



Committed To *Your* Success

July 7, 1999

Mr. Thomas Eschner
Harding Lawson Associates
511 Congress St
Portland, ME 04112

Severn Trent Laboratories
10 Hazelwood Drive
Suite 106
Amherst, New York 14228-2298

Tel: (716) 691-2600
Fax: (716) 691-7991

RE: Analytical Results

Dear Mr. Eschner:

Please find enclosed results concerning the analyses of the samples recently submitted to Severn Trent Laboratories, Inc. The pertinent information regarding these analyses is listed below:

Quote #: NY95-155
Project Name: Arch Chemical Treatability
Matrix: Water
Samples Received: 06/22/99
Sample Date: 06/21,20,19/99

If you have any questions concerning these data, please contact me at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Harding Lawson Associates with environmental testing services. We look forward to serving you in the future.

Sincerely,

Severn Trent Laboratories, Inc.

Brian J. Fischer
Program Manager

BJF/csm
Enclosure

I.D. #A99-3944
#NY5A5762

This report contains 21 pages which are individually numbered.

Laboratory Locations:

- Monroe, CT
- Pensacola, FL
- University Park, IL
- Billerica, MA
- Westfield, MA
- Edison, NJ
- Whippany, NJ
- Newburgh, NY
- Houston, TX
- Colchester, VT

Service Center Locations:

- Mt. Laurel, NJ
- Glen Cove, NY

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- Cantonment, FL
- New Orleans, LA
- Waterford, MI
- Blairstown, NJ
- Schenectady, NY
- Cleveland, OH

a part of

Severn Trent Services, Inc.



ANALYTICAL RESULTS

Prepared For:

Harding Lawson Associates
511 Congress St
Portland, ME 04112

Prepared By:

Severn Trent Laboratories, Inc.
10 Hazelwood Drive, Suite 106
Amherst, NY 14228-2298

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency references.

- * "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, September 1994, U.S. Environmental Protection Agency Office of Solid Waste.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing data qualifiers (Q) as defined on the Organic Data Comment Page.

METHOD 8270

Samples 1-1, 1-2, 1-3, 2-1, 2-2, 2-3, 3-1, 3-2, 3-3, and PRETREAT exhibited surrogate recovery results outside quality control limits for Nitrobenzene-D5, Terphenyl-D14, 2-Fluorobiphenyl, 2-Fluorophenol, Phenol-D5, and 2,4,6-Tribromophenol.

All client samples were analyzed at a dilution factor of 500.

The Matrix Spike Blank exhibited spike recovery results outside quality control limits for 2-Chloropyridine.

The relative percent difference (RPD) for spike recovery between the Matrix Spike Blank and the Matrix Spike Blank Duplicate was outside quality control limits for 2-Chloropyridine.

No other deviations were observed during the analytical procedure. Batch Quality Control (QC) for this Methodology was reviewed and found to be within acceptance criteria.

This data report shall not be reproduced, except in full, without the written authorization of Severn Trent Laboratories, Inc.

ORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES INC.

USEPA Defined Organic Data Qualifiers:

- U - Indicates compound was analyzed for but not detected.
- J - Indicates an estimate value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- T - This flag is used when the analyte is found in the associated TCLP extraction blank as well as in the sample.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.
- P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- A - This flag indicates that a TIC is a suspected aldol-condensation product.

000003

Sample Data Package

Date: 07/06/1999
Time: 16:59:58

HARDING LAWSON ASSOCIATES - Olin Rochester
Arch Chemical Treatability
METHOD 8270-TCL SEMI-VOLATILES PLUS ADD COMPOUNDS

Rept: ANU326

| Client ID | | 1-1 | | 1-2 | | 1-3 | | 2-1 | |
|------------------------------|--------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| Job No | Lab ID | A99-3944 | A9394401 | A99-3944 | A9394402 | A99-3944 | A9394403 | A99-3944 | A9394404 |
| Sample Date | | 06/19/1999 | | 06/19/1999 | | 06/19/1999 | | 06/20/1999 | |
| Analyte | Units | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit |
| Acenaphthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Anthracene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(a)anthracene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(b)fluoranthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(k)fluoranthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(ghi)perylene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(a)pyrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzoic acid | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| Benzyl alcohol | UG/L | ND | 9400 | ND | 9400 | ND | 9400 | ND | 9400 |
| Bis(2-chloroethoxy) methane | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Bis(2-chloroethyl) ether | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,2'-Oxybis(1-Chloropropane) | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Bis(2-ethylhexyl) phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Bromophenyl phenyl ether | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Butyl benzyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chloroaniline | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chloro-3-methylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Chloronaphthalene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Chlorophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chlorophenyl phenyl ether | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Chrysene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Dibenzo(a,h)anthracene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Dibenzofuran | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Di-n-butyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 1,3-Dichlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 1,4-Dichlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 3,3'-Dichlorobenzidine | UG/L | ND | 9400 | ND | 9400 | ND | 9400 | ND | 9400 |
| 2,4-Dichlorophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Diethyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,4-Dimethylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Dimethyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4,6-Dinitro-2-methylphenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 2,4-Dinitrophenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 2,4-Dinitrotoluene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,6-Dinitrotoluene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Di-n-octyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Fluoranthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Fluorene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachlorobutadiene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachlorocyclopentadiene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachloroethane | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Indeno(1,2,3-cd)pyrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |

NA = Not Applicable ND = Not Detected

STL Buffalo

000004

Date: 07/06/1999
Time: 16:59:58

HARDING LAWSON ASSOCIATES - Olin Rochester
Arch Chemical Treatability
METHOD 8270-TCL SEMI-VOLATILES PLUS ADD COMPOUNDS

Rept: AN0326

| Client ID | | 1-1 | | 1-2 | | 1-3 | | 2-1 | |
|----------------------------|--------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| Job No | Lab ID | A99-3944 | A9394401 | A99-3944 | A9394402 | A99-3944 | A9394403 | A99-3944 | A9394404 |
| Sample Date | | 06/19/1999 | 4.5 | 06/19/1999 | 1.5 | 06/19/1999 | 6.5 | 06/20/1999 | |
| Analyte | Units | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit |
| Isophorone | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Methylnaphthalene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Methylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Methylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Naphthalene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 3-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 4-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| Nitrobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Nitrophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Nitrophenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| N-nitrosodiphenylamine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| N-Nitroso-Di-n-propylamine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Pentachlorophenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| Phenanthrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Phenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Pyrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 1,2,4-Trichlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,4,5-Trichlorophenol | UG/L | ND | 12000 | ND | 12000 | ND | 12000 | ND | 12000 |
| 2,4,6-Trichlorophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Pyridine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Chloropyridine | UG/L | 15000 | 4700 | 23000 | 4700 | 23000 | 4700 | 35000 | 4700 |
| 3-Chloropyridine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chloropyridine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,6-Dichloropyridine | UG/L | 950 J | 4700 | 2200 J | 4700 | 1500 J | 4700 | 2900 J | 4700 |
| p-Fluoroaniline | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| -IS/SURROGATE(S)- | | | | | | | | | |
| 1,4-Dichlorobenzene-D4 | % | 108 | 50-200 | 106 | 50-200 | 105 | 50-200 | 111 | 50-200 |
| Naphthalene-D8 | % | 110 | 50-200 | 108 | 50-200 | 112 | 50-200 | 111 | 50-200 |
| Acenaphthene-D10 | % | 110 | 50-200 | 111 | 50-200 | 111 | 50-200 | 113 | 50-200 |
| Phenanthrene-D10 | % | 111 | 50-200 | 110 | 50-200 | 111 | 50-200 | 115 | 50-200 |
| Chrysene-D12 | % | 111 | 50-200 | 109 | 50-200 | 112 | 50-200 | 114 | 50-200 |
| Perylene-D12 | % | 92 | 50-200 | 91 | 50-200 | 96 | 50-200 | 94 | 50-200 |
| Nitrobenzene-D5 | % | 0 * | 26-114 | 0 * | 26-114 | 0 * | 26-114 | 0 * | 26-114 |
| terphenyl-D14 | % | 0 * | 31-141 | 0 * | 31-141 | 0 * | 31-141 | 0 * | 31-141 |
| 2-Fluorobiphenyl | % | 0 * | 28-116 | 0 * | 28-116 | 0 * | 28-116 | 0 * | 28-116 |
| 2-Fluorophenol | % | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 |
| Phenol-D5 | % | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 |
| 2,4,6-Tribromophenol | % | 0 * | 10-135 | 0 * | 10-135 | 0 * | 10-135 | 0 * | 10-135 |

NA = Not Applicable ND = Not Detected

STL Buffalo

000005

Date: 07/06/1999
Time: 16:59:58

HARDING LAWSON ASSOCIATES - Olin Rochester
Arch Chemical Treatability
METHOD 8270-TCL SEMI-VOLATILES PLUS ADD COMPOUNDS

Rept: AN0326

| Client ID | | 2-2 | | 2-3 | | 3-1 | | 3-2 | |
|------------------------------|--------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| Job No | Lab ID | A99-3944 | A9394405 | A99-3944 | A9394406 | A99-3944 | A9394408 | A99-3944 | A9394409 |
| Sample Date | | 06/20/1999 | | 06/20/1999 | | 06/21/1999 | | 06/21/1999 | |
| Analyte | Units | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit |
| Acenaphthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Anthracene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(a)anthracene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(b)fluoranthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(k)fluoranthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(ghi)perylene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzo(a)pyrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Benzoic acid | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| Benzyl alcohol | UG/L | ND | 9400 | ND | 9400 | ND | 9400 | ND | 9400 |
| Bis(2-chloroethoxy) methane | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Bis(2-chloroethyl) ether | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,2'-Oxybis(1-Chloropropane) | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Bis(2-ethylhexyl) phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Bromophenyl phenyl ether | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Butyl benzyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chloroaniline | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chloro-3-methylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Chloronaphthalene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Chlorophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chlorophenyl phenyl ether | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Chrysene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Dibenzo(a,h)anthracene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Dibenzofuran | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Di-n-butyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 1,3-Dichlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 1,4-Dichlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 3,4-Dichlorobenzidine | UG/L | ND | 9400 | ND | 9400 | ND | 9400 | ND | 9400 |
| 2,4-Dichlorophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Diethyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,4-Dimethylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Dimethyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,6-Dinitro-2-methylphenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 2,4-Dinitrophenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 2,4-Dinitrotoluene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,6-Dinitrotoluene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Di-n-octyl phthalate | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Fluoranthene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Fluorene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachlorobutadiene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachlorocyclopentadiene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Hexachloroethane | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Indeno(1,2,3-cd)pyrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |

900006

Date: 07/06/1999
Time: 16:59:58

HARDING LAWSON ASSOCIATES - Olin Rochester
Arch Chemical Treatability
METHOD 8270-TCL SEMI-VOLATILES PLUS ADD COMPOUNDS

Rept: AN0326

| Client ID | | 2-2 | | 2-3 | | 3-1 | | 3-2 | |
|----------------------------|--------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| Job No | Lab ID | A99-3944 | A9394405 | A99-3944 | A9394406 | A99-3944 | A9394408 | A99-3944 | A9394409 |
| Sample Date | | 06/20/1999 | | 06/20/1999 | | 06/21/1999 | | 06/21/1999 | |
| Analyte | Units | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit |
| Isophorone | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Methylnaphthalene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Methylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Methylphenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Naphthalene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 3-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| 4-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| Nitrobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Nitrophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Nitrophenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| N-nitrosodiphenylamine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| N-Nitroso-Di-n-propylamine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Pentachlorophenol | UG/L | ND | 24000 | ND | 24000 | ND | 24000 | ND | 24000 |
| Phenanthrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Phenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Pyrene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 1,2,4-Trichlorobenzene | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,4,5-Trichlorophenol | UG/L | ND | 12000 | ND | 12000 | ND | 12000 | ND | 12000 |
| 2,4,6-Trichlorophenol | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| Pyridine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2-Chloropyridine | UG/L | 32000 | 4700 | 26000 | 4700 | 38000 | 4700 | 36000 | 4700 |
| 3-Chloropyridine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 4-Chloropyridine | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| 2,6-Dichloropyridine | UG/L | 2700 J | 4700 | 2200 J | 4700 | 4500 J | 4700 | 4500 J | 4700 |
| p-Fluoroaniline | UG/L | ND | 4700 | ND | 4700 | ND | 4700 | ND | 4700 |
| IS/SURROGATE(S) | | | | | | | | | |
| 1,4-Dichlorobenzene-D4 | % | 109 | 50-200 | 116 | 50-200 | 123 | 50-200 | 124 | 50-200 |
| Naphthalene-D8 | % | 114 | 50-200 | 118 | 50-200 | 119 | 50-200 | 116 | 50-200 |
| Acenaphthene-D10 | % | 114 | 50-200 | 121 | 50-200 | 115 | 50-200 | 115 | 50-200 |
| Phenanthrene-D10 | % | 113 | 50-200 | 120 | 50-200 | 119 | 50-200 | 118 | 50-200 |
| Chrysene-D12 | % | 113 | 50-200 | 119 | 50-200 | 125 | 50-200 | 120 | 50-200 |
| Perylene-D12 | % | 96 | 50-200 | 103 | 50-200 | 108 | 50-200 | 101 | 50-200 |
| Nitrobenzene-D5 | % | 0 * | 26-114 | 0 * | 26-114 | 0 * | 26-114 | 0 * | 26-114 |
| Terphenyl-D14 | % | 0 * | 31-141 | 0 * | 31-141 | 0 * | 31-141 | 0 * | 31-141 |
| 2-Fluorobiphenyl | % | 0 * | 28-116 | 0 * | 28-116 | 0 * | 28-116 | 0 * | 28-116 |
| 2-Fluorophenol | % | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 |
| Phenol-D5 | % | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 | 0 * | 10-105 |
| 2,4,6-Tribromophenol | % | 0 * | 10-135 | 0 * | 10-135 | 0 * | 10-135 | 0 * | 10-135 |

400000

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 07/06/1999
Time: 16:59:58

HARDING LAWSON ASSOCIATES - Olin Rochester
Arch Chemical Treatability
METHOD 8270-TCL SEMI-VOLATILES PLUS ADD COMPOUNDS

Rept: AN0326

| Client ID | | 3-3 | | PRETREAT | | | | | |
|------------------------------|--------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| Job No | Lab ID | A99-3944 | A9394410 | A99-3944 | A9394407 | | | | |
| Sample Date | | 06/21/1999 | | 06/20/1999 | | | | | |
| Analyte | Units | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit |
| Acenaphthene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Anthracene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Benzo(a)anthracene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Benzo(b)fluoranthene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Benzo(k)fluoranthene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Benzo(ghi)perylene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Benzo(a)pyrene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Benzoic acid | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| Benzyl alcohol | UG/L | ND | 9400 | ND | 9400 | NA | | NA | |
| Bis(2-chloroethoxy) methane | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Bis(2-chloroethyl) ether | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2,2'-Oxybis(1-Chloropropane) | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Bis(2-ethylhexyl) phthalate | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4-Bromophenyl phenyl ether | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Butyl benzyl phthalate | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4-Chloroaniline | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4-Chloro-3-methylphenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 1-Chloronaphthalene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2-Chlorophenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4-Chlorophenyl phenyl ether | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Chrysene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Dibenzo(a,h)anthracene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Imidazofuran | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Di-n-butyl phthalate | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 1,3-Dichlorobenzene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 1,4-Dichlorobenzene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 3,4-Dichlorobenzidine | UG/L | ND | 9400 | ND | 9400 | NA | | NA | |
| 2,4-Dichlorophenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Diethyl phthalate | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2,4-Dimethylphenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Dioctyl phthalate | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4,6-Dinitro-2-methylphenol | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| 1,3-Dinitrophenol | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| 2,4-Dinitrotoluene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2,6-Dinitrotoluene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Di-n-octyl phthalate | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Fluoranthene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Fluorene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Hexachlorobenzene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Hexachlorobutadiene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Hexachlorocyclopentadiene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Hexachloroethane | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Indeno(1,2,3-cd)pyrene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |

8000008

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 07/06/1999
Time: 16:59:58

HARDING LAWSON ASSOCIATES - Olin Rochester
Arch Chemical Treatability
METHOD 8270-TCL SEMI-VOLATILES PLUS ADD COMPOUNDS

Rept: AN0326

| Client ID | | 3-3 | | PRETREAT | | | | | |
|----------------------------|-------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| Job No | | A99-3944 | | A99-3944 | | | | | |
| Lab ID | | A9394410 | | A9394407 | | | | | |
| Sample Date | | 06/21/1999 | | 06/20/1999 | | | | | |
| Analyte | Units | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit | Sample Value | Reporting Limit |
| Isophorone | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2-Methylnaphthalene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2-Methylphenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4-Methylphenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Naphthalene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| 3-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| 4-Nitroaniline | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| Nitrobenzene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2-Nitrophenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4-Nitrophenol | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| N-nitrosodiphenylamine | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| N-Nitroso-Di-n-propylamine | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Pentachlorophenol | UG/L | ND | 24000 | ND | 24000 | NA | | NA | |
| Fluoranthrene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Phenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Pyrene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 1,2,4-Trichlorobenzene | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2,3,5-Trichlorophenol | UG/L | ND | 12000 | ND | 12000 | NA | | NA | |
| 2,4,6-Trichlorophenol | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| Pyridine | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2-Chloropyridine | UG/L | 34000 | 4700 | 44000 | 4700 | NA | | NA | |
| 3-Chloropyridine | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 4-Chloropyridine | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| 2,5-Dichloropyridine | UG/L | 4000 J | 4700 | 5200 | 4700 | NA | | NA | |
| p-Fluoroaniline | UG/L | ND | 4700 | ND | 4700 | NA | | NA | |
| --- IS/SURROGATE(S) --- | | | | | | | | | |
| 1,4-Dichlorobenzene-D4 | % | 123 | 50-200 | 124 | 50-200 | NA | | NA | |
| Naphthalene-D8 | % | 120 | 50-200 | 121 | 50-200 | NA | | NA | |
| Acenaphthene-D10 | % | 115 | 50-200 | 117 | 50-200 | NA | | NA | |
| Fluoranthrene-D10 | % | 120 | 50-200 | 125 | 50-200 | NA | | NA | |
| Chrysene-D12 | % | 121 | 50-200 | 127 | 50-200 | NA | | NA | |
| Benzyene-D12 | % | 104 | 50-200 | 113 | 50-200 | NA | | NA | |
| 1-Trobenzene-D5 | % | 0 * | 26-114 | 0 * | 26-114 | NA | | NA | |
| Phenyl-D14 | % | 0 * | 31-141 | 0 * | 31-141 | NA | | NA | |
| 2-Fluorobiphenyl | % | 0 * | 28-116 | 0 * | 28-116 | NA | | NA | |
| 2-Fluorophenol | % | 0 * | 10-105 | 0 * | 10-105 | NA | | NA | |
| Phenol-D5 | % | 0 * | 10-105 | 0 * | 10-105 | NA | | NA | |
| 2,4,6-Tribromophenol | % | 0 * | 10-135 | 0 * | 10-135 | NA | | NA | |

600009

NA = Not Applicable ND = Not Detected

STL Buffalo