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**Robert Bucci, Consultant**  
**3344 Wildwood Dr.**  
**Niagara Falls, New York 14304**  
**Phone 716 297-6772 Cell & 716 628-8208**  
**Email: nia3344@verizon.net**

June 4, 2007

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 2007  
UCAR Republic SWMF #32N03

The annual monitoring event for the above-referenced Site was conducted on March 21, 2007.  
The Site groundwater-monitoring program was modified in November 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.

June 4, 2007

2

Reference No. 00551

The next groundwater-monitoring event at the Site will be conducted in the Fall of 2008. Should you have any questions or require additional information, please do not hesitate to contact the undersigned at 716-628-8208.

Yours truly,

A handwritten signature in black ink, appearing to read "Robert Bucci", with a long horizontal flourish extending to the right.

Robert Bucci  
Site Consultant

Encl.

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

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY  
POST-CLOSURE MONITORING PROGRAM  
UCAR REPUBLIC SWMU #32NO3  
NIAGARA FALLS, NEW YORK  
MARCH 2007**

| Well I.D. | Purge<br>Date | Sample<br>Date | One                         | Total                         | Turbidity<br>(NTU) | Analytical Parameters |                 |                     | Misc. <sup>(1)</sup><br>Parameters | Comments |
|-----------|---------------|----------------|-----------------------------|-------------------------------|--------------------|-----------------------|-----------------|---------------------|------------------------------------|----------|
|           |               |                | Well<br>Volume<br>(Gallons) | Volume<br>Purged<br>(Gallons) |                    | VOCs                  | Total<br>Metals | Dissolved<br>Metals |                                    |          |
| MW-3      | 03/21/07      | 03/21/07       | 1.9                         | 2.5                           | 151                | x                     | x               | x                   | x                                  |          |
| BW-1      | 03/21/07      | 03/21/07       | 10.3                        | 31.0                          | 24                 | x                     | x               | x                   | x                                  |          |
| BW-2      | 03/21/07      | 03/21/07       | 14.1                        | 42.3                          | 5                  | x                     | x               | x                   | x                                  | MS/MSD   |
| BW-3      | 03/21/07      | 03/21/07       | 8.5                         | 25.5                          | 0.8                | x                     | x               | x                   | x                                  |          |
| BW-4      | 03/21/07      | 03/21/07       | 10.2                        | 30.6                          | 30                 | x                     | x               | x                   | x                                  |          |
| GW-8B     | 03/21/07      | 03/21/07       | 8.0                         | 24.0                          | 41.8               | x                     | x               | x                   | x                                  |          |
| GW-9B     | 03/21/07      | 03/21/07       | 7.9                         | 24.0                          | 0.0                | x                     | x               | x                   | x                                  |          |

Notes:

<sup>(1)</sup> Nitrite: nitrogen, NO<sub>2</sub>, ammonia, total kjeldahl nitrogen.

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  
MARCH 2007

| <i>Well I.D.</i> | <i>TOC<br/>Elevation<br/>(Ft. AMSL)</i> | <i>Depth to<br/>Water<br/>(Ft. BTOC)</i> | <i>Water<br/>Level<br/>Elevation<br/>(Ft. AMSL)</i> | <i>Sounded<br/>Depth<br/>(Ft. BTOC)</i> | <i>Installed<br/>Depth<br/>(Ft. BTOC)</i> |
|------------------|-----------------------------------------|------------------------------------------|-----------------------------------------------------|-----------------------------------------|-------------------------------------------|
| MW-3             | 601.89                                  | 3.40                                     | 598.49                                              | 15.16                                   | 14.4                                      |
| BW-1             | 610.72                                  | 13.16                                    | 597.56                                              | 29.04                                   | 35.9                                      |
| BW-2             | 608.43                                  | 8.34                                     | 600.09                                              | 24.73                                   | 37.1                                      |
| BW-3             | 604.72                                  | 4.36                                     | 600.36                                              | 23.48                                   | 22.7                                      |
| BW-4             | 607.08                                  | 5.16                                     | 601.92                                              | 21.86                                   | 27.5                                      |
| GW-8B            | 603.90                                  | 8.02                                     | 595.88                                              | 29.52                                   | 29.5                                      |
| GW-9B            | 603.40                                  | 10.34                                    | 593.06                                              | 32.06                                   | 31.7                                      |

## Notes:

AMSL Above Mean Sea Level.

BTOC Below Top of Casing.

Ft. Feet.

NM Not Measured.

TABLE 3

**ANALYTICAL RESULTS SUMMARY  
ANNUAL GROUNDWATER MONITORING  
UCAR CARBON COMPANY, INC.  
NIAGARA FALLS, NEW YORK  
MARCH 2007**

|                             | Sample ID: WG-5513-032107-001 | WG-5513-032107-002 | WG-5513-032107-003 | WG-5513-032107-004 | WG-5513-032107-005 | WG-5513-032107-006 | WG-5513-032107-007 | WG-5513-032107-008 |
|-----------------------------|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                             | Location ID: GW-SB            | BW-3               | BW-4               | BW-4               | MW-3               | BW-2               | GW-9B              | BW-1               |
|                             | Collection Date: 03/21/07     | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           |
| Parameters                  | Units                         |                    |                    | Duplicate          |                    |                    |                    |                    |
| TCL Volatiles               |                               |                    |                    |                    |                    |                    |                    |                    |
| Acetone                     | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Benzene                     | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Bromodichloromethane        | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Bromoform                   | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Bromomethane                | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 2-Butanone (MEK)            | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Carbon disulfide            | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Carbon tetrachloride        | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Chlorobenzene               | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Chloroethane                | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Chloroform                  | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | 15                 |
| Chloromethane               | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Dibromochloromethane        | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 1,1-Dichloroethane          | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 1,2-Dichloroethane          | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 1,1-Dichloroethene          | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| trans-1,2-Dichloroethene    | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| cis-1,2-Dichloroethene      | µg/l                          | 20                 | ND                 | 710                | 640                | ND                 | ND                 | ND                 |
| 1,2-Dichloropropane         | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| cis-1,3-Dichloropropene     | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| trans-1,3-Dichloropropene   | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Ethylbenzene                | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 2-Hexanone                  | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Methylene chloride          | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 4-Methyl-2-pentanone (MIBK) | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Styrene                     | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 1,1,2,2-Tetrachloroethane   | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Tetrachloroethene           | µg/l                          | ND                 | ND                 | 120                | 110                | ND                 | ND                 | ND                 |
| Toluene                     | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 1,1,1-Trichloroethane       | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| 1,1,2-Trichloroethane       | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Trichloroethene             | µg/l                          | 98                 | ND                 | 310                | 280                | ND                 | ND                 | ND                 |
| Vinyl chloride              | µg/l                          | ND                 | ND                 | 170                | 150                | ND                 | ND                 | ND                 |
| m,p-Xylenes                 | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| o-Xylenes                   | µg/l                          | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |

TABLE 3

ANALYTICAL RESULTS SUMMARY  
ANNUAL GROUNDWATER MONITORING  
UCAR CARBON COMPANY, INC.  
NIAGARA FALLS, NEW YORK  
MARCH 2007

| Parameters              | Units | Sample ID: WG-5513-032107-001 | WG-5513-032107-002 | WG-5513-032107-003 | WG-5513-032107-004 | WG-5513-032107-005 | WG-5513-032107-006 | WG-5513-032107-007 | WG-5513-032107-008 |
|-------------------------|-------|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                         |       | Location ID: GW-8B            | BW-3               | BW-4               | BW-4               | MW-3               | BW-2               | GW-9B              | BW-1               |
|                         |       | Collection Date: 03/21/07     | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           | 03/21/07           |
|                         |       | Duplicate                     |                    |                    |                    |                    |                    |                    |                    |
| Metals                  |       |                               |                    |                    |                    |                    |                    |                    |                    |
| Iron (total)            | µg/L  | 315                           | 1100               | 9350 J             | 16300 J            | 13400              | 5170               | 250                | 1910               |
| Potassium (total)       | µg/L  | 6000                          | ND                 | 14800              | 15100              | 3090               | 5310               | 3500               | 6880               |
| Zinc (total)            | µg/L  | 542                           | 396                | 887 J              | 1850 J             | 35.1               | 1050               | ND                 | 795                |
| Iron (dissolved)        | µg/L  | 202                           | 618                | 4760               | 4310               | 503                | 1350               | 173                | 1010               |
| Potassium (dissolved)   | µg/L  | 5600                          | ND                 | 15600              | 14400              | 2050               | 5360               | 4120               | 7500               |
| Zinc (dissolved)        | µg/L  | 451                           | 244                | 348                | 476                | ND                 | ND                 | ND                 | ND                 |
| General Chemistry       |       |                               |                    |                    |                    |                    |                    |                    |                    |
| Ammonia                 | mg/L  | 0.123                         | 0.0661             | 2.96               | 2.82               | 0.0681             | 0.368              | 0.392              | 0.881              |
| Nitrate                 | mg/L  | ND                            | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 | ND                 |
| Total Kjeldahl Nitrogen | mg/L  | 0.236                         | 0.312              | 3.35               | 3.67               | 0.484              | 1.02               | 0.940              | 1.69               |

## Notes

- J = Estimated  
NDx = Non-detect at associated value  
TCL = Target compound list

(86)

Gw 9 B

Date 3/21/06

Project # 5513-20

Condition good

Depth 3" 0 - 31.70

Initial w/L 10.34

Vol. Calc.  $31.70 - 10.34 = 21.36 \times .37 = 7.9$ 

Method whole pump

Purge Record

| Time | Vol | pH   | Cond | Temp | Turb |
|------|-----|------|------|------|------|
| 1248 | 8   | 7.51 | .008 | 9.39 | 0.0  |
| 1254 | 16  | 7.07 | 2.30 | 9.6  | 0.0  |
| 1302 | 24  | 7.13 | 230  | 9.61 | 0.0  |

Initial w/Q  
clean / colorless

Final w/Q  
~~66~~ same

Final w/L  
15.19

Sample Record

Date 3/21/2007

crew RBN / DJT

Method dedicated bailer

Vol / Analysis See pg 28 C

Sample Time 1305

Sample ID WG-5513-03212007-007

w/L SAME AS BEFORE

| pH   | Cond | Temp | Turb |
|------|------|------|------|
| 7.35 | 2.32 | 8.99 | 0.0  |

Col # 4996

Inst. Control #5  
w/L Metre 4307  
Horiba 4288

James B. Hart

(84)

Gw 8B

Date 3/21/07

crew RBN  
DST

project # 5513-20

Condition good

Depth 3" 0-29.70

Initial w/c 8.02

Vol. Calc  $29.70 - 8.02 = 21.68 \times .37 = 8.02 \text{ gal}$ 

Method - whole pump

Purge Record

| Time | Vol    | pH   | Cond | Temp | Turb |
|------|--------|------|------|------|------|
| 0920 | 8 gal  | 6.77 | 1.49 | 9.57 | 65.1 |
| 0930 | 16 gal | 6.83 | 1.52 | 8.56 | 76.5 |
| 0940 | 24 gal | 6.88 | 1.50 | 8.44 | 2.4  |

Initial w/o

clear / colorless

Final w/o

clear / colorless

Final w/c 15.97

Sample Record

Date 3/21/07

crew RBN/DST

Method dedicated bailer

Vol/Analysis See pg 28 C

Sample Time 1000

Sample ID WG-5513-03212007-001

w/o clear quality

| pH   | Cond | Temp | Turb |
|------|------|------|------|
| 7.23 | 1.46 | 8.43 | 41.8 |

Cof C# 4996

Inst. Control #5

w/c Meter 4307

Horiba 4288

MCW 3

3/21/07 crew

6513-02

in good

2" O- 15.28

w/L 3.40

15.28 - 3.40 x 1.16 = 1.9 gal

designated barrel

record

| Vol | pH   | Cond  | Temp | Turb |
|-----|------|-------|------|------|
| 1   | 5.57 | 0.411 | 7.86 | 314  |

24 at 2.5 gallons

w/o slightly cloudy  
light brown

w/o cloudy brown

16 dry at 2.5 gallons

# Sample Record

Date 3/21/07

crew RBN/ DJT

Method dedicated barrel

Vol/Analysis see pg 28 C

Sample Time 11 20

Sample ID WG-5513-03212007-005

w/o slightly cloudy brown

| pH   | Cond  | Temp | Turb |
|------|-------|------|------|
| 4.73 | 0.460 | 5.90 | 151  |

CofC# 4996

Inst. Control #5  
w/L Meter 4301  
Monba 4288

Rachel [Signature]

(82)

Date

Project #

Condite

Depth

Initial

Vol. Calc

Method

Purge R

Time

0810

D

Initial

Final

Final

80

Bow 4

Date 3/21/07 crew PBN  
 Project # 5513 DJT  
 Condition good  
 Depth 4" 0-13.9 3" 13.9-27.5  
 Initial w/L 5.16  
 Vol Calc.  $13.9 - 5.16 = 8.74 \times 0.65 = 5.68$  14.6  
 Method whole pump -11.2

Purge Record

| Time | Vol | pH   | Cond | Temp °C | Turb |
|------|-----|------|------|---------|------|
| 1047 | 10  | 7.21 | 1.19 | 7.89    | 42.4 |
| 1053 | 20  | 6.98 | 1.19 | 8.31    | 4.8  |
| 1059 | 30  | 6.98 | 1.18 | 8.50    | 4.4  |

Initial w/o  
 cloudy / Red Brown

Final w/o  
 clear / colorless

Final w/L  
 6.10

Sample Record

DUP

Date 3/21/2007  
 crew PBN / DJT  
 Method dedicated barzer

Vol / Analysis Sec Rg 28C

Sample Time 1130  
 Sample ID WG-5513-03212007-003  
 Blind Dup. WG-5513-03212007-004  
 (1215)

w/o  
 clear / colorless

pH 7.02 Cond 1.19 Temp °C 8.40 Turb 24.8

CofC\* 4996

Inst. Control #'s  
 w/L Meter 4307  
 Horiba 4288

Rachel [Signature]

(78)

Bw 3

Date 03/21/07 Crew RBV/DJT

Project# 5513-20

Condition good

Depth 4" 0-9.7 3" 9.7-23.45

Initial w/L 4.36

Vol. Calc.  $23.45 - 4.36 =$ Method  $\frac{9.7 - 4.36}{5.1} \times 0.05 = 3.47 \div 5.1 = 8.571$   
check pumpPurge Record

| Time  | Vol  | pH   | Cond  | Temp °C | Turb |
|-------|------|------|-------|---------|------|
| 10:08 | 8.5  | 7.18 | 0.667 | 5.93    | 4.8  |
| 10:15 | 17   | 7.10 | 0.675 | 6.13    | 0.0  |
| 10:18 | 25.5 | 6.98 | 0.676 | 5.63    | 0.8  |

Initial w/Q  
cloudy BrownFinal w/Q  
clear / colorlessFinal w/L  
4.40Sample Record

Date 3/21/07

Crew RBV/DJT

method dedicated bucket

Vol/Analysis See pg 28C

Sample Time 1100

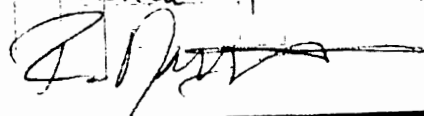
Sample ID: W6-5513-03212007-002

w/Q

clear colorless

| pH   | Cond  | Temp °C | Turb |
|------|-------|---------|------|
| 6.95 | 0.665 | 5.52    | 0.8  |

CFC# 4996

Inst. Control #5  
w/c Meter #307  
Noriba 4288


(76)

Baw 2

Date 3/21/2007 crew RBN/DJT

Project# 5513-20

Condition good

Depth H" 0-21.1 3" 21.1-37.1

Initial w/L 8.34

Vol. Calc.  $21.1 - 8.34 = 12.76 \times 0.65 = 8.29$   
= 14.1

Method whole pump

Purge Record

| Time  | Vol | pH   | Cond | Temp °C | Turb |
|-------|-----|------|------|---------|------|
| 11:51 | 14  | 6.73 | 2.11 | 9.4     | 25.3 |
| 12:00 | 28  | 6.78 | 2.17 | 9.7     | 0.3  |
| 12:10 | 42  | 6.80 | 2.19 | 9.5     | 0.0  |

Initial w/Q  
cloudy brownFinal w/Q  
Bike 2Final w/L  
clear / green tint

MS/MSD

Sample Record

Date 3/21/2007

crew RBN / DJT

Method dedicated bailer

Vol/Analysis See pg 28 C

Sample Time 1245

Sample ID WG-5513-03212007-0006

w/Q  
clear / green tint

| pH   | Cond | Temp °C | Turb |
|------|------|---------|------|
| 6.88 | 2.22 | 9.3     | 5.0  |

CofC# 4996

Inst. Control #5  
w/L Meter 4307  
Niriba 4288

Rachel B. [Signature]

(74)

BW. 1

Date 3/21/2007 Crew RBN  
 Project # 5513-20 DJT  
 Condition good  
 Depth 4" 0-20.9 3" 20.9-35.9  
 Initial w/k 13.16  
 Vol. Calc. 20.9 - 13.16 = 7.74 = 4.75 + 5.6 = 10.35  
 Method small pump

Purge Record

| Time | Vol | pH   | Cond | Temp | Turb |
|------|-----|------|------|------|------|
| 1338 | 10  | 7.63 | 1.79 | 9.06 | 48.5 |
| 1342 | 20  | 7.29 | 1.83 | 9.26 | 17.0 |
| 1352 | 30  | 7.31 | 1.85 | 9.70 | 5.0  |

Initial w/Q

cloudy / brown

Final w/Q

clear / colorless

Final w/k

13.92

Sample Record

Date 3/21/2007  
 Crew RBN / DJT  
 Method dedicated bucket  
 Vol / Analysis See pg 28 C

Sample Time 1400

Sample ID WG-5513-03212007-008

w/Q Same as final

pH  
7.50Cond  
1.82Temp  
9.40Turb  
24

CofC # 4996

Inst. Control #5

w/k Meter 4307

Horiba 4228

Keele H

(72)

Hydraulic Monitoring  
 Date 3/21/07 Crew DJ/RBN  
 Project # 5511302 5513-02

| Well  | Time | W/L   | Sounded Depth |
|-------|------|-------|---------------|
| MW 1  | 0850 | 7.83  | 21.14         |
| ↓ 2   | 0830 | 20.22 | 24.70         |
| ↓ 3   | 0810 | 3.40  | 15.16         |
| BW 1  | 0855 | 13.16 | 29.04         |
| ↓ 2   | 0829 | 8.34  | 24.73         |
| ↓ 3   | 0832 | 4.36  | 23.48         |
| ↓ 4   | 0845 | 5.16  | 21.86         |
| ↓ 5   | 0834 | 4.13  | 14.66         |
| ↓ 6   | 0823 | 13.81 | 26.18         |
| GW 8B | 0907 | 8.02  | 29.52         |
| ↓ 9B  | 0818 | 10.34 | 32.06         |

Inst. Control # 4307  
 Water level Meter

Daily log

Date 3/21/2007  
 Conn. Cune at site  
 begin water levels

Sunny, mild temps 25°F  
 at start, light wind.

0910 begin pouring and sampling  
 TRAP blanks

TR ~~03212007~~ TR-5513-03212007  
 -04

MS/MSD on well BW-2

1420

Sampling complete  
 leave site

*David RBN*