2021 Hazardous Waste Scanning Project

File Form Naming Convention.

(File_Type).(Program).(Site_Number).(YYYY-MM-DD).(File_Name).pdf

.pdf

Note 1: Each category is separated by a period "." Note 2: Each word within category is separated by an underscore "_"

Specific File Naming Convention Label:

932001. 2009-04-01. Biannual_ 2008_ Mondering_event

Bi-Annual 2008 Monitoring Event Letter Report For Site No. 932001 Airco Properties, Inc., Airco Parcel Niagara Falls, New York

Prepared for

Linde, Inc. 575 Mountain Avenue Murray Hill, New Jersey 07974

Prepared by



Greenstar Engineering, PC 6 Gellatly Drive Wappingers Falls, New York 12590 (845) 223-9944

> April 2009 Revision: 0 Project No.: 150C265.1005

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6 Gellatly Drive Wappingers Falls, NY 12590 (845) 223-9944 MAY 0 4 2009 NYSDEC REG 9 FOIL REL UNREL

LETTER OF TRANSMITTAL

ТО	Mr. Michael Hinton			DATE: 04/30/09 JOB NO.: 150C265.1005				
	New York State Depa	rtment of	ATTENTION: Mr. Michael Hinton RE: Bi-Annual 2008 Monitoring Event Letter Report, Site No. 932001, Airco Properties Inc.,					
	Environmental Conse	rvation						
	Region 9	· · ·						
	270 Michigan Avenue Buffalo, New York 14203			Airco Parcel, Niagara Falls, New York				
				÷	·			
WE A	RE SENDING YOU	[X] Attached	[]	Under separate cover v	ia the following items:			
	[] Shop drawings	[] Prints [] Plans	[]	Samples [] Speci	ifications			
	[] Copy of letter	[] Change order	[]					

COPIES	DATE	DESCRIPTION				
1	04/30/09	Second Bi-Annual 2008 Monitoring Event Letter, Site No. 932001, Airco Properties Inc., Airco Parcel, Niagara Falls, New York				
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THESE ARE TRANSMITTED as checked below:

[] For approval	[] Approved as submitted	[] Resubmit copies for approval
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SIGNED

REMARKS Greenstar is pleased to provide you with the above listed document. Should you have any questions or comments regarding this report, please do not hesitate to contact me at (845) 223-9944.

COPY TO: M. Resh, Linde (1 copy) M. Forcucci (NYSDOH) (1 copy) Town of Niagara Falls, Town Clerk (1 copy)

LLE. MENR

Charles E. McLeod, President

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Greenstar Engineering, PC 6 Gellatly Drive Wappingers Falls, NY 12590

30 April 2009

Mr. Michael Resh Head of Environment Linde North America, Inc. 575 Mountain Avenue Murray Hill, New Jersey 07974

RE: Bi-Annual 2008 Monitoring Event Letter Report, Site No. 932001, Airco Properties Inc., Airco Parcel, Niagara Falls, New York Greenstar Project No.: 150C265.1005

Dear Mr. Resh:

Greenstar Engineering, P.C. (Greenstar) is pleased to provide the second 2008 Bi-Annual Monitoring Event Letter Report summarizing the operation and maintenance activities which occurred from 1 July 2008 to 31 December 2008 at the above referenced site. The post-closure monitoring and facility maintenance program was initiated at the Airco Parcel located in Niagara Falls, New York, during December 2000. Post-closure monitoring and facility maintenance is required by New York State Solid Waste Management Facilities Regulations (6 NYCRR Part 360-2.15[k][4]) and stipulated in Order on Consent No. B9-0470-94-12. The purpose of this monitoring event letter report is to summarize the analytical results of the second bi-annual 2008 groundwater monitoring event that was conducted in September 2008, and to summarize operations and maintenance activities completed from July through December 2008.

OBJECTIVES

In accordance with the Revised Final Post-Closure Monitoring and Facility Maintenance Plan for the Airco Parcel, prepared by EA Engineering, PC and its affiliate EA Science and Technology (EA 2004)¹, environmental monitoring points will be maintained and sampled during the post-closure monitoring period, including the collection of appropriate groundwater, surface water, and groundwater collection treatment system (GCTS) samples. The Post-Closure Monitoring and Facility Maintenance Plan documents sampling locations, sampling parameters and analytical methods, in addition to other required maintenance activities, such as landfill cap inspections and the operations and maintenance plan for the GCTS. Following completion of the first five years of post-closure monitoring, the original Revised Final Post-Closure Monitoring and Facility Maintenance Plan, which was included as Appendix A in the Interim Remedial Measure Report (EA 2001a)², was re-evaluated and revised based on the data collected at the site so that the monitoring plan is more focused to address site-specific issues that were identified during the first five years of post-closure monitoring.

In accordance with the Revised Post-Closure Monitoring and Facility Maintenance Program the following activities are being completed:

^{1.} EA Engineering, P.C. and its Affiliate EA Science and Technology. 2004. Revised Final Post-Closure Monitoring and Facility Maintenance Plan for the Airco Parcel, Niagara Falls, New York. September.

EA Engineering, P.C. and its Affiliate EA Science and Technology. 2001a. Interim Remedial Measure Report Documenting Closure of the Witmer Road Landfill, Niagara Falls, New York. Appendix A – Revised Final Post-Closure Monitoring and Facility Maintenance Plan. January.



- Environmental monitoring points are being maintained and sampled during the post-closure period.
- Bi-annual summary reports are submitted to the New York State Department of Environmental Conservation (NYSDEC) Division of Solid and Hazardous Materials, Region 9; the State of New York State Department of Health in Albany, New York; Linde, Inc.; and the document repository located at the Town of Niagara Town's Clerk's Office.
- Routine inspections are conducted of sediment ponds and the engineered wetlands to assess the presence of mosquito larvae.
- Drainage structures and ditches are maintained to prevent ponding of water and erosion of the landfill soil cap.
- Soil cover integrity, slopes, cover vegetation, drainage structures, and the perimeter road are maintained during the post-closure monitoring and maintenance period.
- A vegetative cover is maintained on all exposed final cover material, and adequate measures are taken to ensure the integrity of the final vegetated cover, topsoil layer, and underlying barrier protection layer.
- The GCTS is being operated and maintained to effectively mitigate the discharge of groundwater to surface water in the southwest corner of the Airco Parcel.
- Records are maintained of all sampling and analytical results.

The bi-annual sampling events are summarized in a letter report detailing the findings of the environmental sampling. Monitoring event letter reports are limited to documenting the results of each sampling round. This letter report summarizes the findings of the tenth bi-annual post-closure monitoring event completed at the Site, along with a summary of operation and maintenance activities performed from 1 July through 31 December 2008.

BACKGROUND

The Airco Parcel is part of the Vanadium Corporation of America site that is located in the Town of Niagara Falls, New York (Figure 1). The entire Vanadium site is approximately 150 acres in size, with the Airco Parcel encompassing approximately 25 acres. The 25-acre Airco parcel is the focus of this bi-annual sampling event letter report. The site contains waste material from the historic operation of onsite and nearby production facilities.

An Immediate Investigative Work Assignment (IIWA) investigation was conducted by NYSDEC for a portion of the 150-acre parcel in August 1997, and included investigation of approximately 70 acres of the Niagara Mohawk Power Corporation and New York Power Authority owned parcel. During the investigation, NYSDEC determined that the site had been used by Vanadium Corporation of America (the owners of the site from 1924 to 1964) to dispose of wood, brick, ash, lime slag, ferrochromium silicon slag, and ferrochromium silicon dust. Based on results of the IIWA investigation, it was determined that much of the surface material consisted of fill, including fly ash, dust, slag, and cinder materials.

Analytical results of groundwater samples collected at the site during the IIWA investigation indicated that surface water and groundwater standards were exceeded for hexavalent chromium and pH. Based on the results of the IIWA and other investigations, the Vanadium site, including the Airco Parcel, has been listed as a Class 2 Hazardous Waste Site in the New York State Registry of



Mr. Michael Resh Linde North America, Inc. 30 April 2009 Page 3

Inactive Hazardous Waste Sites (Site No. 932001). A Class 2 listing indicates a significant threat to public health and the environment, and requires remedial action.

Remedial measures at the Airco Parcel were completed in 2000 when the landfill was capped as part of an Interim Remedial Measure (IRM) implemented at the Site. A complete description of the history of the site, and the construction details of the landfill capping system, can be found in the Interim Remedial Measure Report (EA 2001b)³. During construction of the capping system a relief pipe system was installed to allow perched water to exit from under the cap without causing slope instability. Flow monitoring and quarterly sampling were initiated as part of post-closure operations and facility maintenance. The data collected since December 2000 indicated that the leachate was actually shallow groundwater discharging to surface water. The data also indicated that the discharge of groundwater at the site was seasonal. The data further indicated that elevated hexavalent chromium (Cr^{6+}) concentrations and pH in groundwater, upon mixing with surface water, remained in excess of the ambient water quality criteria.

The IRM was augmented in 2003 with the design and implementation of the GCTS, which was determined to be necessary to meet the goals of the interim remedial measures program. The GCTS was designed to prevent the uncontrolled discharge of impacted groundwater from the Airco Parcel and includes pH adjustment via carbon dioxide aeration, settling for precipitate removal, oxidation/reduction via zero valence iron, and final clarification via an engineered wetland. The main portion of the GCTS is located at the northwest corner of the site and contains the main control panel, carbon dioxide storage tank, carbon dioxide aeration system, sedimentation tanks, pump stations, zero valence iron reaction tanks, and an engineered wetland. An influent pump station is located at the southwest corner of the site.

MONITORING EVENT FIELD ACTIVITIES

Monitoring Well Gauging

The site monitoring wells, Figure 2, were gauged prior to sampling on 16 September 2008. The depth to water ranged from 5.01 ft below top of casing at MW-6B to 13.66 ft below top of casing at MW-4B. Gauging data are summarized in the table below:

Monitoring Well	Depth to Water (ft btoc)	Well Elevation (ft AMSL)	Water Elevation (ft AMSL)
MW-1B	12.99	617.77	604.78
MW-2B	13.60	615.88	602.28
MW-3B	11.10	611.22	600.12
MW-4B	13.66	606.68	593.02
MW-5B	11.19	605.48	594.29
MW-6B	5.01	603.47	598.46
MW-7B	12.26	609.48	597.22
MW-8B	8.00	611.62	603.62
NOTE: btoc =	Below top of casing.		

An interpretation of the water table surface is illustrated on Figure 3.

^{3.} EA Engineering, Science, and Technology. 2001b. Interim Remedial Measure Report Documenting Closure of the Witmer Road Landfill, Niagara Falls, New York. January.



Mr. Michael Resh Linde North America, Inc. 30 April 2009 Page 4

Groundwater Sampling Procedures

Monitoring wells were sampled on 16 September 2008. Seven of the eight groundwater samples were collected from the site monitoring wells. Monitoring well MW-4B was purge using a dedicated bailer and gauged the following day. There was insufficient well volume to collect a sample. Monitoring wells MW-3B, MW-5B and MW-8B were purged using dedicated bailers due to slow recharge and limited well volume. These wells were bailed dry and allowed to recharge prior to sample collection. Monitoring wells MW-1B, MW-2B, MW-6B, and MW-7B had adequate recharge rates for low flow sampling utilizing a peristaltic pump. Water quality readings were allowed to stabilize prior to sample collection. Surface water samples were collected from the drainage swales in the southwest corner. Two samples were collected from the eastern swale approximately 80 feet east of the pump station (SS-02) and from the confluence of the two swales where they discharge from the property (SS-01). Samples were submitted to TestAmerica Laboratories of Amherst, New York for analysis of phenolics by U.S. Environmental Protection Agency (EPA) Method 420.2, sulfate by EPA Method 375.3, ammonia (expressed as nitrogen) by EPA Method 350.2, and Target Analyte List metals by EPA Series 6010/6020, including hexavalent chromium.

Groundwater sampling results were compared to NYSDEC Ambient Water Quality Standards (AWQS) (NYSDEC 1999) and guidance values for Class GA waters. Class GA groundwater is used as a source of drinking water. Surface water samples were compared to NYSDEC AWQS for Class D surface waters. Class D waters are used for fishing but are not conducive to fish propagation. If no Class D standards were applicable for a particular compound, analytical results were compared to the more stringent Class C standards. Class C waters are suitable for fishing and fish propagation. Analytical results for groundwater and surface water are summarized on the table provided in Attachment A. Copies of the well gauging, purging, and sampling forms are provided in Attachment B. Laboratory chain of-custody records are provided in Attachment C. Laboratory analytical results for groundwater sampling are included in Attachment D.

ANALYTICAL RESULTS

Based on the analytical results collected during the Fourth Quarter 2000 and First Quarter 2001, NYSDEC approved a reduction in the sampling requirements. As per a letter to NYSDEC dated 5 June 2000, samples were analyzed for water quality parameters (ammonia, phenolics, and sulfate) and total (unfiltered) metals.

Summary tables listing analytical results compared to applicable NYSDEC AWQS are included in Attachment A, and a tag map illustrating analytical results is provided as Figure 4. Notable results of chemical analyses are as follows.

Metals

Unfiltered metals samples were collected from the 7 monitoring wells. Notable results included the following:

- Chromium, hexavalent chromium, iron, Lead, magnesium, manganese, selenium and sodium were detected in one or more of the groundwater samples at concentrations in excess of NYSDEC AWQS.
- Chromium was detected in excess of the NYSDEC AWQS in MW-2B and MW-8B at concentrations of 0.65 mg/L and 0.11 mg/L, respectively.



- Hexavalent chromium was detected in excess of the NYSDEC AWQS in MW-2B, and MW-8B at concentrations of 0.197 mg/L and 0.066 mg/L, respectively.
- Iron was detected in excess of the NYSDEC AWQS in MW-2B, MW-3B, MW-5B, MW-7B and MW-8B at concentrations ranging from of 0.33 mg/L (MW-3B) to 29.8 mg/L (MW-5B).
- Lead was detected in excess of the NYSDEC AWQS in MW-5B at a concentration of 0.059 mg/L.
- Magnesium was detected in excess of the NYSDEC AWQS in MW-1B, MW-5B, MW-6B and MW-8B at concentrations ranging from 61 mg/L (MW-1B) to 105 mg/L (MW-5B).
- Manganese was detected in excess of the NYSDEC AWQS in MW-1B and MW-5B at concentrations of 0.70 mg/L and 0.67 mg/L, respectively.
- Selenium was detected in excess of the NYSDEC AWQS in MW-8B at a concentration of 0.03 mg/L.
- Sodium was detected in excess of the NYSDEC AWQS in all 7 monitoring wells at concentrations ranging from 31.5 mg/L (MW-5B) to 117 mg/L (MW-1B).

Unfiltered metals samples were collected from 2 surface water locations. No metals were detected at concentration above the NYSDEC AWQS for Class D surface waters

Water Quality Parameters

Water quality parameters, including pH, temperature, conductivity, dissolved oxygen, turbidity, and salinity, were collected in the field. In addition, water quality parameters, including ammonia (expressed as N), phenolics, and sulfate, were also analyzed by the laboratory. Notable results included the following:

- Phenolics were detected in excess of NYSDEC AWQS in MW-2B at a concentration of 0.015 mg/L and in the duplicate sample collected from MW-6B at a concentration of 0.008 mg/L. Phenolics were not detected in the primary sample from MW-6B.
- Sulfate was detected in excess of the NYSDEC AWQS in MW-6B and MW-8B at concentrations of 376 mg/L and 263 mg/L, respectively.
- pH measurements were measured outside the NYSDEC AWQS of 6.5-8.5 standard pH units in monitoring wells MW-1B (6.48), MW-2B (12.29), MW-3B (9.66) and MW-5B (5.61).

LANDFILL INSPECTION

Landfill cap inspections were conducted on 15 September and 21 October 2008. The Landfill Cap Inspection Checklists are provided as Attachment E. No deterioration, damage, or erosion to the landfill cap was noted during the engineering inspections. Drainage swales were predominantly clear.



GCTS OPERATIONS AND MAINTENANCE MONITORING ACTIVITIES

Routine operations and maintenance of the GCTS is preformed during site visits twice per month. Activities performed include data collection, cleaning and calibration of pH probes, cleaning of pressure transmitters, operational parameter adjustments based on observed site conditions, and general housekeeping tasks. The replacement of system components, including pumps, pressure transmitters, and pH probes is also scheduled and performed during the routine visits when practicable.

System Operations and Maintenance (July – December 2008)

The GCTS was operated throughout the 6-month period of 1 July -31 December 2008. System monitoring was conducted throughout the operation period. Attachment G provides details of the problems encountered, and the implemented solutions.

During the report period, the GCTS operated for 4,416 hours (100 percent) and averaged 12.6 gpm. The GCTS sampling occurred bi-weekly during the operation period. Samples were collected at various locations within the system to evaluate treatment system performance and compliance with discharge criteria. Bi-weekly samples were collected from the system at the following locations: T3B after CO₂ aeration, after treatment via the zero valence iron tank T6B, after the engineered wetland (EWE), and where the drainage swale exits the site in the southwest corner, when accessible. The samples were analyzed in the field for total chromium and hexavalent chromium using a HACH DR4000[®] spectrophotometer. The HACH DR4000[®] spectrophotometer field method is EPA approved for reporting water and wastewater analyses within a detection limit of 0.006 and 0.005 mg/L for hexavalent chromium, and 0.003 mg/L for total chromium. The engineered wetland discharge samples were analyzed in the field as well as separate quarterly samples collected for off-site laboratory analysis at Test America Laboratories of Amherst, New York for a full list of discharge permit criteria.

Field sampling results for total and hexavalent chromium can be found in Table 1, and results of the quarterly engineered wetland discharge samples can be found in Table 2. Analytical results for the quarterly discharge sampling noted that no constituents exceeded the NYSDEC discharge guidance values for the September or December 2008 discharge sampling. The full set of laboratory analytical data for the GCTS discharge sampling can be found in Attachment F.

GCTS Modifications (July - December 2008)

No major modifications to the GCTS were performed during the report period. Only Routine operations and maintenance activities, including repairs to pumps, VFDs, pH probes, etc were performed. Attachment G summarizes monthly operation and maintenance details for the period July through December 2008, as well as provides proposed operation and maintenance projects and modification improvements to be implemented in the near future.



Mr. Michael Resh Linde North America, Inc. 30 April 2009 Page 7

If you have any questions regarding the results of this Bi-Annual 2008 Monitoring Event Letter Report, please do not hesitate to contact Charles McLeod at (845) 223-9944.

Sincerely,

GREENSTAR ENGINEERING, P.C.

LI E. Mrd R

Charles E. McLeod, Jr., P.E. President

CEM/cl Attachments

cc: M. Hinton (NYSDEC) M. Forcucci (NYSDOH) Town of Niagara Falls (Town Clerk) Greenstar Engineering, P.C.

TABLE 1 SUMMARY OF GCTS FIELD SAMPLING RESULTS 1 JULY – 31 DECEMBER 2008, AIRCO PARCEL, NIAGARA FALLS, NEW YORK

	Chromium Tank 3B		Iron Tank 6B		Engineered Wetland		Southwest Corner			
	Total	Hexavalent	Total	Hexavalent	Total	Hexavalent	Total	Hexavalent		
Date	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium		
7/14/08	109 µg/L	95 μg/L	<6U µg/L	<3U μg/L	<6U μg/L	<3U µg/L	<6U µg/L	<3U µg/L		
7/28/08	88 μg/L	88 μg/L	<6U μg/L	<3U μg/L	<6U μg/L	<3U μg/L	<6U μg/L	<3U μg/L		
8/13/08	157 μg/L	19 μg/L	<6U μg/L	<3U μg/L	<6U μg/L	<3U µg/L	28 μg/L	11 μg/L		
8/27/08	76 μg/L	5 μg/L	<6U µg/L	<3U μg/L	-<6U μg/L	<3U μg/L	33 μg/L	11 μg/L		
9/15/08	49 µg/L	23 μg/L	18 µg/L	<3U μg/L	5 μg/L	1 μg/L	13 μg/L	2 μg/L		
9/25/08	59 μg/L	3 μg/L	<6U μg/L	4 μg/L	<6U μg/L	<3U μg/L	7 μg/L	7 μg/L		
10/1/08	14 μg/L	1 μg/L	<6U µg/L	<3U µg/L	<6U μg/L	<3U μg/L	4 μg/L	7 μg/L		
10/21/08	96 µg/L	54 μg/L	<6U µg/L	2 μg/L	<6U μg/L	7 μg/L	12 μg/L	11 μg/L		
11/3/08	115 μg/L	2 μg/L	<6U µg/L	<3U µg/L	<6U μg/L	<3U µg/L	17 μg/L	8 μg/L		
11/24/08	145 μg/L	21 μg/L	<6U µg/L	<3U μg/L	<6U µg/L	<3U μg/L	<6U μg/L	<3U μg/L		
12/2/08	172 μg/L	142 µg/L	24 µg/L	<3U μg/L	15 μg/L	<3U μg/L	18 μg/L	8 μg/L		
12/16/08	163 µg/L	62 μg/L	17 μg/L	<3U µg/L	7 μg/L	<3U µg/L	NS-Ice	NS-Ice		

NOTE: NS = Not Sampled

NS - Ice = Not Sampled due to winter weather conditions.

No results were in excess of SPDES discharge guidance values

Field samples analyzed using a HACH DR4000® Spectrophotometer.

Hach Methods 8023 for Hexavalent Chromium and Hach Method 8084 for Total Chromium.

* = Sampled collected and analyzed by Test America, Buffalo, NY

Airco Parcel, Niagara Falls, New York

TABLE 2 SUMMARY OF QUARTERLY GCTS DISCHARGE SAMPLING 16 SEPTEMBER AND 2 DECEMBER 2008, AIRCO PARCEL, NIAGARA FALLS, NEW YORK

			New York State Department of
			Environmental Conservation
Parameter	16 September 2008	2 December 2008	Discharge Criteria
pH	7.80	7.91	6-8 s.u.
Total suspended solids	<10U	<10U	10 mg/L
Dissolved Oxygen	7.0	10.2	7 mg/L
Ammonia as N	<9.2U	<9.2U	9.2 mg/L
Total Kjeldahl nitrogen	5.9	<1.0U	Monitor (mg/L)
Total Recoverable Phenolics	<0.008U	<0.008U	.008 mg/L
Biochemical oxygen demand	<5U	<5U	5.0 mg/L
1,1-Dichloroethane	<5U	<5U	5.0 μg/L
Trichloroethene	<5U	<5U	5.0 μg/L
Nickel	<0.07U	<0.07U	0.07 mg/L
Copper	<0.0147U	<0.0147U	0.0147 mg/L
Barium	<2U	<2U	2 mg/L
Total chromium	<0.1U	<0.1U	0.1 mg/L
Hexavalent chromium	<0.011U	<0.011U	0.011 mg/L
Iron	<0.3U	<0.3U	0.3 mg/L
Selenium	<0.0046U	<0.0046U	0.0046 mg/L
Thallium	<0.004U	<0.004U	0.004 mg/L
Zinc	<0.115U	<0.115U	0.115 mg/L
Nitrate as N	3.0	<0.05U	Monitor (mg/L-N)
Nitrite as N	<0.05U	1.3	Monitor (mg/L-N)
Chemical oxygen demand	<40U	<40U	40 mg/L
Total dissolved solids	590	566	Monitor (mg/L)
Notes: Values in BOLD exceed	d discharge guidance	values	









Attachment A

Summary of Analytical Results Groundwater and Surface Water Samples September 2008

ATTACHMENT A

SUMMARY OF ANALYTICAL RESULTS OF GROUNDWATER SAMPLES COLLECTED IN SEPTEMBER 2008, AIRCO PARCEL, NIAGARA FALLS, NEW YORK

Groundwater

Baseline Metals by EPA Method 200.7 (mg/L) Total (Unfiltered)

	·	MW-1B	MW-2B	MW-3B	MW-5B	MW-6B	MW-6B	MW-7B	MW-8B
							(Dup)		
Analyte	AWQS								
Cadmium	0.005	(<0.001U)	(<0.001U)	(<0.001U)	0.0022	(<0.001U)	(<0.001U)	(<0.001U)	(<0.001U)
Chromium	0.05	(<0.004U)	0.65	(<0.004U)	0.04	(<0.004U)	(<0.004U)	0.028	0.11
Chromium, Hexavalent	0.05	(<0.011U)	0.197	(<0.011U)	(<0.011U)	(<0.011U)	(<0.011U)	(<0.011U)	0.066
Iron	0.3	0.15	0.57	0.33	28.9	0.27	0.25	0.86	1.8
Lead	0.025	(<0.005U)	(<0.005U)	(<0.005U)	0.059	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)
Magnesium	35*	61	0.21	7.7	105	74.2	73.9	7.4	64.2
Manganese	0.3	0.7	0.035	0.019	0.67	0.15	0.15	0.047	0.2
Selenium	0.01	(<0.015U)	0.03						
Silica		6.9	1.7	7.7	22.1	7.1	• 5.9	5.1	9.1
Sodium	20	117	73.3	53.3	31.5	69.1	68.4	52.9	93.1
Zinc	2*	0.5	(<0.01U)	0.026	0.7	(<0.01U)	(<0.01U)	(<0.01U)	0.11

Water Quality Parameters (mg/L)

		MW-1B	MW-2B	MW-3B	MW-5B	MW-6B	MW-6B (Dup)	MW-7B	MW-8B
Analyte	AWQS					ş. 1			
Phenolics	0.001	(<0.008U)	0.015	(<0.008U)	(<0.008U)	(<0.008U)	0.008	(<0.008U)	(<0.008U)
Sulfate	250	223	17.1	51	. 145	376	330	34	263

Surface Water

Baseline Metals by EPA Method 200.7 (mg/L) Total (Unfiltered)

•		SS-01	SS-02
• •	•	•	
Analyte	AWQS		
Cadmium		(<0.001U)	(<0.001U)
Chromium		(<0.004U)	(<0.004U)
Chromium, Hexavalent	0.016	(<0.011U)	(<0.011U)
Iron	· 0.3	0.1	0.1
Lead	·	(<0.005U)	(<0.005U)
Magnesium		3.8	. 15
Manganese		(<0.003U)	0.011
Selenium	0.0046	(<0.015U)	(<0.015U)
Silica	·	2.8	4.9
Sodium		64.5	6.8
Zinc		(<0.01U)	(<0.01U)

Water Quality Parameters (mg/L)

	,	SS-01	SS-02
Analyte	AWQS		
Phenolics		(<0.008U)	(<0.008U)
Sulfate ·		21.4	107

QA/QC

Baseline Metals by EPA Method 200.7 (mg/L) Total (Unfiltered)

		RB-01	SWB-01
			- 1
Analyte	AWQS		
Cadmium		(<0.001U)	(<0.001U)
Chromium		(<0.004U)	(<0.004U)
Chromium, Hexavalent		(<0.011U)	(<0.011U)
Iron		(<0.05U)	(<0.05U)
Lead		(<0.005U)	(<0.005U)
Magnesium		1.2	1.2
Manganese		(<0.003U)	(<0.003U)
Selenium		(<0.015U)	(<0.015U)
Silica		6.7	6.5
Sodium		2	2.1
Zinc		(<0.01U)	(<0.01U)

Water Quality Parameters (mg/L)

		RB-01	SWB-01
Analyte	AWQS		
Phenolics		(<0.008U)	(<0.008U)
Sulfate		4.1	4.1

	TABLE N	OTES						
AWQS	= New York State Ambient Water Qua	lity Standards and Guidance Values from						
	Water Quality Regulations, Title 6, Chapter X Parts 700-706 August 1999.							
*	= Indicates guidance value.							
U	= Not detected. Sample quantitation lin	mits shown as $(< _ U)$.						
J	= Estimated concentration.							
only inc		1						
Results s Water Q Analytic	shaded and in boldface indicate concentrat Quality Standards or Guidance Values. ical Methods for Water Quality Paramet	ions in excess of New York State Ambient ers						
Results s Water Q Analytic Amm	shaded and in boldface indicate concentrat Quality Standards or Guidance Values. ical Methods for Water Quality Paramet monia (expressed as Nitrogen) = E	ions in excess of New York State Ambient ers PA 350.2						
Results s Water Q Analytic Amm Phen	shaded and in boldface indicate concentrat Quality Standards or Guidance Values. ical Methods for Water Quality Paramet monia (expressed as Nitrogen) = E nolics = E	ions in excess of New York State Ambient ers PA 350.2 PA 420.2						
Results s Water Q Analytic Amm Phen Silica	shaded and in boldface indicate concentrat Quality Standards or Guidance Values. ical Methods for Water Quality Paramet monia (expressed as Nitrogen) = E nolics = E ca = E	ions in excess of New York State Ambient ers PA 350.2 PA 420.2 PA 6010						
Results s Water Q Analytic Amm Phen Silica Sulfa	shaded and in boldface indicate concentrat Quality Standards or Guidance Values. ical Methods for Water Quality Paramet monia (expressed as Nitrogen) = E nolics = E ca = E cate = E	ions in excess of New York State Ambien ers PA 350.2 PA 420.2 PA 6010 PA 375.3						
Results s Water Q Analytic Amm Phen Silica Sulfa	shaded and in boldface indicate concentrat Quality Standards or Guidance Values. ical Methods for Water Quality Paramet monia (expressed as Nitrogen) = E nolics = E ca = E fate = E	ions in excess of New York State Ambient ers PA 350.2 PA 420.2 PA 6010 PA 375.3						
Results s Water Q Analytic Amm Phen Silica Sulfa	shaded and in boldface indicate concentrat Quality Standards or Guidance Values. ical Methods for Water Quality Paramet monia (expressed as Nitrogen) = E nolics = E ca = E fate = E	ions in excess of New York State Ambient ers PA 350.2 PA 420.2 PA 6010 PA 375.3						

Attachment B

Well Gauging, Purging, and Sampling Forms September 2008



Well I.D.:	Personnel:	Client:	
AP-MW1B	Steve Bazilus	Linde, Inc.	
Location:	Well Condition:	Weather:	
Niagara Falls	Locked	Overcast & Breezy, 64°	
Sounding Method:	Gauge Date:	Measurement Ref:	
WLI	9/15/2008	TOC	
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):	
UP	15:10	2"	

Purge Date:	Purge Time:
9/16/2008	8:15
Purge Method:	Greenstar Personnel:
Peristaltic Pump	SB `

Well Volume						
A. Well Depth (ft):	D. Well Volume (ft3):		Depth/Height of Top of PVC:			
27.83	0	.32				
B. Depth to Water (ft):	E. Well Volume (L)		Pump Type:			
12.99	9	.16	Peristaltic Pump			
C. Liquid Depth (ft) (A-B):			Pump Designation:			
14.84						

	Water Quality Parameters								
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)
8:16	13.52	0.5	0.20	5.77	1.59	44.1	0.00	10.61	160
8:22	13.51	2	0.25	6.19	1.56	44.3	0.00	10.63	66
8:30	13.51	4	0.25	6.32	1.53	49.6	0.00	10.64	25
8:34	13.54	5	0.30	6.42	1.52	60.4	0.00	10.64	15
8:38	13.56	6	0.25	6.46	1.50	51.5	0.00	10.66	11
8:42	13.57	7	0.25	6.46	1.50	53.5	0.00	10.64	11
8:46	13.56	8	0.25	6.47	1.50	55.9	0.00	10.63	9
8:50	13.58	9	0.25	6.48	1.49	54.4	0.00	10.62	8
						·			
								┨	
L					<u> </u>				
				I					

Total Quantity of Water Removed:	~ 9 L	Sampling Time:	8:55	
Samplers:	SB	Split Sample With:	N/A	
Sampling Date:	16-Sep-08	Sample Type:	GRAB	
			· ·	





Well I.D.:	Personnel:	Client:
AP-MW2B	Steve Bazilus	Linde, Inc.
Location:	Well Condition:	Weather:
Niagara Falls	Locked	Overcast & Breezy, 64°
Sounding Method:	Gauge Date:	Measurement Ref:
WLI	9/15/2008	TOC
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):
	15:20	2"

Purge Date:	Purge Time:	
9/16/2008	9:25	
Purge Method:	Greenstar Personnel:	
Pesistaltic Pump	SB	

Well Volume						
A. Well Depth (ft):	D. Well Volume (ft3):	Depth/Height of Top of PVC:				
27.31	0.30					
B. Depth to Water (ft):	E. Weil Volume (L):	Pump Type:				
13.6	8.46	Peristaltic Pump				
C. Liquid Depth (ft) (A-B):		Pump Designation:				
13.71						

	Water Quality Parameters								
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)
8:42	16.20	1	0.20	12.27	6.22	0.0	0.07	11.90	-129
8:47	17.77	2	0.20	12.28	6.23	0.0	0.06	11.95	-129
8:52	19.50	3	0.20	12.28	6.26	0.0	0.06	12.15	-129
8:57	20.44	4	0.20	12.29	6.25	0.0	0.12	12.27	-128
9:02	22.13	5	0.20	12 30	6.30	0.0	0.11	12.02	-128
9:07	23.21	6	0.20	(12.29)	6.25	0.0	0.07	12.04	-127

Total Quantity of Water Removed:	~6L	Sampling Time:	9:12
Samplers:	SB	Split Sample With:	N/A
Sampling Date:	16-Sep-08	Sample Type:	GRAB
COMMENTS AND OBSERVATIONS:	Well damaged; maj	or kink/hold-up in PVC; Replace?	



Well I.D.:	Personnel:	Client:	
AP-MW3B	Steve Bazilus	Linde, Inc.	
Location:	Well Condition:	Weather:	
Niagara Falls	Locked	Overcast & Breezy, 64°	
Sounding Method:	Gauge Date:	Measurement Ref:	
WLI	9/15/2008	тос	
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):	
	15:25	2"	

Purge Date:	Purge Time:	
9/15/2008	15:30	
Purge Method:	Greenstar Personnel:	
Hand Bail	SB	

Well Volume				
A. Well Depth (ft): D. Well Volume (ft3): Depth/Height of Top of PVC:				
18.41	0.16			
B. Depth to Water (ft):	E. Well Volume (L):	Pump Type:		
11.1	4.51	Dedicated hand bailer		
C. Liquid Depth (ft) (A-B):		Pump Designation:		
7.31				

	Water Quality Parameters								
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)
15:32	11.10	0.5	N/A	6.19	0.368	36.5	10.15	14.03	83
15:45	Dry	6	N/A	6.49	0.383	122.0	10.44	12.69	47
10:35	11.04	N/A	N/A	(9.66)	0.490	20.0	10.33	13.42	54
			_					<u> </u>	
					L				

Total Quantity of Water Removed:	~ 6 L	Sampling Time:	10:44
Samplers:	SB	Split Sample With:	N/A
Sampling Date:	16-Sep-08	Sample Type:	GRAB
COMMENTS AND OBSERVATIONS:	Well purged dry an	d sampled the following day.	



Well I.D.:	Personnel:	Client:	
AP-MW4B	Steve Bazilus	Linde, Inc.	
Location:	Well Condition:	Weather:	
Niagara Falls	Locked	Overcast & Breezy, 64°	
Sounding Method:	Gauge Date:	Measurement Ref:	
WLI	9/15/2008	TOC	
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):	
UP	15:55	2"	

Purge Date:	Purge Time:
9/15/2008	16:03
Purge Method:	Greenstar Personnel:
Hand Bail	SB

Well Volume					
A. Well Depth (ft): D. Well Volume (ft3): Depth/Height of Top of PVC:					
15.08	0.03				
B. Depth to Water (ft):	E. Weil Volume (L):	Pump Type:			
13.66	0.88	Dedicated hand bailer			
C. Liquid Depth (ft) (A-B):		Pump Designation:			
1.42					

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)
16:03	Dry	1	N/A	6.57	0.800	> 999	10.40	13.25	-140
11:05	Dry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
									· · · · · · · · · · · · · · · · · · ·
Total Quan	Fotal Quantity of Water Removed: ~1 L Sampling Time: N/A								

Compleme	<u></u>	Split Sample With:	N/A
Samplers:	NOT SAMPLED	Sample Type:	N/A
COMMENTS AND OBSERVATIONS:	3 ft. ba	ailer used, purge water was grey a	nd odorous.
Well purged dry and gauged the following o	lay; insufficent water column	to sample (< 1L).	
NO SAMPLE COLLECTED			





Well I.D.:	Personnel:	Client:
AP-MW5B	Steve Bazilus	Linde, Inc.
Location:	Well Condition:	Weather:
Niagara Falls	Locked	Overcast & Breezy, 64°
Sounding Method:	Gauge Date:	Measurement Ref:
WLI	9/15/2008	TOC
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):
UP	16:08	2"

Purge Date:	Purge Time:
9/15/2008	17:05
Purge Method:	Greenstar Personnel:
Hand Bail	SB

Well Volume				
A. Well Depth (ft):	D. Well Volume (ft3):	Depth/Height of Top of PVC:		
14.22	0.07			
B. Depth to Water (ft):	E. Well Volume (L):	Pump Type:		
11.19	1.87	Dedicated hand bailer		
C. Liquid Depth (ft) (A-B):		Pump Designation:		
3.03				

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)
17:05	11.19	0.5	N/A	6.74	0.900	16.0	9.32	15.39	70
17:10	Dry	2.5	N/A	6.90	0.899	> 999	10.26	14.36	68
									100
11:20	11.24	N/A	N/A	5.61	0.900	77.3	10.32	14.70	180

Total Quantity of Water Removed:	~ 2.5 L	Sampling Time:	11:20			
Samplers:	SB	Split Sample With:	N/A			
Sampling Date:	16-Sep-08	Sample Type:	GRAB			
COMMENTS AND OBSERVATIONS:	Well purged dry and sampled the following day.					
1 foot bailer used.						
pH probe was malfunctioning while collecting	g water quality parameters	on this well.	······			



Well I.D.:	Personnel:	Client:
AP-MW6B	Steve Bazilus	Linde, Inc.
Location:	Well Condition:	Weather:
Niagara Falls	Locked	Overcast & Breezy, 64°
Sounding Method:	Gauge Date:	Measurement Ref:
WLI	9/15/2008	TOC
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):
UP	17:20	2"

Purge Date:	Purge Time:	
9/16/2008	12:00	
Purge Method:	Greenstar Personnel:	
Peristaltic Pump	SB	

Well Volume							
A. Well Depth (ft):	D. Well Volume (ft3):	Depth/Height of Top of PVC:					
23.02	0.39						
B. Depth to Water (ft):	E. Well Volume (L):	Pump Type:					
5.01	11.12	Peristaltic Pump					
C. Liquid Depth (ft) (A-B):		Pump Designation:					
18.01							

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)
12:08	6.68	1	0.20	5.92	1.10	3.6	0.00	16.32	-70
12:13	7.61	2	0.20	6.16	1.09	7.4	0.00	16.54	-89
12:18	8.20	3	0.20	6.32	1.08	8.3	0.00	16.26	-93
12:23	9.40	4	0.20	6.48	1.09	11.9	0.00	16.13	-97
12:28	10.12	5	0.20	6.53	1.09	17.8	0.00	16.29	-98
12:33	10.65	6	0.20	6.50	1.09	19.1	0.00	16.24	-97
12:38	11.30	7	0.20	6.62	1.10	18.2	0.00	16.23	-97

Total Quantity of Water Removed:	~ 7 L	Sampling Time:	12:40
Samplers:	SB	Split Sample With:	AP-DUP-01
Sampling Date:	16-Sep-08	Sample Type:	GRAB
COMMENTS AND OBSERVATIONS:	AP-DUP-01 collecte	ed from AP-MW-6B	





Well I.D.:	Personnel:	Client:
AP-MW7B	Steve Bazilus	Linde, Inc.
Location:	Well Condition:	Weather:
Niagara Falls	Locked	Overcast & Breezy, 64°
Sounding Method:	Gauge Date:	Measurement Ref:
WLI	9/15/2008	TOC
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):
UP	17:25	2"

Purge Date:	Purge Time:	
9/16/2008	13:20	
Purge Method:	Greenstar Personnel:	
Peristaltic Pump	SB	

Well Volume							
A. Well Depth (ft):	D. Well Volume (ft3):		Depth/Height of Top of PVC:				
21.79	0	.21					
B. Depth to Water (ft):	E. Well Volume (L):		Pump Type:				
12.26	5	.88	Peristaltic Pump				
C. Liquid Depth (ft) (A-B):			Pump Designation:				
9.53							

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)
13:44	15.42	1	0.25	7.17	0.490	51.1	9.65	15.28	51
13:48	15.41	2	0.25	7.16	0.483	61.6	8.81	15.13	34
13:52	16.52	3	0.25	7.16	0.482	81.3	6.21	15.24	6
13:56	16.92	4	0.25	7.21	0.481	130.0	3.84	16.87	-4
14:00	18.20	5	0.25	7.23	0.489	60.4	7.81	13.96	-62
14:04	18.40	6	0.25	7.23	0.486	60.7	7.03	14.34	-80
14:08	18.33	7	0.25	728	0.487	61.3	7.08	14.33	-80
14:12	19.04	8	0.25	7.23	0.486	62.8	7.11	14.41	-86

Total Quantity of Water Removed:	~ 8 L	Sampling Time:	14:15
Samplers:	SB	Split Sample With:	N/A
Sampling Date:	16-Sep-08	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS:

Almost ran dry; possibly hand bail next event depending on WL.



Well I.D.:	Personnel:	Client:
AP-MW8B	Steve Bazilus	Linde, Inc.
Location:	Well Condition:	Weather:
Niagara Falls	Locked	Overcast & Breezy, 64°
Sounding Method:	Gauge Date:	Measurement Ref:
WLI	9/15/2008	TOC
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):
UP	16:40	2"

Purge Date:	Purge Time:
9/15/2008	16:45
Purge Method:	Greenstar Personnel:
Hand Bail	SB

Well Volume										
A. Well Depth (ft):	D. Well Volume (ft3):	Depth/Height of Top of PVC:								
15.51	0.16									
B. Depth to Water (ft):	E. Well Volume (L):	Pump Type:								
8.00	4.64	Dedicated hand bailer								
C. Liquid Depth (ft) (A-B):		Pump Designation:								
7.51										

	Water Quality Parameters										
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	Conduct. (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (° C)	ORP (mv)		
17:51	8.00	0.5	N/A	6.88	0.999	70.9	9.09	15.47	93		
18:00	Dry	5.5	N/A	7.08	0.999	> 999	9.25	13.91	95		
14:45	7 88	N/A	N/A	6.92	1.13	140.0	10.34	16.67	155		
								-	<u> </u>		
		I	L								

Total Quantity of Water Removed:	~ 5.5 L	Sampling Time:	14:45
Samplers: Sampling Date:	16-Sep-08	Split Sample With: Sample Type:	GRAB
COMMENTS AND OBSERVATIONS:	Well purged dry an	d sampled the following day.	

Attachment C

Chain-of-Custody Records



Temperature on Receipt _____

Drinking Water? Yes 🗆 No



THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)				
Client China Fux China Mala	Project Manager		Date	
Address	C JKK	a Code)/Eax Number	<u>04/16/08</u>	<u> </u>
6 Gelletty Device	845-223	- 9914 19955	Lab Nullabl	Page of
City State Zip Code	Site Contact	Lab Contact	Analysis (Attach list if	
WAPPINGERS Falls NY 12590)		more space is needed)	
Project Name and Location (State)	Carrier/Waybill Number			
WITMER SEMI-ANNUAL GW MON	.(NY)			Special Instructions/
Contract/Purchase Order/Quote No.	Matrix	Containers &		Conditions of Receipt
			- 이신되고 한국	
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Time Time	Unpres HNO3 HCI NaOH NaOH	RHN NAP	
AP-MW-1B MILL	08 0855 X	122	XXXXXX	
AP-MW-2B	0912 1		XXXXX	
AP-MW-3B	1044		XXXXXX	
AP-MW-MB.5B	1120		XXXXXXX	
AP-MW-GB	1240 (XXXXXX	
AP-MW-7B	1415		XXXXXX	
AP-MW-8B	1445 1		XXXXXX	
AP-DUP-DI	NA		XXXXXX	
AP-SWB-0	1450		XXXXXX	
AP - RB - OI	1455		XXXXXX	
AP-55-01	1410		XXXXXX	
AP-55-02 1	1420 2		XXXXXX	
Possible Hazard Identification	B Unknown B Return To	osai o Client 🛛 📈 Disposal By Lab 🗌	(A fee may) Archive For Months longer than	be assessed if samples are retained 1 month)
Turn Around Time Required	······································	QC Requirements (Spec	fy)	Ur
24 Hours 48 Hours 7 Days 14 Days	21 Days Other			
1. Relinquisbed By	Date Maliblog	1. Received By	V The Etheren	D Date 16 00 TIME TUD
2. Relinduished By	Dale Time	2. Received By		Date
3. Relinquished By	Date Time	a 3. Received By		Date Time
Comments +		<u> </u>		
* CR+6 SAMPLES	Short H	ble A	(302.0)	
DISTRIBUTION: WHITE - Returned to Client with Report; CANARY -	Stays with the Sample; PINK - Field	асору		•



Temperature on Receipt

Drinking Water? Yes 🗆 Nox



THE LEADER IN ENVIRONMENTAL TESTING

Client Greenstar ENG Chip M	close	Project Ma	nager J	RN	e										Date	09	11	6/	0	8	C	hain o	1 <u>Custody</u>	Number 925	
Gentatly Drive Sity Warangers Falls NY 12		Site Conta	5 - 5	er (Area <u>203</u>	<u>3</u> - 9	AG L Lab Co	umbe 14 Intac	190	<u> </u>	5				Ana nore	lysis spa	Num (Atta Ce is	oer ich li nee	st if ded)			,	Page _		of	/
Project Name and Location (State) ALPCD - QUACTIBILY DISCHAR Contract/Purchase Order/Quote No.	266 - SEP (N	Carrier/Wa	ybill Nu	imber atrix	ł		Cor	ntaine	ors &			09	DAS	2	NIA	475	TTE -		227	the /	A N D	N-S-IA	Specia Conditic	Instructions of Re	ons/ ceipt
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time ই	Shoeura	Sed. Soil		Unpres. H2SO4	Pre. 80NH	Serva Ĵ Ĵ H	HOEN	ZAAC NaOH	dmo	200	PPV	7	ANNA			805	X	0.0	1+30	TPHE			
AP-EWE-OI 0	4/16/08 14	10	X			42	. 1	2			X	X	X	X	X	<u> </u>	12	1	X	X	X	XĻ			
TRIP BLANK 0	903108 N		X					1					X			_	-				<u> </u>	<u> </u>			
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Possible Hazard Identification		r	Sample	Dispos	sal [1				<u> </u>			. 1			<u> </u>	1	1	L	<u> </u>	<u> </u>			
Non-Hazard 🗍 Flammable 🗌 Skin Irritant] Poison B 🗌 L	Inknown	Rei	lum To	Client	\mathbf{X}	Disp	osal B	ly Lat	• 🗆	Arch	ive Fo	or		M	onths	(A Ioi	ree r nger t	nay i than	oe as 1 mo	sses: onth)	sea ir s	ampies ai	e retained	
Tum Around Time Required							C Re	quiren	nents	(Specify	り														
1. Relinquished By	A 21 Days	Date	Írr	Time IG	5	- 1.	Rece	eived I	By	10	/	~		2				•				Date Al	6107	Time	55
2. Relinquisted By		Date		Time		2.	Rece	eived l	By						-							Date		Time	
3. Relinquished By	<u></u>	Date		Time		З.	Rece	eived l	By			· · · ·										Date		Time	
Comments & CR+6 ANA	4515 -	Sh	int		flo	19		T,	m	e	1	K													
DISTRIBUTION: WHITE - Returned to Cilent with Report; C)	ANARY - Stays with	the Sample	; PINK	- Field	Сору					?e	2	0	\sim												



WASTE MANAGEMENT CHAIN OF CUSTODY

THE LEADER IN	NENVIRONM	ENTAL TESTIN	NG 1 A	1		\sim									ম							
Sampler Name <u>Carles</u> Site Name: <u>AIRCO</u> Site Location: <u>Niciona</u> Stample No.	(Print) M ^C leud Parcel Is, HY Sam	Signature Spec Request AC Event Name: Quartor Ientia ple ID	Discharge Discharge Date	Acn. It's Diling	Water MATRIX	COMP (GRAB	8260VOA	T-METALS	D-METALS	CHLORIDE/SULFATE/NITBATE PHCTSS, TDS	ALK / CARB / BICARB	HARDNESS	NH ³ / COD	TOC	BOD DO. CITE W	Nitrare Nitrite	PPUORS TEN	Toral Armell	dm e 200.5			
						alariya Sariya	IND	CATE	PRE	SERV TE C	ATIVE ONTA	BY U	SING BY US	KEY-I	BELON	N.(OP. ELOW	<u>TIONA</u>	(L).			Additional Anal	ysis/Remarks
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Matrix Key WW = Wastewate W = Water/Gro S = Solid SI = Shidae	y er bundwater	Containe 1. Plastic 2. VOA Vial 3. Sterile Pl 4. Amber G	er Key lastic	Preservstion 1. HCI, Cool to 2. H ₂ SO ₄ , Cool 3. HNO ₃ , Cool 4. NaOH, Cool	n Key 5 4° 51 to 4° 1 to 4° 1 to 4°		· ·	CC		ENTS)°			-					Cou	rier:		
MS = Sludge MS = Miscellane OI = Oil A = Air O =	eous Solids	5. Widemot 6. Other	uth Glass	5. NaOH/Zn A 6. Cool to 4° 7. None	cetate,	Cool t	o 4°		•				·	•					Bill c	of Lad	ing:	TAL-8219 (1207)

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Internal Use Only

Attachment D

Laboratory Analytical Results for Groundwater and Surface Water Sampling September 2008

ANALYTICAL REPORT

Job#: <u>A08-B300,A08-B302</u>

<u>NY5A9582</u>	
<u>B300</u>	
Airco - Niagara Falls	5
Airco Parcel, Niagara	n Falls
	<u>NY5A9582</u> <u>B300</u> <u>Airco - Niagara Falls</u> Airco Parcel, Niagara

Charles E. McLeod, Jr. Greenstar Engineering, PC 6 Gellatly Drive Wappinger Falls, NY 12590

TestAmerica Laboratories Inc.

Jason R. Kacalski Project Manager

10/02/2008

1/105


TestAmerica Buffalo Current Certifications

As of 6/15/2007

STATE	Program	Cert # / Lab ID
Arkansas	SDWA, CWA, RCRA, SOIL	88-0686
California*	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida*	NELAP CWA, RCRA	E87672
Georgia*	SDWA, NELAP CWA, RCRA	956
Illinois*	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas*	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana*	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY0044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire*	NELAP SDWA, CWA	233701
New Jersey*	NELAP, SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA,CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania*	Registration, NELAP CWA, RCRA	68-00281
Tennessee	SDWA	02970
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington	CWA,RCRA	C1677
West Virginia	CWA,RCRA	252
Wisconsin	CWA, RCRA	998310390

*As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

SAMPLE SUMMARY

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	SAN		SAMPI	ED	RECEIVE	-D
ID CLIENT SAMP	LE ID	MATRIX	DATE	TIME	DATE	TIME
AP-DUP-01		WATER	09/16/2008	00:00	09/16/2008	17:00
AP-DUP-01		WATER	09/16/2008	00:00	09/16/2008	17:00
AP-MW-1B		WATER	09/16/2008	08:55	09/16/2008	17:00
AP-MW-1B		WATER	09/16/2008	08:55	09/16/2008	17:00
AP-MW-2B		WATER	09/16/2008	09:12	09/16/2008	17:00
AP-MW-2B		WATER	09/16/2008	09:12	09/16/2008	17:00
AP-MW-3B		WATER	09/16/2008	10:44	09/16/2008	17:00
AP-MW-3B	•	WATER	09/16/2008	10:44	09/16/2008	17:00
AP-MW-5B		WATER	09/16/2008	11:20	09/16/2008	17:00
AP-MW-5B		WATER	09/16/2008	11:20	09/16/2008	17:00
AP-MW-6B		WATER	09/16/2008	12:40	09/16/2008	17:00
AP-MW-6B		WATER	09/16/2008	12:40	09/16/2008	17:00
AP-MW-7B		WATER	09/16/2008	14:15	09/16/2008	17:00
AP-MW-7B		WATER	09/16/2008	14:15	09/16/2008	17:00
AP-MW-8B		WATER	09/16/2008	14:45	09/16/2008	17:00
AP-MW-8B		WATER	09/16/2008	14:45	09/16/2008	17:00
AP-RB-01		WATER	09/16/2008	14:55	09/16/2008	17:00
AP-RB-01		WATER	09/16/2008	14:55	09/16/2008	17:00
AP-SS-01		WATER	09/16/2008	14:10	09/16/2008	17:00
AP-SS-01		WATER	09/16/2008	14:10	09/16/2008	17:00
AP-SS-02		WATER	09/16/2008	14:20	09/16/2008	17:00
AP-SS-02		WATER	09/16/2008	14:20	09/16/2008	17:00
AP-SWB-01		WATER	09/16/2008	14:50	09/16/2008	17:00
AP-SWB-01		WATER	09/16/2008	14:50	09/16/2008	17:00
	ID CLIENT SAMP AP-DUP-01 AP-DUP-01 AP-MW-1B AP-MW-1B AP-MW-1B AP-MW-2B AP-MW-2B AP-MW-2B AP-MW-3B AP-MW-3B AP-MW-3B AP-MW-5B AP-MW-6B AP-MW-6B AP-MW-7B AP-MW-8B AP-MW-8B AP-MW-8B AP-RB-01 AP-SS-01 AP-SS-02 AP-SS-02 AP-SWB-01 AP-SWB-01	ID CLIENT SAMPLE ID AP-DUP-01 AP-DUP-01 AP-MW-1B AP-MW-2B AP-MW-2B AP-MW-3B AP-MW-3B AP-MW-6B AP-MW-7B AP-MW-7B AP-MW-8B AP-MW-8B AP-MW-8B AP-MW-8B AP-RB-01 AP-SS-01 AP-SS-02 AP-SS-02 AP-SWB-01	ID CLIENT SAMPLE ID MATRIX AP-DUP-01 WATER AP-DUP-01 WATER AP-MW-1B WATER AP-MW-1B WATER AP-MW-2B WATER AP-MW-2B WATER AP-MW-3B WATER AP-MW-3B WATER AP-MW-5B WATER AP-MW-6B WATER AP-MW-7B WATER AP-MW-8B WATER AP-SS-01 WATER AP-SS-01 WATER AP-SS-02 WATER AP-SS-02 WATER AP-SWB-01 WATER	SAMPI ID CLIENT SAMPLE ID MATRIX DATE AP-DUP-01 WATER 09/16/2008 AP-DUP-01 WATER 09/16/2008 AP-MW-1B WATER 09/16/2008 AP-MW-1B WATER 09/16/2008 AP-MW-2B WATER 09/16/2008 AP-MW-2B WATER 09/16/2008 AP-MW-3B WATER 09/16/2008 AP-MW-3B WATER 09/16/2008 AP-MW-3B WATER 09/16/2008 AP-MW-3B WATER 09/16/2008 AP-MW-5B WATER 09/16/2008 AP-MW-5B WATER 09/16/2008 AP-MW-6B WATER 09/16/2008 AP-MW-6B WATER 09/16/2008 AP-MW-7B WATER 09/16/2008 AP-MW-7B WATER 09/16/2008 AP-MW-8B WATER 09/16/2008 AP-MW-8B WATER 09/16/2008 AP-RB-01 WATER 09/16/2008 AP-SS-01 WATER	ID CLIENT SAMPLE ID MATRIX DATE TIME AP-DUP-01 WATER 09/16/2008 00:00 AP-DUP-01 WATER 09/16/2008 08:55 AP-MW-1B WATER 09/16/2008 08:55 AP-MW-1B WATER 09/16/2008 09:12 AP-MW-2B WATER 09/16/2008 09:12 AP-MW-2B WATER 09/16/2008 09:12 AP-MW-3B WATER 09/16/2008 09:12 AP-MW-3B WATER 09/16/2008 10:44 AP-MW-3B WATER 09/16/2008 10:44 AP-MW-3B WATER 09/16/2008 11:20 AP-MW-5B WATER 09/16/2008 11:20 AP-MW-5B WATER 09/16/2008 12:40 AP-MW-6B WATER 09/16/2008 12:40 AP-MW-7B WATER 09/16/2008 14:15 AP-MW-7B WATER 09/16/2008 14:15 AP-MW-8B WATER 09/16/2008 14:45 <td>SAMPLED RECEIVE ID CLIENT SAMPLE ID MATRIX DATE TIME DATE AP-DUP-01 WATER 09/16/2008 00:00 09/16/2008 AP-DUP-01 WATER 09/16/2008 00:00 09/16/2008 AP-MW-1B WATER 09/16/2008 08:55 09/16/2008 AP-MW-1B WATER 09/16/2008 08:55 09/16/2008 AP-MW-2B WATER 09/16/2008 09:12 09/16/2008 AP-MW-2B WATER 09/16/2008 09:12 09/16/2008 AP-MW-2B WATER 09/16/2008 10:44 09/16/2008 AP-MW-3B WATER 09/16/2008 10:44 09/16/2008 AP-MW-3B WATER 09/16/2008 11:20 09/16/2008 AP-MW-5B WATER 09/16/2008 11:20 09/16/2008 AP-MW-6B WATER 09/16/2008 14:15 09/16/2008 AP-MW-7B WATER 09/16/2008 14:15 09/16/2008 AP-MW-7B <td< td=""></td<></td>	SAMPLED RECEIVE ID CLIENT SAMPLE ID MATRIX DATE TIME DATE AP-DUP-01 WATER 09/16/2008 00:00 09/16/2008 AP-DUP-01 WATER 09/16/2008 00:00 09/16/2008 AP-MW-1B WATER 09/16/2008 08:55 09/16/2008 AP-MW-1B WATER 09/16/2008 08:55 09/16/2008 AP-MW-2B WATER 09/16/2008 09:12 09/16/2008 AP-MW-2B WATER 09/16/2008 09:12 09/16/2008 AP-MW-2B WATER 09/16/2008 10:44 09/16/2008 AP-MW-3B WATER 09/16/2008 10:44 09/16/2008 AP-MW-3B WATER 09/16/2008 11:20 09/16/2008 AP-MW-5B WATER 09/16/2008 11:20 09/16/2008 AP-MW-6B WATER 09/16/2008 14:15 09/16/2008 AP-MW-7B WATER 09/16/2008 14:15 09/16/2008 AP-MW-7B <td< td=""></td<>

METHODS SUMMARY

Job#: <u>A08-B300, A08-B302</u>

Project#: <u>NY5A9582</u> SDG#: <u>B300</u> Site Name: <u>Airco - Niagara Falls</u>

	ANALYTICAL
PARAMETER	METHOD
Cadmium - Total	MCAWW 200.7
Chromium - Total	MCAWW 200.7
Iron - Total	MCAWW 200.7
Lead - Total	MCAWW 200.7
Magnesium - Total	MCAWW 200.7
Manganese - Total	MCAWW 200.7
Selenium - Total	MCAWW 200.7
Silicon - Total	SW8463 6010
Sodium - Total	MCAWW 200.7
Thallium - Total	MCAWW 200.7
Zinc - Total	MCAWW 200,7
Ammonia	MCAWW 350.1
Hexavalent Chromium - Total	SW8463 7196A
Sulfate	MCAWW 300.0
Total Recoverable Phenolics	MCAWW 420.4

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/4-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993)
- SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

* Armonia and/or Fluoride were not distilled prior to analysis.

SDG NARRATIVE

Job#: <u>A08-B300, A08-B302</u>

Project#: <u>NY5A9582</u> SDG#: <u>B300</u> Site Name: <u>Airco - Niagara Falls</u>

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A08-B300

Sample Cooler(s) were received at the following temperature(s); 3@2.0 °C All samples were received in good condition.

A08-B302

Sample Cooler(s) were received at the following temperature(s); 3@2.0 °C All samples were received in good condition.

Metals Data

Silicon was subcontracted to TestAmerica Connecticut. The complete subcontract report is included in this report as Appendix A. Comments pertaining to Silicon may be found within the comment summary of the subcontract report.

Wet Chemistry Data

The recovery of sample AP-MW-7B Matrix Spike exhibited results below the quality control limits for Hexachrome. However, the LCS was acceptable.

The values obtained for Sulfate on samples AP-DUP-01 and AP-SS-02 are inconsistent with historical trends. Reanalysis was performed and the values were confirmed.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Date: Time:	: 10/02/2008 : 15:08:58		Dilution Log w/Code Information For Project NY5A9582, SDG B300	7/105		Page: 1 Rept: AN1266R
	Client Sample	ID Lab Sample ID	Parameter (Inorganic)/Method (Organic)	<u>Dilution</u>	<u>Code</u>	
	AP-DUP-01	A8B30001	Sulfate	5.00	800	
	AP-MW-1B	A8B30002	Sulfate	5.00	800	
	AP-MW-2B	A8B30003	Ammonia	2.00	800	
	AP-MW-5B	A8B30005	Sulfate	2.00	800	
· .	AP-MW-5B	A8B30005MS	Sulfate	2.00	800	
	AP-MW-6B	A8B30006	Sulfate	5.00	800	
	AP-MW-8B	A8B30008	Sulfate	5.00	800	
	AP-SS-02	A8B30011	Sulfate	2.00	008	
Dilu	tion Code Definition:		<u> </u>		•	· · ·
	, ,	002 - sample matrix	effects			•
•		003 - excessive foa	ming	÷		

- 004 high levels of non-target compounds
- 005 -.sample matrix resulted in method non-compliance for an Internal Standard
- 006 sample matrix resulted in method non-compliance for Surrogate
- 007 nature of the TCLP matrix
- 008 high concentration of target analyte(s)
- 009 sample turbidity
- 010 sample color
- 011 insufficient volume for lower dilution
- 012 sample viscosity

013 - other

The requested project specific reporting limits listed below were less than lab standard quantitation limits but greater than or equal to lab MDL. It must be noted that results reported below lab standard quantitation limit (PQL) may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Parameter	<u>Unit</u>	RL	PQL
420.4	Total Recoverable Phenolics	UG/L	8.0	10

9/105



THE LEADER IN ENVIRONMENTAL TESTING

DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- 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 the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
- P This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- ¹ Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- E Indicates a value estimated or not reported due to the presence of interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- G Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
- Indicates the spike or duplicate analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

Airco - Niagara Falls

Airco Parcel, Niagara Falls (GW Monitoring)

10/105

Page: 1 Rept: AN1178

		•					•		
Sample ID: AP-DUP-01 Lab Sample ID: A8B30001 Lte Collected: 09/16/2008 Time Collected: 00:00						Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:			
		• •		Detection			——Date/Time——		
Parameter	··	Result	<u>Flag</u>	Limît	<u>Units</u>	Method	Analyzed	Analyst	
Metals Analysis									
Cadmium - Total		ND		0.0010	MG/L	200.7	09/17/2008 23:23	T₩S	
Chromium - Total		ND	•	0.0040	MG/L	200.7	09/17/2008 23:23	TWS	
Iron - Total		0.25	•	0.050	MG/L	200.7	09/17/2008 23:23	T₩S	
Lead - Total		ND		0.0050	MG/L	200.7	09/17/2008 23:23	T₩S	
Magnesium - Total		73.9.		0.20	MG/∟	200.7	09/17/2008 23:23	TWS	
Manganese – Total	•	0.15		0.0030	MG/∟	200.7	09/17/2008 23:23	TWS	
Selenium - Total		ND		0.015	MG/L	200.7	09/17/2008 23:23	T₩S	
Sodium – Total		68.4		1.0	MG/∟	200.7	09/17/2008 23:23	TWS	
Thallium - Total		ND ·		0.020	MG/L	200.7	09/17/2008 23:23	TWS	
Zinc - Total		ND		0.010	MG/L	200.7	09/17/2008 23:23	TWS	
		н. 1		•		. •			
Wet Chemistry Analysis					•			;	
Ammonia		ND		9.2	MG/L-N	350.1	09/17/2008 11:07	ERK	
Hexavalent Chromium - Total		ND		11.0	UG/L	7196A	09/16/2008 21:30	RJP	
Sulfate		330		10	MG/L	300.0	09/29/2008 17:20) BWM	
Total Recoverable Phenolics	÷	8.0		8.0	UG/L	420.4	09/18/2008 15:13	, KD	

TestAmerica

Date: 10/02/2008 Time: 15:09:07	Airco	Airco - N Parcel, Niaga	iagara Fal ra Falls (lş GW Monitoring)	11/1	105	Page: Rept:	: 2 : AN1178
Sample ID: AP-DUP-01 Lab Sample ID: A8B30201 Ite Collected: 09/16/2008 Time Collected: 00:00						Date P	Received: 09/16/20 roject No: NY5A9582 Client No: 137175 Site No:	2
	<u> </u>	· · _ · · ·		Detection	<u></u>		Date/Time	<u> </u>
Parameter		Result	<u>Flag</u>	Limit	Units	Method	Analyzed	<u>Analyst</u>
Metals Analysis		5 9		0.50000	MG/I	6010	09/23/2008 18:11	SUB
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12/105

Sample ID: AP-MW-1B Lab Sample ID: A8B30002 te Collected: 09/16/2008 Time Collected: 08:55					Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:				
			Detection			Date/Time			
Parameter	Result	<u>Flag</u>	Limit	Units	Method	Analyzed	Analyst		
Metals Analysis			0.0040	nali	200 7	00/17/2008 23.11	THE		
Cadmium - Total	ND		0.0010	mg/L	200.7	09/17/2000 23:41	1 W S		
Chromium – Total	ND		0.0040	MG/L	200.7	09/17/2008 23:41	185		
Iron - Total	0.15		0.050	MG/L	200.7	09/17/2008 23:41	TWS		
Lead - Total	ND		0.0050	MG/L	200.7	09/17/2008 23:41	T₩S		
Magnesium - Total	61.0		0.20	MG/L	200.7	09/17/2008 23:41	TWS		
Manganese - Total	0.70		0.0030	MG/L	200.7	09/17/2008 23:41	T₩S		
Selenium - Total	ND		0.015	MG/∟	200.7	09/17/2008 23:41	T₩S		
Sodium - Total	117		1.0	MG/L	200.7	09/17/2008 23:41	T₩S		
Thallium - Total	ND		0.020	MG/L	200.7	09/17/2008 23:41	TWS		
Zinc - Total	0.50	,	0.010	MG/L	200.7	09/17/2008 23:41	T₩S		
Wet Chemistry Analysis									
Ammonia	ND		9.2	MG/L-N	350.1	09/17/2008 11:07	ERK		
Hexavalent Chromium - Total	ND		11.0	UG/L	7196A	09/16/2008 21:30	RJP		
Sulfate	223		10	MG/L	300.0	09/22/2008 14:30	AEG		
Total Recoverable Phenolics	ND		8.0	UG/L	420.4	09/18/2008 14:48	KD		



TestAmerica

Airco - Niagara Falls irco Parcel, Niagara Falls (GW Monitoring

Page: 4 Rept: AN1178

4.

13/105

Sample ID: AP-MW-1B Lab Sample ID: A8B30202 Ate Collected: 09/16/2008 Time Collected: 08:55	н — — — — — — — — — — — — — — — — — — —			Date P	Received: 09/16/200 roject No: NY5A9582 Client No: 137175 Site No:)8
Parameter	Result	Detection Flag Limit	Units	Method		Analyst
Metals Analysis	<u> </u>	0 50000	MG/I	6010	09/23/2008 18-17	SUB
Silicon - Total	0.7	0.50000	HO/ L		07/25/2008 18:17	308
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14/105



Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:

	Detection				Date/Time			
Parameter	Result	Flag	<u>Limit</u>	<u>Units</u>	Method	Analyzed	Analyst	
Metals Analysis								
Cadmium - Total	ND		0.0010	MG/L	200.7	09/17/2008 23:46	T₩S	
Chromium - Total	0.65		0.0040	MG/L	200.7	09/17/2008 23:46	T₩S	
Iron - Total	0.57		0.050	MG/L	200.7	09/17/2008 23:46	T₩S	
Lead - Total	ND		0.0050	MG/L	200.7	09/17/2008 23:46	T₩S	
Magnesium - Total	0.21		0.20	MG/L	200.7	09/17/2008 23:46	T₩S	
Manganese - Total	0.035		0.0030	MG/L	200.7	09/17/2008 23:46	TWS	
Selenium - Total	ND		0.015	MG/L	200.7	09/17/2008 23:46	TWS	
Sodium - Total	73.3		1.0	MG/L	200.7	09/17/2008 23:46	T₩S	
Thallium - Total	ND		0.020	MG/L	200.7	09/17/2008 23:46	T₩S	
Zinc - Total	· ND		0.010	MG/L	200.7	09/17/2008 23:46	T₩S	
Wet Chemistry Analysis	,							
Ammonia	ND		18.4	MG/L-N	350.1	09/17/2008 11:07	ERK	
Hexavalent Chromium - Total	197		11.0	UG/L	7196A	09/16/2008 21:30	RJP	
Sulfate	17.1		2.0	MG/L	300.0	09/22/2008 14:30	AEG	
Total Recoverable Phenolics	15.0		8.0	• UG/L	420.4	09/18/2008 15:40	KD	



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15/105

Date Received: 09/16/2008 Sample ID: AP-MW-2B Project No: NY5A9582 Lab Sample ID: A8B30203 Client No: 137175 te Collected: 09/16/2008 Site No: Time Collected: 09:12 -Date/Time-Detection Analyzed Uni<u>ts</u> Method <u>Analyst</u> Result Flag_ Limit Parameter Metals Analysis 09/23/2008 18:23 SUB 6010 0.50000 MG/L Silicon - Total 1.7

16/105

Sample ID: AP-MW-3B ab Sample ID: A8B30004 te Collected: 09/16/2008 Time Collected: 10:44		•				Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:			
		. ,		Detection			—_Date/Time—		
Parameter		Result	<u>Flag</u>	Limit	<u>Units</u>	Method	Analyzed	<u>Analyst</u>	
Metals Analysis		•			,				
Cadmium - Total		ND		0.0010	MG/L	200.7	09/18/2008 00:13	T₩S	
Chromium - Total		ND .		0.0040	MG/∟	200.7	09/18/2008 00:13	T₩S	
Iron - Total		0.33		0.050	MG/L	200.7	09/18/2008 00:13	T₩S	
Lead - Total		ND		0.0050	MG/L	200.7	09/18/2008 00:13	TWS	
Magnesium - Total		7.7		0.20	. MG/L	200.7	09/18/2008 00:13	T₩S	
Manganese - Total		0.019		0.0030	MG/L	200.7	09/18/2008 00:13	T₩S	
Selenium - Total		ND		0.015	MG/∟	200.7	09/18/2008 00:13	TWS	
Sodium - Total		53.3		1.0	MG/L	200.7	09/18/2008 00:13	TWS	
Thallium - Total		ND		0.020	MG/L	200.7	09/18/2008 00:13	T₩S	
Zinc - Total		0.026		0.010	MG/L	200.7	09/18/2008 00:13	TWS	
Wet Chemistry Analysis				4					
Ammonia	•	ND		9.2	MG/L-N	350.1	09/17/2008 11:07	ERK	
Hexavalent Chromium - Total		ND .		11.0	UG/L	7196A	09/16/2008 21:30	RJP	
Sulfate		51.0		2.0	MG/L	300.0	09/22/2008 14:30	AEG	
Total Recoverable Phenolics		ND		8.0	UG/L	420.4	09/18/2008 14:48	KD	

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17/105



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18/105

Sample ID: AP-MW-5B Lab Sample ID: A8B30005 te Collected: 09/16/2008 Time Collected: 11:20					Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:				
Parameter	Result	Flag	Detection Limit	Units	Method	—_Date/Time— Analyzed	Analyst		
Metals Analysis									
Cadmium - Total	0.0022		0.0010	MG/L	200.7	09/18/2008 00:19	T₩S		
Chromium – Total	0.040		0.0040	MG/∟	200.7	09/18/2008 00:19	T₩S		
Iron - Total	28.9		0.050	MG/L	200.7	09/18/2008 00:19	T₩S		
Lead - Total	0.059		0.0050	MG/L	200.7	09/18/2008 00:19	TWS		
Magnesium - Total	105		0.20	MG/L	200.7	09/18/2008 00:19	TŴS		
Manganese - Total	0.67		0.0030	MG/∟	200.7	09/18/2008 00:19	TWS		
Selenium - Total	ND		0.015	MG/L	200.7	09/18/2008 00:19	TWS		
Sodium - Total	31.5		1.0	MG/L	200.7	09/18/2008 00:19	TWS		
Thallium - Total	ND		0.020	MG/L	200.7	09/18/2008 00:19	T₩S		
Zinc - Total	0.70		0.010	MG/L	200.7	09/18/2008 00:19	T₩S		
Wet Chemistry Analysis									
Ammonia	ND		9.2	MG/L-N	350.1	09/17/2008 11:07	ERK		
Hexavalent Chromium - Total	ND		11.0	UG/∟	7196A	09/16/2008 21:30	RJP		
Sulfate	145		4.0	MG/∟	300.0	09/22/2008 14:30	AEG		
Total Recoverable Phenolics	ND		8.0	UG/L	420.4	09/18/2008 14:48	KD		

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19/105

	Sample ID: ab Sample ID: te Collected: me Collected:	AP-MW-5B A8B30205 09/16/2008 11:20			•				Date Pi	Received: 09/16/2 roject No: NY5A958 Client No: 137175 Site No:	008 2
		Parameter			Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
Me	tals Analysis Silicon - To	tal			. 22.1		0.50000	MG/L	6010	09/23/2008 18:34	SUB
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20/105

Sample ID: AP-MW-6B Lab Sample ID: A8B30006 te collected: 09/16/2008 Time Collected: 12:40				Date P	Received: 09/16/20 roject No: NY5A958 Client No: 137175 Site No:	2008 82	
		Detection			Date/Time		
Parameter	Result Flag	<u> Limit </u>	Units	method	Anatyzed	Analysi	
Metals Analysis Cadmium - Total	ND	0.0010	MG/∟	200.7	09/18/2008 00:24	T₩S	
Chromium - Total	ND	0.0040	MG/L	200.7	09/18/2008 00:24	TWS	
Iron - Total	0.27	0.050	MG/L	200.7	09/18/2008 00:24	T₩S	
Lead - Total	ND	0.0050	MG/L	200.7	09/18/2008 00:24	TWS	
Magnesium - Total	74.2	0.20	MG/L	200.7	09/18/2008 00:24	TWS	
Manganese – Total	0.15	0.0030	MG/L	200.7	09/18/2008 00:24	T₩S	
Selenium - Total	ND	0.015	MG/L	200.7	09/18/2008 00:24	T₩S	
Sodium – Total	69.1	1.0	MG/∟	200.7	09/18/2008 00:24	TWS	
Thallium - Total	ND	0.020	MG/L	200.7	09/18/2008 00:24	T₩S	
Zinc - Total	ND	0.010	MG/L	200.7	09/18/2008 00:24	TWS	
Wet Chemistry Analysis							
Ammonia	ND	9.2	MG/L-N	350.1	09/17/2008 11:07	ERK	
Hexavalent Chromium - Total	ND	11.0	UG/L	7196A	09/16/2008 21:30	RJP	
Sulfate	376	10	MG/L	300.0	09/22/2008 14:30	AEG	
Total Recoverable Phenolics	ND	8.0	UG/∟	420.4	09/18/2008 14:54	KD	

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21/105

Sample ID: AP-MW-6B Lab Sample ID: A8B30206 te Collected: 09/16/2008 Time Collected: 12:40						Date Pi	Received: 09/16/2 roject No: NY5A958 Client No: 137175 Site No:	008 2
Parameter	· · ·	Result	Flag	Detection Limit	Units	Method	——Date/Time Analyzed	Analyst
Metals Analysis Silicon - Total		7.1		0.50000	MG/∟	6010	09/23/2008 18:40	SUB
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22/105

Sample ID: AP-MW-7B (ab Sample ID: A8B30007) te Collected: 09/16/2008 Time Collected: 14:15					Date Pr	Received: 09/16/20 roject No: NY5A958 Client No: 137175 Site No:	16/2008 A9582 175	
			Detection			Date/Time		
Parameter	Result	Flag	Limit	Units	Method	Analyzed	<u>Analyst</u>	
Metals Analysis								
Cadmium - Total	ND		0.0010	MG/L	200.7	09/18/2008 00:29	T₩S	
Chromium - Total	0.028		0.0040	MG/L	200.7	09/18/2008 00:29	TWS	
Iron - Total	0.86		0.050	MG/L	200.7	09/18/2008 00:29	TWS	
Lead - Total	ND		0.0050	MG/L	200.7	09/18/2008 00:29	TWS	
Magnesium - Total	7.4		0.20	MG/∟	200.7	09/18/2008 00:29	TWS	
Manganese - Total	0.047		0.0030	MG/L	200.7	09/18/2008 00:29	TWS	
Selenium - Total	ND		0.015	MG/∟	200.7	09/18/2008 00:29	TWS	
Sodium – Total	52.9		1.0	MG/L	200.7	09/18/2008 00:29	TWS	
Thallium - Total	ND		0.020	MG/L	200.7	09/18/2008 00:29	TWS	
Zinc - Total	ND		0.010	MG/L	200.7	09/18/2008 00:29	T₩S	
Wet Chemistry Analysis								
Ammonia	ND		9.2	MG/L-N	350.1	09/17/2008 11:07	ERK	
Hexavalent Chromium - Total	ND		11.0	UG/∟	7196A	09/16/2008 21:30	RJP	
Sulfate	34.0		2.0	MG/∟	300.0	09/22/2008 14:30	AEG	
Total Recoverable Phenolics	ND		8.0	UG/L	420.4	09/23/2008 00:10	KD	



Total Recoverable Phenolics



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Page: 14 Rept: AN1178

23/105

Sample ID: AP-MW-7B Lab Sample ID: A8B30207 te Collected: 09/16/2008 Time Collected: 14:15		•	.e			Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:			
Parameter	<u> </u>		Result Flag	Detection Limit	Units	Method	——Date/Time—— Analyzed	- Analyst	
Metals Analysis Silicon — Total		· · ·	5.1	0.50000	MG/L	6010	09/23/2008 18:4	6 SUB	
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24/105



ab Sample ID: A8B30008 te Collected: 09/16/2008 Time Collected: 14:45

Sample ID: AP-MW-8B

Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:

			Detection			Date/Time	•
Parameter	Result	<u>Flag</u>	Limit	<u>Units</u>	Method	Analyzed	Analyst
Metals Analysis							
Cadmium - Total	ND		0.0010	MG/L	200.7	09/18/2008 00:49	T₩S
Chromium - Total	0.11	• •	0.0040	MG/L	200.7	09/18/2008 00:49	T₩S
Iron - Total	1.8		0.050	MG/L	200.7	09/18/2008 00:49	TWS
Lead ~ Total	ND		0.0050	MG/L	200.7	09/18/2008 00:49	T₩S
Magnesium - Total	64.2		0.20	MG/∟	200.7	09/18/2008 00:49	T₩S
Manganese - Total	0.20		0.0030	MG/∟	200.7	09/18/2008 00:49	TWS
Selenium - Total	0.030		0.015	MG/∟	200.7	09/18/2008 00:49	TWS
Sodium - Total	93.1		1.0	MG/L	200.7	09/18/2008 00:49	TWS
Thallium — Total	ND		0.020	MG/L	200.7	09/18/2008 00:49	T₩S
Zinc - Total	0.11		0.010	MG/∟	200.7	09/18/2008 00:49	TWS
Wet Chemistry Analysis							
Ammonia	ND		9.2	MG/L-N	350.1	09/17/2008 11:07	ERK
Hexavalent Chromium - Total	66.0		11.0	UG/∟	7196A	09/16/2008 21:30	RJP
Sulfate	263		10	MG/∟	300.0	09/24/2008 12:22	AEG
Total Recoverable Phenolics	ND		8.0	UG/∟	420.4	09/18/2008 14:54	KD





Date:	10/02/2008
Time:	15:09:07

Sample ID: AP-MW-8B

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Page: Rept: AN1178

Date Received: 09/16/2008

Project No: NY5A9582

16

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25/105

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ab Sample ID: A8B30208 Client No: 137175 te Collected: 09/16/2008 Site No: Time Collected: 14:45 ----Date/Time-Detection Result Flag Limit Units Method Analyzed Parameter Metals Analysis 6010 09/23/2008 19:14 SUB 9.1 0.50000 MG/L Silicon - Total

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Sample ID: AP-RB-01 tab Sample ID: A8B30009 te Collected: 09/16/2008 Time Collected: 14:55				Project No: NY5A9582 Client No: 137175 Site No:								
Parameter	Result F	Detection Lag Limit	Units	Method	Date/Time Analyzed	Analyst						
Metals Analysis	· · · · ·											
Cadmium - Total	ND	0.0010	MG/L	200.7	09/18/2008 00:54	TWS						
Chromium - Total	ND	0.0040	MG/L	200.7	09/18/2008 00:54	TWS						
Iron - Total	ND	0.050	MG/∟	200.7	09/18/2008 00:54	TWS						
Lead - Total	ND	0.0050	MG/∟	200.7	09/18/2008 00:54	T₩S						
Magnesium - Total	1.2	0.20	MG/L	200.7	09/18/2008 00:54	TWS						
Manganese – Total	ND	0.0030	MG/L	200.7	09/18/2008 00:54	TWS						
Selenium - Total	ND	0.015	MG/L	200.7	09/18/2008 00:54	TWS						
Sodium - Total	2.0	1.0	MG/∟	200.7	09/18/2008 00:54	TWS						
Thallium - Total	ND	0.020	MG/∟	200.7	09/18/2008 00:54	TWS						
Zinc - Total	ND	0.010	MG/L	200.7	09/18/2008 00:54	TWS						
Wet Chemistry Analysis	•		·									
Ammonia	ND	9.2	MG/L-N	350.1	09/17/2008 11:07	ERK						
Hexavalent Chromium - Total	ND	11.0	UG/L	7196A	09/16/2008 21:30	RJP						
Sulfate	4.1	2.0	MG/L	300.0	09/22/2008 14:30	AEG						
Total Recoverable Phenolics	ND	8.0	UG/L	420.4	09/18/2008 14:54	KD						



Total Recoverable Phenolics

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Sample ID: AP-RB-01

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Date Received: 09/16/2008

27/105

Project No: NY5A9582 ab Sample ID: A8B30209 te Collected: 09/16/2008 Client No: 137175 Time Collected: 14:55 Site No: ——Date/Time— Detection Analyzed <u>Analyst</u> Units Result <u>Flag</u> <u>Limi</u>t Method Parameter Metals Analysis Silicon - Total 6.7 0.50000 MG/L 6010 09/23/2008 19:20 SUB TestAmerica

28/105

Sample ID: AP-SS-01 ab Sample ID: A8B30010 te Collected: 09/16/2008 Time Collected: 14:10	•					Date Pi	Received: 09/16/2 roject No: NY5A958 Client No: 137175 Site No:	'16/2008 39582 7175	
				Detection			Date/Time	-	
Parameter		Result	Flag	Limit	Units	method	Analyzed		
Metals Analysis		ND		0.0010	MG/I	200.7	09/18/2008 00-59). т ы с	
Cadmium - Total		ND		0.0010	mo/L	200.7	00/10/2000 00.55	и тис	
Chromium - Total		ND		0.0040	mg/L	200.7	09/18/2008 00.55		
Iron - Total		0.10		0.050	MG/L	200.7	09/18/2008 00:55	/ 185	
Lead - Total		ND		0.0050	MG/L	200.7	09/18/2008 00:59	7 TWS	
Magnesium - Total		3.8		0.20	MG/∟	200.7	09/18/2008 00:59	9 T₩S	
Manganese - Total		ND		0.0030	MG/L	200.7	09/18/2008 00:59	∂ TWS	
Selenium - Total		ND		0.015	MG/L	200.7	09/18/2008 00:59	9 T₩S	
Sodium - Total		64.5	•	1.0	MG/L	200.7	09/18/2008 00:59	9 TWS	
Thallium - Total		ND		0.020	MG/L	200.7	09/18/2008 00:59	9 T₩S	
Zinc - Total		ND		0.010	MG/L	200.7	09/18/2008 00:59	∂ TWS	
wet inemistry Analysis				0.7	MGLIAN	350 1	00/17/2008 11-0	7 696	
Ammonia		ND		9.2		330.1	00/16/2000 21-74		
Hexavalent Chromium - Total		ND		11.0	UG/L	7196A	09/10/2008 21:50	J KJP	
Sulfate		21.4		2.0	MG/L	300.0	09/24/2008 12:22	Z AEG	
Total Recoverable Phenolics		ND		8.0	UG/L	420.4	09/18/2008 14:5	4 KD	

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29/105

Rept: AN1178

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Sample ID: AP-SS-01 ab Sample ID: A8B30210 te Collected: 09/16/2008 Time Collected: 14:10 Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175

Site No:

•			Parameter			Result	Flag	Det L	ection imit	Units	Method	Date/Time Analyzed	- Analyst
	Metals Analysis				•							· · · · · · · · · · · · · · · · · · ·	
•	Silicon - To	tal		· · .		2.8			0.50000	MG/L	6010	09/23/2008 18:51	SUB
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30/105

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		Parameter	• •.	<u>·</u>	· · · ·	Result	Flag	Detection Limit	Units	Method		 Analysi	
te Time	Collected: 09 Collected: 14	/16/2008 :20		· · ·	•					CL	ient No: 13717 Site No:	5	
ab	Sample ID: A8	B30011			100				•	Project No: NY5A9582			
	Sample ID: AP	-ss-02								Date R	ecerved: 09/16/	2008	

		-										
	Cadmium - Total			,	ND		0.0010	MG/L	200.7	09/18/2008 0	01:05	T₩S
• •	Chromium - Total	· · ·	· · · · ·	•	ND		0.0040	MG/L	200.7	09/18/2008 0	1:05	TWS
	Iron - Total				0.10		0.050	MG/L	200.7	09/18/2008 0	01:05	T₩S
;	Lead - Total				ND	•	0.0050	MG/∟	200.7	09/18/2008 0	01:05	T₩S
	Magnesium – Total			•	15.0		0.20	MG/∟	200.7	09/18/2008 0	01:05	TWS
	Manganese - Total			et e e	0.011		0.0030	MG/L	200.7	09/18/2008 0	1:05	TWS
	Selenium - Total	÷.,		. • . · · :	ND	• • •	0.015	MG/L	200.7	09/18/2008 (01:05	T₩S
	Sodium - Total		- 1	· · · ·	6.8	· ·	1.0	MG/L	200.7	09/18/2008 0	01:05	T₩S
	Thallium - Total				ND		0.020	MG/L	200.7	09/18/2008 (01:05	TWS
	Zinc - Total			•	ND ·		0.010	MG/L	200.7	09/18/2008 (01:05	T₩S
						· · ·					•	
We	t Chemistry Analysis			•								
	Ammonia		·		ND		9.2	MG/L-N	350.1	09/17/2008	11:07	ERK
	Hexavalent Chromium -	Total			ND		11.0	UG/L	7196A	09/16/2008 2	21:30	RJP
·	Sulfate	····			107		4.0	MG/L	300.0	09/29/2008	17:20	BWM
	Total Recoverable Pher	nolics			ND		8.0	UG/L	420.4	09/18/2008	14:54	KD
				•								



TestAmerica

Airco - Niagara Falls Airco Parcel, Niagara Falls (GW Monitoring) 31/105



Sample ID: AP-SWB-01 ab Sample ID: A8B30012 te Collected: 09/16/2008 Time Collected: 14:50						Date Received: 09/16/2008 Project No: NY5A9582 Client No: 137175 Site No:		
	<u> </u>		Detection		Date/Time			
Parameter	Result	Flag	Limit	Units	Method	Analyzed	<u>Analyst</u>	
Metals Analysis								
Cadmium - Total	ND		0.0010	MG/L	200.7	09/18/2008 01:10	TWS	
Chromium - Total	ND		0.0040	MG/∟	200.7	09/18/2008 01:10	T₩S	
Iron - Total	ND		0.050	∶MG/L	200.7	09/18/2008 01:10	TWS	
Lead - Total	ND		0.0050	MG/L	200.7	09/18/2008 01:10	TWS	
Magnesium - Total	1.2		0.20	MG/∟	200.7	09/18/2008 01:10	T₩S	
Manganese – Total	ND		0.0030	MG/L	200.7	09/18/2008 01:10	T₩S	
Selenium - Total	ND		0.015	MG/∟	200.7	09/18/2008 01:10	TWS	
Sodium - Total	2.1		1.0	MG/L	200.7	09/18/2008 01:10	T₩S	
Thallium - Total	ND		0.020	MG/L	200.7	09/18/2008 01:10	TWS	
Zinc - Total	. ND		0.010	MG/∟	200.7	09/18/2008 01:10	T₩S	
Wet Chemistry Analysis								
Ammonia	ND		9.2	MG/L-N	350.1	09/17/2008 11:07	ERK	
Hexavalent Chromium - Total	ND		11.0	UG/L	7196A	09/16/2008 21:30	RJP	
Sulfate	4.1		2.0	MG/∟	300.0	09/22/2008 14:30	AEG	
Total Recoverable Phenolics	ND		8.0	UG/∟	420.4	09/18/2008 15:01	KD	



33/105



Attachment E

Landfill Cap Inspection Checklists September and October 2008

LANDFILL CAP INSPECTION CHECKLIST AIRCO PARCEL, NIAGARA FALLS, NEW YORK

Personnel:	Bruce Vinal - Greenstar Engineering, PC,	
Date:	3 rd Quarter Inspection (15 September 2008)	
Weather:	Overcast, 65 degrees	

- 1. Inspection of ground surface for exposure of geotextile cover (cap erosion): None noted.
- 2. Inspection of ground surface for differential settlement resulting in soil cracking or ponded water:

No ponded water noted. Area adjacent to treatment system where excess soil was spread has been seeded and no erosion noted

3. Identification of stressed vegetation:

Reconfigured drainage swale in southwest corner: Due to dry conditions, seed over the disturbed area has not done well. Recommend scarifying, adding topsoil, and reseeding in the spring of 2009

- 4. Identification of seeps, rooted vegetation (trees), and/or animal burrows: Rooted vegetation noted in the drainage swales at the cap perimeter. These will be removed concurrent with the October mowing.
- 5. Identification of deteriorating equipment (i.e., monitoring wells, fencing, or drainage structures):

Monitoring wells were not sanded, primed and painted concurrent with the October 2008 GCTS upgrades due to schedule constraints. This will occur in the Spring-Summer of 2009.

- 6. Inspection of stormwater drainage swales for erosion, sloughing, or flow-through: The reconfigured swale in the southwest corner appears to be working as designed; it is currently free of any vegetation and shows no signs of erosion. All other drainage swales and structures are in good shape.
- 7. Inspection of east side of the landfill (Niagara Mohawk Power Corporation parcel) along the intermittent stream for the presence of erosion or sloughing: None noted.

8. Inspection of access roads:

Roads are almost impassible. Will mow and scarify the roads to try to limit the vegetation growth. This will be done in October 2008.

LANDFILL CAP INSPECTION CHECKLIST AIRCO PARCEL, NIAGARA FALLS, NEW YORK

Pers	sonnel:	Bruce Vinal - Greenstar Engineering, PC				
Date:		4 th Quarter Inspection (21 October 2008)				
We	eather: Rain/snow showers, 40 degrees					
1.	Inspection None noted	of ground surface for exposure of geotextile cover (cap erosion): l.				
2.	Inspection of ground surface for differential settlement resulting in soil cracking or ponded water: None noted.					
3.	Identification of stressed vegetation: None noted. Cap mowing completed during the October mowing event. South east corner: Excess soil from grading work on southwest corner has been spread and seeded. The seed has done well and no erosion has been noted.					
4.	Identification of seeps, rooted vegetation (trees), and/or animal burrows: All rooted vegetation previously identified was removed during October 2008. The landfill cap and perimeter of the site was mowed.					
5.	Identificat structures Monitoring of 2009.	ion of deteriorating equipment (i.e., monitoring wells, fencing, or drainage): g wells should be sanded, primed and painted. This will be done in the Spring				
6.	Inspection No draina	of stormwater drainage swales for erosion, sloughing, or flow-through: ge issues noted.				
7.	Inspection along the i None noted	of east side of the landfill (Niagara Mohawk Power Corporation parcel) intermittent stream for the presence of erosion or sloughing: 1.				
8.	Inspection Access roa	of access roads: d were mowed, and scarified to remove vegetation.				

Attachment F

Laboratory Analytical Results for GCTS Discharge Sampling September and December 2008
ANALYTICAL REPORT

Job#: <u>A08-B299</u>

Project#:	NY5A95	82		
Site Name:	Airco	- Niaga	ra Falls	
Task:	Airco	Parcel,	Niagara	Falls

Charles E. McLeod, Jr. Greenstar Engineering, PC 6 Gellatly Drive Wappinger Falls, NY 12590

TestAmerica Laboratories Inc.

Jason R. Kacalski Project Manager

09/26/2008

1/54



TestAmerica Buffalo Current Certifications

As of 6/15/2007

STATE	Program	Cert # / Lab ID
Arkansas	SDWA, CWA, RCRA, SOIL	88-0686
California*	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida*	NELAP CWA, RCRA	E87672
Georgia*	SDWA, NELAP CWA, RCRA	956
Illinois*	NELAP SDWA, CWA, RCRA	200003
lowa	SW/CS	374
Kansas*	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana*	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY0044
Maryland	SDWA	- 294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire*	NELAP SDWA, CWA	233701
New Jersey*	NELAP, SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA,CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania*	Registration, NELAP CWA, RCRA	68-00281
Tennessee	SDWA	02970
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington	CWA, RCRA	C1677
West Virginia	CWA,RCRA	252
Wisconsin	CWA, RCRA	998310390

*As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

3/54

SAMPLE SUMMARY

			SAMPI		VEC ET VI	
LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE	TIME	DATE	TIME
A8B29901	AP-EWE-01	WATER	09/16/2008	14:10	09/16/2008	16:55
A8B29902	TRIP BLANK	WATER	09/16/2008	00:00	09/16/2008	16:55
		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	•			

METHODS SUMMARY

Job#: <u>A08-B299</u>

Project#:	<u>NY5A9582</u>	
Site Name:	<u>Airco - Niagara</u>	Falls

	ANALYTICAL	
PARAMETER	METHOD	
METHOD 624 - PRIORITY POLLUTANT VOLATILES	CFR136 624	
	NCD121	
Barium - Total	MCAWW 200.7	
Chromium - Total	MCAWW 200.7	
Copper - Total	MCAWW 200.7	
Iron - Total	MCAWW 200.7	
Nickel - Total	MCAWW 200.7	
Selenium - Total	MCAWW 200.8	
Thallium - Total	MCAWW 200.8	
Zinc - Total	MCAWW 200.7	
Armonia Biochemical Oxygen Demand Chemical Oxygen Demand Dissolved Oxygen Hexavalent Chromium - Total Nitrite Nitrogen, Nitrate pH Total Dissolved Solids Total Kjeldahl Nitrogen Total Recoverable Phenolics	MCAWW 350.1 SM20 5210B MCAWW 410.4 SM20 4500-0 G SW8463 7196A MCAWW 353.2 MCAWW 353.2 SW8463 9040 SM20 2540C MCAWW 351.2 MCAWW 420.4 SM20 2540D	*

References:

- CFR136 Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, and Appendix A-C; 40 CFR Part 136, USEPA Office of Water.
- MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/4-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993)

SM20 "Standard Methods for the Examination of Water and Wastewater", 20th Edition.

SW8463

"Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

* Ammonia and/or Fluoride were not distilled prior to analysis.

SDG NARRATIVE

Job#: <u>A08-B299</u>

Project#: <u>NY5A9582</u> Site Name: <u>Airco - Niagara Falls</u>

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A08-B299

Sample Cooler(s) were received at the following temperature(s); 3@2.0 °C All samples were received in good condition.

GC/MS Volatile Data

For method 8260, sample TRIP BLANK was analyzed with headspace. The volatile organic results may be biased low.

Metals Data

No deviations from protocol were encountered during the analytical procedures.

Wet Chemistry Data

The opening continuing calibration cerification for Biochemical Oxygen Demand failed low for sample AP-EWE-01. All other quality controls were within acceptance limits.

7/54

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Date: 09/26/2008 Time: 08:51:46 Requested Reporting Limits < Lab PQL

8/54

The requested project specific reporting limits listed below were less than lab standard quantitation limits but greater than or equal to lab MDL. It must be noted that results reported below lab standard quantitation limit (PQL) may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Parameter	Unit		PQL
Wet Chemis	try			·
2540C 420.4	Total Dissolved Solids Total Recoverable Phenolics	MG/L UG/L	1.0 8.0	10 10







THE LEADER IN ENVIRONMENTAL TESTING

DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1.1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample guantitation limit but greater than zero.
- 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 the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
 - This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- Indicates coelution.

Ρ

Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- E Indicates a value estimated or not reported due to the presence of interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- G Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
 - Indicates the spike or duplicate analysis is not within the quality control limits.
 - Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

TestAmerica Laboratories, Inc Data Qualifier Page Revision 3, 10/22/2007

Total Suspended Solids

Time: 08:51:51

Airco - Niagara Falls Airco Parcel, Niagara Falls (Discharge)

Date Received: 09/16/2008 Sample ID: AP-EWE-01 ab Sample ID: A8B29901 Project No: NY5A9582 Client No: 137175 te Collected: 09/16/2008 Site No: Time Collected: 14:10 -Date/Time-Detection Limit Units Method Analyzed Analyst Parameter Result Flag AQUEOUS-CFR136 624 - SELECT COMPOUNDS UG/L 09/17/2008 02:30 624 MF 5.0 1,1-Dichloroethane ND 09/17/2008 02:30 5.0 UG/L 624 MF Trichloroethene ND Metals Analysis UG/L 200.7 09/18/2008 21:32 Barium - Total ND 2000 S₩ 09/18/2008 21:32 100 UG/L 200.7 S₩ Chromium - Total ND UG/L 200.7 09/18/2008 21:32 14.7 s₩ ND Copper - Total 09/18/2008 21:32 300 UG/L 200.7 S₩ Iron - Total ND 200.7 09/18/2008 21:32 Nickel - Total ND 70.0 UG/L S₩ 09/18/2008 13:29 4.6 UG/L 200.8 S₩ Selenium - Total ND 200.8 09/18/2008 13:29 4.0 UG/L SW Thallium - Total ND UG/L 200.7 09/18/2008 21:32 115 SW Zinc - Total ND Wet Chemistry Analysis 09/17/2008 11:07 9.2 MG/L-N 350.1 ERK ND Ammonia MG/L 5210B 09/17/2008 17:00 TL. 5.0 Biochemical Oxygen Demand ND 40.0 MG/L 410.4 09/18/2008 17:15 ΤL ND Chemical Oxygen Demand 09/16/2008 22:15 MG/L 4500-0 G RK 7.0 7.0 Dissolved Oxygen 11.0 UG/L 7196A 09/16/2008 21:30 RJP ND Hexavalent Chromium - Total MG/L-N 353.2 09/17/2008 11:05 ND 0.050 JIM Nitrite 3.0 0.050 MG/L-N 353.2 09/17/2008 11:05 JΜ Nitrogen, Nitrate 9040 09/16/2008 17:38 ΤL 0.100 s.u. 7.80 pН 4.0 MG/L 2540c 09/17/2008 13:30 KD 590 Total Dissolved Solids 09/25/2008 11:44 351.2 ERK 1.0 MG/L-N Total Kjeldahl Nitrogen ND UG/L 420.4 09/23/2008 00:10 KD Total Recoverable Phenolics ND 8:0

ND

10

MG/L

2540D

TestAmerica

09/17/2008 11:45

KD

Attachment G

Monthly Operation and Maintenance Details July – December 2008

1. INTRODUCTION

This report presents a summary of the ongoing operation and maintenance activities for the Airco Parcel site from 1 July to 31 December 2008. It includes a summary of ongoing operations, system repairs, corrective actions, improvements, and an evaluation of the groundwater collection treatment system (GCTS) performance.

2. ROUTINE OPERATION AND MAINTENANCE

The 21,600 gallons per day (gpd) discharge limit was exceeded during the reporting period. The number of days per month the limit was exceeded was as follows: July (25), August (12), September (1), November (1), and December (13). The majority of the days which exceeded the criteria were due to pumping water from the T8 emergency overflow pond into the treatment system. Influent flow rate at T1 is routinely adjusted to prevent excess flow into the treatment system. It may be necessary to augment the discharge guidance values in the future to allow for a higher flow rate, if the discharge flow rate routinely exceeds 21,600 gpd. Table 2 of the Bi-Annual 2008 Monitoring Event Letter Report provides a summary of the analytical results from the quarterly effluent sampling events from September and December 2008. Routine operation and maintenance was completed throughout the monitoring period. Field tasks included system checks, data collection, and field analysis of treatment water at various stages of the treatment process, transducer cleanings, and general site maintenance.

3. SYSTEM OPERATIONS AND EFFICIENCY

During this monitoring period, 3,335,092 gal of groundwater were treated and discharged to the stormwater swale adjacent to the engineered wetlands. The system flow rate averaged 12.6 gpm, during the reporting period, with no influence observed due to heavy rain events. The treatment system was operational for 100 percent of the reporting period. The emergency overflow pond, T8, was utilized at various points during the reporting period during routine system maintenance and cleaning activities.

The completed System Monitoring Checklists are provided in Attachment G.1. Monthly GCTS flow calculations are provided in Attachment G.2. During the reporting period, an estimated 2.8 lb of total chromium was removed by the system. The calculated removal efficiency for Total Chromium is 99.3 percent. An estimated 1.1 lb of the Total Chromium removed by the GCTS was hexavalent chromium. The estimated removal efficiency for Hexavalent Chromium was 95.6 percent. These values are based on the total gallons treated and the average influent and effluent concentrations observed from the bi-weekly field sampling.

3.1 SYNOPSIS OF THE BI-ANNUAL ACTIVITIES

July 2008

The system was operational for all 31 days in July. Alarm conditions were reported, but no unscheduled shut downs occurred. The following details the activities which were performed during July:

- 14 July 2008 Routine site visit. Performed calibration of pH probes and commenced dewatering of northern tank field to initiate cleaning and removal of hardness precipitate.
- 15 July 2008 While onsite for routine operation and maintenance activities Greenstar personnel responded to a P1B fail to start. The VFD was reset multiple times before pump operation returned to normal.
- 18 July 2008 Responded remotely to high pH alarm in T3B. Increased CO₂ flow into T3A and reset alarm conditions.
- 22 July 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely multiple times before pump operation returned to normal.
- 28 July 2008 Routine site visit. Tightened covers on the T3A and T6A tank fields. Performed mowing and vegetation removal from around the solar panel and control panel and various other locations to maintain access to equipment.

August 2008

The system was operational for all 31 days in August. Alarm conditions were reported but no unscheduled shut downs occurred. The following details the activities which were performed during August:

- 2 August 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely multiple times before pump operation returned to normal. Further diagnosis of this pump will be performed this month.
- 13 August 2008 Routine site visit. Prior to this site visit, remote monitoring of the system revealed that pump P6 in tank T6B was showing evidence of significant pump deterioration. The condition was observed in July into August. This routine visit was scheduled to include the replacement of pump P6. Investigation into P1B fail to start will be delayed until the next routine visit since replacement of P6 took precedence.
- 18 August 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely multiple times before pump operation returned to normal. A site visit was scheduled for 27 August 2008 to assess the P1B pump.
- 18 August 2008 Responded remotely to low level and low pressure alarms in T2, the CO₂ storage tank. Linde service personnel were contacted.
- 23 August 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely multiple times before pump operation returned to normal. A site visit was scheduled for 27 August 2008 to assess the P1B pump.
- 27 August 2008 Routine site visit. Prior remote monitoring revealed that pump P1B was not operating properly. Diagnosis of the pump indicated that the motor was damaged and needed to be replaced. A new pump was ordered. The pH probes in T3B, T6B and T7 were calibrated. Vegetation was removed as needed to access equipment.

September 2008

The system was operational for all 30 days in September. Alarm conditions were reported but no unscheduled shut downs occurred. The following details the activities which were performed during September:

- 5 September 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely multiple times before pump operation returned to normal.
- 7 September 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely multiple times before pump operation returned to normal.
- 9 September 2008 Responded remotely to T3B high level alarm. Alarm condition a result of pumping water from T8 in advance of routine shut down for cleaning of T6A.
- 15 19 September 2008 Routine site visit performed in conjunction with the bi-annual groundwater monitoring event and sediment removal from the southern T6A tanks. Vegetation removal from around T7 to provide routine access to monitoring equipment. P1B was replaced with the new pump and the existing P1B was rebuilt with a new motor and placed into inventory as a spare.
- 25 26 September 2008 Routine site visit performed in response to ongoing alarm conditions being reported from 20 25 September 2008. Initial diagnosis of Panel A indicated that the 24 VDC power supply was faulty and required replacement. Two 24 VDC transformers were ordered. Continued issues after installation of the new transformer occurred. The system was operated to T8 manually over the weekend until a electrical controls specialist could be mobilized. During the site visit, P3B exhibited a pump fail to start. The pump failed and was replaced with a pump from inventory. A new inventory pump was ordered.
- 29 September 2008 Controls specialist mobilized to the site. A wire was determined to be grounding out causing failure of the power supply. The system returned to normal operations. While onsite, the controls specialist responded to a P1B fail to start. The controls specialist tested the VFD and determined that the ongoing fail to start alarms are attributed to the VFD. A VFD replacement was ordered.

October 2008

The system was operational for 31 days in October. Alarm conditions were reported but no unscheduled shut downs occurred. The following details the activities which were performed during October:

- 1 3 October 2008 Remote monitoring of pump cycles revealed that P5 was pumping too frequently. During the site visit it was determined that the ball check valve in T5 required replacement to prevent the backflow of water form T6A which was occurring. Activated all shed heaters and heat trace operational for winter. Bloom's Landscaping mowed the cap and removed deciduous growth from roadways and swales.
- 5 October 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely to reset pump to normal operation.

- 16 October 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely to reset pump to normal operation.
- 21 October 2008 Routine site visit. Mowed vegetation around T7 to maintain access to equipment. VFD issues continue. New VFD is expected to be installed in November.
- 23 October 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely to reset pump to normal operation.
- 24 October 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely to reset pump to normal operation.
- 26 October 2008 Responded remotely to multiple pump fail to start alarm associated with P1B. The VFD was reset remotely to reset pump to normal operation.
- 31 October 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely to reset pump to normal operation.

November 2008

The system was operational for 30 days in November. Alarm conditions were reported but no unscheduled shut downs occurred. The following details the activities which were performed during November:

- 1 November 2008 Responded remotely to pump fail to start alarm associated with P1B. The VFD was reset remotely to reset pump to normal operation.
- 3 November 2008 Extended site visit to perform routine operations and maintenance activities, rebuild the old P1B and place into inventory, and install a program the new VFD.
- 24 November 2008 Routine site visit. Calibrated pH probes in T3B and T6B. Could not perform calibration to T7 pH probe due to ice.

December 2008

The system was operational for 31 days in December. Alarm conditions were reported but no unscheduled shut downs occurred. The following details the activities which were performed during December:

- 2 December 2008 Routine site visit. Calibrated pH probes. No alarm conditions have been logged since 3 November 2008. Calibrated and cleaned pH probes. Collected the 4th quarter compliance samples for the effluent discharge. Samples transported to TestAmerica in Amherst, NY.
- 8 December 2008 Responded remotely to multiple alarm conditions. Mobilized local contractor to check system. Heater in Panel A was not functioning causing the PLC not to operate within allowable temperatures. A heater was pulled from inventory and installed.

- 13 December 2008 Responded remotely to multiple alarm conditions. Mobilized local contractor to check system. Heater in Panel A was functioning, but high winds and cold temperatures were resulting in cold air blowing through the vents on the panel. Vents were blocked to prevent heat loss.
- 16 December 2008 Routine site visit. Aeration blower in T6B was off upon arrival. Blower was restarted and thermal overload was adjusted. Calibrated and cleaned pH probes in T3B and T6B.
- 21 December 2008 Responded remotely to low level and low pressure alarms in T2, the CO₂ storage tank. Linde service personnel were contacted. A relief valve on the tank was determined to be faulty. The relief valve was replaced. Additionally, the automated control valve which operates to maintain system pressure was becoming jammed with ice and snow. Linde personnel thawed the valve and insulated it to protect it from freezing and failure.

4. MODIFICATIONS/IMPROVEMENTS AND RECOMMENDATIONS

4.1 SYSTEM MODIFICATION/IMPROVEMENTS

No major modifications to the GCTS were performed during the report period. Only Routine operations and maintenance activities, including repairs to pumps, VFDs, pH probes, etc were performed.

4.2 RECOMMENDATIONS

No recommendations for system modifications or changes are suggested at this time. The monitoring and maintenance program is continually evaluated to streamline the process to the extent practical. Any recommendations to the program will be suggested when identified.

5. PROJECTED OPERATION AND MAINTENACE

5.1 JANUARY – JUNE 2009

During the first bi-annual reporting period of 2009, Greenstar anticipates performing routine operation and maintenance activities.

6. SYSTEM MONITORING

6.1 ENVIRONMENTAL SAMPLING

Routine system sampling with field analysis will continue on a bi-monthly basis to ensure chromium removal efficiency is maintained and no short circuiting is occurring in the zero valence iron beds. Quarterly discharge samples are anticipated to be collected in March and May 2009 from the GCTS to monitor the New York State Department of Environmental Conservation discharge permit guidelines. The first bi-annual groundwater monitoring event for 2009 is anticipated to occur in April 2009.

Attachment G.1

Airco Parcel Bi-Weekly System Monitoring Checklists July – December 2008

Date: 7/14/08	Project No.: 1005	Greenstar Personnel Chip Mcleod / Bruce Vinal	
Weather: Sunny 80	Weather: Sunny 80 degrees		
READING		ІТЕМ	
	227.5	Carbon Dioxide Storage Tank Pressure (220-235 psi)	
	6900	Carbon Dioxide Tank Liquid Level	
	2.5	T1 Water Level	
AU	TO/CYCLING	Pump P1A Running Status ON/OFF	
AU	TO/CYCLING	Pump P1BA Running Status ON/OFF	
	616.1	T3A Water Elevation	
	6.4	T3B pH Reading	
	614.1	T3B Water Level	
AU	TO/CYCLING	Pump 3B Operational Status ON/OFF	
	612.3	T5 Water Level	
AU	TO/CYCLING	Pump 5 Operational Status ON/OFF	
	615.9	T6A Water Elevation	
	6.4	Т6В рН	
	612.6	T6B Water Level	
AU	TO/CYCLING	Pump 6B Operational Status ON/OFF	
	616.2	T7 Water Level Reading	
	6.3	Т7 рН	
	1.3	T8 Water Elevation	
	10,747,717	Flow Meter Reading	
	15	Average System Flow	
	9.8	Generator Run Hours	
READING	Standard	LOCATION/PARAMETER	
0.095	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium	
0.109	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium	
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium	
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium	
ND	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium	
ND	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium	
-0.002	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium	
0.000	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium	
p	H READING	SAMPLE LOCATION	
	6.37	Calcium Settling Pond Effluent (T3)	
	6.13	Iron Settling Pond Effluent (T6)	
	6.44	Engineered Wetland Effluent (T7)	
	7.23	Southwest Corner Effluent (SS-1)	
Notes: Clean and c two rows of tanks in	calibrate pH probes in T3B a	and T6B/ Pump dry and remove calcium precipitate from first	



Date: 7/28/08	Project No.: 1005	Greenstar Personnel: Bruce Vinal	
Weather: Sunny 80	Weather: Sunny 80 degrees		
READING		ITEM	
	231	Carbon Dioxide Storage Tank Pressure (220-235 psi)	
	7820	Carbon Dioxide Tank Liquid Level	
	2.9	T1 Water Level	
AL	JTO/CYCLING	Pump P1A Running Status ON/OFF	
AL	JTO/CYCLING	Pump P1BA Running Status ON/OFF	
	616.0	T3A Water Elevation	
	6.2	T3B pH Reading	
	613.1	T3B Water Level	
AU	JTO/CYCLING	Pump 3B Operational Status ON/OFF	
	612.8	T5 Water Level	
AU	JTO/CYCLING	Pump 5 Operational Status ON/OFF	
	615.9	T6A Water Elevation	
	6.4	Т6В рН	
	613.1	T6B Water Level	
AU	JTO/CYCLING	Pump 6B Operational Status ON/OFF	
	616.3	T7 Water Level Reading	
	6.0	T7 pH	
	1.3	T8 Water Elevation	
	11,071,142	Flow Meter Reading	
	16 gpm	Average System Flow	
	10.2	Generator Run Hours	
READING	Standard	LOCATION/PARAMETER	
0.088	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium	
0.088	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium	
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium	
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium	
ND	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium	
-0.010	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium	
-0.004	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium	
-0.003	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium	
<i>P</i>	oH READING	SAMPLE LOCATION	
	6.45	Calcium Settling Pond Effluent (T3)	
	6.28	Iron Settling Pond Effluent (T6)	
	6.49	Engineered Wetland Effluent (T7)	
	7.14	Southwest Corner Effluent (SS-1)	
Notes: Tightened of	Notes: Tightened covers on T3A and T6A. Cleared tall grass at solar panel and various other maintenance locations.		

Date: 8/13/08	Project No.: 1005	Greenstar Personnel: Bruce Vinal
Weather: Scattered showers 80 degrees		
	READING	ІТЕМ
235		Carbon Dioxide Storage Tank Pressure (220-235 psi)
	11,493	Carbon Dioxide Tank Liquid Level
	3.4	T1 Water Level
AUT	TO/CYCLING	Pump P1A Running Status ON/OFF
AU	TO/CYCLING	Pump P1BA Running Status ON/OFF
	616.0	T3A Water Elevation
	6.2	T3B pH Reading
	614.3	T3B Water Level
AU	TO/CYCLING	Pump 3B Operational Status ON/OFF
	613.1	T5 Water Level
AU	TO/CYCLING	Pump 5 Operational Status ON/OFF
	615.9	T6A Water Elevation
	6.4	Т6В рН
	612.9	T6B Water Level
AU	TO/CYCLING	Pump 6B Operational Status ON/OFF
	616.3	T7 Water Level Reading
	6.0	T7 pH
	1.2	T8 Water Elevation
	11,449,119	Flow Meter Reading
	15	Average System Flow
	10.5	Generator Run Hours
READING	Standard	LOCATION/PARAMETER
0.019	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium
0.157	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium
-0.009	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium
ND	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium
0.011	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium
0.028	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium
p	H READING	SAMPLE LOCATION
X	6.31	Calcium Settling Pond Effluent (T3)
	6.12	Iron Settling Pond Effluent (T6)
	6.44	Engineered Wetland Effluent (T7)
· · · · · ·	7.09	Southwest Corner Effluent (SS-1)
Notes: Replaced nump P6		

Date: 8/27/08	ate: 8/27/08 Project No.: 1005 Greenstar Personnel: Bruce Vinal		
Weather: Sunny 75 Degrees			
READING		ІТЕМ	
234		Carbon Dioxide Storage Tank Pressure (220-235 psi)	
	9339	Carbon Dioxide Tank Liquid Level	
	3.1	T1 Water Level	
AU	JTO/CYCLING	Pump P1A Running Status ON/OFF	
AU	JTO/CYCLING	Pump P1BA Running Status ON/OFF	
	616.0	T3A Water Elevation	
	6.2	T3B pH Reading	
	613.5	T3B Water Level	
AU	JTO/CYCLING	Pump 3B Operational Status ON/OFF	
	612.1	T5 Water Level	
AL	JTO/CYCLING	Pump 5 Operational Status ON/OFF	
	615.9	T6A Water Elevation	
	6.4	Т6В рН	
	613.3	T6B Water Level	
AL	JTO/CYCLING	Pump 6B Operational Status ON/OFF	
	616.3	T7 Water Level Reading	
	5.9	Т7 рН	
	1.3	T8 Water Elevation	
	11,673,570	Flow Meter Reading	
	11.0	Average System Flow	
	10.9	Generator Run Hours	
READING	Standard	LOCATION/PARAMETER	
0.005	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium	
0.076	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium	
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium	
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium	
-0.016	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium	
ND	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium	
0.011	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium	
0.033	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium	
1	oH READING	SAMPLE LOCATION	
	6.43	Calcium Settling Pond Effluent (T3)	
	6.30	Iron Settling Pond Effluent (T6)	
	6.5	Engineered Wetland Effluent (T7)	
	7.14	Southwest Corner Effluent (SS-1)	
Notes: Diagnose and Coil 2" lay flat hose	I repair sporadic pump shutdov	vn of P1B. Calibrate pH probes in T3, T6, and T7. Pull weeds.	



Date: 9/15/08	Date: 9/15/08 Project No.: 1005 Greenstar Personnel: Bruce Vinal		
Weather: Overcast 65 degrees			
READING		ITEM	
	231	Carbon Dioxide Storage Tank Pressure (220-235 psi)	
	5828	Carbon Dioxide Tank Liquid Level	
	2.4	T1 Water Level	
AUT	O/CYCLING	Pump P1A Running Status ON/OFF	
AUT	O/CYCLING	Pump P1BA Running Status ON/OFF	
	616.1	T3A Water Elevation	
	6.2	T3B pH Reading	
	613.7	T3B Water Level	
AUT	O/CYCLING	Pump 3B Operational Status ON/OFF	
	612.8	T5 Water Level	
AUT	O/CYCLING	Pump 5 Operational Status ON/OFF	
	615.9	T6A Water Elevation	
	6.3	Т6В рН	
	613.5	T6B Water Level	
AUT	TO/CYCLING	Pump 6B Operational Status ON/OFF	
	616.3	T7 Water Level Reading	
	6.2	Т7 рН	
	1.3	T8 Water Elevation	
1	2,000,558	Flow Meter Reading	
11		Average System Flow	
	11.4	Generator Run Hours	
READING	Standard	LOCATION/PARAMETER	
0.023	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium	
0.049	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium	
0.018	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium	
-0.008	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium	
0.001	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium	
0.005	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium	
0.002	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium	
0.013	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium	
pł	H READING	SAMPLE LOCATION	
	6.62	Calcium Settling Pond Effluent (T3)	
	6.63	Iron Settling Pond Effluent (T6)	
	6.81	Engineered Wetland Effluent (T7)	
	7.44	Southwest Corner Effluent (SS-1)	
Notes: Replace P-1B. Weed whack around T-7. Bi-annual monitoring sampling event. Vacuum first row of tanks in T-6A			



Date: 9/25/08	Project No.: 1005	Greenstar Personnel: Bruce Vinal
Weather: Sunny 70 o	degrees	
	READING	ITEM
	NA	Carbon Dioxide Storage Tank Pressure (220-235 psi)
	NA	Carbon Dioxide Tank Liquid Level
	NA	T1 Water Level
AUT	O/CYCLING	Pump P1A Running Status ON/OFF
AUT	O/CYCLING	Pump P1BA Running Status ON/OFF
	NA	T3A Water Elevation
	NA	T3B pH Reading
	NA	T3B Water Level
AUT	O/CYCLING	Pump 3B Operational Status ON/OFF
	NA	T5 Water Level
AUT	O/CYCLING	Pump 5 Operational Status ON/OFF
	NA	T6A Water Elevation
	NA	Т6В рН
	NA	T6B Water Level
AU1	ro/cycling	Pump 6B Operational Status ON/OFF
	NA	T7 Water Level Reading
	NA	T7 pH
	NA	T8 Water Elevation
	NA	Flow Meter Reading
	NA	Average System Flow
	NA	Generator Run Hours
READING	Standard	LOCATION/PARAMETER
0.003	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium
0.059	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium
0.004	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium
-0.000	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium
ND	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium
ND	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium
0.007	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium
0.007	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium
pł	H READING	SAMPLE LOCATION
	6.56	Calcium Settling Pond Effluent (T3)
	6.38	Iron Settling Pond Effluent (T6)
	6.71	Engineered Wetland Effluent (T7)
	7.48	Southwest Corner Effluent (SS-1)
Notes: Replaced P	3. Diagnose electrical problem	in Panel "A" PLC. Due to these electrical problems much of the
information needed for this report was unavailable		

Date: 10/1/08	Project No.: 1005	Greenstar Personnel: Bruce Vinal			
Weather: 62 degree	s partly cloudy				
	READING	ITEM			
	233	Carbon Dioxide Storage Tank Pressure (220-235 psi)			
	11,125	Carbon Dioxide Tank Liquid Level			
	2.8	T1 Water Level			
AU'	TO/CYCLING	Pump P1A Running Status ON/OFF			
AU	TO/CYCLING	Pump P1BA Running Status ON/OFF			
	616.0	T3A Water Elevation			
	6.3	T3B pH Reading			
	613.8	T3B Water Level			
AU	TO/CYCLING	Pump 3B Operational Status ON/OFF			
	613.4	T5 Water Level			
AU	TO/CYCLING	Pump 5 Operational Status ON/OFF			
	616.0	T6A Water Elevation			
	6.3	Т6В рН			
	613.2	T6B Water Level			
AU	TO/CYCLING	Pump 6B Operational Status ON/OFF			
	616.3	T7 Water Level Reading			
	6.2	Т7 рН			
	2.3	T8 Water Elevation			
	12,161,876	Flow Meter Reading			
	13	Average System Flow			
	11.8	Generator Run Hours			
READING	Standard	LOCATION/PARAMETER			
0.001	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium			
0.014	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium			
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium			
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium			
-0.010	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium			
-0.017	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium			
0.007	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium			
0.004	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium			
p.	H READING	SAMPLE LOCATION			
	6.41	Calcium Settling Pond Effluent (T3)			
6.50		Iron Settling Pond Effluent (T6)			
	6.58	Engineered Wetland Effluent (T7)			
	7.35	Southwest Corner Effluent (SS-1)			
Notes: Replaced b cap and removed dec	all check in T5. Got shed heate iduous growth from roadways a	ers up and running for winter. Bloom's Landscaping mowed the ind swales.			

Date: 10/21/08	Project No.: 1005	Greenstar Personnel: Bruce Vinal			
Weather: Rain/snow	showers 40 degrees				
1	READING	ITEM			
	230	Carbon Dioxide Storage Tank Pressure (220-235 psi)			
	6167	Carbon Dioxide Tank Liquid Level			
	2.8	T1 Water Level			
AUT	ro/cycling	Pump P1A Running Status ON/OFF			
AUI	TO/CYCLING	Pump P1BA Running Status ON/OFF			
	616	T3A Water Elevation			
	6.3	T3B pH Reading			
	613.9	T3B Water Level			
AUI	ro/cycling	Pump 3B Operational Status ON/OFF			
	613.3	T5 Water Level			
AUI	ro/cycling	Pump 5 Operational Status ON/OFF			
	616	T6A Water Elevation			
	6.3	Т6В рН			
	612.7	T6B Water Level			
AUT	FO/CYCLING	Pump 6B Operational Status ON/OFF			
	616.3	T7 Water Level Reading			
	6.2	T7 pH			
	2.3	T8 Water Elevation			
	12458301	Flow Meter Reading			
	11.0	Average System Flow			
	12.3	Generator Run Hours			
READING	Standard	LOCATION/PARAMETER			
0.054	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium			
0.096	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium			
0.002	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium			
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium			
0.007	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium			
ND	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium			
0.011	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium			
0.012	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium			
pl	H READING	SAMPLE LOCATION			
6.41		Calcium Settling Pond Effluent (T3)			
6.51		Iron Settling Pond Effluent (T6)			
	6.78	Engineered Wetland Effluent (T7)			
	7.40	Southwest Corner Effluent (SS-1)			
Notes: Mow lawn a	around T-7				



Date: 11/3/08	Project No.: 1005	Greenstar Personnel: Bruce Vinal		
Weather: Sun 50 de	grees			
·	READING	ITEM		
,,	229	Carbon Dioxide Storage Tank Pressure (220-235 psi)		
	7141 lbs.	Carbon Dioxide Tank Liquid Level		
	3.4	T1 Water Level		
AU'	TO/CYCLING	Pump P1A Running Status ON/OFF		
AU'	TO/CYCLING	Pump P1BA Running Status ON/OFF		
	616.0	T3A Water Elevation		
	6.4	T3B pH Reading		
	613.5	T3B Water Level		
AU'	TO/CYCLING	Pump 3B Operational Status ON/OFF		
	612.8	T5 Water Level		
AU'	TO/CYCLING	Pump 5 Operational Status ON/OFF		
	616.0	T6A Water Elevation		
	6.3	Т6В рН		
	612.8	T6B Water Level		
AU	TO/CYCLING	Pump 6B Operational Status ON/OFF		
	616.3	T7 Water Level Reading		
	6.2	Т7 рН		
	2.4	T8 Water Elevation		
	12,662,914	Flow Meter Reading		
	44	Average System Flow		
	12.6	Generator Run Hours		
READING	Standard	LOCATION/PARAMETER		
0.002	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium		
0.115	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium		
-0.008	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium		
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium		
-0.020	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium		
ND	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium		
0.008	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium		
0.017	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium		
p	H READING	SAMPLE LOCATION		
	6.39	Calcium Settling Pond Effluent (T3)		
	6.46	Iron Settling Pond Effluent (T6)		
	6.68	Engineered Wetland Effluent (T7)		
	7.08	Southwest Corner Effluent (SS-1)		
Notes: Rebuild spa	are T-1 pump, replace and pro	ogram VFD to P1B		

Date: 11/24/08	Project No.: 1005	Greenstar Personnel: Chip McLeod				
Weather: 30 Degree	Weather: 30 Degrees, Mostly Sunny					
	READING	ITEM				
	230	Carbon Dioxide Storage Tank Pressure (220-235 psi)				
	6,344	Carbon Dioxide Tank Liquid Level				
	3.1	T1 Water Level				
AU	TO/CYCLING	Pump P1A Running Status ON/OFF				
AU	TO/CYCLING	Pump P1BA Running Status ON/OFF				
	616.1	T3A Water Elevation				
	6.3	T3B pH Reading				
	613.3	T3B Water Level				
AU	TO/CYCLING	Pump 3B Operational Status ON/OFF				
	613.2	T5 Water Level				
AU	TO/CYCLING	Pump 5 Operational Status ON/OFF				
	616.0	T6A Water Elevation				
	6.3	Т6В рН				
	612.1	T6B Water Level				
AU'	TO/CYCLING	Pump 6B Operational Status ON/OFF				
	616.3	T7 Water Level Reading				
	6.1	T7 pH				
	2.4	T8 Water Elevation				
	13,021,789	Flow Meter Reading				
12 GPM	I (Reset at 715 am)	Average System Flow				
	13.2	Generator Run Hours				
READING	Standard	LOCATION/PARAMETER				
0.021	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium				
0.145	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium				
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium				
ND	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium				
ND	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium				
ND	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium				
ND	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium				
ND	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium				
p	H READING	SAMPLE LOCATION				
6.46		Calcium Settling Pond Effluent (T3)				
6.45		Iron Settling Pond Effluent (T6)				
	6.67	Engineered Wetland Effluent (T7)				
	6.93	Southwest Corner Effluent (SS-1)				
Notes: Had to brea	k through the ice in SW corne	er to obtain a sample. Calibrated pH probes in T3B and T6B.				
Probe cable in T7 was	s frozen into ice. No calibration	on could be performed.				



Date: 12/2/08	Project No.: 1005	Greenstar Personnel: Chip McLeod		
Weather: 32 Degree	s, Freezing Rain, Snow, Windy			
	READING	ITEM		
	231	Carbon Dioxide Storage Tank Pressure (220-235 psi)		
	6,934	Carbon Dioxide Tank Liquid Level		
	3.4	T1 Water Level		
AUI	ro/cycling	Pump P1A Running Status ON/OFF		
AUI	TO/CYCLING	Pump P1BA Running Status ON/OFF		
	616.0	T3A Water Elevation		
	6.4	T3B pH Reading		
	614.2	T3B Water Level		
AU	TO/CYCLING	Pump 3B Operational Status ON/OFF		
	611.3	T5 Water Level		
AU	ro/cycling	Pump 5 Operational Status ON/OFF		
	616.0	T6A Water Elevation		
	6.3	T6B pH		
	613.5	T6B Water Level		
AU	TO/CYCLING	Pump 6B Operational Status ON/OFF		
	616.3	T7 Water Level Reading		
	6.0	T7 pH		
	2.6	T8 Water Elevation		
· · · · · · · · · · · · · · · · · · ·	13,189,313	Flow Meter Reading		
15 GPN	A (Reset at 7 AM)	Average System Flow		
	13.4	Generator Run Hours		
READING	Standard	LOCATION/PARAMETER		
0.142	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium		
0.172	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium		
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium		
0.024	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium		
ND	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium		
0.015	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium		
0.008	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium		
0.018	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium		
pi	H READING	SAMPLE LOCATION		
	6.37	Calcium Settling Pond Effluent (T3)		
6.36		Iron Settling Pond Effluent (T6)		
	6.63	Engineered Wetland Effluent (T7)		
	7.35	Southwest Corner Effluent (SS-1)		
Notes: No alarm construction of the second s	onditions have been logged since	11/6. Calibrated and cleaned pH probes. Collected the 4 th Samples transported to TestAmerica in Amherst, NY.		

Date: 12/16/08	Project No.: 1005	: 1005 Greenstar Personnel: Chip McLeod			
Weather: Snow, 26	Degrees				
	READING	ІТЕМ			
	231	Carbon Dioxide Storage Tank Pressure (220-235 psi)			
	3,334	Carbon Dioxide Tank Liquid Level			
	2.5	T1 Water Level			
AU'	TO/CYCLING	Pump P1A Running Status ON/OFF			
AU	TO/CYCLING	Pump P1BA Running Status ON/OFF			
	616.1	T3A Water Elevation			
	6.4	T3B pH Reading			
	613.7	T3B Water Level			
AU	TO/CYCLING	Pump 3B Operational Status ON/OFF			
	611.0	T5 Water Level			
AU	TO/CYCLING	Pump 5 Operational Status ON/OFF			
	616.1	T6A Water Elevation			
	6.3	T6B pH			
	613.9	T6B Water Level			
AU	TO/CYCLING	Pump 6B Operational Status ON/OFF			
	616.2	T7 Water Level Reading			
	6.0	T7 pH			
	2.7	T8 Water Elevation			
	13,491,888	Flow Meter Reading			
14 GPM	(Reset at 848 AM)	Average System Flow			
	13.7	Generator Run Hours			
READING	Standard	LOCATION/PARAMETER			
0.062	0.011 mg/L	Calcium Settling Pond Effluent (T3) Hexavalent Chromium			
0.163	0.050 mg/L	Calcium Settling Pond Effluent (T3) Total Chromium			
ND	0.011 mg/L	Iron Settling Pond Effluent (T6) Hexavalent Chromium			
0.017	0.050 mg/L	Iron Settling Pond Effluent (T6) Total Chromium			
ND	0.011 mg/L	Engineered Wetland Effluent (T7) Hexavalent Chromium			
0.007	0.050 mg/L	Engineered Wetland Effluent (T7) Total Chromium			
NS- Ice	0.011 mg/L	Southwest Corner Effluent (SS-1) Hexavalent Chromium			
NS – Ice	0.050 mg/L	Southwest Corner Effluent (SS-1) Total Chromium			
p.	H READING	SAMPLE LOCATION			
	6.34	Calcium Settling Pond Effluent (T3)			
	6.31	Iron Settling Pond Effluent (T6)			
	6.48	Engineered Wetland Effluent (T7)			
NS – Ice too	thick to break through	Southwest Corner Effluent (SS-1)			
Notes: Ice in SW of was restarted and the	corner was too thick to break th mal overload was adjusted. C	rough. Aeration blower in T6B was off upon arrival. Blower alibrated and cleaned pH probes in T3B and T6B.			



Attachment G.2

Airco Parcel GCTS Monthly Flow Calculations July – December 2008

Project No.: 150C265.1005 Attachment G-2, Page 1 of 6 30 April 2009

Monthly Airco Parcel GCTS Flow Calculations July 2008

	Maximu	Average	Total	Total	Run	
	m Flow	Flow Rate	Daily Flow	Gallons To	Time	Run Time
Date	(gpm)	(gpm)	(Gal)	Date (Gal)	(hours)	(minutes)
7/1/2008	41	15	21,842	10,473,250	24	0
7/2/2008	41	15	22,940	10,496,190	24	0
7/3/2008	41	15	22,962	10,519,152	24	0
7/4/2008	41	15	22,827	10,541,979	24	0
7/5/2008	41	15	22,647	10,564,626	24	0
7/6/2008	40	15	22,669	10,587,295	24	0
7/7/2008	40	15	22,118	10,609,413	24	0
7/8/2008	40	15	22,099	10,631,512	24	0
7/9/2008	40	15	21,762	10,653,274	24	0
7/10/2008	40	15	21,837	10,675,111	24	0
7/11/2008	40	14	21,575	10,696,686	24	0
7/12/2008	40	14	21,204	10,717,890	24	0
7/13/2008	40	14	21,133	10,739,023	24	0
7/14/2008	40	19	28,767	10,767,790	24	0
7/15/2008	40	3	4,670	10,772,460	24	0
7/16/2008	66	5	7,295	10,779,755	24	0
7/17/2008	40	16	24,347	10,804,102	24	0
7/18/2008	40	21	30,020	10,834,122	24	0
7/19/2008	40	14	20,771	10,854,893	24	0
7/20/2008	41	18	26,980	10,881,873	24	0
7/21/2008	41	18	27,305	10,909,178	24	0
7/22/2008	40	18	26,358	10,935,536	24	0
7/23/2008	39	16	23,633	10,959,169	24	0
7/24/2008	39	18	26,065	10,985,234	24	0
7/25/2008	38	17	24,898	11,010,132	24	0
7/26/2008	37	17	24,543	11,034,675	24	0
7/27/2008	36	16	24,434	11,059,109	24	0
7/28/2008	36	16	24,185	11,083,294	24	0
7/29/2008	36	16	24,048	11,107,342	24	0
7/30/2008	36	16	24,096	11,131,438	24	0
7/31/2008	36	18	27,198	11,158,636	24	0
	66	15.3	707.228	11.158.636	31	100%
Sample		Monitoring	Monitoring	·····		
Measurement	Daily	Period	Period			
	Maximum	Average	Total	Cumulative	Runtime	Operational
	(GPM)	(GPM)	(GAL)	Total (GAL)	(Days)	Percentage

Monthly Airco Parcel GCTS Flow Calculations August 2008

	Maximum	Average		Total	Run	
	Flow	Flow Rate	Total Daily	Gallons To	Time	Run Time
Date	(gpm)	(gpm)	Flow (Gal)	Date (Gal)	(hours)	(minutes)
8/1/2008	35	16	24,340	11,182,976	24	0
8/2/2008	35	17	24,475	11,207,451	24	0
8/3/2008	34	16	23,465	11,230,916	24	0
8/4/2008	34	16	23,206	11,254,122	24	0
8/5/2008	34	16	23,975	11,278,097	24	0
8/6/2008	33	15	22,737	11,300,834	24	0
8/7/2008	33	15	22,832	11,323,666	24	0
8/8/2008	32	15	22,469	11,346,135	24	0
8/9/2008	31	15	22,266	11,368,401	24	0
8/10/2008	32	17	25,184	11,393,585	24	0
8/11/2008	31	15	22,186	11,415,771	24	0
8/12/2008	31	15	21,742	11,437,513	24	0
8/13/2008	43	14	20,181	11,457,694	24	0
8/14/2008	44	11	16,016	11,473,710	24	0
8/15/2008	44	11	16,255	11,489,965	24	0
8/16/2008	44	10	15,819	11,505,784	24	0
8/17/2008	44	11	15,856	11,521,640	24	0
8/18/2008	44	11	16,936	11,538,576	24	0
8/19/2008	44	12	17,655	11,556,231	24	0
8/20/2008	44	11	17,006	11,573,237	24	0
8/21/2008	44	11	16,891	11,590,128	24	0
8/22/2008	44	11	16,902	11,607,030	24	0
8/23/2008	45	11	16,546	11,623,576	24	0
8/24/2008	44	11	16,647	11,640,223	24	0
8/25/2008	45	11	17,056	11,657,279	24	0
8/26/2008	45	11	16,291	11,673,570	24	0
8/27/2008	45	11	16,314	11,689,884	24	0
8/28/2008	45	11	16,614	11,706,498	24	0
8/29/2008	45	10	15,725	11,722,223	24	0
8/30/2008	45	10	15,662	11,737,885	24	0
8/31/2008	45	10	15,125	11,753,010	24	0
	45	12.8	594.374	11.753.010	31	100%
Sample		Monitoring	0,7,0,7			
Measurement	Daily	Period	Monitoring			
	Maximum	Average	Period Total	Cumulative	Runtime	Operational
	(GPM)	(GPM)	(GAL)	Total (GAL)	(Days)	Percentage

Project No.: 150C265.1005 Attachment G-2, Page 3 of 6 30 April 2009

Monthly Airco Parcel GCTS Flow Calculations September 2008

	Maximum	Average		Total	Run	
	Flow	Flow Rate	Total Daily	Gallons To	Time	Run Time
Date	(gpm)	(gpm)	Flow (Gal)	Date (Gal)	(hours)	(minutes)
9/1/2008	45	10	15,173	11,768,183	24	0
9/2/2008	45	10	15,199	11,783,382	24	0
9/3/2008	45	10	14,560	11,797,942	24	0
9/4/2008	45	10	15,439	11,813,381	24	0
9/5/2008	46	11	16,753	11,830,134	24	0
9/6/2008	46	12	17,296	11,847,430	24	0
9/7/2008	45	11	16,913	11,864,343	24	0
9/8/2008	45	12	18,628	11,882,971	24	0
9/9/2008	45	14	21,079	11,904,050	24	0
9/10/2008	45	11	17,144	11,921,194	24	0
9/11/2008	45	11	16,508	11,937,702	24	0
9/12/2008	45	12	17,661	11,955,363	24	0
9/13/2008	45	13	19,155	11,974,518	24	0
9/14/2008	45	12	17,493	11,992,011	24	0
9/15/2008	45	18	26,049	12,018,060	24	0
9/16/2008	45	12	18,500	12,036,560	24	0
9/17/2008	45	4	6,461	12,043,021	24	0
9/18/2008	44	6	9,071	12,052,092	24	0
9/19/2008	44	10	14,876	12,066,968	24	0
9/20/2008	44	10	14,912	12,081,880	24	0
9/21/2008	44	10	15,283	12,097,163	24	0
9/22/2008	44	10	15,089	12,112,252	24	0
9/23/2008	44	10	14,440	12,126,692	24	0
9/24/2008	44	3	3,888	12,130,580	24	0
9/25/2008	44	1	2,649	12,133,229	24	0
9/26/2008	0	0	0	12,133,229	24	0
9/27/2008	0	0	0	12,133,229	24	0
9/28/2008	0	0	0	12,133,229	24	0
9/29/2008	44	6	9,332	12,142,561	24	0
9/30/2008	44	13	19,315	12,161,876	24	0
	46	9.06	408,866	12,161,876		100%
Sample		Monitoring				
Measurement	Daily	Period	Monitoring			
	Maximum	Average	Period Total	Cumulative	Runtime	Operational
	(GPM)	(GPM)	[(GAL)	Total (GAL)	(Days)	Percentage

Project No.: 150C265.1005 Attachment G-2, Page 4 of 6 30 April 2009

Monthly Airco Parcel GCTS Flow Calculations October 2008

	Maximu	Average		Total	Run	
	m Flow	Flow Rate	Total Daily	Gallons To	Time	Run Time
Date	(gpm)	(gpm)	Flow (Gal)	Date (Gal)	(hours)	(minutes)
10/1/2008	44	12	17,892	12,179,768	24	0
10/2/2008	47		17,055	12,196,823	24	0
10/3/2008	44	11	16,082	12,212,905	24	0
10/4/2008	44	11	15,882	12,228,787	24	0
10/5/2008	48	3	4,677	12,233,464	24	0
10/6/2008	0	0	0	12,233,464	24	0
10/7/2008	44	8	11,879	12,245,343	24	0
10/8/2008	44	13	18,816	12,264,159	24	0
10/9/2008	44	11	16,284	12,280,443	24	0
10/10/2008	44	11	16,176	12,296,619	24	0
10/11/2008	44	10	15,821	12,312,440	24	0
10/12/2008	44	11	15,839	12,328,279	24	0
10/13/2008	46	10	15,343	12,343,622	24	0
10/14/2008	44	10	15,446	12,359,068	24	0
10/15/2008	44	10	15,253	12,374,321	24	0
10/16/2008	46	11	16,511	12,390,832	24	0
10/17/2008	44	10	14,801	12,405,633	24	0
10/18/2008	44	10	14,480	12,420,113	24	0
10/19/2008	47	10	14,537	12,434,650	24	0
10/20/2008	44	10	14,563	12,449,213	24	0
10/21/2008	44	11	16,245	12,465,458	24	0.
10/22/2008	44	9	14,088	12,479,546	24	0
10/23/2008	44	9	14,163	12,493,709	24	0
10/24/2008	44	10	15,004	12,508,713	24	0
10/25/2008	45	11	16,880	12,525,593	24	0
10/26/2008	44	11	16,424	12,542,017	24	0
10/27/2008	44	10	15,469	12,557,486	24	0
10/28/2008	44	10	14,899	12,572,385	24	0
10/29/2008	44	10	14,543	12,586,928	24	0
10/30/2008	44	9	13,982	12,600,910	24	0
10/31/2008	44	10	14,743	12,615,653	24	0
	47	9.77	453 777	12,615653	31	100%
Sample	<u>, , , , , , , , , , , , , , , , , , , </u>	Monitoring	+33,111	18,010,000		
Measurement	Daily	Period	Monitoring			
	Maximum	Average	Period Total	Cumulative	Runtime	Operational
	(GPM)	(GPM)	(GAL)	Total (GAL)	(Days)	Percentage

Monthly Airco Parcel GCTS Flow Calculations November 2008

	Maximum	Average		Total	Run	
	Flow	Flow Rate	Total Daily	Gallons To	Time	Run Time
Date	(gpm)	(gpm)	Flow (Gal)	Date (Gal)	(hours)	(minutes)
11/1/2008	44	10	15,001	12,630,654	24	0
11/2/2008	44	13	19,208	12,649,862	24	0
11/3/2008	44	12	17,512	12,667,374	24	0
11/4/2008	44	11	17,022	12,684,396	24	0
11/5/2008	44	11	16,874	12,701,270	24	0
11/6/2008	44	11	17,128	12,718,398	24	0
11/7/2008	44	11	16,641	12,735,039	24	0
11/8/2008	44	12	18,248	12,753,287	24	0
11/9/2008	44	11	16,473	12,769,760	24	0
11/10/2008	44	11	16,266	12,786,026	24	0
11/11/2008	44	11	16,255	12,802,281	24	0
11/12/2008	44	11	16,617	12,818,898	24	0
11/13/2008	44	11	16,648	12,835,546	24	0
11/14/2008	44	11	16,030	12,851,576	24	0
11/15/2008	44	14	20,810	12,872,386	24	0
11/16/2008	44	13	19,854	12,892,240	24	0
11/17/2008	43	12	17,799	12,910,039	24	0
11/18/2008	43	12	17,488	12,927,527	24	0
11/19/2008	43	12	17,609	12,945,136	24	0
11/20/2008	44	12	17,521	12,962,657	24	0
11/21/2008	44	12	17,372	12,980,029	24	0
11/22/2008	44	12	17,720	12,997,749	24	0
11/23/2008	44	12	17,868	13,015,617	24	0
11/24/2008	44	13	19,368	13,034,985	24	0
11/25/2008	44	13	19,999	13,054,984	24	0
11/26/2008	44	15	21,715	13,076,699	24	0
11/27/2008	43	14	20,265	13,096,964	24	0
11/28/2008	43	14	20,282	13,117,246	24	0
11/29/2008	43	14	20,158	13,137,404	24	0
11/30/2008	44	15	22,341	13,159,745	24	0
1	44	12.2	544.092	13,159,745	30	100%
Sample		Monitoring		10,10,7,7,10		
Measurement	Dailv	Period	Monitoring			
	Maximum	Average	Period Total	Cumulative	Runtime	Operational
	(GPM)	(GPM)	(GAL)	Total (GAL)	(Days)	Percentage





Project No.: 150C265.1005 Attachment G-2, Page 6 of 6 30 April 2009

Monthly Airco Parcel GCTS Flow Calculations December 2008

	Maximum	Average		Total	Run	
	Flow	Flow Rate	Total Daily	Gallons To	Time	Run Time
Date	(gpm)	(gpm)	Flow (Gal)	Date (Gal)	(hours)	(minutes)
12/1/2008	44	15	22,684	13,182,430	24	0
12/2/2008	43	14	20,700	13,203,130	24	0
12/3/2008	43	14	21,560	13,224,690	24	0
12/4/2008	43	14	20,761	13,245,451	24	0
12/5/2008	43	12	18,699	13,264,150	24	0
12/6/2008	43	13	19,176	13,283,326	24	0
12/7/2008	42	11	16,943	13,300,269	24	0
12/8/2008	42	7	10,464	13,310,733	24	0
12/9/2008	42	14	20,573	13,331,306	24	0
12/10/2008	43	17	25,668	13,356,974	24	0
12/11/2008	42	14	20,827	13,377,801	24	0
12/12/2008	42	14	20,593	13,398,394	24	0
12/13/2008	42	14	20,310	13,418,704	24	0
12/14/2008	42	14	21,132	13,439,836	24	0
12/15/2008	42	15	21,777	13,461,613	24	0
12/16/2008	42	14	21,279	13,482,892	24	0
12/17/2008	42	15	21,903	13,504,795	24	0
12/18/2008	42	15	21,821	13,526,616	24	0
12/19/2008	41	15	22,395	13,549,011	24	0
12/20/2008	41	15	21,826	13,570,837	24	0
12/21/2008	41	10	14,283	13,585,120	24	0
12/22/2008	41	13	18,900	13,604,020	24	0
12/23/2008	41	15	22,463	13,626,483	24	0
12/24/2008	41	18	26,451	13,652,934	24	0
12/25/2008	41	16	22,316	13,675,250	24	0
12/26/2008	41	14	20,820	13,696,070	24	0
12/27/2008	41	21	30,792	13,726,862	24	0
12/28/2008	40	11	17,190	13,744,052	24	0
12/29/2008	40	13	19,091	13,763,143	24	0
12/30/2008	40	15	22,287	13,785,430	24	0
12/31/2008	40	15	22,912	13,808,342	24	0
Sample						
Measurement	44	14.1	648,596	13,808,342	31	100%
	Daily Maximum (GPM)	Monitoring Period Average (GPM)	Monitoring Period Total (GAL)	Cumulative Total (GAL)	Runtime (Days)	Operational Percentage