



UCAR CARBON COMPANY INC.

32N03 6W63

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

(931) 388-1410

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32N03

November 18, 2002

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

Dear Ms. McIntosh:

SUBJECT: 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 23, 2002. 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.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned. Just to let you know that the UCAR location in Niagara Falls has closed it's office, I will still be responsible for the landfill, you may contact me at (716) 297-6772 or by mail at 3344 Wildwood Dr Niagara Falls, New York 14304.

Yours truly,

A handwritten signature in black ink, appearing to read 'Robert Bucci', with a stylized, cursive script.

Robert Bucci
Consultant

R. Bucci

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

Well I.D.	Purge Date	Sample Date	One Well Volume (Gallons)	Total Volume Purged (Gallons)	Turbidity (NTU)	Analytical Parameters			Misc. ⁽¹⁾ Parameters	Comments
						VOCs	Total Metals	Dissolved Metals		
MW-1	09/24/02	-	2.0	2.0	16					(2)
MW-2	09/24/02	-	0.6	0.6	360					(2)
MW-3	09/24/02	09/24/02	0.15	0.45	0		x		x	
BW-1	09/24/02	09/24/02	8.1	24	0	x	x		x	
BW-2	09/24/02	09/24/02	9.5	28.5	0		x		x	MS/MSD
BW-3	09/24/02	09/24/02	3.1	9	0	x	x		x	
BW-4	09/24/02	09/24/02	4.6	15	46	x	x		x	
BW-5	09/24/02	09/24/02	6	18	0		x		x	
BW-6	09/24/02	09/24/02	7.2	30	2	x	x		x	
GW-8B	09/24/02	09/24/02	5.8	18	0	x	x		x	
GW-9B	09/24/02	09/24/02	5.7	18	0		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
SAMPLE KEY
POST-CLOSURE MONITORING PROGRAM
UCAR REPUBLIC SWMU #32NO3
NIAGARA FALLS, NEW YORK
SEPTEMBER 2002

<i>Sample I.D.</i>	<i>Well I.D.</i>	<i>Sample Time</i>	<i>Date</i>	<i>Comments</i>
GW-5513- 01	MW-3	1025	09/23/02	
GW-5513- 02	BW-6	1140	09/23/02	
GW-5513- 03	BW-2	1230	09/23/02	MS/MSD
GW-5513- 04	BW-3	1315	09/23/02	
GW-5513- 05	BW-5	1345	09/23/02	
GW-5513- 06	GW-9B	1430	09/23/02	
GW-5513- 07	BW-1	1520	09/23/02	
GW-5513- 08	BW-1	1600	09/23/02	Blind Duplicate
GW-5513- 09	GW-8B	1605	09/23/02	
GW-5513- 10	BW-4	1640	09/23/02	

Notes:

MS Matrix Spike.

MSD Matrix Spike Duplicate.

TABLE 2
SUMMARY OF WATER LEVEL ELEVATIONS
POST-CLOSURE MONITORING PROGRAM
UCAR REPUBLIC SWMU #32NO3
NIAGARA FALLS, NEW YORK

<i>Well No.</i>	<i>TOC Elevation (ft. AMSL)</i>	<i>Water Level Elevation (ft. AMSL)</i>				
		<i>Sep-00</i>	<i>Mar-01</i>	<i>Sep-01</i>	<i>Mar-02</i>	<i>Sep-02</i>
MW-1	612.00	603.77	601.80	603.10	604.40	602.48
MW-2	608.17	585.27	584.57	584.63	584.14	584.41
MW-3	601.89	591.19	599.27	587.50	598.32	587.58
BW-1	610.72	593.02	596.64	593.77	596.72	593.66
BW-2	608.43	595.00	597.18	592.98	599.22	592.73
BW-3	604.72	590.32	598.52	589.72	600.11	589.58
BW-4	607.08	594.83	600.19	592.26	601.47	591.95
BW-5	603.33	590.93	599.21	590.97	601.75	590.86
BW-6	607.04	594.54	595.47	593.49	592.88	588.13
GW-8B	603.90	574.40	596.64	591.62	596.70	590.09
GW-9B	603.40	589.83	591.73	587.64	592.54	587.09

Notes:

ft. AMSL Feet Above Mean Sea Level.

TOC Top of Casing

TABLE 3

ANALYTICAL RESULTS SUMMARY
POST-CLOSURE MONITORING PROGRAM
UCAR REPUBLIC SWMU #32NO3
NIAGARA FALLS, NEW YORK

	Sample ID:	GW-5513-01	GW-5513-02	GW-5513-03	GW-5513-04	GW-5513-05	GW-5513-06	GW-5513-07	GW-5513-08	GW-5513-09	GW-5513-10
	Location ID:	MW-3	BW-6	BW-2	BW-3	BW-5	GW-9B	BW-1	BW-1	GW-8B	BW-4
	Collection Date:	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02
Parameters	Units	(field duplicate)									
TCL Volatiles											
Acetone	µg/L	-	20 U	-	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	5.0 U
Bromodichloromethane	µg/L	-	5.0 U	-	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	5.0 U
Bromomethane	µg/L	-	5.0 U	-	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	10 U
Carbon disulfide	µg/L	-	10 U	-	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	5.0 U
Chlorobenzene	µg/L	-	5.0 U	-	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	6.1	5.0 U	5.0 U
Chloroform	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	5.0 U	8.3
Chloromethane	µg/L	-	5.0 U	-	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	5.0 U
1,1-Dichloroethane	µg/L	-	5.0 U	-	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	5.0 U
1,1-Dichloroethene	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	27	300
trans-1,2-Dichloroethene	µg/L	-	5.0 U	-	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	5.0 U
cis-1,3-Dichloropropene	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	-	5.0 U	-	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	5.0 U
2-Hexanone	µg/L	-	10 U	-	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	5.0 U
4-Methyl-2-pentanone	µg/L	-	10 U	-	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	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	5.0 U
Tetrachloroethene	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	5.0 U	230
1,1,1-Trichloroethane	µg/L	-	5.0 U	-	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	5.0 U
Toluene	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	5.0 U	5.0 U

TABLE 3

**ANALYTICAL RESULTS SUMMARY
POST-CLOSURE MONITORING PROGRAM
UCAR REPUBLIC SWMU #32NO3
NIAGARA FALLS, NEW YORK**

	Sample ID:	GW-5513-01	GW-5513-02	GW-5513-03	GW-5513-04	GW-5513-05	GW-5513-06	GW-5513-07	GW-5513-08	GW-5513-09	GW-5513-10
	Location ID:	MW-3	BW-6	BW-2	BW-3	BW-5	GW-9B	BW-1	BW-1	GW-8B	BW-4
	Collection Date:	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02	09/23/02
Parameters	Units	(field duplicate)									
TCL Volatiles (Cont'd.)											
Trichloroethene	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	10	420
Vinyl chloride	µg/L	-	5.0 U	-	5.0 U	-	-	5.0 U	5.0 U	5.0 U	59
o-Xylenes	µg/L	-	5.0 U	-	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	5.0 U
Metals											
Iron (total)	mg/L	7.10	5.92	1.28	0.878	5.17	0.327	1.55	1.68	0.288	15.1
Potassium (total)	mg/L	2.50	2.00 U	6.78	3.71	3.11	4.55	5.97	6.26	6.69	25.6
Zinc (total)	mg/L	0.0292	0.0200 U	0.180	0.0227	0.401	0.0445	1.47	1.36	0.596	0.304
General Chemistry											
Ammonia	mg/L	0.0500 U	0.104	0.607	0.467	0.150	0.469	0.769	0.758	0.0585	4.89
Nitrite	mg/L	0.0114	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0114
Total Kjeldahl Nitrogen	mg/L	0.450	0.416	1.19	0.824	0.365	0.830	1.24	1.21	0.200 U	5.12

Notes:

- Not applicable.

TCL Target Compound List

U Non-detect at associated value.

32NO3. 6.12.03



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

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THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513
Lab Submission # : R2213884
Project Manager : Mark Wilson
Reported : 10/17/02

Report Contains a total of 16 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. Ferris*



CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2213884

<u>Lab ID</u>	<u>Client ID</u>
587021	GW-5513-01
587022	GW-5513-02
587023	GW-5513-03
587024	GW-5513-04
587025	GW-5513-05
587026	GW-5513-06
587027	GW-5513-07
587028	GW-5513-08
587029	GW-5513-09
587030	GW-5513-10
587031	TRIP BLANK

All samples were received in good condition.

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 6/18/2002

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.

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
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292



Effective 6/28/2002

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:

- 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
Rhode Island ID # 158
South Carolina ID # 91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-01

Date Sampled : 09/23/02 10:25

Order #: 587021

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIO
AMMONIA	350.1	0.0500	0.0500 U	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0114	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.450	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-01

Date Sampled : 09/23/02 10:25

Order #: 587021

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIO
IRON	6010B	0.100	7.10	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	2.50	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.0292	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-02

Date Sampled : 09/23/02 11:40
Date Received: 09/24/02

Order #: 587022
Submission #: R2213884

Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIC
AMMONIA	350.1	0.0500	0.104	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.416	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-02

Date Sampled : 09/23/02 11:40

Order #: 587022

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIO
IRON	6010B	0.100	5.92	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	2.00 U	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.0200 U	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B TCL

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-02

Date Sampled : 09/23/02 11:40 Order #: 587022 Sample Matrix: WATER
Date Received: 09/24/02 Submission #: R2213884 Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 10/05/02		
ANALYTICAL DILUTION:	1.00		
ACETONE	20	20 U	UG/L
BENZENE	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
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
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-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
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
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
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	100	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	100	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513
Client Sample ID : GW-5513-03

Date Sampled : 09/23/02 12:30	Order #: 587023	Sample Matrix: WATER
Date Received: 09/24/02	Submission #: R2213884	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIC
AMMONIA	350.1	0.0500	0.607	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	1.19	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513
Client Sample ID : GW-5513-03

Date Sampled : 09/23/02 12:30	Order #: 587023	Sample Matrix: WATER
Date Received: 09/24/02	Submission #: R2213884	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIO
IRON	6010B	0.100	1.28	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	6.78	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.180	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513
Client Sample ID : GW-5513-04

Date Sampled : 09/23/02 13:15	Order #: 587024	Sample Matrix: WATER
Date Received: 09/24/02	Submission #: R2213884	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIC
AMMONIA	350.1	0.0500	0.467	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.824	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-04

Date Sampled : 09/23/02 13:15

Order #: 587024

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIO
IRON	6010B	0.100	0.878	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	3.71	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.0227	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B TCL

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-04

Date Sampled : 09/23/02 13:15 Order #: 587024 Sample Matrix: WATER
Date Received: 09/24/02 Submission #: R2213884 Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/04/02			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	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
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
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-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
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
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
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIESQC LIMITS

4-BROMOFLUOROBENZENE	(83 - 118 %)	96	%
TOLUENE-D8	(91 - 113 %)	101	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	100	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-05

Date Sampled : 09/23/02 13:45

Order #: 587025

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIO
AMMONIA	350.1	0.0500	0.150	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.365	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-05

Date Sampled : 09/23/02 13:45

Order #: 587025

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIO
IRON	6010B	0.100	5.17	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	3.11	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.401	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-06

Date Sampled : 09/23/02 14:30

Order #: 587026

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIO
AMMONIA	350.1	0.0500	0.469	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.830	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513
Client Sample ID : GW-5513-06

Date Sampled : 09/23/02 14:30	Order #: 587026	Sample Matrix: WATER
Date Received: 09/24/02	Submission #: R2213884	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIC
IRON	6010B	0.100	0.327	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	4.55	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.0445	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513
Client Sample ID : GW-5513-07

Date Sampled : 09/23/02 15:20	Order #: 587027	Sample Matrix: WATER
Date Received: 09/24/02	Submission #: R2213884	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIO
AMMONIA	350.1	0.0500	0.769	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	1.24	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-07

Date Sampled : 09/23/02 15:20

Order #: 587027

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIC
IRON	6010B	0.100	1.55	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	5.97	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	1.47	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMI-ANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-07

Date Sampled : 09/23/02 15:20 Order #: 587027 Sample Matrix: WATER
Date Received: 09/24/02 Submission #: R2213884 Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/04/02			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	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
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
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-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
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
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
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	93	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	98	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-08

Date Sampled : 09/23/02 16:00

Order #: 587028

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIO
AMMONIA	350.1	0.0500	0.758	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	1.21	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates
Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513
Client Sample ID : GW-5513-08

Date Sampled : 09/23/02 16:00	Order #: 587028	Sample Matrix: WATER
Date Received: 09/24/02	Submission #: R2213884	

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIO
IRON	6010B	0.100	1.68	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	6.26	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	1.36	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B TCL

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-08

Date Sampled : 09/23/02 16:00 Order #: 587028 Sample Matrix: WATER
Date Received: 09/24/02 Submission #: R2213884 Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/05/02			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	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
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	6.1	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-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
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
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
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	99	%
TOLUENE-D8	(91 - 113 %)	101	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	101	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-09

Date Sampled : 09/23/02 16:05

Order #: 587029

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIC
AMMONIA	350.1	0.0500	0.0585	MG/L	10/01/02	13:27	1.0
NITRITE NITROGEN	353.2	0.0100	0.0100 U	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	0.200 U	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-09

Date Sampled : 09/23/02 16:05

Order #: 587029

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIO
IRON	6010B	0.100	0.288	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	6.69	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.596	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-09

Date Sampled : 09/23/02 16:05 Order #: 587029 Sample Matrix: WATER
Date Received: 09/24/02 Submission #: R2213884 Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 10/04/02		
ANALYTICAL DILUTION:	1.00		
ACETONE	20	20 U	UG/L
BENZENE	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
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
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	27	UG/L
TRANS-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
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
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	10	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	99	%
TOLUENE-D8	(91 - 113 %)	101	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-10

Date Sampled : 09/23/02 16:40

Order #: 587030

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTIO
AMMONIA	350.1	0.0500	4.89	MG/L	10/01/02	13:27	4.0
NITRITE NITROGEN	353.2	0.0100	0.0114	MG/L	09/25/02	11:25	1.0
TOTAL KJELDAHL NITROGEN	351.2	0.200	5.12	MG/L	10/02/02	10:19	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-10

Date Sampled : 09/23/02 16:40

Order #: 587030

Sample Matrix: WATER

Date Received: 09/24/02

Submission #: R2213884

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTIC
IRON	6010B	0.100	15.1	MG/L	10/09/02	1.0
POTASSIUM	6010B	2.00	25.6	MG/L	10/09/02	1.0
ZINC	6010B	0.0200	0.304	MG/L	10/09/02	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMI-ANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-10

Date Sampled : 09/23/02 16:40 Order #: 587030 Sample Matrix: WATER
Date Received: 09/24/02 Submission #: R2213884 Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/04/02			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	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
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	8.3	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	340 E	UG/L
TRANS-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
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
TETRACHLOROETHENE	5.0	250 E	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	460 E	UG/L
VINYL CHLORIDE	5.0	59	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	96	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS

METHOD 8260B TCL

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMIANNUAL GW SAMPLING 5513

Client Sample ID : GW-5513-10

Date Sampled : 09/23/02 16:40 Order #: 587030 Sample Matrix: WATER
Date Received: 09/24/02 Submission #: R2213884 Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 10/05/02		
ANALYTICAL DILUTION:	2.50		
ACETONE	20	50 U	UG/L
BENZENE	5.0	13 U	UG/L
BROMODICHLOROMETHANE	5.0	13 U	UG/L
BROMOFORM	5.0	13 U	UG/L
BROMOMETHANE	5.0	13 U	UG/L
2-BUTANONE (MEK)	10	25 U	UG/L
CARBON DISULFIDE	10	25 U	UG/L
CARBON TETRACHLORIDE	5.0	13 U	UG/L
CHLOROBENZENE	5.0	13 U	UG/L
CHLOROETHANE	5.0	13 U	UG/L
CHLOROFORM	5.0	13 U	UG/L
CHLOROMETHANE	5.0	13 U	UG/L
DIBROMOCHLOROMETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHANE	5.0	13 U	UG/L
1,2-DICHLOROETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHENE	5.0	13 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
1,2-DICHLOROPROPANE	5.0	13 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
ETHYLBENZENE	5.0	13 U	UG/L
2-HEXANONE	10	25 U	UG/L
METHYLENE CHLORIDE	5.0	13 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/L
STYRENE	5.0	13 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/L
TETRACHLOROETHENE	5.0	230	UG/L
TOLUENE	5.0	13 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/L
TRICHLOROETHENE	5.0	420	UG/L
VINYL CHLORIDE	5.0	52	UG/L
O-XYLENE	5.0	13 U	UG/L
M+P-XYLENE	5.0	13 U	UG/L

REVISED
11/13/02
icsSURROGATE RECOVERIESQC LIMITS

4-BROMOFLUOROBENZENE	(83 - 118 %)	101	%
TOLUENE-D8	(91 - 113 %)	103	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	101	%

COLUMBIA ANALYTICAL SERVICES**VOLATILE ORGANICS**

METHOD 8260B TCL

Reported: 10/17/02

Conestoga Rovers & Associates

Project Reference: UCAR SEMI-ANNUAL GW SAMPLING 5513

Client Sample ID : TRIP BLANK

Date Sampled : 09/23/02	Order #: 587031	Sample Matrix: WATER
Date Received: 09/24/02	Submission #: R2213884	Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/04/02			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	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
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
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-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
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
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
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	93	%
TOLUENE-D8	(91 - 113 %)	101	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	104	%

LUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/17/02
CAS Order # : 587023 - GW-5513-03
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL GW SAMPLING 5513
Reported Units: MG/L
Run # : 83606

PRECISION

ACCURACY

ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
1.28	1.32	3	2.29	1.00	101	75 - 125
6.78	7.08	4	27.6	20.0	104	75 - 125
0.180	0.185	3	0.674	0.500	99	75 - 125

N

ASSIUM

C

LUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/17/02
CAS Order # : 587023 - GW-5513-03
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL GW SAMPLING 5513
Reported Units: MG/L
Run # : 82959

PRECISION

ACCURACY

ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
0.0100 U	0.0100 U	NC	0.258	0.250	103	45 - 148

RITE NITROGEN

LUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/17/02
CAS Order # : 587023 - GW-5513-03
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL GW SAMPLING 5513
Reported Units: MG/L
Run # : 83163

PRECISION

ACCURACY

ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
0.607	0.614	1	0.987	0.500	76	65 - 127

ONIA

LUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 10/17/02
CAS Order # : 587023 - GW-5513-03
Client : Conestoga Rovers & Associates
UCAR SEMIANNUAL GW SAMPLING 5513
Reported Units: MG/L
Run # : 83169

PRECISION

ACCURACY

ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
1.19	1.21	1	3.79	2.50	104	55 - 128

AL KJELDAHL NITROGEN

LUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

S Submission #: R2213884

Client: Conestoga Rovers & Associates

UCAR SEMIANNUAL GW SAMPLING 5513

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
N	0.100 U	1.09	1.00	109	80 - 120	83606	MG/L
ASSIUM	2.00 U	21.3	20.0	107	80 - 120	83606	MG/L
C	0.0200 U	0.568	0.500	114	80 - 120	83606	MG/L
RITE NITROGEN	0.0100 U	0.245	0.250	98	90 - 110	82959	MG/L
ONIA	0.0500 U	0.531	0.500	106	90 - 110	83163	MG/L
AL KJELDAHL NITROGEN	0.200 U	2.42	2.50	97	63 - 116	83169	MG/L

COLUMBIA ANALYTICAL SERVICESVOLATILE ORGANICS
METHOD: 8260B TCLLABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 590911

ANALYTICAL RUN # : 83464

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 10/03/02			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	110	50 - 150
BENZENE	20.0	105	70 - 130
BROMODICHLOROMETHANE	20.0	101	70 - 130
BROMOFORM	20.0	92	70 - 130
BROMOMETHANE	20.0	93	50 - 150
2-BUTANONE (MEK)	20.0	92	50 - 150
CARBON DISULFIDE	20.0	88	70 - 130
CARBON TETRACHLORIDE	20.0	110	70 - 130
CHLOROBENZENE	20.0	106	70 - 130
CHLOROETHANE	20.0	109	70 - 130
CHLOROFORM	20.0	108	70 - 130
CHLOROMETHANE	20.0	97	70 - 130
DIBROMOCHLOROMETHANE	20.0	101	70 - 130
1,1-DICHLOROETHANE	20.0	110	70 - 130
1,2-DICHLOROETHANE	20.0	101	70 - 130
1,1-DICHLOROETHENE	20.0	111	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	110	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	107	70 - 130
1,2-DICHLOROPROPANE	20.0	105	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	103	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	101	70 - 130
ETHYLBENZENE	20.0	107	70 - 130
2-HEXANONE	20.0	92	70 - 130
METHYLENE CHLORIDE	20.0	104	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	93	70 - 130
STYRENE	20.0	105	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	86	70 - 130
TETRACHLOROETHENE	20.0	108	70 - 130
TOLUENE	20.0	105	70 - 130
1,1,1-TRICHLOROETHANE	20.0	105	70 - 130
1,1,2-TRICHLOROETHANE	20.0	103	70 - 130
TRICHLOROETHENE	20.0	118	70 - 130
VINYL CHLORIDE	20.0	111	70 - 130
O-XYLENE	20.0	104	70 - 130
M+P-XYLENE	40.0	107	70 - 130

COLUMBIA ANALYTICAL SERVICESVOLATILE ORGANICS
METHOD: 8260B TCLLABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 590913

ANALYTICAL RUN # : 83464

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 10/05/02			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	91	50 - 150
BENZENE	20.0	94	70 - 130
BROMODICHLOROMETHANE	20.0	93	70 - 130
BROMOFORM	20.0	96	70 - 130
BROMOMETHANE	20.0	91	50 - 150
2-BUTANONE (MEK)	20.0	99	50 - 150
CARBON DISULFIDE	20.0	94	70 - 130
CARBON TETRACHLORIDE	20.0	86	70 - 130
CHLOROBENZENE	20.0	95	70 - 130
CHLOROETHANE	20.0	88	70 - 130
CHLOROFORM	20.0	91	70 - 130
CHLOROMETHANE	20.0	82	70 - 130
DIBROMOCHLOROMETHANE	20.0	95	70 - 130
1,1-DICHLOROETHANE	20.0	92	70 - 130
1,2-DICHLOROETHANE	20.0	86	70 - 130
1,1-DICHLOROETHENE	20.0	94	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	95	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	93	70 - 130
1,2-DICHLOROPROPANE	20.0	92	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	97	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	97	70 - 130
ETHYLBENZENE	20.0	93	70 - 130
2-HEXANONE	20.0	98	70 - 130
METHYLENE CHLORIDE	20.0	96	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	99	70 - 130
STYRENE	20.0	96	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	84	70 - 130
TETRACHLOROETHENE	20.0	96	70 - 130
TOLUENE	20.0	94	70 - 130
1,1,1-TRICHLOROETHANE	20.0	84	70 - 130
1,1,2-TRICHLOROETHANE	20.0	95	70 - 130
TRICHLOROETHENE	20.0	103	70 - 130
VINYL CHLORIDE	20.0	90	70 - 130
O-XYLENE	20.0	95	70 - 130
M+P-XYLENE	40.0	95	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/17/02

Project Reference:

Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 590910 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/03/02			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	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
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
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-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
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
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
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	100	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/17/02

Project Reference:

Client Sample ID : METHOD BLANK

Date Sampled :	Order #: 590912	Sample Matrix: WATER
Date Received:	Submission #:	Analytical Run 83464

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 10/04/02		
ANALYTICAL DILUTION:	1.00		
ACETONE	20	20 U	UG/L
BENZENE	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
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
DIBROMOCHLOROMETHANE	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
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-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
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
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
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES**QC LIMITS**

4-BROMOFLUOROBENZENE	(83 - 118 %)	101	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	100	%

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: cas/roch Contract: cra1
 Lab Code: 10145 Case No.: r2-13884 SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): C4942.D Date Analyzed: 10/03/02
 Instrument ID: ms#3 Time Analyzed: 21:11
 GC Column: db-624 ID: 0.20 (mm) Heated Purge (Y/N): N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	686370	6.85	1177268	8.01	995055	13.03
UPPER LIMIT	1372740	7.35	2354536	8.51	1990110	13.53
LOWER LIMIT	343185	6.35	588634	7.51	497528	12.53
EPA SAMPLE NO.						
01 LCS1	737147	6.85	1276089	8.01	1068490	13.03
02 MET BLK1	741310	6.85	1280726	8.01	1070045	13.03
03 GW-5513-04	636706	6.85	1176352	8.00	954239	13.04
04 GW-5513-07	646229	6.85	1169418	8.01	960306	13.04
05 GW-5513-09	644484	6.85	1155365	8.01	962009	13.04
06 GW-5513-10	650477	6.85	1182569	8.01	964064	13.04
07 TRIP BLANK	648753	6.85	1154920	8.01	976926	13.04

IS1 = Pentafluorobenzene
 IS2 = 1,4 - Difluorobenzene
 IS3 = d5 - Chlorobenzene
 IS4 = d4 - Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: cas/roch Contract: cra1
 Lab Code: 10145 Case No.: r2-13884 SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): C4942.D Date Analyzed: 10/03/02
 Instrument ID: ms#3 Time Analyzed: 21:11
 GC Column: db-624 ID: 0.20 (mm) Heated Purge (Y/N): N

	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	391502	17.44				
UPPER LIMIT	783004	17.94				
LOWER LIMIT	195751	16.94				
EPA SAMPLE NO.						
01 LCS1	429853	17.44				
02 MET BLK1	411628	17.44				
03 GW-5513-04	354707	17.45				
04 GW-5513-07	352401	17.45				
05 GW-5513-09	365911	17.45				
06 GW-5513-10	370288	17.45				
07 TRIP BLANK	362652	17.45				

IS1 = Pentafluorobenzene
 IS2 = 1,4 - Difluorobenzene
 IS3 = d5 - Chlorobenzene
 IS4 = d4 - Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: cas/roch Contract: cra1
 Lab Code: 10145 Case No.: r2-13884 SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): A3855.D Date Analyzed: 10/04/02
 Instrument ID: ms#5 Time Analyzed: 21:52
 GC Column: db-624 ID: 0.32 (mm) Heated Purge (Y/N): N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	562575	10.10	986504	11.44	972225	16.98
UPPER LIMIT	1125150	10.60	1973008	11.94	1944450	17.48
LOWER LIMIT	281288	9.60	493252	10.94	486113	16.48
EPA SAMPLE NO.						
01 MET BLK2	533076	10.10	945696	11.44	936453	16.98
02 LCS2	523779	10.11	925800	11.44	919756	16.98
03 GW-5513-02	520330	10.09	927999	11.43	912809	16.97
04 GW-5513-08	504558	10.09	896136	11.43	876280	16.97
05 GW-5513-10 (	492008	10.09	875764	11.43	865651	16.97

IS1 = Pentafluorobenzene
 IS2 = 1,4-Difluorobenzene
 IS3 = d5-Chlorobenze
 IS4 = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
 * Values outside of contract required QC limits

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: cas/roch Contract: cra1
 Lab Code: 10145 Case No.: r2-13884 SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): A3855.D Date Analyzed: 10/04/02
 Instrument ID: ms#5 Time Analyzed: 21:52
 GC Column: db-624 ID: 0.32 (mm) Heated Purge (Y/N): N

	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	436734	21.69				
UPPER LIMIT	873468	22.19				
LOWER LIMIT	218367	21.19				
EPA SAMPLE NO.						
01 MET BLK2	412281	21.69				
02 LCS2	416687	21.68				
03 GW-5513-02	398979	21.68				
04 GW-5513-08	379634	21.68				
05 GW-5513-10 (	377872	21.68				

IS1 = Pentafluorobenzene
 IS2 = 1,4-Difluorobenzene
 IS3 = d5-Chlorobenze
 IS4 = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
 * Values outside of contract required QC limits

CHAIN OF CUSTODY RECORD

R2213884



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

UCAR 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
						VOCs	Metals	NO _x								
	9-23-02	1025	Gw-5513-01	Water	3		1	1	1							587021
		1140	Gw-5513-02		6	3	1	1	1							22
		1230	Gw-5513-03		9		3	3	3							23
		1315	Gw-5513-04		6	3	1	1	1							24
		1345	Gw-5513-05		3		1	1	1							25
		1430	Gw-5513-06		3		1	1	1							26
		1520	Gw-5513-07		6	3	1	1	1							27
		1600	Gw-5513-08		6	3	1	1	1							28
		1605	Gw-5513-09		6	3	1	1	1							29
		1640	Gw-5513-10		6	3	1	1	1							30
			TRIP BLANK	Lab Water	3	3										31

Note: Matrix Spike / Matrix spike Duplicate Volume taken for Sample Q3

TOTAL NUMBER OF CONTAINERS

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY:

① *David Tyran*

DATE: 9-24-02

TIME: 0730

RECEIVED BY:

① *John CAS*

DATE: 9/24/02

TIME: 1150

RELINQUISHED BY:

② *John CAS*

DATE: 9/24/02

TIME: 1643

RECEIVED BY:

②

DATE:

TIME:

RELINQUISHED BY:

③

DATE:

TIME:

RECEIVED BY:

③

DATE:

TIME:

METHOD OF SHIPMENT: Courier

WAY BILL No.

White

-Fully Executed Copy

Yellow

-Receiving Laboratory Copy

Pink

-Shipper Copy

Goldenrod

-Sampler Copy

SAMPLE TEAM:

D. Tyran

RECEIVED FOR LABORATORY BY:

John CAS

NO N

1451

DATE: 9/24/02 TIME: 1645

Cooler Receipt And Preservation Check Form

Project/Client CRA Submission Number R2-13824

Cooler received on 9/24/02 by: QNP 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: 6°

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: 9/24/02 1710

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: 9/25/02 by: QNP

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	✓				
2	H ₂ SO ₄	✓				
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			
	<u>all < 2 mmw 10/17</u>		

Other Comments: