

932001

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30 November 2004

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



DEC 0 2 2004

NYSDEC REG 9

RE: Bi-Annual 2004 Monitoring Event Letter Report, Site No. 932001, Airco Properties-Inc.,
Airco Parcel, Niagara Falls, New York
EA Project No. 12040.87

Dear Mr. Resh:

EA Engineering, P.C. and its affiliate EA Science and Technology are pleased to provide the Bi-Annual 2004 Monitoring Event Letter Report. During December 2000, the post-closure monitoring and facility maintenance program was initiated at the Airco Parcel 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 first bi-annual 2004 groundwater monitoring event that was completed at this site in April 2004, and to summarize operation and maintenance activities completed through July 2004.

OBJECTIVES

In accordance with the Revised Final Post-Closure Monitoring and Facility Maintenance Plan (EA 2004)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 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 and the operation and maintenance plan for the groundwater collection and treatment system (GCTS). Following the first 5 years of post-closure monitoring, the original Revised Final Post-Closure Monitoring and Facility Maintenance Plan (EA 2001)² plan was 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.

In accordance with the updated Post-Closure Monitoring and Facility Maintenance Program, the following activities must be completed:

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

^{2.} 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.



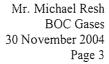
- Environmental monitoring points must be maintained and sampled during the postclosure period. Bi-annual summary reports must be submitted to the New York State Department of Environmental Conservation (NYSDEC) Division of Solid and Hazardous Materials, Region 9; the New York State Department of Health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

As noted above, the results of the bi-annual 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 round. This letter report summarizes the findings of the first bi-annual post-closure monitoring event completed at this site, along with a summary of operation and maintenance activities performed at the this site through July 2004.

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 Vanadium site is approximately 150 acres. This bi-annual sampling event focuses on the 25-acre Airco Parcel operated by BOC Gases. 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.

The Airco site remedial measures were completed as a capped landfill in 2000. A complete description of the history of the site, and the construction details of the landfill capping system, are provided 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 concentrations and pH in groundwater, upon mixing with surface water, remained in excess of the ambient water quality criteria.

The GCTS was designed to implement additional remedial actions, which have been deemed necessary to meet the goals of the interim remedial measures program. The main portion of the GCTS is located on the northwest corner of the site and contains the main control panel, carbon dioxide storage tank, carbon dioxide aeration system, two sediment ponds, duplex pump house, zero valence iron (ZVI) reaction tanks, manhole collection sump, engineered wetland, and an effluent pump station. At the southwest corner of the site, there is an influent wetwell pump station. The GCTS located at the site is presented on Figure 2.

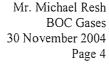
MONITORING EVENT FIELD ACTIVITIES

Monitoring Well Gauging

The site monitoring wells (MW-1B through MW-8B) were gauged prior to sampling on 26-27 April 2004. The depth to water ranged from 2.64 ft at MW-6B to 11.89 ft at MW-2B. Gauging data are summarized in the table below:

NA '4 ' 337 - 11	Depth to Water	Well Elevation	Water Elevation
Monitoring Well	(ft btoc)	(ft AMSL)	(ft AMSL)
MW-1B	8.59	617.77	609.18
MW-2B	11.89	615.88	603.99
MW-3B	8.28	611.22	602.94
MW-4B	5.67	606.68	601.01
MW-5B	5.24	605.48	600.24
MW-6B	2.64	603.47	600.83
MW-7B	7.88	609.48	601.60
MW-8B	4.35	611.62	607.27
NOTE: btoc =	Below top of casing.		
AMSL =	Above mean sea level		

^{3.} 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.





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

Groundwater Sampling Procedures

Monitoring wells were sampled on 26-27 April 2004. Eight groundwater samples were collected from the site monitoring wells. Monitoring wells MW-4B, MW-5B, and MW-7B 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-3B, MW-6B, and MW-8B had adequate recharge rates; consequently, 4 well volumes were removed and water quality readings allowed to stabilize prior to sample collection. One surface water sample was also collected southwest of monitoring well MW-6B. Samples were submitted to Life Science Laboratories, Inc. of East 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)⁴ 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 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 are summarized on the table provided in Attachment A. Copies of the field notebook, including the results for well gauging, purging, and 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 4. Notable results of chemical analyses are as follows.

Metals

Unfiltered metals samples were collected from 8 of the site monitoring wells. Notable results included the following:

^{4.} New York State Department of Environmental Conservation. 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.



- Chromium, hexavalent chromium, iron, 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 surface water sample. Selenium was also detected in excess of the NYSDEC AWQS in MW-4B and MW-8B.

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:

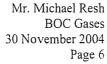
- Sulfate was detected in excess of NYSDEC AWQS in the sample collected from monitoring well MW-8B
- Ammonia and phenolics were detected in excess of NYSDEC AWQS in the sample collected from monitoring well MW-2B, as well as phenolics in monitoring well MW-7B
- pH measurements exceeded the NYSDEC AWQS of 6.5 to 8.5 standard pH units in monitoring wells MW-2B (12.38-12.45), MW-3B (9.97-10.72), and MW-7B (8.64-8.65) as well as the surface water sample (11.66) (Attachment B).

LANDFILL INSPECTION

A landfill cap inspection was conducted on 27 April 2004. The Landfill Cap Inspection Checklist is provided as Attachment E. No deterioration, damage, or erosion to the landfill cap were noted during the engineering inspection. The access roads were in good order, and 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 the southwest swale where soils and vegetation have covered the stone swale. The inspections suggest that the soil should be removed and new stone installed.

GROUNDWATER COLLECTION AND TREATMENT SYSTEM OPERATIONS AND MAINTENANCE MONITORING ACTIVITIES

The GCTS is part of the Airco Parcel located near Witmer Road in Niagara Falls, New York. The GCTS was designed to implement additional remedial actions, which have been deemed necessary to meet the goals of the interim remedial measures program. The main portion of the GCTS is located on the northwest corner of the site and contains the main control panel, carbon dioxide storage tank, carbon dioxide aeration system, two sediment ponds, duplex pump house, ZVI reaction tanks, engineered wetland, and an effluent pump station. At the southwest corner





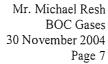
of the site, there is an influent wetwell pump station. The GCTS located at the site is presented on Figure 2. The complete operation and maintenance manual is presented as an appendix to the Post-Closure Monitoring and Facility Maintenance Plan (EA 2004).

System Operations and Maintenance

The GCTS began discharging water on 20 November 2003 when the first compliance samples were collected and sent for offsite laboratory analysis. The system operated on average at approximately 20 gpm during the winter months, December 2003 through March 2004. Carbon dioxide consumption during those months was 12,000 lb every 21-24 days or approximately 535 lb per day. Monthly site visits were conducted through April 2004. During the monthly site visits, an EA technician completed field sampling analysis utilizing the HACH DR/4000 spectrophotometer. Field analyses were conducted at three different stages of the treatment process. Influent water was collected from the discharge of Pump P4A (prior to initial aeration), from discharge of Pump P4B (after ZVI reaction), and from discharge of Pump P7 (prior to discharge to southwest corner wetland). Field data collected during the monthly site visits were recorded and are provided in Attachment F. Along with field sampling activities, pH meters and pressure transducers were cleaned, dry wells were checked, the carbon dioxide tank pressures and capacity were recorded, and the ZVI box was visually inspected. The GCTS operated with minor adjustments through April 2004.

The GCTS sampling occurred weekly for the first 8 weeks of operation and monthly after that until April 2004. Samples were collected at various locations to evaluate treatment system performance and compliance with discharge criteria. Samples were collected prior to (Sediment Pond No. 1) and after treatment via the ZVI tank (Sediment Pond No. 2), and after the engineered wetland (EFF7). The samples were analyzed in the field for total chromium and hexavalent chromium using a HACH DR4000 spectrophotometer. The HACH DR4000 spectrophotometer 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 samples taken for offsite laboratory analysis at Life Science Laboratories, East Syracuse, New York, for a full list of discharge criteria.

Field sampling results for total and hexavalent chromium are provided in Table 1, and results of the engineered wetland discharge samples are provided in Table 2. Hexavalent chromium removal rates were 98.7 percent and chromium removal rates were 95.2 percent during the monitoring period. Total suspended solids and iron analytical results were continuously above NYSDEC discharge criteria throughout the monitoring period. The correlation between the two analyses indicates that the suspended solids were iron. Measures to reduce iron and total suspended solids in the effluent have been incorporated to the system with the planting of the wetland in August 2004. Hexavalent chromium (0.013 mg/L) was above the NYSDEC discharge criteria (0.011 mg/L) in samples collected 16 April 2004, although total chromium (<0.01) results indicate that no chromium was present in the discharged water. This difference of 3 μ g/L can be the result of a small fluctuation in digestion procedure, or low-level turbidity. The full set of laboratory analytical data for the GCTS discharge sampling can be found in Attachment G.





During the monthly site visit in April 2004, it was noted that the dry well pump station containing Pumps P4A and P4B was inundated with water, and that the ZVI box was releasing treated water over the top end of the box. It was also observed that water had seeped between the liner and berm of Sediment Pond Nos. 1 and 2. A French drain was installed on the northeast side of the ponds from the dry well pump station to relieve water retention in the soil.

In May 2004, it was observed that the southwest corner was inundated by groundwater which was discharging to the surface, indicating that the discharge flow rate had increased. The GCTS was shut down to reassess the flow rates from the collection system. Flow rates ranged between 35 and 40 gpm from the collection system. After determining the new flow rates, the appropriate modifications and upgrades were designed for the GCTS.

Groundwater Collection and Treatment System Upgrades and Modifications (June-July 2004)

GCTS upgrades and modification began on 17 June 2004. The flow/treatment process of the GCTS was not altered during the modification phase. The major system components that were upgraded and/or modified were the ZVI box; suction Pumps P4A, P4B, and P7; carbon dioxide aeration chamber; duplex pump station; and the addition of a manhole collection sump. The following describes component adjustments to meet increased flow rates:

- ZVI Box—The ZVI box was no longer capable of handling the increased flow rates. This component was removed and replaced with four separate concrete ZVI vaults. The new ZVI vaults were located northeast of the sediment ponds. The ZVI vault dimensions are 7 ft width × 13 ft length × 4 ft height (outside dimensions); each vault was pre-fabricated with an influent line opening at the base and an effluent line outlet opposite the influent side at the top of the vault. The vaults were filled with 12-16 in. of pea stone and 12-16 in. of ZVI filings. All four ZVI vaults gravity drain to a manhole collection sump equipped with a submersible pump.
- *Pumps P4A, P4B, and P7*—The three original pumps, Goulds Model No. SSH 1×2-6 closed coupled pumps were replaced with three Goulds Model No. SSH 1½ × 2½ -6 closed coupled pumps each with a 1-hp, totally enclosed fan cooled 1,750-rpm motor rated for 3-phase, 60-hertz, 460-volt power. The new pumps are rated for 60 gpm at 30 ft of total discharge head to handle the increased flow capacities. Pump designations remained unchanged.
- Carbon Dioxide Reaction Chamber—The carbon dioxide reaction chamber was removed from the GCTS due to its inability to manage the increase in flow rates. The collection water now pumps directly to Sediment Pond No. 1, where it is aerated with carbon dioxide in the first channel of the baffle system.
- **Duplex Pump Station**—The duplex pump station was removed from in between the sediment ponds and replaced with an aboveground pump house located between the sediment ponds and the ZVI vaults.



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• *Manhole Collection Sump*—A manhole collection sump equipped with a Goulds Model 3885 submersible pump, rated for 60 gpm at 20 ft of total discharge head, and controlled by an ON/OFF float switch, was added to the GCTS. The collection sump conveys water from the ZVI vaults to Sediment Pond No. 2.

The modifications and upgrades were completed during the period June-July 2004. The GCTS was re-started on 29 July 2004, and the first compliance sample was collected for offsite laboratory analysis at that time.

If you have any questions regarding the results of this Bi-Annual 2004 Monitoring Event Letter Report, please do not hesitate to contact Charles McLeod at (845) 565-8100, Ext. 1008.

Sincerely,

EA ENGINEERING, P.C.

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

Vice President

EA SCIENCE AND TECHNOLOGY

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Scott Graham, CPG, P.G.

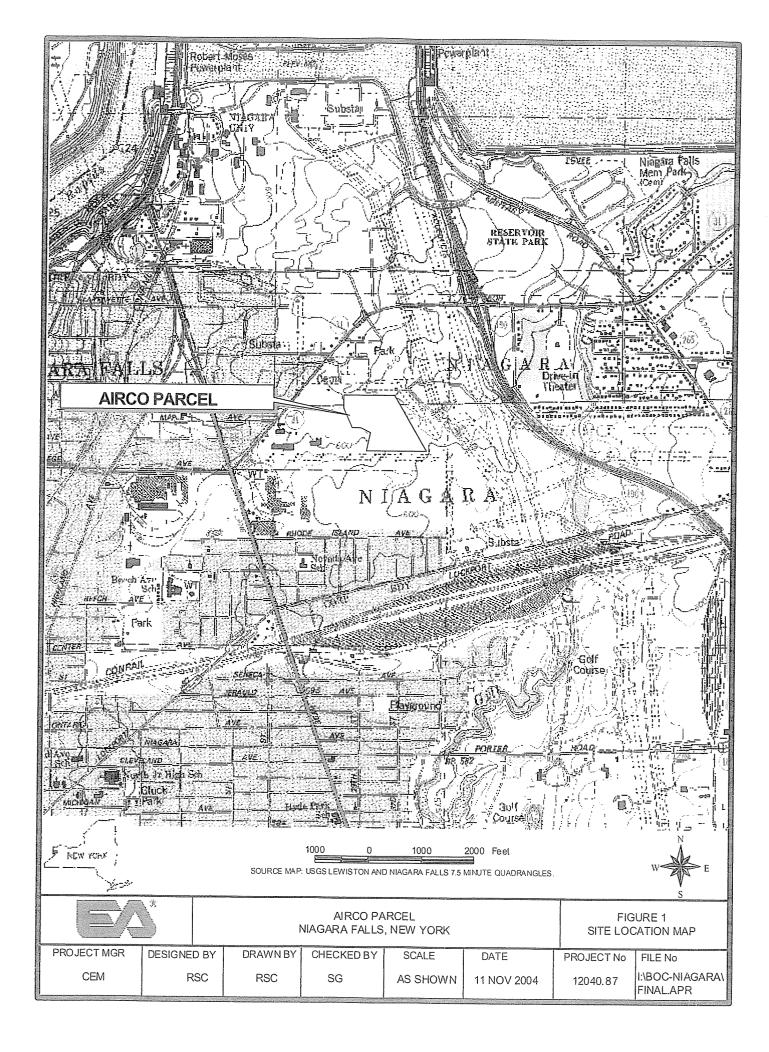
Project Geologist

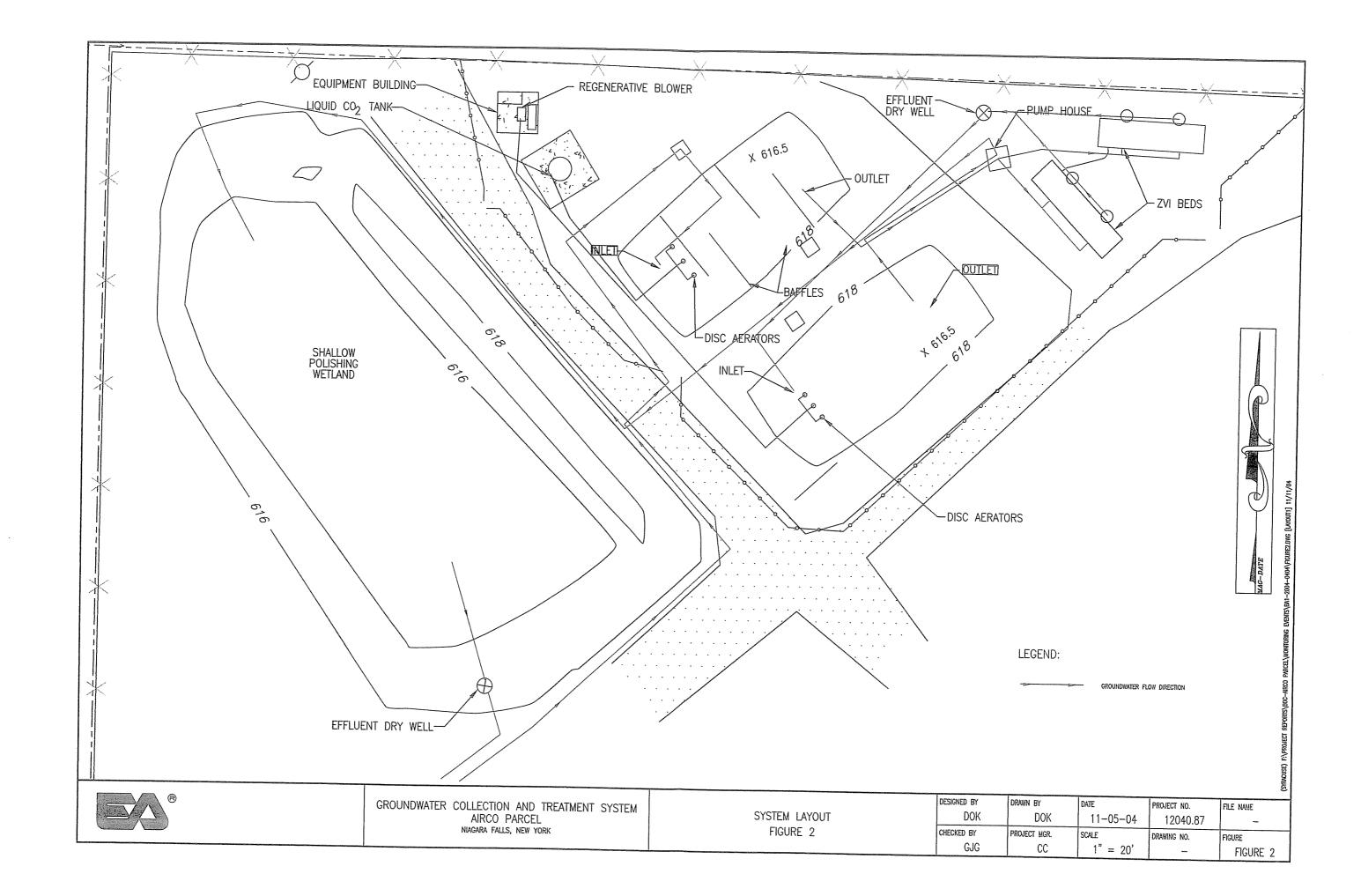
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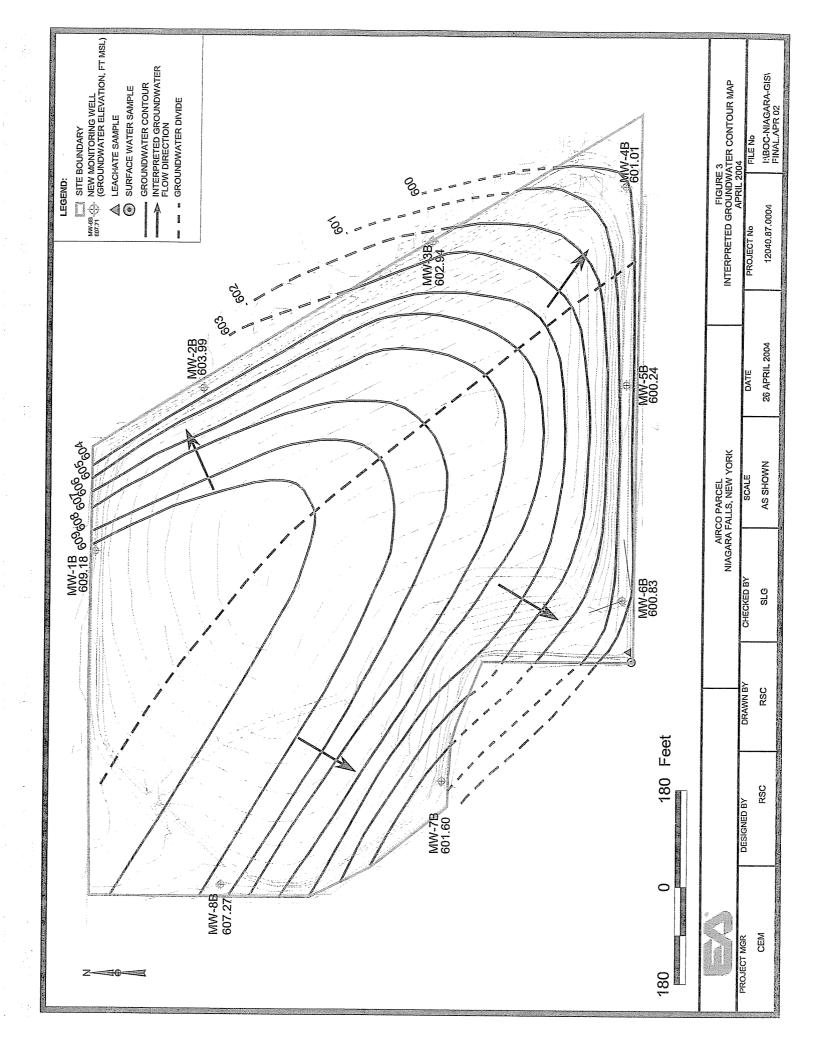
cc: M. Hinton (NYSDEC)

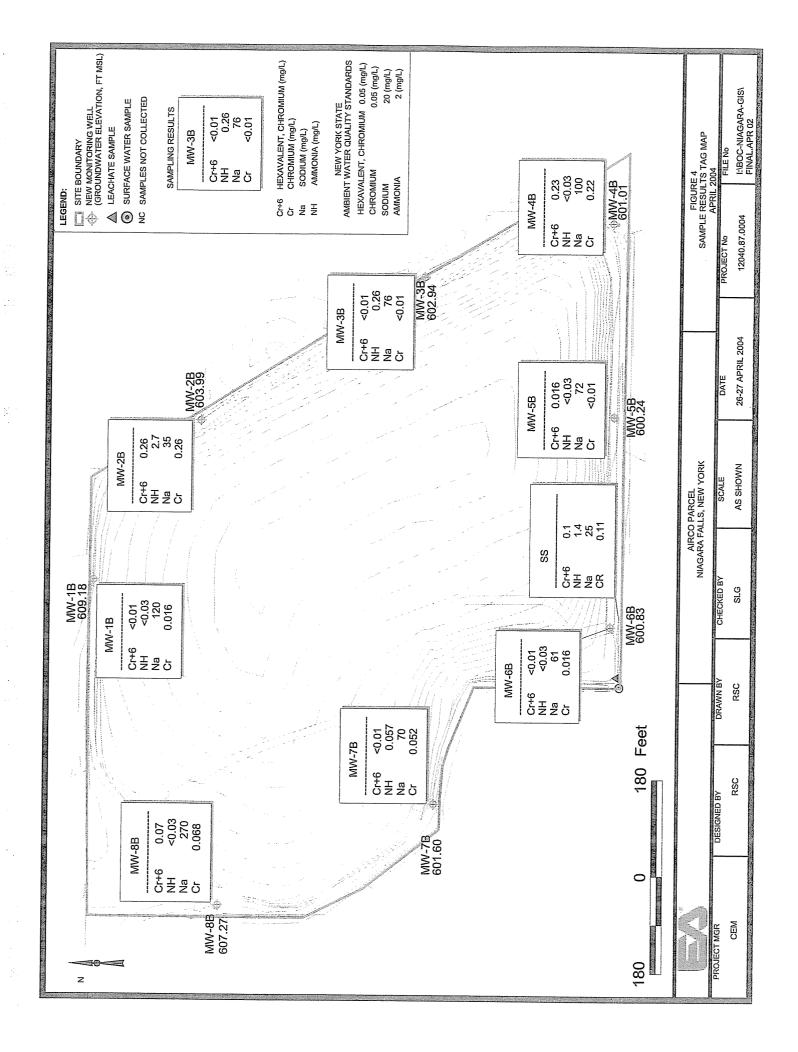
M. Forcucci (NYSDOH)

Town of Niagara Falls (Town Clerk)









Project No.: 12040.87 Table 1, Page 1 of 1 November 2004

TABLE 1 SUMMARY OF WEEKLY FIELD SAMPLING RESULTS 20 NOVEMBER 2003 – 16 MARCH 2004

	Sediment I	Pond No. 1	Sediment I	Pond No. 2	Wetland l	Discharge
	Total	Hexavalent	Total	Hexavalent	Total	Hexavalent
	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium
Date	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)
20 NOV 2003	1 B	110				
25 NOV 2003	250	180	120	100	30	20
02 DEC 2003	190	150	40	30	10	10
09 DEC 2003	290	250	140	130	10	0
16 DEC 2003	260	120	150	70	10	0
23 DEC 2003	240	150	160	90	10	0
30 DEC 2003	250	170	20	10	10	0
07 JAN 2004	310	200	30	20	10	0
15 JAN 2004	250	120	20	10	10	0
17 FEB 2004	190	160	30	20	10	0
16 MAR 2004	200	180	10	0	10	0

NOTE: Field samples were analyzed using a HACH DR4000 Spectrophotometer, Methods 8023 (hexavalent chromium) and 8084 (total chromium).

EA Engineering, P.C. and its Affiliate EA Science and Technology

TABLE 2 SUMMARY OF WEEKLY DISCHRAGE SAMPLING 20 NOVEMBER 2003 – 16 APRIL 2004

Project No.: 12040.87 Table 2, Page 1 of 1 November 2004

				2003						2004		NYSDEC
Parameter	20 NOV	25 NOV	2 DEC	9 DEC		16 DEC 23 DEC 30 DEC	30 DEC	7 JAN	17 FEB	25 MAR	16 APR	Discharge Criteria
Hd	$ 2.1^{(a)} $	7.7	8.1	6.3	7.0	8.9	7.2	7.5	6.3	7.4	7.8	6-8 NTU
Total suspended solids	12	4	7	160	43	10	30	22	110	14	9.5	10 mg/L
Ammonia as N	2.9	2.1	2.6	3.1	4.3	3.6	3.0	3.3	4.7	3.0	1.8	9.2 mg/L
Total Kjeldahl nitrogen	2.3	3.3	2.1	4.8	5.0	3.2	2.3	4.2	0.9	6.4	3.2	Monitor
Biochemical oxygen demand	4	4>	4>	70	7.6	4>	8.0	8.4	16	12	4>	5.0 mg/L
1,1-Dichloroethane	▽	~	~	~	⊽	>	\ 	<	I>	l>	>	5.0 µg/L
Trichloroethane	▽	~	⊽	~	⊽	▽	⊽	⊽	 -	l>	>	5.0 µg/L
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07 mg/L
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0147 mg/L
Barium	<0.01	<0.2	<0.2	<0.2	<0.01	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2 mg/L
Total chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	0.1 mg/L
Hexavalent chromium	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.011 mg/L
Iron	1.7	0.22	1.6	150	24	7.8	21	6.5	64	7.6	0.38	0.3 mg/L
Selenium	<0.01	0.012	0.014	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	0.015	<0.01	0.0046 mg/L
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	10.0>	<0.01	0.012	<0.01	0.004 mg/L
Zinc	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	0.016	0.011	0.016	<0.01	0.014	0.115 mg/L
Nitrate as N	0.83	<0.1	<0.1	0.17	0.34	0.25	0.26	0.20	<0.1	<0.1	0.23	Monitor
Nitrite as N	<0.1	0.88	0.89	<0.1	<0.1	<0.1	<0.1	1.0>	<0.1	<0.1	I.0>	Monitor
Chemical oxygen demand	14	3.8	4.0	36	20	23	21	10	40	14	12	40 mg/L
Total dissolved solids	480	NA	NA	099	890	730	450	069	NA	850	470	Monitor
(a) I aboratory error sample diluted with acid	diluted wi	th acid										

a) Laboratory error; sample diluted with acid.

NOTE: NA = Sample not analyzed for parameter.

Values in bold indicate an excess of discharge criteria.

Attachment A

Summary of Analytical Results of Groundwater and Surface Water Samples April 2004

ATTACHMENT A SUMMARY OF ANALYTICAL RESULTS OF GROUNDWATER, AND SURFACE WATER SAMPLES COLLECTED IN APRIL 2004, AIRCO PARCEL, NIAGARA FALLS, NEW YORK

Ground Water

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									
Chromium	0.05	0.016	0.26	(<0.01U)	0.23	(<0.01U)	0.016	0.015	0.052	0.068
Chromium, Hexavalent	0.05	(<0.01U)	0.26	(<0.01U)	0.22	0.016	(<0.01U)	0.011	(<0.01U)	0.07
Iron	0.3	2.9	0.37	0.2	2.2	0.62	0.6	0.61	- 6	1.1
Lead	0.025	0.022	0.01	(<0.01U)	0.014	(<0.01U)	(<0.01U)	(<0.01U)	0.01	0.011
Magnesium	35*	63	(<0.01U)	0.87	42	65	78	82	11	37
Manganese	0.3	0.82	0.017	(<0.01U)	0.04	0.066	0.14	0.14	0.14	0.1
Selenium	0.01	(<0.01U)	(<0.01U)	(<0.01U)	0.013	(<0.01U)	(<0.01U)	(<0.01U)	(<0.01U)	0.043
Silicon		9.9	1.3	8.8	8.2	8.3	6.4	6.9	10	7.9
Sodium	20	120	35	76	100	72	58	61	70	270
Thallium	0.0005*	(<0.01U)	0.027	(<0.01U)	(<0.01U)	(<0.01U)	(<0.01U)	(<0.01U)	(<0.01U)	(<0.01U)
Zinc	2*	0.61	0.051	0.034	0.06	0.072	0.017	0.021	0.075	0.056

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						h			
Ammonia (expressed as N)	2	(<0.03U)	2.7	0.26	(<0.03U)	(<0.03U)	(<0.03U)	(<0.03U)	0.057	(<0.03U)
Phenolics	0.001	(<0.002U)	0.0047	(<0.002U)	(<0.002U)	(<0.002U)	(<0.002U)	(<0.002U)	0.011	(<0.002U)
Sulfate	250	180	29	120	150	160	190	200	99	300

ATTACHMENT A (CONTINUED)

Surface Water

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

Total (Unfiltered)

		SS
Compound/Element	AWQS	
Chromium		0.11
Chromium, Hexavalent	0.016	0.1
Iron	0.3	(<0.05U)
Lead		(<0.01U)
Magnesium		2.5
Manganese		(<0.01U)
Selenium	0.0046	(<0.01U)
Silicon		1.8
Sodium		25
Thallium	0.02	(<0.01U)
Zinc		(<0.01U)

Water Quality Parameters (mg/L)

Total (Unfiltered)

		SS
Compound/Element	AWQS	
Ammonia (expressed as N)		1.4
Phenolics		0.018
Sulfate		71

ATTACHMENT A (CONTINUED)

QA/QC

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

Total (Unfiltered)

		Rinse	Source
		Blank	Water
			Blank
Compound/Element	AWQS		
Chromium		(<0.01U)	(<0.01U)
Chromium, Hexavalent		(<0.01U)	(<0.01U)
Iron		(<0.05U)	(<0.05U)
Lead		(<0.01U)	(<0.01U)
Magnesium		2.2	2.2
Manganese		(<0.01U)	(<0.01U)
Selenium		(<0.01U)	(<0.01U)
Silicon		(<0.5U)	(<0.5U)
Sodium		4.3	4.4
Thallium		(<0.01U)	(<0.01U)
Zinc		(<0.01U)	0.011

Water Quality Parameters (mg/L)

		Rinse	Source
		Blank	Water
			Blank
Compound/Element	AWQS		
Ammonia (expressed as N)		(<0.03U)	(<0.03U)
Phenolics		(<0.002U)	(<0.002U)
Sulfate		12	12

ATTACHMENT A (CONTINUED)

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 and Field Notes
April 2004

			G	ROUNDW	ATER SA	MPLING			
				PUR	GE FOR	M			
Well I.D.:		· · · · · · · · · · · · · · · · · · ·	EA Person	nel:		Client:			
	AP-MW1B			R.CASEY			BOC GASES		
Location:			Well Condi	tion:		Weather:			
	NIAGARA F	ALLS		LOCKED			OVERCAST, CO	OOL, 50s	
Sounding N	/lethod:		Gauge Dat	e:		Measurement I	Ref:		
	WLI			4/26/2004			TOC		
Stick Up/Do	own (ft):		Gauge Tim	e:		Well Diameter	(in):		
	UP						4 "		·
Ti-									
Purge Date	:	4/27/2004			Purge Tim	e:	930		
Purge Meth	nod:	2" SUB/LO	W FLOW		Field Tech	nician:	R.CASEY		
					II Volume)			
A. Well Der	oth (ft):		D. Well Vo	lume (ft):		Depth/Height of Top of PVC:			
B. Depth to	Water (ft):		E. Well Volume (gal) C*D):			Pump Type:			
-	8.59			,	•		GRUNDFOS RI	EDI-FLO 2	
C. Liquid D	Liquid Depth (ft) (A-B):			ll Volumes (ga	al) (E3):	Pump Designa	tion:		
<u> </u>									
				Water Qu	ality Para	meters			
Time	DTW	Volume	Rate	pН	ORP	Temperature	Conductivity	DO	Turbidity
(hours)	(ft btoc)	(liters)	(Lpm)	(pH units)	(mV)	(oC)	(uS/cm)	(ug/L)	(ntu)
944	8.42	0	0.25	7.09	160	8.95	1.79	5.58	326
948	9.25	1	0.25	6.97	86	9.88	1.82	2.45	317
952	9.34	2	0.25	6.93	68	10.89	1.82	1.44	199
956	NC	3	0.25	6.90	59	11.41	1.83	1.13	167
1000	9.40	4	0.25	6.89	53	11.54	1.83	1.00	99
1004	9.40	5	0.25	6.88	52	11.42	1.82	0.87	97.6

Time	DTW	Volume	Rate	pН	ORP	Temperature	Conductivity	DO	Turbidity
(hours)	(ft btoc)	(liters)	(Lpm)	(pH units)	(mV)	(oC)	(uS/cm)	(ug/L)	(ntu)
944	8.42	0	0.25	7.09	160	8.95	1.79	5.58	326
948	9.25	1	0.25	6.97	86	9.88	1.82	2.45	317
952	9.34	2	0.25	6.93	68	10.89	1.82	1.44	199
956	NC	3	0.25	6.90	59	11.41	1.83	1.13	167
1000	9.40	4	0.25	6.89	53	11.54	1.83	1.00	99
1004	9.40	5	0.25	6.88	52	11.42	1.82	0.87	97.6
1008	9.41	6	0.25	6.88	52	11.40	1.82	0.90	98
			·						

Total Quantity of Water Removed (gal):	~2 gal	Sampling Time:	1010
Samplers:	R.CASEY	Split Sample With:	
Sampling Date:	27-Apr-04	Sample Type:	GRAB
COMMENTS AND OBSERVATIONS:			

				PUR	GE FOR	AM				
Well I.D.:	AP-MW2B		EA Persor	nel: R.CASEY		Client:	BOC GASES			
Location:			Well Cond			Weather:	Weather:			
	NIAGARA I	FALLS		LOCKED		OVERCAST, COOL, 50s				
Sounding	Method:		Gauge Dat	e:		Measurement				
WLI				4/26/2004			TOC			
Stick Up/D				ne:		Well Diameter	(in):			
	UP						4"			
Purge Date):	4/27/2004			Purge Tin	ne:	1020			
Purge Met	Purge Method: 2" SUB/LOW FLOW					nnician:	R.CASEY			

				We	II Volum	2				
A. Well De	pth (ft):		D. Well Vo	lume (ft):		Depth/Height of	of Top of PVC:			
B. Depth to	Water (ft):		E. Well Volume (gal) C*D):		Pump Type:					
	11.89		(92.)							
C. Liquid [epth (ft) (A	-B):	F. Five We	ll Volumes (ga	al) (E3):	Pump Designa	tion:			
				Water Qu	ality Dar	motors				
Time	DTW	Volume	Rate	7	ORP		0			
(hours)	(ft btoc)	(liters)	(Lpm)	pH (pH units)	(mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity (ntu)	
1029	11.41	0	0.25	12.38	-138	8.48	4.04	4.22	606	
1033	11.78	1	0.25	12.45	-141	7.80	4.11	1.96	266	
1037	12.24	2	0.25	12.42	-133	8.43	4.03	1.76	281	
1041	12.29	3	0.25	12.41	-131	8.67	4.05	1.80	269	
1045	12.34	4	0.25	12.41	-130	8.55	3.94	1.88	238	
*note								!		

Total Quar	itity of Wate	r Removed	l (gal):	~1.5 gal.		Sampling Time	3.	1110		
Samplers:	•			R.CASEY	-	Split Sample W	_	1110		
Sampling I	Date:			27-Apr-04	-	Sample Type:	•	GRAB		
					-		-			

*NOTE: WELL PUMPED DRY, ALLOWED TO RECHARGE THEN SAMPLED.

COMMENTS AND OBSERVATIONS:

SAMPLED ON 05 JUN 03.

Well I.D.:			EA Person	nel:		Client:				
	AP-MW3B			R.CASEY			BOC GASES			
Location:			Well Cond		Weather:					
	NIAGARA F	ALLS		LOCKED	OVERCAST, COOL, 50s					
Sounding	Method:		Gauge Dat	e:		Measurement I	Ref:			
	WLI			4/26/2004			TOC			
Stick Up/D	k Up/Down (ft): Gauge Time:					Well Diameter	(in):			
	UP						4"			
Purge Date	:	4/27/2004			Purge Tin	ne:	1120			
Purge Met	hod:	2" SUB/LO\	W ELOW		Field Tec	nician	R.CASEY	***************************************		
urge men		2 000/20	WILOW		rieid rec	mician.	n.oade1			
				We	II Volum	9				
A. Well De	oth (ft):		D. Well Vo			Depth/Height o	of Top of PVC:			
	Well Depth (ft): 8.28 D. Well Volume (ft):					Deptivileight	7 TOP 01 F VO.			
3. Depth to	Water (ft):		E. Well Vo	lume (gal) C*D):	Pump Type:				
. ,						GRUNDFOS RE	EDI-FLO 2			
C. Liquid [Pepth (ft) (A	·B):	F. Five We	II Volumes (ga	ıl) (E3):	Pump Designa	tion:			
C. Liquid [Depth (ft) (A-	:В):	F. Five We				tion:			
				Water Qua		ameters				
Time	DTW	Volume	Rate	Water Qua	ality Para	ameters Temperature	Conductivity	DO	Turbidity	
Time (hours)				Water Qua	ality Para	ameters		DO (ug/L)	Turbidity (ntu)	
Time (hours)	DTW (ft btoc) 7.36	Volume (liters)	Rate (Lpm)	Water Qua	ORP (mV)	ameters Temperature (oC) 8.64	Conductivity			
Time (hours) 1125 1129	DTW (ft btoc) 7.36 9.73	Volume (liters) 0	Rate (Lpm) 0.25 0.25	Water Quaph (pH units) 10.72 10.69	ORP (mV)	Temperature (oC) 8.64 9.16	Conductivity (uS/cm) 0.625 0.610	(ug/L)	(ntu) 82.9 83.7	
Time (hours) 1125 1129 1133	DTW (ft btoc) 7.36 9.73 9.76	Volume (liters) 0 1	Rate (Lpm) 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57	ORP (mV) 8 2 -17	Temperature (oC) 8.64 9.16 10.21	Conductivity (uS/cm) 0.625 0.610 0.587	0.94 0.63 0.44	(ntu) 82.9 83.7 85.2	
Time (hours) 1125 1129 1133 1137	DTW (ft btoc) 7.36 9.73 9.76 NC	Volume (liters) 0 1 2	Rate (Lpm) 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47	ORP (mV) 8 2 -17 -42	Temperature (oC) 8.64 9.16 10.21 10.89	Conductivity (uS/cm) 0.625 0.610 0.587 0.560	0.94 0.63 0.44 0.48	(ntu) 82.9 83.7 85.2 64	
Time (hours) 1125 1129 1133 1137 1141	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81	Volume (liters) 0 1 2 3 4	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536	(ug/L) 0.94 0.63 0.44 0.48	(ntu) 82.9 83.7 85.2 64 62.7	
Time (hours) 1125 1129 1133 1137 1141 1145	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82	Volume (liters) 0 1 2 3 4 5	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47	(ntu) 82.9 83.7 85.2 64 62.7 60.3	
Time (hours) 1125 1129 1133 1137 1141	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81	Volume (liters) 0 1 2 3 4	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536	(ug/L) 0.94 0.63 0.44 0.48	(ntu) 82.9 83.7 85.2 64 62.7	
Time (hours) 1125 1129 1133 1137 1141 1145	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82	Volume (liters) 0 1 2 3 4 5	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47	(ntu) 82.9 83.7 85.2 64 62.7 60.3	
Time (hours) 1125 1129 1133 1137 1141 1145	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82	Volume (liters) 0 1 2 3 4 5	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47	(ntu) 82.9 83.7 85.2 64 62.7 60.3	
Time (hours) 1125 1129 1133 1137 1141 1145	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82	Volume (liters) 0 1 2 3 4 5	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47	(ntu) 82.9 83.7 85.2 64 62.7 60.3	
Time (hours) 1125 1129 1133 1137 1141 1145	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82	Volume (liters) 0 1 2 3 4 5	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47	(ntu) 82.9 83.7 85.2 64 62.7 60.3	
Time (hours) 1125 1129 1133 1137 1141 1145 1149	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82 9.85	Volume (liters) 0 1 2 3 4 5 6	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10 12.31	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533 0.534	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47 0.48	(ntu) 82.9 83.7 85.2 64 62.7 60.3	
Time (hours) 1125 1129 1133 1137 1141 1145 1149	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82	Volume (liters) 0 1 2 3 4 5 6	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10 12.31 Sampling Time	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533 0.534	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47	(ntu) 82.9 83.7 85.2 64 62.7 60.3	
Time (hours) 1125 1129 1133 1137 1141 1145 1149	DTW (ft btoc) 7.36 9.73 9.76 NC 9.81 9.82 9.85	Volume (liters) 0 1 2 3 4 5 6	Rate (Lpm) 0.25 0.25 0.25 0.25 0.25 0.25	Water Qua pH (pH units) 10.72 10.69 10.57 10.47 10.29 9.97 9.97	ORP (mV) 8 2 -17 -42 -95	Temperature (oC) 8.64 9.16 10.21 10.89 11.49 12.10 12.31	Conductivity (uS/cm) 0.625 0.610 0.587 0.560 0.536 0.533 0.534	(ug/L) 0.94 0.63 0.44 0.48 0.40 0.47 0.48	(ntu) 82.9 83.7 85.2 64 62.7 60.3	

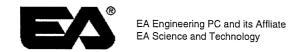
Well I.D.:			EA Person	nol·		Client:				
	AP-MW4B		EA PEISON	nei: R.CASEY		1	BOC GASES			
Location:	7.11.11.12		Well Condi			Weather:	DOG GROEG			
	NIAGARA F	ALLS		LOCKED			OVERCAST, CO	OOL, 50s		
Sounding N	lethod:		Gauge Dat	e:		Measurement I	Ref:			
	WLI			4/26/2004			TOC			
Stick Up/Do			Gauge Tim	e:		Well Diameter	• •			
	UP		<u> </u>				4"		· · · · · · · · · · · · · · · · · · ·	
Purge Date	•	4/26/2004			Purge Tin	ne:	1500			
Purge Meth	urge Method: HAND BAIL			1-19	Field Tecl	nnician:	R.CASEY			
										
				We	il Volum	9				
A. Well Dep	. Well Depth (ft): D. Well Volume (ft):					Depth/Height o	of Top of PVC:			
B. Depth to	Water (ft):		E. Well Vo	ume (gal) C*D)):	Pump Type:				
	5.67					DEDICATED BAILER				
C. Liquid Depth (ft) (A-B): F. Five Well Volume			II Volumes (ga	al) (E3):	Pump Designa	tion:				
				Water Qu	alitv Para	ameters				
Time	DTW	Volume	Rate	pН	ORP	Temperature	Conductivity	DO	Turbidity	
(hours)	(ft btoc)	(liters)	(Lpm)	(pH units)	(mV)	(oC)	(uS/cm)	(ug/L)	(ntu)	
INITIAL	5.67			7.54	169	10.46	1.19	14.75	141	
ENDING		~2		7.63	138	10.08	1.12	13.59	999	
			ļ							
			<u> </u>							
								W		
***************************************				<u> </u>						
Γotal Quan	tity of Wate	r Removed	d (gal):	~2 gal	_	Sampling Time) ;	1520		
Samplers:			-	R.CASEY	-	Split Sample V				
Sampling D	ate:			27-Apr-04	_	Sample Type:	•	GRAB		
COMMENT	S AND OBS	ERVATION	NS:							

Wall I D .			EA Davage			Tour				
Well I.D.:	AP-MW5B		EA Persor	nel: R.CASEY		Client:	DOC 04050			
Location:	AL-MAND		Well Cond			Weather:	BOC GASES			
Location.	NIAGARA F	FALLS	Well Colla	LOCKED		weather:	OVERCAST, CO	201 500		
Sounding I		7	Gauge Dat			Measurement		JOL, 303		
oodiidiiig i	WLI		Gauge Da	9/10/2003		weasurement	TOC			
Stick Up/D			Gauge Tin			Well Diameter				
	UP					Tron Diamotor	4"			
Purge Date	:	4/26/2004			Purge Tin	ne:	1520			
Purge Meth	urge Method: HAND BAIL				Field Tecl	hnician:	R.CASEY			
					II Volum	е				
A. Well De	Well Depth (ft): D. Well Volume (ft):					Depth/Height of	of Top of PVC:			
B. Depth to	Water (ft):		E. Well Vo	lume (gal) C*[D):	Pump Type:				
O Limetal D	5.24	D \	p= p=+ 3.5.		DEDICATED BAILER					
C. Liquia D	epth (ft) (A	·B):	F. Five We	ll Volumes (ga	al) (E3):	Pump Designa	tion:			
			<u></u>			,1				
				Water Qu	ality Para	ameters				
Time	DTW	Volume	Rate	pН	ORP	Temperature	Conductivity	DO	Turbidity	
(hours)	(ft btoc)	(liters)	(Lpm)	(pH units)	(mV)	(oC)	(uS/cm)	(ug/L)	(ntu)	
INITIAL	5.24			7.19	164	12.39	1.25	12.39	92.4	
ENDING		~2.5		7.25	165	12.62	1.27	12.62	999	
	ı									
			 							
					1					
Γotal Quan	tity of Wate	r Removed	l (gal):	~2.5 gal		Sampling Time	:	1530		
Total Quan Samplers:	tity of Wate	r Removed	i (gal):	~2.5 gal R.CASEY	-	Sampling Time		1530		
		r Removed	l (gal):	The second secon	-	Sampling Time Split Sample W Sample Type:		1530 GRAB		
Samplers: Sampling D	Date:			R.CASEY	- -	Split Sample W				
Samplers: Sampling E				R.CASEY	-	Split Sample W				

Well I.D.:	AD 18465		EA Person			Client:				
	AP-MW6B			R.CASEY			BOC GASES			
Location:	MAGARA		Well Cond			Weather:				
	NIAGARA I	FALLS	<u> </u>	LOCKED		OVERCAST, COOL, 50s				
Sounding			Gauge Dat			Measurement I	Ref:			
	WLI		4/26/2004 TOC							
Stick Up/Down (ft): Gauge Time: Well Diameter (in):			-							
	UP						4"			
Purge Date):	4/27/2004			Purge Tim	ie:	1200			
Purge Meti	hod:	2" SUB/LO	W FLOW		Field Tech	nician:	R.CASEY			
					II Volume)				
A. Well De	pth (ft):		D. Well Vo	lume (ft):	Depth/Height of Top of PVC:					
B. Depth to	Water (ft):		E. Well Vo	lume (gal) C*E)):	Pump Type:				
	2.63				•	GRUNDFOS REDI-FLO 2				
C. Liquid D	epth (ft) (A	-B):	F. Five We	II Volumes (ga	al) (E3):	Pump Designation:				
				W-1 0	- III - B					
				Water Qu	, 					
Time	DTW	Volume	Rate	pН	ORP	Temperature	Conductivity	DO	Turbidity	
(hours)	(ft btoc)	(liters)	(Lpm)	(pH units)	(mV)	(oC)	(uS/cm)	(ug/L)	(ntu)	
1210	1.43	0	0.25	7.25	48	9.21	1.36	1.61	311	
1214	4.03	1	0.25	7.12	35	8.83	1.37	0.61	262	
1218	5.11	2	0.25	7.07	26	9.39	1.33	0.39	161	
1222	9.82	3	0.25	7.07	20	9.73	1.35	0.36	133	
1226	9.88	4	0.25	7.07	16	9.68	1.34	0.31	112	
1230	9.94	5	0.25	7.08	15	9.25	1.36	0.30	64	
1234	NC	6	0.25	7.08	16	9.23	1.36	0.32	58	
L	1	<u> </u>	1	L	1	1			1	

Total Quantity of Water Removed (gal): Samplers:	~2 gal R.CASEY	Sampling Time: Split Sample With:	1240
Sampling Date:	27-Apr-04	Sample Type:	GRAB
COMMENTS AND OBSERVATIONS:	AP-DUP-0404 ALS	O COLLECTED FROM MW6B.	

Well I.D.:	EA Personnel:				Client:				
	AP-MW7B		EA I GISOII	R.CASEY		Janeari.	BOC GASES		
Location:	711 1411171		Well Cond			Weather:	DOG GAGEG		
	NIAGARA F	ALLS		LOCKED			OVERCAST, CO	DOL, 50s	
Sounding I			Gauge Dat	e:		Measurement			
J	WLI			4/26/2004			TOC		
Stick Up/Do	own (ft):		Gauge Tim	ie:		Well Diameter	(in):		
	UP						4"		
Purge Date):	4/26/2004	-		Purge Tin	ne:	1535		
Purge Meth	nod:	HAND BAII	L		Field Tecl	nnician:	R.CASEY		
				We	II Volum	e			
A. Well Dep	oth (ft):		D. Well Vo			Depth/Height of	of Top of PVC:		
				(1.7)		- opinionigini s			
B. Depth to	Water (ft):		E. Well Vo	lume (gal) C*E)):	Pump Type:			
	7.88					DEDICATED BAILER			
C. Liquid D	epth (ft) (A-	·B):	F. Five We	e Well Volumes (gal) (E3):		Pump Designation:			
				Water Qu	ality Dar	amotore			
Time	DTW	Volume	Rate		ORP		Conditation		T
(hours)	(ft btoc)	(liters)	(Lpm)	pH (pH units)	(mV)	Temperature (oC)	Conductivity (uS/cm)	DO (ug/L)	Turbidity
INITIAL	7.88	(iiicio)	(Lpiii)	8.64	121	10.17	0.415	12.97	(ntu) 95.2
ENDING	7.00	~3	<u> </u>	8.66	112	10.17	0.415	11.97	999
LITOITO				0.00	112	10.07	0.032	11.37	333
Tatal Over		- D	1 (1)-	01					
	itity of Wate	r Removed	ı (gaı):	~3 gal	•	Sampling Time		1545	
				R.CASEY	-	Split Sample V	vitn:	0040	
	Sampling Date: 2		27-Apr-04		Sample Type:		GRAB		
-	Jate.						•		
Sampling [EDVATION	vic.		-		•		
Sampling [S AND OBS	ERVATIO	NS:				·		



Well I.D.:			EA Person			Tou				
Well I.D	AP-MW8B		EA Person	R.CASEY		Client:				
Location:	AF-IVIVOD		Well Cond	····		Weather:	BOC GASES			
Location.	NIAGARA F	ALLS	Well Collu	LOCKED		OVERCAST, COOL, 50s				
Sounding		7120	Gauge Dat			Measurement Ref:				
Journaling !	WLI		Gauge Dai	4/26/2004		weasurement	ner: TOC			
Stick Up/D			Gauge Tin			Well Diameter				
	UP					Well Diameter	4"			
							-			
Purge Date	a:	4/27/2004			Purge Tin	ne:	1350			
, g	•	.,,			, ange in	10.	1330			
Purge Method: 2" SUB/LOW FLOW					Field Tecl	nnician:	R.CASEY			
				We	II Volum	9				
A. Well De	oth (ft):		D. Well Vo			Depth/Height o	of Top of PVC:			
	()-		2	(11).		Departicignic	n rop of FVC.			
B. Depth to	Water (ft):		E. Well Vo	lume (gal) C*E	D):	Pump Type:				
	4.35			,	•	GRUNDFOS REDI-FLO 2				
C. Liquid D	epth (ft) (A-	В):	F. Five We	II Volumes (ga	al) (E3):					
				Water Qu	ality Para	ameters				
Time	DTW	Volume	Rate	рН	ORP	Temperature	Conductivity	DO	Turbidity	
(hours)	(ft btoc)	(liters)	(Lpm)	(pH units)	(mV)	(oC)	(uS/cm)	(ug/L)	(ntu)	
1404	4.61	0	0.25	7.94	121	9.17	1.62	2.76	999	
1408	5.18	1	0.25	7.47	122	9.14	1.61	0.86	999	
1412	5.52	2	0.25	7.40	119	9.62	1.60	0.68	741	
1416										
	5.72	3	0.25	7.33	113	10.31	1.59	0.64	432	
1420	5.81	4	0.25	7.32	113	10.31 10.36	1.59	0.64 0.63	432 447	
1420 1424			 		 					
	5.81	4	0.25	7.32	113	10.36	1.59	0.63	447	
	5.81	4	0.25	7.32	113	10.36	1.59	0.63	447	
	5.81	4	0.25	7.32	113	10.36	1.59	0.63	447	
	5.81	4	0.25	7.32	113	10.36	1.59	0.63	447	
	5.81	4	0.25	7.32	113	10.36	1.59	0.63	447	
	5.81	4	0.25	7.32	113	10.36	1.59	0.63	447	
1424	5.81 5.93	5	0.25 0.25	7.32 7.32	113	10.36	1.59 1.55	0.63 0.65	447	
1424 Total Quan	5.81	5	0.25 0.25	7.32 7.32 ~1.5 gal	113	10.36 10.50 Sampling Time	1.59 1.55	0.63	447	
Total Quan Samplers:	5.81 5.93 tity of Wate	5	0.25 0.25	7.32 7.32 ~1.5 gal R.CASEY	113	10.36 10.50 Sampling Time Split Sample W	1.59 1.55	0.63	447	
1424 Total Quan	5.81 5.93 tity of Wate	5	0.25 0.25	7.32 7.32 ~1.5 gal	113	10.36 10.50 Sampling Time	1.59 1.55	0.63 0.65	447	
1424 Total Quan Samplers: Sampling [5.81 5.93 tity of Wate	4 5	0.25 0.25	7.32 7.32 ~1.5 gal R.CASEY	113	10.36 10.50 Sampling Time Split Sample W	1.59 1.55	0.63	447	

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	man man			

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			CAND CAND OBLO
			Rue
	AP-MW48-0404	ENDING	7.63 1.12 999 12.59 10.08 136 1500 21 1500 21 1500 21 1500
2004	Ap-M	MITIME	PH 7.54 COND 1.19 TURB 14.15 DO 14.15 TEMP 10.46 ORP 169 * READINGS TAKEN * WILL ALLOW WELL AND SAMPLE TO
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		O. A. MWS OFBY SAMPLE COLL	<u> </u>	:

TIME 1520 ON 274922004.

Pulls Voles & Fgal.

X746220x	AP-MW18-0404	Think : 0430 METHO: 2" SUB		6.93 6.70 (6.1 1.82) 1.84 1	10.4 11.54 11.42 11.42 5.40 - 1.40 9.40 -	April E COLE COLECTION	
morant	AP-MW76-0404	Dis Soul Solow Solow	10 0.415 0.3 45.2 999 10.97 11.9	12mp 10.17 10.41 0pp 171 11.7 11.7 (teapinos Talless & 15.35	PARENCE WELL DRY, WILL ALLOW TO RECHARGE & SAMPLE TOWICEROW	Pulls vol. 23grl AP-MW 78-0404 SAMPLE COLLECTION TIME 1545 ON 27 APP.2404.	

27 450 2004	7. Carcan 7.
AP-MW2B-0404	AP_MW3B0405
Time: 1020 Menness: 2"5610	The: 1120 Memb 7.546
TIME 1029 1033 1037 1041 1045 PREATON (C) (C) (C) (C) (C) (C) VAR BARGO - 1 2 3 4 4 PREESERTE 0.15 - 1 2 3 4 4	Thing 1125 1129 1137 1149 114
4.54 12.45 12.42 12.41 4.65	0th 10.72 10.49 10.57 10.47 10.29 9.97 9.97 6.45 0.554 0.57 10.47 10.29 9.97 9.97 7.998 7.997 7.997 7.998 7.997 7.998 7.997 7.998 7.997 7.998 7.997 7.998 7.997 7.998 7.997 7.998 7.
040 -180 8.45 8.17 855 040 -189 -141 -135 -131 -150 07W 11.41 11.78 12.14 12.34 12.34	01.44 2.15 01.41 20.1 01.81 90.1
TIME IIO	O AD-MW3B-0404 SANGLE COLLECTION
THEN SAMPLE,	

Vol- Puller

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TOMO

1 me PARAM

Attachment C

Chain-of-Custody Records April 2004

002P Sample Temp 6-8°C SCA. ewi, <u>00|C</u> LSI. ID# *Additional Charges 32 A S LSL Southern Tier Lab (585)988-4908 Phone: (585)968-2840 Cuba, N.Y. 14727 30 East Main St. may apply Date Preserv Check Fax Na, st. Silicon, ma, My J:UY RCYD 12040.87,0003 3-Day Onte Needed or Special Instructions: Analyses Sou 504 T. Phenois (585)728-2711 Phone: (585)728-3320 T. Phenols 0406259 BASing Nayland, N.Y. 14572 Metals Pre-Authorized Metals Crtb NH 3 でする Authorization or P.O.# ETZ. SL Project Number Fe Cd Next Day* 2-Day * Rec'd for Lab By Turnaround Time Fax: Received By: Received By: 580 x1 AMPER 250ml 75057 250 F 250 m SBOWL size/type CHAIN OF CUSTODY RECORE **Custody Transfers** Life Science Laboratorio 子の時でファルス 40Å XI¥ Normal Containers Fax: 315 431 4260 Waddington, N.Y. 13694 (315)368-4061 Phone: (315)388-4476 H,524 NONE HNO3 131 St Lawrence Ave. NOVE NOVE 15 SE H.504 12.50V Preserv Added 文 LSL North Lab 308 <u>S</u> Matrix 3 SCHONCE 4 TECH NOLDERY Fax: Zlb: grab grab grab/comp Relinquished By: Shipment Method: Relinguished By: とあったし Sampled By: E. Syracuse, N.Y. 13057 Phone: (315)445-1105 (315)445-1301 110 Sample Sample Time 5854 Butternut Drive <u>010</u> LSL Central Lab 41660 ROAD 27 APP. 2003 Containers this C-O-C 17 ACR. co with Rd pro scott Com you ass Date Shuse only is The San Jit Fax: EA ENEMICERANG 6731 COLLANDER Emall: Client Project ID/Client Site ID AP-MWZB-OHOY अह ५३। प्रशं PABERT CASEY City/State: E, SYLACUSE AP-MW18 -0404 Client's Sample Identifications Report Address: Company: Phone: **TST** Street:

(585)968-0906 Phone: (585)968-2640 Cubs, N.Y. 14727 30 East Main St.

Fax:

0406259

LSL Southern Tler Lab

Life Science Laboratories, Inc. CHAIN OF CUSTODY RECORD

E. Syracuse, N.Y. 13057 (315)445-1301 Phone: (315)445-1105 5854 Buffernut Drive LSL Central Lab Fax:

Phone: (585)728-3320 (585)728-2711 LSL Finger Lakes Lab Wayland, N.Y. 14572 Pre-Authorized 16 N. Main St. Turnaround Time
Normal Pre-Author
14 DAY Next Day* Fax: Waddington, N.Y. 13694 Fax: (315)388-4061 Phone: (315)388-4478 131 St Lawrence Ave. LSL North Lab

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AP-MW36-0404 WARES	25, 1155	Grab	315	+		+					ANA R	6
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Attachment D

Laboratory Analytical Results April 2004





Scott Graham EA Engineering, Science and Technology 6731 Collamer Road East Syracuse, NY 13057-9759

Phone: (315) 431-4610 FAX: (315) 431-4280

Authorization: PO#12040.87.0003

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

Airco Parcel

LSL Project ID: 0406259

Receive Date/Time: 04/28/04 10:09

Project Received by: ALH

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Life Science Laboratories, Inc.

LSL Central Lab 5854 Butternut Drive East Syracuse, NY 13057 Tel. (315) 445-1105 Fax (315) 445-1301 NYS DOH ELAP #10248 PA DEP #68-2556

LSL North Lab 131 St. Lawrence Avenue Waddington, NY 13694 Tel. (315) 388-4476 Fax (315) 388-4061 NYS DOH ELAP #10900

LSL Finger Lakes Lab 16 N. Main St., PO Box 424 Wayland, NY 14572 Tel. (585) 728-3320 Fax (585) 728-2711 NYS DOH ELAP #11667

LSL Southern Tier Lab 30 East Main Street Cuba, NY 14727 Tel. (585) 968-2640 Fax (585) 968-0906

LSL MidLakes Lab 699 South Main Street Canandaigua, NY 14424 Tel. (585) 396-0270 Fax (585) 396-0377 NYS DOH ELAP #10760 NYS DOH ELAP #11369

This report was reviewed by:	Ginda Waters	QC	Date:	5/21/04	
	Life Science Laboratories, Inc.				

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-MW1B-0404

LSL Sample ID:

0406259-001

Location:

Airco Parcel

Sampled:

04/27/04 10:10

Sampled By: RSC

Sample Matrix: NPW

Analytical Method			Prep	Analysis	Analyst
Analyte	Result	Units	Date	Date & Tin	ne Initials
(I) EPA 350.1 Ammonia					
Ammonia as N	<0.03	mg/l		5/7/04	DRB
(1) EPA 420.1 Recoverable Phenolics LL					
Phenolics, Total Recoverable	< 0.002	mg/l	5/4/04	5/4/04	DWK
(1) EPA 6010 Total Metals					
Cadmium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Chromium	0.016	mg/l	4/29/04	4/29/04	PEF
Iron	2.9	mg/l	4/29/04	4/29/04	PEF
Lead	0.022	mg/l	4/29/04	4/29/04	PEF
Magnesium	63	mg/l	4/29/04	4/29/04	PEF
Manganese	0.82	mg/l	4/29/04	4/29/04	PEF
Selenium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Silicon	9.9	mg/l	4/29/04	4/29/04	PEF
Sodium	120	mg/l	4/29/04	4/29/04	PEF
Thallium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Zinc	0.61	mg/l	4/29/04	4/29/04	PEF
(1) EPA Method 300.0 A					
Sulfate	180	mg/l		5/7/04	RAF
(1) SM 18 3500Cr-D Hexavalent Chromium					
Chromium, Hexavalent	< 0.01	mg/l		4/28/04	0:10 DWK

Page 2 of 13

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-MW2B-0404

LSL Sample ID:

0406259-002

Location:

Airco Parcel

Sampled:

04/27/04 11:10

Sampled By: RSC

Sample Matrix: NPW

Ar	nalytical Method			Prep	Analysis		Analyst
	Analyte	Result	Units	Date	Date & Tir	ne	Initials
(1)	EPA 350.1 Ammonia						
	Ammonia as N	2.7	mg/l		5/7/04		DRB
(1)	EPA 420.1 Recoverable Phenolics LL						
	Phenolics, Total Recoverable	0.0047	mg/l	5/4/04	5/4/04		DWK
(1)	EPA 6010 Total Metals						
	Cadmium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Chromium	0.26	mg/l	4/29/04	4/29/04		PEF
	Iron	0.37	mg/l	4/29/04	4/29/04		PEF
	Lead	0.010	mg/l	4/29/04	4/29/04		PEF
	Magnesium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Manganese	0.017	mg/l	4/29/04	4/29/04		PEF
	Selenium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Silicon	1.3	mg/l	4/29/04	4/29/04		PEF
	Sodium	35	mg/l	4/29/04	4/29/04		PEF
	Thallium	0.027	mg/l	4/29/04	4/29/04		PEF
	Zinc	0.051	mg/l	4/29/04	4/29/04		PEF
(1)	EPA Method 300.0 A						
	Sulfate	29	mg/l		4/28/04		RAF
(1)	SM 18 3500Cr-D Hexavalent Chromium						
	Chromium, Hexavalent	0.26	mg/l		4/28/04	10:59	DWK

Page 3 of 13

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-MW3B-0404

LSL Sample ID:

0406259-003

Location:

Airco Parcel

Sampled:

04/27/04 11:55

Sampled By: RSC

Sample Matrix: NPW

		Prep	Analysis	Analyst
Result	Units	Date	Date & Tin	ne Initials
0.26	mg/l		5/7/04	DRB
< 0.002	mg/l	5/4/04	5/4/04	DWK
< 0.01	mg/l	4/29/04	4/29/04	PEF
< 0.01	mg/l	4/29/04	4/29/04	PEF
0.20	mg/l	4/29/04	4/29/04	PEF
< 0.01	mg/l	4/29/04	4/29/04	PEF
0.87	mg/l	4/29/04	4/29/04	PEF
< 0.01	mg/l	4/29/04	4/29/04	PEF
< 0.01	mg/l	4/29/04	4/29/04	PEF
8.8	mg/l	4/29/04	4/29/04	PEF
76	mg/l	4/29/04	4/29/04	PEF
< 0.01	mg/l	4/29/04	4/29/04	PEF
0.034	mg/l	4/29/04	4/29/04	PEF
120	mg/l		5/7/04	RAF
< 0.01	mg/l		4/28/04 1	0:59 DWK
	0.26 <0.002 <0.01 <0.01 0.20 <0.01 0.87 <0.01 <0.01 8.8 76 <0.01 0.034	0.26 mg/l <0.002 mg/l <0.01 mg/l <0.01 mg/l 0.20 mg/l <0.01 mg/l 0.87 mg/l <0.01 mg/l <0.01 mg/l <0.01 mg/l 10.034 mg/l 120 mg/l	Result Units Date 0.26 mg/l 5/4/04 <0.002	Result Units Date Date & Tin 0.26 mg/l 5/7/04 <0.002

EA Engineering, Science and Technology

Sampled By: RSC

East Syracuse, NY

Sample ID: Location:

Sampled:

AP-MW4B-0404

Airco Parcel

04/27/04 15:20

LSL Sample ID:

0406259-004

Sample Matrix: NPW

Chromium, Hexavalent

Analytical Method Prep Analysis Analyst **Initials** Date Date & Time Units **Analyte** Result EPA 350.1 Ammonia Ammonia as N < 0.03 5/7/04 DRB mg/l (1) EPA 420.1 Recoverable Phenolics LL Phenolics, Total Recoverable < 0.002 5/4/04 5/4/04 DWK mg/l (1) EPA 6010 Total Metals 4/29/04 PEF Cadmium < 0.01 mg/l 4/29/04 Chromium 0.23 mg/l 4/29/04 4/29/04 PEF 4/29/04 PEF 2.2 4/29/04 Iron mg/l 0.014 4/29/04 4/29/04 PEF Lead mg/l PEF 4/29/04 Magnesium 42 mg/l 4/29/04 Manganese 4/29/04 PEF 0.040 mg/l 4/29/04 4/29/04 PEF Selenium 0.013 mg/l 4/29/04 Silicon 4/29/04 4/29/04 PEF 8.2 mg/l Sodium 100 mg/l 4/29/04 4/29/04 PEF Thallium 4/29/04 4/29/04 PEF < 0.01 mg/l Zinc 0.060 mg/l 4/29/04 4/29/04 PEF (1) EPA Method 300.0 A Suifate 5/7/04 **RAF** 150 mg/l (1) SM 18 3500Cr-D Hexavalent Chromium

0.22

mg/l

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4/28/04

13:33

DWK

Life Science Laboratories, Inc.

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-MW5B-0404

LSL Sample ID:

0406259-005

Location: Sampled:

49 - ---

Airco Parcel

04/27/04 15:30

Sampled By: RSC

Sample Matrix: NPW

Analytical Method			Prep	Analysis	
Analyte	Result	Units	Date	Date & Ti	me Initials
(I) EPA 350.1 Ammonia					
Ammonia as N	<0.03	mg/l		5/7/04	DRB
(1) EPA 420.1 Recoverable Phenolics LL					
Phenolics, Total Recoverable	< 0.002	mg/l	5/4/04	5/4/04	DWK
(1) EPA 6010 Total Metals					
Cadmium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Chromium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Iron	0.62	mg/l	4/29/04	4/29/04	PEF
Lead	< 0.01	mg/l	4/29/04	4/29/04	PEF
Magnesium	65	mg/l	4/29/04	4/29/04	PEF
Manganese	0.066	mg/l	4/29/04	4/29/04	PEF
Selenium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Silicon	8.3	mg/l	4/29/04	4/29/04	PEF
Sodium	. 72	mg/l	4/29/04	4/29/04	PEF
Thallium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Zinc	0.072	mg/l	4/29/04	4/29/04	PEF
(1) EPA Method 300.0 A					
Sulfate	160	mg/l		5/7/04	RAF
(1) SM 18 3500Cr-D Hexavalent Chromium					
Chromium, Hexavalent	0.016	mg/l		4/28/04	13:33 DWK

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-MW6B-0404

LSL Sample ID:

0406259-006

Location:

Airco Parcel

Sampled:

04/27/04 12:40

Sampled By: RSC

Sample Matrix: NPW

Aı	nalytical Method			Prep	Analysis	-
	Analyte	Result	Units	Date	Date & Tir	ne Initials
(1)	EPA 350.1 Ammonia					
	Ammonia as N	<0.03	mg/l		5/7/04	DRB
(1)	EPA 420.1 Recoverable Phenolics LL					
	Phenolics, Total Recoverable	< 0.002	mg/l	5/4/04	5/4/04	DWK
(1)	EPA 6010 Total Metals					
	Cadmium	< 0.01	mg/l	4/29/04	4/29/04	PEF
	Chromium	0.016	mg/l	4/29/04	4/29/04	PEF
	Iron	0.60	mg/l	4/29/04	4/29/04	PEF
	Lead	< 0.01	mg/l	4/29/04	4/29/04	PEF
	Magnesium	78	mg/l	4/29/04	4/29/04	PEF
	Manganese	0.14	mg/l	4/29/04	4/29/04	PEF
	Selenium	< 0.01	mg/l	4/29/04	4/29/04	PEF
	Silicon	6.4	mg/l	4/29/04	4/29/04	PEF
	Sodium	58	mg/l	4/29/04	4/29/04	PEF
	Thallium	< 0.01	mg/l	4/29/04	4/29/04	PEF
	Zinc	0.017	mg/l	4/29/04	4/29/04	PEF
(1)	EPA Method 300.0 A					
	Sulfate	190	mg/l		5/7/04	RAF
(1)	SM 18 3500Cr-D Hexavalent Chromium					
	Chromium, Hexavalent	<0.01	mg/l		4/28/04	10:59 DWk

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EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-MW7B-0404

LSL Sample ID:

0406259-007

Location:

Airco Parcel

Sampled:

04/27/04 15:45

Sampled By: RSC

Sample Matrix: NPW

Aı	alytical Method			Prep	Analysis	Analyst
	Analyte	Result	Units	Date	Date & Tin	ne Initials
$\overline{(1)}$	EPA 350.1 Ammonia					
	Ammonia as N	0.057	mg/l		5/7/04	DRB
(1)	EPA 420.1 Recoverable Phenolics LL					
	Phenolics, Total Recoverable	0.011	mg/l	5/6/04	5/12/04	DWK
(1)	EPA 6010 Total Metals					
	Cadmium	< 0.01	mg/l	4/29/04	4/29/04	PEF
	Chromium	0.052	mg/l	4/29/04	4/29/04	PEF
	Iron	6.0	mg/l	4/29/04	4/29/04	PEF
	Lead	0.010	mg/l	4/29/04	4/29/04	PEF
	Magnesium	11	mg/l	4/29/04	4/29/04	PEF
	Manganese	0.14	mg/l	4/29/04	4/29/04	PEF
	Selenium	< 0.01	mg/l	4/29/04	4/29/04	PEF
	Silicon	10	mg/l	4/29/04	4/29/04	PEF
	Sodium	70	mg/l	4/29/04	4/29/04	PEF
	Thallium	< 0.01	mg/l	4/29/04	4/29/04	PEF
	Zinc	0.075	mg/l	4/29/04	4/29/04	PEF
(1)	EPA Method 300.0 A					
	Sulfate	99	mg/l		4/28/04	RAF
<i>(1)</i>	SM 18 3500Cr-D Hexavalent Chromium					
	Chromium, Hexavalent	<0.01	mg/l		4/28/04 1	3:33 DWK

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-MW8B-0404

LSL Sample ID:

0406259-008

Location:

Airco Parcel

Sampled:

04/27/04 14:30

Sampled By: RSC

Sample Matrix: NPW

Analytical Method			Prep	Analysis	Analyst
Analyte	Result	Units	Date	Date & Tir	ne Initials
(1) EPA 350.1 Ammonia					
Ammonia as N	<0.03	mg/l		5/7/04	DRB
(1) EPA 420.1 Recoverable Phenolics LL					
Phenolics, Total Recoverable	< 0.002	mg/l	5/6/04	5/12/04	DWK
(1) EPA 6010 Total Metals					
Cadmium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Chromium	0.068	mg/l	4/29/04	4/29/04	PEF
Iron	1.1	mg/l	4/29/04	4/29/04	PEF
Lead	0.011	mg/l	4/29/04	4/29/04	PEF
Magnesium	37	mg/l	4/29/04	4/29/04	PEF
Manganese	0.10	mg/l	4/29/04	4/29/04	PEF
Selenium	0.043	mg/l	4/29/04	4/29/04	PEF
Silicon	7.9	mg/l	4/29/04	4/29/04	PEF
Sodium	270	mg/l	4/29/04	4/29/04	PEF
Thallium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Zinc	0.056	mg/l	4/29/04	4/29/04	PEF
(1) EPA Method 300.0 A					
Sulfate	300	mg/l		5/7/04	RAF
(1) SM 18 3500Cr-D Hexavalent Chromium					
Chromium, Hexavalent	0.070	mg/l		4/28/04	3:33 DWK

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EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-DUP-0404

LSL Sample ID:

0406259-009

Location:

Airco Parcel

Sampled:

04/27/04 0:00

Sampled By: RSC

Sample Matrix: NPW

Analytical Method			Prep	Analysis	Analyst
Analyte	Result	Units	Date	Date & Tir	ne Initials
(1) EPA 350.1 Ammonia					
Ammonia as N	<0.03	mg/l		5/7/04	DRB
(1) EPA 420.1 Recoverable Phenolics LL					
Phenolics, Total Recoverable	< 0.002	mg/l	5/6/04	5/12/04	DWK
(1) EPA 6010 Total Metals					
Cadmium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Chromium	0.015	mg/l	4/29/04	4/29/04	PEF
Iron	0.61	mg/l	4/29/04	4/29/04	PEF
Lead	< 0.01	mg/l	4/29/04	4/29/04	PEF
Magnesium	82	mg/l	4/29/04	4/29/04	PEF
Manganese	0.14	mg/l	4/29/04	4/29/04	PEF
Selenium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Silicon	6.9	mg/l	4/29/04	4/29/04	PEF
Sodium	61	mg/l	4/29/04	4/29/04	PEF
Thallium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Zinc	0.021	mg/l	4/29/04	4/29/04	PEF
(1) EPA Method 300.0 A					
Sulfate	200	mg/l		5/7/04	RAF
(1) SM 18 3500Cr-D Hexavalent Chromium					
Chromium, Hexavalent	0.011	mg/l		4/28/04	3:33 DWK

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-RB-0404

LSL Sample ID:

0406259-010

Location: Sampled:

Airco Parcel

04/27/04 14:45

Sampled By: RSC

Sample Matrix: NPW

Ar	alytical Method			Prep	Analysis		Analyst
	Analyte	Result	Units	Date	Date & Tin	ne	Initials
(1)	EPA 350.1 Ammonia						
	Ammonia as N	<0.03	mg/l		5/7/04		DRB
(1)	EPA 420.1 Recoverable Phenolics LL						
	Phenolics, Total Recoverable	< 0.002	mg/l	5/6/04	5/12/04		DWK
(1)	EPA 6010 Total Metals						
	Cadmium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Chromium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Iron	< 0.05	mg/l	4/29/04	4/29/04		PEF
	Lead	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Magnesium	2.2	mg/l	4/29/04	4/29/04		PEF
	Manganese	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Selenium	<0.01	mg/l	4/29/04	4/29/04		PEF
	Silicon	<0.5	mg/l	4/29/04	4/29/04		PEF
	Sodium	4.3	mg/l	4/29/04	4/29/04		PEF
	Thallium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Zinc	< 0.01	mg/l	4/29/04	4/29/04		PEF
(1)	EPA Method 300.0 A						
	Sulfate	12	mg/l		4/28/04		RAF
(1)	SM 18 3500Cr-D Hexavalent Chromium						
	Chromium, Hexavalent	<0.01	mg/l		4/28/04	13:33	DWK

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5/20/04

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-SS-0404

LSL Sample ID:

0406259-011

Location:

Sampled:

Airco Parcel

04/27/04 12:55

Sampled By: RSC

Sample Matrix: NPW

Analytical Method			Prep	Analysis	Analyst
Analyte	Result	Units	Date	Date & Tin	ne Initials
(1) EPA 350.1 Ammonia			-		
Ammonia as N	1.4	mg/l		5/7/04	DRB
(1) EPA 420.1 Recoverable Phenolics LL					
Phenolics, Total Recoverable	0.018	mg/l	5/6/04	5/12/04	DWK
(1) EPA 6010 Total Metals					
Cadmium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Chromium	0.11	mg/l	4/29/04	4/29/04	PEF
Iron	< 0.05	mg/l	4/29/04	4/29/04	PEF
Lead	< 0.01	mg/l	4/29/04	4/29/04	PEF
Magnesium	2.5	mg/l	4/29/04	4/29/04	PEF
Manganese	< 0.01	mg/l	4/29/04	4/29/04	PEF
Selenium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Silicon	1.8	mg/l	4/29/04	4/29/04	PEF
Sodium	25	mg/l	4/29/04	4/29/04	PEF
Thallium	< 0.01	mg/l	4/29/04	4/29/04	PEF
Zinc	< 0.01	mg/l	4/29/04	4/29/04	PEF
(1) EPA Method 300.0 A					
Sulfate	71	mg/l		4/28/04	RAF
(1) SM 18 3500Cr-D Hexavalent Chromium					
Chromium, Hexavalent	0.10	mg/l		4/28/04 1	0:59 DWK

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EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

AP-SWB-0404

LSL Sample ID:

0406259-012

Location: Sampled:

Airco Parcel

04/27/04 14:50

Sampled By: RSC

Sample Matrix: NPW

Analytical Method				Prep	Analysis		Analyst
Analyte		Result	Units	Date	Date & Tir	ne	Initials
(1)	EPA 350.1 Ammonia						
	Ammonia as N	< 0.03	mg/l		5/7/04		DRB
(1)	EPA 420.1 Recoverable Phenolics LL						
	Phenolics, Total Recoverable	< 0.002	mg/l	5/6/04	5/12/04		DWK
(1)	EPA 6010 Total Metals						
	Cadmium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Chromium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Iron	< 0.05	mg/l	4/29/04	4/29/04		PEF
	Lead	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Magnesium	2.2	mg/l	4/29/04	4/29/04		PEF
	Manganese	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Selenium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Silicon	< 0.5	mg/l	4/29/04	4/29/04		PEF
	Sodium	4.4	mg/l	4/29/04	4/29/04		PEF
	Thallium	< 0.01	mg/l	4/29/04	4/29/04		PEF
	Zinc	0.011	mg/l	4/29/04	4/29/04		PEF
(1)	EPA Method 300.0 A						
	Sulfate	12	mg/l		4/28/04		RAF
(1)	SM 18 3500Cr-D Hexavalent Chromium						
	Chromium, Hexavalent	<0.01	mg/l		4/28/04	13:33	DWK

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Attachment E

Landfill Cap Inspection Checklist April 2004

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

EA Personnel: Chip McLeod, Robert Casey

Date: 29 April 2004

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 located at the top and east of the access road which cuts across the center of landfill; will have a better idea when grass is cut.

3. Identification of stressed vegetation:

Vegetation on landfill (grass), approximately 0.5-ft high; no stressed vegetation observed.

- 4. Identification of seeps, rooted vegetation (trees), and/or animal burrows:

 Observed some small rodent burrows in topsoil throughout the site. Rodents are most likely a type of field mice. Groundwater flow structure located along the southwest side of 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, 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 many areas of the road. Defoliant should be used to remove the vegetation in the roadways.

Attachment F

Groundwater Collection and Treatment System Field Forms

Checklist

Yes/No Wet Well Pump Station Checked

Yes /No) T3 Pressure Transducer Cleaned

Yes / No T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes /No) Water in Station

Yes INO Pumped out?

Yes / No P6 Pressure Transducer Cleaned

Yes / No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes / No Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

NA Sed Pond A Flow (scfh)

Sed Pond B Flow (scfh)

date: IONOV 2003 personnel: R. LASEY

Treatment System Checklist

233	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
10,580	CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs
<u> </u>	P1 Running Status (on/off)
615.8	T3 Water Elevation
6.8	T3 pH
49.6	T3 Temperature
<u> </u>	P4A Running Status (on/off)
4psi	P4A Pressure Gauge (normal range = 10psi)
616.0	T6 Water Elevation
<u>on</u>	P4B Running Status (on/off)
614.3	T7 Water Elevation
0N	P7 Running Status (on/off)

date: 16 Nov 2003 personnel: RCASEY

Checklist

Wet Well Pump Station Checked

13 Pressure Transducer Cleaned

Yes / No T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes (M) Water in Station

Yes / No Pumped out?

Yes / No P6 Pressure Transducer Cleaned

Yes / No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes / No Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

Sed Pond A Flow (scfh)

10 Sed Pond B Flow (scfh)

date: 25 NW 2003 personnel: R.CASCY

Treatment System Checklist

221	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
-----	---

OFF P1 Running Status (on/off)

6/6,8 T3 Water Elevation

7.0 T3 pH

47,6 T3 Temperature

OFF P4A Running Status (on/off)

2 ps P4A Pressure Gauge (normal range = 10psi)

615.9 T6 Water Elevation

OFF P4B Running Status (on/off)

614,2 T7 Water Elevation

OFF P7 Running Status (on/off)

date: 25 NIV2003 personnel: R.CASEY

Field sampling

0.18	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.25	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0,10	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0,12	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.02	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.03	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)

pH Sed Pond A

pH Sed Pond B

pH Wetland

date: **TENOV 2003** personnel: **R, CARRY**

Checklist

Yes No Wet Well Pump Station Checked

T3 Pressure Transducer Cleaned

res/No T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes / No Water in Station

Yes / No Pumped out?

10 P6 Pressure Transducer Cleaned

P7 Pressure Transducer Cleaned

Zero Valance Tank

Outlet Structure Checked

No Water Level OK

Sed Pond Manifold

________ Sed Pond A Flow (scfh)

Sed Pond B Flow (scfh)

date: 2 DEC 2003 personnel: R. CASEY

Treatment System Checklist

222	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
-----	---

OFF P1 Running Status (on/off)

015.7 T3 Water Elevation

<u>6.6</u> тз рн

<u>423</u> T3 Temperature

OFF P4A Running Status (on/off)

2.5 P4A Pressure Gauge (normal range = 10psi)

6162 T6 Water Elevation

________P4B Running Status (on/off)

6/4/3 T7 Water Elevation

______P7 Running Status (on/off)

date: 205C 2003 personnel: L, CASEY

Field sampling

0.15	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0,19	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.03	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.04	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.01	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)

pH Sed Pond A

pH Sed Pond B

pH Wetland

date: 3 DEL 2003 personnel: E. LATEY

Checklist

Yes No Wet Well Pump Station Checked

YES / No T3 Pressure Transducer Cleaned

No T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes / No Water in Station

Yes /No Pumped out?

Yes / No P6 Pressure Transducer Cleaned

Yes/No P7 Pressure Transducer Cleaned

Zero Valance Tank

/No Outlet Structure Checked

(e)/No Water Level OK

Sed Pond Manifold

Sed Pond A Flow (scfh) reset to 7310 Scfh

Sed Pond B Flow (scfh)

date: 9 DELZ003 personnel: RASEY

Field sampling

0.25	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.29	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.13	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.14	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)
	oH Sed Pond A	

pH Sed Pond B

pH Wetland

date: 9 DEL2003 personnel: P. CASEY

Checklist

Wet Well Pump Station Checked

T3 Pressure Transducer Cleaned

T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes /No Person Pressure Transducer Cleaned

P7 Pressure Transducer Cleaned

Zero Valance Tank

Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

Sed Pond A Flow (scfh)

10 Sed Pond B Flow (scfh)

date: 16 DEL 2003 personnel: R, CASEY

Treatment System Checklist

230 CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)

<u>9,900</u> CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs)
*Note: call for refill @ 2,000 - 3,000lbs

OFF P1 Running Status (on/off)

45.7 T3 Water Elevation

<u>6.54</u> тз рн

43.5 T3 Temperature

OFF P4A Running Status (on/off)

3 P4A Pressure Gauge (normal range = 10psi)

616. T6 Water Elevation

OFF P4B Running Status (on/off)

6142 T7 Water Elevation

________P7 Running Status (on/off)

date: (lb DEL 2003 personnel: PL CASEY

Field sampling

0.12	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.26	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.07	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0,16	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)

pH Sed Pond A

pH Sed Pond B

pH Wetland

date: 16 DEL 2003 personnel: R. CASEY

Checklist

Wet Well Pump Station Checked

Yes/No T3 Pressure Transducer Cleaned

Yes / No T3 pH Probe Cleaned

P4A / P4B Pump Station

(No Water in Station

Yes / No Pumped out?

Yes / No P6 Pressure Transducer Cleaned

P7 Pressure Transducer Cleaned

Zero Valance Tank

No Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

3 Sed Pond A Flow (scfh) -> turned up to 20 Sch

10 Sed Pond B Flow (scfh)

date: 23 DEC2003 personnel: R.C4SEY

Treatment System Checklist

234	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
<u>\$,880</u>	CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs
_ON	P1 Running Status (on/off)
615.8	T3 Water Elevation
6.98	T3 pH
41.7	T3 Temperature
ON	P4A Running Status (on/off)
3	P4A Pressure Gauge (normal range = 10psi)
615.9	T6 Water Elevation
OFF	P4B Running Status (on/off)
6142	T7 Water Elevation
OFF	P7 Running Status (on/off)

date: 23 DEC 2003 personnel: P.CASEY

Field sampling

0.15	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.24	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.09	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.16	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)
	pH Sed Pond A	
	pH Sed Pond B	

pH Wetland

date: 73 DEC 2003 personnel: R.CASEY

Checklist

Wet Well Pump Station Checked

Yes / No T3 Pressure Transducer Cleaned

Yes/ No T3 pH Probe Cleaned

P4A / P4B Pump Station

(No Water in Station

Yes /No Pumped out?

(6) / No P6 Pressure Transducer Cleaned

(es) No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes/No Outlet Structure Checked

Yes No Water Level OK

Sed Pond Manifold

______ Sed Pond A Flow (scfh)

Sed Pond B Flow (scfh)

date: 30 DEL 2003 personnel: R. LASEY

Treatment System Checklist

225	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
-----	---

OFF P1 Running Status (on/off)

615.8 T3 Water Elevation

<u>6.60</u> тз рн

45.1 T3 Temperature

_______ P4A Running Status (on/off)

2.5 P4A Pressure Gauge (normal range = 10psi)

615.8 T6 Water Elevation

ON P4B Running Status (on/off)

414.5 T7 Water Elevation

P7 Running Status (on/off)

date: 30 DEC 2003 personnel: D. CASEY

Field sampling

0.17	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.25	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0,01	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.02	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)
6.74	pH Sed Pond A	
7.07	pH Sed Pond B	
7.36	pH Wetland	

date: 30 DEC 2003 personnel: RCASEY

Checklist

(Yes) / No Wet Well Pump Station Checked

13 Pressure Transducer Cleaned

Yes / No T3 pH Probe Cleaned

P4A / P4B Pump Station

Yesy No Water in Station

Yes/No Pumped out?

169 / No P6 Pressure Transducer Cleaned

P7 Pressure Transducer Cleaned

Zero Valance Tank

Mes / No Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

10 Sed Pond A Flow (scfh)

Sed Pond B Flow (scfh)

date: 75AN 2003 personnel: R.CASEY

*T7 alarm, well pumped out.

* wetland pond level high, completely frozen

· Sed pond B frozen as well as sample ports 4A 44B

Treatment System Checklist

CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs
P1 Running Status (on/off)
T3 Water Elevation
Т3 рН
T3 Temperature
P4A Running Status (on/off)
P4A Pressure Gauge (normal range = 10psi)
T6 Water Elevation
P4B Running Status (on/off)
T7 Water Elevation
P7 Running Status (on/off)

date: 7 J AN 2003 personnel: R. CASEY

Field sampling

0.20	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.31	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.02	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.03	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0,00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)
6.97	pH Sed Pond A	
7.31	pH Sed Pond B	
7,77	pH Wetland	

date: 7 JAN 2003 personnel: R.CASEY

Checklist

No Wet Well Pump Station Checked

Yes 160 T3 Pressure Transducer Cleaned

Yes /No T3 pH Probe Cleaned

3 per Chap

P4A / P4B Pump Station

Water in Station

Yes / No Pumped out?

Yes (No) P6 Pressure Transducer Cleaned

Yes (No) P7 Pressure Transducer Cleaned

3 per Chip

Zero Valance Tank

Ver / No Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

_______ Sed Pond A Flow (scfh)

________ Sed Pond B Flow (scfh)

date: (5 SAN 2004 personnel: P. CASEY

Treatment System Checklist

	Treatment Oystem Gricoknis.
225	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
5,100	CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs
<u>Off</u>	P1 Running Status (on/off)
615.8	T3 Water Elevation
6.5	T3 pH
41.9	T3 Temperature
070	P4A Running Status (on/off)
3.5	P4A Pressure Gauge (normal range = 10psi)
615.9	T6 Water Elevation
_ON	P4B Running Status (on/off)
615,2	T7 Water Elevation
ON	P7 Running Status (on/off)

date: (5 JAN 2004 personnel: R.CASEY

Field sampling

0,12	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.25	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.01	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.02	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)
6.86	pH Sed Pond A	
7.01	pH Sed Pond B	
6.99	pH Wetland	

date: 15 JAN 2004 personnel: R.CASEY

Checklist

Yes// No Wet Well Pump Station Checked

Yes / 10 T3 Pressure Transducer Cleaned

Yes /(No) T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes / No Water in Station

Yes / No Pumped out?

Yes 1460 P6 Pressure Transducer Cleaned

Yes / No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes No Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

______ Sed Pond A Flow (scfh)

10 Sed Pond B Flow (scfh)

date: 22 d AF 2004 personnel: P. CASEY

Treatment System Checklist

2-2.4	CO2 Storage Tank Pressure (1	Normal Range = 220 - 235nsi)
227	COZ Storage Tarik Pressure (1	Numai Kange - 220 - 230psij

1,900 CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs

_OFF P1 Running Status (on/off)

615.7 T3 Water Elevation

6.7 T3 pH

38.1 T3 Temperature

OFF P4A Running Status (on/off)

3.0 P4A Pressure Gauge (normal range = 10psi)

615.9 T6 Water Elevation

OFF P4B Running Status (on/off)

615.0 T7 Water Elevation

DN P7 Running Status (on/off)

date: 22 JAN 2009 personnel: RCASSY

Checklist

Yes / No Wet Well Pump Station Checked
Yes / No T3 Pressure Transducer Cleaned
Yes / No T3 pH Probe Cleaned

P4A / P4B Pump Station

Water in Station

Pumped out?

Yes No P6 Pressure Transducer Cleaned

Yes No P7 Pressure Transducer Cleaned

Zero Valance Tank

Outlet Structure Checked

Ves/No Water Level OK

Sed Pond Manifold

Sed Pond A Flow (scfh)

10 Sed Pond B Flow (scfh)

date: (7 FB3 2004 personnel: R.CASE)

Treatment System Checklist

225 CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)

<u>4,500</u> CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs)

*Note: call for refill @ 2,000 - 3,000lbs

OFF P1 Running Status (on/off)

6)5.8 T3 Water Elevation

<u>6.65</u> тэрн

41.0 T3 Temperature

OFF P4A Running Status (on/off)

2.5 P4A Pressure Gauge (normal range = 10psi)

615.9 T6 Water Elevation

<u>off</u> P4B Running Status (on/off)

616.1 T7 Water Elevation

________P7 Running Status (on/off)

date: 7 FBB 2009 personnel: A. CAGEY

Field sampling

0.16	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
0.19	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.02	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.03	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)
	pH Sed Pond A	
	pH Sed Pond B	
	pH Wetland	

date: 16 FBS 2009 personnel: P. CASEY

Checklist

Wet Well Pump Station Checked

Yes 100 T3 Pressure Transducer Cleaned

Yes 1/No T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes / No Water in Station

Yes / No Pumped out?

Yes / 100 P6 Pressure Transducer Cleaned

Yes / No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes / No Outlet Structure Checked

No Water Level OK

Sed Pond Manifold

_________ Sed Pond A Flow (scfh)

______ Sed Pond B Flow (scfh)

date: 26 Feb 2004 personnel: R.CASEY

> Both turned down to 7 softh

Treatment System Checklist

233 CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)

<u>i, loo</u> CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs)

*Note: call for refill @ 2,000 - 3,000lbs

OFF P1 Running Status (on/off)

615.7 T3 Water Elevation

<u>6.5</u> T3 pH

40.5 T3 Temperature

OFF P4A Running Status (on/off)

P4A Pressure Gauge (normal range = 10psi)

616,1 T6 Water Elevation

P4B Running Status (on/off)

65.0 T7 Water Elevation

P7 Running Status (on/off)

date: 26 FBB 2004

personnel: RCASEY

* TANKED FILLED TO 12,000 (bs.

Field sampling

P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)

pH Sed Pond A

pH Sed Pond B

pH Wetland

date: 26 PEB 230 Y personnel: P, CACOY

NO FIELD DATA COLLECTED

Checklist

No Wet Well Pump Station Checked

Yes / 10 T3 Pressure Transducer Cleaned

Yes / No T3 pH Probe Cleaned

P4A / P4B Pump Station

Y69 / No Water in Station

Yes / No Pumped out?

Yes / No P6 Pressure Transducer Cleaned

Yes / No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes / No Outlet Structure Checked

Yes / No Water Level OK

Sed Pond Manifold

> turned back up to 105 of h due to elevated PH Sed Pond A Flow (scfh) Sed Pond B Flow (scfh)

date: 16 m AREH 2004

personnel: P. CASEY

Treatment System Checklist

225	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
4,500	CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs
OFF	P1 Running Status (on/off)
615.8	T3 Water Elevation
6.7	T3 pH
39,6	T3 Temperature
OFF	P4A Running Status (on/off)
2.5	P4A Pressure Gauge (normal range = 10psi)
615.7	T6 Water Elevation
OFF	P4B Running Status (on/off)

615.0 T7 Water Elevation

________ P7 Running Status (on/off)

date:16 MARCH 2004 personnel: R. CASEY

Field sampling

0.18	P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
000	P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
0.00	P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
0.01	P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)
6.88	pH Sed Pond A	
7.89	pH Sed Pond B	
8.48	pH Wetland	

date: 16 MARCH 2004 personnel: p.casey

Checklist

Well Pump Station Checked

Yes / No T3 Pressure Transducer Cleaned

Yes / No T3 pH Probe Cleaned

P4A / P4B Pump Station

Yes / No Water in Station

Yes / No Pumped out?

Yes No P6 Pressure Transducer Cleaned

Yes No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes / No Outlet Structure Checked

No Water Level OK

Sed Pond Manifold

Sed Pond A Flow (scfh)

Sed Pond B Flow (scfh)

date: 25 m AP 200 y personnel: 2. CRSEY

· System down due to low CO2 level

Treatment System Checklist

CO2 Storage Tank Pressure (Normal Range = 220 - 235psi) CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs OFF P1 Running Status (on/off) 615.7 T3 Water Elevation 7.0 T3 pH T3 Temperature OFF P4A Running Status (on/off) P4A Pressure Gauge (normal range = 10psi) 615.6 T6 Water Elevation ON P4B Running Status (on/off)

615,0

T7 Water Elevation

P7 Running Status (on/off)

date: R CASEY
personnel: 15mm2004

Field sampling

P4A Hexavalent, Chromium Concentration (mg/L)	Standard (0.011 mg/L)
P4A Total Chromium Concentration (mg/L)	(0.05 mg/L)
P4B Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
P4B Total Chromium Concentration (mg/L)	(0.05 mg/L)
P7 Hexavalent, Chromium Concentration (mg/L)	(0.011 mg/L)
P7 Total Chromium Concentration (mg/L)	(0.05 mg/L)

pH Sed Pond A

pH Sed Pond B

6.41 pH Wetland

date: 25 M4R 2004 personnel: R. CASEY

NO FIELD DATA COCCECTED SAMPLES FOR LARDRATORY AWALTS IS COLLEGED @ 1140!

Treatment System Checklist

	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
3,200 lp	CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) -> tank filled to *Note: call for refill @ 2,000 - 3,000lbs
ON	P1 Running Status (on/off)
6178	T3 Water Elevation
7.0	T3 pH
50.0	T3 Temperature
OFF	P4A Running Status (on/off)
NA	P4A Pressure Gauge (normal range = 10psi)
(N.S.6	T6 Water Elevation
OPF	P4B Running Status (on/off)
916,3	T7 Water Elevation
ON	P7 Running Status (on/off)

date: (IL APR200Y personnel: R.CA40Y

Checklist

Yes / No 13 Pressure Transducer Cleaned
Yes / No 13 pH Probe Cleaned

P4A / P4B Pump Station

Yes/No Water in Station > 12" from top

Yes / Mo P6 Pressure Transducer Cleaned

Yes / No P7 Pressure Transducer Cleaned

Zero Valance Tank

Yes No Outlet Structure Checked

Yes No Water Level OK

Sed Pond Manifold

Sed Pond A Flow (scfh) > furned up to 7

Sed Pond B Flow (scfh)

date: personnel:

Treatment System Checklist

221	CO2 Storage Tank Pressure (Normal Range = 220 - 235psi)
1,750	CO2 Storage Liquid Level (Normal Range = 2,000 - 12,000lbs) *Note: call for refill @ 2,000 - 3,000lbs
ON	P1 Running Status (on/off)
615.8	T3 Water Elevation
6.49	T3 pH
45.1	T3 Temperature
OFF	P4A Running Status (on/off)
3ps.	P4A Pressure Gauge (normal range = 10psi)
616,0	T6 Water Elevation
<u>_ON_</u>	P4B Running Status (on/off)
612.7	T7 Water Elevation
OFF	P7 Running Status (on/off)

date: 9 DEC 2003 personnel: R.CASEY

Attachment G

Laboratory Analytical Results for Groundwater Collection and Treatment System Discharge Sampling





Scott Graham
EA Engineering, Science and Technology
6731 Collamer Road
East Syracuse, NY 13057-9759

Phone: (315) 431-4610 FAX: (315) 431-4280

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

Witmer Rd. Landfill

LSL Project ID: 0405657

Receive Date/Time: 04/16/04 16:47

Project Received by: ALH

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LSL Finger Lakes Lab 16 N. Main St., PO Box 424 Wayland, NY 14572 Tel. (585) 728-3320 Fax (585) 728-2711 NYS DOH ELAP #11667 LSL Southern Tier Lab 30 East Main Street Cuba, NY 14727 Tel. (585) 968-2640 Fax (585) 968-0906 NYS DOH ELAP #10760

LSL MidLakes Lab 699 South Main Street Canandaigua, NY 14424 Tel. (585) 396-0270 Fax (585) 396-0377 NYS DOH ELAP #11369

This report was reviewed by:	Life Science Laboratories, Inc.	QC	Date:	5/4/64
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A copy of this report was sent to:

Page 1 of 3

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF1 - 041604

LSL Sample ID:

0405657-001

Location: Sampled:

Witmer Rd. Landfill

04/16/04 13:15

Sampled By: RSC

Sample Matrix: NPW

Analytical Method Analyte	Result Units	Prep Analysis Date Date & Time	Analys
(1) EPA 150.1 pH		Date Date & Time	<u>Initial</u>
рН	7.8 Std Units		
pH Measurement Temperature	25 Degrees C	5/3/04 16:	55 GIS
(1) EPA 160.2 Total Suspended Solids	Dogices C		
Total Suspended Solids @ 103-105 C	9.5 mg/j		
(1) EPA 200.7 Total Metals	9.5 mg/i	4/20/04	MM
Barium	10.0		
Chromium	<0.2 mg/l <0.01 mg/l	4/22/04 4/20/04	PEF
Copper		4/22/04 4/20/04	PEF
Iron		4/22/04 4/20/04	PEF
Nickel	0.38 mg/l <0.01 mg/l	4/22/04 4/20/04	PEF
Selenium	<0.01 mg/l	4/22/04 4/20/04	PEF
Thallium	<0.01 mg/l	4/22/04 4/20/04	PEF
Zinc	0.014 mg/l	4/22/04 4/20/04	PEF
D EPA 350.1 Ammonia		4/22/04 4/20/04	PEF
Ammonia as N	1.9		
P EPA 351.2 TKN as N	1.8 mg/l	4/28/04	DRB
Total Kjeldahl Nitrogen			
EPA 405.1 BOD-5	3.2 mg/l	4/26/04 4/27/04	DRB
			5.05
Biochemical Oxygen Demand, 5 Day	<4 mg/l	4/16/04 21:05	
EPA 420.1 Recoverable Phenolics LL		4/16/04 21:05	MM
Phenolics, Total Recoverable	0.0045 mg/l	4/20/04	
EPA 601 Halocarbons by 624(Partial List)		4/22/04 4/27/04	DWK
1,1-Dichloroethane	-11		
Trichloroethene	<1 ug/l	4/25/04	BD
Surrogate (Tol-d8)	<1 ug/l 117 %R	4/25/04	BD
Surrogate (4-BFB)	117 %R 116 %R	4/25/04	BD
Surrogate (1,2-DCA-d4)	96 %R	4/25/04	BD
EPA Method 300.0 A	20 York	4/25/04	BD
Nitrate as N	2.22		
Nitrite as N	0.23 mg/l	4/16/04 19:54	RAF
HACH 8000 COD	<0.1 mg/l	4/16/04 19:54	RAF
Chemical Oxygen Demand			
	12 mg/l	4/26/04	DWK
SM 18 3500Cr-D Hexavalent Chromium			DWK
Chromium, Hexavalent	0.013 mg/l	4/1.6/04	
SM18-2540C Total Dissolved Solids	, C	4/16/04 21:30	KBB
Total Dissolved Solids @ 180 C	470 mg/)		
	470 mg/l	4/20/04	MM

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

Trip Blank

Location:

Witmer Rd. Landfill

LSL Sample ID:

0405657-002

Sample Matrix: TB

Sampled: 04/16/04 0:00 Sampled By: RSC

EPA 601 Halocarbons by 624/P	Result	Units	Prep Date	Analysis Date & Time	Analyst
EPA 601 Halocarbons by 624(Partial List)				Date & Time	Initials
1,1-Dichloroethane					
Trichloroethene	<1	ug/l %R		4/25/04	BD
Surrogate (Tol-d8)	<1			4/25/04	BD
Surrogate (4-BFB)	117			4/25/04	
Surrogate (1,2-DCA-d4)	117			4/25/04	BD
Surrogate (1,2-DCA-d4)	98	%R			BD
				4/25/04	BD



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS 8/14/02

5. 1-11 -02			
Method	Surrogate(s)	Water	SHW
	<u>Sanogate</u> [S]	Limits, %R	Limits, %R
EPA 504	TCMX		
EPA 50 8	DCB	80-120	NA
EPA 515.4	DCAA .	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	70-13 0	NA
EPA 525.2	13.04 2 NO TOO 0	80-120	NA
EPA 526	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 528	1,3-DM-2-NB, TPP	70-13 0	NA.
EPA 551.1	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 552.2	Decaffuorobiphenyl 2,3-DBPA	80-120	NA
	2300PA	80-120	NA
EPA 601	12004 44 =		101
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA NA
EPA 624	DC8	30-150	NA NA
EPA 625, AE	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA NA
EPA 625, AE	2-Fluorophenol	21-110	NA NA
EPA 625, AE	Phenol-d5	10-110	
EPA 625, BN	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA NA
C1 17 020, BIY	Terphenyl-d14	33-141	NA
EPA 8010	4.5.5	00 141	NA
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70.400
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	1,2-DCA-d4, Tol-d8, 4-RFR	70-130	70-130
EPA 8082	TCMX, DCB	30-1 50	70-130
EPA 8151	DCB	30-15 0	30-150
EDA 0000	DCAA	30-13 0	30-150
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-13 0	30-120
EPA 8270, AE	2-Fluorophenol	21-110	70-130
EPA 8270, AE	Phenol-d5		25-121
EPA 8270, AE	2,4,6-Tribromophenol	10-110	24-113
EPA 8270, BN	Nitrobenzene-d5	10-123	19-122
EPA 8270, BN	2-Fluorobiphenyl	35-114	23-120
EPA 8270, BN	Terphenyl-d14	43-116	30-115
DOLLAGO CO		33-141	18-137
DOH 310-13	Dodecane	40 440	
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110 40-110	40-110
DOH 310-34*	4-BFB	40-110	40-110
8015M_GRO*	4-BFB	50-1 50	50-150
8015M_DRO*	Terphenyl-d14	50-1 50	50-150
*Run by GOME		50-1 50	50-150

*Run by GC/MS.

2008
ug/i = microgram per liter
naka = wkolodisii bet kgodisii
at UT = ITMIKE (BM per liter
mg/kg = milligram per kilogram
%R = Percent Recovery

Lif sier Laturatories, Inc.

5854 Butternut Drive

TST

East Syracuse, NY 13057

Chain of Custody Record

0405657 EAEng

81/4 Each Preserv. Check 001B 001A 1700 Time U 0111 3 Date BOD,TSS,pH,NO3,NO2,Cr+6 Ba,Cr,Cu,Fe,Ni,Ni,Se,TI,Zn 5-04-16:47-RCVD TKN,NH3,COD Analyses Trip Blank Phenols 601/602 Witmer Rd. Landfill Sample Donning Letter Client's Project I.D.: Client's Site I.D.: **Custody Transfers** LSL Project #: Received for Lab By: ≺ size/type Containers 500 ml Liter(g) 500 ml 500 ml 40 ml Sampled By: Rabe 1 S Entrey Received By: 40 ml Relinquished By: Alex Received By: # 2 _ Н Contact Person: 7 Preserv. Added H2SO4 None HNO₃ H2S04 HCL Scott Graham 건 Shipment Method: DRIP NAC grab comp. Matrix 8 Type Relinquished By: Telefax # (315) 445-1301 Phone # 431-4610 Telefax # 431-4280 Time Sample Sample 1315 Authorization: WRL-EFFT-OHENY +huloy Client's Sample Identifications EA Engineering Science & Tech. E. Syracuse, NY 13057 Notes and Hazard identifications: 6731 Collamer Rd. Phone # (315) 445-1105 LSL Sample Number Address: Client:



Scott Graham EA Engineering, Science and Technology 6731 Collamer Road East Syracuse, NY 13057-9759

Phone: (315) 431-4610 FAX: (315) 431-4280

Laboratory Analysis Report For

EA Engineering, Science and Technology

LSL Project ID: 0404327

Receive Date/Time: 03/26/04 8:54

Project Received by: GS

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LSL Southern Tier Lab 30 East Main Street Cuba, NY 14727 Tel. (585) 968-2640 Fax (585) 968-0906

LSL MidLakes Lab 699 South Main Street Canandaigua, NY 14424 Tel. (585) 396-0270 Fax (585) 396-0377 NYS DOH ELAP #10760 NYS DOH ELAP #11369

This report	was	reviewed	bv:
-------------	-----	----------	-----

Life Science Laboratories, Inc.

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7 032504

LSL Sample ID:

0404327-001

Location: Sampled:

Witmer Rd. Landfill

03/25/04 11:40

Sampled By: RSC

Analytical Method Analyte	Docul	t Units	Prep	Analysis	Analys
(1) Electronic Report Generation	1/63(1)	t Units	Date	Date & Time	Initial
Report Fee					
(1) EPA 150.1 pH					
-					
pH	7.4	Std. Units		3/26/04 09:4	is per
pH Measurement Temperature	25	Degrees C		3/26/04 09:4	
NYS DOH ELAP specifications require pH to be measured with	iin one hour of sample	collection.		3/20/04 09.2	15 DSE
DEPA 160.2 Total Suspended Solids					
Total Suspended Solids @ 103-105 C	14	mg/l			
D EPA 200.7 Total Metals	• .	iligi i		3/29/04	MM
Barium					
Chromium	<0.2	mg/l	3/28/04	3/30/04	PEF
Copper	<0.01	mg/l	3/28/04	3/30/04	PEF
Iron	<0.01	mg/l	3/28/04	3/30/04	PEF
Nickel	7.6	mg/l	3/28/04	3/30/04	PEF
Selenium	< 0.01	mg/l	3/28/04	3/30/04	PEF
Thallium	0.015	mg/l	3/28/04	3/30/04	PEF
Zinc	0.012	mg/l	3/28/04	3/30/04	PEF
	< 0.01	mg/l	3/28/04	3/30/04	PEF
EPA 350.1 Ammonia					
Ammonia as N	3.0	mg/l		4/7/04	
EPA 351.2 TKN as N		5		4/7/04	DRB
Total Kjeldahl Nitrogen					
EPA 405.1 BOD-5	6.4	mg/l	4/7/04	4/8/04	DRB
Biochemical Oxygen Demand, 5 Day	12	mg/l		3/26/04 20:02	MM/KB
EPA 420 1 Recoverable Phonelies L.				20.02	В
IZO.1 ICCCOVCIABLE FIIEHOIICS LL					
Phenolics, Total Recoverable	0.013	mg/l	4/8/04	4/8/04	Dun
EPA 601/602 Volatiles by 624				47.07.04	DWK
Benzene	<1				
Bromodichloromethane	<1	ug/l		4/2/04	BD
Bromoform		ug/l		4/2/04	BD
Bromomethane		ug/l		4/2/04	BD
Carbon tetrachloride		ug/l		4/2/04	BD
Chlorobenzene		ug/l		4/2/04	BD
Chloroethane		ug/l		4/2/04	BD
2-Chloroethylvinyl ether		ug/l		4/2/04	BD
Chloroform		ug/l		4/2/04	BD
Chloromethane		ug/l		4/2/04	BD
Dibromochloromethane		тб\] пб\]		4/2/04	BD
1,2-Dichlorobenzene		18\] 18\]		4/2/04	BD
1,3-Dichlorobenzene		1g/		4/2/04	BD
1,4-Dichlorobenzene		ıg/l		4/2/04	BD
Dichlorodifluoromethane		ıg/l		4/2/04	BD
1,1-Dichloroethane		ig/l		4/2/04	BD
1,2-Dichloroethane		g/l		4/2/04	BD
1,1-Dichloroethene	<1 u	E/ 1		4/2/04	BD

Life Science Laboratories, Inc.

Page 2 of 4

4/9/04

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7 032504

LSL Sample ID:

0404327-001

Location:

Witmer Rd. Landfill

Sampled:

03/25/04 11:40

Sampled By: RSC

Sample Matrix: NPW

Analytical Method Analyte	Resul	t Units	Prep Date	Analysis Date & Time	Analyst
1) EPA 601/602 Volatiles by 624			Date	Date & Time	Initials
trans-1,2-Dichloroethene 1,2-Dichloropropane	<br <1	-8.		4/2/04	BD
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	<1	ug/l		4/2/04 4/2/04	BD BD
Ethyl benzene	<1 <1	ug/l ug/l		4/2/04	BD
Methylene chloride Vinyl chloride	<1	ug/l		4/2/04 4/2/04	BD BD
Tetrachloroethene Toluene	<1	ug/l ug/l		4/2/04 4/2/04	BD BD
1,1,1-Trichloroethane	<1 <1	ug/l ug/l		4/2/04	BD
Trichloroethene Trichlorofluoromethane (Freon 11)	<1	ug/l		4/2/04 4/2/04	BD BD
1,1,1,2-Tetrachloroethane	<1 <1	ug/l ug/l		4/2/04 4/2/04	BD BD
Surrogate (1,2-DCA-d4) Xylenes (Total)	83 <1	%R ug/l		4/2/04	BD
Surrogate (Tol-d8) Surrogate (4-BFB)	103	%R		4/2/04 4/2/04	BD BD
EPA Method 300.0 A	97	%R		4/2/04	BD
Nitrate as N Nitrite as N	<0.1 <0.1	mg/l		3/26/04 16:02	RAF
HACH 8000 COD	\0.1	mg/l		3/26/04 16:02	RAF
Chemical Oxygen Demand SM 18 3500Cr-D Hexavalent Chromium	14	mg/l		4/7/04	DWK
Chromium, Hexavalent SM18-2540C Total Dissolved Solids	<0.01	mg/l		3/26/04 09:10	DWK
Total Dissolved Solids @ 180 C	850	mg/l		3/30/04	MM

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

Trip Blank

LSL Sample ID:

0404327-002

Location:

Sampled:

03/25/04 0:00

Sampled By: RSC

Sample Matrix:

palytical Method Analyte	Result	Units	Prep Date	Analysis Date & Time	Analys
EPA 601/602 Volatiles by 624			Date	Date & Time	Initials
Benzene	<1	/1			
Bromodichloromethane	2.4	ug/l		4/2/04	BD
Laboratory contamination is suspected.	2.4	ug/l		4/2/04	BD
Bromoform	<1	ua/1			
Bromomethane	<1	ug/l		4/2/04	BD
Carbon tetrachloride	<1	ug/l		4/2/04	BD
Chlorobenzene	<1	ug/l		4/2/04	BD
Chloroethane	<1	ug/l		4/2/04	BD
2-Chloroethylvinyl ether		ug/l		4/2/04	BD
Chloroform	<10	ug/l		4/2/04	BD
Laboratory contamination is suspected.	3.9	ug/l		4/2/04	BD
Chloromethane	٦,				
Dibromochloromethane	<1	ug/l		4/2/04	BD
Laboratory contamination is suspected.	1.1	ug/l		4/2/04	BD
1,2-Dichlorobenzene	-1				
1,3-Dichlorobenzene	<1	ug/l		4/2/04	BD
1,4-Dichlorobenzene	<1	ug/l		4/2/04	BD
Dichlorodifluoromethane	<1	ug/l		4/2/04	BD
1,1-Dichloroethane	<1	ug/l		4/2/04	BD
1,2-Dichloroethane	<1	ug/l		4/2/04	BD
1,1-Dichloroethene		ug/l		4/2/04	BD
trans-1,2-Dichloroethene		ug/l		4/2/04	BD
1,2-Dichloropropane		ug/l		4/2/04	BD
cis-1,3-Dichloropropene		ug/l		4/2/04	BD
trans-1,3-Dichloropropene	<1	ug/l		4/2/04	BD
Ethyl benzene	<1	ug/l		4/2/04	BD
Methylene chloride	<1 1	ıg/l		4/2/04	BD
Vinyl chloride	<1 1	1g/		4/2/04	BD
Tetrachloroethene	<1 1	ıg/l		4/2/04	BD
Toluene	<1 u	ıg/l		4/2/04	BD
1,1,1-Trichloroethane	<1 ı	ıg/l		4/2/04	BD
Trichloroethene	<1 u	g/l		4/2/04	BD
	<1 u	g/l		4/2/04	BD
Trichlorofluoromethane (Freon 11)	<1 u	g/l		4/2/04	BD
1,1,1,2-Tetrachloroethane	<1 u	g/l		4/2/04	BD
Surrogate (1,2-DCA-d4)	83 %	SR .		4/2/04	BD BD
Xylenes (Total)	<1 u	g/l		4/2/04	BD BD
Surrogate (Tol-d8)	105 %	ıR.		4/2/04	BD BD
Surrogate (4-BFB)	96 %	R		4/2/04	BD



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS 8/14/02

Method	Surrogate(s)	Water	SHW
-	Sant Spaticion	Limits, %R	Limits, %R
EPA 504	TCHIX	00.460	
EPA 508	DC8	80- 120	NA
EPA 515.4	DCAA	70- 13 0	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	70- 13 0	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	80- 12 0	NA
EPA 526	1,3-DM-2-NB, TPP	70- 13 0	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70- 13 0	NA
EPA 551.1	Decafluoroblphenyl	70- 13 0	NA
EPA 552.2	2,3-DBPA	80-120	NA
		80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70 490	
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DC8	70-130	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	30-150	NA
EPA 625, AE	2-Fluorophenol	70-130	NA
EPA 625, AE	Phenol-d5	21-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-110	NA
EPA 625, BN	Nitrobenzene-d5	10-123	NA
EPA 625, BN	2-Fluorobiphenyl	35-114	NA
EPA 625, BN	Terphenyl-d14	43-116	NA
	Priorite and	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB		
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	70-130	70-130
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-15 0	30-150
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	30-13 0	30-120
EPA 8270, AE	2-Fluorophenol	70-130	70-130
EPA 8270, AE	Phenol-d5	21-110	25-121
EPA 8270, AE	2,4,6-Tribromophenol	10-110	24-113
EPA 8270, BN	Nitrobenzene-d5	10-123	19-122
EPA 8270, BN	2-Fluoroblphenyl	35-114	23-120
EPA 8270, BN	Terphenyl-d14	43-116	30-115
	Friends-A let	33-141	18-137
DOH 310-13	Dodecane	** ***	
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34°	4-BFB	40-110	40-110
8015M_GRO°	4-BFB	50-1 50	50-150
8015M_DRO*	Terphenyl-d14	50-1 50	50-150
-		50-1 50	50-150

*Run by GC/MS.

Units Key:	ug/i = microgram per liter
1	ug/kg = microgram per kilogram
	mg/i = milligram per kier
ļ	a
	mg/kg = milligram per kilogram
	%R = Percent Recovery

Life ocience Laboratories, Inc.

5854 Butternut Drive East Syracuse, NY 13057

Chain of Custody Record

Phone # (315) 445-1105	105	Telefax # (315) 445-1301				
Client: EA Engine	EA Engineering Science & Tech.	Phone # 431-4610	Contact Person:	LSL Project#: EAErg		
Address: 6731 Collamer Rd.	amer Rd.	Telefax # 431_4280	7		•	
E. Syracus	E. Syracuse, NY 13057			Client's Site I.D.:		
			Scott Graham	Witmer Rd. Landfill		
LSL Sample Number	Client's Sample	e dic	Preserv	Client's Project I.D.:		
00 (A	WEL-EFF7 - 030:5701.	25 MAR 64 11 10	Matrix Added #	size/type Analyses	Preserv	Žž
8			GW H2SO4 1	500 ml TKN,NH3.COD		<u> </u>
ں ،			None 1	500 ml BOD,TSS,pH,NO3.NO2.Cr+6	VO2.Cr+6	
d E			HNO ₃ 1	500 ml Ba,Cr,Cu,Fe,Ni Ni Se Ti Zn	Sa TI Zn	T
4	>		HCL 2	40 ml 601/602		T
		>	H2SO4 1	Liter(g) Phenois		T
						1
						T
002413			+			Τ
			HCL	40 ml Trip Blank		T
	-					T
						T
						-
						T
						7
Notes and Hazard identifications:	lifications:					
			Custo	Custody Transfers	Date Time	T
		Sampled By: (Cared	Received By:	ed By:		T
		Relinquished By:	Received By:	ed By:		
		Relinquished By	My Received for Lab By:	John	03-26-04 08:54 RCVD	Ta
		Shipment Method:	DRAM CASC.			



Scott Graham
EA Engineering, Science and Technology
6731 Collamer Road
East Syracuse, NY 13057-9759

Phone: (315) 431-4610 FAX: (315) 431-4280

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

12040.87.0003

LSL Project ID: **0402253**

Receive Date/Time: 02/17/04 13:08

Project Received by: DSB

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This	report	was	reviewed	hv:
	, cpois	<i>,,</i> ,,,,	revieweu	Uy.

Life Science I aboratories Inc

Date

3-3-04

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7-0204

LSL Sample ID:

0402253-001

Location:

Witmer Rd. Landfill

Sampled:

02/17/04 10:00

Sampled By: RSC

Sample Matrix: NPW

Ar	allytical Method		T T •	Prep	Analys		Analys
	Analyte FPA 150 1 V	Result	Units	Date	Date & T	ime	Initial
1)	EPA 150.1 pH						
	pH	6.3	Std. Units		2/18/04	09:00	DSE
1 7T.71	pH Measurement Temperature	25	Degrees C		2/18/04	09:00	DSE
VY	SDOH ELAP specifications require pH to be measured with	in one hour of sample	collection.				
l)	EPA 160.2 Total Suspended Solids						
	Total Suspended Solids @ 103-105 C	110	mg/l		2/19/04		MM
1)	EPA 200.7 Total Metals						
	Barium	<0.2	mg/l	2/20/04	2/20/04		PEI
	Chromium	0.012	mg/l	2/20/04	2/20/04		PEI
	Copper	<0.01	mg/l	2/20/04	2/20/04		PE
	Iron	64	mg/l	2/20/04	2/20/04		PEI
	Nickel	< 0.01	mg/l	2/20/04	2/20/04		PER
	Selenium	< 0.01	mg/l	2/20/04	2/20/04		PEF
	Thallium	< 0.01	mg/l	2/20/04	2/20/04		PEF
	Zinc	0.016	mg/l	2/20/04	2/20/04		PEF
)	EPA 350.1 Ammonia						
	Ammonia as N	4.7	mg/l		2/23/04		חחח
1		4.7	1116.1		2/23/04		DRB
)	EPA 351.2 TKN as N						
	Total Kjeldahl Nitrogen	6.0	mg/l	2/25/04	2/26/04		DRE
)	EPA 405.1 BOD-5						
	Biochemical Oxygen Demand, 5 Day	16	mg/l		2/18/04	15:50	MM
)	EPA 420.1 Recoverable Phenolics LL						
	Phenolics, Total Recoverable	0.022	mg/l	3/1/04	3/2/04		DWK
)]		0.032		5/1/04	312104		DWK
	EPA 601/602 Volatiles by 624		_				
	Benzene	<1	ug/l		2/23/04		BD
	Bromodichloromethane Bromoform	<1	ug/l		2/23/04		BD
	Bromomethane	<1	ug/l		2/23/04		BD
	Carbon tetrachloride	<1	ug/l		2/23/04		BD
	Chlorobenzene	<1	ug/l		2/23/04		BD
	Chloroethane	<1 <1	ug/l ug/l		2/23/04		BD
	2-Chloroethylvinyl ether	<10	ug/l		2/23/04		BD
	Chloroform	<10	ug/l		2/23/04 2/23/04		BD
	Chloromethane	<1	ug/l		2/23/04		BD BD
	Dibromochloromethane	<1	ug/l		2/23/04		BD
	1,2-Dichlorobenzene	<1	ug/l		2/23/04		BD
	1,3-Dichlorobenzene	<1	ug/l		2/23/04		BD
	1,4-Dichlorobenzene	<1	ug/l		2/23/04		BD
	Dichlorodifluoromethane		ug/l		2/23/04		BD
	1,1-Dichloroethane		ug/l		2/23/04		BD
	1,2-Dichloroethane		ug/l		2/23/04		BD
	1,1-Dichloroethene		ug/l		2/23/04		BD
	trans-1,2-Dichloroethene		ug/l		2/23/04		BD
	1,2-Dichloropropane		ug/I		2/23/04		BD
	cis-1,3-Dichloropropene	<1	ug/l		2/23/04		BD

Life Science Laboratories, Inc.

Page 2 of 4

Date Printed:

3/3/04

EA Engineering, Science and Technology

Sampled By: RSC

East Syracuse, NY

Sample ID: Location:

Sampled:

WRL-EFF7-0204

Witmer Rd. Landfill

02/17/04 10:00

LSL Sample ID:

0402253-001

Sample Matrix: NPW

A:	nalytical MethodAnalyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1)	EPA 601/602 Volatiles by 624				Date & Time	Illitials
	trans-1,3-Dichloropropene	<1	ug/l		2/23/04	BD
	Ethyl benzene	<1	ug/l		2/23/04	BD
	Methylene chloride	<1	ug/l		2/23/04	BD
	Vinyl chloride	<1	ug/l		2/23/04	BD
	Tetrachloroethene	<1	ug/l		2/23/04	BD
	Toluene	<1	ug/l		2/23/04	BD
	1,1,1-Trichloroethane	<1	ug/l		2/23/04	BD
	Trichloroethene	<1	ug/l		2/23/04	BD BD
	Trichlorofluoromethane (Freon 11)	<1	ug/l		2/23/04	BD BD
	1,1,1,2-Tetrachloroethane	<1	ug/l		2/23/04	BD BD
	Surrogate (1,2-DCA-d4)	102	%R		2/23/04	BD
	Xylenes (Total)	<1	ug/l		2/23/04	BD
	Surrogate (Tol-d8)	110	%R		2/23/04	BD
	Surrogate (4-BFB)	120	%R		2/23/04	BD
(1)	EPA Method 300.0 A					22
	Nitrate as N	<0.1	mg/l		2/17/04 23:59) AMW
	Nitrite as N	<0.1	mg/l		2/17/04 23:59	
(1)	HACH 8000 COD				2/17/04 23.39	AJVI W
	Chemical Oxygen Demand	40	mg/l		2/24/04	DWK
(1)	SM 18 3500Cr-D Hexavalent Chromium				· - ·	*** ** ***
	Chromium, Hexavalent	<0.01	mg/l		2/17/04 14:55	DWK

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

Trip Blank

LSL Sample ID:

0402253-002

Location:

Sampled:

02/17/04 0:00

Sampled By: RSC

Sample Matrix: TB

Analytical Method Analyte	n v	TT *2	Prep	Analysis	Analyst
	Result	Units	Date	Date & Time	Initials
(1) EPA 601/602 Volatiles by 624					
Benzene	<1	ug/l		2/23/04	BD
Bromodichloromethane	3.6	ug/l		2/23/04	. BD
Bromoform	<1	ug/l		2/23/04	BD
Bromomethane	<1	ug/l		2/23/04	BD
Carbon tetrachloride	<1	ug/l		2/23/04	BD
Chlorobenzene	<1	ug/l		2/23/04	BD
Chloroethane	<1	ug/l		2/23/04	BD
2-Chloroethylvinyl ether	<10	ug/l		2/23/04	BD
Chloroform	3.3	ug/l		2/23/04	BD
Chloromethane	<1	ug/l		2/23/04	BD
Dibromochloromethane	2.0	ug/l		2/23/04	BD
1,2-Dichlorobenzene	<1	ug/l		2/23/04	BD
1,3-Dichlorobenzene	<1	ug/l		2/23/04	BD
1,4-Dichlorobenzene	<1	ug/l		2/23/04	BD
Dichlorodifluoromethane	<1	ug/l		2/23/04	BD
1,1-Dichloroethane	<1	ug/l		2/23/04	BD
1,2-Dichloroethane	<1	ug/l		2/23/04	BD
1,1-Dichloroethene	<1	ug/l		2/23/04	BD
trans-1,2-Dichloroethene	<1	ug/l		2/23/04	BD
1,2-Dichloropropane	<1	ug/l		2/23/04	BD
cis-1,3-Dichloropropene	<1	ug/l		2/23/04	BD
trans-1,3-Dichloropropene	<1	ug/l		2/23/04	BD
Ethyl benzene	<1	ug/l		2/23/04	BD
Methylene chloride	<1	ug/l		2/23/04	BD
Vinyl chloride	<1	ug/l		2/23/04	BD
Tetrachloroethene	<1	ug/l		2/23/04	BD
Toluene	<1	ug/l		2/23/04	BD
1,1,1-Trichloroethane	<1	ug/l		2/23/04	BD
Trichloroetliene	<1	ug/l		2/23/04	BD
Trichlorofluoromethane (Freon 11)	<1	ug/l		2/23/04	BD
1,1,1,2-Tetrachloroethane	<1	ug/l		2/23/04	BD
Surrogate (1,2-DCA-d4)	102	%R		2/23/04	BD
Xylenes (Total)	<1	ug/l		2/23/04	BD
Surrogate (Tol-d8)	109	%R		2/23/04	BD
Surrogate (4-BFB)	121	%R		2/23/04	BD

Page 4 of 4

Life, Science Laboratories, Inc.

5854 Butternut Drive East Syracuse, NY 13057

Chain of Custody Record

Preserv. Check Time RCVD 02-17-04 13:08 Date BOD, TSS, pH, NO3, NO2, Cr+6 Ba,Cr,Cu,Fe,Ni,Ni,Se,TI,Zn Client's Project I.D.: 12040.87.0003 TKN,NH3,COD Trip Blank 601/602 **0402253** EAEng Samples Rechind Internet Witmer Rd. Landfill N Pleasing **Custody Transfers** Client's Site I.D.: LSL Project #: Received for Lab By: // size/type Containers 500 ml 500 ml 500 ml 40 mJ Received By: Received By: 40 ml # ભ Contact Person: Preserv. Added H2S04 None HNO₃ HCL HCL Scott Graham Shipment Method: DO.00 NEE Sampled By: ROBAL S. CHEY Type grab comp. Matrix ĕ Relinquished By: Whit Relinquished By: Telefax # (315) 445-1301 Phone # 431-4610 Telefax # 431-4280 Time Sample Sample 1000 Authorization: 17FEB.04 Date WRI-EFF7-0204 Client's Sample EA Engineering Science & Tech. Identifications E. Syracuse, NY 13057 Notes and Hazard identifications: 6731 Collamer Rd. Phone # (315) 445-1105 -SL Sample Number 9 Address: 600 Client:



QUICK RESPONSE FAX OF LABORATORY RESULTS

Today's Date

PROJECT ID: BOC Witmer Road

TO:

COPY TO:

Robert S. Casey

EA Engineering, Science and Technology

(315) 431-4280

FROM:

LIFE SCIENCE LABORATORIES, INC.

LSL PROJECT ID:

0400285

NUMBER OF PAGES TRANSMITTED:

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COMMENTS:

6

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The Quality Department

The Client Services Department

The Field Services Department

The Technical Services Department

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LIFE SCIENCE LABORATORIES, INC. 5854 Butternut Drive, E. Syracuse, NY 13057



Robert S. Casey EA Engineering, Science and Technology 6731 Collamer Road East Syracuse, NY 13057-9759

Phone: (315) 431-4610

FAX: (315) 431-4280

Authorization: 12040.87.0003

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

BOC Witmer Road

LSL Project ID: 0400285

Receive Date/Time: 01/08/04 9:45

Project Received by: DSB

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LSL Middlesex Lab 5611 Water St. Middlesex, NY 14507 Tel. (585) 554-5347 Fax. (585) 554-6743

s nis report was reviewed by	report was reviewed by	·
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	gale a	sultain	. QAD
ife Science	Laboratorics (1	ing	

Date:

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7-010703

LSL Sample ID:

0400285-001

Location:

Sampled:

01/07/04 13:40

Sampled By: RC

Sample Matrix: NPW

	nalytical Method Analyte	Resul	t_Units_	Prep Date		ılysis & Time	Analyst Initials
(1)	EPA 150.1 pH						AAIILIAIS
	Hq	7.5	Std. Units		1/8/0)4 12:30	Don
	pH Measurement Temperature	2;	Degrees C		1/8/0		DSB DSB
NΥ	S DOH ELAP specifications require pH to be measured w	lthin one hour of sample	e collection.		17070	14 14.00	Dan
T)	EPA 160.2 Total Suspended Solids						
	Total Suspended Solids @ 103-105 C	22	nig/l		1/12/0	.4	
7)	EPA 200.7 Total Metals				171270	+	MM
	Barium	<0.2	ma/i	1			
	Chromlum	<0.01		1/8/04	1/9/0		PEF
	Copper	<0.01	m\$/l	1/8/04	1/9/0		PEF
	íron	6.5		1/8/04 1/8/04	1/9/0-		PEF
	Nickel	<0.01	mg/l	1/8/04	1/9/04		PEF
	Selenium	0.012	mg/l	1/8/04	1/9/04 1/9/04		PEF
	Thallium	<0.01	mg/l	1/8/04	1/9/04		PEF
	Zinc	0.011	mg/l	1/8/04	1/9/04		Pef Pef
)	EPA 350.1 Ammonia		•	1.0,0	2/5/04		PEP
	Ammonia as N	3.3	mg/l		1,11,5,10		
)	EPA 351.2 TKN as N		11.8.		1/16/04		DRB
	Total Kjeldahi Nitrogen						
)]	EPA 405.1 BOD-5	4.2	mg∕l	1/19/04	1/21/04		DRB
	Biochemical Oxygen Demand, 5 Day						
	prochemical oxygen bemand 2 Day	8.4`	mg/l		1/9/04	11:31	MM/AS
I	EPA 420.1 Recoverable Phenolics LL						Н
	Phenolics, Total Recoverable						
	A trace amount of this analyte was detecte	0.013	nıg/i	1/15/04	1/16/04		DWK
Ε		ea in the taboratory blar	ık.				
•	EPA 601 Halocarbons by 624(Partial List)						
	Trichloroethene	<1	บธิ/J		1/10/04		BD
	Surrogate (Tol-d8)	<1	ug/i		1/10/04		BD
	Surrogate (4-BFB)	108	%R		1/10/04		BD
	Surrogate (1,2-DCA-d4)	118	%R		1/10/04		RD
E	EPA Method 300,0 A	107	%R		1/10/04		BD
سد	Nitrate as N						
	Nitrite as N	0.20	m <u>@</u> ∕I		1/8/04	18:22	AMW
**		<0.1	mg/l		1/8/04	18:22	AMW
Н	IACH 8000 COD						
	Chemical Oxygen Demand	10	mg/l		1/22/04		DWK
SI	M 18 3500Cr-D Hexavalent Chromium						DWV
	Chromium, Hexavalcut	<0.01	mg/l		1 (0 (0.1	00-14	m
SI	M18-2540C Total Dissolved Solids	···			1/8/04	08:14	DWK
	Total Dissolved Solids @ 180 C	(00					
		690	mg/l		1/13/04		MM

Life Science Laboratories, Inc.

Page 2 of 3

Date Printed:

1/22/04

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

Trip Blank

LSL Sample ID:

0400285-002

Location:

Sampled:

01/07/04 0:00

Sampled By: RC

Sample Matrix: TB

Analytical Method Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
D EPA 601 Halocarbons by 624(Partial List)					
1,1-Dichloroethane	<1	u g /l		1/10/04	BD
Trichlorocthene	<1	ug/l		1/10/04	BD
Sarrogate (Tol-d8)	108	%R		1/10/04	BD
Surrogate (4-BFB)	122	%R		1/10/04	BD
Surrogate (1,2-DCA-d4)	107	%R		1/10/04	BD



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS 8/14/02

O I-HUZ		Water	Cina
Method	<u>Surrogate(s)</u>	Limits, %R	SHW <u>Limits, %</u> R
		Fritten! berr	Carries, MA
EPA 504	TCMX	80-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluorobiphenyl	80-120	NA
EPA 552.2	2,3-DBPA	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70 190	MA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130 70-130	NA
EPA 608	DC8	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB		NA
EPA 625, AE	2-Fluorophenoi	70-130	NA
EPA 625, AE	Phenol-d5	21-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-110	NA
EPA 625, BN	Nitrobenzene-d5	10-123	NA
EPA 625, BN	2-Fluorobiphenyl	35-114	NA
EPA 625, BN	Terphenyl-d14	43-116	NA
C1 77 020, D14	represyldig	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 6082	DÇB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 6270, AE	2-Fluorophenol	21-110	25-121
EPA 6270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 6270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	10 44n	45 44.
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	40-110	40-110
6015M_GRO*	4-BFB	50-150 50-450	50-150
6015M_DRO*	Terphenyl-d14	50-150 50-450	50-150
minimately	, which Late	50-150	50-150

*Run by GC/MS.

Units Key.	ug/i = microgram per liter
	ug/kg = microgram per kilopram
	mg/l = milligram per ider
1	mg/kg = maligram per kilogram
	%R = Percent Recovery

32.A

Bond

N

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Life Science Laborato CHAIN OF CUSTODY RECO LSL North Lab

131 St. Lawrence Ave.

E. Syrnouse, N.Y. 13057.

5854 Butternut Drive

LSL Centre! Lab

Phone: (3/8)445-1105

Waddington, N.Y. 13694

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LSL Southern Tier Lab

Cubs, N.Y. 14727 30 Enet Maln St.

> Phone: (315)388-4478 (315)388-4061

Chone: (585)728-3320

Phone: (585)688-2540 (585)968-0908 F (585)728-2711 Turnaround 11ma Fax (315)445-1301 Fax

*Additional Charges がなったが may apply 3-Day * Date Needed or Special Instructions: Pre-Authorized Authorization or P.O. # Next Day* 2-Dey * 14 DAY Normal Fax: 315 421 4290 TECHNOLOGY Oly/State: East Dypagause , NY COLLAMENT R.D. raser Genest. Born ROBERT S. CASE SCIENCE Client Project ID/Cilont Site ID 515 431 4610 6731 Report Address: Company:

Phone:

Emall

Street

12040.87.0003

(co) 46 LSL 1D# BO1 C 2 P 4 Preserv Check <u>ಸ</u> Crt6, Nigrata Nitrige METALS: Ba, Cr, Se, In, 000 TSS, TDS Analyses TKN, NH3, phenotics 600 | 60g. BoD. o Ti 802. 000 AMBER 500ml size/type 500 ml 500ml 40 ml Containers 4 * Preserv NONE MONE 4,50c Added 4003 NONE HC 55 Matrix 30C WITHER KOAD GRAGE Турв Time grab/comp Sample | Sample [3七 Date 7.447 WRL-EFF7-010703 Cllent's Sample TRIP BLANK identifications

RCVD Sample Temp 0.1.C TIme 01-08-04 09:45 Date *** All areas of this Chain of Custody Record MUST be filled out in order to process samples in a timely manner in PEN ONLY*** Received Intact: // 'N Rec'd for Lab By: (Received By: Received By: Custody Transfers していると Robert Relinquished By: Relinguished By: Shipment Method: Sampled By: Containers the C-O-C aft with 18-058

Reg COC





Robert S. Casey
EA Engineering, Science and Technology
6731 Collamer Road
East Syracuse, NY 13057-9759

Phone: (315) 431-4610

FAX: (315) 431-4280

Authorization: PO# 12040.87

Laboratory Analysis Report For

EA Engineering, Science and Technology

LSL Project ID: 0320451

Receive Date/Time: 12/31/03 8:54

Project Received by: CDG

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LSL Southern Tier Lab 30 East Main St. Cuba. NY 14727 Tcl. (585) 968-2640 Fax (585) 968-0906 NYS DOH ELAP #10760 LSL Middlesex Lab 5611 Water St. Middlesex, NY 14507 Tel. (585) 554-5347 Fax. (585) 554-6743 NYS DOH ELAP #11369

This report was reviewed by:

Life Science Laboratorics, Inc

Date.

1/15/04

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7-123003

LSL Sample ID:

0320451-001

Location:

Witmer Rd. (BOC)

Sampled: 12/30/03 12:30

Sampled By: RSC

Sample Matrix: NPW

Ā	nalytical Method Analyte	Result	Units	Prep Date	Analy Date &		Analyst Initials
\overline{a}	EPA 150.1 pH						
	рн	7.2	Std. Units		12/31/03	09:48	DSB
	pH Measurement Temperature	25			12/31/03	09:48	DSB
N	YS DOH ELAP specifications require pH to be measured within one h	our of sample	collection.				
(1)	EPA 160.2 Total Suspended Solids						
	Total Suspended Solids @ 103-105 C	30	mg/l		1/5/04		MM
(1)	EPA 200.7 Total Metals						
	Barium	<0.2	mg/l	1/5/04	1/5/04		PEF
	Chromium	<0.01	mg/l	1/5/04	1/5/04		PEF
	Copper	< 0.01	mg/l	1/5/04	1/5/04		PEF
	iron	21	mg/l	1/5/04	1/5/04		PEF
	Nickel	<0.01	mg/I	1/5/04	1/5/04		PEF
	Scienium	<0.01	mg/l	1/5/04	1/5/04		PEF
	Thallium	<0.01	mg/l	1/5/04	1/5/04		PEF
	Zinc	0.016	mg/l	1/5/04	1/5/04		PEF
(1)	EPA 350.1 Ammonia						
	Ammonla as N	3.0	mg/l		1/9/04		DRB
(I)	EPA 351.2 TKN as N						
	Total Kjeldahi Nitrogen	2.3	mg/l	1/6/04	1/8/04		DRB
(1)	EPA 405.1 BOD-5		_		170704		DIAD
	Biochemical Oxygen Demand, 5 Day	8.0	mg/l		17/21/02	16.21	
(1)	EPA 420.1 Recoverable Phenolics LL	010	mg i		12/31/03	15:31	MM
	Phenolics, Total Recoverable	0.011					
A tr	ace amount of this analyte was detected in the laboratory blank	0.011	mg/l	1/13/04	1/14/04		DWK
	•						
(1)	EPA 601 Halocarbons by 624(Partial List)						
	1,1-Dichlorocthane Trichloroethene	</td <td>пĒ/J</td> <td></td> <td>1/8/04</td> <td></td> <td>ВĎ</td>	пĒ/J		1/8/04		ВĎ
	Surrogate (Tol-d8)	<1	пБ\J		1/8/04		BD
	Surrogate (4-BFB)	112	%R		1/8/04		BD
	Surrogate (1,2-DCA-d4)	87	%R		1/8/04		BD
(7)	,	84	%R		1/8/04		BD
<i>(1)</i>	EPA Method 300.0 A						
	Nitrate as N	0.26	mg/l		12/31/03	17:57	AMW
	Nitrite as N	<0.1	me∕l		12/31/03	17:57	ΛMW
(1)	SM 18 3500Cr-D Hexavalent Chromium						
	Chromium, Hexavalent	<0.01	mg/l		12/31/03	11:31	DWK

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

Trip Blank

LSL Sample ID:

0320451-002

Location:

Sampled:

12/30/03 0:00

Sampled By:

Sample Matrix: TB

Analytical Method Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
PPA 601 Halocarbons by 624(Partial List)					- III VANAO
1,1-Dichlorocthane	<1	ug/l		1/8/04	
Trichloroethene	<1	ug/i		1/8/04	BD
Surrogate (Tol-d8)	112	%R		1/8/04	BD
Surrogate (4-BFB)	86	%R		1/8/04	CB CB
Surrogate (1,2-DCA-d4)	83	%R		1/8/04	BD BD



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS

8/14/02			
OV 14VUZ		Water	SHW
Method	Surrogate(s)	Limits, %R	Limits, %R
Menton	<u>aunojatelaj</u>	Dilitto, Ver	Enido, Mr.
EPA 504	TCMX	80-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA.
EPA 524.2	1,2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA.
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluorobiphenyi	80-120	NA NA
EPA 552.2	2,3-DBPA	80-120	NA.
C. C. American	70-201 M	Qu. 160	
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DCB	30-150	NA.
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA.
EPA 625, AE	Phenol-d5	10-110	NA NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA.
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluoroblphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 6020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Toi-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 6270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluoroblphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	50-150	50-150
8015M_GRO*	4-BFB	50-150	50-150
8015M_DRO*	Terphenyl-d14	50-150	50-150

*Run by GC/MS.

Units Key:	ug/l = microgram per liter ug/kg = microgram per kilogram
	mg/i = milligram per liter mg/kg = milligram per kilogram
	%R = Percent Recovery

Life Science Laboratories, Inc. CHAIN OF CUSTODY RECORD

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	P	TICHIE: (315)440-1108	2	Phone	Phone: (315)388-4478	20		Phone:				
	Ž.	(310)445-1301	10	Fee	(316)388-4061	1 9		Fat: (583)728-2711		į)968-2640
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Robert Casey EA Engineering, Science and Technology 6731 Collamer Road East Syracuse, NY 13057-9759

Phone: (315) 431-4610

FAX: (315) 431-4280

Authorization: PO# 12040.69

Laboratory Analysis Report For

EA Engineering, Science and Technology

LSL Project ID: 0320265

Receive Date/Time: 12/24/03 8:45

Project Received by: GS

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LSL North Lab 131 St. Lawrence Avenue Waddington, NY 13694 Tel. (315) 388-4476 Fax (315) 388-4061 NYS DOH ELAP #10900

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30 East Main St. Cuba, NY 14727 Tel. (585) 968-2640 Fax (585) 968-0906 NYS DOH ELAP #10760

LSL Southern Tier Lab

L\$L Middlesex Lab 5611 Water St. Middlesex, NY 14507 Tcl. (585) 554-5347 Fax. (585) 554-6743 NYS DOH ELAP #11369

This report was reviewed by:

Life Science Laboratories, Inc

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7-122303

LSL Sample ID:

0320265-001

Location:

Sampled:

12/23/03 12:50

Sampled By: RC

Sample Matrix: NI	PW
-------------------	----

	mple Matrix: NPW alytical Method	Result	; Units	Prep Date	Analys Date & T		Analyst <u>Initials</u>
	Analyte	ROSGIO					
(7)	EPA 150.1 pH	6.8	Std. Units		12/24/03	09:57	DSB
	pΠ	25	Degrees C		12/24/03	09:57	DSB
	pH Measurement Temperature		; -		•		
NY	S DOH ELAP specifications require pH to be measured within on	e nour of sumple t	OHELHOI-				
(1)	EPA 160.2 Total Suspended Solids		,		12/29/03		MM
	Total Suspended Solids @ 103-105 C	10	mg/l		12/29/03		2.77
(1)	EPA 200.7 Total Metals		į				70.00
	Barium	<0.2	mg/l	12/31/03	12/31/03		PEF PEF
	Chromium	<0.01	mg/l	12/31/03	12/31/03		PEF
	Copper	<0.01	mg/l	12/31/03	12/31/03		PEF
	Iron	7.8	mg/l	12/31/03	12/31/03		PEF
	Nickel	<0.01	mg/l	12/31/03	12/31/03		PEF
	Selenium	<0.01	mg/l	12/31/03	12/31/03		PEF
	Thallium	<0.01	mg/l	12/31/03	12/31/03		PEF
	Zine	<0.01	mg/l	12/31/03	12/31/03		1 111
(1)	EPA 350.1 Ammonia		1				
(-,	Ammonia as N	3.6	mg/l		1/7/04		DRÈ
			1				
(1)	EPA 351,2 TKN as N	3.2	mg/l	1/6/04	1/8/04		DRE
	Total Kjeldahl Nitrogen						
(I)	EPA 405.1 BOD-5	-10			12/24/03	12:51	MM
	Biochemical Oxygen Demand, 5 Day	<10	mg/l		12/2-7/05		•
	This result should be considered an estimate d	ie to low oxygen d	reptetion.				
<i>(1)</i>	EPA 420.1 Recoverable Phenolics LL		i i				733107
	Phenolics, Total Recoverable			1/5/04		, .	DWK
Dı du	r netiones, total recoverable is to unexpectedly high carry over from a sample associated with e to inadequate sample quantity	this analytical bu	ich, a result could n	ot be quantitated. S	ubsequent and	atysus was	not possion
(1)	EPA 601 Halocarbons by 624(Partial List)		·				7.5
	1,1-Dichloroethane	<1	ug/l		1/2/04		BI
	Trichlornethene	<1	ug/l		1/2/04		BI
	Surrogate (Tol-d8)	111	%R		1/2/04		BI
	Surrogate (4-BFB)	110	%R		1/2/04		BI
	Surrogate (1,2-DCA-d4)	102	%R		1/2/04		DI
(1)	EPA Method 300.0 A						
` ´	Nitrate as N	0.25	സള∕ി		12/24/03	11:34	RA
	Nitrite as N	<0.1	mg/l		12/24/03	11:34	RA
(1)	HACH 8000 COD						
,~/	Chemical Oxygen Demand	23	,mg/l		1/2/04		DWI
۲4،	A A D D T D D T D T T T T T T T T T T T						
(1)	Chromium, Hexavalent	<0.01	; 'mg/l		12/24/03	10:18	DWI

Life Science Laboratories, Inc.

Page 2 of 3

Date Printed:

1/16/04

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

Trip Blank

LSL Sample ID:

0320265-002

Location:

Sampled:

12/23/03 0:00

Sampled By:

Sample Matrix: TB

Analytical Method	T114	Units	Prep Date	Analysis Date & Time	Analyst Initials
Analyte	Result	Umrs	,,,,,,,		
(1) EPA 601 Halocarbons by 624(Partial List) 1,1-Dichloroethane Trichloroethene Surrogate (Tol-d8) Surrogate (4-BFB) Surrogate (1,2-DCA-d4)	<1 <1 111 109 103	ug/I ug/I %R %R %R		1/2/04 1/2/04 1/2/04 1/2/04 1/2/04	BD BD BD BD



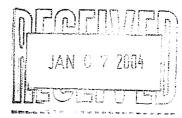
8/14/02			
Of (-HOE		Water	SHW
Method	Surrogate(s)	Limits, %R	Limits, %R
-		80-120	NA
EPA 504	TCMX	70-130	NA NA
EPA 508	DCB	70-130	NA.
EPA 615.4	DCAA	80-120	NA NA
EPA 524.2	1,2-DCA-d4, 4-BFB	70-130	NA NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130 70-130	NA NA
EPA 526	1,3-DM-2-NB, TPP	70-130 70-130	NA NA
EPA 628	2-CP-3,4,5,6-d4, 2,4,6-TBP	80-120	NA NA
EPA 551.1	Decafluoroblphenyl	80-120	NA NA
EPA 552.2	2,3-DBPA	80-120	143
EPA 601	1,2-DCA-d4, Tol-d8, 4-BF8	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DCB	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-8FB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA
EPA 625, AE	Phenol-d5	10-11 0	NA
EPA 625, AE	24.6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	. 33-141	NA
V	•		
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BF8	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 6270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN		43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	50-150	50 -150
8015M_GRO*		50-150	50-150
8015M_DRO*		50-150	50-150

*Run by GC/MS.

Units Key:	ugil = microgrem per liter
	ug/kg = microgram per kilogram
<u> </u>	mg/i = milligram per liter
1	mg/kg = milligram per kilogram
	%R = Percent Recovery

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Robert Casey
EA Engineering, Science and Technology
6731 Collamer Road
East Syracuse, NY 13057-9759

Phone: (315) 431-4610

FAX: (315) 431-4280

Authorization: 12040.69

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

12040.69

LSL Project ID: **0319895**

Receive Date/Time: 12/17/03 9:50

Project Received by: GS

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This	report	was	reviewed	by
------	--------	-----	----------	----

Linda Water QC

Date:

1/2/04

Life Science Laboratories, Inc

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7-121603

LSL Sample ID:

0319895-001

Location:

Witmer Road

Sampled:

12/16/03 13:30

Sampled By: RC

Sample Matrix: NPW

A	nalytical Method			Prep	Analys		Analyst
	Analyte	Result	Units	Date	Date & T	Time	Initials
(1)	4				•		
	pH	7.0	Std. Units		12/16/03	12:14	CDG
	pH Measurement Temperature	25	Degrees C		12/16/03	12:14	CDG
NY	S DOH ELAP specifications require pH to be measured within o	one hour of sample	collection.				
7)	EPA 160.2 Total Suspended Solids						
	Total Suspended Solids @ 103-105 C	48	mg/l		12/22/03		MM
7)	EPA 350.1 Ammonia						
	Ammonia as N	4.3	mg/l		12/31/03		DRB
1)	EPA 351.2 TKN as N		-				
	Total Kjeldahl Nitrogen	5.0	ma/l	12/20/02	12/20/02		ממת
		5.0	mg/l	12/29/03	12/30/03		DRB
I)	EPA 405.1 BOD-5						
	Biochemical Oxygen Demand, 5 Day	7.6	mg/l		12/17/03	19:00	MM/AS
.	TTD 1 100 1 D						Н
1)	EPA 420.1 Recoverable Phenolics ML						
	Phenolics, Total Recoverable	<0.05	mg/l	12/23/03	12/24/03		DWK
I)	EPA 601 Halocarbons by 624(Partial List)						
	1,1-Dichloroethane	<1	ug/l		12/25/03		BD
	Trichloroethene	<1	ug/l		12/25/03		BD
	Surrogate (Tol-d8)	124	%R		12/25/03		BD
	Surrogate (4-BFB)	131	%R		12/25/03		BD
	Surrogate (1,2-DCA-d4)	124	%R		12/25/03		BD
)	EPA 6010 Total Metals						
	Iron	24	mg/l	12/19/03	12/19/03		PEF
	Nickel	< 0.01	mg/l	12/19/03	12/19/03		PEF
	Barium	< 0.01	mg/l	12/19/03	12/19/03		PEF
	Copper	<0.01	mg/l	12/19/03	12/19/03		PEF
	Chromium	< 0.01	mg/l	12/19/03	12/19/03		PEF
	Selenium	< 0.01	mg/l	12/19/03	12/19/03		PEF
	Thallium	<0.01	mg/l	12/19/03	12/19/03		PEF
)	EPA Method 300.0 A						
	Nitrate as N	0.34	mg/l		12/18/03	06:16	RAF
	Nitrite as N	<0.1	mg/l		12/18/03	06:16	RAF
)	HACH 8000 COD						
	Chemical Oxygen Demand	20	mg/l		12/22/03		DWK
)	SM 18 3500Cr-D Hexavalent Chromium		-				
•	Chromium, Hexavalent	-0.01	ma/l		12/12/02	12.22	Dune
		<0.01	mg/l		12/17/03	12:22	DWK
)	SM18-2540C Total Dissolved Solids						
	Total Dissolved Solids @ 180 C	890	mg/l		12/18/03		MM

Page 2 of 2



$\frac{\text{SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS}}{8/14/02}$

0/14/02		Matar	CLIM
<u>Method</u>	Surrogate(s)	Water <u>Limits, %R</u>	SHW <u>Limits, %R</u>
EPA 504	TCMX	80-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluorobiphenyl	80-120	NA
EPA 552.2	2,3-DBPA	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DCB	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenoi	21-110	NA
EPA 625, AE	Phenol-d5	10-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	50-150	50-150
8015M_GRO*	4-BFB	50-150	50-150
8015M_DRO*	Terphenyl-d14	50-150	50-150

*Run by GC/MS.

Lipita Kove	uall = miorogram nor liter
Units Key:	ug/l = microgram per liter
	ug/kg = microgram per kilogram
	mg/l = milligram per liter
	mg/kg = milligram per kilogram
	%R = Percent Recovery



Life Science Laboratories, Inc. CHAIN OF CUSTODY RECORD

	Lot Central Lab	2		LSL NOITH LAD	Lab					LSL Southern Her Lab	
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	E. Syracus	E. Syracuse, N.Y. 13057	57	Waddingt	Waddington, N.Y. 13694	3 5		E-Alsig		Cuba, N.Y. 14727	4727
	Phone: (3	Phone: (315)445-1105	10	Phone: (Phone: (315)388-4476	•				Phone: (585)968-2640	968-2640
	Fax: (3	(315)445-1301	-	Fax:	(315)388-4061	·				Fax: (58	(585)968-0906
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18/2 315			Fax:	215	431 4280	0	Authorizat	Authorization or P.O. #			
Email: VLusey @ Da #5+	5+, com							(5040, uy			
		Witner	Road				LSL Project Number	tNumber			
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Identifications	Date	Time	grab/comp	Matrix	Added	#	size/type			Check	LSL ID#
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					hosiH	-	500ml	TKN, NH3, COD			3
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					2MpM	(200	HOH			ひ
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		Rellnqu	Relinquished By:	1) Kr. 1	2 m		Hec'd for Lab By:	Lab By:	-7/	17-05	09:50 CVD
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Robert Casey
EA Engineering, Science and Technology
6731 Collamer Road
East Syracuse, NY 13057-9759

Phone: (315) 431-4610 FAX: (315) 431-4280

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

12040.87.0003

LSL Project ID: 0319517

Receive Date/Time: 12/10/03 8:02

Project Received by: CDG

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LSL Central Lab 5854 Butternut Drive East Syracuse, NY 13057 Tel. (315) 445-1105 Fax (315) 445-1301 NYS DOH ELAP #10248

LSL North Lab 131 St. Lawrence Avenue Waddington, NY 13694 Tel. (315) 388-4476 Fax (315) 388-4061 NYS DOH ELAP #10900

LSL Finger Lakes Lab 16 N. Main St., PO Box 424 Wayland, NY 14572 Tel. (585) 728-3320 Fax (585) 728-2711 NYS DOH BLAP #11667 LSL Southern Tier Lab 30 East Main St. Cuba, NY 14727 Tel. (585) 968-2640 Fax (585) 968-0906 NYS DOH ELAP #10760 LSL Middlesex Lab 5611 Water St. Middlesex, NY 14507 Tel. (585) 554-5347 Fax. (585) 554-6743 NYS DOH ELAP #11369

This repor	t was	reviewed	by:
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•	1		
- Genda Water	QC D	Date:	12/24/03
Life Science Laboratories, Inc		-	

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7-120903

LSL Sample ID:

0319517-001

Location:

Sampled:

12/09/03 16:20

Sampled By: RSC

Sample Matrix: NPW

Aı	nalytical Method Analyte	Result	Units	Prep Date	Analysis Date & Time	Analys Initials
(1)	EPA 150.1 pH					*111111111
	pH	6.3	Std. Units		12/10/03 13:36	DSB
	pH Measurement Temperature	25	Degrees C		12/10/03 13:36	DSB
NY	'S DOH ELAP specifications require pH to be measured within one hour of	sample			12.1000 15.55	Don
	EPA 160.2 Total Suspended Solids					
	Total Suspended Solids @ 103-105 C	160	**************************************		10/11/03	
71		100	mg/l		12/11/03	MM/GS
1)	EPA 200.7 Total Metals	-				
	Barium	₹0.2	•	12/11/03	12/11/03	PEI
	Chromium	<0.01	mg/l	12/11/03	12/11/03	PE
	Copper	<0.01	J	12/11/03	12/[1/03	PEI
	lron	150		12/11/03	12/11/03	PE
	Nickel	<0.01	mg/l	12/11/03	12/11/03	PEI
	Selenium	<0.01	mg/l	12/11/03	12/11/03	PE
	Thallium	<0.01	mg/l	12/11/03	12/11/03	PEI
	Zine	<0.01	rng/l	12/11/03	12/11/03	PEI
1)	EPA 350.1 Ammonia					
	Ammonia as N	3.1	mg/l		12/19/03	DRE
l)	EPA 351.2 TKN as N					
	Total Kjeldahl Nitrogen	4.8		10/10/02	10/10/10	
	- -	4.0	mg/l	12/18/03	12/19/03	DRE
1)	EPA 405.1 BOD-5					
	Biochemical Oxygen Demand, 5 Day	70	mg/l		12/10/03 16:06	TER
)	EPA 420.1 Recoverable Phenolics LL	:				
	Phenolics, Total Recoverable	0.028	mg/l	12/17/03	12/19/03	DWK
	A trace amount of this analyte was detected in the labora	- 1	•	1211105	1215705	DWK
)	EPA 601/602 Volatiles by 624					
-	Benzene	_,	n			
	Bromodichloromethane	<1	ນg/l "!		12/15/03	BD
	Bromoform	 <	ug/l		12/15/03	BD
	Bromomethane	<1 <1	ug/l		12/15/03	BD
	Carbon tetrachloride	<1	ug/l ug/l		12/15/03	BD
	Chlorobenzene	<1	ug/l		12/15/03	BD
	Chloroethane	<1	ug/l		12/15/03 12/15/03	BD
	2-Chloroethylvinyl ether	<10	ug/l		12/15/03	BD
	Chloroform	<1	ug/l		12/15/03	BD
	Chloromethane	<1	ug/l		12/15/03	BD
	Dibromochloromethane	<1	ug/l		12/15/03	BD
	1,2-Dichlorobenzene	<1	ug/l		12/15/03	BD
	1,3-Dichlorobenzene	</td <td>ug/l</td> <td></td> <td>12/15/03</td> <td>BD</td>	ug/l		12/15/03	BD
	1,4-Dichlorobenzene	<1	ug/l		12/15/03	BD BD
	Dichlorodifluoromethane	<1	ug/l		12/15/03	BD
	1,1-Dichloroethane	· <1	ug/l		12/15/03	BD
	1,2-Dichloroethane	<1	ug/I		12/15/03	BD
	1,1-Dichloroethene	<1	ug/l		12/15/03	BD
	trans-1,2-Dichloroethene	<i< td=""><td>ug/l</td><td></td><td>12/15/03</td><td>BD</td></i<>	ug/l		12/15/03	BD
	1,2-Dichloropropane	</td <td>ug/l</td> <td></td> <td>12/15/03</td> <td>BD</td>	ug/l		12/15/03	BD

Life Science Laboratories, Inc.

Page 2 of 3

Date Printed:

12/23/03

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-EFF7-120903

LSL Sample ID:

0319517-001

Location:

Sampled:

12/09/03 16:20

Sampled By: RSC

Sample Matrix: NPW

		Prep	Analysi	S	Analyst
Result	Units	Date	Date & Ti	ime	<u>Initials</u>
<1	ug/l		12/15/03		BD
<1	ug/l		12/15/03		BD
</td <td>ug/l</td> <td></td> <td>12/15/03</td> <td></td> <td>BD</td>	ug/l		12/15/03		BD
<	ug/l		12/15/03		BD
<1	ug/l		12/15/03		BD
<1	ug/l		12/15/03		BD
<1	ug/l		12/15/03		BD
<	ug/l		12/15/03		BD
<	ug/l		1-2/15/03		BD
<1	ug/l		12/15/03		BD
<	ug/l		12/15/03		BD
78	%R		12/15/03		BD
<1	ug/l		12/15/03		BD
102	%R		12/15/03		BD
91	%R		12/15/03		BD
0.17	mg/l		12/10/03	19:55	RAF
<0.1	mg/l		12/10/03	19:55	RAF
36	mg/l		12/12/03		DWK
<0.01	mg/l		12/10/03	13:37	DWK
	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	< ug/l 78 %R < ug/l 102 %R 91 %R 91 %R	Result Units Date	Result Units Date Date & Ti	Result Units Date Date & Time



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS 8/14/02

011-1102		Water	SHW
Method	Surrogate(s)	Limits, %R	Limits, %R
EDA EDA	TOUR		
EPA 504	TCMX	80-120	NA NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluoroblphenyl	80-120	NA
EPA 552.2	2,3-DBPA	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DC8	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA
EPA 625, AE	Phenol-d5	10-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluoroblphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 8270, BN	Terphenyi-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34°	4-BFB	50-150	50-150
8015M_GRO°	4-BFB	50-15 0	50-150
8015M_DRO*	Terphenyl-d14	50-150	50-150

*Run by GC/MS.

Units Key:	ug/i = mkcrogram per liter
1	ug/kg = mkcrogram per kilogram
i	mg/i = milligram per liter
1	udu _ umBrani ha ma
1	mg/kg = milligram per kilogram
l .	Alta Company for the family
Ł	%R = Percent Recovery
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	7130500	USING TANK	a-mwii					. 1	3-Day	7-Day	18tructions:			67.0003		Analyzae	A tanyona		20	TKN, NH3, COD	755	Metals: Barium, chroming Total	iRons, Thrul , Nided,	類	Crtb, Nitrate, Nitrige	. 52.						N		THE ALI BYBBS OF THIS Chain of Custody Record ALUST be Tilled out in order to process samples in a timely manner in PEN UNLY	
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Robert Casey
EA Engineering, Science and Technology
6731 Collamer Road
East Syracuse, NY 13057-9759

Phone: (315) 431-4610

FAX: (315) 431-4280

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

12040.83.0005

LSL Project ID: 0319068

Receive Date/Time: 12/03/03 9:06

Project Received by: CDG

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LSL North Lab 131 St. Lawrence Avenue Waddington, NY 13694 Tel. (315) 388-4476 Fax (315) 388-4061 NYS DOH ELAP #10900 LSL Finger Lakes Lab 16 N. Main St., PO Box 424 Wayland, NY 14572 Tel. (585) 728-3320 Fax (585) 728-2711 NYS DOH ELAP #11667

LSL Southern Tier Lab 30 East Main St Cuba, NY 14727 Tel. (585) 968-2640 Fax (585) 968-0906 NYS DOH ELAP #10760

LSL Middlesex Lab 5611 Water St. Middlesex, NY 14507 Tel. (585) 554-5347 Fax. (585) 554-6743 NYS DOH ELAP #11369

This report was reviewed by:

Life Science Laboratories Inc

Date:

12-15-03

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID: Location:

WRL-EFF7-120203

LSL Sample ID:

0319068-001

Sampled:

Witner Road Landfill 12/02/03 13:30

Sampled By: RC

Sample Matrix: NPW

=	Analyte	Resul	t Units	Prep		lysis	Analys
(1)	Electronic Report Generation		2 04163	Date	Date &	Time	Initials
	Report Fee						
(1)	EPA 150.1 pH						
	Hq						
	pH Measurement Temporature	8.1			12/4/0	3 14:31	DSB
NYS	DOH ELAP specifications require pH to be measured with	25 hin one hour of ac-1-	Degrees C		12/4/0	3 14:31	DSB
1)	EPA 160.2 Total Suspended Solids	one nour by sample	collection.				
	Total Suspended Solids @ 103-105 C						
1)	EPA 200.7 Total Metals	7.0	mg/l		12/4/03		MM
	Barium						1,771,47
	Chromium	<0.2	mg/l	12/5/03	13/6/03		
	Copper	<0.01	mg/l	12/5/03	1 <i>2/5/</i> 03 1 <i>2/5/</i> 03		PEF
	Iron	<0.01	mg/l	12/5/03	12/5/03		PEF
	Nickel	1.6	ग्राष्ट्र∕ी	12/5/03	12/5/03		PEF
	Selenium	<0.01	mg/l	12/5/03	12/5/03		PEF PEF
	Thalijum	0.014	mg/l	12/5/03	12/5/03		PEF
	Zinc	<0.01	mg/l	12/5/03	12/5/03		PEF
) F	PA 350.1 Ammonia	0.013	mg/l	12/5/03	12/5/03		PEF
•							
	Ammonia as N	2.6	mg/l		12/12/03		•
E	PA 351.2 TKN as N				12/12/03		DRB
	Total Kjeldahl Nitrogen	2.1	mg/l				
E	PA 405.1 BOD-5	**** *	mg.	12/10/03	12/11/03		DRB
	Biochemical Oxygen Demand, 5 Day						
	John Marie John	<4	mg/l		12/3/03	14:59	MM/A5
E	PA 601 Halocarbons by 624(Partial List)						Н
	1,1-Dieblorgethanc						
	Trichloroethene	<1	ug/l		12/6/03		BD
	Surrogate (Tol-d8)		ng/l		12/6/03		BD
	Surrogate (4-BFB)		%R		12/6/03		BD
	Surrogate (1.2-DCA-d4)		%R %R		12/6/03		BD
EF	PA Method 300.0 A	0.0	70K		12/6/03		BD
	Nitrate as N						
	Nitrite as N		mg/l		12/3/03	17:57	RAF
H.	ACH 8000 COD	0.89 1	mg/I			17:57	RAF
111							
	Chemical Oxygen Demand	4.0 r	ng/l		12/12/03		Ditter
SM	18 3500Cr-D Hexavalent Chromium				LE (2)		DWK
	Chromium, Hexavalent						

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Page 2 of 2



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS

Method	Surrogate(s)	Water	SHW
	<u>Soutodafela</u>	Limits, %R	Limits, %R
EPA 604	TCMX		
EPA 508	DCB	80-120	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	70-130	NA
EPA 525.2	1 5 04 0 40 700 0	80-120	NA
EPA 526	1,3-DM-2-NB, TPP, Per-d12	70-13 0	NA
EPA 628	1,3-DM-2-NB, TPP	70-130	NA
EPA 551.1	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 552.2	Decafluorobiphenyl	80-120	NA
	2,3-DBPA	80-120	NA
EPA 601	4.0.004 da m. i		
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA.
EPA 624	DCB	30-150	NA NA
EPA 625, AE	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA NA
EPA 625, AE	Phenol-d5	10-110	NA.
EPA 625, BN	2,4,6-Tribromophenol	10-123	NA NA
EPA 625, BN	Nitrobenzene-dS	35-114	NA NA
EPA 625, BN	2-Fluoroblphenyl	43-116	NA NA
CLW 0529' BM	Terphenyl-d14	33-141	NA NA
EPA 8010	4.5.5		ITM
EPA 6020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 6081	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 6260	1.2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	1 9-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	83-141	
000.040.45		WO-1-41	18-137
DOH 310-13	Dodecane	40-110	40.440
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	50-160	40-110
6015M_GRO*	4-8FB	50-150	50-150 50-150
6015M_DRO*	Terphenyl-d14	50-150	50-150
*Dun bu Ocaso			60-150

*Run by GC/MS.

Halia Maria	
Units Key:	vg/i = microgram per liter
	ug/kg = microgram per kilogram
	mg/i = miligram per liter
	morkg = maigram per kilogram
	%R = Percent Recovery

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Sample Sample Type Preserv Constitute Preserv Constitute Preserv Check LSLIDR 2040 1350 groub 6au H55q 5coul THJ NH 1, COD Col A 2060 1350 groub 6au H55q 5coul Mercers 6au 4h0g 5coul Herrer Mercers 6au 4h0g 1 50oul Mercers 6au 4h0g 1 50oul Mercers 6au 4h0g 1 8oz Cutte Mitrade 4h0g 1 8oz Cutte Mitrade 4h0g 1 6au 6au 6au 4h0g 1 6au 6au 6au 4col 6au 6au 4col <	Client Project ID/Client Site ID		TAME	KUAU	AUNA	ונר							
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20ECO 1350 gree 664 H264 500 mL TH-J NH J, COT 601 6 6 6 6 6 6 6 6 6	Identifications	Date	Time	grab/comp	Matrix		*	8 ze/type			Cileck		
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John John



Robert Casey EA Engineering, Science and Technology 6731 Collamer Road East Syracuse, NY 13057-9759

Phone: (315) 431-4610 FAX: (315) 431-4280

Laboratory Analysis Report

For

EA Engineering, Science and Technology

Client Project ID:

12040.83.0005

LSL Project ID: 0318812

Receive Date/Time: 11/26/03 8:45

Project Received by: CDG

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LSL Middlesex Lab 5611 Water St Middlesex, NY 14507 Tel. (585) 554-5347 Fax. (585) 554-6743 NYS DOH ELAP #11369

This report was reviewed by:

Date: 12-15-03

EA Engineering, Science and Technology

Sampled By:

East Syracuse, NY

Sample ID: Location:

WRL-Eff7-1103

Witmer Road Landfill

Sampled:

11/25/03 14:00

LSL Sample ID:

0318812-001

AI	nalytical Method Analyte	Result	Units	Prep Date	Analys Date & T		Analyst Initials
7)	EPA 150.1 pH						
-/		7.7	Std. Units		11/26/03	12:41	DSB
	pH	25	Degrees C		11/26/03	12:41	DSB
	pH Measurement Temperature S DOH ELAP specifications require pH to be measured with		-		11.20-02		
		mit one nour of sumpto t					
l)	EPA 160.2 Total Suspended Solids		_		4 8 4 7 7 7 7		343
	Total Suspended Solids @ 103-105 C	<4	m <u>e</u> /l		12/1/03		MM
2)	EPA 350.1 Ammonia						
	Ammonia as N	2.1	mg/l		12/9/03		DRI
ij	EPA 351.2 TKN as N						
,	Total Kjeldahl Nitrogen	3.3	mg/I	12/8/03	12/9/03		DR
_	-	3.3	rreD				
()	EPA 405.1 BOD-5						
	Blochemical Oxygen Domand, 5 Day	. <4	mg/l		11/26/03	16:57	M
()	EPA 601 Halocarbons by 624(Partial List)						
	1,1-Dichloroethane	<1	បខ្ល/l		12/6/03		B
	Trichloroethene	<1	ug/l		12/6/03		B
	Surrogate (Tol-d8)	106	%R		12/6/03		B
	Surrogate (4-BFB)	92	%R		12/6/03		B
	Surrogate (1,7-DCA-d4)	86	%R		12/6/03		B
ŋ	EPA 6010 Total Metals						
	Barium	<0.2	mg/l	12/1/03	12/1/03		PE
	Copper	<0.01	mg/l	12/1/03	12/1/03		PE
	Nickel	<0.01	mg/l	12/1/03	12/1/03		PE
	Cadmium	<0.01	mg/I	12/1/03	12/1/03		PE
	Chromium	<0.01	mg/l	12/1/03	12/1/03		PE
	Iron	0.22	mg/l	12/1/03	12/1/03		PE
	Lead	<0.01	mg/l	12/1/03	12/1/03		PE
	Magnesium	8.1	mg/l	12/1/03	12/1/03		PE
	Manganese	0.12	mg/l	12/1/03	12/1/03		PE
	Selenium	0.012	mg/l	12/1/03	12/1/03		PE
	Silicon	2.5	mg/l	12/1/03	12/1/03		PE
	Sodium	42	mg/l	12/1/03	12/1/03		PE
	Thallium	<0.01	mg/l	12/1/03	12/1/03		PE
	Zinc	<0.01	mg/i	12/1/03	12/1/03		PE
D	EPA Method 300.0 A						
	Nitrate as N	<0.1	mg/l		12/3/03	11:51	RA.
	This analysis was performed beyond the	holding time limit.					
	Nitrite as N	0.88	mg/l		12/3/03	11:51	RA
	This analysis was performed beyond the i	holding time limit.					
9	HACH 8000 COD						
-	Chemical Oxygen Demand	3.8	mg/l		12/12/03		DWI
,		,	₩.				
)	SM 18 3500Cr-D Hexavalent Chromium				4 t M P IN n	11.00	es tra
	Chromium, Hexavalent	<0.01	mg/l		11/26/03	11:23	DW

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Page 2 of 2

Date Printed:



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS

B/14/02	•		
		Water	SHW
Method	Surrogate(s)	Limits, %R	Limits, %R
EPA 504	TCMX	60-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1.2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluoroblphenyl	80-120	NA
EPA 552.2	23-DBPA	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DCB	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA
EPA 625, AE	Phenol-d5	10-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 626, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 802 0	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 6270, BN	2-Fluoroblphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34°	4-8FB	50-150	50-150
8015M_GRO*	4-8FB	50-150	60-150
8015M_DRO	Terphenyl-d14	50-150	50-150

*Run by GC/MS.

Units Key:	ug/l = mkrogram per liter ug/kg = mkrogram per kilogram
	mgA = milligram per liter mgAkg = milligram per kilogram %R = Percent Recovery

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		Wrylind, N.Y. 1981. Phone: (885)728-33 Fex: (885)728-2711	Pre-Authorized	Red Day 7-Day 7	Date Needed of Special ingulations	12040.83.		Analyses	1	THW, WHY, COID	1500, 755	Merals	Ha	6 Nissiste	610/620		·				11	Rec'd for Lab By:	Shipment Method: F. D. C.
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					-7.1	EA S	hone: 315, 431 4610	inall: V Couley Course 10/Cilent Site 10 (U TV	Client's Sample	Identifications	WRL- EFF7-1103										(Al. use only:		Cort



Robert Casey
EA Engineering, Science and Technology
6731 Collamer Road
East Syracuse, NY 13057-9759

Phone: (315) 431-4610

FAX: (315) 431-4280

Laboratory Analysis Report For

EA Engineering, Science and Technology

Client Project ID:

12040.83.0005

LSL Project ID: 0318613

Receive Date/Time: 11/21/03 11:35

Project Received by: GS

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LSL Southern Tier Lab 30 East Main St. Cuba, NY 14727 Tel. (585) 968-2640 Fax (585) 968-0906 NYS DOH ELAP #10760

LSL Middlesex Lab 5611 Water St. Middlesex, NY 14507 Tel. (585) 554-5347 Fax. (585) 554-6743 NYS DOH ELAP #11369

This report was reviewed by:

Life Science Laboratories, Inc

Date.

12-10-03

EA Engineering, Science and Technology

East Syracuse, NY

Sample ID:

WRL-Eff7-1103

Location:

BOC Gases

LSL Sample ID:

0318613-001

Sampled:

11/20/03 9:30

Sampled By: RC

Sample Matrix: NPW

Analytical Method Analyte	Result	Units	Prep Date	Analysis		nalys
(1) EPA 150.1 pH			Date	Date & Tir	ne lo	itial.
Щq	2.1	Std. Units				
pH Measurement Temperature	25	5 · · · · ·			4:49	DSE
NYS DOH ELAP specifications require pH to be me	asured within one hour of sample	collection.		11/21/03 1	4:49	DSE
(1) EPA 160.2 Total Suspended Solids	. ,					
Total Suspended Solids @ 103-105 C	12					
(I) EPA 350.1 Ammonia	12	mg/l		11/25/03		MM
Ammonia as N						
7) EPA 351.2 TKN as N	2.9	mg/l		12/5/03		DRB
Total Kjeldahl Nitrogeo	2.3	mg/l	12/2/03	12/3/03		DRB
7) EPA 405.1 BOD-5						
Biochemical Oxygen Demand, 5 Day	<4	mg/l		11/21/03 15	di sese	·/m =
 EPA 601 Halocarbons by 624(Partial L 	.ist)	· ·		11/21/03 [3	:21 MM	/JRG
1,1-Dichloroethane	<1	um/l				
Trichloroetheac	<1	ប g/l ug/l		12/4/03		BD
Surrogate (Tol-d8)	115	%R		12/4/03		BD
Surrogate (4-BFB)	114	%R		12/4/03 12/4/03		BD
Surrogate (1,2-DCA-d4)	109	%R		12/4/03		BD
EPA 6010 Total Metals				121-103		BD
Nickel	<0.01	mg/l	444.44-			
Соррсг	<0.01	mg/l	11/24/03	11/24/03		PEF
Bariam	<0.01	mg/l	11/24/03 11/24/03	11/24/03		PEF
Cadmium	<0.01	mg/I	11/24/03	11/24/03 11/24/03		PEF
Chromium	<0.01	mg/l	11/24/03	11/24/03		PEF PEF
Iron	1.7	mg/l	11/24/03	11/24/03		PEF
Lead	<0.01	mg/l	11/24/03	11/24/03		PEF
Magaesium	5.8	mg/l	11/24/03	11/24/03		EF
Manganese Selenium	0.30	mg/l	11/24/03	11/24/03		EF
Silicon	<0.01	mg/l	11/24/03	11/24/03		PEF
Sodium		mg/l	11/24/03	11/24/03	P	PEF
Thallium		mg/l	11/24/03	11/24/03	P	EF
Zine		mg/l	11/24/03	11/24/03	P	EF
EPA Method 300.0 A	<0.01	mg/l	11/24/03	11/24/03	P	EF
Nitrate as N Nitrite as N	0.83	mg/l		11/21/03 18:3	9 R	АF
	<0.1	mg/l		11/21/03 18:3	9 R/	٨F
HACH 8000 COD						
Chemical Oxygen Demand	14 :	mg/l		12/4/03	wa	π
SM18-2540C Total Dissolved Solids					54	
Total Dissolved Solids @ 180 C	480 r	ng/l		11/26/07		
•	400 1	161		11/25/03	M	M

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12/10/03

0318613-002

-- LABORATORY ANALYSIS REPORT --

EA Engineering, Science and Technology

East Syracuse, NY

LSL Sample ID:

Sample ID: Location:

Sampled:

Trip Blank

BOC Gases

11/20/03 0:00

Sampled By:

Sample Matrix: TB

Analytical Method Analyte Per Analyte Per Analyte Per Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
OUT TIMEOCH COMS DY UZ4(FAI HAI LIST)					
1,1-Dichloroethane Trichloroethane	</td <td>ug/l</td> <td></td> <td>12/4/03</td> <td>BD</td>	ug/l		12/4/03	BD
Surrogate (Tol-d8)	<1	ug/l		12/4/03	BD
Surrogate (4-BFB)	113	%R		12/4/03	BD
- ' '	116	%R		12/4/03	BD
Surrogate (1,2-DCA-u4)	115	%R		12/4/03	BD

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Date Printed:

12/10/03



SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS 8/14/02

<u>Method</u>	Sumogate(s)	Water Limits, %R	SHW Limits, %R
EPA 504	TCMX	00.400	
EPA 508	DCB	80-120	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	70-130	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	80-120	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 651.1	Decafluoroblphenyl	70-130	NA
EPA 552.2	2,3-DBPA	80-120	NA
	COURT N	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA NA
EPA 608	DCB	30-150	NA NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-8FB	70-130	
EPA 625, AE	2-Fluorophenol	21-110	NA NA
EPA 625, AE	Phenol-d5	10-110	
EPA 625, AE	2.4,6-Tribromophenol	10-123	NA NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA NA
EBA 8040	4.6		
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021 EPA 8081	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
	TCMX, DCB	30-150	30-150
EPA 8082	DC8	30-150	30-150
EPA 8151	DCAA	30-1 30	30-120
EPA 8260	1,2-DCA-04, Tol-08, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 6270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluoroblphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 810-13	Dodecane	40 440	
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	40-110	40-110
8015M_GRO*	4-BFB	50-150 50-450	60-150
6015M_DRO*	Terphenyl-d14	50-150 50-450	50-150
	Accompany of the same	50-150	50-150

*Run by GC/MS.

11-14-14	
Units Key.	ug/l = microgram per liter
]	HONE w miner a Lit.
i	ug/kg = microgram per kilogram
į	mg/l = milligram per liter
1 .	
i	mg/kg = miliigram per kilogram
1	%R = Percent Recovery
Contractor Services and Contractor of the Contra	MAY - LOICELL LACOAGIA

Sample Temp -03 11

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Life Science Laboratories, Inc. CHAIN OF CUSTODY RECORD LSt Central Lab.

Waddington, N.Y. 13694 131 St. Lawrence Ave. Phone: 315-388-4476 Fax: 315-388-4061 LSL North Lab.

E. Syracuse, N.Y. 13057 Phone: 315-445-1105

Fax: 315-446-1301

5854 Buttemut Drive

LSL Finger Lakes Lab.

0518613 EAEng

Additional Charges BL 日本 CF 87.40 ඨ <u>ક</u> may apply Check Preserv Date Motalsclestellmm 7-Day 3-Day TIEN, NHZ, COD Date Needed or Special Instructions: Withate, Nitoria. Analyses GOD, TSS, TDS 610/620 I TI BY WILLIAM SEC Authorization or P.O. # Next Day 2-Day * EPA Ţ Turnarou Normal skertype Bounc Sport 14 DAY Somi ずるし rage 2 Amber Custody Transfers Containers 4 Preserv Added Nowe NowE MONE Zip: 1300, Fax: 431,4280 表現 H5504 芝 GREES Matrix 32 Bol GLAB Type grab/comp Sampled By: Relinquished By: 12040.83.0005 Clerice & Technology ППе Sample Sample TOWNON OF TO Loca Date reason e easest.com Callonion Stassey Client Project ID/Client Site ID City/State: E.Sye Attacke irif Blay WEL-EFFT-1103 Cllent's Sample Phone: 431 4610 Identifications Report Address: Company: Name: St use only: Street: Emal:

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Containers this Chain of Custody Record MUST be filled out in order to process samples in a timely manner in PEN ONLY*** . 980