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November 15, 2010

Mr. Michael J. Hinton, PE
Environmental Engineer II
NYS Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

SUBJECT: UCAR Republic Landfill #32NO3

Dear Mr. Hinton,

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) 628-8208.

Very truly yours,

Robert Bucci
Consultant

R. Bucci
enc.

Robert Bucci, Consultant
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November 15, 2010 Reference No. 005513

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: Annual Monitoring Event 2009
UCAR Republic SWMF #32N03

The annual monitoring event for the above-referenced Site was conducted on Sept. 07, 2010. The Site groundwater monitoring program was modified in November 2005 and currently consists of the following (excerpt from letter from C. Barron (CRA) to M. McIntosh (NYSDEC) dated November 4, 2005.):

> Annual sampling of seven wells (BW-1, BW-2, BW-3, BW-4, MW-3, GW-8B, and GW-9B) with analysis of the samples for Part 360 volatiles, ammonia, iron (total and soluble), potassium (total and soluble), zinc (total and soluble), nitrite, total kjeldahl nitrogen (TKN), turbidity, groundwater elevation, pH, specific conductance, and temperature. Monitoring is rotated between the spring and fall seasons such that one year sampling is conducted in the spring and the next year it will be conducted in the fall. Sampling is conducted once in each calendar year and reporting is submitted annually following receipt and review of the groundwater analytical data.

The sample collection and analyses were performed in accordance with the program outlined in the letters from M. McIntosh (NYSDEC) 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. The analytical laboratory report for this sampling event is enclosed and the data are summarized in Table 3.

November 15, 2010 Reference No. 005513

The analytical data from this monitoring event are consistent with the historical data.

The next groundwater monitoring event at the Site will be conducted in March of 2011. Should you have any questions or require additional information, please do not hesitate to contact the undersigned at 716-628-8208.

Yours truly,

Robert Bucci
Site Consultant

Encl.

c.c.: M. Hans
M. Hinton
J. M. Bursley

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO: Jim Kay

REF. NO.: 005513

FROM: Sheri Finn/bjw/3

DATE: October 22, 2010

E-Mail and Hard Copy If Requested

RE: Analytical Results and QA/QC Review
Annual Groundwater Monitoring Program
UCAR Carbon Company, Inc.
Niagara Falls, New York
September 2010

INTRODUCTION

Eight groundwater samples, including one field duplicate sample were collected during September 2010 in support of the annual monitoring program at the UCAR Carbon Site in Niagara Falls, New York (Site). The samples were submitted to Columbia Analytical Services (CAS), located in Rochester, New York, and analyzed for the following:

Parameter	*Methodology*
Volatile Organic Compounds (VOCs)	SW-846 8260B[1]
Total & Dissolved Iron, Potassium, and Zinc	SW-846 6010B[1]
Ammonia	USEPA 350.1[2]
Nitrite	USEPA 353.2[2]
Total Kjeldahl Nitrogen (TKN)	USEPA 351.2[2]

A sampling and analysis summary is presented in Table 1. The analytical results are summarized in Table 2. The quality assurance/quality control (QA/QC) criteria by which the data have been assessed are outlined in the respective methods and the following documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", October 1999, United States Environmental Protection Agency (USEPA) 540/R-99/008

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", February 1994, USEPA 540/R-94/013

1 "Test Methods for Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

2 "Methods for Chemical Analysis of Water and Wastes", United States Environmental Protection Agency (USEPA) 600/4-79-220, March 1983 (with all subsequent revisions).

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. The data quality assessment and validation presented in the following subsections were performed based on the sample results, supporting QA/QC and raw data provided.

HOLDING TIME PERIOD AND SAMPLE ANALYSIS

The holding time periods are presented in the analytical methods. All samples were properly preserved and cooled to 4°C (±2°C) after collection. All samples were prepared and analyzed within the method-required holding times with the exception of nitrite analysis, which has a 48 hour holding time. The samples were received at the laboratory 2 days after collection. All associated nitrite results were qualified as estimated (see Table 3).

GAS CHROMATOGRAPHY/MASS SPECTROMETER (GC/MS) MASS CALIBRATION

Prior to analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the volatile organic compound (VOC) method requires the analysis of the specific tuning compound bromofluorobenzene (BFB). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. The tuning compound was analyzed at the required frequency throughout the VOC analysis periods. All tuning criteria were met for the analyses, indicating proper optimization of the instrumentation.

INITIAL CALIBRATION - GC/MS ANALYSES

To quantify compounds of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a minimum of a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range.

Calibration data were reviewed for all samples. Linearity of the calibration curve and instrument sensitivity were evaluated against the following criteria:

i) All relative response factors (RRFs) for the GC/MS must be greater than or equal to 0.05.

ii) Percent relative standard deviation (%RSD) values for the GC/MS must not exceed 30 percent, or if linear regression is used, the correlation coefficient (R^2) value must be at least 0.990.

Initial calibration standards were analyzed as required and the data showed acceptable sensitivity and linearity.

INITIAL CALIBRATION - METALS ANALYSES

To calibrate the inductively coupled plasma (ICP), a calibration blank and at least one standard must be analyzed at each wavelength to establish the analytical curve. After calibration, an initial calibration

verification (ICV) standard must be analyzed to verify the analytical accuracy of the calibration curves within a method-specific percent recovery of the accepted or true value. A Contract Required Detection Limit (CRDL) standard is analyzed before and after sample analyses to verify instrument sensitivity.

A review of the data showed that all metals calibration curves, ICVs and CRDL were analyzed at the proper frequencies and were within the acceptance criteria.

INITIAL CALIBRATION - GENERAL CHEMISTRY ANALYSES

The general chemistry analyses of ammonia, nitrite, and TKN were calibrated in accordance with the methods and all calibration criteria were met.

CONTINUING CALIBRATION - GC/MS

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

The following criteria were employed to evaluate continuing calibration data:

i) All RRF values for the GC/MS must be greater than or equal to 0.05.

ii) Percent difference (%D) values must not exceed 25 percent.

Continuing calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response.

CONTINUING CALIBRATION - INORGANICS

Continuing calibration criteria for inorganic analyses were the same criteria as used for assessing the initial calibration data. All continuing calibration verification data were within the acceptance criteria.

SURROGATE COMPOUND RECOVERIES

Surrogates were added to all samples, blanks, and QC samples prior to analysis of VOCs. All recoveries met the method criteria.

METHOD BLANK SAMPLES

Method blanks were analyzed for all parameters. All results were non-detect, indicating that contamination during analysis was not a concern.

LABORATORY CONTROL SAMPLE (LCS) ANALYSIS

The LCS serves as a measure of overall analytical performance. LCSs are prepared with all analytes of interest and analyzed with each sample batch.

LCSs were prepared and analyzed for all parameters at the proper frequency. The LCS recoveries were within the control limits for all analytes of interest, indicating acceptable analytical accuracy.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

The recoveries of MS analyses are used to assess the analytical accuracy achieved on individual sample matrices. MS/MSD analyses were performed on the sample submitted for metals and VOC analysis. All MS/MSD recoveries and relative percent differences (RPDs) were within laboratory control limits for all analytes of interest, indicating good analytical accuracy and precision.

LABORATORY DUPLICATE ANALYSES

Laboratory duplicates were performed for inorganic analyses. All results were within laboratory control limits showing acceptable analytical precision with the exception of dissolved iron analysis. The associated sample results were qualified as estimated (see Table 4).

INDUCTIVELY COUPLED PLASMA (ICP) INTERFERENCE CHECK SAMPLE (ICS) ANALYSIS

To verify that proper inter-element and background correction factors have been established by the laboratory, ICSs are analyzed. These samples contain high concentrations of aluminum, calcium, magnesium, and iron and are analyzed at the beginning and end of each sample analysis period.

ICS analysis results were evaluated for all samples. All ICS recoveries were within the established control limits of 80 to 120 percent.

SERIAL DILUTION - METALS ANALYSES

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. A minimum of one per 20 investigative samples is analyzed at a five-fold dilution. For samples with sufficient analyte concentrations, the serial dilution results must agree within 10 percent of the original results.

Serial dilution analyses were performed and all results were within the method criteria.

INTERNAL STANDARD (IS) SUMMARIES

To correct for changes in GC/MS response and sensitivity, IS compounds are added to investigative samples and QC samples prior to VOC analyses. All results are calculated as a ratio of the IS response. The criteria by which the IS results are assessed are as follows:

i) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated calibration standard.

ii) The retention time of the IS must not vary more than ±30 seconds from the associated calibration standard.

All sample IS results met the above criteria and were correctly used to calculate sample results.

TRIP BLANKS - VOCS

Trip blanks are transported, stored, and analyzed with the investigative samples to identify potential cross-contamination of VOCs. A trip blank was collected as shown on Table 1. All results were non-detect for the analytes of interest, indicating that contamination during transport and storage was not an issue.

FIELD DUPLICATES

Samples were collected in duplicate as summarized in Table 1 and submitted "blind" to the laboratory for analysis. All sample results outside of estimated ranges of detection showed acceptable sampling and analytical precision.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use with the qualifications noted.

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MEMORANDUM

Sent via email

TO:	Jim Kay	REF. NO.:	005513
FROM:	Dave Tyran/adh/2	DATE:	September 8, 2010
RE:	**Annual Groundwater Sampling**		

INTRODUCTION

In accordance with Conestoga-Rovers & Associates (CRA) Field Sampling Plan (FSP) Post-Closure Monitoring Program for UCAR Carbon's Solid Waste Management Unit (SWMU) No. 32NO3, the Annual groundwater sampling event was performed on September 7, 2010. Activities associated with this sampling event are described in this memo.

HYDRAULIC MONITORING

Prior to sampling, a complete round of water level measurements and well soundings were taken. Table 1 presents the water level information in addition to comparing the sounded depths to the installed depths.

GROUNDWATER MONITORING

A total of seven monitoring wells were visited during this sampling round. All seven wells had sufficient recharge to purge three to five well volumes.

Purging of wells was accomplished by the use of either a battery operated submersible pump or Teflon bailer. Samples were obtained with a dedicated bottom loading Teflon bailer. Table 2 provides the pertinent groundwater data.

WELL INSPECTIONS

Well inspections were performed at each of the monitoring wells. No problems were noted during this round.

FUTURE MONITORING

The next scheduled groundwater sampling round will be performed in March 2011.

(122)

DAILY LOG

9-7-10 Calibrate YSI NF04441

	Before	After
pH (4)		
pH (7)		
Cond (1.413)	DJT	
Turb (0)		
Turb (100)		

Calibrate Horiba NF05036
w/Auto cal Solution pH 4.00
Cond 4.49 Turb 0

0755 DJT on-site meet Bob Bucci get keys Mostly sunny 70-85 very windy
0825 start w/l Round
0920 Complete w/L Round
Dry out MW-3
Purge & Sample BW-2, GW8B
Trip Blank = TB-5513-090710
BW1, BW4, BW3, Sample MW3
Purge & Sample GW9B
Clean up
1515 Off-site

HYDRAULIC MONITORING

DATE CREW

WELL #	TIME	W/L	SOUNDED DEPTH
MW 3	0848	12.62 DJT	15.25
BW 1	0826	~~18.44~~ 15.44	25.93
BW 2	0921	14.13	24.76
BW 3	0836	13.96	23.48
BW 4	0833	13.36	21.49
GW 8B	0822	11.07	29.53
GW 9B	0909	14.51	32.03
MW 1	0830	11.86	23.44
MW 2	0918	17.59	24.73
BW 5	0844	10.44	26.00
BW 6	0912	17.16	26.23

INST. CONTROL #

NF04308

Dave J Tyson

MW-3

DATE 9-7-10 CREW DJT
PROJECT 5513
CONDITION Good
DEPTH 2" 0-15.25
INITIAL W/L 12.62
VOL CALC. 15.25 - 12.62 = 2.63 x .16 = 0.4
METHOD Dedicated Teflon Bailer

PURGE RECORD

TIME	VOL	PH	COND	TEMP	TURB
0852	0.4	5.48	0.513	16.71	535
0856	0.8	6.05	0.487	14.68	800
0858	1.2	6.20	0.477	14.11	OR
0900	1.6	6.21	0.473	13.62	OR

INITIAL W/P Cloudy Dark Brown

FINAL W/P Same

FINAL W/L 14.51

SAMPLE RECORD

DATE 9-7-10
CREW DJT
METHOD dedicated Teflon Bailer

VOL/ANALYSIS See pg 28©

SAMPLE TIME: 1350
SAMPLE ID: WG-5513-090710-007

W/P Cloudy Brown

PH	COND	TEMP	TURB
6.99	0.488	17.45	736

COFC# 24518

INST CONTROL #S
W/L METER NF04308
Horiba NF05036

OR over range

Dave J Tyson

BW-1

DATE 9-7-10 CREW DJT
PROJECT# 5513
CONDITION Good
DEPTH 4" 0 - 20.9 3" 20.9 - 35.9
INITIAL W/L 18.44
VOL CALC. 20.9 - 18.44 = 2.46 x .65 = 1.6 + 5.6
METHOD Monsoon Pump 7.2

PURGE RECORD

TIME	VOL	PH	COND	TEMP	TURB
1140	7.2	6.88	1.42	16.10	11.8
1144	14.4	6.80	1.44	14.72	51.8
1148	21.6	6.59	1.46	12.67	26.3

INITIAL W/Q Cloudy Dark gray

FINAL W/L Clear, Colorless

FINAL W/Q 20.11

SAMPLE RECORD

DATE 9-7-10
CREW DJT
METHOD Dedicated Teflon Bailer

VOL/ANALYSIS See pg 28 (C)

SAMPLE TIME 1155
SAMPLE ID: WG-5513-090710-004

W/Q Cloudy Light Brown

PH	COND	TEMP	TURB
6.82	1.47	14.05	1.79

COC# 24518

INST. CONTROL #'S
W/L METER - NF04308
Horiba NF05036

35.9 - 20.9 = 15 x .37 = 5.6

Dave J Tyson

BW-2

DATE 9-7-10 CREW DJT
PROJECT # 5513
CONDITION Good
DEPTH 4" 0 - 21.1 3" 21.1 - 37.1
INITIAL W/L 14.13
VOL CALC. 21.1 - 14.13 = 6.97 x .65 = 4.5 + 5.9 =
METHOD Monsoon Pump 10.4

PURGE RECORD

TIME	VOL	PH	COND	TEMP	TURB
0934	10.4	6.23	2.24	13.71	19.9
0939	20.8	6.20	2.33	12.52	0.0
0944	31.2	6.21	2.34	11.72	0.0

INITIAL W/P Cloudy Dark Brown

FINAL W/P Clear, Light Green Tint

FINAL W/L 14.50

DUP

SAMPLE RECORD

DATE 9-7-10
CREW DJT
METHOD Dedicated Teflon Bailer

VOL/ANALYSIS Pg 28 (C) x 2

SAMPLE TIME: 1000
SAMPLE ID: WG-5513-090710-001
Blind Dup WG-5513-090710-002
(1200)

W/P Cloudy green/Brown

PH	COND	TEMP	TURB
6.29	2.34	13.52	152

COFC # 24518

INST. CONTROL #'S
W/L METER NF04308
Horiba NF0-5036

37.1 - 21.1 = 16 x .37 = 5.9

Dave J Tyrrell

BW-3

DATE: 9-7-10 CREW DJT
PROJECT # 5513
CONDITION Good
DEPTH 4" 0-9.7 3" 9.7-23.45
INITIAL W/L 13.96
VOL CALC 23.45 - 13.96 = 9.49 x 6 .37 = 3.5
METHOD Monsoon Pump

PURGE RECORD

TIME	VOL	PH	COND	TEMP	TURB
1307	3.5	7.11	1.49	14.02	0.0
1309	7.0	6.77	1.53	12.56	0.0
1310	10.5	6.64	1.55	11.74	0.0

INITIAL W/Q Clear, Colorless

FINAL W/Q Same

FINAL W/L 13.83

SAMPLE RECORD

DATE 9-7-10
CREW DJT
METHOD Dedicated Teflon Bailer

VOL/ANALYSIS See pg 28 (C)

SAMPLE TIME: 1330
SAMPLE ID: WG-5513-090710-006

W/Q Clear, colorless

PH	COND	TEMP	TURB
6.61	1.53	14.47	0.0

COC# 24518

INST. CONTROL #S
W/L Meter NF041308
Horiba NF 05036

Dave J Tyler

BW-4

DATE 9.7.10 CREW DJT
PROJECT# 5513
CONDITION Good
DEPTH 4" 0 - 13.9 3" 13.9 - 27.5
INITIAL W/L 13.36
VOL CALC 13.9 - 13.36 = 0.54 x .65 = .4 x 5
METHOD Monsoon Pump 5.4

PURGE RECORD

TIME	VOL	PH	COND	TEMP	TURB
1222	5.4	6.75	1.66	14.63	>77.7
1225	10.8	6.39	1.68	12.84	5.2
1228	16.2	6.39	1.64	12.30	0.6

INITIAL W/Q Cloudy Dark gray

~~INITIAL~~ (23) FINAL W/Q

FINAL W/L 14.66

SAMPLE RECORD

DATE 9.7.10
CREW DJT
METHOD Dedicated Teflon Bailer

VOL/ANALYSIS See pg 28 (C)

SAMPLE TIME: 1240
SAMPLE ID: WG-5513-090710-005

W/Q Cloudy Light Brown

PH	COND.	TEMP	TURB
6.32	1.61	13.60	64.9

COFC# 24518

INST CONTROL #3
W/L METER: NF043C8
Horiba NF05036

27.5 - 13.9 = 13.6 x .37 = 5

Dave J Tyan

GW-8B

DATE 9-7-10 CREW DJT
PROJECT # 5513
CONDITION Good
DEPTH 3" ⌀ - 29.5
INITIAL W/L 11.07
VOL CALC 29.5 - 11.07 = 18.43 x .37 = 6.8
METHOD Monsoon Pump

PURGE RECORD

TIME	VOL	PH	COND	TEMP	TURB
1041	6.8	7.02	1.61	14.25	140
1045	13.6	6.64	1.61	12.85	342
1050	20.4	6.51	1.63	12.48	266

INITIAL W/⌀ Clear, colorless

FINAL W/⌀ Cloudy Dark gray

FINAL W/L 28.60

MS/MSD

SAMPLE RECORD

DATE 9-7-10
CREW DJT
METHOD Dedicated Teflon Bailer

VOL/ANALYSIS See pg 28 (C) x 3

SAMPLE TIME WG-5513-090710-003
SAMPLE ID: 1100

W/⌀ Clear, colorless

PH	COND	TEMP	TURB
6.45	1.62	18.30	10.4

COC # 24518

INST. CONTROL #3
W/L METER

David J Tyler

GW-9B

DATE 9-7-10 CREW DJT
PROJECT# 5513
CONDITION Good
DEPTH 3" 0-31.7
INITIAL W/L 14.51
VOL CALC. 31.7 - 14.51 = 17.19 x .37 = 6.4
METHOD Monsoon Pump

PURGE RECORD

TIME	VOL	PH	COND	TEMP	TURB
1414	6.4	6.80	2.18	14.18	17.8
1417	12.8	6.42	2.27	12.78	0.0
1421	19.2	6.31	2.32	12.06	0.0

INITIAL W/P Clear, Colorless

FINAL W/P Same

FINAL W/L 23.78

SAMPLE RECORD

DATE 9-7-10
CREW DJT
METHOD Dedicated Teflon Bailer

VOL/ANALYSIS See pg 28©

SAMPLE TIME 1430
SAMPLE ID: WG-5513-090710-008

W/P Clear, Colorless

PH	COND	TEMP	TURB
6.42	2.31	13.95	9.2

COFC# 24518

INST. CONTROL #3
W/L METER. NF04308
Horiba NF05036

Dave J Tyson

TABLE 1

HYDRAULIC MONITORING
POST-CLOSURE MONITORING PROGRAM
UCAR REPUBLIC SWMU #32NO3
NIAGARA FALLS, NEW YORK
SEPTEMBER 2010

Well I.D.	*TOC Elevation (Ft. AMSL)*	*Depth to Water (Ft. BTOC)*	*Water Level Elevation (Ft. AMSL)*	*Sounded Depth (Ft. BTOC)*	*Installed Depth (Ft. BTOC)*
MW-3	601.89	12.62	589.27	15.25	14.4
BW-1	610.72	15.44	595.28	25.93	35.9
BW-2	608.43	14.13	594.30	24.76	37.1
BW-3	604.72	13.96	590.76	23.48	22.7
BW-4	607.08	13.36	593.72	21.49	27.5
GW-8B	603.90	11.07	592.83	29.53	29.5
GW-9B	603.40	14.51	588.89	32.03	31.7

Notes:

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

TABLE 2

SAMPLE COLLECTION AND ANALYSIS SUMMARY
POST-CLOSURE MONITORING PROGRAM
UCAR REPUBLIC SWMU #32NO3
NIAGARA FALLS, NEW YORK
SEPTEMBER 2010

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-3	09/07/10	09/07/10	0.4	1.6	736	x	x	x	x	
BW-1	09/07/10	09/07/10	7.2	21.6	179	x	x	x	x	
BW-2	09/07/10	09/07/10	10.4	31.2	152	x	x	x	x	
BW-3	09/07/10	09/07/10	3.5	10.5	0.0	x	x	x	x	
BW-4	09/07/10	09/07/10	5.4	16.2	64.9	x	x	x	x	
GW-8B	09/07/10	09/07/10	6.8	20.4	10.4	x	x	x	x	MS/MSD
GW-9B	09/07/10	09/07/10	6.4	19.2	9.2	x	x	x	x	

Notes:

[1] Nitrite, nitrogen, NO_2, ammonia, total kjeldahl nitrogen.
MS Matrix Spike.
MSD Matrix Spike Duplicate.
NM Not measured, insufficient volume for final reading.
NTU Nephelometric Turbidity Unit.
VOCs Volatile Organic Compounds.

TABLE 3

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER MONITORING
UCAR CARBON COMPANY, INC.
NIAGARA FALLS, NEW YORK
SEPTEMBER 2010

	Location ID:	*BW-2*	*BW-2*	*GW-8B*	*BW-1*	*BW-4*	*BW-3*	*MW-3*	*GW-9B*
	Sample Date:	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*
Parameters	*Units*								
Volatile Organic Compounds									
1,1,1-TRICHLOROETHANE (TCA)	µg/L	5.0 U	5.0 U	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	2.9 J	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	5.0 U	5.0 U
1,1-DICHLOROETHANE (1,1-DCA)	µg/L	5.0 U	5.0 U	5.0 U	0.20 J	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE (1,1-DCE)	µg/L	5.0 U	5.0 U	0.41 J	5.0 U	4.1 J	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	5.0 U	5.0 U
1,2-DICHLOROETHENE, TOTAL	µg/L	10 U	10 U	20	0.94 J	740	2.2 J	10 U	10 U
1,2-DICHLOROPROPANE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-HEXANONE	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYL-2-PENTANONE	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	µg/L	20 U	20 U	20 U	2.9 J	3.2 J	20 U	20 U	20 U
BENZENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	0.48 J	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	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	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	5.0 U	5.0 U
CARBON DISULFIDE	µg/L	0.60 J	0.74 J	10 U	10 U	0.66 J	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	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	5.0 U	5.0 U
CHLOROETHANE	µg/L	5.0 U	5.0 U	5.0 U	6.8	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	9.6	5.0 U	5.0 U	5.0 U
CHLOROMETHANE	µg/L	5.0 U	5.0 U	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	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	5.0 U	5.0 U
ETHYLBENZENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
METHYLENE CHLORIDE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
STYRENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
TETRACHLOROETHENE (PCE)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	97	5.0 U	5.0 U	5.0 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER MONITORING
UCAR CARBON COMPANY, INC.
NIAGARA FALLS, NEW YORK
SEPTEMBER 2010

	Location ID:	*BW-2*	*BW-2*	*GW-8B*	*BW-1*	*BW-4*	*BW-3*	*MW-3*	*GW-9B*
	Sample Date:	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*	*09/07/10*
Parameters	*Units*								
Volatile Organic Compounds (Cont'd.)									
TOLUENE	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	0.51 J	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	5.0 U	5.0 U
TRICHLOROETHENE (TCE)	µg/L	5.0 U	5.0 U	8.8	5.0 U	300	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	µg/L	5.0 U	5.0 U	3.5 J	1.6 J	170	6.4	5.0 U	5.0 U
XYLENES, TOTAL	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Metals		0.60 J	0.745	32.71	12.44	1327.97	8.6	ND	ND
IRON 300	µg/L	6240	8930	272	10000	8480	982	35800	199
POTASSIUM	µg/L	5720	5640	5400	5650	18200	3360	7710	3580
ZINC 300	µg/L	2900	3850	1350	30600	3340	66.8	221	9.7 J
Metals (Dissolved)									
IRON (Diss.) 300	µg/L	1140 J	1410 J	265 J	1700 J	4350 J	806 J	6350 J	133 J
POTASSIUM (Diss.)	µg/L	5560	5590	5680	5780	19300	3420	2930	3680
ZINC (Diss.) 300	µg/L	135	163	303	1400	143	8.1 J	33.4	5.0 J
Wet Chemistry									
AMMONIA AS NITROGEN	mg/L	0.522	0.529	0.050 U	0.927	3.32	0.482	0.099	0.461
NITRITE AS NITROGEN	mg/L	0.010 UJ	0.010 UJ	0.010 UJ	0.010 UJ	0.010 UJ	0.010 UJ	0.015 J	0.010 UJ
NITROGEN, TOTAL KJELDAHL (TKN)	mg/L	1.26	1.20	0.41	1.76	4.24	0.80	1.46	0.89