

932001



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22 August 2003

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NYSDEC - REG. 9
FOIL
 REL UNREL

Mr. Michael Resh
Manager of Environmental Remediation
BOC Gases
100 Mountain Avenue
Murray Hill, New Jersey 07974

RE: Second Quarter 2003 (June 2003) Monitoring Event Letter Report, Site No. 932001
Aircro Properties Inc., Witmer Road Landfill, Niagara Falls, New York
EA Project No. 12040.69

Dear Mr. Resh:

EA Engineering, P.C. and its affiliate EA Science and Technology are pleased to provide the Second Quarter 2003 (June 2003) Monitoring Event Letter Report. During December 2000, the post-closure monitoring and facility maintenance program was initiated at the Witmer Road Landfill located in Niagara Falls, New York. 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 quarter 2003 groundwater monitoring event and the engineering inspection of the landfill cover and appurtenances that were completed at this site in June 2003.

OBJECTIVES

In accordance with the Revised Final Post-Closure Monitoring and Facility Maintenance Plan (EA 2001a)¹, environmental monitoring points will be maintained and sampled during the post-closure monitoring period. This includes collection of groundwater, surface water, and leachate samples. The Revised Final Post-Closure Monitoring and Facility Maintenance Plan documents sampling locations and sampling parameters and methods, in addition to other required maintenance activities, such as landfill cap inspections. It is anticipated that within 5 years of the start of post-closure monitoring, this plan will be re-evaluated based on the data collected at the site so that the monitoring plan will be focused to address site-specific issues that may be identified.

The objectives of the Post-Closure Monitoring and Facility Maintenance Program are to:

- Collect representative groundwater and surface water samples in order to monitor any potential leachate migration from the landfill, and to document the effectiveness of the landfill capping system

1. 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.



- Evaluate these data to determine whether any potential impacts may be occurring that could affect human health or the environment
- Provide this information to BOC Gases and the New York State Department of Environmental Conservation (NYSDEC).

As noted in the Revised Final Post-Closure Monitoring and Facility Maintenance Plan (EA 2001a), the results of the quarterly sampling events will be summarized in a letter report detailing the findings of the environmental sampling. Monitoring event letter reports will be limited to documenting the results of each sampling event. This letter report summarizes the findings of the 11th post-closure monitoring event completed at this site.

BACKGROUND

The Witmer Road Landfill is part of the Vanadium Corporation of America site that is located in the Town of Niagara Falls, New York (Figure 1). The Vanadium site is approximately 150 acres. This quarterly sampling event focused on the 25-acre Airco parcel operated by the BOC Group. The site contains waste material from the operation of onsite and nearby production facilities.

An Immediate Investigative Work Assignment was conducted by NYSDEC for a portion of the 150-acre parcel in August 1997. Approximately 70 acres from the Niagara Mohawk Power Corporation and New York Power Authority parcel were investigated. 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. According to the Immediate Investigative Work Assignment, much of the surface material consisted of fill, including fly ash, dust, slag, and cinder materials.

Analysis of site groundwater during the Immediate Investigative Work Assignment indicated that surface water and groundwater standards were exceeded for hexavalent chromium and pH. Based on the Immediate Investigative Work Assignment and other investigations, the facility has been listed as a Class 2 Hazardous Waste Site in the New York State Registry of 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 were completed at the Witmer Road Landfill during 2000, which included completion of an impermeable cap and leachate relief system. 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)².

² EA Engineering, P.C. and its Affiliate EA Science and Technology. 2001b. Interim Remedial Measure Report Documenting Closure of the Witmer Road Landfill, Niagara Falls, New York. January.



MONITORING EVENT FIELD ACTIVITIES

Monitoring Well Gauging

The site monitoring wells (MW-1B through MW-8B) were gauged prior to sampling on 4 June 2003. The depth to water ranged from 3.29 ft below top of casing (btoc) at MW-6B to 12.21 ft btoc at MW-2B. Gauging data are summarized in the table below:

Monitoring Well	Depth to Water (ft btoc)	Well Elevation (ft MSL)	Water Elevation (ft MSL)
MW-1B	9.61	617.77	608.16
MW-2B	12.21	615.88	603.67
MW-3B	7.87	611.22	603.35
MW-4B	5.72	606.68	600.92
MW-5B	4.41	605.48	601.07
MW-6B	3.29	603.47	600.18
MW-7B	8.56	609.48	600.92
MW-8B	5.52	611.62	606.10

NOTE: MSL = Mean sea level.

An interpretation of the water table surface is illustrated on Figure 2.

Groundwater Sampling Procedures

Monitoring wells were sampled on 4-5 June 2003. Eight groundwater samples were collected from the site monitoring wells. Monitoring wells MW-2B, MW-4B, and MW-5B 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-3B, MW-6B, MW-7B, and MW-8B yielded adequate recharge rates; consequently, 4 well volumes were removed and water quality readings allowed to stabilize prior to sample collection. One leachate sample and one surface water sample were also collected. Samples were submitted to Environmental Laboratory Services of North Syracuse, 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)³ and guidance values for Class GA waters. Class GA groundwater is used as a source of drinking water. Leachate samples were compared to NYSDEC AWQS for Class D surface waters. Class D surface waters are used for fishing but are not conducive to fish propagation. If no Class D standards were applicable for a particular compound/analyte, analytical results were compared to the more stringent Class C standards. Class C surface waters are suitable for fishing and fish propagation. Analytical results are summarized on the table provided in Attachment A. Copies of the field notebook, including the results for well gauging, purging, and

3. New York State Department of Environmental Conservation (NYSDEC). 1999. Water Quality Regulations – Surface Water and Groundwater Classifications and Standards New York State Codes, Rules and Regulations Title 6, Chapter X Parts 700-706.



sampling, are provided in Attachment B. Laboratory chain-of-custody records are provided in Attachment C. Laboratory Form I analytical results 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 is provided as Figure 3. Notable results of chemical analyses are as follows.

Metals

Unfiltered metals samples were collected from 8 of 8 site 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. Hexavalent chromium was detected in excess of the NYSDEC AWQS in MW-2B, MW-4B, MW-8B, and the leachate sample. Selenium was also detected in excess of the NYSDEC AWQS in MW-8B and the leachate sample.

Water Quality Indicator Parameters

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

- Sulfate was detected in excess of NYSDEC AWQS in the sample collected from monitoring well MW-8B
- Phenolics were detected in excess of NYSDEC AWQS in samples collected from monitoring wells MW-2B, MW-6B (duplicate sample), and MW-7B
- pH measurements exceeded NYSDEC AWQS in monitoring wells MW-2B, MW-3B, as well as the leachate samples (Attachment B).



LANDFILL INSPECTION

A landfill cap inspection was conducted under the supervision of a New York State licensed Professional Engineer on 4 June 2003. The Landfill Cap Inspection Checklist is provided as Attachment E. No deterioration, damage, or erosion to the landfill cap was noted during the engineering inspection. The access road's stability was in good order; vegetation was observed growing in many areas of the road. A defoliant should be used to remove the vegetation in the roadways. Drainage swales are clear with the exception of 250 linear ft of the southwest swale where soils and vegetation have covered the stone swale. However, the drainage swale at this location is scheduled to be restored to original conditions during the installation of the groundwater collection and treatment system.

If you have any questions regarding the results of this Second Quarter 2003 Monitoring Event, please do not hesitate to contact Charles McLeod at (845) 565-8100, Ext. 1008.

Sincerely,

EA ENGINEERING, P.C.

A handwritten signature in black ink, appearing to read 'Charles E. McLeod, Jr.'.

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

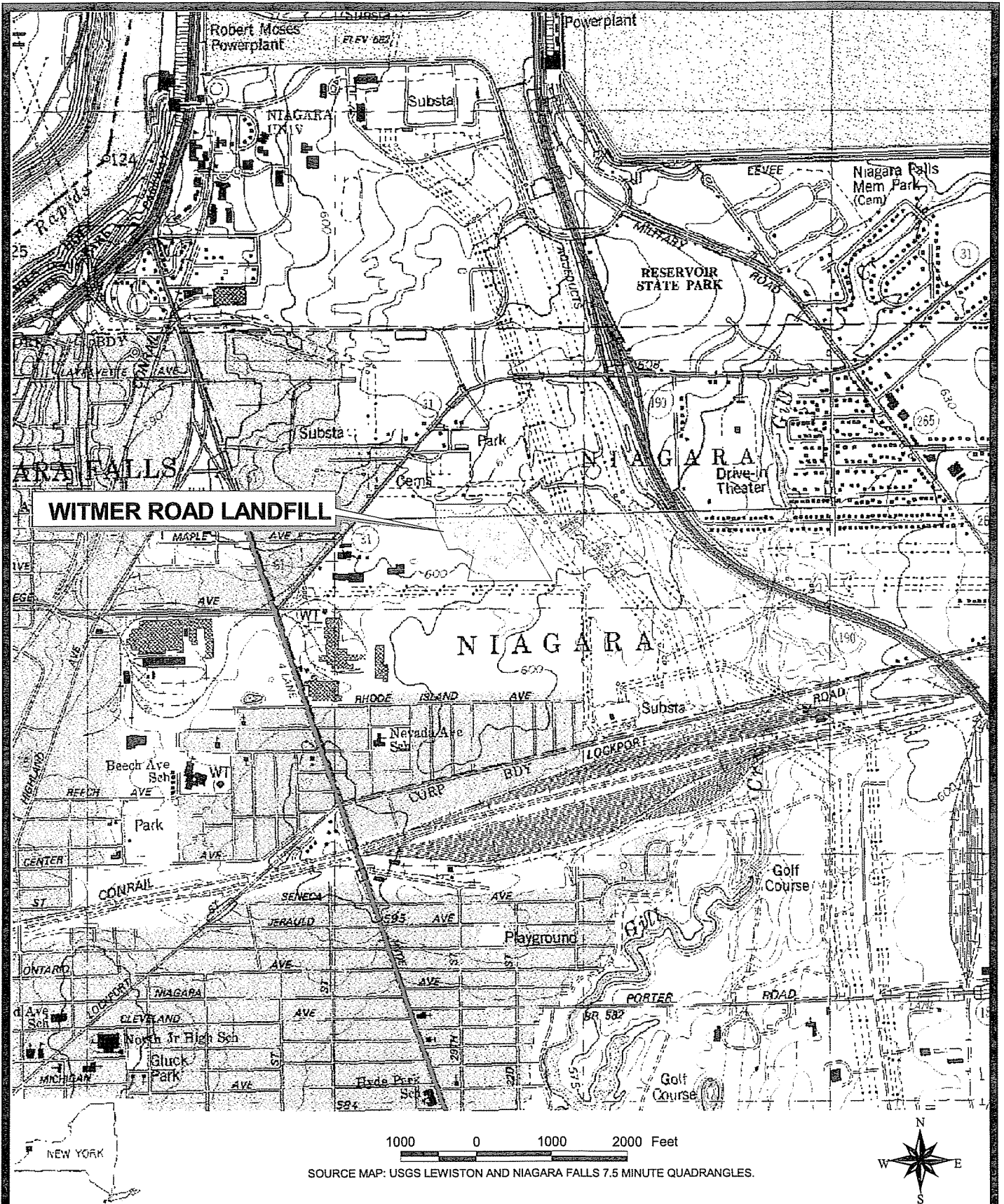
EA SCIENCE AND TECHNOLOGY

A handwritten signature in black ink, appearing to read 'Scott Graham'.

Scott Graham
Project Geologist

CEM/rsc
Attachments

cc: M. Hinton (NYSDEC) (3 copies)
D. Hettrick (NYSDOH) (1 copy)
Town of Niagara Falls (Town Clerk) (1 copy)



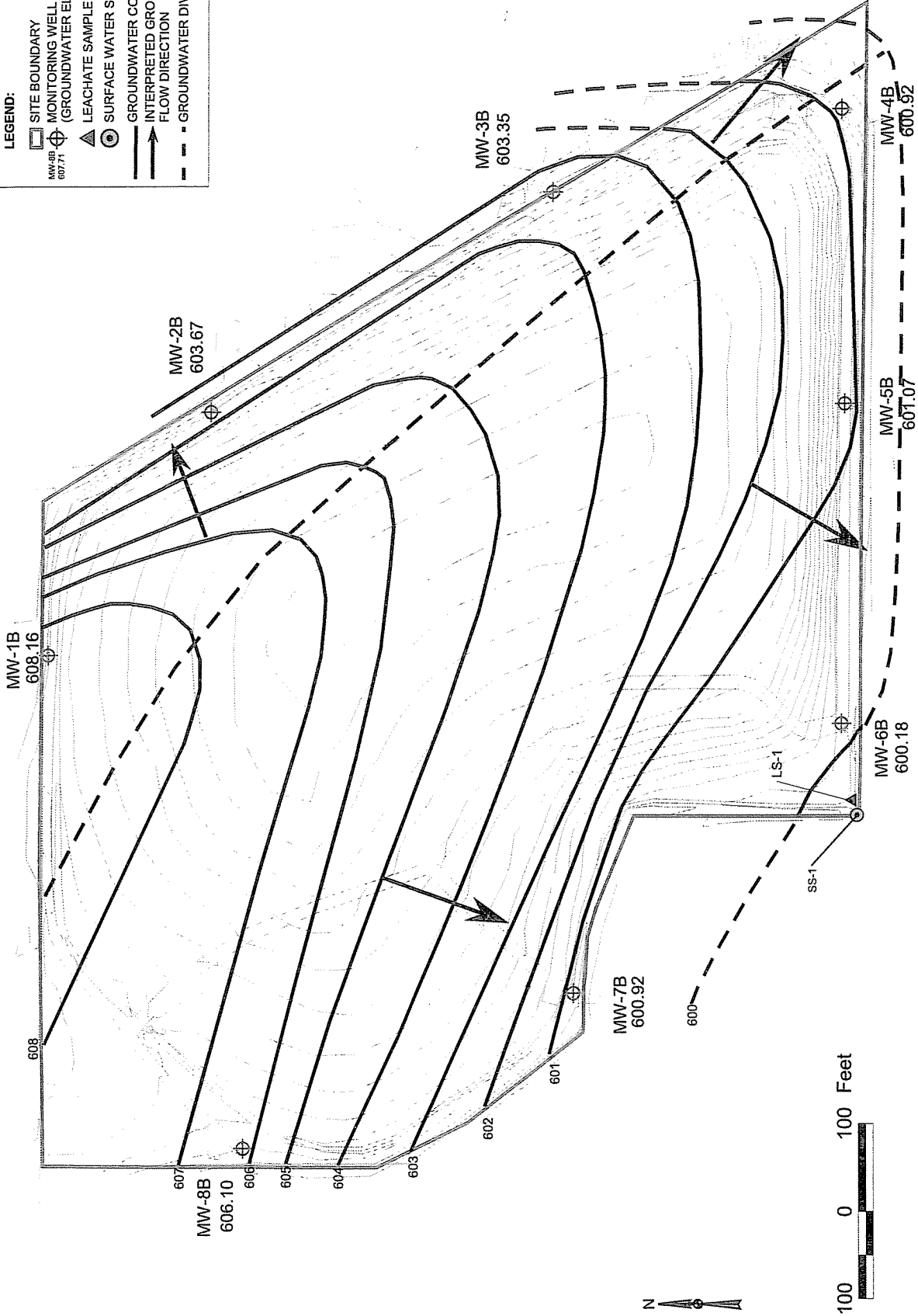
EA ENGINEERING, P.C. AND ITS AFFILIATE
EA SCIENCE AND TECHNOLOGY

AIRCO PARCEL
NIAGARA FALLS, NEW YORK

FIGURE 1
SITE LOCATION MAP

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT No	FILE No
CEM	RSC	RSC	CEM	AS SHOWN	11 JUNE 2003	12040.69	I:\BOC-NIAGARA\FINAL.APR

- LEGEND:**
- SITE BOUNDARY
 - ⊕ MONITORING WELL (GROUNDWATER ELEVATION, FT AMSL)
 - ▲ LEACHATE SAMPLE
 - ⊙ SURFACE WATER SAMPLE
 - GROUNDWATER CONTOUR
 - INTERPRETED GROUNDWATER FLOW DIRECTION
 - - - GROUNDWATER DIVIDE



PROJECT MGR CEM		DESIGNED BY BT/RSC	DRAWN BY BT/RSC	CHECKED BY SLG	SCALE AS SHOWN	DATE 4 JUNE 2003	PROJECT No 12040.69	FILE No I:\BOC-NIAGARA-GIS\FINAL.APR
AIRCO PARCEL NIAGARA FALLS, NEW YORK				FIGURE 2 INTERPRETED GROUNDWATER CONTOUR MAP JUNE 2003				

LEGEND:

- SITE BOUNDARY
- MONITORING WELL
- LEACHATE SAMPLE
- SURFACE WATER SAMPLE

SAMPLING RESULTS

MW-3B	
CR+6	<0.01
NH	<1.0
NA	73.1
CR	<0.005

CHROMIUM HEXAVALENT (mg/L)
 CR CHROMIUM (mg/L)
 NA SODIUM (mg/L)
 NH AMMONIA (mg/L)

NEW YORK STATE AMBIENT
 GROUNDWATER QUALITY STANDARDS
 CHROMIUM HEXAVALENT 0.05 (mg/L)
 CHROMIUM 0.05 (mg/L)
 SODIUM 20 (mg/L)
 AMMONIA 2 (mg/L)

MW-2B	
CR+6	0.34
NH	2.3
NA	45.8
CR	0.343

MW-3B	
CR+6	<0.01
NH	<1.0
NA	73.1
CR	<0.005

MW-4B	
CR+6	0.22
NH	<1.0
NA	83
CR	0.210

MW-5B	
CR+6	<0.01
NH	<1.0
NA	65
CR	<0.005

MW-6B	
CR+6	<0.01
NH	<1.0
NA	66.7
CR	<0.005

MW-1B	
CR+6	<0.01
NH	<1.0
NA	118
CR	0.014

L1	
CR+6	0.43
NH	5.2
NA	80.3
CR	0.419

SS	
CR+6	<0.01
NH	4.1
NA	54.8
CR	0.015

MW-7B	
CR+6	<0.01
NH	<1.0
NA	62.9
CR	0.058

MW-8B	
CR+6	0.08
NH	<1.0
NA	212
CR	0.117

100 0 100 Feet



FIGURE 3
 SAMPLING RESULTS
 4-5 JUNE 2003

AIRCO PARCEL
 NIAGARA FALLS, NEW YORK

PROJECT MGR CEM	DESIGNED BY RSC	DRAWN BY RSC	CHECKED BY SLG	SCALE AS SHOWN	DATE 14 JULY 2003	PROJECT No 12040.69	FILE No I:BOC-NIAGARA-GIS/ FINAL.APR
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Attachment A

Summary of Analytical Results of Groundwater, Surface Water, and Leachate Samples

ATTACHMENT A
SUMMARY OF ANALYTICAL RESULTS OF GROUNDWATER, SURFACE WATER, AND RELIEF PIPE
SAMPLES COLLECTED IN JUNE 2003,
AIRCO PARCEL, NIAGARA FALLS, NEW YORK

Groundwater

Baseline Metals by EPA Method 6010/6020 (mg/L)

Total (Unfiltered)

		MW-1B	MW-2B	MW-3B	MW-4B	MW-5B	MW-6B	MW-6B (Dup)	MW-7B	MW-8B
Compound/Element	AWQS									
Cadmium	0.005	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	0.005
Chromium	0.05	0.014	0.343	(<0.005U)	0.21	(<0.005U)	(<0.005U)	(<0.005U)	0.058	0.117
Chromium, Hexavalent	0.05	(<0.01U)	0.34	(<0.01U)	0.22	(<0.01U)	(<0.01U)	(<0.01U)	(<0.01U)	0.08
Iron	0.3	1.85	1.14	0.129	1.18	0.548	0.696	0.751	5.04	3.51
Lead	0.025	0.005	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)
Magnesium	35*	69.5	(<1U)	1.95	47.7	71.6	82.8	82.3	11.6	51
Manganese	0.3	0.809	0.024	(<0.005U)	0.007	0.026	0.151	0.158	0.116	0.145
Selenium	0.01	(<0.005U)	0.008	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	(<0.005U)	0.064
Silica	---	25.9	10	20.2	18.3	18	15.7	15.2	43	30.9
Sodium	20	118	45.8	73.1	83	65	66.7	65.6	62.9	212
Zinc	2*	0.36	(<0.005U)	0.091	0.01	0.028	(<0.005U)	(<0.005U)	(<0.005U)	0.117

Water Quality Parameters (mg/L)

Total (Unfiltered)

		MW-1B	MW-2B	MW-3B	MW-4B	MW-5B	MW-6B	MW-6B (Dup)	MW-7B	MW-8B
Compound/Element	AWQS									
Ammonia (expressed as N)	2	(<1U)	2.3	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)
Phenolics	0.001	(<0.002U)	0.003	(<0.002U)	(<0.002U)	(<0.002U)	(<0.002U)	0.002	0.013	(<0.002U)
Sulfate	250	185	14.8	96.9	138	126	209	198	44.3	335

ATTACHMENT A (CONTINUED)

Surface Water

Baseline Metals by EPA Method 6010/6020 (mg/L)

Total (Unfiltered)

		SS
Compound/Element	AWQS	
Cadmium	---	(<0.005U)
Chromium	---	0.015
Chromium, Hexavalent	0.016	(<0.01U)
Iron	0.3	1.01
Lead	---	(<0.005U)
Magnesium	---	8.87
Manganese	---	0.035
Selenium	0.0046	0.012
Silica	---	7.05
Sodium	---	54.8
Zinc	---	(<0.005U)

Water Quality Parameters (mg/L)

Total (Unfiltered)

		SS
Compound/Element	AWQS	
Ammonia (expressed as N)	---	4.1
Phenolics	---	0.113
Sulfate	---	31.5

ATTACHMENT A (CONTINUED)

Groundwater Relief Pipe

Baseline Metals by EPA Method 6010/6020 (mg/L)

Total (Unfiltered)

		L1
Compound/Element	AWQS	
Cadmium	---	(<0.005U)
Chromium	---	0.419
Chromium, Hexavalent	0.016	0.43
Iron	0.3	(<0.025U)
Lead	---	(<0.005U)
Magnesium	---	(<1U)
Manganese	---	(<0.005U)
Selenium	0.0046	0.019
Silica	---	0.438
Sodium	---	80.3
Zinc	---	(<0.005U)

Water Quality Parameters (mg/L)

Total (Unfiltered)

		L1
Compound/Element	AWQS	
Ammonia (expressed as N)	---	5.2
Phenolics	---	0.026
Sulfate	---	8.26

QA/QC

Baseline Metals by EPA Method 6010/6020 (mg/L)

Total (Unfiltered)

Compound/Element	AWQS	Rinse Blank	Source Water Blank
Cadmium	---	(<0.005U)	(<0.005U)
Chromium	---	(<0.005U)	(<0.005U)
Chromium, Hexavalent	---	(<0.01U)	(<0.01U)
Iron	---	(<0.025U)	(<0.025U)
Lead	---	(<0.005U)	(<0.005U)
Magnesium	---	(<1U)	(<1U)
Manganese	---	(<0.005U)	(<0.005U)
Selenium	---	(<0.005U)	(<0.005U)
Silica	---	0.217	0.2
Sodium	---	(<1U)	(<1U)
Zinc	---	(<0.005U)	(<0.005U)

Water Quality Parameters (mg/L)

Compound/Element	AWQS	Rinse Blank	Source Water Blank
Ammonia (expressed as N)	---	(<1U)	(<1U)
Phenolics	---	(<0.002U)	(<0.002U)
Sulfate	---	(<2U)	5.39

TABLE NOTES

- AWQS = New York State Ambient Water Quality Standards and Guidance Values from Water Quality Regulations, Title 6, Chapter X Parts 700-706 August 1999.
- * = Indicates guidance value.
- = Indicates no standard or guidance value exists.
- U = Not detected. Sample quantitation limits shown as (<__U).

Only those analytes detected in at least one of the samples is shown on this table. Results shaded and in boldface indicate concentrations in excess of New York State Ambient Water Quality Standards or Guidance Values.

Analytical Methods for Water Quality Parameters

- Ammonia (expressed as Nitrogen) = EPA 350.2
- Phenolics = EPA 420.2
- Sulfate = EPA 375.3

Attachment B

**Groundwater Sampling
Purge Forms**



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW1B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/4/2003	Purge Time: 1230
Purge Method: 2" SUB/LOW FLOW	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 9.61	E. Well Volume (gal) C*D):	Pump Type: GRUNDFOS REDI-FLO 2
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
1254	9.58	0	0.25	7.49	214	12.28	1.47	9.97	225
1258	10.40	1	0.25	7.22	80	11.64	1.48	2.90	482
1302	10.35	2	0.25	7.11	49	12.16	1.51	1.92	103
1306	10.35	3	0.25	7.07	41	12.52	1.50	1.85	57.8
1310	nc	4	0.25	7.06	36	12.76	1.49	1.81	45.7
1314	nc	5	0.25	7.06	35	12.72	1.49	1.80	39.4

Total Quantity of Water Removed (gal):	~1.5 gal	Sampling Time:	1320
Samplers:	R. CASEY	Split Sample With:	_____
Sampling Date:	4-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: _____



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW2B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/4/2003	Purge Time: 1140
Purge Method: HAND BAIL	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 12.21	E. Well Volume (gal) C*D):	Pump Type:
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (gal)	Rate (gpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
INITIAL	12.21			12.55	-36	10.52	3.23	13.24	32.2
ENDING		-3		11.83	-17	11.14	3.87	12.54	74.3

Total Quantity of Water Removed (gal):	~3 gal	Sampling Time:	925
Samplers:	R. CASEY	Split Sample With:	
Sampling Date:	5-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: NOT ENOUGH WATER TO PUMP. WELL BAILED DRY ON 04 JUN 03 AND SAMPLED ON 05 JUN 03.



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW3B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/5/2003	Purge Time: 930
Purge Method: 2" SUB/LOW FLOW	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft): 7.87	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft):	E. Well Volume (gal) C*D):	Pump Type: GRUNDFOS REDI-FLO 2
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
941	7.22	0	0.25	10.65	35	12.07	0.352	9.50	51.9
945	9.05	1	0.25	10.65	14	11.36	0.360	1.08	30.2
949	9.41	2	0.25	10.60	3	11.91	0.366	1.30	14.3
953	9.41	3	0.25	10.54	-3	13.06	0.359	0.96	12.5
957	nc	4	0.25	10.53	-9	13.37	0.358	0.98	11.7
1001	nc	5	0.25	10.52	-10	13.83	0.356	0.96	11.9

Total Quantity of Water Removed (gal):	~1.5 gal	Sampling Time:	1005
Samplers:	R. CASEY	Split Sample With:	_____
Sampling Date:	5-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: _____



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW4B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/4/2003	Purge Time: 1155
Purge Method: HAND BAIL	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 5.72	E. Well Volume (gal) C*D):	Pump Type:
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (gal)	Rate (gpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
INITIAL	5.72			8.97	119	12.17	0.674	12.56	15.8
ENDING		-3		8.24	180	11.38	0.709	13.52	999

Total Quantity of Water Removed (gal):	~3 gal	Sampling Time:	1020
Samplers:	R. CASEY	Split Sample With:	_____
Sampling Date:	5-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: _____



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW5B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/4/2003	Purge Time: 1210
Purge Method: HAND BAIL	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 4.41	E. Well Volume (gal) C*D):	Pump Type:
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (gal)	Rate (gpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
INITIAL	4.41			7.82	207	14.55	0.761	11.49	16.6
ENDING		~2.5		7.59	192	11.17	0.001	13.05	999

Total Quantity of Water Removed (gal):	~2.5 gal	Sampling Time:	1035
Samplers:	R. CASEY	Split Sample With:	_____
Sampling Date:	5-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: _____



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW6B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/5/2003	Purge Time: 1045
Purge Method: 2" SUB/LOW FLOW	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 3.29	E. Well Volume (gal) C*D):	Pump Type: GRUNDFOS REDI-FLO 2
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
1051	2.33	0	0.25	7.65	111	13.32	1.10	7.76	125
1055	4.23	1	0.25	7.29	74	11.89	1.12	2.69	187
1059	4.42	2	0.25	7.16	60	12.07	1.11	2.32	101
1103	4.96	3	0.25	7.12	55	12.46	1.11	1.92	78.6
1107	nc	4	0.25	7.13	52	12.87	1.12	1.65	66.2
1111	5.95	5	0.25	7.15	45	12.85	1.12	1.48	55.2
1115	5.98	6	0.25	7.19	41	13.34	1.12	1.62	56.5
1119	nc	7	0.25	7.18	38	13.24	1.12	1.62	50.8

Total Quantity of Water Removed (gal):	~2 gal	Sampling Time:	1125
Samplers:	R. CASEY	Split Sample With:	
Sampling Date:	5-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: WRL-DUP-0603 ALSO COLLECTED FROM MW6B.



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW7B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/4/2003	Purge Time: 1450
Purge Method: 2" SUB/LOW FLOW	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 8.56	E. Well Volume (gal) C*D):	Pump Type: GRUNDFOS REDI-FLO 2
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
1508	10.40	0	0.25	9.14	21	10.84	0.274	2.67	393
1512	12.35	1	0.25	9.00	9	11.97	0.278	0.60	173
1516	13.29	2	0.25	8.83	2	12.44	0.274	0.47	183
1520	13.39	3	0.25	8.90	-9	14.25	0.275	0.52	215
1524	13.49	4	0.25	8.94	-18	15.26	0.275	0.60	522
1528	13.51	5	0.25	9.03	-36	14.85	0.275	0.68	645
1532	nc	6	0.25	9.10	-45	15.31	0.274	0.74	449
1536	nc	7	0.25	9.11	-47	15.61	0.273	0.85	554
1540	nc	8	0.25	9.15	-49	15.42	0.273	0.87	559

Total Quantity of Water Removed (gal):	~2 gal	Sampling Time:	1550
Samplers:	R. CASEY	Split Sample With:	_____
Sampling Date:	5-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: _____



GROUNDWATER SAMPLING PURGE FORM

Well I.D.: WRL-MW8B	EA Personnel: R. CASEY	Client: BOC GASES
Location: NIAGARA FALLS	Well Condition: LOCKED	Weather: OVERCAST, MID-60s
Sounding Method: WLI	Gauge Date: 6/4/2003	Measurement Ref: TOC
Stick Up/Down (ft): UP	Gauge Time:	Well Diameter (in): 4"

Purge Date: 6/4/2003	Purge Time: 1340
Purge Method: 2" SUB/LOW FLOW	Field Technician: R. CASEY

Well Volume		
A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft): 5.52	E. Well Volume (gal) C*D):	Pump Type: GRUNDFOS REDI-FLO 2
C. Liquid Depth (ft) (A-B):	F. Five Well Volumes (gal) (E3):	Pump Designation:

Water Quality Parameters									
Time (hrs)	DTW (ft btoc)	Volume (liters)	Rate (Lpm)	pH (pH units)	ORP (mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)
1345	5.47	0	0.25	7.68	83	12.76	1.40	5.76	164
1349	5.68	1	0.25	7.49	58	12.28	1.40	0.70	103
1353	5.71	2	0.25	7.44	41	12.46	1.40	0.59	91.1
1357	5.71	3	0.25	7.49	24	12.96	1.38	0.55	100
1401	nc	4	0.25	7.47	28	13.20	1.38	0.56	62.1
1405	nc	5	0.25	7.44	25	13.24	1.37	0.53	51.2

Total Quantity of Water Removed (gal):	~1 gal	Sampling Time:	1410
Samplers:	R. CASEY	Split Sample With:	
Sampling Date:	4-Jun-03	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: _____

Attachment C

Chain-of-Custody Records



Environmental
LABORATORY SERVICES
7280 Caswell Street, Hancock Air Park North Syracuse, NY 13212
(315) 458-8033 FAX (315) 458-0249 (800) 843-8265

CHAIN OF CUSTODY RECORD
and Authorization for Analysis

Billing Information:
Name: Robert Caswell
Company: EA Engineering
Address: 6031 Collier Way Rd
City, State, Zip: Syracuse, NY 13207

Quote No.:
Job No.:
PONo.:

Telephone: (315) 458-4610
Fax: (315) 458-4280
Telephone Results:
Fax Results:

Site Address: BCC Landfill
June 2003

Standard Turn Around Time is end of day, 10 Work Days after lab receipt. Surcharges may apply for Express Service.

Matrix Codes:
AR - Air
DW - Drinking Water
FT - Filter
GW - Ground Water
OL - Oil
PC - Paint Chips
PR - Product
SL - Sludge
SD - Solid/Soil
SW - Surface Water
SB - Swab
TP - Tape
WP - Wipe
WW - Waste Water

Sample(s) State of Origin:
CT DE MA MD NH NJ NY PA RI VT

Time Required:
 Same Day
 1 Work Day
 2 Work Days
 3 Work Days
 4 Work Days
 5 Work Days
 Normal
 Other

ELIS Use Only	Date	Time	Comp/Grab	Matrix	Sampling Location/Sample ID	Number of Containers	Plastic / No Preservatives	Plastic / HNO ₃	Plastic / H ₂ SO ₄	Plastic / NaOH+Ascorbic Acid	Plastic / Zinc Acetate + NaOH	Plastic / Glass/Sodium Thiosulfate	Glass / No Preservative	Glass / H ₂ SO ₄	VOA / HCL	Other: (specify)	Remarks/Special Instructions:
3-16-177	4/16/03	1550	GW	GW	WEL-MW74-0603	1	SA										Catle
3-16-123			GW	GW		1			IL								Phonics 11/1/01
3-16-124			GW	GW		1											Acetate
3-16-125			GW	GW		1											Total Cd Cap Pb, Mg, Mn S, Se, Ni, Ti, Zn

Analyses Required

Relinquished by: [Signature]
Relinquished by: [Signature]
Relinquished by: [Signature]
Relinquished by: [Signature]

Received by: [Signature]
Received by: [Signature]
Received by: [Signature]

Date: 6/1/03
Date: 6/1/03
Date: 6/1/03

Time: 1650
Time:
Time:

White - LABORATORY
Pink - CLIENT

Canary - ACCOMPANIES RESULTS
Please return completed form and all sample containers to Environmental Laboratory Services.

2217.ELS.202.0201



Environmental
LABORATORY SERVICES
7280 Caswell Street, Hancock Air Park North Syracuse, NY 13212
(315) 458-9033 FAX (315) 458-0249 (800) 843-8265

CHAIN OF CUSTODY RECORD
and Authorization for Analysis

Billing Information: Name: Robert Casey Company: EA Engineering Address: 6071 Callaway Rd City, State, Zip: Syracuse, NY 13207		Quote No. Job No. PO No.	Telephone: (315) 431-4610 Fax: (315) 431-4680 Telephone Results Fax Results	Site Address: Box Landfill June 2003		
Matrix Codes: AR - Air DW - Drinking Water FT - Filter GW - Ground Water OL - Oil PC - Paint Chips PR - Product SL - Sludge SD - Solid/Soil SW - Surface Water SB - Swab TP - Tape WP - Wipe WW - Waste Water Standard Turn Around Time is end of day, 10 Work Days after lab receipt. Surcharges may apply for Express Service.		Sample(s) State of Origin: <input type="checkbox"/> CT <input type="checkbox"/> DE <input type="checkbox"/> MA <input type="checkbox"/> MD <input type="checkbox"/> NH <input type="checkbox"/> NJ <input type="checkbox"/> NY <input checked="" type="checkbox"/> PA <input type="checkbox"/> RI <input type="checkbox"/> VT <input type="checkbox"/> Other: (specify)		Remarks/Special Instructions:		
Time Required: <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 3 Work Days <input type="checkbox"/> 4 Work Days <input type="checkbox"/> 5 Work Days <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Other		Container Type/Preservative Sample Receipt Temperature: 6 °C Plastic / No Preservatives Plastic / H ₂ SO ₄ Plastic / HNO ₃ Plastic / NaOH+Ascorbic Acid Plastic / Zinc Acetate + NaOH Plastic / Glass/Sodium Thiosulfate Glass / No Preservative Glass / H ₂ SO ₄ VOA / HCL Other: (specify)				
ELS Use Only 341082 341083 341084 341085 341086 341087 341088 341089	Date 5/4/03 ↓ ↓ ↓ 5/11/03 ↓ ↓ ↓	Time 0925 ↓ ↓ ↓ 1005 ↓ ↓ ↓	Matrix GW GW GW GW GW GW GW GW	Sampling Location/Sample ID WRL-MW2B-0603 ↓ ↓ ↓ WRL-MWSD-0603 ↓ ↓ ↓	Number of Containers 1 1 1 1 1 1 1 1	Analyses Required Co-16 Phosphorus, Nitrogen Sulfate Total Cd, Cr, Fe, Pb, Ni, Mn, Zn Se, Ni, Ti, Zn Co-16 Phosphorus, Nitrogen Sulfate Total Cd, Cr, Fe, Pb, Ni, Mn, Zn Se, Ni, Ti, Zn
Relinquished by: J. D. Smith Relinquished by: J. D. Smith Relinquished by: J. D. Smith Relinquished by: J. D. Smith	Date 6/7/03 Date 6/7/03 Date 6/7/03 Date 6/7/03	Time 0826 Time 0826 Time 0826 Time 0826	Received by: J. D. Smith Received by: J. D. Smith Received by: J. D. Smith Received by: J. D. Smith	Date 6/6/03 Date 6/6/03 Date 6/6/03 Date 6/6/03	Time 0826 Time 0826 Time 0826 Time 0826	

White - LABORATORY
Please return completed form and all sample containers to Environmental Laboratory Services.
Canary - ACCOMPANIES RESULTS
Pink - CLIENT



Environmental
LABORATORY SERVICES

7280 Caswell Street, Hancock Air Park North Syracuse, NY 13212
(315) 458-8033 FAX (315) 458-0249 (800) 843-8265

CHAIN OF CUSTODY RECORD
and Authorization for Analysis

Billing Information: Name: Robert Casper		Quote No.	Telephone: 315 431-4610		Site Address: see landfill	
Company: SA Environmental		Job No.	Fax: 315 431-4280		Remarks/Special Instructions:	
Address: 6011 Colman Dr		PO No.	<input type="checkbox"/> Telephone Results <input type="checkbox"/> Fax Results		Container Type/Preservative Sample Receipt Temperature: 4 °C	
City, State, Zip: Syracuse NY 13205		Matrix Codes: AR - Air DW - Drinking Water FT - Filter GW - Ground Water OL - Oil PC - Paint Chips PR - Product SL - Sludge SD - Solid/Soil SW - Surface Water SB - Swab TP - Tape WP - Wipe WW - Waste Water	Sample(s) State of Origin: CT <input type="checkbox"/> DE <input type="checkbox"/> MA <input type="checkbox"/> MD <input type="checkbox"/> NH <input type="checkbox"/> NJ <input type="checkbox"/> NY <input checked="" type="checkbox"/> PA <input type="checkbox"/> RI <input type="checkbox"/> VT <input type="checkbox"/>	Plastic / HNO ₃ Plastic / H ₂ SO ₄ Plastic / NaOH+Ascorbic Acid Plastic / Zinc Acetate + NaOH Plastic / Glass/Sodium Thiosulfate Glass / No Preservative Glass / H ₂ SO ₄ VOA / HCL Other: (specify)		Analyses Required Cu, Pb Phenolics, Nitro-N Amphetamine Total Cd, Cr, Fe, Pb, Ni, Mn, S Se, Na, Ti, Zn Cu, Pb Phenolics, Nitro-N Amphetamine Total Cd, Cr, Fe, Pb, Ni, Mn, S Se, Na, Ti, Zn
Standard Turn Around Time is end of day, 10 Work Days after lab receipt. Surcharges may apply for Express Service. <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 3 Work Days <input type="checkbox"/> 4 Work Days <input type="checkbox"/> 5 Work Days <input type="checkbox"/> Normal <input type="checkbox"/> Other		Number of Containers	Plastic / No Preservatives Plastic / H ₂ SO ₄ Plastic / NaOH+Ascorbic Acid Plastic / Zinc Acetate + NaOH Plastic / Glass/Sodium Thiosulfate Glass / No Preservative Glass / H ₂ SO ₄ VOA / HCL Other: (specify)			
Time Required:		Sampling Location/Sample ID	Relinquished by: Robert Casper Relinquished by: [Signature] Relinquished by: [Signature]		Date	Time
346074	5/1/05	WPL-56-0602	6	610	6/17/05	0826
346075	↓	↓	↓	610	↓	↓
346076	↓	↓	↓	610	↓	↓
346077	↓	↓	↓	610	↓	↓
346078	5/1/05	WPL-L2-0603	6	610	6/17/05	0826
346079	↓	↓	↓	610	↓	↓
346080	↓	↓	↓	610	↓	↓
346081	↓	↓	↓	610	↓	↓
Relinquished by: [Signature]		Date	Time	Received by: [Signature]		Time
Relinquished by: [Signature]		Date	Time	Received by: [Signature]		Time
Relinquished by: [Signature]		Date	Time	Received by: [Signature]		Time
Sampler Signature: [Signature]		White - LABORATORY Please return completed form and all sample containers to Environmental Laboratory Services.		Canary - ACCOMPANIES RESULTS Pink - CLIENT		2217.ELS.202.0901



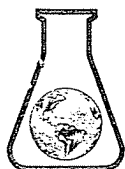
Environmental
LABORATORY SERVICES
7280 Caswell Street, Hancock Air Park North Syracuse, NY 13212
(315) 458-8033 FAX (315) 458-0249 (800) 843-8265

CHAIN OF CUSTODY RECORD
and Authorization for Analysis

Billing Information:		Quote No.	Telephone (315) 458-8033		Site Address: Box Landfills June 2003		
Name		Job No.	Fax (315) 458-4280				
Company: R.A. Environmental		PO No.	Telephone Results				
Address: 6075 Collier Ave Rd			Fax Results				
City, State, Zip: Syracuse NY 13207			Sample Receipt Temperature: 4 °C		Remarks/Special Instructions:		
Standard Turn Around Time is end of day, 10 Work Days after lab receipt. Surcharges may apply for Express Service.		Matrix Codes: AR - Air DW - Drinking Water FT - Filter GW - Ground Water OL - Oil PC - Paint Chips PR - Product SL - Sludge SD - Solid/Soil SW - Surface Water SB - Swab TP - Tape WP - Wipe WW - Waste Water		Container Type/Preservative Plastic / No Preservative Plastic / H ₂ SO ₄ Plastic / NaOH+Ascorbic Acid Plastic / Zinc Acetate + NaOH Plastic / Glass/Sodium Thiosulfate Glass / No Preservative Glass / H ₂ SO ₄ VOA / HCL Other: (specify)		Analyses Required Cu Pb Arsenic Nitrogen Sulfate Total Cd Cr Pb Se Na T Zn	
Time Required: _____ <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 3 Work Days <input type="checkbox"/> 4 Work Days <input type="checkbox"/> 5 Work Days <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Other		Sample(s) State of Origin: <input type="checkbox"/> CT <input type="checkbox"/> DE <input type="checkbox"/> MA <input type="checkbox"/> MD <input type="checkbox"/> NH <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> PA <input type="checkbox"/> RI <input type="checkbox"/> VT <input type="checkbox"/>		Number of Containers			
ELS Use Only 3410010 3410017 3410018 3410019	Date 5/20/03 ↓ ↓ ↓	Time 11:25 ↓ ↓ ↓	Comp/Grab 60 ↓ ↓ ↓	Matrix GW GW GW GW	Sampling Location/Sample ID WRL-MWB-0603 ↓ ↓ ↓	Plastic / No Preservatives Plastic / HNO ₃ Plastic / H ₂ SO ₄ Plastic / NaOH+Ascorbic Acid Plastic / Zinc Acetate + NaOH Plastic / Glass/Sodium Thiosulfate Glass / No Preservative Glass / H ₂ SO ₄ VOA / HCL Other: (specify)	Analyses Required Cu Pb Arsenic Nitrogen Sulfate Total Cd Cr Pb Se Na T Zn
Relinquished by: D. Kelly		Date 6/17/03	Time 08:26	Received by: [Signature]		Date 6/17/03	Time 11
Relinquished by:		Date	Time	Received at Lab by: [Signature]		Date 6/17/03	Time 11
Relinquished by:		Your signature authorizes ELS to analyze the sample(s) as indicated.		White - LABORATORY Please return completed form and all sample containers to Environmental Laboratory Services.		Pink - CLIENT 2217.ELS.202.0901	

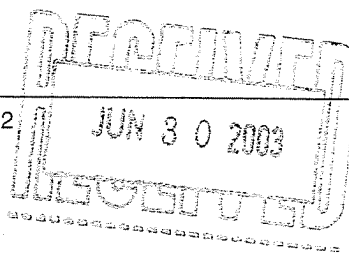
Attachment D

Laboratory Analytical Results



Environmental
LABORATORY SERVICES

7280 Caswell Street, Hancock Air Park, North Syracuse, NY 13212
(315) 458-8033, FAX (315) 458-0249, (800) 842-4667



- Certified in:
- Connecticut
 - Delaware
 - Maryland
 - Massachusetts
 - New Hampshire
 - New Jersey
 - New York
 - Pennsylvania
 - Rhode Island

E.A. ENGINEERING, SCIENCE & TECHNOLOGY
6731 Collamer Road

PROJECT #: 205128
RECEIVED: 06/06/2003

East Syracuse, NY 13057
ATTN: Mr. Scott Graham

Site Address:
BOC LANDFILL
JUNE 2003

TEST PERFORMED	RESULTS	UNITS	DATE/TIME PERFORMED	METHOD NUMBER	PERFORMED BY
SAMPLE #: 346066 CHROMIUM, HEXA VALENT	WRL-MW6B-0603 <0.01	MG/L	06/06/03 @ 0915	DATE SAMPLED: 06/05/03 SM18 3500-CR D	CSA
SAMPLE #: 346067 AMMONIA NITROGEN	WRL-MW6B-0603 <1.0	MG/L	06/12/03	DATE SAMPLED: 06/05/03 SM18 4500-NH3-E	CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346068 SULFATE	WRL-MW6B-0603 209	MG/L	06/09/03	DATE SAMPLED: 06/05/03 EPA 375.2	CSA
SAMPLE #: 346069 ICP/MS	WRL-MW6B-0603			DATE SAMPLED: 06/05/03	
cadmium	<0.005	MG/L	06/13/03	EPA 6020	NSH
chromium	<0.005	MG/L	06/13/03	EPA 6020	NSH
lead	<0.005	MG/L	06/13/03	EPA 6020	NSH
manganese	0.151	MG/L	06/13/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/13/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/13/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/13/03	EPA 6020	NSH
ICP					
iron	0.696	MG/L	06/10/03	EPA 6010	NSH
magnesium	82.8	MG/L	06/10/03	EPA 6010	NSH
silica (sio2)	15.7	MG/L	06/11/03	EPA 6010	NSH
sodium	66.7	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/09/03	EPA 3005A	BDR
SAMPLE #: 346070 CHROMIUM, HEXA VALENT	WRL-DUP-0603 <0.01	MG/L	06/06/03 @ 0915	DATE SAMPLED: 06/05/03 SM18 3500-CR D	CSA

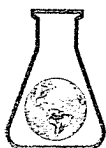
E.A. ENGINEERING, SCIENCE & TECHNOLOGY
6731 Collamer Road

PROJECT #: 205128
RECEIVED: 06/06/2003

East Syracuse, NY 13057
ATTN: Mr. Scott Graham

Site Address:
BOC LANDFILL
JUNE 2003

TEST PERFORMED	RESULTS	UNITS	DATE/TIME PERFORMED	METHOD NUMBER	PERFORMED BY
SAMPLE #: 346071	CLIENT SAMPLE ID:	WRL-DUP-0603		DATE SAMPLED:	06/05/03
AMMONIA NITROGEN	<1.0	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346072	CLIENT SAMPLE ID:	WRL-DUP-0603		DATE SAMPLED:	06/05/03
SULFATE	198	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346073	CLIENT SAMPLE ID:	WRL-DUP-0603		DATE SAMPLED:	06/05/03
ICP/MS					
cadmium	<0.005	MG/L	06/13/03	EPA 6020	NSH
chromium	<0.005	MG/L	06/13/03	EPA 6020	NSH
lead	<0.005	MG/L	06/13/03	EPA 6020	NSH
manganese	0.158	MG/L	06/13/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/13/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/13/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/13/03	EPA 6020	NSH
ICP					
iron	0.751	MG/L	06/10/03	EPA 6010	NSH
magnesium	82.3	MG/L	06/10/03	EPA 6010	NSH
silica (sio2)	15.2	MG/L	06/11/03	EPA 6010	NSH
sodium	65.6	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/09/03	EPA 3005A	BDR
SAMPLE #: 346074	CLIENT SAMPLE ID:	WRL-SS-0603		DATE SAMPLED:	06/05/03
CHROMIUM, HEXAVALENT	<0.01	MG/L	06/06/03 @ 0915	SM18 3500-CR D	CSA
SAMPLE #: 346075	CLIENT SAMPLE ID:	WRL-SS-0603		DATE SAMPLED:	06/05/03
AMMONIA NITROGEN	4.1	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	0.113	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346076	CLIENT SAMPLE ID:	WRL-SS-0603		DATE SAMPLED:	06/05/03
SULFATE	31.5	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346077	CLIENT SAMPLE ID:	WRL-SS-0603		DATE SAMPLED:	06/05/03
ICP/MS					
cadmium	<0.005	MG/L	06/13/03	EPA 6020	NSH
chromium	0.015	MG/L	06/13/03	EPA 6020	NSH



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SAMPLE #: 346077	CLIENT SAMPLE ID:	WRL-SS-0603		DATE SAMPLED:	06/05/03
ICP/MS					
lead	<0.005	MG/L	06/13/03	EPA 6020	NSH
manganese	0.035	MG/L	06/13/03	EPA 6020	NSH
selenium	0.012	MG/L	06/13/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/13/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/13/03	EPA 6020	NSH
ICP					
iron	1.01	MG/L	06/10/03	EPA 6010	NSH
magnesium	8.87	MG/L	06/10/03	EPA 6010	NSH
silica (sio2)	7.05	MG/L	06/11/03	EPA 6010	NSH
sodium	54.8	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/09/03	EPA 3005A	BDR
SAMPLE #: 346078	CLIENT SAMPLE ID:	WRL-L1-0603		DATE SAMPLED:	06/05/03
CHROMIUM, HEXAVALENT	0.43	MG/L	06/06/03 @ 0915	SM18 3500-CR D	CSA
SAMPLE #: 346079	CLIENT SAMPLE ID:	WRL-L1-0603		DATE SAMPLED:	06/05/03
AMMONIA NITROGEN	5.2	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	0.026	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346080	CLIENT SAMPLE ID:	WRL-L1-0603		DATE SAMPLED:	06/05/03
SULFATE	8.26	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346081	CLIENT SAMPLE ID:	WRL-L1-0603		DATE SAMPLED:	06/05/03
ICP/MS					
cadmium	<0.005	MG/L	06/13/03	EPA 6020	NSH
chromium	0.419	MG/L	06/13/03	EPA 6020	NSH
lead	<0.005	MG/L	06/13/03	EPA 6020	NSH
manganese	<0.005	MG/L	06/13/03	EPA 6020	NSH
selenium	0.019	MG/L	06/13/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/13/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/13/03	EPA 6020	NSH
ICP					
iron	<0.025	MG/L	06/10/03	EPA 6010	NSH
magnesium	<1.0	MG/L	06/10/03	EPA 6010	NSH
silica (sio2)	0.438	MG/L	06/11/03	EPA 6010	NSH
sodium	80.3	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/09/03	EPA 3005A	BDR



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SAMPLE #: 346081	CLIENT SAMPLE ID:	WRL-L1-0603		DATE SAMPLED:	06/05/03
SAMPLE #: 346082	CLIENT SAMPLE ID:	WRL-MW2B-0603		DATE SAMPLED:	06/05/03
CHROMIUM, HEXAVALENT	0.34	MG/L	06/06/03 @ 0915	SM18 3500-CR D	CSA
SAMPLE #: 346083	CLIENT SAMPLE ID:	WRL-MW2B-0603		DATE SAMPLED:	06/05/03
AMMONIA NITROGEN	2.3	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	0.003	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346084	CLIENT SAMPLE ID:	WRL-MW2B-0603		DATE SAMPLED:	06/05/03
SULFATE	14.8	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346085	CLIENT SAMPLE ID:	WRL-MW2B-0603		DATE SAMPLED:	06/05/03
ICP/MS					
cadmium	<0.005	MG/L	06/13/03	EPA 6020	NSH
chromium	0.343	MG/L	06/13/03	EPA 6020	NSH
lead	<0.005	MG/L	06/13/03	EPA 6020	NSH
manganese	0.024	MG/L	06/13/03	EPA 6020	NSH
selenium	0.008	MG/L	06/13/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/13/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/13/03	EPA 6020	NSH
ICP					
iron	1.14	MG/L	06/10/03	EPA 6010	NSH
magnesium	<1.0	MG/L	06/10/03	EPA 6010	NSH
silica (sio2)	10.0	MG/L	06/11/03	EPA 6010	NSH
sodium	45.8	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/09/03	EPA 3005A	BDR
SAMPLE #: 346086	CLIENT SAMPLE ID:	WRL-MW5B-0603		DATE SAMPLED:	06/05/03
CHROMIUM, HEXAVALENT	<0.01	MG/L	06/06/03 @ 0915	SM18 3500-CR D	CSA
SAMPLE #: 346087	CLIENT SAMPLE ID:	WRL-MW5B-0603		DATE SAMPLED:	06/05/03
AMMONIA NITROGEN	<1.0	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346088	CLIENT SAMPLE ID:	WRL-MW5B-0603		DATE SAMPLED:	06/05/03
SULFATE	126	MG/L	06/09/03	EPA 375.2	CSA



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SAMPLE #: 346088 SULFATE	CLIENT SAMPLE ID: WRL-MW5B-0603	126 MG/L	06/09/03	DATE SAMPLED: EPA 375.2	06/05/03 CSA
SAMPLE #: 346089 ICP/MS	CLIENT SAMPLE ID: WRL-MW5B-0603			DATE SAMPLED:	06/05/03
cadmium	<0.005	MG/L	06/13/03	EPA 6020	NSH
chromium	<0.005	MG/L	06/13/03	EPA 6020	NSH
lead	<0.005	MG/L	06/13/03	EPA 6020	NSH
manganese	0.026	MG/L	06/13/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/13/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/13/03	EPA 6020	NSH
zinc	0.028	MG/L	06/13/03	EPA 6020	NSH
ICP					
iron	0.548	MG/L	06/10/03	EPA 6010	NSH
magnesium	71.6	MG/L	06/10/03	EPA 6010	NSH
silica (sio2)	18.0	MG/L	06/11/03	EPA 6010	NSH
sodium	65.0	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/09/03	EPA 3005A	BDR
SAMPLE #: 346090 CHROMIUM, HEXAVALENT	CLIENT SAMPLE ID: WRL-MW4B-0603	0.22 MG/L	06/06/03 @ 0915	DATE SAMPLED: SM18 3500-CR D	06/05/03 CSA
SAMPLE #: 346091 AMMONIA NITROGEN	CLIENT SAMPLE ID: WRL-MW4B-0603	<1.0 MG/L	06/12/03	DATE SAMPLED: SM18 4500-NH3-E	06/05/03 CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346092 SULFATE	CLIENT SAMPLE ID: WRL-MW4B-0603	138 MG/L	06/09/03	DATE SAMPLED: EPA 375.2	06/05/03 CSA
SAMPLE #: 346093 ICP/MS	CLIENT SAMPLE ID: WRL-MW4B-0603			DATE SAMPLED:	06/05/03
cadmium	<0.005	MG/L	06/17/03	EPA 6020	NSH
chromium	0.210	MG/L	06/17/03	EPA 6020	NSH
lead	<0.005	MG/L	06/17/03	EPA 6020	NSH
manganese	0.007	MG/L	06/17/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/17/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/17/03	EPA 6020	NSH
zinc	0.010	MG/L	06/17/03	EPA 6020	NSH



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SAMPLE #: 346093 CLIENT SAMPLE ID: WRL-MW4B-0603				DATE SAMPLED: 06/05/03	
ICP/MS					
ICP					
iron	1.18	MG/L	06/11/03	EPA 6010	NSH
magnesium	47.7	MG/L	06/11/03	EPA 6010	NSH
silica (sio2)	18.3	MG/L	06/11/03	EPA 6010	NSH
sodium	83.0	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/10/03	EPA 3005A	BDR
SAMPLE #: 346094 CLIENT SAMPLE ID: WRL-MW3B-0603				DATE SAMPLED: 06/05/03	
CHROMIUM, HEXAVALENT	<0.01	MG/L	06/06/03 @ 0915	SM18 3500-CR D	CSA
SAMPLE #: 346095 CLIENT SAMPLE ID: WRL-MW3B-0603				DATE SAMPLED: 06/05/03	
AMMONIA NITROGEN	<1.0	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346096 CLIENT SAMPLE ID: WRL-MW3B-0603				DATE SAMPLED: 06/05/03	
SULFATE	96.9	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346097 CLIENT SAMPLE ID: WRL-MW3B-0603				DATE SAMPLED: 06/05/03	
ICP/MS					
cadmium	<0.005	MG/L	06/17/03	EPA 6020	NSH
chromium	<0.005	MG/L	06/17/03	EPA 6020	NSH
lead	<0.005	MG/L	06/17/03	EPA 6020	NSH
manganese	<0.005	MG/L	06/17/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/17/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/17/03	EPA 6020	NSH
zinc	0.091	MG/L	06/17/03	EPA 6020	NSH
ICP					
iron	0.129	MG/L	06/11/03	EPA 6010	NSH
magnesium	1.95	MG/L	06/11/03	EPA 6010	NSH
silica (sio2)	20.2	MG/L	06/11/03	EPA 6010	NSH
sodium	73.1	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/10/03	EPA 3005A	BDR
SAMPLE #: 346098 CLIENT SAMPLE ID: WRL-RB-0603				DATE SAMPLED: 06/05/03	
CHROMIUM, HEXAVALENT	<0.01	MG/L	06/06/03 @ 0915	SM18 3500-CR D	CSA



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SAMPLE #: 346099	CLIENT SAMPLE ID:	WRL-RB-0603		DATE SAMPLED:	06/05/03
AMMONIA NITROGEN	<1.0	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346100	CLIENT SAMPLE ID:	WRL-RB-0603		DATE SAMPLED:	06/05/03
SULFATE	<2.0	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346101	CLIENT SAMPLE ID:	WRL-RB-0603		DATE SAMPLED:	06/05/03
ICP/MS					
cadmium	<0.005	MG/L	06/17/03	EPA 6020	NSH
chromium	<0.005	MG/L	06/17/03	EPA 6020	NSH
lead	<0.005	MG/L	06/17/03	EPA 6020	NSH
manganese	<0.005	MG/L	06/17/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/17/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/17/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/17/03	EPA 6020	NSH
ICP					
iron	<0.025	MG/L	06/11/03	EPA 6010	NSH
magnesium	<1.0	MG/L	06/11/03	EPA 6010	NSH
silica (sio2)	0.217	MG/L	06/11/03	EPA 6010	NSH
sodium	<1.0	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/10/03	EPA 3005A	BDR
SAMPLE #: 346102	CLIENT SAMPLE ID:	WRL-SB-0603		DATE SAMPLED:	06/05/03
CHROMIUM, HEXA VALENT	<0.01	MG/L	06/06/03 @ 0915	SM18 3500-CR D	CSA
SAMPLE #: 346103	CLIENT SAMPLE ID:	WRL-SB-0603		DATE SAMPLED:	06/05/03
AMMONIA NITROGEN	<1.0	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346104	CLIENT SAMPLE ID:	WRL-SB-0603		DATE SAMPLED:	06/05/03
SULFATE	5.39	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346105	CLIENT SAMPLE ID:	WRL-SB-0603		DATE SAMPLED:	06/05/03
ICP/MS					
cadmium	<0.005	MG/L	06/17/03	EPA 6020	NSH
chromium	<0.005	MG/L	06/17/03	EPA 6020	NSH



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SAMPLE #: 346105	CLIENT SAMPLE ID:	WRL-SB-0603		DATE SAMPLED:	06/05/03
ICP/MS					
lead	<0.005	MG/L	06/17/03	EPA 6020	NSH
manganese	<0.005	MG/L	06/17/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/17/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/17/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/17/03	EPA 6020	NSH
ICP					
iron	<0.025	MG/L	06/11/03	EPA 6010	NSH
magnesium	<1.0	MG/L	06/11/03	EPA 6010	NSH
silica (sio2)	0.200	MG/L	06/11/03	EPA 6010	NSH
sodium	<1.0	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/10/03	EPA 3005A	BDR
SAMPLE #: 346114	CLIENT SAMPLE ID:	WRL-MW8B-0603		DATE SAMPLED:	06/04/03
CHROMIUM, HEXA VALENT	0.08	MG/L	06/05/03 @ 0945	SM18 3500-CR D	CSA
SAMPLE #: 346115	CLIENT SAMPLE ID:	WRL-MW8B-0603		DATE SAMPLED:	06/04/03
AMMONIA NITROGEN	<1.0	MG/L	06/12/03	SM18 4500-NH3-E	CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346116	CLIENT SAMPLE ID:	WRL-MW8B-0603		DATE SAMPLED:	06/04/03
SULFATE	335	MG/L	06/09/03	EPA 375.2	CSA
SAMPLE #: 346117	CLIENT SAMPLE ID:	WRL-MW8B-0603		DATE SAMPLED:	06/04/03
ICP/MS					
cadmium	0.005	MG/L	06/17/03	EPA 6020	NSH
chromium	0.117	MG/L	06/17/03	EPA 6020	NSH
lead	<0.005	MG/L	06/17/03	EPA 6020	NSH
manganese	0.145	MG/L	06/17/03	EPA 6020	NSH
selenium	0.064	MG/L	06/17/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/17/03	EPA 6020	NSH
zinc	0.117	MG/L	06/17/03	EPA 6020	NSH
ICP					
iron	3.51	MG/L	06/11/03	EPA 6010	NSH
magnesium	51.0	MG/L	06/11/03	EPA 6010	NSH
silica (sio2)	30.9	MG/L	06/11/03	EPA 6010	NSH
sodium	212	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/10/03	EPA 3005A	BDR



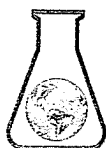
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SAMPLE #: 346117 CLIENT SAMPLE ID:	WRL-MW8B-0603			DATE SAMPLED:	06/04/03
SAMPLE #: 346118 CLIENT SAMPLE ID: CHROMIUM, HEXAVALENT	<0.01	MG/L	06/05/03 @ 0945	SM18 3500-CR D	06/04/03 CSA
SAMPLE #: 346119 CLIENT SAMPLE ID: AMMONIA NITROGEN	<1.0	MG/L	06/16/03	SM18 4500-NH3-E	06/04/03 CSA
PHENOLICS	<0.002	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346120 CLIENT SAMPLE ID: SULFATE	185	MG/L	06/09/03	EPA 375.2	06/04/03 CSA
SAMPLE #: 346121 CLIENT SAMPLE ID: ICP/MS				DATE SAMPLED:	06/04/03
cadmium	<0.005	MG/L	06/17/03	EPA 6020	NSH
chromium	0.014	MG/L	06/17/03	EPA 6020	NSH
lead	0.005	MG/L	06/17/03	EPA 6020	NSH
manganese	0.809	MG/L	06/17/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/17/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/17/03	EPA 6020	NSH
zinc	0.360	MG/L	06/17/03	EPA 6020	NSH
ICP					
iron	1.85	MG/L	06/11/03	EPA 6010	NSH
magnesium	69.5	MG/L	06/11/03	EPA 6010	NSH
silica (sio2)	25.9	MG/L	06/11/03	EPA 6010	NSH
sodium	118	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/10/03	EPA 3005A	BDR
SAMPLE #: 346122 CLIENT SAMPLE ID: CHROMIUM, HEXAVALENT	<0.01	MG/L	06/05/03 @ 0945	SM18 3500-CR D	06/04/03 CSA
SAMPLE #: 346123 CLIENT SAMPLE ID: AMMONIA NITROGEN	<1.0	MG/L	06/16/03	SM18 4500-NH3-E	06/04/03 CSA
PHENOLICS	0.013	MG/L	06/11/03	EPA 420.2	CSA
SAMPLE #: 346124 CLIENT SAMPLE ID: SULFATE	44.3	MG/L	06/09/03	EPA 375.2	06/04/03 CSA



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SAMPLE #: 346124 SULFATE	CLIENT SAMPLE ID: WRL-MW7B-0603	44.3	06/09/03	DATE SAMPLED: EPA 375.2	06/04/03 CSA
SAMPLE #: 346125 ICP/MS	CLIENT SAMPLE ID: WRL-MW7B-0603			DATE SAMPLED: 06/04/03	
cadmium	<0.005	MG/L	06/17/03	EPA 6020	NSH
chromium	0.058	MG/L	06/17/03	EPA 6020	NSH
lead	<0.005	MG/L	06/17/03	EPA 6020	NSH
manganese	0.116	MG/L	06/17/03	EPA 6020	NSH
selenium	<0.005	MG/L	06/17/03	EPA 6020	NSH
thallium	<0.005	MG/L	06/17/03	EPA 6020	NSH
zinc	<0.005	MG/L	06/17/03	EPA 6020	NSH
ICP					
iron	5.04	MG/L	06/11/03	EPA 6010	NSH
magnesium	11.6	MG/L	06/11/03	EPA 6010	NSH
silica (sio2)	43.0	MG/L	06/11/03	EPA 6010	NSH
sodium	62.9	MG/L	06/11/03	EPA 6010	NSH
Metals Digestion			06/10/03	EPA 3005A	BDR


Wendy J. Umbarger
Laboratory Director

06/20/2003
Print Date

All tests performed under NYS ELAP Laboratory Certification # 11375 unless otherwise stated.
Report relates only to the samples as received by the laboratory and shall not be reproduced
except in full, without written approval from Environmental Laboratory Services.



Attachment E

Landfill Cap Inspection
Checklist

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

EA Personnel: Kurt Ilker, Chip McLeod, P.E., and Robert Casey

Date: 4 June 2003

Weather: Overcast, light rain, windy, mid-60s

- 1. Inspection of ground surface for exposure of geotextile cover (cap erosion):**
No erosion observed.
- 2. Inspection of ground surface for differential settlement resulting in soil cracking or ponded water:**
One area (50 ft × 50 ft) located at the top and east of the access road that cuts across the center of the landfill; will have a better idea when grass is cut.
- 3. Identification of stressed vegetation:**
Vegetation on landfill (grass), ~1 ft high; no stressed vegetation observed.
- 4. Identification of seeps, rooted vegetation (trees), and/or animal burrows:**
Observed six small rodent burrows in topsoil throughout the site. Rodents are most likely a type of field mouse. Groundwater flow structure located along the southwest side of the landfill.
- 5. Identification of deteriorating equipment (i.e., monitoring wells, fencing, or drainage structures):**
Monitoring wells show some rusting of the steel protective casings. May choose to grind rust, prime, and paint before rust gets too far into the metal.
- 6. Inspection of stormwater drainage swales for erosion, sloughing, or flow-through:**
Drainage swales are clear with the exception of the one located at the southwest edge (approximately 150 linear ft), where soils and vegetation have covered the stone swale. Should be cleaned and new stone installed.
- 7. Inspection of east side of the landfill (Niagara Mohawk Power Corporation parcel) along the intermittent stream for the presence of erosion or sloughing:**
No deficiencies observed.
- 8. Inspection of access roads:**
Access roads were in good shape. Vegetation was observed growing in 30 percent of the road areas. Defoliant should be used to remove the vegetation in the roadways.