



UCAR CARBON COMPANY INC.

P.O. Box 513, Columbia, TN 38402-0513

(931) 388-1410

November 2, 2003

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NYSDEC - REG. 9
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~~REL~~ UNREL

Mr. Mark Hans, PE
Regional Solid Materials Engineer
NYS Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: UCAR Republic Landfill #32NO3

Dear Mr. Hans,

Please find enclosed a copy of the sampling results that were sent to Mary E. McIntosh, Engineering Geologist II of the New York State Department of Environmental Conservation Region 9 Office.

If you have any questions please feel free to call me at (716 (297-6772).

Very truly yours,

Robert Bucci
Consultant

R. Bucci

enc.

cc: Mr. Jim Devald, Dir. of Environmental Health
Niagara County Health Department
Environmental Division
5467 Upper Mountain Road
Lockport, New York 14094-1899

MJT
MM 2/11
log
signature

32NO3



UCAR CARBON COMPANY INC.

P.O. Box 513, Columbia, TN 38402-0513

(931) 388-1410

November 2, 2003

Ms. Mary F. McIntosh
Engineering Geologist II
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Ms. McIntosh:

Re: Semi-Annual Monitoring Event
UCAR Republic SWMF #32N03

The semi-annual monitoring event for the above-referenced Site was conducted during the week of September 8, 2003. The sample collection and analyses were performed in accordance with the program outlined in the letters from M. McIntosh (New York State Department of Environmental Conservation) to R. Bucci (UCAR), dated January 18, 2000 and February 23, 2000. A sample collection and analysis summary is presented in Table 1 and water level elevations measured prior to well purging are presented in Table 2.

Due to low well volumes and slow recharge no samples were collected from monitoring wells MW-1 or MW-2 during this monitoring event. These wells were purged to dryness and did not recover sufficient volume for sampling within 3 days following purging. (See "Field Sampling Plan, Post-Closure Monitoring Program" dated June 2000, Section 3.2.2.)

The analytical laboratory report for this sampling event is enclosed and the data are summarized in Table 3. The analytical data from this monitoring event are consistent with the historical data. An error was made in the collection of field samples. The duplicate sample collected was analyzed for only metals and general parameters. A field duplicate for volatile analyses was not collected during this monitoring event.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned. Again I would like to remind you that the UCAR Location in Niagara Falls has been closed. I will still be responsible for the landfill, please contact me at (716) 297-6772 or by mail at 3344 Wildwood Dr. Niagara Falls, New York 14304.

Yours truly,

Robert Bucci
Consultant

Encl.

c.c.: M. Hans
M. Hinton

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
 POST-CLOSURE MONITORING PROGRAM
 UCAR REPUBLIC SWMU #32NO3
 NIAGARA FALLS, NEW YORK
 SEPTEMBER 2003

Well I.D.	Purge Date	Sample Date	Sample Number	One Well Volume (Gallons)	Total Volume Purged (Gallons)	Turbidity (NTU)	Analytical Parameters			Misc. ¹¹ Parameters	Comments
							VOCs	Total Metals	Dissolved Metals		
MW-1	09/08/03	-	-	1.9	1.9	206					(2)
MW-2	09/08/03	-	-	0.5	0.5	267					(2)
MW-3	09/08/03	09/08/03	GW-5513-0903-003	0.64	1.8	13		x		x	
BW-1	09/08/03	09/08/03	GW-5513-0903-010	7.6	22.5	49	x	x		x	
BW-2	09/08/03	09/08/03	GW-5513-0903-005	11	33	50		x		x	Blind dupl.
			GW-5513-0903-006								
BW-3	09/08/03	09/08/03	GW-5513-0903-008	3.7	12	9	x	x		x	
BW-4	09/08/03	09/08/03	GW-5513-0903-009	5.6	16.5	35	x	x		x	
BW-5	09/08/03	09/08/03	GW-5513-0903-002	7.6	37.5	20		x		x	
BW-6	09/08/03	09/08/03	GW-5513-0903-007	8.4	34	67	x	x	x	x	
GW-8B	09/08/03	09/08/03	GW-5513-0903-001	6.5	19.5	8	x	x		x	MS/MSD
GW-9B	09/08/03	09/08/03	GW-5513-0903-004	6.6	18.5	63		x	x	x	

Notes:

(1) Nitrite, nitrogen, NO₂, ammonia, total kjeldahl nitrogen.

(2) Not sampled, insufficient volume.

MS Matrix Spike.

MSD Matrix Spike Duplicate.

NTU Nephelometric Turbidity Unit.

VOCs Volatile Organic Compounds.

TABLE 2

**HYDRAULIC MONITORING
POST-CLOSURE MONITORING PROGRAM
UCAR REPUBLIC SWMU #32NO3
NIAGARA FALLS, NEW YORK
SEPTEMBER 2003**

<i>Well I.D.</i>	<i>TOC Elevation (Ft. AMSL)</i>	<i>Depth to Water (Ft. BTOC)</i>	<i>Water Level Elevation (Ft. AMSL)</i>
MW-1	612.00	9.18	602.82
MW-2	608.17	23.81	584.36
MW-3	601.89	11.21	590.68
BW-1	610.72	17.89	592.83
BW-2	608.43	13.42	595.01
BW-3	604.72	13.45	591.27
BW-4	607.08	12.96	594.12
BW-5	603.33	10.10	593.23
BW-6	607.04	17.06	589.98
GW-8B	603.90	11.81	592.09
GW-9B	603.40	14.17	589.23

Notes:

AMSL	Above Mean Sea Level.
BTOC	Below Top of Casing.
Ft.	Feet.
NM	Not Measured.

TABLE 3

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UCAR CARBON COMPANY, INC.
NIAGARA FALLS, NY

		Sample ID: GW-5513-001	GW-5513-002	GW-5513-003	GW-5513-004	GW-5513-005	GW-5513-006	GW-5513-007	GW-5513-008	GW-5513-009	GW-5513-010
		Location ID: GW-8B	BW-5	MW-3	GW-9B	BW-2	BW-2	BW-6	BW-3	BW-4	BW-1
		Collection Date: 09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03
		(Field Dup.)									
Parameters	Units										
TCL Volatiles											
Acetone	µg/L	20 U	-	-	-	-	-	20 U	20 U	20 U	20 U
Benzene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	µg/L	10 U	-	-	-	-	-	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	10 U	-	-	-	-	-	10 U	10 U	10 U	10 U
Carbon tetrachloride	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.3
Chloroform	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	6.6	5.0 U
Chloromethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.3	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	24	-	-	-	-	-	5.0 U	5.0 U	500	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Ethyl benzene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	µg/L	10 U	-	-	-	-	-	10 U	10 U	10 U	10 U
Methylene chloride	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	µg/L	10 U	-	-	-	-	-	10 U	10 U	10 U	10 U
Styrene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	100	5.0 U
1,1,1-Trichloroethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UCAR CARBON COMPANY, INC.
NIAGARA FALLS, NY

		Sample ID: GW-5513-001	GW-5513-002	GW-5513-003	GW-5513-004	GW-5513-005	GW-5513-006	GW-5513-007	GW-5513-008	GW-5513-009	GW-5513-010
		Location ID: GW-8B	BW-5	MW-3	GW-9B	BW-2	BW-2	BW-6	BW-3	BW-4	BW-1
		Collection Date: 09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03	09/08/03
		(Field Dup.)									
Parameters	Units										
TCL Volatiles (Cont'd.)											
Trichloroethene	µg/L	12	-	-	-	-	-	5.0 U	5.0 U	330	5.0 U
Vinyl chloride	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	100	5.0 U
o-Xylenes	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
m/p-Xylenes	µg/L	5.0 U	-	-	-	-	-	5.0 U	5.0 U	5.0 U	5.0 U
Metals											
Iron (total)	mg/L	0.438	6.66	1.10	0.481	9.62	5.83	12.8	1.69	19.2	5.25
Potassium (total)	mg/L	6.38	2.63	2.25	4.44	7.05	6.94	2.09	3.54	23.5	5.62
Zinc (total)	mg/L	0.723	0.859	0.0200 U	0.0200 U	6.75	3.30	0.0208	0.201	6.08	5.87
Iron (dissolved)	mg/L	-	-	-	0.191	-	-	4.78	-	-	-
Potassium (dissolved)	mg/L	-	-	-	4.52	-	-	2.00 U	-	-	-
Zinc (dissolved)	mg/L	-	-	-	0.0200 U	-	-	0.0200 U	-	-	-
General Chemistry											
Ammonia	mg/L	0.066	0.142	0.0500 U	0.416	0.472	0.494	0.142	0.382	4.29	0.685
Nitrite	mg/L	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0116	0.0100 U	0.0110	0.0100 U	0.0235	0.0194
Total Kjeldahl Nitrogen	mg/L	0.245	0.426	0.343	0.827	1.18	1.24	0.462	0.699	4.19	1.25

Notes:

- Not applicable.

Dup. Duplicate.

TCL Target Compound List

U Non-detect at associated value.



1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

32103 6205
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FEB 18 2004

NYSDEC REG 9
FOIL
REL UNREL

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Lab Submission # : R2318349
Project Manager : Mark Wilson
Reported : 10/15/03

Report Contains a total of 56 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael K. Perry*



CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2318349

<u>Lab ID</u>	<u>Client ID</u>
670795	GW-5513-0903-001
670796	GW-5513-0903-007
670797	GW-5513-0903-008
670798	GW-5513-0903-009
670799	GW-5513-0903-010
670800	GW-5513-0903-002
670801	GW-5513-0903-003
670802	GW-5513-0903-004
670803	GW-5513-0903-005
670804	GW-5513-0903-006
670805	TRIP BLANK
670806	GW-5513-0903-004 diss
670807	GW-5513-0903-007 diss

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.



Effective 6/12/2003

ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The 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.
- 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.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a 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".
- 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 instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.
- * - This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
 Delaware Accredited
 Connecticut ID # PH0556
 Florida ID # E87674
 Massachusetts ID # M-NY032
 Navy Facilities Engineering Service Center Approved
 Nebraska Accredited

NELAP Accredited
 New York ID # 10145
 New Jersey ID # NY004
 New Hampshire ID # 294100 A/B
 Pennsylvania Registration 68-786
 Rhode Island ID # 158
 South Carolina ID #91012
 West Virginia ID # 292



Effective 6/12/2003

INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- D - Spike was diluted out
- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- * - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
 Delaware Accredited
 Connecticut ID # PH0556
 Florida ID # E87674
 Massachusetts ID # M-NY032
 Navy Facilities Engineering Service Center Approved
 Nebraska Accredited
 NELAP Accredited

New York ID # 10145
 New Jersey ID # NY004
 New Hampshire ID # 294100 A/B
 Pennsylvania Registration 68-786
 Rhode Island ID # 158
 South Carolina ID #91012
 West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-001

Date Sampled : 09/08/03 10:45 Order #: 670795 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.0664	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.245	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-001

Date Sampled : 09/08/03 10:45 Order #: 670795 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	0.438	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	6.38	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.723	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS

METHOD 8260B.360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-001

Date Sampled : 09/08/03 10:45 Order #: 670795

Sample Matrix: WATER

Date Received: 09/09/03 Submission #: R2318349

Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	24	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	12	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B 360 BASELINE
Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-001

Date Sampled : 09/08/03 10:45 Order #: 670795 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
VINYL ACETATE	10	10 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(83 - 118 %)	110	%
TOLUENE-d8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	104	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-007

Date Sampled : 09/08/03 14:40 Order #: 670796 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349.

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.142	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0110	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.462	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-007

Date Sampled : 09/08/03 14:40	Order #: 670796	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	12.8	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	2.09	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.0208	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-007 diss

Date Sampled : 09/08/03	Order #: 670807	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	4.78	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	2.00 U	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.0200 U	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B 360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-007

Date Sampled : 09/08/03 14:40 Order #: 670796

Sample Matrix: WATER

Date Received: 09/09/03 Submission #: R2318349

Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/11/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B.360 BASELINE
Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-007

Date Sampled : 09/08/03 14:40 Order #: 670796 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/11/03			
ANALYTICAL DILUTION: 1.00			
VINYL ACETATE	10	10 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(83 - 118 %)	108	%
TOLUENE-d8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	104	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-008

Date Sampled : 09/08/03 15:15	Order #: 670797	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.382	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.699	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-008

Date Sampled : 09/08/03 15:15 Order #: 670797 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	1.69	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	3.54	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.201	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B.360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-008

Date Sampled : 09/08/03 15:15 Order #: 670797

Sample Matrix: WATER

Date Received: 09/09/03 Submission #: R2318349

Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS

METHOD 8260B 360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-008

Date Sampled : 09/08/03 15:15 Order #: 670797 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
VINYL ACETATE	10	10 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(83 - 118 %)	106	%
TOLUENE-d8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-009

Date Sampled : 09/08/03 15:42	Order #: 670798	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	4.29	MG/L	09/15/03	13:44	4.0
NITRITE NITROGEN	353.2	0.0100	0.0235	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	4.19	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-009

Date Sampled : 09/08/03 15:42 Order #: 670798 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	19.2	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	23.5	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	6.08	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B 360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-009

Date Sampled : 09/08/03 15:42 Order #: 670798

Sample Matrix: WATER

Date Received: 09/09/03 Submission #: R2318349

Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	6.6	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.3	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	480 E	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	100	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	310 E	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B 360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-009

Date Sampled : 09/08/03 15:42 Order #: 670798 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 09/10/03		
ANALYTICAL DILUTION:	1.00		
VINYL ACETATE	10	10 U	UG/L
VINYL CHLORIDE	5.0	100	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(83 - 118 %)	107	%
TOLUENE-d8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS

METHOD 8260B 360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-009

Date Sampled : 09/08/03 15:42 Order #: 670798

Sample Matrix: WATER

Date Received: 09/09/03 Submission #: R2318349

Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/11/00			
ANALYTICAL DILUTION: 5.00			
ACETONE	20	100 U	UG/L
ACRYLONITRILE	100	500 U	UG/L
BENZENE	5.0	25 U	UG/L
BROMOCHLOROMETHANE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	25 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	25 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25 U	UG/L
1,2-DIBROMOETHANE	5.0	25 U	UG/L
DIBROMOMETHANE	5.0	25 U	UG/L
1,4-DICHLOROBENZENE	5.0	25 U	UG/L
1,2-DICHLOROBENZENE	5.0	25 U	UG/L
1,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	500	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
IODOMETHANE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	93	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	330	UG/L
TRICHLOROFLUOROMETHANE	5.0	25 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	25 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B 360 BASELINE
Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-009

Date Sampled : 09/08/03 15:42 Order #: 670798 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/11/00			
ANALYTICAL DILUTION: 5.00			
VINYL ACETATE	10	50 U	UG/L
VINYL CHLORIDE	5.0	95	UG/L
M+P-XYLENE	5.0	25 U	UG/L
O-XYLENE	5.0	25 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(83 - 118 %)	111	%
TOLUENE-d8	(88 - 124 %)	111	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-010

Date Sampled : 09/08/03 16:20	Order #: 670799	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.685	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0194	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	1.25	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-010

Date Sampled : 09/08/03 16:20	Order #: 670799	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	5.25	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	5.62	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	5.87	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B.360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-010

Date Sampled : 09/08/03 16:20 Order #: 670799

Sample Matrix: WATER

Date Received: 09/09/03 Submission #: R2318349

Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 09/11/03		
ANALYTICAL DILUTION:	1.00		
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.3	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B 360 BASELINE

Reported: 10/15/03

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL 5513

Client Sample ID : GW-5513-0903-010

Date Sampled : 09/08/03 16:20 Order #: 670799 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 09/11/03		
ANALYTICAL DILUTION:	1.00		
VINYL ACETATE	10	10 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(83 - 118 %)	111	%
TOLUENE-d8	(88 - 124 %)	112	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-002

Date Sampled : 09/08/03 11:40	Order #: 670800	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.142	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.426	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-002

Date Sampled : 09/08/03 11:40 Order #: 670800 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	6.66	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	2.63	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.859	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-003

Date Sampled : 09/08/03 12:10 Order #: 670801 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.0500 U	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.343	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-003

Date Sampled : 09/08/03 12:10	Order #: 670801	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	1.10	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	2.25	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.0200 U	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-004

Date Sampled : 09/08/03 12:35 Order #: 670802 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.416	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.827	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-004

Date Sampled : 09/08/03 12:35	Order #: 670802	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	0.481	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	4.44	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.0200 U	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-004 diss

Date Sampled : 09/08/03	Order #: 670806	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	0.191	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	4.52	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	0.0200 U	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-005

Date Sampled : 09/08/03 13:45	Order #: 670803	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE	TIME	DILUTION
					ANALYZED	ANALYZED	
AMMONIA	350.1	0.0500	0.472	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0116	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	1.18	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-005

Date Sampled : 09/08/03 13:45 Order #: 670803 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	9.62	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	7.05	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	6.75	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-006

Date Sampled : 09/08/03 13:55	Order #: 670804	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE	TIME	DILUTION
					ANALYZED	ANALYZED	
AMMONIA	350.1	0.0500	0.494	MG/L	09/15/03	13:44	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/10/03	10:39	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	1.24	MG/L	09/23/03	08:48	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : GW-5513-0903-006

Date Sampled : 09/08/03 13:55	Order #: 670804	Sample Matrix: WATER
Date Received: 09/09/03	Submission #: R2318349	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
IRON	6010B	0.100	5.83	MG/L	09/26/03	1.0
POTASSIUM	6010B	2.00	6.94	MG/L	09/26/03	1.0
ZINC	6010B	0.0200	3.30	MG/L	09/26/03	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B 360 BASELINE
Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : TRIP BLANK

Date Sampled : 09/08/03 Order #: 670805 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B 360 BASELINE
Reported: 10/15/03

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL 5513
Client Sample ID : TRIP BLANK

Date Sampled : 09/08/03 Order #: 670805 Sample Matrix: WATER
Date Received: 09/09/03 Submission #: R2318349 Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
VINYL ACETATE	10	10 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
BROMOFLUOROBENZENE	(83 - 118 %)	109	%
TOLUENE-d8	(88 - 124 %)	112	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES**INORGANIC BLANK SPIKE SUMMARY**

CAS Submission #: R2318349

Client: Conestoga Rovers & Associates

UCAR SEMIANNUAL 5513

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
IRON	0.100 U	1.05	1.00	105	80 - 120	95875	MG/L
POTASSIUM	2.00 U	20.4	20.0	102	80 - 120	95875	MG/L
ZINC	0.0200 U	0.542	0.500	108	80 - 120	95875	MG/L
NITRITE NITROGEN	0.0100 U	0.264	0.250	106	90 - 110	95221	MG/L
AMMONIA	0.0500 U	0.514	0.500	103	90 - 110	95338	MG/L
TOTAL KJELDAHL NITROGEN	0.200 U	2.34	2.50	94	63 - 116	95586	MG/L

COLUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/15/03
CAS Order # : 670795 - GW-5513-0903-001
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL 5513
Reported Units: MG/L
Run # : 95875

	PRECISION			ACCURACY		
	ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC. LIMITS
IRON	0.438	0.388	12	1.49	1.00	105 75 - 125
POTASSIUM	6.38	6.10	4	26.9	20.0	103 75 - 125
ZINC	0.723	0.696	4	1.24	0.500	103 75 - 125

COLUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/15/03
CAS Order # : 670795 - GW-5513-0903-001
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL 5513
Reported Units: MG/L
Run # : 95221

PRECISION

ACCURACY

ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
0.0100 U	0.0100 U	NC	0.264	0.250	105	45 - 148

NITRITE NITROGEN

COLUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/15/03
CAS Order # : 670795 - GW-5513-0903-001
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL 5513
Reported Units: MG/L
Run # : 95338

PRECISION			ACCURACY			
ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
0.0664	0.0716	8	0.454	0.500	78	65 - 127

MMONIA

COLUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/15/03
CAS Order # : 670795 - GW-5513-0903-001
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL 5513
Reported Units: MG/L
Run # : 95586

	PRECISION			ACCURACY			
	ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
TOTAL KJELDAHL NITROGEN	0.245	0.226	8	2.51	2.50	90	55 - 128

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
WATER

Spiked Order No. : 670795 Conestoga Rovers & Associates

Client ID: GW-5513-0903-001

Test: 8260B 360 BASELINE

Analytical Units: UG/L

Run Number : 95320

ANALYTE	SPIKE ADDED	CONCENT. SAMPLE	MATRIX SPIKE		MATRIX SPIKE DUP.				QC LIMITS	
			FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.	
BENZENE	50.0	0	46.0	92	41.0	82	11	30	62 - 122	
CHLOROBENZENE	50.0	0	42.0	84	37.0	74	13	30	70 - 130	
1,1-DICHLOROETHENE	50.0	0	50.0	100	44.0	88	13	30	68 - 114	
TOLUENE	50.0	0	44.0	88	39.0	78	12	30	70 - 130	
TRICHLOROETHENE	50.0	12.0	53.0	82	50.0	76	6	30	68 - 114	

UMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B 360 BASELINE

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 671739 ANALYTICAL RUN #: 95320

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 9/10/2003			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	86	50 - 150
ACRYLONITRILE	100	92	50 - 150
BENZENE	20.0	102	70 - 130
BROMOCHLOROMETHANE	20.0	104	70 - 130
BROMODICHLOROMETHANE	20.0	96	70 - 130
BROMOFORM	20.0	83	70 - 130
BROMOMETHANE	20.0	103	50 - 150
2-BUTANONE (MEK)	20.0	91	50 - 150
TRANS-1,4-DICHLORO-2-BUTENE	20.0	88	50 - 150
CARBON DISULFIDE	20.0	92	70 - 130
CARBON TETRACHLORIDE	20.0	83	70 - 130
CHLOROBENZENE	20.0	94	70 - 130
CHLOROETHANE	20.0	96	70 - 130
CHLOROFORM	20.0	105	70 - 130
CHLOROMETHANE	20.0	110	70 - 130
1,2-DIBROMO-3-CHLOROPROPANE	20.0	75	50 - 150
DIBROMOCHLOROMETHANE	20.0	89	70 - 130
1,2-DIBROMOETHANE	20.0	91	70 - 130
DIBROMOMETHANE	20.0	100	70 - 130
1,4-DICHLOROBENZENE	20.0	89	70 - 130
1,2-DICHLOROBENZENE	20.0	89	70 - 130
1,1-DICHLOROETHANE	20.0	98	70 - 130
1,2-DICHLOROETHANE	20.0	89	70 - 130
1,1-DICHLOROETHENE	20.0	109	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	111	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	111	70 - 130
1,2-DICHLOROPROPANE	20.0	94	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	96	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	92	70 - 130
ETHYLBENZENE	20.0	91	70 - 130
2-HEXANONE	20.0	80	70 - 130
IODOMETHANE	20.0	69	50 - 150
METHYLENE CHLORIDE	20.0	112	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	90	70 - 130
STYRENE	20.0	92	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	92	70 - 130
1,1,1,2-TETRACHLOROETHANE	20.0	88	70 - 130
TETRACHLOROETHENE	20.0	83	70 - 130
TOLUENE	20.0	98	70 - 130
1,1,1-TRICHLOROETHANE	20.0	97	70 - 130
1,1,2-TRICHLOROETHANE	20.0	98	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B 360 BASELINE

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 671739 ANALYTICAL RUN #: 95320

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 9/10/2003			
ANALYTICAL DILUTION: 1.0			
TRICHLOROETHENE	20.0	96	70 - 130
TRICHLOROFLUOROMETHANE	20.0	93	70 - 130
1,2,3-TRICHLOROPROPANE	20.0	85	70 - 130
VINYL ACETATE	20.0	78	50 - 150
VINYL CHLORIDE	20.0	105	70 - 130
M+P-XYLENE	40.0	92	70 - 130
O-XYLENE	20.0	90	70 - 130

COLUMBIA ANALYTICAL SERVICESVOLATILE ORGANICS
METHOD: 8260B 360 BASELINELABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 671745 ANALYTICAL RUN #: 95320

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 9/11/2003			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	102	50 - 150
ACRYLONITRILE	100	102	50 - 150
BENZENE	20.0	98	70 - 130
BROMOCHLOROMETHANE	20.0	99	70 - 130
BROMODICHLOROMETHANE	20.0	90	70 - 130
BROMOFORM	20.0	82	70 - 130
BROMOMETHANE	20.0	96	50 - 150
2-BUTANONE (MEK)	20.0	101	50 - 150
TRANS-1,4-DICHLORO-2-BUTENE	20.0	91	50 - 150
CARBON DISULFIDE	20.0	78	70 - 130
CARBON TETRACHLORIDE	20.0	86	70 - 130
CHLOROBENZENE	20.0	94	70 - 130
CHLOROETHANE	20.0	101	70 - 130
CHLOROFORM	20.0	102	70 - 130
CHLOROMETHANE	20.0	106	70 - 130
1,2-DIBROMO-3-CHLOROPROPANE	20.0	80	50 - 150
DIBROMOCHLOROMETHANE	20.0	83	70 - 130
1,2-DIBROMOETHANE	20.0	89	70 - 130
DIBROMOMETHANE	20.0	98	70 - 130
1,4-DICHLOROBENZENE	20.0	89	70 - 130
1,2-DICHLOROBENZENE	20.0	89	70 - 130
1,1-DICHLOROETHANE	20.0	97	70 - 130
1,2-DICHLOROETHANE	20.0	90	70 - 130
1,1-DICHLOROETHENE	20.0	107	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	101	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	106	70 - 130
1,2-DICHLOROPROPANE	20.0	90	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	94	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	92	70 - 130
ETHYLBENZENE	20.0	89	70 - 130
2-HEXANONE	20.0	83	70 - 130
IODOMETHANE	20.0	50	50 - 150
METHYLENE CHLORIDE	20.0	105	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	96	70 - 130
STYRENE	20.0	88	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	102	70 - 130
1,1,1,2-TETRACHLOROETHANE	20.0	84	70 - 130
PETRACHLOROETHENE	20.0	82	70 - 130
TOLUENE	20.0	97	70 - 130
1,1,1-TRICHLOROETHANE	20.0	98	70 - 130
1,1,2-TRICHLOROETHANE	20.0	97	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B 360 BASELINE

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 671745 ANALYTICAL RUN #: 95320

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 9/11/2003			
ANALYTICAL DILUTION: 1.0			
TRICHLOROETHENE	20.0	101	70 - 130
TRICHLOROFLUOROMETHANE	20.0	95	70 - 130
1,2,3-TRICHLOROPROPANE	20.0	89	70 - 130
VINYL ACETATE	20.0	75	50 - 150
VINYL CHLORIDE	20.0	101	70 - 130
M+P-XYLENE	40.0	91	70 - 130
O-XYLENE	20.0	87	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS

METHOD 8260B, 360 BASELINE

Reported: 10/15/03

Project Reference:

Client Sample ID : METHOD BLANK

Date Sampled :	Order #: 671738	Sample Matrix: WATER
Date Received:	Submission #:	Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/10/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L
VINYL ACETATE	10	10 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B 360 BASELINE
Reported: 10/15/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :	Order #: 671738	Sample Matrix: WATER
Date Received:	Submission #:	Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 09/10/03		
ANALYTICAL DILUTION:	1.00		
VINYL CHLORIDE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
BROMOFLUOROBENZENE	(83 - 118 %)	108	%
TOLUENE-d8	(88 - 124 %)	112	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B.360 BASELINE
Reported: 10/15/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : Order #: 671744 Sample Matrix: WATER
Date Received: Submission #: Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/11/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
ACRYLONITRILE	100	100 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMOCHLOROMETHANE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
TRANS-1,4-DICHLORO-2-BUTENE	5.0	5.0 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DIBROMOETHANE	5.0	5.0 U	UG/L
DIBROMOMETHANE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
IODOMETHANE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
1,1,1,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/L
1,2,3-TRICHLOROPROPANE	5.0	5.0 U	UG/L
VINYL ACETATE	10	10 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B 360 BASELINE
Reported: 10/15/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :	Order #: 671744	Sample Matrix: WATER
Date Received:	Submission #:	Analytical Run 95320

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/11/03			
ANALYTICAL DILUTION: 1.00			
VINYL CHLORIDE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(83 - 118 %)	110	%
TOLUENE-d8	(88 - 124 %)	111	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

CHAIN OF CUSTODY RECORD KLS18344



CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, N.Y. 14304 (716) 297-6150

SHIPPED TO (Laboratory Name):

Columbia

REFERENCE NUMBER: 5513

U-CAR Semi Annual
Gw Sampling

SAMPLER'S SIGNATURE:

David Tyran

PRINTED NAME:

David Tyran

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	PARAMETERS										REMARKS
						PH	NO ₃ -N	NO ₂ -N	NO ₃ -N	NO ₂ -N	NO ₃ -N	NO ₂ -N	NO ₃ -N	NO ₂ -N	NO ₃ -N	
	9-8-03	1045	Gw-5513-0903-001	water	12	6	2	2	2							670795
		1140	Gw-5513-0903-002		3											800
		1210	Gw-5513-0903-003		3											01
		1235	Gw-5513-0903-004		4											02/06
		1345	Gw-5513-0903-005		3											03
		1355	Gw-5513-0903-006		3											04
		1440	Gw-5513-0903-007		7	3	1	1	1	1						96/07
		1515	Gw-5513-0903-008		6	3	1	1	1	1						97
		1542	Gw-5513-0903-009		6	3	1	1	1	1						98
		1620	Gw-5513-0903-010		6	3	1	1	1	1						99
			TRIP BLANK	Lab water	3											05

Note: Matrix Spike / Matrix Spike Duplicate Volume taken for Sample 001

TOTAL NUMBER OF CONTAINERS

56

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY:

①

David Tyran

DATE: 9/8/03

TIME: 1800

RECEIVED BY:

①

J. Pietraszek CAS

DATE: 9/9/03

TIME: 1225

RELINQUISHED BY:

②

J. Pietraszek CAS

DATE: 9/9/03

TIME: 1800

RECEIVED BY:

②

DATE:

TIME:

RELINQUISHED BY:

③

DATE:

TIME:

RECEIVED BY:

③

DATE:

TIME:

METHOD OF SHIPMENT: Courier

WAY BILL No.

White
Yellow
Pink
Goldenrod

-Fully Executed Copy
-Receiving Laboratory Copy
-Shipper Copy
-Sampler Copy

SAMPLE TEAM:

J. Pietraszek

D. Tyran

RECEIVED FOR LABORATORY BY:

J. Pietraszek

NO N 1335

DATE: 9/9/03 TIME: 1500

Cooler Receipt And Preservation Check Form

Project/Client CRAI Submission Number R23-18349

Cooler received on 9/4/03 by: [Signature] COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 3°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 9/4/03 1500

Thermometer ID: 161 or IR GUN Reading From: Temp Blank or Sample Bottle

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 9/10/03 by: [Signature]

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
 2. Did all bottle labels and tags agree with custody papers? YES NO
 3. Were correct containers used for the tests indicated? YES NO
 4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A
- Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO ₃	X				
2	H ₂ SO ₄	X				
Residual Chlorine (+/-)	for TCN & Phenol					
5-9**	P/PCBs (608 only)					

YES = All samples OK

NO = Samples were preserved at lab as listed

PC OK to adjust pH

**If pH adjustment is required, use NaOH and/or H₂SO₄

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments: