring wells MW-13i and MW-13s were sampled in order to confirm the analytical results previously presented in the **Report of Revised Remedial Investigation Findings, L.E. Carpenter and Company, Wharton, New Jersey**. This document was submitted to the NJDEP in June of 1990.



WESTON
MANAGERS DESIGNERS/CONSULTANTS

FIGURE 1-1

GENERAL SITE LOCATION MAP

L.E. Carpenter Wharton, NJ

SECTION 2.0

SAMPLING PROCEDURES

Prior to sampling, water level measurements were taken in order to calculate the volume of water to be evacuated from each well (Table 1). To obtain a representative sample, approximately three (3) well volumes of water were evacuated from each well. Monitoring wells MW-19 and MW-20 were evacuated using laboratory decontaminated bailers which were subsequently dedicated to the wells. A decontaminated Johnson keck pump was used to evacuate monitoring wells MW-21, MW-13i, and MW-13s.

The decontamination sequence was as follows:

- non-phosphate detergent scrub
- tab water rinse
- deionized water rinse
- 10% nitric acid solution rinse
- deionized water rinse
- acetone rinse
- air-dry
- deionized water rinse

Approximately 14.7 gallons were evacuated from MW-19, 9.3 gallons from MW-20 and 39.12 gallons from MW-21, 34.7 gallons were evacuated from MW-13s, and 57.0 gallons from MW-13i. All samples were collected using laboratory decontaminated bailers and shipped to the laboratory via overnight courier.

One field rinsate blank per analytical parameters was included in each sample shipment. The field blank was handled, transported, and analyzed in the same manner as samples collected in the field that day. The field blank was collected by passing analyte-free water over a clean sampling device (bailer) into an empty sample container. The water used for the field blank was supplied by the laboratory in laboratory provided sample containers and shipped in a similar manner as the sample bottles used that day. After collection, the field blank sample was packaged with their associated matrix and shipped back to the laboratory with other samples collected that day.

One trip blank for volatile organic compounds (VOCs) was included in each laboratory shipment. All trip blanks were handled, transported and analyzed in the same manner as samples collected that day. Trip blanks were returned to the lab with the same set of bottles they accompanied to the field.

TABLE 1

Water Levels & Evacuation Volumes

	MW-19 (7-3-91)	MW-20 (7-3-91)	MW-21 (7-3-91)	MW-13i (7-9-91)	MW-13s (7-9-91)
DEPTH TO GROUNDWATER FROM TOP OF INNER CASING (feet)	13.0	11.5	4.5	6.3	6.8
VOLUME OF WATER EVACUATED (gallons)	14.7	9.3	39.1	57.0	34.7

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SECTION 3.0

ANALYSIS AND RESULTS

Consistent with previous groundwater analysis conducted during the RI sampling, monitoring wells MW-21, MW-13s, and MW-13i were analyzed for priority pollutants plus forty (PP+40) highest peaks Analytical results from MW-21 did not indicate the presence of any priority pollutants. One unknown volatile organic tentatively identified compound (TIC) was identified at an estimated concentration of 6.0 micrograms per liter (ug/L) and eight (8) semivolatile organic TICs were identified at concentrations ranging from 8.0 to 26.0 ug/L (see Appendix A). Analytical results for MW-13s indicated the presence of several inorganic compounds. Copper, mercury, nickel, and zinc indicated concentrations of 0.04, 0.0005, 0.07, and 0.02 milligrams per liter (mg/L), respectively. Volatile organic analysis indicated the presence of 1,1-dichloroethane at a concentration of 18.0 ug/L and trans-1,2-dichloroethene at a concentration of 14 ug/L. One volatile TIC 2,6-bis(1,1-dimethylethyl)-phenol was detected at an estimated concentration of 23 ug/L. In addition, five (5) unknown semivolatile TICs were identified at estimated concentrations ranging from 6.0 to 22.0 ug/L (see Appendix B). Analytical results for MW-13i indicated the presence of one unknown volatile organic TIC (see Appendix C). Because of the time period between sampling dates, there are two sets of field blank sample results. Analytical results for field blank samples collected on 3 July 1991 indicates the presence of methylene chloride at a concentration of 7.0 ug/L (see Appendix D) while analytical results from field blank samples collected on 9 July 1991 indicates the presence of chloroform at a concentration of 6 ug/L (see Appendix E). Trip blank sample results from 3 July 1991 and 9 July 1991 did not indicate the presence of any Target Compound List (TCL) volatiles or volatile organic TICs (see Appendix F).

Consistent with the NJDEP approved tank closure plan, monitoring well MW-19 was analyzed for methyl ethyl ketone (MEK) and monitoring well MW-20 located downgradient of tanks formerly used for the storage of smog hog condensate, was analyzed for TCL volatile organic analysis (VOA). Analytical results for MW-19 indicate the presence of MEK at a concentration of 6,800 ug/L (see Appendix G). Analytical results for monitoring well MW-20 indicate the presence of acetone at a concentration of 83 ug/L and xylene at a concentration of 10 ug/L. In addition, two volatile organic TICs were detected. One compound described as unknown had an estimated concentration of 40 ug/L and the TIC 2,4-dimethyl 3-pentanone had an estimated concentration of 310 ppb (see Appendix H). Analytical data for MW-19 and MW-20 will also be incorporated into the tank closure report for submittal to NJDEP, Bureau of Underground Storage Tanks.

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APPENDIX A

MONITORING WELL MW-21
ANALYTICAL RESULTS

***** Lancaster Laboratories, Inc. Analytical Report *****
2425 New Holland Pike, Lancaster, PA 17601

Sample Number: WW 1685563 Account: 04219 Weston Designers/Consultants
Date Submitted: 07/03/91 Date Reported: 08/05/91

L.E. Carpenter/WSI MW21 Unspiked Water Sample

Analysis Name	Final Result	Units
0178 Pesticides/PCB's		attached
1902 Alpha BHC	< 0.04	ug/l
1903 Beta BHC	< 0.04	ug/l
0453 Gamma BHC - Lindane	< 0.04	ug/l
1904 Delta BHC	< 0.04	ug/l
0454 Heptachlor	< 0.04	ug/l
0455 Aldrin	< 0.04	ug/l
1905 Heptachlor Epoxide	< 0.04	ug/l
1906 DDE	< 0.04	ug/l
1907 DDD	< 0.04	ug/l
0478 DDT	< 0.04	ug/l
0469 Dieldrin	< 0.04	ug/l
0477 Endrin	< 0.04	ug/l
1908 Chlordane	< 0.2	ug/l
1909 Toxaphene	< 4.	ug/l
1910 Endosulfan I	< 0.04	ug/l
1911 Endosulfan II	< 0.04	ug/l
1912 Endosulfan Sulfate	< 0.2	ug/l
0638 Endrin Aldehyde	< 0.4	ug/l
1913 PCB-1016	< 4.	ug/l
1914 PCB-1221	< 4.	ug/l
1915 PCB-1232	< 4.	ug/l
1916 PCB-1242	< 4.	ug/l
1917 PCB-1248	< 4.	ug/l
1918 PCB-1254	< 4.	ug/l
1919 PCB-1260	< 4.	ug/l
0237 Cyanide, Total	< 0.005	mg/l
0245 Arsenic	< 0.01	mg/l
0259 Mercury	< 0.0005	mg/l
0264 Selenium	< 0.005	mg/l
0434 Phenols	< 0.01	mg/l
0520 Purgeables Method # 624		attached

The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.
==========

The result reported for trans-1,2-dichloroethene represents the combined total of the cis and trans isomers.
==========

0827 Chloromethane	< 10.	ug/l
0828 Bromomethane	< 10.	ug/l
0829 Vinyl Chloride	< 10.	ug/l
0830 Chloroethane	< 10.	ug/l
0824 Acrolein	< 100.	ug/l
0825 Acrylonitrile	< 100.	ug/l
0831 Methylene Chloride	< 5.	ug/l
0790 Trichlorofluoromethane	< 5.	ug/l
0832 1,1-Dichloroethene	< 5.	ug/l

0833	1,1-Dichloroethane	< 5.	ug/l
0834	trans-1,2-Dichloroethene	< 5.	ug/l
0835	Chloroform	< 5.	ug/l
0836	1,2-Dichloroethane	< 5.	ug/l
0837	1,1,1-Trichloroethane	< 5.	ug/l
0838	Carbon Tetrachloride	< 5.	ug/l
0839	Bromodichloromethane	< 5.	ug/l
0849	1,1,2,2-Tetrachloroethane	< 5.	ug/l
0840	1,2-Dichloropropane	< 5.	ug/l
0841	trans-1,3-Dichloropropene	< 5.	ug/l
0842	Trichloroethene	< 5.	ug/l
0846	Dibromochloromethane	< 5.	ug/l
0845	1,1,2-Trichloroethane	< 5.	ug/l
0843	Benzene	< 5.	ug/l
0844	cis-1,3-Dichloropropene	< 5.	ug/l
0826	2-Chloroethyl Vinyl Ether	< 10.	ug/l
0847	Bromoform	< 5.	ug/l
0848	Tetrachloroethene	< 5.	ug/l
0850	Toluene	< 5.	ug/l
0851	Chlorobenzene	< 5.	ug/l
0852	Ethylbenzene	< 5.	ug/l
0552	Acid Extractables		attached
0646	2-chlorophenol	< 20.	ug/l
0655	phenol	< 20.	ug/l
0651	2-nitrophenol	< 20.	ug/l
0648	2,4-dimethylphenol	< 20.	ug/l
0647	2,4-dichlorophenol	< 20.	ug/l
0653	4-chloro-3-methylphenol	< 20.	ug/l
0656	2,4,6-trichlorophenol	< 20.	ug/l
0650	2,4-dinitrophenol	< 50.	ug/l
0652	4-nitrophenol	< 50.	ug/l
0649	2-methyl-4,6-dinitrophenol	< 50.	ug/l
0654	pentachlorophenol	< 100.	ug/l
0553	Base Neutrals		attached
0697	N-nitrosodimethylamine	< 20.	ug/l
0667	bis (2-chloroethyl) ether	< 20.	ug/l
0677	1,3-dichlorobenzene	< 20.	ug/l
0678	1,4-dichlorobenzene	< 20.	ug/l
0676	1,2-dichlorobenzene	< 20.	ug/l
0668	bis (2-chloroisopropyl) ether	< 20.	ug/l
0692	hexachloroethane	< 20.	ug/l
0698	N-nitrosodi-n-propylamine	< 20.	ug/l
0696	nitrobenzene	< 20.	ug/l
0694	isophorone	< 20.	ug/l
0666	bis (2-chloroethoxy) methane	< 20.	ug/l
0702	1,2,4-trichlorobenzene	< 20.	ug/l
0695	naphthalene	< 20.	ug/l
0690	hexachlorobutadiene	< 20.	ug/l
0691	hexachlorocyclopentadiene	< 20.	ug/l
0672	2-chloronaphthalene	< 20.	ug/l
0658	acenaphthylene	< 20.	ug/l
0681	dimethyl phthalate	< 20.	ug/l
0684	2,6-dinitrotoluene	< 20.	ug/l
0657	acenaphthene	< 20.	ug/l
0683	2,4-dinitrotoluene	< 20.	ug/l
0688	fluorene	< 20.	ug/l
0673	4-chlorophenyl phenyl ether	< 20.	ug/l
0680	diethyl phthalate	< 20.	ug/l
0686	1.2-diphenylhydrazine	< 20.	ug/l

0699	N-nitrosodiphenylamine	< 20.	ug/l
0670	4-bromophenyl phenyl ether	< 20.	ug/l
0689	hexachlorobenzene	< 20.	ug/l
0700	phenanthrene	< 20.	ug/l
0554	Base Neutrals (cont)		attached

Due to insufficient sample, the quantitation limits for the GC/MS semivolatile compounds were raised.

==========

0659	anthracene	< 20.	ug/l
0682	di-n-butyl phthalate	< 20.	ug/l
0687	fluoranthene	< 20.	ug/l
0701	pyrene	< 20.	ug/l
0660	benzidine	< 50.	ug/l
0671	butyl benzyl phthalate	< 20.	ug/l
0661	benzo (a) anthracene	< 20.	ug/l
0674	chrysene	< 20.	ug/l
0679	3,3'-dichlorobenzidine	< 40.	ug/l
0669	bis (2-ethylhexyl) phthalate	< 20.	ug/l
0685	di-n-octyl phthalate	< 20.	ug/l
0663	benzo (b) fluoranthene	< 20.	ug/l
0665	benzo (k) fluoranthene	< 20.	ug/l
0662	benzo (a) pyrene	< 20.	ug/l
0693	indeno (1,2,3-cd) pyrene	< 20.	ug/l
0675	dibenz (a,h) anthracene	< 20.	ug/l
0664	benzo (ghi) perylene	< 20.	ug/l
0890	VOA GC/MS Library Search		attached

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:

- B - detected in method blank
- D - determined in diluted sample
- J - estimated value

==========

0893 Semivolatile Library Search attached

The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are:

- A - aldol condensate
- B - detected in method blank
- D - determined in diluted sample
- I - an isomer of the listed compound
- J - estimated value

==========

1722	Thallium	< 0.1	mg/l
1744	Antimony	< 0.05	mg/l
1747	Beryllium	< 0.005	mg/l
1749	Cadmium	< 0.005	mg/l
1751	Chromium	< 0.01	mg/l
1753	Copper	< 0.02	mg/l
1755	Lead	< 0.05	mg/l
1761	Nickel	< 0.04	mg/l
1766	Silver	< 0.01	mg/l
1772	Zinc	< 0.02	mg/l

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW21-

Lab Name: LANCASTER LABS, INC. Contract: _____.
Lab Code: _____. Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1685563
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >U1007
Level: (low/med) LOW Date Received: 07/03/91
% Moisture: not dec. _____. Date Analyzed: 07/10/91
Column: (pack/cap) CAP Dilution Factor: 1.000

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	7.19	6.	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW21-

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1685563
Sample wt/vol: 500.0(g/mL) ML Lab File ID: >83700
Level: (low/med) LOW Date Received: 07/03/91
% Moisture: not dec. _____. dec. _____. Date Extracted: 07/05/91
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/17/91
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.000

Number TICs found: 8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	10.74	20.	J
2.	Unknown	20.38	8.	J
3.	Unknown	24.45	26.	J
4.	Unknown	32.38	22.	J
5.	Unknown	34.68	18.	J
6.	Unknown alkane	34.79	10.	J
7.	Unknown alkane	35.91	10.	J
8.	Unknown alkane	37.17	8.	J
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				

I - isomer of

APPENDIX B

MONITORING WELL MW-13S
ANALYTICAL RESULTS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLL Sample No. WW 1687512

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1351
P.O. LL-0890
Rel. 3600-05-67

001 MW-13S Unspiked Water Sample

MW13S SDG# WDC1-01BG ANALYSIS	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Pesticides/PCB's		attached		017822500P*
Cyanide, Total	< 0.005	mg/l	0.005	023704000P*
Arsenic	< 0.01	mg/l	0.01	024502500P*
Mercury	0.0005	mg/l	0.0005	025902500P*
Selenium	< 0.005	mg/l	0.005	026402500P*
Phenols	< 0.006	mg/l	0.006	043404000P*
Purgeables Method # 624		attached		052025000P
Acid Extractables		attached		055213500P*
Base Neutrals		attached		055335000P*
Base Neutrals (cont)		attached		055400000P*
VOA GC/MS Library Search		attached		089005500P

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:

- B - detected in method blank
- D - determined in diluted sample
- J - estimated value

Semivolatile Library Search		attached		089309500P*

The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are:

- A - aldol condensate
- B - detected in method blank
- D - determined in diluted sample
- I - an isomer of the listed compound
- J - estimated value

Thallium	< 0.1	mg/l	0.1	172201400P*
Antimony	< 0.05	mg/l	0.05	174401400P*
Beryllium	< 0.005	mg/l	0.005	174701400P*
Cadmium	< 0.005	mg/l	0.005	174901400P*
Chromium	< 0.05	mg/l	0.05	175101400P*
Copper	0.04	mg/l	0.02	175301400P*
Lead	< 0.05	mg/l	0.05	175501400P*
Nickel	0.07	mg/l	0.04	176101400P*
Silver	< 0.01	mg/l	0.01	176601400P*
Zinc	0.02	mg/l	0.02	177201400P*

This sample was field filtered for dissolved metals.

The American Association for Laboratory Accreditation Chemical, Biological & Environmental Fields of testing.

Member: American Council of Independent Laboratories, Inc.

Questions? Contact Environmental Client Services at (717) 656-2301

See Reverse Side For Explanation Of Symbols And Abbreviations And Our Standard Terms And Conditions

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LL Sample No. WW 1687512

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1351
P.O. LL-0890
Rel. 3600-05-67

001 MW-13S Unspiked Water Sample

MW13S SDG# WDC1-01BG

ANALYSIS	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

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Member: American Council of Independent Laboratories, Inc.

Questions? Contact Environmental Client Services at (717) 656-2301
270 04219 70.00 147500

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Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

LLI Sample No. WW 1687512
Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1351
P.O. LL-0890
Rel. 3600-05-67

001 MW-13S Unspiked Water Sample

MW13S SDG# WDC1-01BG Pesticides/PCB's	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Alpha BHC	< 0.04	ug/l	0.04	190200000P
Beta BHC	< 0.04	ug/l	0.04	190300000P
Gamma BHC - Lindane	< 0.04	ug/l	0.04	045300000P
Delta BHC	< 0.04	ug/l	0.04	190400000P
Heptachlor	< 0.04	ug/l	0.04	045400000P
Aldrin	< 0.04	ug/l	0.04	045500000P
Heptachlor Epoxide	< 0.04	ug/l	0.04	190500000P
DDE	< 0.04	ug/l	0.04	190600000P
DDD	< 0.04	ug/l	0.04	190700000P
DDT	< 0.04	ug/l	0.04	047800000P
Dieldrin	< 0.04	ug/l	0.04	046900000P
Endrin	< 0.04	ug/l	0.04	047700000P
Chlordane	< 0.2	ug/l	0.2	190800000P
Toxaphene	< 4.	ug/l	4.	190900000P
Endosulfan I	< 0.04	ug/l	0.04	191000000P
Endosulfan II	< 0.04	ug/l	0.04	191100000P
Endosulfan Sulfate	< 0.2	ug/l	0.2	191200000P
Endrin Aldehyde	< 0.4	ug/l	0.4	063800000P
PCB-1016	< 4.	ug/l	4.	191300000P
PCB-1221	< 4.	ug/l	4.	191400000P
PCB-1232	< 4.	ug/l	4.	191500000P
PCB-1242	< 4.	ug/l	4.	191600000P
PCB-1248	< 4.	ug/l	4.	191700000P
PCB-1254	< 4.	ug/l	4.	191800000P
PCB-1260	< 4.	ug/l	4.	191900000P

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

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See Reverse Side For Explanation Of Symbols And Abbreviations And Our Standard Terms And Conditions

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Nelson H. Risser B.A.
Manager, Pesticides/PCBs

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

Lab Sample No. WW-1687512

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1351
P.O. LL-0890
Rel. 3600-05-67

001 MW-13S Unspiked Water Sample

MW13S SDG# WDC1-01BG Purgeables Method # 624	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Chloromethane	< 10.	ug/l	10.	082700000P
Bromomethane	< 10.	ug/l	10.	082800000P
Vinyl Chloride	< 10.	ug/l	10.	082900000P
Chloroethane	< 10.	ug/l	10.	083000000P
Acrolein	< 100.	ug/l	100.	082400000P
Acrylonitrile	< 100.	ug/l	100.	082500000P
Methylene Chloride	< 5.	ug/l	5.	083100000P
Trichlorofluoromethane	< 5.	ug/l	5.	079000000P
1,1-Dichloroethene	< 5.	ug/l	5.	083200000P
1,1-Dichloroethane	18.	ug/l	5.	083300000P
trans-1,2-Dichloroethene	14.	ug/l	5.	083400000P
Chloroform	< 5.	ug/l	5.	083500000P
1,2-Dichloroethane	< 5.	ug/l	5.	083600000P
1,1,1-Trichloroethane	< 5.	ug/l	5.	083700000P
Carbon Tetrachloride	< 5.	ug/l	5.	083800000P
Bromodichloromethane	< 5.	ug/l	5.	083900000P
1,1,2,2-Tetrachloroethane	< 5.	ug/l	5.	084900000P
1,2-Dichloropropane	< 5.	ug/l	5.	084000000P
trans-1,3-Dichloropropene	< 5.	ug/l	5.	084100000P
Trichloroethene	< 5.	ug/l	5.	084200000P
Dibromochloromethane	< 5.	ug/l	5.	084600000P
1,1,2-Trichloroethane	< 5.	ug/l	5.	084500000P
Benzene	< 5.	ug/l	5.	084300000P
cis-1,3-Dichloropropene	< 5.	ug/l	5.	084400000P
2-Chloroethyl Vinyl Ether	< 10.	ug/l	10.	082600000P
Bromoform	< 5.	ug/l	5.	084700000P
Tetrachloroethene	< 5.	ug/l	5.	084800000P
Toluene	< 5.	ug/l	5.	085000000P
Chlorobenzene	< 5.	ug/l	5.	085100000P
Ethylbenzene	< 5.	ug/l	5.	085200000P

The result reported for trans-1,2-dichloroethene represents the combined total of the cis and trans isomers.

The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas

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Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

LLI Sample No. WW-1687512
Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1351
P.O. LL-0890
Rel. 3600-05-67

001 MW-13S Unspiked Water Sample

	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE
MW13S SDG# WDC1-01BG			
Purgeables Method # 624			
1 COPY TO Data Package Group			

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LLI Sample No. WW 1687512

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001 MW-13S Unspiked Water Sample

MW13S SDG# WDC1-01BG Acid Extractables	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
2-chlorophenol	< 10.	ug/l	10.	064600000P
phenol	< 10.	ug/l	10.	065500000P
2-nitrophenol	< 10.	ug/l	10.	065100000P
2,4-dimethylphenol	< 10.	ug/l	10.	064800000P
2,4-dichlorophenol	< 10.	ug/l	10.	064700000P
4-chloro-3-methylphenol	< 10.	ug/l	10.	065300000P
2,4,6-trichlorophenol	< 10.	ug/l	10.	065600000P
2,4-dinitrophenol	< 25.	ug/l	25.	065000000P
4-nitrophenol	< 25.	ug/l	25.	065200000P
2-methyl-4,6-dinitrophenol	< 25.	ug/l	25.	064900000P
pentachlorophenol	< 50.	ug/l	50.	065400000P

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Rel. 3600-05-67

001 MW-13S Unspiked Water Sample

MW13S SDG# WDC1-01BG

Base Neutrals	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
N-nitrosodimethylamine	< 10.	ug/l	10.	069700000P
bis (2-chloroethyl) ether	< 10.	ug/l	10.	066700000P
1,3-dichlorobenzene	< 10.	ug/l	10.	067700000P
1,4-dichlorobenzene	< 10.	ug/l	10.	067800000P
1,2-dichlorobenzene	< 10.	ug/l	10.	067600000P
bis (2-chloroisopropyl) ether	< 10.	ug/l	10.	066800000P
hexachloroethane	< 10.	ug/l	10.	069200000P
N-nitrosodi-n-propylamine	< 10.	ug/l	10.	069800000P
nitrobenzene	< 10.	ug/l	10.	069600000P
isophorone	< 10.	ug/l	10.	069400000P
bis (2-chloroethoxy) methane	< 10.	ug/l	10.	066600000P
1,2,4-trichlorobenzene	< 10.	ug/l	10.	070200000P
naphthalene	< 10.	ug/l	10.	069500000P
hexachlorobutadiene	< 10.	ug/l	10.	069000000P
hexachlorocyclopentadiene	< 10.	ug/l	10.	069100000P
2-chloronaphthalene	< 10.	ug/l	10.	067200000P
acenaphthylene	< 10.	ug/l	10.	065800000P
dimethyl phthalate	< 10.	ug/l	10.	068100000P
2,6-dinitrotoluene	< 10.	ug/l	10.	068400000P
acenaphthene	< 10.	ug/l	10.	065700000P
2,4-dinitrotoluene	< 10.	ug/l	10.	068300000P
fluorene	< 10.	ug/l	10.	068800000P
4-chlorophenyl phenyl ether	< 10.	ug/l	10.	067300000P
diethyl phthalate	< 10.	ug/l	10.	068000000P
1,2-diphenylhydrazine	< 10.	ug/l	10.	068600000P
N-nitrosodiphenylamine	< 10.	ug/l	10.	069900000P
4-bromophenyl phenyl ether	< 10.	ug/l	10.	067000000P
hexachlorobenzene	< 10.	ug/l	10.	068900000P
phenanthrene	< 10.	ug/l	10.	070000000P

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Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

Lab Sample No. WW-1687512

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

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Time Collected 1351
P.O. LL-0890
Rel. 3600-05-67

001 MW-13S Unspiked Water Sample

MW13S SDG# WDC1-01BG Base Neutrals (cont)	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
anthracene	< 10.	ug/l	10.	065900000P
di-n-butyl phthalate	< 10.	ug/l	10.	068200000P
fluoranthene	< 10.	ug/l	10.	068700000P
pyrene	< 10.	ug/l	10.	070100000P
benzidine	< 25.	ug/l	25.	066000000P
butyl benzyl phthalate	< 10.	ug/l	10.	067100000P
benzo (a) anthracene	< 10.	ug/l	10.	066100000P
chrysene	< 10.	ug/l	10.	067400000P
3,3'-dichlorobenzidine	< 20.	ug/l	20.	067900000P
bis (2-ethylhexyl) phthalate	< 10.	ug/l	10.	066900000P
di-n-octyl phthalate	< 10.	ug/l	10.	068500000P
benzo (b) fluoranthene	< 10.	ug/l	10.	066300000P
benzo (k) fluoranthene	< 10.	ug/l	10.	066500000P
benzo (a) pyrene	< 10.	ug/l	10.	066200000P
indeno (1,2,3-cd) pyrene	< 10.	ug/l	10.	069300000P
dibenz (a,h) anthracene	< 10.	ug/l	10.	067500000P
benzo (ghi) perylene	< 10.	ug/l	10.	066400000P

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Timothy S. Oostdyk, B.A.
Manager GC/MS

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW13S

Lab Name: LANCASTER LABS Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 1687512

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >U1107

Level: (low/med) LOW Date Received: 07/10/91

% Moisture: not dec. _____ Date Analyzed: 07/11/91

Column: CAP Dilution Factor: 1.000

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 128392	Phenol, 2,6-bis(1,1-dimethylethyl)-	17.65	23.	JX
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				

X - Indicates that this compound is suspected system carryover

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2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW13S

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1687512
Sample wt/vol: 1000.(g/mL) ML Lab File ID: >A3156
Level: (low/med) LOW Date Received: 07/10/91
% Moisture: not dec. _____. dec. _____. Date Extracted: 07/11/91
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/18/91
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.000

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	28.21	22.	J
2.	Unknown	28.30	7.	J
3.	Unknown carboxylic acid	28.41	7.	J
4.	Unknown amide	38.48	5.	J
5.	Unknown	39.21	6.	J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				

I - isomer of

FORM I SV-TIC

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Questions? Contact Our Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:
Timothy S. Oostdyk, B.A.

APPENDIX C

MONITORING WELL MW-13I
ANALYTICAL RESULTS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW 1687515

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1130
P.O. LL-0890
Rel. 3600-05-67

002 MW-13I Water Sample

MW13I SDG# WDC1-02 ANALYSIS	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Pesticides/PCB's		attached		017822500P*
Cyanide, Total	< 0.005	mg/l	0.005	023704000P*
Arsenic	< 0.01	mg/l	0.01	024502500P*
Mercury	< 0.0005	mg/l	0.0005	025902500P*
Selenium	< 0.005	mg/l	0.005	026402500P*
Phenols	< 0.006	mg/l	0.006	043404000P*
Purgeables Method # 624		attached		052025000P
Acid Extractables		attached		055213500P*
Base Neutrals		attached		055335000P*
Base Neutrals (cont)		attached		055400000P*
VOA GC/MS Library Search		attached		089005500P

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:

B - detected in method blank
D - determined in diluted sample
J - estimated value

Semivolatile Library Search		attached		089309500P*

The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are:

A - aldol condensate
B - detected in method blank
D - determined in diluted sample
I - an isomer of the listed compound
J - estimated value

Thallium	< 0.1	mg/l	0.1	172201400P*
Antimony	< 0.05	mg/l	0.05	174401400P*
Beryllium	< 0.005	mg/l	0.005	174701400P*
Cadmium	< 0.005	mg/l	0.005	174901400P*
Chromium	< 0.05	mg/l	0.05	175101400P*
Copper	< 0.02	mg/l	0.02	175301400P*
Lead	< 0.05	mg/l	0.05	175501400P*
Nickel	< 0.04	mg/l	0.04	176101400P*
Silver	< 0.01	mg/l	0.01	176601400P*
Zinc	< 0.02	mg/l	0.02	177201400P*

This sample was field filtered for dissolved metals.

Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW 1687515

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1130
P.O. LL-0890
Rel. 3600-05-67

002 MW-13I Water Sample

MW13I SDG# WDC1-02

ANALYSIS	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE

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270 04219 70.00 147500

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P.O. LL-0890
Rel. 3600-05-67

002 MW-13I Water Sample

MW13I SDG# WDC1-02 Pesticides/PCB's	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Alpha BHC	< 0.02	ug/l	0.02	190200000P
Beta BHC	< 0.02	ug/l	0.02	190300000P
Gamma BHC - Lindane	< 0.02	ug/l	0.02	045300000P
Delta BHC	< 0.02	ug/l	0.02	190400000P
Heptachlor	< 0.02	ug/l	0.02	045400000P
Aldrin	< 0.02	ug/l	0.02	045500000P
Heptachlor Epoxide	< 0.02	ug/l	0.02	190500000P
DDE	< 0.02	ug/l	0.02	190600000P
DDD	< 0.02	ug/l	0.02	190700000P
DDT	< 0.02	ug/l	0.02	047800000P
Dieldrin	< 0.02	ug/l	0.02	046900000P
Endrin	< 0.02	ug/l	0.02	047700000P
Chlordane	< 0.1	ug/l	0.1	190800000P
Toxaphene	< 2.	ug/l	2.	190900000P
Endosulfan I	< 0.02	ug/l	0.02	191000000P
Endosulfan II	< 0.02	ug/l	0.02	191100000P
Endosulfan Sulfate	< 0.06	ug/l	0.06	191200000P
Endrin Aldehyde	< 0.2	ug/l	0.2	063800000P
PCB-1016	< 2.	ug/l	2.	191300000P
PCB-1221	< 2.	ug/l	2.	191400000P
PCB-1232	< 2.	ug/l	2.	191500000P
PCB-1242	< 2.	ug/l	2.	191600000P
PCB-1248	< 2.	ug/l	2.	191700000P
PCB-1254	< 2.	ug/l	2.	191800000P
PCB-1260	< 2.	ug/l	2.	191900000P

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Reviewed and Approved by:

Nelson H. Risser B.A.
Manager, Pesticides/PCBs

ANALYSIS REPORT

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002 MW-13I Water Sample

MW13I SDG# WDC1-02 Purgeables Method # 624	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Chloromethane	< 10.	ug/l	10.	082700000P
Bromomethane	< 10.	ug/l	10.	082800000P
Vinyl Chloride	< 10.	ug/l	10.	082900000P
Chloroethane	< 10.	ug/l	10.	083000000P
Acrolein	< 100.	ug/l	100.	082400000P
Acrylonitrile	< 100.	ug/l	100.	082500000P
Methylene Chloride	< 5.	ug/l	5.	083100000P
Trichlorofluoromethane	< 5.	ug/l	5.	079000000P
1,1-Dichloroethene	< 5.	ug/l	5.	083200000P
1,1-Dichloroethane	< 5.	ug/l	5.	083300000P
trans-1,2-Dichloroethene	< 5.	ug/l	5.	083400000P
Chloroform	< 5.	ug/l	5.	083500000P
1,2-Dichloroethane	< 5.	ug/l	5.	083600000P
1,1,1-Trichloroethane	< 5.	ug/l	5.	083700000P
Carbon Tetrachloride	< 5.	ug/l	5.	083800000P
Bromodichloromethane	< 5.	ug/l	5.	083900000P
1,1,2,2-Tetrachloroethane	< 5.	ug/l	5.	084900000P
1,2-Dichloropropane	< 5.	ug/l	5.	084000000P
trans-1,3-Dichloropropene	< 5.	ug/l	5.	084100000P
Trichloroethene	< 5.	ug/l	5.	084200000P
Dibromochloromethane	< 5.	ug/l	5.	084600000P
1,1,2-Trichloroethane	< 5.	ug/l	5.	084500000P
Benzene	< 5.	ug/l	5.	084300000P
cis-1,3-Dichloropropene	< 5.	ug/l	5.	084400000P
2-Chloroethyl Vinyl Ether	< 10.	ug/l	10.	082600000P
Bromoform	< 5.	ug/l	5.	084700000P
Tetrachloroethene	< 5.	ug/l	5.	084800000P
Toluene	< 5.	ug/l	5.	085000000P
Chlorobenzene	< 5.	ug/l	5.	085100000P
Ethylbenzene	< 5.	ug/l	5.	085200000P

The result reported for trans-1,2-dichloroethene represents the combined total of the cis and trans isomers.
The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.

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2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW 1687515

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1130
P.O. LL-0890
Rel. 3600-05-67

002 MW-13I Water Sample

	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE
MW13I SDG# WDC1-02			
Purgeables Method # 624			
1 COPY TO Data Package Group			

Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

The American Association for Laboratory Accreditation Chemical, Biological & Environmental fields of testing.

Member: American Council of Independent Laboratories, Inc.

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW-1687515

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1130
P.O. LL-0890
Rel. 3600-05-67

002 MW-13I Water Sample

MW13I SDG# WDC1-02 Acid Extractables	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
2-chlorophenol	< 10.	ug/l	10.	064600000P
phenol	< 10.	ug/l	10.	065500000P
2-nitrophenol	< 10.	ug/l	10.	065100000P
2,4-dimethylphenol	< 10.	ug/l	10.	064800000P
2,4-dichlorophenol	< 10.	ug/l	10.	064700000P
4-chloro-3-methylphenol	< 10.	ug/l	10.	065300000P
2,4,6-trichlorophenol	< 10.	ug/l	10.	065600000P
2,4-dinitrophenol	< 25.	ug/l	25.	065000000P
4-nitrophenol	< 25.	ug/l	25.	065200000P
2-methyl-4,6-dinitrophenol	< 25.	ug/l	25.	064900000P
pentachlorophenol	< 50.	ug/l	50.	065400000P

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

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Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW-1687515

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
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Discard Date 8/ 7/91
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Time Collected 1130
P.O. LL-0890
Rel. 3600-05-67

002 MW-13I Water Sample

MW13I SDG# WDC1-02

Base Neutrals	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
N-nitrosodimethylamine	< 10.	ug/l	10.	069700000P
bis (2-chloroethyl) ether	< 10.	ug/l	10.	066700000P
1,3-dichlorobenzene	< 10.	ug/l	10.	067700000P
1,4-dichlorobenzene	< 10.	ug/l	10.	067800000P
1,2-dichlorobenzene	< 10.	ug/l	10.	067600000P
bis (2-chloroisopropyl) ether	< 10.	ug/l	10.	066800000P
hexachloroethane	< 10.	ug/l	10.	069200000P
N-nitrosodi-n-propylamine	< 10.	ug/l	10.	069800000P
nitrobenzene	< 10.	ug/l	10.	069600000P
isophorone	< 10.	ug/l	10.	069400000P
bis (2-chloroethoxy) methane	< 10.	ug/l	10.	066600000P
1,2,4-trichlorobenzene	< 10.	ug/l	10.	070200000P
naphthalene	< 10.	ug/l	10.	069500000P
hexachlorobutadiene	< 10.	ug/l	10.	069000000P
hexachlorocyclopentadiene	< 10.	ug/l	10.	069100000P
2-chloronaphthalene	< 10.	ug/l	10.	067200000P
acenaphthylene	< 10.	ug/l	10.	065800000P
dimethyl phthalate	< 10.	ug/l	10.	068100000P
2,6-dinitrotoluene	< 10.	ug/l	10.	068400000P
acenaphthene	< 10.	ug/l	10.	065700000P
2,4-dinitrotoluene	< 10.	ug/l	10.	068300000P
fluorene	< 10.	ug/l	10.	068800000P
4-chlorophenyl phenyl ether	< 10.	ug/l	10.	067300000P
diethyl phthalate	< 10.	ug/l	10.	068000000P
1,2-diphenylhydrazine	< 10.	ug/l	10.	068600000P
N-nitrosodiphenylamine	< 10.	ug/l	10.	069900000P
4-bromophenyl phenyl ether	< 10.	ug/l	10.	067000000P
hexachlorobenzene	< 10.	ug/l	10.	068900000P
phenanthrene	< 10.	ug/l	10.	070000000P

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

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Questions? Contact Environmental Client Services at (717) 656-2301

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Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW 1687515

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1130
P.O. LL-0890
Rel. 3600-05-67

002 MW-13I Water Sample

MW13I SDG# WDC1-02 Base Neutrals (cont)	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
anthracene	< 10.	ug/l	10.	065900000P
di-n-butyl phthalate	< 10.	ug/l	10.	068200000P
fluoranthene	< 10.	ug/l	10.	068700000P
pyrene	< 10.	ug/l	10.	070100000P
benzidine	< 25.	ug/l	25.	066000000P
butyl benzyl phthalate	< 10.	ug/l	10.	067100000P
benzo (a) anthracene	< 10.	ug/l	10.	066100000P
chrysene	< 10.	ug/l	10.	067400000P
3,3'-dichlorobenzidine	< 20.	ug/l	20.	067900000P
bis (2-ethylhexyl) phthalate	< 10.	ug/l	10.	066900000P
di-n-octyl phthalate	< 10.	ug/l	10.	068500000P
benzo (b) fluoranthene	< 10.	ug/l	10.	066300000P
benzo (k) fluoranthene	< 10.	ug/l	10.	066500000P
benzo (a) pyrene	< 10.	ug/l	10.	066200000P
indeno (1,2,3-cd) pyrene	< 10.	ug/l	10.	069300000P
dibenz (a,h) anthracene	< 10.	ug/l	10.	067500000P
benzo (ghi) perylene	< 10.	ug/l	10.	066400000P

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

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Questions? Contact Environmental Client Services at (717) 656-2301

See Reverse Side For Explanation Of Symbols And Abbreviations And Our Standard Terms And Conditions

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED

2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW13I

Lab Name: LANCASTER LABS, INC. Contract: _____.
Lab Code: _____. Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1687515
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >U1110
Level: (low/med) LOW Date Received: 07/10/91
% Moisture: not dec. _____. Date Analyzed: 07/12/91
Column: (pack/cap) CAP Dilution Factor: 1.000

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 1

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		C4H8O isomer	10.43	6.	J
2.					
3.					
4.					
5.					
6.					
7.					
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23.					
24.					
25.					

FORM I VOA-TIC 1/87 Rev.

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Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:
Timothy S. Oostdyk, B.A.

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW13I

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1687515
Sample wt/vol: 1000.(g/mL) ML Lab File ID: >A3159
Level: (low/med) LOW Date Received: 07/10/9
% Moisture: not dec. _____. dec. _____. Date Extracted: 07/11/91
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/18/91
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.000

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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25.				

FORM I SV-TIC 1/87 Rev.

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Questions: Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:
Timothy S. Oostdyk, B.A.

APPENDIX D

FIELD BLANK SAMPLE ANALYTICAL RESULTS 3 JULY 1991

0701	pyrene	183.	ug/l
0660	benzidine	674.	ug/l
0671	butyl benzyl phthalate	137.	ug/l
0661	benzo (a) anthracene	181.	ug/l
0674	chrysene	183.	ug/l
0679	3,3'-dichlorobenzidine	184.	ug/l
0669	bis (2-ethylhexyl) phthalate	171.	ug/l
0685	di-n-octyl phthalate	180.	ug/l
0663	benzo (b) fluoranthene	178.	ug/l
0665	benzo (k) fluoranthene	172.	ug/l
0662	benzo (a) pyrene	175.	ug/l
0693	indeno (1,2,3-cd) pyrene	192.	ug/l
0675	dibenz (a,h) anthracene	178.	ug/l
0664	benzo (ghi) perylene	181.	ug/l
1722	Thallium	< 0.1	mg/l
1744	Antimony	< 0.05	mg/l
1747	Beryllium	< 0.005	mg/l
1749	Cadmium	< 0.005	mg/l
1751	Chromium	< 0.01	mg/l
1753	Copper	< 0.02	mg/l
1755	Lead	< 0.05	mg/l
1761	Nickel	< 0.04	mg/l
1766	Silver	< 0.01	mg/l
1772	Zinc	< 0.02	mg/l

This sample functions as a matrix spike duplicate for organic compounds and as a duplicate for inorganic compounds. This means that for quality control purposes, inorganic compounds will be compared with the unspiked sample and organic compounds will be spiked with known concentrations of analyte for comparison with the matrix spike sample.
This sample was field filtered for dissolved metals.
==========

***** Lancaster Laboratories, Inc. Analytical Report *****
2425 New Holland Pike, Lancaster, PA 17601

Sample Number: WW 1685566 Account: 04219 Weston Designers/Consultants
Date Submitted: 07/03/91 Date Reported: 08/05/91

L.E. Carpenter/WSI Field Blank Water Sample

	Analysis Name	Final Result	Units
0178	Pesticides/PCB's		attached
1902	Alpha BHC	< 0.04	ug/l
1903	Beta BHC	< 0.04	ug/l
0453	Gamma BHC - Lindane	< 0.04	ug/l
1904	Delta BHC	< 0.04	ug/l
0454	Heptachlor	< 0.04	ug/l
0455	Aldrin	< 0.04	ug/l
1905	Heptachlor Epoxide	< 0.04	ug/l
1906	DDE	< 0.04	ug/l
1907	DDD	< 0.04	ug/l
0478	DDT	< 0.04	ug/l
0469	Dieldrin	< 0.04	ug/l
0477	Endrin	< 0.04	ug/l
1908	Chlordane	< 0.2	ug/l
1909	Toxaphene	< 4.	ug/l
1910	Endosulfan I	< 0.04	ug/l

1911	Endosulfan II	< 0.04	ug/l
1912	Endosulfan Sulfate	< 0.2	ug/l
0638	Endrin Aldehyde	< 0.4	ug/l
1913	PCB-1016	< 4.	ug/l
1914	PCB-1221	< 4.	ug/l
1915	PCB-1232	< 4.	ug/l
1916	PCB-1242	< 4.	ug/l
1917	PCB-1248	< 4.	ug/l
1918	PCB-1254	< 4.	ug/l
1919	PCB-1260	< 4.	ug/l
0237	Cyanide, Total	< 0.005	mg/l
0245	Arsenic	< 0.01	mg/l
0259	Mercury	< 0.0005	mg/l
0264	Selenium	< 0.005	mg/l
0434	Phenols	< 0.005	mg/l
0552	Acid Extractables		attached
0646	2-chlorophenol	< 10.	ug/l
0655	phenol	< 10.	ug/l
0651	2-nitrophenol	< 10.	ug/l
0648	2,4-dimethylphenol	< 10.	ug/l
0647	2,4-dichlorophenol	< 10.	ug/l
0653	4-chloro-3-methylphenol	< 10.	ug/l
0656	2,4,6-trichlorophenol	< 10.	ug/l
0650	2,4-dinitrophenol	< 25.	ug/l
0652	4-nitrophenol	< 25.	ug/l
0649	2-methyl-4,6-dinitrophenol	< 25.	ug/l
0654	pentachlorophenol	< 50.	ug/l
0553	Base Neutrals		attached
0697	N-nitrosodimethylamine	< 10.	ug/l
0667	bis (2-chloroethyl) ether	< 10.	ug/l
0677	1,3-dichlorobenzene	< 10.	ug/l
0678	1,4-dichlorobenzene	< 10.	ug/l
0676	1,2-dichlorobenzene	< 10.	ug/l
0668	bis (2-chloroisopropyl) ether	< 10.	ug/l
0692	hexachloroethane	< 10.	ug/l
0698	N-nitrosodi-n-propylamine	< 10.	ug/l
0696	nitrobenzene	< 10.	ug/l
0694	isophorone	< 10.	ug/l
0666	bis (2-chloroethoxy) methane	< 10.	ug/l
0702	1,2,4-trichlorobenzene	< 10.	ug/l
0695	naphthalene	< 10.	ug/l
0690	hexachlorobutadiene	< 10.	ug/l
0691	hexachlorocyclopentadiene	< 10.	ug/l
0672	2-chloronaphthalene	< 10.	ug/l
0658	acenaphthylene	< 10.	ug/l
0681	dimethyl phthalate	< 10.	ug/l
0684	2,6-dinitrotoluene	< 10.	ug/l
0657	acenaphthene	< 10.	ug/l
0683	2,4-dinitrotoluene	< 10.	ug/l
0688	fluorene	< 10.	ug/l
0673	4-chlorophenyl phenyl ether	< 10.	ug/l
0680	diethyl phthalate	< 10.	ug/l
0686	1,2-diphenylhydrazine	< 10.	ug/l
0699	N-nitrosodiphenylamine	< 10.	ug/l
0670	4-bromophenyl phenyl ether	< 10.	ug/l
0689	hexachlorobenzene	< 10.	ug/l
0700	phenanthrene	< 10.	ug/l
0554	Base Neutrals (cont)		attached
0659	anthracene	< 10.	ug/l

0682	di-n-butyl phthalate	< 10.	ug/l
0687	fluoranthene	< 10.	ug/l
0701	pyrene	< 10.	ug/l
0660	benzidine	< 25.	ug/l
0671	butyl benzyl phthalate	< 10.	ug/l
0661	benzo (a) anthracene	< 10.	ug/l
0674	chrysene	< 10.	ug/l
0679	3,3'-dichlorobenzidine	< 20.	ug/l
0669	bis (2-ethylhexyl) phthalate	< 10.	ug/l
0685	di-n-octyl phthalate	< 10.	ug/l
0663	benzo (b) fluoranthene	< 10.	ug/l
0665	benzo (k) fluoranthene	< 10.	ug/l
0662	benzo (a) pyrene	< 10.	ug/l
0693	indeno (1,2,3-cd) pyrene	< 10.	ug/l
0675	dibenz (a,h) anthracene	< 10.	ug/l
0664	benzo (ghi) perylene	< 10.	ug/l

0890 VOA GC/MS Library Search attached

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:

B - detected in method blank
D - determined in diluted sample
J - estimated value

==========

0893 Semivolatile Library Search attached

The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are:

A - aldol condensate
B - detected in method blank
D - determined in diluted sample
I - an isomer of the listed compound
J - estimated value

==========

0922 TCL Volatiles attached

The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.

==========

3371	Chloromethane	< 10.	ug/l
3372	Bromomethane	< 10.	ug/l
3373	Vinyl Chloride	< 10.	ug/l
3374	Chloroethane	< 10.	ug/l
3375	Methylene Chloride	7.	ug/l
0914	Acetone	< 10.	ug/l
0915	Carbon Disulfide	< 5.	ug/l
3376	1,1-Dichloroethene	< 5.	ug/l
3377	1,1-Dichloroethane	< 5.	ug/l
3378	1,2-Dichloroethene (total)	< 5.	ug/l
3379	Chloroform	< 5.	ug/l
3380	1,2-Dichloroethane	< 5.	ug/l
0916	2-Butanone	< 10.	ug/l
3381	1,1,1-Trichloroethane	< 5.	ug/l
3382	Carbon Tetrachloride	< 5.	ug/l
0917	Vinyl Acetate	< 10.	ug/l
3383	Bromodichloromethane	< 5.	ug/l
3384	1,2-Dichloropropane	< 5.	ug/l
3385	cis-1,3-Dichloropropene	< 5.	ug/l

3386	Trichloroethene	< 5.	ug/l
3387	Dibromochloromethane	< 5.	ug/l
3388	1,1,2-Trichloroethane	< 5.	ug/l
3389	Benzene	< 5.	ug/l
3390	trans-1,3-Dichloropropene	< 5.	ug/l
3391	Bromoform	< 5.	ug/l
0919	4-Methyl-2-pentanone	< 10.	ug/l
0918	2-Hexanone	< 10.	ug/l
3392	Tetrachloroethene	< 5.	ug/l
3393	1,1,2,2-Tetrachloroethane	< 5.	ug/l
3394	Toluene	< 5.	ug/l
3395	Chlorobenzene	< 5.	ug/l
3396	Ethylbenzene	< 5.	ug/l
0920	Styrene	< 5.	ug/l
0921	Xylene (total)	< 5.	ug/l
1722	Thallium	< 0.1	mg/l
1744	Antimony	< 0.05	mg/l
1747	Beryllium	< 0.005	mg/l
1749	Cadmium	< 0.005	mg/l
1751	Chromium	< 0.01	mg/l
1753	Copper	< 0.02	mg/l
1755	Lead	< 0.05	mg/l
1761	Nickel	< 0.04	mg/l
1766	Silver	< 0.01	mg/l
1772	Zinc	< 0.02	mg/l

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FIELD

Lab Name: LANCASTER LABS Contract: -----
Lab Code: LANCAS Case No.: 304698 SAS No.: ----- SDG No.: LEC1
Matrix: (soil/water) WATER Lab Sample ID: 1685566
Sample wt/vol: 5. (g/mL) ML Lab File ID: >L0866
Level: (low/med) LOW Date Received: 07/03/91
% Moisture: not dec. _____. Date Analyzed: 07/09/91
Column: PACK Dilution Factor: 1.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FIELD

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1685566
Sample wt/vol: 1000.(g/mL) ML Lab File ID: >B3704
Level: (low/med) LOW Date Received: 07/03/91
% Moisture: not dec. _____. dec. _____. Date Extracted: 07/05/91
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/17/91
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.000

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

WESTON

APPENDIX E

FIELD BLANK SAMPLE ANALYTICAL RESULTS 9 JULY 1991

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLL Sample No. WW-1687516

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

003 Field Blank Water Sample

FIELD SDG# WDC1-03 ANALYSIS	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Pesticides/PCB's		attached		017822500P*
Cyanide, Total	< 0.005	mg/l	0.005	023704000P*
Arsenic	< 0.01	mg/l	0.01	024502500P*
Mercury	< 0.0005	mg/l	0.0005	025902500P*
Selenium	< 0.005	mg/l	0.005	026402500P*
Phenols	< 0.006	mg/l	0.006	043404000P*
Purgeables Method # 624		attached		052025000P
Acid Extractables		attached		055213500P*
Base Neutrals		attached		055335000P*
Base Neutrals (cont)		attached		055400000P*
VOA GC/MS Library Search		attached		089005500P

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:

- B - detected in method blank
- D - determined in diluted sample
- J - estimated value

Semivolatile Library Search		attached		089309500P*

The results from the semivolatile library search are listed on the attached FORM 1F - SV-TIC. The qualifiers appearing in the "Q" column are:

- A - aldol condensate
- B - detected in method blank
- D - determined in diluted sample
- I - an isomer of the listed compound
- J - estimated value

Thallium	< 0.1	mg/l	0.1	172201400P*
Antimony	< 0.05	mg/l	0.05	174401400P*
Beryllium	< 0.005	mg/l	0.005	174701400P*
Cadmium	< 0.005	mg/l	0.005	174901400P*
Chromium	< 0.05	mg/l	0.05	175101400P*
Copper	< 0.02	mg/l	0.02	175301400P*
Lead	< 0.05	mg/l	0.05	175501400P*
Nickel	< 0.04	mg/l	0.04	176101400P*
Silver	< 0.01	mg/l	0.01	176601400P*
Zinc	< 0.02	mg/l	0.02	177201400P*

This sample was field filtered for dissolved metals.

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Member: American Council of Independent Laboratories, Inc.

Questions? Contact Environmental Client Services at (717) 656-2301

See Reverse Side For Explanation Of Symbols And Abbreviations And Our Standard Terms And Conditions

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLL Sample No. WW-1687516

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

003 Field Blank Water Sample

FIELD SDG# WDC1-03	RESULT	LIMIT OF	
ANALYSIS	AS RECEIVED	QUANTITATION	LAB CODE

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

Questions? Contact Environmental
Client Services at (717) 656-2301
270 04219 70.00 147500

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

LLL Sample No. WW-1687516
Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

003 Field Blank Water Sample

FIELD SDG# WDC1-03

Pesticides/PCB's	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Alpha BHC	< 0.01	ug/l	0.01	190200000P
Beta BHC	< 0.01	ug/l	0.01	190300000P
Gamma BHC - Lindane	< 0.01	ug/l	0.01	045300000P
Delta BHC	< 0.01	ug/l	0.01	190400000P
Heptachlor	< 0.01	ug/l	0.01	045400000P
Aldrin	< 0.01	ug/l	0.01	045500000P
Heptachlor Epoxide	< 0.01	ug/l	0.01	190500000P
DDE	< 0.01	ug/l	0.01	190600000P
DDD	< 0.01	ug/l	0.01	190700000P
DDT	< 0.01	ug/l	0.01	047800000P
Dieldrin	< 0.01	ug/l	0.01	046900000P
Endrin	< 0.01	ug/l	0.01	047700000P
Chlordane	< 0.05	ug/l	0.05	190800000P
Toxaphene	< 1.	ug/l	1.	190900000P
Endosulfan I	< 0.01	ug/l	0.01	191000000P
Endosulfan II	< 0.01	ug/l	0.01	191100000P
Endosulfan Sulfate	< 0.03	ug/l	0.03	191200000P
Endrin Aldehyde	< 0.1	ug/l	0.1	063800000P
PCB-1016	< 1.	ug/l	1.	191300000P
PCB-1221	< 1.	ug/l	1.	191400000P
PCB-1232	< 1.	ug/l	1.	191500000P
PCB-1242	< 1.	ug/l	1.	191600000P
PCB-1248	< 1.	ug/l	1.	191700000P
PCB-1254	< 1.	ug/l	1.	191800000P
PCB-1260	< 1.	ug/l	1.	191900000P

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
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Questions? Contact Environmental Client Services at (717) 656-2301

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Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Nelson H. Risser B.A.
Manager, Pesticides/PCBs

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW-1687516

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

003 Field Blank Water Sample

FIELD SDG# WDC1-03 Purgeables Method # 624	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Chloromethane	< 10.	ug/l	10.	082700000P
Bromomethane	< 10.	ug/l	10.	082800000P
Vinyl Chloride	< 10.	ug/l	10.	082900000P
Chloroethane	< 10.	ug/l	10.	083000000P
Acrolein	< 100.	ug/l	100.	082400000P
Acrylonitrile	< 100.	ug/l	100.	082500000P
Methylene Chloride	< 5.	ug/l	5.	083100000P
Trichlorofluoromethane	< 5.	ug/l	5.	079000000P
1,1-Dichloroethene	< 5.	ug/l	5.	083200000P
1,1-Dichloroethane	< 5.	ug/l	5.	083300000P
trans-1,2-Dichloroethene	< 5.	ug/l	5.	083400000P
Chloroform	6.	ug/l	5.	083500000P
1,2-Dichloroethane	< 5.	ug/l	5.	083600000P
1,1,1-Trichloroethane	< 5.	ug/l	5.	083700000P
Carbon Tetrachloride	< 5.	ug/l	5.	083800000P
Bromodichloromethane	< 5.	ug/l	5.	083900000P
1,1,2,2-Tetrachloroethane	< 5.	ug/l	5.	084900000P
1,2-Dichloropropane	< 5.	ug/l	5.	084000000P
trans-1,3-Dichloropropene	< 5.	ug/l	5.	084100000P
Trichloroethene	< 5.	ug/l	5.	084200000P
Dibromochloromethane	< 5.	ug/l	5.	084600000P
1,1,2-Trichloroethane	< 5.	ug/l	5.	084500000P
Benzene	< 5.	ug/l	5.	084300000P
cis-1,3-Dichloropropene	< 5.	ug/l	5.	084400000P
2-Chloroethyl Vinyl Ether	< 10.	ug/l	10.	082600000P
Bromoform	< 5.	ug/l	5.	084700000P
Tetrachloroethene	< 5.	ug/l	5.	084800000P
Toluene	< 5.	ug/l	5.	085000000P
Chlorobenzene	< 5.	ug/l	5.	085100000P
Ethylbenzene	< 5.	ug/l	5.	085200000P

The result reported for trans-1,2-dichloroethene represents the combined total of the cis and trans isomers.

The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas

Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

The American Association for Laboratory Accreditation Chemical, Biological & Environmental fields of testing.

Member: American Council of Independent Laboratories, Inc.

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

LLL Sample No. WW-1607516
Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

003 Field Blank Water Sample

FIELD SDG# WDC1-03
Purgeables Method # 624
1 COPY TO Data Package Group

	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE

Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LL Sample No. WW 1687516

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

003 Field Blank Water Sample

FIELD SDG# WDC1-03 Acid Extractables	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
2-chlorophenol	< 10.	ug/l	10.	064600000P
phenol	< 10.	ug/l	10.	065500000P
2-nitrophenol	< 10.	ug/l	10.	065100000P
2,4-dimethylphenol	< 10.	ug/l	10.	064800000P
2,4-dichlorophenol	< 10.	ug/l	10.	064700000P
4-chloro-3-methylphenol	< 10.	ug/l	10.	065300000P
2,4,6-trichlorophenol	< 10.	ug/l	10.	065600000P
2,4-dinitrophenol	< 25.	ug/l	25.	065000000P
4-nitrophenol	< 25.	ug/l	25.	065200000P
2-methyl-4,6-dinitrophenol	< 25.	ug/l	25.	064900000P
pentachlorophenol	< 50.	ug/l	50.	065400000P

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1 COPY TO Data Package Group

Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

003 Field Blank Water Sample

LLL Sample No. WW-1687516
Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

FIELD SDG# WDC1-03 Base Neutrals	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
N-nitrosodimethylamine	< 10.	ug/l	10.	069700000P
bis (2-chloroethyl) ether	< 10.	ug/l	10.	066700000P
1,3-dichlorobenzene	< 10.	ug/l	10.	067700000P
1,4-dichlorobenzene	< 10.	ug/l	10.	067800000P
1,2-dichlorobenzene	< 10.	ug/l	10.	067600000P
bis (2-chloroisopropyl) ether	< 10.	ug/l	10.	066800000P
hexachloroethane	< 10.	ug/l	10.	069200000P
N-nitrosodi-n-propylamine	< 10.	ug/l	10.	069800000P
nitrobenzene	< 10.	ug/l	10.	069600000P
isophorone	< 10.	ug/l	10.	069400000P
bis (2-chloroethoxy) methane	< 10.	ug/l	10.	066600000P
1,2,4-trichlorobenzene	< 10.	ug/l	10.	070200000P
naphthalene	< 10.	ug/l	10.	069500000P
hexachlorobutadiene	< 10.	ug/l	10.	069000000P
hexachlorocyclopentadiene	< 10.	ug/l	10.	069100000P
2-chloronaphthalene	< 10.	ug/l	10.	067200000P
acenaphthylene	< 10.	ug/l	10.	065800000P
dimethyl phthalate	< 10.	ug/l	10.	068100000P
2,6-dinitrotoluene	< 10.	ug/l	10.	068400000P
acenaphthene	< 10.	ug/l	10.	065700000P
2,4-dinitrotoluene	< 10.	ug/l	10.	068300000P
fluorene	< 10.	ug/l	10.	068800000P
4-chlorophenyl phenyl ether	< 10.	ug/l	10.	067300000P
diethyl phthalate	< 10.	ug/l	10.	068000000P
1,2-diphenylhydrazine	< 10.	ug/l	10.	068600000P
N-nitrosodiphenylamine	< 10.	ug/l	10.	069900000P
4-bromophenyl phenyl ether	< 10.	ug/l	10.	067000000P
hexachlorobenzene	< 10.	ug/l	10.	068900000P
phenanthrene	< 10.	ug/l	10.	070000000P

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

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See Reverse Side For Explanation Of Symbols And Abbreviations And Our Standard Terms And Conditions

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW 1687516

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91
Collected 7/ 9/91 by
Time Collected 1535
P.O. LL-0890
Rel. 3600-05-67

003 Field Blank Water Sample

FIELD SDG# WDC1-03 Base Neutrals (cont)	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
anthracene	< 10.	ug/l	10.	065900000P
di-n-butyl phthalate	< 10.	ug/l	10.	068200000P
fluoranthene	< 10.	ug/l	10.	068700000P
pyrene	< 10.	ug/l	10.	070100000P
benzidine	< 25.	ug/l	25.	066000000P
butyl benzyl phthalate	< 10.	ug/l	10.	067100000P
benzo (a) anthracene	< 10.	ug/l	10.	066100000P
chrysene	< 10.	ug/l	10.	067400000P
3,3'-dichlorobenzidine	< 20.	ug/l	20.	067900000P
bis (2-ethylhexyl) phthalate	< 10.	ug/l	10.	066900000P
di-n-octyl phthalate	< 10.	ug/l	10.	068500000P
benzo (b) fluoranthene	< 10.	ug/l	10.	066300000P
benzo (k) fluoranthene	< 10.	ug/l	10.	066500000P
benzo (a) pyrene	< 10.	ug/l	10.	066200000P
indeno (1,2,3-cd) pyrene	< 10.	ug/l	10.	069300000P
dibenz (a,h) anthracene	< 10.	ug/l	10.	067500000P
benzo (ghi) perylene	< 10.	ug/l	10.	066400000P

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Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED

2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD _____

Lab Name: LANCASTER LABS, INC. Contract: _____.
Lab Code: _____. Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1687516
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >U1120
Level: (low/med) LOW Date Received: 07/10/91
% Moisture: not dec. _____. Date Analyzed: 07/12/91
Column: (pack/cap) CAP Dilution Factor: 1.000

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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24.				
25.				

FORM I VOA-TIC 1/87 Rev.

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Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:
Timothy S. Oostdyk, B.A.

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD

Lab Name: LANCASTER LABS Contract: _____.
Lab Code: LANCAS Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1687516
Sample wt/vol: 1000.(g/mL) ML Lab File ID: >A3160
Level: (low/med) LOW Date Received: 07/10/91
% Moisture: not dec. _____. dec. _____. Date Extracted: 07/11/91
Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/18/91
GPC Cleanup: (Y/N) N pH: _____. Dilution Factor: 1.000

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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FORM I SV-TIC 1/87 Rev.

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Questions: Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:
Timothy S. Oostdyk, B.A.

APPENDIX F

TRIP BLANK SAMPLES
ANALYTICAL RESULTS
3 JULY 1991 AND 9 JULY 1991

***** Lancaster Laboratories, Inc. Analytical Report *****
2425 New Holland Pike, Lancaster, PA 17601

Sample Number: WW 1685569 Account: 04219 Weston Designers/Consultants
Date Submitted: 07/03/91 Date Reported: 08/05/91

L.E. Carpenter/WSI Trip Blank Sample

Analysis Name	Final Result	Units
0890 VOA GC/MS Library Search		attached

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:

B - detected in method blank
D - determined in diluted sample
J - estimated value

==========

0922 TCL Volatiles		attached

The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.

==========

3371 Chloromethane	< 10.	ug/l
3372 Bromomethane	< 10.	ug/l
3373 Vinyl Chloride	< 10.	ug/l
3374 Chloroethane	< 10.	ug/l
3375 Methylene Chloride	< 5.	ug/l
0914 Acetone	< 10.	ug/l
0915 Carbon Disulfide	< 5.	ug/l
3376 1,1-Dichloroethene	< 5.	ug/l
3377 1,1-Dichloroethane	< 5.	ug/l
3378 1,2-Dichloroethene (total)	< 5.	ug/l
3379 Chloroform	< 5.	ug/l
3380 1,2-Dichloroethane	< 5.	ug/l
0916 2-Butanone	< 10.	ug/l
3381 1,1,1-Trichloroethane	< 5.	ug/l
3382 Carbon Tetrachloride	< 5.	ug/l
0917 Vinyl Acetate	< 10.	ug/l
3383 Bromodichloromethane	< 5.	ug/l
3384 1,2-Dichloropropane	< 5.	ug/l
3385 cis-1,3-Dichloropropene	< 5.	ug/l
3386 Trichloroethene	< 5.	ug/l
3387 Dibromochloromethane	< 5.	ug/l
3388 1,1,2-Trichloroethane	< 5.	ug/l
3389 Benzene	< 5.	ug/l
3390 trans-1,3-Dichloropropene	< 5.	ug/l
3391 Bromoform	< 5.	ug/l
0919 4-Methyl-2-pentanone	< 10.	ug/l
0918 2-Hexanone	< 10.	ug/l
3392 Tetrachloroethene	< 5.	ug/l
3393 1,1,2,2-Tetrachloroethane	< 5.	ug/l
3394 Toluene	< 5.	ug/l
3395 Chlorobenzene	< 5.	ug/l
3396 Ethylbenzene	< 5.	ug/l
0920 Styrene	< 5.	ug/l
0921 Xylene (total)	< 5.	ug/l

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP-

Lab Name:LANCASTER LABS Contract:-----
Lab Code: LANCAS Case No.: 304698 SAS No.: ----- SDG No.: LEC1
Matrix: (soil/water) WATER Lab Sample ID: 1685569
Sample wt/vol: 5. (g/mL) ML Lab File ID: >L0865
Level: (low/med) LOW Date Received: 07/03/91
% Moisture:not dec. _____. Date Analyzed: 07/08/91
Column: PACK Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
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10.				
11.				
12.				
13.				
14.				
15.				

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW 1687517

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91

004 Trip Blank Sample

P.O. LL-0890
Rel. 3600-05-67

TRP-- SDG# WDC1-04	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE
ANALYSIS			
Purgeables Method # 624	attached		052025000P
VOA GC/MS Library Search	attached		089005500P

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:

B - detected in method blank
D - determined in diluted sample
J - estimated value

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas
1 COPY TO Data Package Group

The American Association for Laboratory Accreditation Chemical, Biological & Environmental fields of testing.

Member: American Council of Independent Laboratories, Inc.

Questions? Contact Environmental Client Services at (717) 656-2301
270 04219 25.00 033000

See Reverse Side For Explanation Of Symbols And Abbreviations And Our Standard Terms And Conditions

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW-1687517

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91

004 Trip Blank Sample

P.O. LL-0890
Rel. 3600-05-67

TRP-- SDG# WDC1-04 Purgeables Method # 624	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Chloromethane	< 10.	ug/l	10.	082700000P
Bromomethane	< 10.	ug/l	10.	082800000P
Vinyl Chloride	< 10.	ug/l	10.	082900000P
Chloroethane	< 10.	ug/l	10.	083000000P
Acrolein	< 100.	ug/l	100.	082400000P
Acrylonitrile	< 100.	ug/l	100.	082500000P
Methylene Chloride	< 5.	ug/l	5.	083100000P
Trichlorofluoromethane	< 5.	ug/l	5.	079000000P
1,1-Dichloroethene	< 5.	ug/l	5.	083200000P
1,1-Dichloroethane	< 5.	ug/l	5.	083300000P
trans-1,2-Dichloroethene	< 5.	ug/l	5.	083400000P
Chloroform	< 5.	ug/l	5.	083500000P
1,2-Dichloroethane	< 5.	ug/l	5.	083600000P
1,1,1-Trichloroethane	< 5.	ug/l	5.	083700000P
Carbon Tetrachloride	< 5.	ug/l	5.	083800000P
Bromodichloromethane	< 5.	ug/l	5.	083900000P
1,1,2,2-Tetrachloroethane	< 5.	ug/l	5.	084900000P
1,2-Dichloropropane	< 5.	ug/l	5.	084000000P
trans-1,3-Dichloropropene	< 5.	ug/l	5.	084100000P
Trichloroethene	< 5.	ug/l	5.	084200000P
Dibromochloromethane	< 5.	ug/l	5.	084600000P
1,1,2-Trichloroethane	< 5.	ug/l	5.	084500000P
Benzene	< 5.	ug/l	5.	084300000P
cis-1,3-Dichloropropene	< 5.	ug/l	5.	084400000P
2-Chloroethyl Vinyl Ether	< 10.	ug/l	10.	082600000P
Bromoform	< 5.	ug/l	5.	084700000P
Tetrachloroethene	< 5.	ug/l	5.	084800000P
Toluene	< 5.	ug/l	5.	085000000P
Chlorobenzene	< 5.	ug/l	5.	085100000P
Ethylbenzene	< 5.	ug/l	5.	085200000P

The result reported for trans-1,2-dichloroethene represents the combined total of the cis and trans isomers.
The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.

1 COPY TO Weston Designers/Consultants ATTN: Ms. Diane C. Thomas

Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED
2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

LLI Sample No. WW 1687517

Weston Designers/Consultants
One Weston Way
West Chester, PA 19380

Date Reported 7/30/91
Date Submitted 7/10/91
Discard Date 8/ 7/91

004 Trip Blank Sample

P.O. LL-0890
Rel. 3600-05-67

TRP-- SDG# WDC1-04
Purgeables Method # 624
1 COPY TO Data Package Group

	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE

Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.
Manager GC/MS

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ANALYSIS REPORT

Lancaster Laboratories INCORPORATED

2425 New Holland Pike, Lancaster, PA 17601-5994 (717) 656-2301

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

TRP--

Lab Name: LANCASTER LABS, INC. Contract: _____.
Lab Code: _____. Case No.: _____. SAS No.: _____. SDG No.: _____.
Matrix: (soil/water) WATER Lab Sample ID: 1687517
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >U1121
Level: (low/med) LOW Date Received: 07/10/91
% Moisture: not dec. _____. Date Analyzed: 07/12/91
Column: (pack/cap) CAP Dilution Factor: 1.000

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
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23.				
24.				
25.				

FORM I VOA-TIC 1/87 Rev.

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Questions? Contact Environmental Client Services at (717) 656-2301

Respectfully Submitted
Lancaster Laboratories, Inc.
Reviewed and Approved by:
Timothy S. Oostdyk, B.A.

APPENDIX G

MONITORING WELL MW-19
ANALYTICAL RESULTS

***** Lancaster Laboratories, Inc. Analytical Report *****
2425 New Holland Pike, Lancaster, PA 17601

Sample Number: WW 1685567 Account: 04219 Weston Designers/Consultants
Date Submitted: 07/03/91 Date Reported: 08/05/91

L.E. Carpenter/WSI MW-19 Water Sample

Analysis Name	Final Result	Units
9001 Methyl Ethyl Ketone	6,800.	ug/l

The surrogate, D8-toluene, was outside of specifications due to the amount of a non-target compound present in the sample.
==========

***** Lancaster Laboratories, Inc. Analytical Report *****
2425 New Holland Pike, Lancaster, PA 17601

Sample Number: WW 1685568 Account: 04219 Weston Designers/Consultants
Date Submitted: 07/03/91 Date Reported: 08/05/91

L.E. Carpenter/WSI MW-20 Water Sample

Analysis Name	Final Result	Units
0890 VOA GC/MS Library Search		attached

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:
B - detected in method blank
D - determined in diluted sample
J - estimated value
==========

0922 TCL Volatiles attached
The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.
==========

3371 Chloromethane	< 10.	ug/l
3372 Bromomethane	< 10.	ug/l
3373 Vinyl Chloride	< 10.	ug/l
3374 Chloroethane	< 10.	ug/l
3375 Methylene Chloride	< 5.	ug/l
0914 Acetone	83.	ug/l
0915 Carbon Disulfide	< 5.	ug/l
3376 1,1-Dichloroethene	< 5.	ug/l
3377 1,1-Dichloroethane	< 5.	ug/l
3378 1,2-Dichloroethene (total)	< 5.	ug/l
3379 Chloroform	< 5.	ug/l
3380 1,2-Dichloroethane	< 5.	ug/l
0916 2-Butanone	< 10.	ug/l
3381 1,1,1-Trichloroethane	< 5.	ug/l
3382 Carbon Tetrachloride	< 5.	ug/l
0917 Vinyl Acetate	< 10.	ug/l
3383 Bromodichloromethane	< 5.	ug/l
3384 1,2-Dichloropropane	< 5.	ug/l
3385 cis-1,3-Dichloropropene	< 5.	ug/l

APPENDIX H

MONITORING WELL MW-20
ANALYTICAL RESULTS

***** Lancaster Laboratories, Inc. Analytical Report *****
2425 New Holland Pike, Lancaster, PA 17601

Sample Number: WW 1685567 Account: 04219 Weston Designers/Consultants
Date Submitted: 07/03/91 Date Reported: 08/05/91

L.E. Carpenter/WSI MW-19 Water Sample

Analysis Name	Final Result	Units
9001 Methyl Ethyl Ketone	6,800.	ug/l

The surrogate, D8-toluene, was outside of specifications due to the amount of a non-target compound present in the sample.
==========

***** Lancaster Laboratories, Inc. Analytical Report *****
2425 New Holland Pike, Lancaster, PA 17601

Sample Number: WW 1685568 Account: 04219 Weston Designers/Consultants
Date Submitted: 07/03/91 Date Reported: 08/05/91

L.E. Carpenter/WSI MW-20 Water Sample

Analysis Name	Final Result	Units
0890 VOA GC/MS Library Search		attached

The results from the volatile library search are listed on the attached FORM 1E - VOA-TIC. The qualifiers appearing in the "Q" column are:
B - detected in method blank
D - determined in diluted sample
J - estimated value
==========

0922 TCL Volatiles		attached

The GC/MS volatile sample was preserved with 1 + 1 HCl to pH < 2. Low recovery of acid labile compounds, such as 2-chloroethyl vinyl ether, is likely to occur.
==========

3371 Chloromethane	< 10.	ug/l
3372 Bromomethane	< 10.	ug/l
3373 Vinyl Chloride	< 10.	ug/l
3374 Chloroethane	< 10.	ug/l
3375 Methylene Chloride	< 5.	ug/l
0914 Acetone	83.	ug/l
0915 Carbon Disulfide	< 5.	ug/l
3376 1,1-Dichloroethene	< 5.	ug/l
3377 1,1-Dichloroethane	< 5.	ug/l
3378 1,2-Dichloroethene (total)	< 5.	ug/l
3379 Chloroform	< 5.	ug/l
3380 1,2-Dichloroethane	< 5.	ug/l
0916 2-Butanone	< 10.	ug/l
3381 1,1,1-Trichloroethane	< 5.	ug/l
3382 Carbon Tetrachloride	< 5.	ug/l
0917 Vinyl Acetate	< 10.	ug/l
3383 Bromodichloromethane	< 5.	ug/l
3384 1,2-Dichloropropane	< 5.	ug/l
3385 cis-1,3-Dichloropropene	< 5.	ug/l

3386	Trichloroethene	< 5.	ug/l
3387	Dibromochloromethane	< 5.	ug/l
3388	1,1,2-Trichloroethane	< 5.	ug/l
3389	Benzene	< 5.	ug/l
3390	trans-1,3-Dichloropropene	< 5.	ug/l
3391	Bromoform	< 5.	ug/l
0919	4-Methyl-2-pentanone	< 10.	ug/l
0918	2-Hexanone	< 10.	ug/l
3392	Tetrachloroethene	< 5.	ug/l
3393	1,1,2,2-Tetrachloroethane	< 5.	ug/l
3394	Toluene	< 5.	ug/l
3395	Chlorobenzene	< 5.	ug/l
3396	Ethylbenzene	< 5.	ug/l
0920	Styrene	< 5.	ug/l
0921	Xylene (total)	10.	ug/l

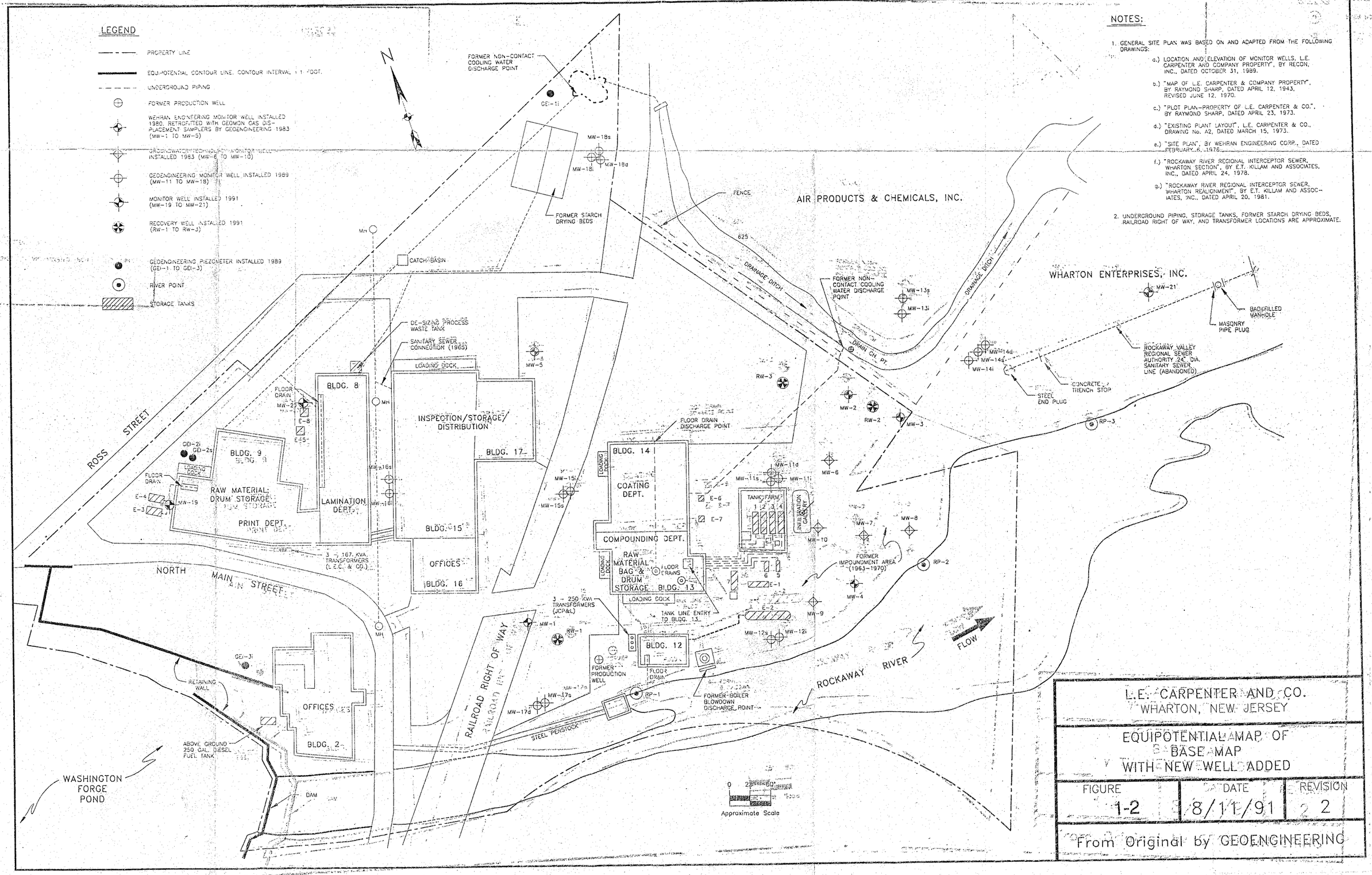
1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MW20-

Lab Name:LANCASTER LABS Contract:-----
Lab Code: LANCAS Case No.: 304698 SAS No.: ----- SDG No.: LEC1
Matrix: (soil/water) WATER Lab Sample ID: 1685568
Sample wt/vol: 5. (g/mL) ML Lab File ID: >L0867
Level: (low/med) LOW Date Received: 07/03/91
% Moisture:not dec. _____. Date Analyzed: 07/09/91
Column: PACK Dilution Factor: 1.0

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 565800	3-Pentanone, 2,4-dimethyl-	18.20	310	J
2.	Unknown	19.13	40	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				



L.E. CARPENTER AND CO.
WHARTON, NEW JERSEY

EQUIPOTENTIAL MAP OF BASE MAP WITH NEW WELL ADDED

FIGURE	DATE	REVISION
1-2	8/11/91	2

From Original by GEOENGINEERING