



# IEA

An Aquarion Company

200 Monroe Turnpike  
Monroe, Connecticut 06468

Phone 203-261-4458  
Fax 203-268-5346

February 19, 1993

Mr. Harry Gregory  
Roux Associates  
775 Park Avenue, Suite 255  
Huntington, NY 11743

Dear Mr. Gregory:

Please find enclosed the analytical results of 4 aqueous samples received at our laboratory on January 27, 1993. This report contains sections addressing the following information at a minimum:

- . sample summary
- . analytical methodology
- . state certifications
- . definitions of data qualifiers and terminology
- . analytical results
- . chain-of-custody

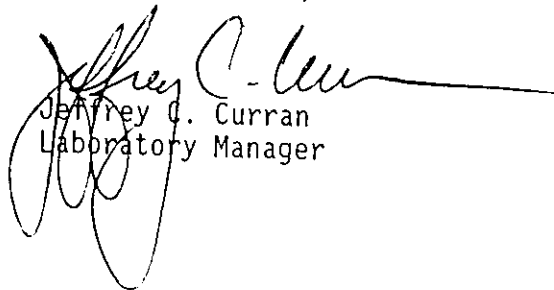
IEA Report #30930-0099	Purchase Order #05511Y
Project ID: Amtrak	

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 261-4458 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,



Jeffrey C. Curran  
Laboratory Manager

JCC/mt

Sunrise,  
Florida  
305-846-1730

Schaumburg,  
Illinois  
708-705-0740

N. Billerica,  
Massachusetts  
617-272-5212

Whippany,  
New Jersey  
201-428-8181

Research Triangle Park,  
North Carolina  
919-677-0090

Essex Junction,  
Vermont  
802-878-5138

30930-0099  
ROUX ASSOCIATES  
SAMPLE SUMMARY

Client ID	Lab ID	Matrix	Date Collected	Date Received
TW-1	0099001	Aqueous	01/26/93	01/27/93
TW-2	0099002	Aqueous	01/26/93	01/27/93
F-B	0099003	Aqueous	01/26/93	01/27/93
T-B	0099004	Aqueous	01/26/93	01/27/93

PROJECT SUMMARY

The client requested the samples be analyzed for TCL volatile organics plus a library search for non-target compounds.

METHODOLOGY

Volatile organics were determined using purge and trap GC/MS. The instrumentation used was a Tekmar Dynamic Headspace Concentrator interfaced with a Hewlett-Packard Model 5995 GC/MS/DS.

The analyses were conducted according to NYSDEC '91 Protocols.

RESULTS

The results are presented in the following Tables.

TABLE 1.0  
30930-0099  
ROUX ASSOCIATES  
EPA TCL VOLATILE ORGANICS

Aqueous

All values are ug/L.

<u>Dilution Factor</u>	<u>Sample Identification</u>			<u>Quantitation Limits with no Dilution</u>
	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	
<u>Method Blank I.D.</u>	<u>VBLKBJ</u>	<u>VBLKBJ</u>	<u>VBLKBJ</u>	
<u>Compound</u>	<u>Method Blank</u>	<u>TW-1</u>	<u>F-B</u>	
Chloromethane	U	U	U	
Bromomethane	U	U	U	10
Vinyl Chloride	U	U	U	10
Chloroethane	U	U	U	10
Methylene Chloride	2J	U	U	10
Acetone	U	U	5J	10
Carbon Disulfide	U	U	U	10
1,1-Dichloroethene	U	U	U	10
1,1-Dichloroethane	U	U	U	10
1,2-Dichloroethene (total)	U	U	U	10
Chloroform	U	U	U	10
1,2-Dichloroethane	U	U	U	10
2-Butanone	U	U	U	10
1,1,1-Trichloroethane	U	U	U	10
Carbon Tetrachloride	U	U	U	10
Bromodichloromethane	U	U	U	10
1,2-Dichloropropane	U	U	U	10
cis-1,3-Dichloropropene	U	U	U	10
Trichloroethene	U	U	U	10
Dibromochloromethane	U	U	U	10
1,1,2-Trichloroethane	U	U	U	10
Benzene	U	U	U	10
trans-1,3-Dichloropropene	U	U	U	10
Bromoform	U	U	U	10
4-Methyl-2-pentanone	U	U	U	10
2-Hexanone	U	U	U	10
Tetrachloroethene	U	U	U	10
1,1,2,2-Tetrachloroethane	U	U	U	10
Toluene	U	U	U	10
Chlorobenzene	U	U	U	10
Ethylbenzene	U	U	U	10
Styrene	U	U	U	10
Xylene (total)	U	U	U	10

U, J - See Appendix for definition.

Note: Sample detection limit = quantitation limit x dilution factor.

TABLE 1.1  
30930-0099  
ROUX ASSOCIATES  
EPA TCL VOLATILE ORGANICS

Aqueous

All values are ug/L.

Dilution Factor	Sample Identification					Quantitation Limits with no Dilution
	1.0	1.0	1.0	1.0	1.0	
Method Blank I.D.	VBLKBK	VBLKBK	VBLKBK	VBLKBK	VBLKBK	
Compound	Method Blank	TW-2	T-B	TW-1 MS	TW-1 MSD	
Chloromethane	U	U	U	U	U	10
Bromomethane	U	U	U	U	U	10
Vinyl Chloride	U	U	U	U	U	10
Chloroethane	U	U	U	0.5J	U	10
Methylene Chloride	2J	2JB	3JB	2JB	U	10
Acetone	U	13	U	U	U	10
Carbon Disulfide	U	U	U	U	U	10
1,1-Dichloroethene	U	U	U	61	71	10
1,1-Dichloroethane	U	U	U	U	U	10
1,2-Dichloroethene (total)	U	U	U	U	U	10
Chloroform	U	U	U	U	U	10
1,2-Dichloroethane	U	U	U	U	U	10
2-Butanone	U	U	U	U	U	10
1,1,1-Trichloroethane	U	U	U	U	U	10
Carbon Tetrachloride	U	U	U	U	U	10
Bromodichloromethane	U	U	U	U	U	10
1,2-Dichloropropane	U	U	U	U	U	10
cis-1,3-Dichloropropene	U	U	U	U	U	10
Trichloroethene	U	U	U	54	54	10
Dibromochloromethane	U	U	U	U	U	10
1,1,2-Trichloroethane	U	U	U	U	U	10
Benzene	U	U	U	48	50	10
trans-1,3-Dichloropropene	U	U	U	U	U	10
Bromoform	U	U	U	U	U	10
4-Methyl-2-pentanone	U	U	U	U	U	10
2-Hexanone	U	U	U	U	U	10
Tetrachloroethene	U	U	U	U	U	10
1,1,2,2-Tetrachloroethane	U	U	U	U	U	10
Toluene	1J	1JB	U	52B	53B	10
Chlorobenzene	U	U	U	48	54	10
Ethylbenzene	U	U	U	U	U	10
Styrene	U	U	U	U	U	10
Xylene (total)	U	U	U	U	U	10

U, J, B - See Appendix for definition.

Note: Sample detection limit = quantitation limit x dilution factor.

TABLE 2.0  
30930-0099  
ROUX ASSOCIATES  
VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS

Sample Identification: Method Blank VBLKBJ

<u>CAS#</u>	<u>Compound</u>	<u>RT</u>	<u>Estimated Concentration, ug/L</u>
None detected			

Sample Identification: TW-1

<u>CAS#</u>	<u>Compound</u>	<u>RT</u>	<u>Estimated Concentration, ug/L</u>
	Unknown C <sub>4</sub> alkyl benzene	24.84	160J
	Unknown alkyl benzene	22.15	140J
	Unknown aromatic	24.14	110J
	Unknown aromatic	25.03	95J
	Unknown C <sub>3</sub> alkyl benzene	21.44	83J
	Unknown C <sub>4</sub> alkyl benzene	25.42	82J
	Unknown C <sub>4</sub> alkyl benzene	23.40	72J
	Unknown aromatic	26.13	59J
	Unknown alkyl benzene	24.26	40J
	Unknown isomer diethyl benzene	24.42	26J

Sample Identification: F-B

<u>CAS#</u>	<u>Compound</u>	<u>RT</u>	<u>Estimated Concentration, ug/L</u>
None detected			

Sample Identification: Method Blank VBLKBK

<u>CAS#</u>	<u>Compound</u>	<u>RT</u>	<u>Estimated Concentration, ug/L</u>
None detected			

J - See Appendix for definition.

TABLE 2.1  
 30930-0099  
 ROUX ASSOCIATES  
VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS

Sample Identification: TW-2

<u>CAS#</u>	<u>Compound</u>	<u>RT</u>	<u>Estimated Concentration, ug/L</u>
	Unknown	25.02	8J
	Unknown C <sub>4</sub> alkyl benzene	24.82	7J

Sample Identification: T-B

<u>CAS#</u>	<u>Compound</u>	<u>RT</u>	<u>Estimated Concentration, ug/L</u>
	Unknown siloxane	25.03	9J

J - See Appendix for definition.

## APPENDIX

- U - Indicates that the compound was analyzed for but not detected.
- J - Indicates that the compound was analyzed for and determined to be present in the sample. The mass spectrum of the compound meets the identification criteria of the method. The concentration listed is an estimated value, which is less than the specified minimum detection limit but is greater than zero.
- B - This flag is used when the analyte is found in the blanks as well as the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.
- N - Indicates that the compound was analyzed for but not requested as an analyte. Value will not be listed on tabular result sheet.
- S - Estimated due to surrogate outliers.
- X - Matrix spike compound.
- (1) - Cannot be separated.
- (2) - Decomposes to azobenzene. Measured and calibrated as azobenzene.
- A - This flag indicates that a TIC is a suspected aldol condensation product.
- E - Indicates that it exceeds calibration curve range.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- C - Confirmed by GC/MS.
- T - Compound present in TCLP blank.
- P - This flag is used for a pesticide/aroclor target analyte when there is a greater than 25 percent difference for detected concentrations between the two GC columns (see Form X).

## STATE CERTIFICATIONS

In some instances it may be necessary for environmental data to be reported to a regulatory authority with reference to a certified laboratory. For your convenience, the laboratory identification numbers for the IEA-Connecticut laboratory are provided in the following table. Many states certify laboratories for specific parameters or tests within a category (i.e. method 325.2 for wastewater). The information in the following table indicates the lab is certified in a general category of testing such as drinking water or wastewater analysis. The laboratory should be contacted directly if parameter-specific certification information is required.

### IEA-Connecticut Certification Summary (as of June 1992)

State	Responsible Agency	Certification	Lab Number
Connecticut	Department of Health Services	Drinking Water, Wastewater	PH-0497
Kansas	Department of Health and Environmental Services	Drinking Water, Wastewater/Solid, Hazardous Waste	E-210/E-1185
Massachusetts	Department of Environmental Protection	Potable/Non-Potable Water	CT023
New Hampshire	Department of Environmental Services	Drinking Water, Wastewater	252891
New Jersey	Department of Environmental Protection	Drinking Water, Wastewater	46410
New York	Department of Health	CLP, Drinking Water, Wastewater, Solid/ Hazardous Waste	10602
North Carolina	Division of Environmental Management	Wastewater	388
Rhode Island	Department of Health	Chemistry...Non- Potable Water and Wastewater	A43