October 28, 2010

Ms. Wallace Coverdale
International Paper
Riegelwood Mill
865 John L. Riegel Road
Riegelwood, North Carolina 28456

Re: Semi-Annual Groundwater
Compliance Monitoring Results (August 2010)
Permit No. 24-02
International Paper, Riegelwood, North Carolina
URS Project No. 31826692.00001

Dear Ms. Coverdale:

URS Corporation (URS) has prepared the attached North Carolina Department of Environment and Natural Resources (NCDENR) Environmental Monitoring Reporting Form and tables presenting the results of the 2010 second semi-annual groundwater compliance monitoring event in the vicinity of the International Paper Riegelwood Mill solid waste landfill. The sampling activities were conducted in accordance with NCDENR Division of Waste Management – Solid Waste Section requirements for groundwater monitoring.

The sampling event was conducted on August 16, 2010. The sampling event included the collection of three water samples, designated Primary, Secondary, and Under-Drain, obtained from the New Landfill Cell 1, and the collection of groundwater samples from monitoring wells MW-1A, MW-1B, MW-4A, MW-5A, MW-7A, and MW-8A. All samples were submitted to Pace Analytical Services, Inc. (a North Carolina certified laboratory) for analysis.

The following are included as attachments to this document:

- NCDENR Environmental Monitoring Reporting Form
- NCDENR Electronic Data Deliverable (EDD)
- Table 1 – Semi-Annual Groundwater Analysis Results
- Table 2 – Historical Groundwater Analysis Results
- Table 3 – New Landfill Cell 1 Analysis Results
- Figure 1 – Location Map
- Figure 2 – Site Map
- Appendix A – Data Validation Report
- Appendix B – Laboratory Report
- Appendix C – Field Activity Documentation

URS Corporation
1600 Perimeter Park, Suite 400
Morrisville, NC 27560
Tel: 919.461.1100
Fax: 919.461.1415

URS appreciates the opportunity to be of continued assistance to International Paper on this project. If you have any questions, please do not hesitate to contact Conan Fitzgerald at (919) 461-1260.

Sincerely,

URS CORPORATION

Conan Fitzgerald, P.E.
Project Engineer

DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

International Paper

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Martha Meyers-Lee Phone: (919) 461-1100

E-mail: martha_meyers-lee@urscorp.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
International Paper	Riegelwood Mill 865 John L. Riegel Road Riegelwood, North Carolina 28456	24-02	.0500	August 16, 2010

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☒ Leachate monitoring data
☐ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Conan Fitzgerald, PE — Senior Project Manager — (919) 461-1100

Facility Representative Name (Print) — Title — (Area Code) Telephone Number

Signature — Date: 10/28/10

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA PROFESSIONAL SEAL 26500 ENGINEER CONAN D. FITZGERALD

URS Corporation, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560

Facility Representative Address

C-2243

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-MW-01A	7440-38-2	14	Arsenic	2.7	ug/L	U	SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	7440-39-3	15	Barium	104	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A		316	Biochemical oxygen demand	2	mg/L	U	SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-MW-01A	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A		317	Chemical oxygen demand	25	mg/L	U	SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-MW-01A	16887-00-6	301	Chloride	10	mg/L		SM 4500Cl	5	5		1	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	7440-47-3	51	Chromium	0.53	ug/L	J	SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-01A	7439-89-6	340	Iron	1650	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A		321	Laboratory pH	4.5	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-01A	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	7439-96-5	342	Manganese	13.9	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	7439-97-6	132	Mercury	0.07	ug/L	U	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-MW-01A	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-01A		437	Orthophosphate	0.05	mg/L	U	EPA 365.1	0.05	0.05		1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-01A	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	7440-22-4	184	Silver	0.1	ug/L	U	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A		324	Specific Conductance	159	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-01A	14808-79-8	315	Sulfate	42	mg/L		ASTM D516-90	10	10	250000	2	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-01A		311	Total Dissolved Solids	82	mg/L		SM 2540C	25	25		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-01A		357	Total Organic Carbon	22.3	mg/L		SM 5310B	1	1		1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-01A		396	Total Organic Halides	0.1	mg/L	U	SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-MW-01A	7440-62-2	209	Vanadium	5.1	ug/L		SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01A	7440-66-6	213	Zinc	1.7	ug/L	J	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7440-38-2	14	Arsenic	7.5	ug/L		SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7440-39-3	15	Barium	26.1	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B		316	Biochemical oxygen demand	2	mg/L	U	SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-MW-01B	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B		317	Chemical oxygen demand	25	mg/L	U	SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-MW-01B	16887-00-6	301	Chloride	8.4	mg/L		SM 4500Cl	5	5		1	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7440-47-3	51	Chromium	0.4	ug/L	U	SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-01B	7439-89-6	340	Iron	2530	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B		321	Laboratory pH	7.2	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-01B	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7439-96-5	342	Manganese	79.4	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7439-97-6	132	Mercury	0.07	ug/L	U	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-MW-01B	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-01B		437	Orthophosphate	0.05	mg/L	U	EPA 365.1	0.05	0.05		1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-01B	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7440-22-4	184	Silver	0.1	ug/L	U	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B		324	Specific Conductance	506	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-01B	14808-79-8	315	Sulfate	26.1	mg/L		ASTM D516-90	5	5	250000	1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-01B		311	Total Dissolved Solids	282	mg/L		SM 2540C	25	25		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-01B		357	Total Organic Carbon	10.8	mg/L		SM 5310B	1	1		1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-01B		396	Total Organic Halides	0.1	mg/L	U	SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-MW-01B	7440-62-2	209	Vanadium	1.6	ug/L	J	SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-01B	7440-66-6	213	Zinc	0.4	ug/L	U	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	7440-38-2	14	Arsenic	2.8	ug/L	J	SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	7440-39-3	15	Barium	72.8	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A		316	Biochemical oxygen demand	2	mg/L	UJ	SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-MW-04A	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A		317	Chemical oxygen demand	25	mg/L	U	SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-MW-04A	16887-00-6	301	Chloride	33.2	mg/L		SM 4500Cl	5	5		1	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	7440-47-3	51	Chromium	0.4	ug/L	U	SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-04A	7439-89-6	340	Iron	8810	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A		321	Laboratory pH	4.9	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-04A	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	7439-96-5	342	Manganese	57.7	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-MW-04A	7439-97-6	132	Mercury	0.14	ug/L	J	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-MW-04A	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-04A		437	Orthophosphate	0.05	mg/L	U	EPA 365.1	0.05	0.05		1	16-Aug-10	18-Aug-10	18-Aug-10	40
24-02	2402-MW-04A	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	7440-22-4	184	Silver	0.1	ug/L	U	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A		324	Specific Conductance	311	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-04A	14808-79-8	315	Sulfate	64.2	mg/L	J	ASTM D516-90	10	10	250000	2	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-04A		311	Total Dissolved Solids	183	mg/L		SM 2540C	25	25		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-04A		357	Total Organic Carbon	13.2	mg/L		SM 5310B	1	1		1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-04A		396	Total Organic Halides	0.1	mg/L		SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-MW-04A	7440-62-2	209	Vanadium	2	ug/L	J	SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-04A	7440-66-6	213	Zinc	11.2	ug/L		SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	7440-38-2	14	Arsenic	3.1	ug/L	J	SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	7440-39-3	15	Barium	130	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A		316	Biochemical oxygen demand	6.3	mg/L		SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-MW-05A	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A		317	Chemical oxygen demand	114	mg/L		SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-MW-05A	16887-00-6	301	Chloride	234	mg/L		SM 4500Cl	40	40		8	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-05A	7440-47-3	51	Chromium	3.3	ug/L	J	SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	31-Aug-10	31-Aug-10	40
24-02	2402-MW-05A	7439-89-6	340	Iron	608	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A		321	Laboratory pH	6.8	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-05A	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	7439-96-5	342	Manganese	332	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	7439-97-6	132	Mercury	0.07	ug/L	U	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-MW-05A	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-05A		437	Orthophosphate	0.067	mg/L		EPA 365.1	0.05	0.05		1	16-Aug-10	18-Aug-10	18-Aug-10	40
24-02	2402-MW-05A	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	7440-22-4	184	Silver	0.1	ug/L	U	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A		324	Specific Conductance	1600	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-05A	14808-79-8	315	Sulfate	568	mg/L		ASTM D516-90	75	75	250000	15	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-05A		311	Total Dissolved Solids	1150	mg/L		SM 2540C	25	25		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-05A		357	Total Organic Carbon	46.6	mg/L		SM 5310B	5	5		5	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-MW-05A		396	Total Organic Halides	0.8	mg/L		SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-MW-05A	7440-62-2	209	Vanadium	7.7	ug/L		SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-05A	7440-66-6	213	Zinc	0.4	ug/L	U	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7440-38-2	14	Arsenic	14.6	ug/L		SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7440-39-3	15	Barium	43.3	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A		316	Biochemical oxygen demand	15	mg/L	J	SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-MW-07A	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A		317	Chemical oxygen demand	126	mg/L		SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-MW-07A	16887-00-6	301	Chloride	227	mg/L		SM 4500Cl	75	75		15	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7440-47-3	51	Chromium	3.3	ug/L	J	SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-07A	7439-89-6	340	Iron	16000	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A		321	Laboratory pH	6.9	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-07A	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7439-96-5	342	Manganese	398	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7439-97-6	132	Mercury	0.07	ug/L	U	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-MW-07A	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-07A		437	Orthophosphate	0.11	mg/L		EPA 365.1	0.05	0.05		1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-07A	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7440-22-4	184	Silver	0.1	ug/L	U	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A		324	Specific Conductance	1980	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-07A	14808-79-8	315	Sulfate	56	mg/L		ASTM D516-90	15	15	250000	3	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-07A		311	Total Dissolved Solids	1190	mg/L		SM 2540C	50	50		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-07A		357	Total Organic Carbon	55.4	mg/L		SM 5310B	5	5		5	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-MW-07A		396	Total Organic Halides	1.1	mg/L		SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-MW-07A	7440-62-2	209	Vanadium	12.6	ug/L		SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-07A	7440-66-6	213	Zinc	0.4	ug/L	U	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	7440-38-2	14	Arsenic	7.3	ug/L		SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	7440-39-3	15	Barium	57.8	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-MW-08A		316	Biochemical oxygen demand	2	mg/L	UJ	SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-MW-08A	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A		317	Chemical oxygen demand	25	mg/L	U	SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-MW-08A	16887-00-6	301	Chloride	6.7	mg/L		SM 4500Cl	5	5		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-08A	7440-47-3	51	Chromium	0.41	ug/L	J	SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	31-Aug-10	31-Aug-10	40
24-02	2402-MW-08A	7439-89-6	340	Iron	16400	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A		321	Laboratory pH	6.7	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-08A	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	7439-96-5	342	Manganese	1030	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	7439-97-6	132	Mercury	0.07	ug/L	U	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-MW-08A	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-MW-08A		437	Orthophosphate	0.05	mg/L	U	EPA 365.1	0.05	0.05		1	16-Aug-10	18-Aug-10	18-Aug-10	40
24-02	2402-MW-08A	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	7440-22-4	184	Silver	0.24	ug/L	J	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A		324	Specific Conductance	1250	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-MW-08A	14808-79-8	315	Sulfate	259	mg/L		ASTM D516-90	50	50	250000	10	16-Aug-10	30-Aug-10	30-Aug-10	40
24-02	2402-MW-08A		311	Total Dissolved Solids	998	mg/L		SM 2540C	25	25		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-MW-08A		357	Total Organic Carbon	17	mg/L		SM 5310B	1	1		1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-MW-08A		396	Total Organic Halides	0.1	mg/L	U	SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-MW-08A	7440-62-2	209	Vanadium	0.2	ug/L	U	SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-MW-08A	7440-66-6	213	Zinc	6.6	ug/L	J	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7440-38-2	14	Arsenic	190	ug/L		SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7440-39-3	15	Barium	251	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System		316	Biochemical oxygen demand	30	mg/L	J	SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-Primary Leachate Collection System	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System		317	Chemical oxygen demand	1230	mg/L		SM 5220D	50	50		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-Primary Leachate Collection System	16887-00-6	301	Chloride	255	mg/L		SM 4500Cl	100	100		20	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7440-47-3	51	Chromium	128	ug/L		SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	16984-48-8	312	Fluoride	0.4	mg/L	U	SM 4500F	0.4	0.4	2000	1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-Primary Leachate Collection System	7439-89-6	340	Iron	10100	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-Primary Leachate Collection System		321	Laboratory pH	7.2	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-Primary Leachate Collection System	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7439-96-5	342	Manganese	500	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7439-97-6	132	Mercury	0.15	ug/L	J	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-Primary Leachate Collection System	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-Primary Leachate Collection System		437	Orthophosphate	0.51	mg/L		EPA 365.1	0.05	0.05		1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-Primary Leachate Collection System	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7440-22-4	184	Silver	1.5	ug/L	J	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System		324	Specific Conductance	8600	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-Primary Leachate Collection System	14808-79-8	315	Sulfate	39.5	mg/L		ASTM D516-90	10	10	250000	2	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-Primary Leachate Collection System		311	Total Dissolved Solids	7120	mg/L		SM 2540C	100	100		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-Primary Leachate Collection System		357	Total Organic Carbon	510	mg/L		SM 5310B	100	100		100	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System		396	Total Organic Halides	1.4	mg/L		SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-Primary Leachate Collection System	7440-62-2	209	Vanadium	828	ug/L		SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Primary Leachate Collection System	7440-66-6	213	Zinc	0.4	ug/L	U	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7440-38-2	14	Arsenic	5.3	ug/L		SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-Secondary Leachate Collection System	7440-39-3	15	Barium	42.1	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System		316	Biochemical oxygen demand	6.6	mg/L		SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System		317	Chemical oxygen demand	119	mg/L		SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-Secondary Leachate Collection System	16887-00-6	301	Chloride	40.7	mg/L		SM 4500Cl	10	10		2	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7440-47-3	51	Chromium	7.6	ug/L		SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7440-50-8	54	Copper	0.4	ug/L	J	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7439-89-6	340	Iron	2650	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System		321	Laboratory pH	6.5	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7439-96-5	342	Manganese	301	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7439-97-6	132	Mercury	0.07	ug/L	U	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-Secondary Leachate Collection System	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-Secondary Leachate Collection System		437	Orthophosphate	1.9	mg/L		EPA 365.1	0.1	0.1		2	16-Aug-10	18-Aug-10	18-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7440-22-4	184	Silver	0.12	ug/L	J	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System		324	Specific Conductance	2290	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-Secondary Leachate Collection System	14808-79-8	315	Sulfate	162	mg/L		ASTM D516-90	25	25	250000	5	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-Secondary Leachate Collection System		311	Total Dissolved Solids	1600	mg/L		SM 2540C	25	25		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-Secondary Leachate Collection System		357	Total Organic Carbon	50.2	mg/L		SM 5310B	5	5		5	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System		396	Total Organic Halides	0.2	mg/L		SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-Secondary Leachate Collection System	7440-62-2	209	Vanadium	15.4	ug/L		SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Secondary Leachate Collection System	7440-66-6	213	Zinc	3	ug/L	J	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-38-2	14	Arsenic	7.8	ug/L		SW-846 6010	2.7	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-39-3	15	Barium	101	ug/L		SW-846 6010	0.2	5	100	1	16-Aug-10	23-Aug-10	25-Aug-10	40

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-Under-Drain Leachate Collection System		316	Biochemical oxygen demand	11	mg/L	J	SM 5210B	2	2		1	16-Aug-10	17-Aug-10	22-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-43-9	34	Cadmium	0.5	ug/L	U	SW-846 6010	0.5	1	1	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System		317	Chemical oxygen demand	307	mg/L		SM 5220D	25	25		1	16-Aug-10	20-Aug-10	20-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	16887-00-6	301	Chloride	264	mg/L		SM 4500Cl	90	90		18	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-47-3	51	Chromium	31.3	ug/L		SW-846 6010	0.4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-50-8	54	Copper	0.3	ug/L	U	SW-846 6010	0.3	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	16984-48-8	312	Fluoride	0.1	mg/L	U	SM 4500F	0.1	0.1	2000	1	16-Aug-10	24-Aug-10	24-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7439-89-6	340	Iron	9020	ug/L		SW-846 6010	14	50	300	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System		321	Laboratory pH	6.7	s.u.	J	SM 4500H		1		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7439-92-1	131	Lead	4	ug/L	U	SW-846 6010	4	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7439-96-5	342	Manganese	578	ug/L		SW-846 6010	0.3	5	50	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7439-97-6	132	Mercury	0.07	ug/L	U	SW-846 7470	0.07	0.2	0.2	1	16-Aug-10	25-Aug-10	26-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	14797-55-8	303	Nitrate	0.1	mg/L	U	EPA 353.2	0.1	0.1	10000	1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System		437	Orthophosphate	0.27	mg/L		EPA 365.1	0.05	0.05		1	16-Aug-10	17-Aug-10	17-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7782-49-2	183	Selenium	3.8	ug/L	U	SW-846 6010	3.8	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-22-4	184	Silver	0.29	ug/L	J	SW-846 6010	0.1	5	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40

FACILITY PERMIT	WELL ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE	NC LAB CERT #
24-02	2402-Under-Drain Leachate Collection System		324	Specific Conductance	4230	umhos/cm		EPA 120.1	10	10		1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	14808-79-8	315	Sulfate	7.9	mg/L		ASTM D516-90	5	5	250000	1	16-Aug-10	27-Aug-10	27-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System		311	Total Dissolved Solids	2950	mg/L		SM 2540C	100	100		1	16-Aug-10	19-Aug-10	19-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System		357	Total Organic Carbon	82.9	mg/L		SM 5310B	5	5		5	16-Aug-10	25-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System		396	Total Organic Halides	0.5	mg/L		SW-846 9020	0.1			1	16-Aug-10		01-Sep-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-62-2	209	Vanadium	75.4	ug/L		SW-846 6010	0.2	5	25	1	16-Aug-10	23-Aug-10	25-Aug-10	40
24-02	2402-Under-Drain Leachate Collection System	7440-66-6	213	Zinc	0.4	ug/L	U	SW-846 6010	0.4	10	10	1	16-Aug-10	23-Aug-10	25-Aug-10	40

TABLES

TABLE 1
SEMI-ANNUAL GROUNDWATER ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA
AUGUST 2010 EVENT

		Montioring Well:	MW-1A		MW-1B		MW-4A		MW-5A		MW-7A		MW-8A		2L	
		Collection Date:	8/16/10		8/16/10		8/16/10		8/16/10		8/16/10		8/16/10			
Method	Parameter	Units	Value	Q	Value	Q	Value	Q	Value	Q	Value	Q	Value	Q	*Standard*	*SWSL*
SW-846 6010	Arsenic	ug/l	2.7	U	7.5		2.8	J	3.1	J	14.6		7.3		10	10
SW-846 6010	Barium	ug/l	104		26.1		72.8		130		43.3		57.8		700	100
SW-846 6010	Cadmium	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	2	1
SW-846 6010	Chromium	ug/l	0.53	J	0.4	U	0.4	U	3.3	J	3.3	J	0.41	J	10	10
SW-846 6010	Copper	ug/l	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	1,000	10
SW-846 6010	Iron	ug/l	1650		2530		8810		608		16000		16400		300	300
SW-846 6010	Lead	ug/l	4	U	4	U	4	U	4	U	4	U	4	U	15	10
SW-846 6010	Manganese	ug/l	13.9		79.4		57.7		332		398		1030		50	50
SW-846 6010	Selenium	ug/l	3.8	U	3.8	U	3.8	U	3.8	U	3.8	U	3.8	U	20	10
SW-846 6010	Silver	ug/l	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.24	J	20	10
SW-846 6010	Vanadium	ug/l	5.1		1.6	J	2	J	7.7		12.6		0.2	U	NE	25
SW-846 6010	Zinc	ug/l	1.7	J	0.4	U	11.2		0.4	U	0.4	U	6.6	J	1,000	10
SW-846 7470	Mercury	ug/l	0.07	U	0.07	U	0.14	J	0.07	U	0.07	U	0.07	U	1	0.2
ASTM D516-90	Sulfate	ug/l	42,000		26100		64200	J	568000		56000		259000		250,000	250,000
EPA 120.1	Specific Conductance	umhos/cm	159		506		311		1600		1980		1250		NE	NE
EPA 353.2	Nitrate	ug/l	100	U	100	U	100	U	100	U	100	U	100	U	10,000	10,000
SM 2540C	Total Dissolved Solids	ug/l	82,000		282000		183000		1150000		1190000		998000		500,000	NE
SM 4500Cl	Chloride	ug/l	10,000		8400		33200		234000		227000		6700		250,000	NE
SM 4500F	Fluoride	ug/l	100	U	100	U	100	U	100	U	100	U	100	U	2,000	2,000
SM 5210B	Biochemical oxygen	ug/l	2,000	U	2000	U	2000	UJ	6300		15000	J	2000	UJ	NE	NE
SM 5220D	Chemical oxygen	ug/l	25,000	U	25000	U	25000	U	114000		126000		25000	U	NE	NE
SM 5310B	Total Organic Carbon	ug/l	22,300		10800		13200		46600		55400		17000		NE	NE
SW-846 9020	Total Organic Halides	ug/l	100	U	100	U	100		800		1100		100	U	NE	NE
SM 4500H	pH	s.u.	4.5	J	7.2	J	4.9	J	6.8	J	6.9	J	6.7	J	6.5-8.5	NE

Notes

Bold values indicate concentrations in excess of NC Groundwater quality standards for the protection of the groundwater.

2L Standard - 15A NCAC 2L Groundwater Standards

SWSL - Solid Waste Section Limits

NE = Not Established

NS = Not Sampled

s.u. = Standard unit

ug/L = Micrograms per Liter

umhos/cm = Micromhos per centimeter

Qualifiers (Q):

U	The analyte was analyzed for, but was not detected above the associated detection limit.
UJ	The analyte was not detected and the associated detection limit is estimated
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample

TABLE 2
HISTORICAL GROUNDWATER ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA

PARAMETER	MONITORING WELL MW-1A																											2L Std	SWSL
	1997	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010			
	SEPT	APRIL	SEPT	MAR	NOV	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	AUG	MAR	AUG		
BOD, mg/L	<2	<2	<2	<2	5	12	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5	< 2	<5	<2.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS	2 U	2 U	2 U	NE	NE
COD, mg/L	<5	6.34	6.27	<5	46	<5.0	<5.0	<5.0	<5.0	25	<5.0	7	<20.0	< 20	< 20	<20	21	<20	<20	<20	<20	<20	<20	25 U	25 U	25 U	25 U	NE	NE
TOX, mg/L	0.0179	0.0119	0.02	<0.005	0.015	<0.010	0.022	0.0271	0.0173	0.0299	0.0156	0.022	<.010	0.013	< 0.100	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	0.0092	0.026	0.03	0.04	3.8	0.1 U	NE	NE
TOC, as C, mg/L	4.99	2.01	2.46	1.72	7	3.3	2.1	3.64	3.40	2.90	<0.5	4.3	2.3	2.6	1.3	1.8	3.8	2.3	2.8	1.9	3.7	43	2.7	8.5	7	0.05 U	22.3	NE	NE
TDS, mg/L	90	110	110	113	96.4	31	103	123	116	112	133	111	110	100	99	94	210	62	90	86	200	260	74	82	20 U	64	82	500	NE
pH	4.75	4.37	4.22	4.19	4.34	3.97	4.23	4.03	3.82	3.90	4.02	3.72	4.20	6.6	4.1	4.4	6.8	3.9	5.2	4.4	6.7	7.9	4.6	4.4 J	4.5 J	4 J	4.5 J	6.5-8.5	NE
Conductivity, umohs/cm	159	189	194	188	178	187.5	176	190	193	188	198	194	190	200	170	170	320	170	150	170	320	410	160	187	170	177	159	NE	NE
Sulfate, mg/L	29.2	52.2	53.9	61.7	63.5	39	36	61	58	35	59	49	62	55	50	54	38	40	33	42	21	51	42	38.2	35.1	46.1	42	250	250
Chloride, as Cl, mg/L	20.8	12.9	19.7	13.3	14.5	20.5	22.5	9.2	8.2	11.0	8.4	8.8	6.2	9.6	8.3	10.0	11.0	13	12	15	4.8	5.8	14	15.6	8.8	8.2	10	250	NE
Fluoride, as F, mg/L	<0.1	<0.1	<0.1	<0.1	0.14	0.49	0.17	<0.2	0.17	0.16	0.12	0.2	0.2	< 0.100	0.11	<0.100	<0.100	<0.10	0.32	<0.10	0.15	0.069	<0.10	0.1 U	0.1 U	0.1 U	0.1 U	2	2
Nitrate, as NO3-N, mg/L	<0.1	<0.5	<0.5	<0.1	0.09	0.17	0.15	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	< 0.100	< 0.100	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	0.097	<0.10	0.1 U	0.1 U	0.1 U	0.1 U	10	10
Arsenic, as As, mg/L	<0.025	<0.025	<0.025	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.026	0.031	<0.020	<0.020	<0.020	<0.020	0.018	0.00028	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.01	0.01
Barium, as Ba, mg/L	0.082	0.129	0.114	0.152	0.141	0.121	<0.1	0.148	0.156	0.148	0.148	0.139	0.16	0.150	0.140	0.120	0.020	0.11	0.12	0.12	<0.0050	0.028	0.12	0.0839	0.122	0.106	0.104	0.7	0.1
Cadmium, as Cd, mg/L	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.005	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0005	<0.0005	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002	0.001
Chromium, as Cr, mg/L	0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.00063 B	0.0004 U	0.00046 B	0.00053 J	0.01	0.01
Copper, as Cu, mg/L	0.009	<0.005	<0.005	<0.005	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	0.021	<0.0050	<0.0010	0.0003 U	0.0003 U	0.0003 U	0.0003 U	1	0.01
Iron, as Fe, mg/L	0.834	1.5	1.96	2.52	2.28	1.97	2.63	2.73	3.31	2.35	2.34	2.56	2.6	2.80	1.90	1.60	12.00	0.34	1.2	1.7	<0.10	14	1.4	0.821	2.28	0.969	1.65	0.3	0.3
Lead, as Pb, mg/L	<0.020	<0.020	<0.020	<0.020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	< 0.005	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.004 U	0.004 U	0.004 U	0.004 U	0.015	0.01
Manganese, as Mn, mg/L	<0.010	0.017	0.0225	0.0212	0.0244	0.0169	0.017	0.0757	0.0249	0.0208	0.0195	0.0201	0.03	0.020	0.017	0.018	0.330	0.016	0.02	0.014	0.026	0.32	0.013	0.0095	0.0173	0.0146	0.0139	0.05	0.05
Mercury, as Hg, mg/L	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00007 U	0.00007 U	0.00007 U	0.00007 U	0.001	0.0002
Selenium, as Se, mg/L	<0.100	<0.100	<0.100	<0.100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	< 0.010	0.01	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0050	0.00081	0.0038 U	0.0038 U	0.0038 U	0.0038 U	0.02	0.01
Silver, as Ag, mg/L	<0.015	<0.015	<0.015	<0.015	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	< 0.0050	< 0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.032	<0.010	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.02	0.01
Vanadium, mg/L	NA	NA	NA	NA	NA	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	0.0044	0.013	0.0057	0.0136	0.0041 J	0.0051	NE*	0.025
Zinc, as Zn, mg/L	0.01	0.01	<0.100	0.0218	<0.02	<0.02	<0.02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.044	0.032	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.050	0.025	0.0038 B	0.0093 B	0.0065 B	0.0017 J	1	0.01

NOTES:
< Symbol = Below Laboratory Detectable Limits
2L Std - Title 15, North Carolina Administrative Code, Subchapter 2L, class GA groundwater standard.
GWP Std - Ground Water Protection Standard (used when no 2L Standards are established). *The GWP Standard for vanadium is 0.0035 mg/L
SWSL - Solid Waste Section Limits - target laboratory method detection limits
Bold text denotes results that exceed NC ground-water standards
Data is reported in milligrams per liter (mg/L) unless otherwise noted
NA = Not Analyzed
NE = Not Established
Refer to laboratory reports for actual sample dates

Qualifiers (Q):

U	The analyte was analyzed for, but was not detected above the associated detection limit.
B	The analyte was detected in a laboratory blank at a similar concentration.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample
UJ	The analyte was not detected and the associated detection limit is estimated

TABLE 2 Continued
HISTORICAL GROUNDWATER ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA

PARAMETER	MONITORING WELL MW-1B																												2L Std	SWSL
	1997	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010			
	SEPT	APRIL	SEPT	MAR	NOV	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	AUG	MAR	AUG		
BOD, mg/L	<2	<2	<2	<2	>27*	2	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5	< 2	<5	<2.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS	2 U	2 U	2 U	NE	NE
COD, mg/L	9.47	8.46	6.55	5.18	6.00	9	5	<5.0	<5.0	<5.0	27	6	<20	< 20	94	<20	<20	<20	<20	<20	<20	<20	<20	25 U	25 U	25 U	25 U	NE	NE
TOX, mg/L	0.007	0.0	0.01	<0.005	<0.01	<0.020	<0.01	0.0463	0.0171	0.0443	0.0195	0.03	<0.010	NR	< 0.100	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	0.015	0.033	0.02	0.04	5	0.1 U	NE	NE
TOC, as C, mg/L	8.19	1.54	<0.100	1.02	8.40	5.3	1.7	3.18	16.80	<0.5	<0.5	5.50	1.90	2.3	1.3	1.0	2.1	1.6	2.4	1.5	4	2.4	4	15.6	4.6	0.4	10.8	NE	NE
TDS, mg/L	293	367	352	391	387	290	411	360	394	339	364	293	320	280	320	310	100	160	190	180	110	76	280	312	36	228	282	500	NE
pH	7.38	7.42	7.19	7.35	7.27	7.37	7.26	7.47	7.64	7.35	7.42	7.41	7.30	6.4	6.9	7.4	5.0	6.5	6.8	6.8	4.4	4.8	7.2	7.5 J	6.4 J	7.4 J	7.2 J	6.5-8.5	NE
Conductivity, umohs/cm	449	499	554	564	543	583	599	501	610	513	596	442	540	480	540	500	160	310	280	290	160	160	480	585	265	431	506	NE	NE
Sulfate Turbidimetric, mg/L	30	48.2	55.2	56.7	49.0	50.0	44.5	49	51	38	60.0	35	42	39	40	34	38	20	15	20	48	48	37	31.6	9.9	22.2	26.1	250	250
Chloride, as Cl, mg/L	9.01	7.40	12.60	10.00	12.90	13.5	14.0	7.9	6.1	8.1	6.4	12.0	8.0	6.4	5.6	6.4	11.0	6.5	4.2	4.8	11	14	5	12.3	10.3	8.9	8.4	250	NE
Fluoride, as F, mg/L	0.138	0.155	0.145	0.162	0.150	0.44	0.15	<0.2	0.15	0.13	0.12	0.19	0.15	0.18	0.18	0.14	<0.100	<0.10	0.11	0.12	0.15	0.13	0.14	0.1 U	0.17	0.11	0.1 U	2	2
Nitrate, as NO3-N, mg/L	0.11	<0.5	<0.5	<0.1	0.08	0.33	0.13	<0.2	<0.2	0.38	0.2	0.45	<0.1	< 0.100	0.22	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	0.15	0.1 U	0.1 U	0.1 U	0.1 U	10	10
Arsenic, as As, mg/L	<0.025	<0.025	<0.025	<0.025	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	<0.010	<0.020	<0.020	<0.020	<0.020	<0.020	0.31	<0.0050	0.0018	0.0044 U	0.0027 U	0.0097	0.0075	0.01	0.01
Barium, as Ba, mg/L	0.054	0.041	0.044	0.038	<0.1	<0.1	<0.1	<0.100	<0.100	<0.100	<0.100	<0.0100	0.022	0.016	0.049	0.024	0.095	0.013	0.018	0.016	0.2	0.12	0.022	0.0186	0.0149	0.016	0.0261	0.7	0.1
Cadmium, as Cd, mg/L	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0050	<0.005	<0.0100	<0.005	< 0.005	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	<0.00050	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002	0.001
Chromium, as Cr, mg/L	0.012	<0.010	<0.010	<0.010	<0.01	<0.01	<0.02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	0.028	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0035	<0.010	0.0032 B	0.0004 U	0.0004 U	0.0004 U	0.01	0.01
Copper, as Cu, mg/L	<0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0101	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0050	<0.0010	0.0003 U	0.0003 U	0.0003 U	0.0003 U	1	0.01
Iron, as Fe, mg/L	1.30	0.665	1.79	0.37	<0.1	1.28	<0.1	0.212	0.508	1.37	<0.0102	0.38	0.38	0.29	11.00	3.70	5.40	3.00	3.1	3.5	11	1.9	1.4	0.639	0.676	4.64	2.53	0.3	0.3
Lead, as Pb, mg/L	0.023	<0.020	<0.020	<0.020	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0103	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.004 U	0.004 U	0.004 U	0.004 U	0.015	0.01
Manganese, as Mn, mg/L	0.077	0.046	0.072	0.028	0.026	0.0486	<0.01	<0.0100	0.0161	0.0429	<0.0104	0.0136	<0.01	0.010	0.130	0.300	0.015	0.047	0.16	0.05	1.2	0.015	0.041	0.0252	0.0095	0.0984	0.0794	0.05	0.05
Mercury, as Hg, mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0003	<0.0003	<0.0105	<0.0003	<0.0002	< 0.0002	< 0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00007 U	0.00007 U	0.00007 U	0.00007 U	0.001	0.0002
Selenium, as Se, mg/L	<0.100	<0.100	<0.100	<0.100	<0.01	<0.01	<0.01	<0.0100	0.0142	<0.0100	<0.0106	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0050	0.00039	0.0038 U	0.0038 U	0.0038 U	0.0038 U	0.02	0.01
Silver, as Ag, mg/L	<0.015	<0.015	<0.015	<0.015	<0.01	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0107	<0.0100	<0.005	< 0.005	< 0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0061	<0.010	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.02	0.01
Vanadium, mg/L	NA	NA	NA	NA	NA	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0108	<0.0500	<0.010	< 0.010	< 0.010	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	0.015	<0.010	0.0013 B	0.00065 J	0.0019 J	0.0016 J	NE*	0.025
Zinc, as Zn, mg/L	0.021	0.012	<0.100	0.0149	<0.02	<0.02	<0.02	<0.0200	<0.0200	<0.0200	<0.0109	<0.0200	<0.030	< 0.030	0.054	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.050	<0.010	0.0059 B	0.0083 B	0.003 B	0.0004 U	1	0.01

NOTES:
< Symbol = Below Laboratory Detectable Limits
2L Std - Title 15, North Carolina Administrative Code, Subchapter 2L, class GA groundwater standard.
GWP Std - Ground Water Protection Standard (used when no 2L Standards are established). *The GWP Standard for vanadium is 0.0035 mg/L
SWSL - Solid Waste Section Limits - target laboratory method detection limits
Bold text denotes results that exceed NC ground-water standards
Data is reported in milligrams per liter (mg/L) unless otherwise noted
NA = Not Analyzed
NE = Not Established
Refer to laboratory reports for actual sample dates

Qualifiers (Q):

U	The analyte was analyzed for, but was not detected above the associated detection limit.
B	The analyte was detected in a laboratory blank at a similar concentration.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample
UJ	The analyte was not detected and the associated detection limit is estimated

TABLE 2 Continued
HISTORICAL GROUNDWATER ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA

PARAMETER	MONITORING WELL MW-4A																											2L Std	SWSL
	1997	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010			
	SEPT	APRIL	SEPT	MAR	NOV	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	AUG	MAR	AUG		
BOD, mg/L	<2	<2	<2	<2	4	4	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5	<2	<5	<2.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	2 UJ	2 UJ	2 U	2 UJ	NE	NE
COD, mg/L	16.7	9.52	11.3	14.5	10	16	9.8	12	6	22	41	<5.0	<20	< 20	27	24	< 20	<20	<20	<20	<20	18	13	25 U	29.5	25 U	25 U	NE	NE
TOX, mg/L	0.047	0.039	0.041	0.013	<0.01	0.037	0.019	0.0329	0.0297	0.0255	0.0215	0.027	<0.010	0.018	<0.100	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	0.019	0.048	0.02	0.06	8.8	0.1	NE	NE
TOC, as C, mg/L	6.33	4.65	2.06	3.24	7.2	5.3	5	4.99	4.7	3.1	2.7	3.4	4.4	6.7	6.2	6.3	3.4	6.7	5.7	5.6	7.3	4.7	7.8	14.2	5.6	0.5	13.2	NE	NE
TDS, mg/L	104	155	131	170	117	35	108	153	112	104	186	77	120	190	160	200	200	180	210	110	88	160	95	108	160	174	183	500	NE
pH	5.00	5.72	5.31	5.08	5.60	5.17	4.72	5.05	4.64	4.65	4.61	4.66	5.40	5.9	4.7	4.8	4.8	5.0	4.7	5.2	3.9	4.2	4.5	4.6 J	4.7 J	5.1 J	4.9 J	6.5-8.5	NE
Conductivity, umohs/cm	158	224	202	269	222	198.4	157	216.7	179	152	125	122	200	270	280	310	240	320	310	190	230	250	160	240	205	339	311	NE	NE
Sulfate Turbidimetric, mg/L	30.6	36.4	40	72.4	48.8	39	34	60	41	35	28	29	46	60	51	75	52	82	77	54	75	76	43	43.7	37.7	84.1	64.2 J	250	250
Chloride, as Cl, mg/L	20.2	28.9	29	29	26.5	25.5	29.5	19	17	16	13	9.8	19	24	34	34	24	31	28	10	16	22	14	24.1	26.6	28.9	33.2	250	NE
Fluoride, as F, mg/L	<0.1	<0.1	<0.1	<0.1	0.29	0.42	0.2	<0.2	0.15	0.11	<0.10	0.18	<0.10	< 0.100	< 0.100	0.110	0.120	0.180	0.12	<0.10	<0.10	<0.10	0.081	0.1 U	0.1 U	0.14	0.1 U	2	2
Nitrate, as NO3-N, mg/L	<0.1	<0.1	<0.1	<0.1	0.06	0.22	0.26	<0.2	<0.2	0.38	<0.2	<0.2	<0.1	< 0.100	< 0.100	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	0.018	0.1 U	0.1 U	0.1 U	0.1 U	10	10
Arsenic, as As, mg/L	<0.025	<0.025	<0.025	<0.025	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0010	<0.0010	0.0027 U	0.0027 U	0.0027 U	0.0028 J	0.01	0.01
Barium, as Ba, mg/L	0.093	0.04	0.0344	0.0683	<0.1	<0.1	<0.1	<0.100	<0.100	<0.100	<0.100	<0.0100	0.043	0.075	0.066	0.081	0.074	0.071	0.087	0.039	<0.0050	0.051	0.047	0.0668	0.0612	0.0579	0.0728	0.7	0.1
Cadmium, as Cd, mg/L	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0050	<0.005	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	0.00022	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002	0.001
Chromium, as Cr, mg/L	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0018 B	0.00046 J	0.00098 B	0.0004 U	0.01	0.01
Copper, as Cu, mg/L	0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	0.062	<0.0010	<0.0010	0.00075 U	0.0003 U	0.0003 U	0.0003 U	1	0.01
Iron, as Fe, mg/L	13.3	1.67	5.32	2.09	2.59	5.61	1.2	3.51	0.345	0.239	<0.100	0.519	6.1	10	9.2	9.3	3.8	11.0	9	8.6	<0.10	6.6	0.7	1.9	4.22	5.32	8.81	0.3	0.3
Lead, as Pb, mg/L	<0.020	<0.020	<0.020	<0.020	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.004 U	0.004 U	0.004 U	0.004 U	0.015	0.01
Manganese, as Mn, mg/L	0.076	0.096	0.053	0.058	0.055	0.0472	0.0397	0.0480	0.0394	0.0423	0.0301	0.0276	0.054	0.078	0.120	0.110	0.048	0.061	0.064	0.04	0.025	0.062	0.024	0.0507	0.0391	0.0501	0.0577	0.05	0.05
Mercury, as Hg, mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0002	< 0.0002	< 0.00020	< 0.00020	< 0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00007 U	0.00007 U	0.00007 U	0.00014 J	0.001	0.0002
Selenium, as Se, mg/L	<0.100	<0.100	<0.100	<0.100	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.00066	0.00069	0.0038 U	0.0038 U	0.0038 U	0.0038 U	0.02	0.01
Silver, as Ag, mg/L	<0.015	<0.015	<0.015	<0.015	<0.01	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.005	< 0.0050	< 0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0002 U	0.0001 U	0.0001 U	0.0001 U	0.02	0.01
Vanadium, mg/L	NA	NA	NA	NA	NA	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.00045 B	0.0029 J	0.0011 J	0.002 J	NE*	0.025
Zinc, as Zn, mg/L	0.035	0.038	<0.100	0.019	<0.02	0.0473	<0.02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.030	< 0.030	< 0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.0035	0.0064	0.0178 B	0.0385	0.0239	0.0112	1	0.01

NOTES:
< Symbol = Below Laboratory Detectable Limits
2L Std - Title 15, North Carolina Administrative Code, Subchapter 2L, class GA groundwater standard.
GWP Std - Ground Water Protection Standard (used when no 2L Standards are established). *The GWP Standard for vanadium is 0.0035 mg/L
SWSL - Solid Waste Section Limits - target laboratory method detection limits
Bold text denotes results that exceed NC ground-water standards
Data is reported in milligrams per liter (mg/L) unless otherwise noted
NA = Not Analyzed
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Refer to laboratory reports for actual sample dates

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TABLE 2 Continued
HISTORICAL GROUNDWATER ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA

PARAMETER	MONITORING WELL MW-5A																											2L Std	SWSL
	1997	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010			
	SEPT.	APRIL	SEPT	MAR	NOV	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	AUG	MAR	AUG		
BOD, mg/L	11.5	4.23	8.96	10.9	9	12	4	4	<2.0	3	10	16	4	< 5	<5	<5	3	<5.0	<5.0	6.3	<5.0	<5.0	9.6	3.7 J	5.8 J	10.9	6.3	NE	NE
COD, mg/L	203	193	99.9	181	107	212	125	222	171	93	166	66	160	110	190	52	93	95	120	120	92	74	66	74.5	86.1	138	114	NE	NE
TOX, mg/L	3.58	2.5	1.4	3.37	0.099	2.46	1.22	2.68	1.4	0.502	0.574	0.25	1.6	0.870	<4.0	0.170	< 1.00	<5.0	<5.0	<0.10	<2.0	0.35	0.46	0.2	0.37	41.1	0.8	NE	NE
TOC, as C, mg/L	105	62.2	23	46.3	23.5	81.5	22.3	90.3	75.6	7.5	<0.5	30.1	49	40	56	16	13	27	33	<1.0	37	31	35	34.3	30.4	0.8	46.6	NE	NE
TDS, mg/L	2390	1700	954	1820	1116	1599	1216	2220	1847	1540	879	704	1400	160	1,600	640	970	850	960	1100	980	1100	1000	1050	1180	840	1150	500	NE
pH	6.81	6.87	6.51	6.72	6.67	6.71	6.61	6.71	6.96	7.53	7.24	7.54	6.9	6.4	6.5	7.3	6.9	6.8	6.7	6.7	6.8	7.6	7	7.2 J	7.5 J	6.7 J	6.8 J	6.5-8.5	NE
Conductivity, umohs/cm	3260	2880	1590	3170	1703	3146	1792	2581	2564	1557	1808	1126	2300	1,900	2,900	1,100	1,800	1,500	1700	1900	1700	1800	1700	1940	1800	1700	1600	NE	NE
Sulfate Turbidimetric, mg/L	25.6	65.2	55.9	26.7	42	62.0	78.0	49	29	21	43.0	32	57	110	<5.0	9.5	<5.00	<5.0	5	<5.0	<5.0	4.1	3.6	5 U	R	5 U	568	250	250
Chloride, as Cl, mg/L	600	265	249	479	119	396	211	440	300	130	150	95	280	170	410	64	180	170	170	220	170	130	130	115	160	177	234	250	NE
Fluoride, as F, mg/L	0.104	<0.1	<0.1	<0.1	0.17	0.34	0.21	<0.2	0.27	<0.10	0.1	0.46	0.13	< 0.100	< 0.100	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	0.12	0.13	0.1 U	0.1 U	2	2
Nitrate, as NO3-N, mg/L	0.835	0.948	0.344	5.09	0.57	0.13	0.22	<0.2	<0.2	<0.2	<0.2	<0.2	<0.100	< 0.100	< 0.100	<0.100	0.26	<0.10	<0.10	<0.10	<0.10	<0.10	0.24	0.1 U	0.1 U	0.1 U	0.1 U	10	10
Arsenic, as As, mg/L	<0.025	<0.025	<0.025	<0.025	<0.01	<0.01	<0.01	<0.0100	<0.0100	0.0113	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.00059	0.00066	0.0066	0.0033 J	0.0027 U	0.0031 J	0.01	0.01
Barium, as Ba, mg/L	0.181	0.193	0.0583	0.032	<0.1	0.139	<0.1	0.112	0.159	<0.100	0.111	<0.0100	0.18	0.140	0.190	0.052	0.032	0.088	0.12	0.13	0.011	0.11	0.12	0.093	0.0968	0.0975	0.13	0.7	0.1
Cadmium, as Cd, mg/L	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0050	<0.005	<0.0100	<.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	<0.00050	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002	0.001
Chromium, as Cr, mg/L	0.014	0.012	<0.010	<0.010	<0.01	<0.01	<0.02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0103	0.0016 J	0.0036 J	0.0033 J	0.01	0.01
Copper, as Cu, mg/L	0.005	<0.005	<0.005	<0.010	<0.02	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	0.021	<0.0010	0.0009	0.0003 U	0.0003 U	0.0003 U	0.0003 U	1	0.01
Iron, as Fe, mg/L	3.01	6.05	2.6	1.93	1.36	3.79	0.805	5.15	17.9	1.71	4.21	0.248	1.8	21	4.7	0.6	0.1	1.5	2	1.5	0.31	0.46	2.4	0.44	0.247	0.762	0.608	0.3	0.3
Lead, as Pb, mg/L	0.036	<0.020	<0.020	<0.020	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.004 U	0.004 U	0.004 U	0.004 U	0.015	0.01
Manganese, as Mn, mg/L	0.650	0.745	0.183	0.386	0.273	0.279	0.166	0.995	0.572	0.252	0.259	0.235	0.730	0.540	0.730	0.190	0.016	0.270	0.37	0.45	<0.010	0.34	0.18	0.232	0.26	0.278	0.332	0.05	0.05
Mercury, as Hg, mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	<0.0002	<0.0002	<0.00020	<0.00020	0.00007 U	0.00007 U	0.00007 U	0.00007 U	0.001	0.0002
Selenium, as Se, mg/L	<0.100	<0.100	<0.100	<0.100	<0.01	<0.01	<0.01	0.0117	0.0159	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.0018	0.0014	0.0038 U	0.0038 U	0.0038 U	0.0038 U	0.02	0.01
Silver, as Ag, mg/L	<0.015	<0.015	<0.015	<0.015	<0.01	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.005	< 0.0050	< 0.0050	<0.010	<0.010	<0.010	0.046	<0.010	<0.010	<0.010	<0.010	0.00035 J	0.00016 J	0.0001 U	0.0001 U	0.02	0.01
Vanadium, mg/L	NA	NA	NA	NA	NA	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.010	0.014	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0041	0.0077	0.0042 J	0.0052	0.0096	0.0077	NE*	0.025
Zinc, as Zn, mg/L	<0.010	0.029	<0.100	<0.01	<0.02	<0.02	<0.02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.030	< 0.030	0.063	<0.030	<0.030	<0.030	<0.030	<0.030	1.0	0.0042	0.0084	0.0023 B	0.0083 B	0.004 B	0.0004 U	1	0.01

NOTES:
< Symbol = Below Laboratory Detectable Limits
2L Std - Title 15, North Carolina Administrative Code, Subchapter 2L, class GA groundwater standard.
GWP Std - Ground Water Protection Standard (used when no 2L Standards are established). *The GWP Standard for vanadium is 0.0035 mg/L
SWSL - Solid Waste Section Limits - target laboratory method detection limits
Bold text denotes results that exceed NC ground-water standards
Data is reported in milligrams per liter (mg/L) unless otherwise noted
NA = Not Analyzed
NE = Not Established
Refer to laboratory reports for actual sample dates

Qualifiers (Q):

U	The analyte was analyzed for, but was not detected above the associated detection limit.
B	The analyte was detected in a laboratory blank at a similar concentration.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample
UJ	The analyte was not detected and the associated detection limit is estimated

TABLE 2 Continued
HISTORICAL GROUNDWATER ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA

PARAMETER	MONITORING WELL MW-7A																													2L Std	SWSL
	1997	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010			
	SEPT	APRIL	SEPT	MAR	NOV	MAR	SEPT	MAR.	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	AUG	MAR	AUG		
BOD, mg/L	4.02	6.02	<2	<2	3	2	<1.0	2	<2.0	<2.0	<2.0	3	<2.0	< 5	<5	<5	<2.00	<5.0	<5.0	<5.0	<5.0	<5.0	11	2 UJ	2.9 J	2 U	15 J	NE	NE
COD, mg/L	115	179	156	154	108	118	114	154	96	132	157	61	110	110	120	130	130	120	120	140	120	63	25	57.3	117	117	126	NE	NE
TOX, mg/L	2.560	2.28	1.97	2.21	0.540	1.02	1.4	1.79	0.976	0.914	0.964	0.91	1.5	1.30	12.00	1.60	< 5.0	<5.0	<5.0	0.51	<20	1.1	0.82	0.6	0.04	45.4	1.1	NE	NE
TOC, as C, mg/L	47.2	35	28.6	25.8	43.1	31.3	50.2	55.8	41.4	22.4	<0.5	29.7	32	42	34	37	50	35	35	35	43	28	24	24.6	34.3	1	55.4	NE	NE
TDS, mg/L	1370	1390	1190	1230	1200	832	1596	1740	1501	2110	1354	1168	1100	1400	1200	1400	1100	1000	1200	1200	1000	1100	740	1010	1020	1250	1190	500	NE
pH	6.79	6.83	6.59	6.7	6.74	6.94	6.79	6.86	7.07	6.86	6.84	6.66	6.9	6.7	6.9	6.8	6.9	6.9	7.2	7.0	6.9	7.4	6.5	7 J	6.8 J	6.9 J	6.9 J	6.5-8.5	NE
Conductivity, umohs/cm	2190	2520	2290	2160	2250	1456	1445	2096	1628	1546	1928	1784	1800	2,200	2,100	2,200	1,600	1,800	2000	2000	1700	1900	1200	1950	1790	2410	1980	NE	NE
Sulfate Turbidimetric, mg/L	0.395	2.26	0.824	7.22	<5.0	<5.0	<5.0	31	38	23	36	28	61	81	71	78	61	45	59	41	41	53	120	69	48.7 J	76.2	56	250	250
Chloride, as Cl, mg/L	515	527	550	437	477	274	281	360	230	260	330	320	250	290	250	260	180	170	200	200	200	270	160	232 J	193	223	227	250	NE
Fluoride, as F, mg/L	0.134	0.101	0.108	0.103	0.58	0.49	0.26	0.28	0.32	0.27	0.1	0.25	<0.100	0.140	0.120	<0.100	<0.100	0.110	0.13	<0.10	0.12	0.05	0.18	0.2	0.23	0.13	0.1 U	2	2
Nitrate, as NO3-N, mg/L	<0.1	<0.1	<0.1	<0.1	0.03	0.16	0.39	<0.2	<0.2	<0.2	<0.2	<0.2	<0.100	< 0.100	< 0.100	<0.100	0.17	<0.10	<0.10	<0.10	<0.10	<0.10	0.27	0.1 U	0.1 U	0.1 U	0.1 U	10	10
Arsenic, as As, mg/L	<0.025	<0.025	<0.025	0.0338	<0.01	0.0191	0.0105	0.017	<0.0100	0.0109	0.0136	<0.0100	0.016	0.013	<0.010	<0.020	0.035	<0.020	0.024	0.026	<0.020	0.016	0.003	0.0135	0.0394	0.0165	0.0146	0.01	0.01
Barium, as Ba, mg/L	0.073	0.075	0.0704	0.0876	<0.1	<0.1	<0.1	<0.100	<0.100	<0.100	<0.100	<0.0100	0.052	0.062	0.042	0.059	0.065	0.037	0.054	0.056	0.07	0.062	0.071	0.0438	0.0782	0.0497	0.0433	0.7	0.1
Cadmium, as Cd, mg/L	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0050	<0.005	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	<0.00050	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002	0.001
Chromium, as Cr, mg/L	<0.010	<0.010	0.0106	0.0288	<0.01	<0.01	<0.02	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	0.032	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0028 B	0.0018 J	0.003 J	0.0033 J	0.01	0.01
Copper, as Cu, mg/L	<0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	0.18	<0.0010	0.0014	0.0003 U	0.0003 U	0.0003 U	0.0003 U	1	0.01
Iron, as Fe, mg/L	39.8	40.9	37	57.4	23.2	21.4	11.4	24.4	16.1	15.6	17.3	33.7	23	30	15	22.0	31.0	14.0	21	30	12	28	4.4	16.9	36	24.9	16	0.3	0.3
Lead, as Pb, mg/L	0.027	<0.020	<0.020	<0.020	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	0.0051	0.0072	0.0057	<0.0050	<0.0050	0.004 U	0.004 U	0.004 U	0.004 U	0.015	0.01
Manganese, as Mn, mg/L	0.795	0.794	0.691	0.759	0.522	0.352	0.267	0.404	0.402	0.396	0.463	0.447	0.490	0.610	0.360	0.520	0.230	0.340	0.34	0.51	0.079	0.68	0.094	0.511	0.409	0.505	0.398	0.05	0.05
Mercury, as Hg, mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.00007 U	0.00007 U	0.00007 U	0.00007 U	0.001	0.0002
Selenium, as Se, mg/L	<0.100	<0.100	<0.100	<0.100	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.0045	0.00081	0.0038 U	0.0038 U	0.0038 U	0.0038 U	0.02	0.01
Silver, as Ag, mg/L	<0.015	<0.015	<0.015	<0.015	<0.02	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0064	< 0.0050	< 0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	0.022	<0.010	<0.010	0.00029 U	0.00011 J	0.0001 U	0.0001 U	0.02	0.01
Vanadium, mg/L	NA	NA	NA	NA	NA	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.011	0.022	0.01	0.014	0.017	0.014	0.014	0.028	<0.010	0.0091	0.0041	0.0058	0.0225	0.0111	0.0126	NE*	0.025
Zinc, as Zn, mg/L	<0.010	0.017	<0.100	0.0348	<0.02	<0.02	<0.02	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.072	< 0.030	< 0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.67	<0.010	0.0093	0.0021 B	0.0085 B	0.0054 B	0.0004 U	1	0.01

NOTES:
< Symbol = Below Laboratory Detectable Limits
2L Std - Title 15, North Carolina Administrative Code, Subchapter 2L, class GA groundwater standard.
GWP Std - Ground Water Protection Standard (used when no 2L Standards are established). *The GWP Standard for vanadium is 0.0035 mg/L
SWSL - Solid Waste Section Limits - target laboratory method detection limits
Bold text denotes results that exceed NC ground-water standards
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TABLE 2 Continued
HISTORICAL GROUNDWATER ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA

PARAMETER	MONITORING WELL MW-8A																													2L Std	SWSL
	1997	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010			
	SEPT.	APRIL	SEPT	MAR	NOV	MAR	SEPT	MAR.	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	SEPT	MAR	AUG	MAR	AUG		
BOD, mg/L	3.48	<2	<2	<2	4	4	<1.0	<2.0	<2.0	6	<2.0	<2.0	<2.0	< 5	<5	<5	<2.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	2 UJ	2 UJ	2 U	2 UJ	NE	NE
COD, mg/L	110	19.3	12.6	9.96	46	8	<5.0	6	<5.0	7	59	8	<20	< 20	30	<20	<20	<20	<20	<20	<20	<20	5.9	25 U	25 U	25 U	25 U	NE	NE
TOX, mg/L	0.012	0.028	0.014	0.028	<0.01	<0.010	0.018	0.0217	0.0198	0.0397	0.041	0.014	<0.01	< 0.010	<100	<0.100	<0.100	<5.0	<0.10	0.56	<0.10	0.03	0.018	0.07	0.05	7.7	0.1 U	NE	NE
TOC, as C, mg/L	5.04	4.65	3.42	2.11	8.4	3.4	3.9	4	3.3	<0.5	<0.5	4.4	5.9	4	5.2	3.4	6.5	3.0	4	2.9	9	3.9	6.2	35.1	11.2	0.4	17	NE	NE
TDS, mg/L	448	407	464	346	337	256	448	295	480	418	862	399	500	1,100	580	400	480	330	350	300	370	730	510	718	1020	580	998	500	NE
pH	7.32	7.24	7.02	7.03	6.86	7.13	6.89	7.39	7.49	7.44	7.04	7.47	7.1	6.5	6.5	6.9	7.0	6.8	6.8	7.0	7	7.6	6.6	6.5 J	6.7 J	6.9 J	6.7 J	6.5-8.5	NE
Conductivity, umohs/cm	662	634	701	547	526	619	667	505	670	602	965	442	790	710	830	670	780	600	600	600	640	990	770	1110	1300	836	1250	NE	NE
Sulfate Turbidimetric, mg/L	134	26.5	111	80.3	33	43	74	32	100	30	290	28	91	70	130	68	38	21	9.8	13	20	370	89	318	452	233	259	250	250
Chloride, as Cl, mg/L	9.6	3.82	12.2	6.76	11	13.5	8.5	2.0	3.9	3.9	4.0	2.1	4.4	3	3.0	3.0	4.4	3.8	1.7	2.8	5.1	3.2	2	6.5	7	5 U	6.7	250	NE
Fluoride, as F, mg/L	0.118	0.183	0.168	0.187	0.23	0.45	0.26	<0.2	0.35	0.17	<0.10	0.3	<0.100	0.220	0.320	0.240	0.360	0.220	0.16	0.2	0.21	0.12	0.19	0.21	0.3	0.1 U	0.1 U	2	2
Nitrate, as NO3-N, mg/L	<0.1	<0.1	<0.1	<0.1	0.07	0.19	0.37	<0.2	<0.2	0.38	0.22	<0.2	<0.100	< 0.100	< 0.100	<0.100	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.1 U	0.1 U	0.1 U	0.1 U	10	10
Arsenic, as As, mg/L	<0.025	<0.025	<0.025	<0.025	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	0.011	<0.0100	<0.010	< 0.010	< 0.010	<0.020	0.021	<0.020	<0.020	<0.020	0.022	<0.0010	0.00034	0.0082	0.0074	0.0046 J	0.0073	0.01	0.01
Barium, as Ba, mg/L	0.09	0.054	0.0601	0.0691	<0.1	<0.1	<0.1	<0.100	<0.100	<0.100	0.164	<0.0100	0.081	0.080	0.110	0.072	0.100	0.079	0.13	0.1	0.089	0.074	0.085	0.0526	0.0757	0.0494	0.0578	0.7	0.1
Cadmium, as Cd, mg/L	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0050	<0.005	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	<0.00050	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.002	0.001
Chromium, as Cr, mg/L	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.02	<0.0100	<0.0100	<0.0100	0.0259	<0.0100	<0.010	< 0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	0.015	<0.010	<0.010	0.0019 B	0.002 J	0.00063 B	0.00041 J	0.01	0.01
Copper, as Cu, mg/L	<0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	0.32	0.0021	0.001	0.0003 U	0.0003 U	0.0003 U	0.0003 U	1	0.01
Iron, as Fe, mg/L	0.832	4.24	0.68	0.85	0.25	0.258	0.198	0.230	0.289	0.310	4.33	0.190	0.390	0.68	5.50	2.30	8.40	0.47	1	0.82	5.7	0.33	0.21	5.61	27.6	1.68	16.4	0.3	0.3
Lead, as Pb, mg/L	0.02	<0.020	<0.020	<0.020	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.005	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.004 U	0.004 U	0.004 U	0.004 U	0.015	0.01
Manganese, as Mn, mg/L	0.123	0.171	0.172	0.016	0.035	0.0109	0.066	0.0134	0.0231	0.0158	2.29	0.275	0.500	0.280	2.000	0.068	0.800	0.180	0.1	0.04	0.077	0.015	0.011	0.143	2.05	0.0547	1.03	0.05	0.05
Mercury, as Hg, mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00007 U	0.00007 U	0.00007 U	0.00007 U	0.001	0.0002
Selenium, as Se, mg/L	<0.100	<0.100	<0.100	<0.100	<0.01	<0.01	<0.01	<0.0100	0.0114	<0.0100	<0.0100	<0.0100	<0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0010	0.00051	0.0038 U	0.0072 J	0.0038 U	0.0038 U	0.02	0.01
Silver, as Ag, mg/L	<0.015	<0.015	<0.015	<0.015	<0.01	<0.02	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.005	< 0.0050	< 0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0033	<0.010	0.001 J	0.001 J	0.0001 U	0.00024 J	0.02	0.01
Vanadium, mg/L	NA	NA	NA	NA	NA	<0.05	<0.05	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.00074 B	0.0036 J	0.00084 J	0.0002 U	NE*	0.025
Zinc, as Zn, mg/L	<0.010	0.015	<0.100	<0.01	<0.02	<0.02	<0.02	<0.0200	<0.0200	<0.0200	0.0244	<0.0200	<0.030	< 0.030	< 0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.4	0.017	0.01	0.007 B	0.0362	0.0085 B	0.0066 J	1	0.01

NOTES:
< Symbol = Below Laboratory Detectable Limits
2L Std - Title 15, North Carolina Administrative Code, Subchapter 2L, class GA groundwater standard.
GWP Std - Ground Water Protection Standard (used when no 2L Standards are established). *The GWP Standard for vanadium is 0.0035 mg/L
SWSL - Solid Waste Section Limits - target laboratory method detection limits
Bold text denotes results that exceed NC ground-water standards
Data is reported in milligrams per liter (mg/L) unless otherwise noted
NA = Not Analyzed
NE = Not Established
Refer to laboratory reports for actual sample dates

Qualifiers (Q):

U	The analyte was analyzed for, but was not detected above the associated detection limit.
B	The analyte was detected in a laboratory blank at a similar concentration.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample
UJ	The analyte was not detected and the associated detection limit is estimated

TABLE 3
NEW LANDFILL CELL 1 ANALYSIS RESULTS
INTERNATIONAL PAPER
RIEGELWOOD, NORTH CAROLINA

		Client Sample ID:	Primary Leachate Collection System		Secondary Leachate Collection System		Under-Drain Leachate Collection System			
		Collect Date:	8/16/10		8/16/10		8/16/10		*2L*	
Method	Parameter	Units	Value	Q	Value	Q	Value	Q	*Standard*	*SWSL*
SW-846 6010	Arsenic	ug/l	**190**		5.3		7.8		10	10
SW-846 6010	Barium	ug/l	251		42.1		101		700	100
SW-846 6010	Cadmium	ug/l	0.5	U	0.5	U	0.5	U	2	1
SW-846 6010	Chromium	ug/l	**128**		7.6		**31.3**		10	10
SW-846 6010	Copper	ug/l	0.3	U	0.4	J	0.3	U	1000	10
SW-846 6010	Lead	ug/l	4	U	4	U	4	U	15	10
SW-846 6010	Manganese	ug/l	**500**		**301**		**578**		50	50
SW-846 6010	Silver	ug/l	1.5	J	0.12	J	0.29	J	20	10
SW-846 6010	Zinc	ug/l	0.4	U	3	J	0.4	U	1000	10
SW-846 7470	Mercury	ug/l	0.15	J	0.07	U	0.07	U	1.0	0.2
ASTM D516-90	Sulfate	ug/l	39,500		162,000		7,900		250,000	250,000
EPA 120.1	Specific Conductance	umhos/cm	8,600		2,290		4,230		NE	NE
EPA 353.2	Nitrate	ug/l	100	U	100	U	100	U	10,000	10,000
EPA 365.1	Orthophosphate	ug/l	510		1,900		270		NE	NE
SM 2540C	Total Dissolved Solids	ug/l	**7,120,000**		**1,600,000**		**2,950,000**		500,000	NE
SM 4500CL	Chloride	ug/l	**255,000**		40,700		**264,000**		250,000	NE
SM 4500F	Fluoride	ug/l	400	U	100	U	100	U	2,000	2,000
SM 5210B	Biochemical oxygen demand	ug/l	30,000	J	6,600		11,000	J	NE	NE
SM 5220D	Chemical oxygen demand	ug/l	1,230,000		119,000		307,000		NE	NE
SM 5310B	Total Organic Carbon	ug/l	510,000		50,200		82,900		NE	NE
SW-846 9020	Total Organic Halides	ug/L	1400		200		500		NE	NE
SM 4500H	pH	s.u.	7.2	J	6.5	J	6.7	J	6.5-8.5	NE

Notes:

Bold values indicate concentrations in excess of NC Groundwater quality standards for the protection of the groundwater.

2L Standard - 15A NCAC 2L Groundwater Standards

SWSL - Solid Waste Section Limits

NE = Not Established

s.u. = Standard unit

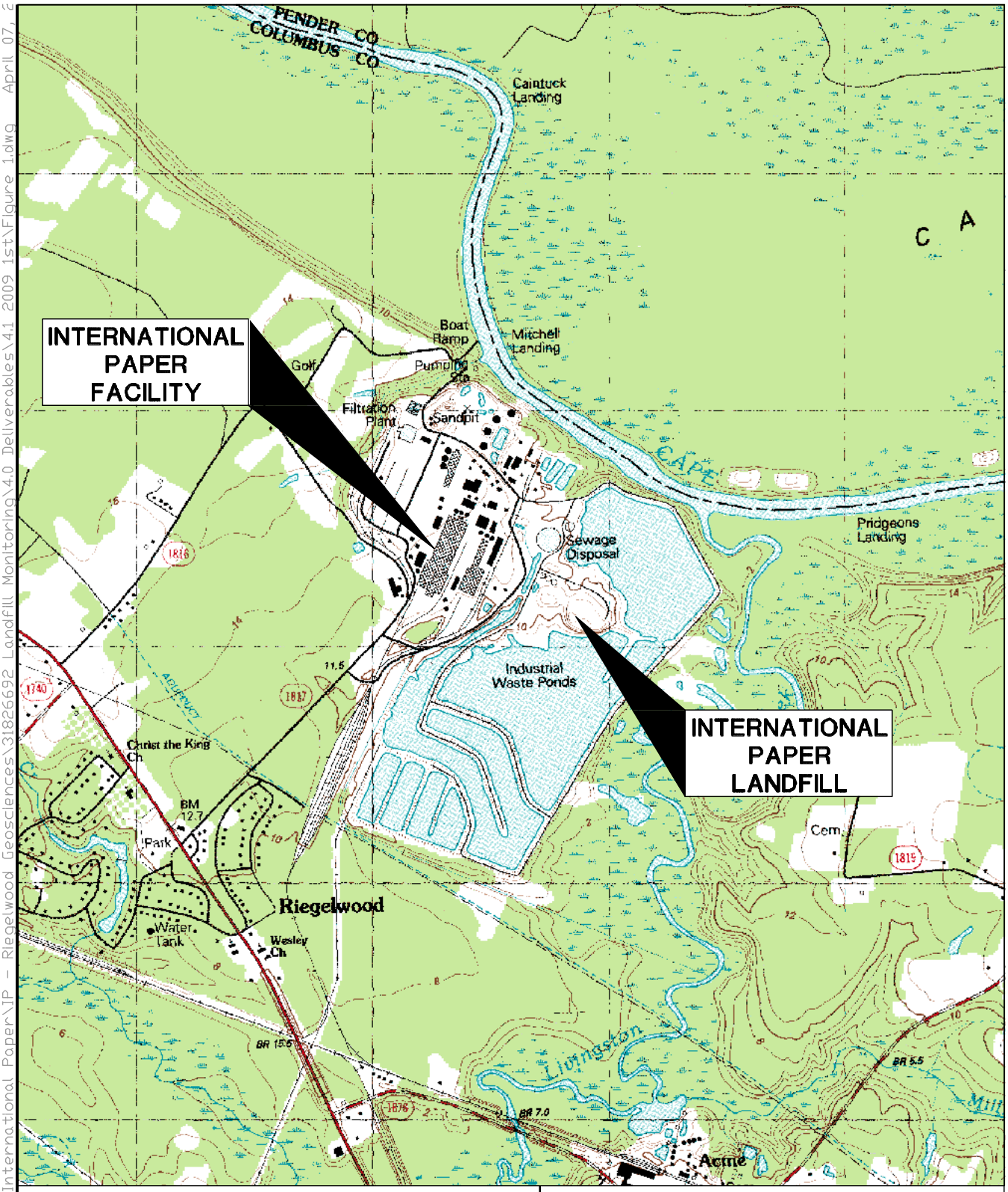
ug/L = Micrograms per Liter

umhos/cm = Micromhos per centimeter

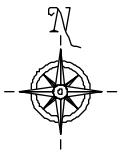
Qualifiers (Q):

U	The analyte was analyzed for, but was not detected above the associated detection limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample

FIGURES



QUADRANGLE LOCATION



SCALE IN FEET

0 2000

SOURCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE
ACME, NC – DATED 1984

FIGURE 1. LOCATION MAP

INTERNATIONAL PAPER
RIEGELWOOD MILL
RIEGELWOOD, NORTH CAROLINA

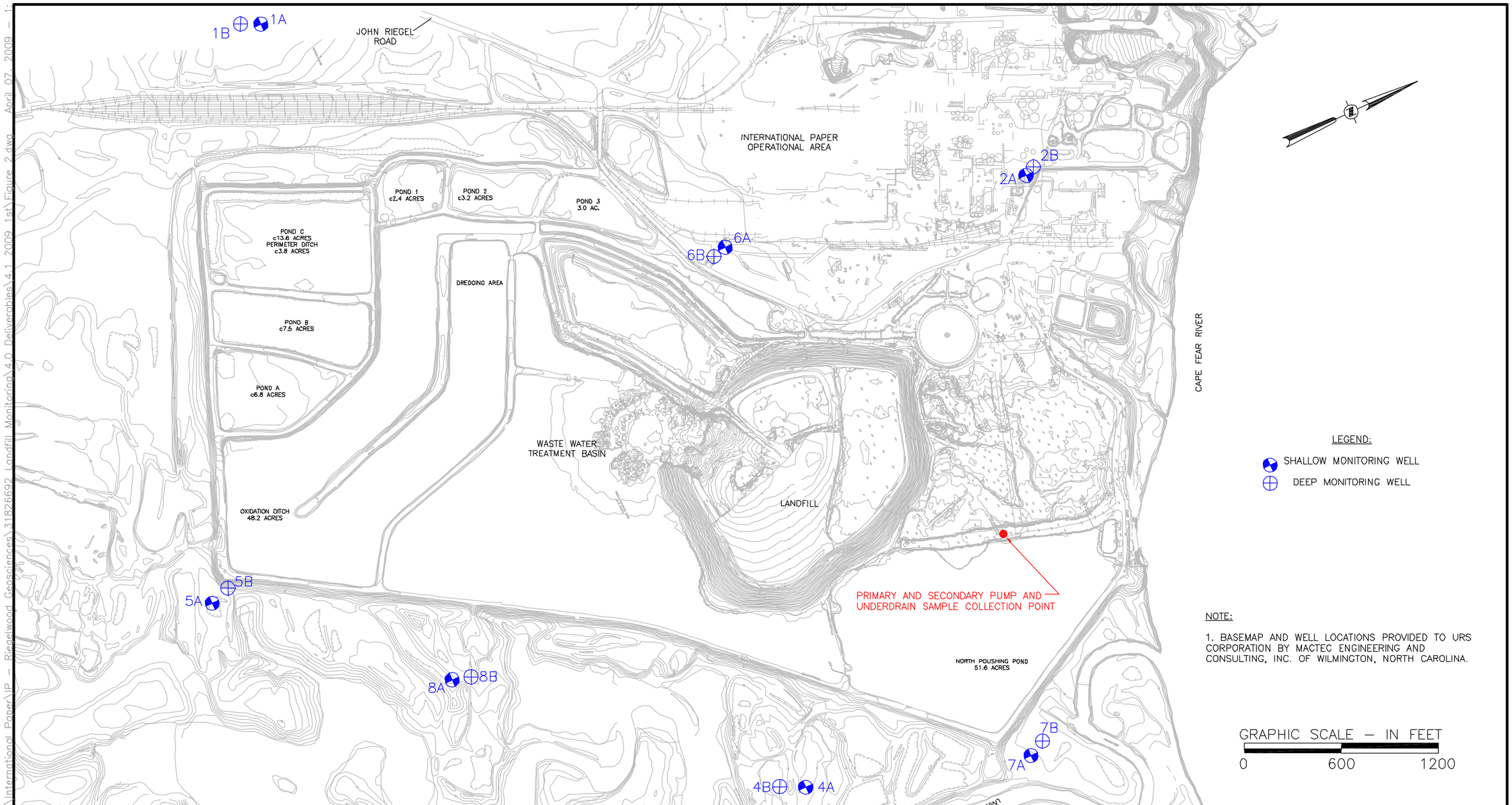
Prepared for:
INTERNATIONAL PAPER

URS
RDU, NORTH CAROLINA 27560

DRAWN BY: TSH
DATE: 04/07/09
PROJECT NO.

Fig. 1

P:\Jobs4_Projects\International Paper\IP – Riegelwood Geosciences\31826692 Landfill Monitoring\4.0 Deliverables\41 2009 1st\Figure 1.dwg April 07, 2



NOTE:

1. BASEMAP AND WELL LOCATIONS PROVIDED TO URS CORPORATION BY MACTEC ENGINEERING AND CONSULTING, INC. OF WILMINGTON, NORTH CAROLINA.

SCALE AS SHOWN	DESIGNED BY	DATE	Figure 2. Site Map Landfill Compliance Monitoring, International Paper Riegelwood Mill, Riegelwood, NC	
CONFIDENTIAL–ALL RIGHTS RESERVED–PROPERTY OF URS RDU, NORTH CAROLINA 27560	DRAWN BY TSH	DATE 07APR09		
	CHECKED BY CK	DATE 07APR09	CONTRACT NO. 31826692.00001	DRAWING NO. FIGURE–2 / REV. 0
	APPROVED BY CK	DATE 07APR09		

P:\Jobs4\Projects\International Paper\IP – Riegelwood Geosciences\31826692 Landfill Monitoring\4.0 Deliverables\4.1 2009 1st\Figure 2.dwg April 07, 2009 – 1:

APPENDIX A

DATA VALIDATION REPORT

Data Validation Checklist
Organic and Inorganic Analyses

Project:	IP – Riegelwood, NC (Landfill Monitoring)	Project No:	31826692.00002
Work Order:	9275629	Methods:	EPA 120.1 (Specific Conductance), 353.2 (Nitrate), 365.1 (Orthophosphate), 6010 (ICP Metals[1]), 7470 (Mercury), and 9020A (TOX); Standard Methods 2540C (Total Dissolved Solids), 4500-CL-E (Chloride), 4500F/C (Fluoride), 4500-H & B (pH), 5210B (BOD), 5220D (COD), and 5310B (TOC); and ASTM D516-90 (Sulfate)
Laboratory:	Pace Analytical Services - Huntersville, NC[2]	Associated Sample IDs:	MW-1A, MW-1B, MW-4A, MW-5A, MW-7A, MW-8A, Primary, Secondary, & Under Drain
Sample Matrix:	Water	Date(s) Sampled:	08/16/10
Reviewer:	Nicole Lancaster	Date:	09/17/10
Concurrence:	Martha Meyers-Lee	Date:	09/23/10

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
1. Were holding times met?	✓			• EPA 6010: ≤180 days	
	✓			• EPA 7470: ≤ 28 days	
	✓			• EPA 120.1: ≤ 28 days	
		✓		• SM 4500-H: ≤15 minutes. Samples were analyzed more than 15 minutes after sample collection. J-flag positive results.	J
	✓			• EPA 353.2: ≤ 48 hours	
	✓			• SM 2540C: ≤7 days	
	✓			• SM 4500 F and Cl: ≤28 days	
	✓			• SM 5210B: ≤ 48 hours and after 5-day (±6 hours) incubation period	
	✓			• SM 5220D: ≤ 28 days	
	✓			• SM 5310B: ≤ 28 days	
	✓			• ASTM D516-90: ≤28 days	
	✓			• EPA 365.1: ≤ 48 hours	
	✓			• EPA 9020A: ≤ 28 days	

[1] As, Ba, Cd, Cr, Cu, Fe, Pb, Mn, Se, Ag, V, and Zn
[2] Pace subcontracted the TOX analysis to Summit Analytical Laboratory of Cuyahoga Falls, Ohio. The TOX analysis was conducted under WO# 1013003.

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
2. Were sample storage and preservation requirements met?	✓			• Temperatures of sample containers upon receipt were 4.1 and 1.3°C (≤6°C).	
		✓		• The laboratory verified that the samples were properly preserved in the field, except Underdrain and primary. The pH of the metals sample was 7 upon receipt at the laboratory; samples were preserved with nitric acid to correct the pH by the laboratory prior to analysis, therefore qualification of data is not required.	
		✓		• Headspace was not observed in any VOA vials, except one vial for MW-5 and Under Drain. No action warranted, as the analysis was conducted using an alternate vial with zero headspace.	
3. Was a method blank analyzed with each batch?	✓			• EPA 6010: 487025	
	✓			• EPA 7470: 488347	
	✓			• EPA 120.1: 489570	
			✓	• SM 4500-H: Not applicable	
	✓			• EPA 353.2: 484323	
	✓			• SM 2540C: 485668	
	✓			• SM 4500 F: 487334 & 490343	
	✓			• SM 4500 Cl: 488791 &489107	
	✓			• SM 5210B: 484350	
	✓			• SM 5220D: 486512	
	✓			• SM 5310B: 487476	
	✓			• ASTM D516-90: 489495	
	✓			• EPA 365.1: 484376	
	✓			• EPA 9020A: Blank	
4. Were target analytes reported in the method blank above the Detection Limit (DL)?	✓			Vanadium @ 0.21 J µg/L (RL=5)	
5. Were target analytes reported in field blank analyses (e.g., trip, ~~ambient, field, or equipment~~) above the DL?			✓		
6. Were contaminants detected in samples below the blank contamination action level?		✓		Blank contamination action levels: • Vanadium @ 1.05 µg/L (0.21 x 5).	U
7. Was a field duplicate analyzed?		✓			

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
8. Was precision deemed acceptable as defined by the project plans and/or DV Guidelines?			✓		
9. Was a LCS prepared/analyzed with each batch?	✓			• EPA 6010: 487026 • EPA 7470: 488348 • EPA 120.1: 489571 • SM 4500-H: Not applicable • EPA 353.2: 484324 • SM 2540C: 485669 • SM 4500 F: 487335 & 490344 • SM 4500 Cl: 488792 & 489108 • SM 5210B: 484351 • SM 5220D: 486513 • SM 5310B: 487477 • ASTM D516-90: 489496 • EPA 365.1: 484377 • EPA 9020A: LCS	
10. Were LCS recoveries within lab/project[3] specifications?	✓				
11. Were LCS/LCSD RPD within lab specifications?			✓	LCS Only	
12. Was a MS/MSD pair analyzed with each batch?		✓		• EPA 6010: 487145, 9275813-001 (batch) • EPA 7470, o 488349 & 488350: 9275941-004 (batch) o 488351 & 488352: 9275941-005 (batch) • EPA 120.1: None • SM 4500-H: Not applicable • EPA 353.2: o 484325, 9275609-001 (batch) o 484327, 9275629-001 (MW-1B) • SM 2540C: None • SM 4500 F: o 487336, 9275126-005 (batch) o 490345, 9275629-008 (MW-8A) • SM 4500 Cl: o 488793, 9275561-002 (batch) o 488795, 9275214-013 (batch) o 489109, 9275629-008 (MW-8A)	

[3] LCS recovery is to be within 60-140% of the true value

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
				o 489111, 9275753-003 (batch) • SM 5210B: None • SM 5220D: o 486519, 9275805-001 (batch) o 486521, 9275805-002 (batch) • SM 5310B: o 487478, 3516544-001 (batch) o 487479, 3516544-009 (batch) • ASTM D516-90: o 489497, 9275897-003 (batch) o 489499, 9275629-007 (MW-4A) • EPA 365.1: 484378, 9275629-001 (MW-1B) • EPA 9020A: 1013400-01 (batch)	
13. Is the MS/MSD parent sample a project-specific sample?	✓	✓			
14. Were MS/MSD recoveries within lab specifications? *Only QC results for project samples are evaluated.*		✓		• 9275629-001 (MW-1B), EPA 353.2: Nitrate @111%R (90-110). Non-detect result and a high recovery indicates a positive bias; therefore, no action warranted. • 9275629-007 (MW-4A), ASTM D516-90: Sulfate @ 131%R (75-125). J flag positive result.	J
15. Were laboratory criteria met for precision during the MS/MSD analysis? *Only QC results for project samples are evaluated.*			✓	MS only for project specific samples.	
16. Was a serial dilution conducted on each inorganic batch?		✓			
17. Is the serial dilution parent sample a project-specific sample?			✓		
18. Is the percent difference between the serially diluted result and undiluted result less than 10% (for those analytes with native concentrations greater than 50x the DL)? *Only QC results for project samples are evaluated.*			✓		
19. Was a post-digestion spike analysis conducted whenever the MS or serial dilution results did not meet QC limits?			✓		
20. Were laboratory/project specifications met during the PDS analysis? *Only QC results for project samples are evaluated.*			✓		
21. Was a laboratory duplicate analyzed with each batch?		✓		• EPA 6010: 487146, 9275813-002 (batch) • EPA 7470: None • EPA 120.1: o 489572, 9275629-001 (MW-1B) o 489573, 9275629-002 (MW-1A)	
22. Is the laboratory duplicate sample a project-specific sample?	✓	✓			

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
				• SM 4500-H: 485704, 9275629-001 (MW-1B) • EPA 353.2: o 484326, 9275609-001 (batch) o 484328, 9275629-001 (MW-1B) • SM 2540C: 485670, 9275629-001 (MW-1B) • SM 4500 F: o 487337, 9275126-006 (batch) o 490346, 9275629-009 (MW-5A) • SM 4500 Cl: o 488794, 9275561-002 (batch) o 488796, 9275214-013 (batch) o 489110, 9275629-009 (MW-5A) o 489112, 9275756-001 (batch) • SM 5210B: 484352, 9275629-001 (MW-1A) • SM 5220D: • 486520, 9275805-001 (batch) • 486522, 9275805-002 (batch) • SM 5310B: o 487480, 9275629-001 (MW-1B) o 487481, 9275629-002 (MW-1A) • ASTM D516-90: o 489498, 9275897-004 (batch) o 489500, 9275629-008 (MW-8A) • EPA 365.1: 484379, 9275629-001 (MW-1B) • EPA 9020A: QC data were not included in the laboratory report	
23. Does laboratory duplicate results meet lab specifications? *Only QC results for project samples are evaluated.*	✓				
24. Were initial and continuing calibration standards analyzed at the lab/project-specified frequency for each instrument?			✓	Data is not included in laboratory reports.	
25. Were these results within lab/project specifications?			✓		
26. Were surrogate recoveries within lab/project specifications?			✓		
27. Were internal standard results within lab specifications?			✓	Data is not included in laboratory reports.	
28. Were TIC reported and were reported results qualified as estimated concentrations?			✓		
29. Were laboratory-generated Corrective Action Reports (i.e., QCER) issued? If yes, summarize contents or attach copy of the report.		✓			

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
30. Were lab comments included in report? If yes, summarize contents or attach a copy of the narrative.	✓			According to the B2 laboratory qualifier, oxygen was less than 2.0 for all dilution sets during the analysis of samples MW-7A, MW-8A, MW-4A, Primary and Underdrain. The reported value is estimated (J) and calculated for the dilution using the most amount of sample. Refer to Attachment A (Case Narratives) for additional comments.	J

Comments: The data review process was modeled after the *USEPA National Functional Guidelines (NFG) for Superfund Organic Methods Data Review* (EPA, June 2008) and *USEPA Contract Laboratory Program National Functional Guideline for Inorganic Data Review* (USEPA, October 2004). Sample results have been qualified based on the results of the data review process. In performing the data evaluation, the URS' data reviewer assumed that the data reported by the laboratory are complete, compliant, and an accurate representation of the raw data. Criteria for acceptability of data were based upon available site information, analytical method requirements, guidance documents, and professional judgment.

DV Flag Definitions:

J Estimated value
UJ Not detected and the detection limit is estimated
U Not present above the associated level; blank contamination exists
R Unusable data

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 4500-H+B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated more than 15 minutes after sample collection.

- MW-1A (Lab ID: 9275629002)
- MW-1B (Lab ID: 9275629001)
- MW-5A (Lab ID: 9275629009)
- MW-7A (Lab ID: 9275629006)
- MW-8A (Lab ID: 9275629008)
- MW-4A(*) ~~MW-9A~~ (Lab ID: 9275629007)
- PRIMARY (Lab ID: 9275629003)
- SECONDARY (Lab ID: 9275629004)
- UNDERDRAIN (Lab ID: 9275629005)

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

(*) Sample ID transcription error. MMeyers 9/27/10

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 5210B**
Description: 5210B BOD, 5 day
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 5210B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: WET/13459

B2: Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.

- MW-7A (Lab ID: 9275629006)
  - BOD, 5 day
- MW-8A (Lab ID: 9275629008)
  - BOD, 5 day
- MW-4A ~~MW-9A~~ (Lab ID: 9275629007)
  - BOD, 5 day
- PRIMARY (Lab ID: 9275629003)
  - BOD, 5 day
- UNDERDRAIN (Lab ID: 9275629005)
  - BOD, 5 day

MMeyerslee, 9/27/10

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-1B **Lab ID: 9275629001** Collected: 08/16/10 11:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**7.5**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 21:55	7440-38-2	
Barium	**26.1**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:55	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 21:55	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 21:55	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:55	7440-50-8	
Iron	**2530**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 21:55	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 21:55	7439-92-1	
Manganese	**79.4**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:55	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 21:55	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 21:55	7440-22-4	
Vanadium	**1.6J**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:55	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 21:55	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**506**	umhos/cm	10.0	10.0	1		08/27/10 14:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**282**	mg/L	25.0	25.0	1		08/19/10 18:00		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.2**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 17:50		M1
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	ND	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**8.4**	mg/L	5.0	5.0	1		08/25/10 19:03	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	25.0	1		08/20/10 15:26		

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-1B **Lab ID: 9275629001** Collected: 08/16/10 11:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**10.8**	mg/L	1.0	1.0	1		08/24/10 16:33	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**26.1**	mg/L	5.0	5.0	1		08/27/10 14:40	14808-79-8	

Sample: MW-1A **Lab ID: 9275629002** Collected: 08/16/10 12:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	ND	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 21:58	7440-38-2	
Barium	**104**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:58	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 21:58	7440-43-9	
Chromium	**0.53J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 21:58	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:58	7440-50-8	
Iron	**1650**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 21:58	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 21:58	7439-92-1	
Manganese	**13.9**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:58	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 21:58	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 21:58	7440-22-4	
Vanadium	**5.1**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:58	7440-62-2	
Zinc	**1.7J**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 21:58	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**159**	umhos/cm	10.0	10.0	1		08/27/10 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**82.0**	mg/L	25.0	25.0	1		08/19/10 18:01		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**4.5**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 17:55		

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: PRIMARY **Lab ID: 9275629003** Collected: 08/16/10 13:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.2**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**30.0**	mg/L J	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:38		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.51**	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**255**	mg/L	100	100	20		08/25/10 19:43	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**1230**	mg/L	50.0	50.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**510**	mg/L	100	100	100		08/25/10 17:57	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**39.5**	mg/L	10.0	10.0	2		08/27/10 15:16	14808-79-8	

Sample: SECONDARY **Lab ID: 9275629004** Collected: 08/16/10 13:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**5.3**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:05	7440-38-2	
Barium	**42.1**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:05	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:05	7440-43-9	
Chromium	**7.6**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:05	7440-47-3	
Copper	**0.40J**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:05	7440-50-8	
Iron	**2650**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:05	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:05	7439-92-1	
Manganese	**301**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:05	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:05	7782-49-2	
Silver	**0.12J**	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:05	7440-22-4	
Vanadium	**15.4**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:05	7440-62-2	
Zinc	**3.0J**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:05	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: SECONDARY **Lab ID: 9275629004** Collected: 08/16/10 13:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**2290**	umhos/cm	10.0	10.0	1		08/27/10 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1600**	mg/L	25.0	25.0	1		08/19/10 18:02		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.5**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**6.6**	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:02		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**1.9**	mg/L	0.10	0.10	2		08/18/10 00:08		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**40.7**	mg/L	10.0	10.0	2		08/25/10 19:18	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**119**	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**50.2**	mg/L	5.0	5.0	5		08/25/10 18:07	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**162**	mg/L	25.0	25.0	5		08/27/10 15:44	14808-79-8	

Sample: UNDERDRAIN **Lab ID: 9275629005** Collected: 08/16/10 13:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**7.8**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:18	7440-38-2	
Barium	**101**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:18	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:18	7440-43-9	
Chromium	**31.3**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:18	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:18	7440-50-8	
Iron	**9020**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:18	7439-89-6	

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: UNDERDRAIN **Lab ID: 9275629005** Collected: 08/16/10 13:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:18	7439-92-1	
Manganese	**578**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:18	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:18	7782-49-2	
Silver	**0.29J**	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:18	7440-22-4	
Vanadium	**75.4**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:18	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:18	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**4230**	umhos/cm	10.0	10.0	1		08/27/10 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2950**	mg/L	100	100	1		08/19/10 18:02		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.7**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**11.0**	mg/L J	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:39		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.27**	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**264**	mg/L	90.0	90.0	18		08/25/10 19:43	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**307**	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**82.9**	mg/L	5.0	5.0	5		08/25/10 18:45	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**7.9**	mg/L	5.0	5.0	1		08/27/10 14:37	14808-79-8	

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-7A **Lab ID: 9275629006** Collected: 08/16/10 14:35 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**14.6**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:22	7440-38-2	
Barium	**43.3**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:22	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:22	7440-43-9	
Chromium	**3.3J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:22	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:22	7440-50-8	
Iron	**16000**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:22	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:22	7439-92-1	
Manganese	**398**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:22	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:22	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:22	7440-22-4	
Vanadium	**12.6**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:22	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:22	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1980**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1190**	mg/L	50.0	50.0	1		08/19/10 18:03		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.9**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**15.0**	mg/L J	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:04		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.11**	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**227**	mg/L	75.0	75.0	15		08/25/10 19:44	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**126**	mg/L	25.0	25.0	1		08/20/10 15:26		

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-7A **Lab ID: 9275629006** Collected: 08/16/10 14:35 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**55.4**	mg/L	5.0	5.0	5		08/25/10 18:56	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**56.0**	mg/L	15.0	15.0	3		08/27/10 16:27	14808-79-8	

Sample: ~~MW-9A.~~ MW-4A MMLee 9/27/10 **Lab ID: 9275629007** Collected: 08/16/10 15:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**2.8J**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:26	7440-38-2	
Barium	**72.8**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:26	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:26	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:26	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:26	7440-50-8	
Iron	**8810**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:26	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:26	7439-92-1	
Manganese	**57.7**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:26	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:26	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:26	7440-22-4	
Vanadium	**2.0J**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:26	7440-62-2	
Zinc	**11.2**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:26	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.14J**	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**311**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**183**	mg/L	25.0	25.0	1		08/19/10 18:03		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**4.9**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L UJ	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:05		

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Sample results have been qualified by URS based on the results of the data review process, which is modeled after the *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-~~9~~4A **Lab ID: 9275629007** Collected: 08/16/10 15:15 Received: 08/17/10 09:30 Matrix: Water

MMLee 9/27/10

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	ND	mg/L	0.050	0.050	1		08/18/10 00:00		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**33.2**	mg/L	5.0	5.0	1		08/25/10 19:09	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**13.2**	mg/L	1.0	1.0	1		08/24/10 18:43	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**64.2**	mg/L J	10.0	10.0	2		08/27/10 15:19	14808-79-8	M1

Sample: MW-8A **Lab ID: 9275629008** Collected: 08/16/10 15:50 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**7.3**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:29	7440-38-2	
Barium	**57.8**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:29	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:29	7440-43-9	
Chromium	**0.41J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:29	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:29	7440-50-8	
Iron	**16400**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:29	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:29	7439-92-1	
Manganese	**1030**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:29	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:29	7782-49-2	
Silver	**0.24J**	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:29	7440-22-4	
Vanadium	ND	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:29	7440-62-2	
Zinc	**6.6J**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:29	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1250**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**998**	mg/L	25.0	25.0	1		08/19/10 18:04		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/31/10 12:53	16984-48-8	

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-8A **Lab ID: 9275629008** Collected: 08/16/10 15:50 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.7**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L UJ	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:06		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	ND	mg/L	0.050	0.050	1		08/18/10 00:00		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**6.7**	mg/L	5.0	5.0	1		08/27/10 10:35	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**17.0**	mg/L	1.0	1.0	1		08/24/10 18:53	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**259**	mg/L	50.0	50.0	10		08/30/10 10:23	14808-79-8	

Sample: MW-5A **Lab ID: 9275629009** Collected: 08/16/10 16:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**3.1J**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:33	7440-38-2	
Barium	**130**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:33	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:33	7440-43-9	
Chromium	**3.3J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:33	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:33	7440-50-8	
Iron	**608**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:33	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:33	7439-92-1	
Manganese	**332**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:33	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:33	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:33	7440-22-4	
Vanadium	**7.7**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:33	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:33	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-5A **Lab ID: 9275629009** Collected: 08/16/10 16:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1600**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1150**	mg/L	25.0	25.0	1		08/19/10 18:04		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/31/10 12:53	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.8**	Std. Units J	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**6.3**	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:08		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.067**	mg/L	0.050	0.050	1		08/18/10 00:00		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**234**	mg/L	40.0	40.0	8		08/27/10 11:13	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**114**	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**46.6**	mg/L	5.0	5.0	5		08/25/10 19:06	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**568**	mg/L	75.0	75.0	15		08/27/10 15:22	14808-79-8	

Sample results have been qualified by URS based on the results of the data review process, which is modeled after *the Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, June 2008) and *National Functional Guidelines for Inorganic Data Review* (US EPA, October 2004).

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APPENDIX B
LABORATORY REPORT

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September 09, 2010

Ms. Martha Meyers-Lee
URS Corporation
PO Box 203970
Austin, TX 78720

RE: Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Dear Ms. Meyers-Lee:
Enclosed are the analytical results for sample(s) received by the laboratory on August 17, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Herring

kevin.herring@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Asheville Certification IDs
2225 Riverside Dr., Asheville, NC 28804
Connecticut Certification #: PH-0106
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
New Jersey Certification #: NC011
North Carolina Bioassay Certification #: 9
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
Pennsylvania Certification #: 68-03578
South Carolina Bioassay Certification #: 99030002
South Carolina Certification #: 99030001
Virginia Certification #: 00072

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SAMPLE SUMMARY

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9275629001	**MW-1B**	Water	08/16/10 11:45	08/17/10 09:30
9275629002	**MW-1A**	Water	08/16/10 12:15	08/17/10 09:30
9275629003	**PRIMARY**	Water	08/16/10 13:15	08/17/10 09:30
9275629004	**SECONDARY**	Water	08/16/10 13:30	08/17/10 09:30
9275629005	**UNDERDRAIN**	Water	08/16/10 13:45	08/17/10 09:30
9275629006	**MW-7A**	Water	08/16/10 14:35	08/17/10 09:30
9275629007	**MW-4A**	Water	08/16/10 15:15	08/17/10 09:30
9275629008	**MW-8A**	Water	08/16/10 15:50	08/17/10 09:30
9275629009	**MW-5A**	Water	08/16/10 16:30	08/17/10 09:30

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SAMPLE ANALYTE COUNT

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9275629001	**MW-1B**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	RAB	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629002	**MW-1A**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	RAB	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629003	**PRIMARY**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	MLM	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 5310B	EWS	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629004	**SECONDARY**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	EWS	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629005	**UNDERDRAIN**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	EWS	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629006	**MW-7A**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	EWS	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629007	**MW-4A**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	DMN	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	RAB	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629008	**MW-8A**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	SAJ	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	RAB	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A
9275629009	**MW-5A**	EPA 6010	JMW	12	PASI-A
		EPA 7470	SHB	1	PASI-A
		EPA 120.1	SDH	1	PASI-A
		SM 2540C	MLM	1	PASI-A
		SM 4500F/C	SAJ	1	PASI-A
		SM 4500-H+B	MLM	1	PASI-A
		SM 5210B	JDA	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	DMN	1	PASI-A
		EPA 365.1	DMN	1	PASI-A
		SM 4500-Cl-E	SAJ	1	PASI-A
		SM 5220D	MLM	1	PASI-A
		SM 5310B	EWS	1	PASI-A
		ASTM D516-90	SAJ	1	PASI-A

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **EPA 6010**
Description: 6010 MET ICP
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **EPA 7470**
Description: 7470 Mercury
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **EPA 120.1**
Description: 120.1 Specific Conductance
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for EPA 120.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 4500F/C**
Description: 4500FC Fluoride
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 4500F/C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: WET/13526

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- PRIMARY (Lab ID: 9275629003)
  - Fluoride

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 4500-H+B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated more than 15 minutes after sample collection.
- MW-1A (Lab ID: 9275629002)
- MW-1B (Lab ID: 9275629001)
- MW-5A (Lab ID: 9275629009)
- MW-7A (Lab ID: 9275629006)
- MW-8A (Lab ID: 9275629008)
- MW-9A (Lab ID: 9275629007)
- PRIMARY (Lab ID: 9275629003)
- SECONDARY (Lab ID: 9275629004)
- UNDERDRAIN (Lab ID: 9275629005)

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 5210B**
Description: 5210B BOD, 5 day
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 5210B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: WET/13459

B2: Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.

- MW-7A (Lab ID: 9275629006)
  - BOD, 5 day
- MW-8A (Lab ID: 9275629008)
  - BOD, 5 day
- MW-9A (Lab ID: 9275629007)
  - BOD, 5 day
- PRIMARY (Lab ID: 9275629003)
  - BOD, 5 day
- UNDERDRAIN (Lab ID: 9275629005)
  - BOD, 5 day

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/7953

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 9275609001,9275629001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 484325)
  - Nitrogen, Nitrate
- MS (Lab ID: 484327)
  - Nitrogen, Nitrate

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: WETA/7953

D7: The sample and/or duplicate results for this parameter are less than the reporting limit, calculations are based on estimated values and may be statistically unreliable.

- DUP (Lab ID: 484326)
  - Nitrogen, Nitrate
- DUP (Lab ID: 484328)
  - Nitrogen, Nitrate

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **EPA 365.1**
Description: 365.1 Orthophosphate as P
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for EPA 365.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: WETA/7958

D7: The sample and/or duplicate results for this parameter are less than the reporting limit, calculations are based on estimated values and may be statistically unreliable.

- DUP (Lab ID: 484379)
  - Orthophosphate as P

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 4500-Cl-E**
Description: 4500 Chloride
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 4500-Cl-E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 5220D**
Description: 5220D COD
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 5220D. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **SM 5310B**
Description: 5310B TOC
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for SM 5310B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/8010

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 3516544001,3516544009

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 487479)
  - Total Organic Carbon

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Method: **ASTM D516-90**
Description: ASTM D516-90 Sulfate Water
Client: URS - Morrisville, NC
Date: September 09, 2010

General Information:
9 samples were analyzed for ASTM D516-90. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/8044

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 9275629007,9275897003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 489499)
  - Sulfate

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-1B **Lab ID: 9275629001** Collected: 08/16/10 11:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**7.5**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 21:55	7440-38-2	
Barium	**26.1**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:55	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 21:55	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 21:55	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:55	7440-50-8	
Iron	**2530**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 21:55	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 21:55	7439-92-1	
Manganese	**79.4**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:55	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 21:55	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 21:55	7440-22-4	
Vanadium	**1.6J**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:55	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 21:55	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**506**	umhos/cm	10.0	10.0	1		08/27/10 14:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**282**	mg/L	25.0	25.0	1		08/19/10 18:00		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.2**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 17:50		M1
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	ND	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**8.4**	mg/L	5.0	5.0	1		08/25/10 19:03	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	25.0	1		08/20/10 15:26		

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-1B **Lab ID: 9275629001** Collected: 08/16/10 11:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**10.8**	mg/L	1.0	1.0	1		08/24/10 16:33	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**26.1**	mg/L	5.0	5.0	1		08/27/10 14:40	14808-79-8	

Sample: MW-1A **Lab ID: 9275629002** Collected: 08/16/10 12:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	ND	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 21:58	7440-38-2	
Barium	**104**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:58	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 21:58	7440-43-9	
Chromium	**0.53J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 21:58	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:58	7440-50-8	
Iron	**1650**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 21:58	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 21:58	7439-92-1	
Manganese	**13.9**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 21:58	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 21:58	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 21:58	7440-22-4	
Vanadium	**5.1**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 21:58	7440-62-2	
Zinc	**1.7J**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 21:58	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**159**	umhos/cm	10.0	10.0	1		08/27/10 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**82.0**	mg/L	25.0	25.0	1		08/19/10 18:01		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**4.5**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 17:55		

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-1A **Lab ID: 9275629002** Collected: 08/16/10 12:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	ND	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**10.0**	mg/L	5.0	5.0	1		08/25/10 19:09	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**22.3**	mg/L	1.0	1.0	1		08/24/10 16:54	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**42.0**	mg/L	10.0	10.0	2		08/27/10 15:25	14808-79-8	

Sample: PRIMARY **Lab ID: 9275629003** Collected: 08/16/10 13:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**190**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:01	7440-38-2	
Barium	**251**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:01	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:01	7440-43-9	
Chromium	**128**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:01	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:01	7440-50-8	
Iron	**10100**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:01	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:01	7439-92-1	
Manganese	**500**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:01	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:01	7782-49-2	
Silver	**1.5J**	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:01	7440-22-4	
Vanadium	**828**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:01	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:01	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.15J**	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**8600**	umhos/cm	10.0	10.0	1		08/27/10 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**7120**	mg/L	100	100	1		08/19/10 18:01		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.40	0.40	1		08/24/10 15:19	16984-48-8	D3

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: PRIMARY **Lab ID: 9275629003** Collected: 08/16/10 13:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**7.2**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**30.0**	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:38		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.51**	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**255**	mg/L	100	100	20		08/25/10 19:43	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**1230**	mg/L	50.0	50.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**510**	mg/L	100	100	100		08/25/10 17:57	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**39.5**	mg/L	10.0	10.0	2		08/27/10 15:16	14808-79-8	

Sample: SECONDARY **Lab ID: 9275629004** Collected: 08/16/10 13:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**5.3**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:05	7440-38-2	
Barium	**42.1**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:05	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:05	7440-43-9	
Chromium	**7.6**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:05	7440-47-3	
Copper	**0.40J**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:05	7440-50-8	
Iron	**2650**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:05	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:05	7439-92-1	
Manganese	**301**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:05	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:05	7782-49-2	
Silver	**0.12J**	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:05	7440-22-4	
Vanadium	**15.4**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:05	7440-62-2	
Zinc	**3.0J**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:05	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: SECONDARY **Lab ID: 9275629004** Collected: 08/16/10 13:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**2290**	umhos/cm	10.0	10.0	1		08/27/10 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1600**	mg/L	25.0	25.0	1		08/19/10 18:02		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.5**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**6.6**	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:02		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**1.9**	mg/L	0.10	0.10	2		08/18/10 00:08		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**40.7**	mg/L	10.0	10.0	2		08/25/10 19:18	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**119**	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**50.2**	mg/L	5.0	5.0	5		08/25/10 18:07	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**162**	mg/L	25.0	25.0	5		08/27/10 15:44	14808-79-8	

Sample: UNDERDRAIN **Lab ID: 9275629005** Collected: 08/16/10 13:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**7.8**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:18	7440-38-2	
Barium	**101**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:18	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:18	7440-43-9	
Chromium	**31.3**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:18	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:18	7440-50-8	
Iron	**9020**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:18	7439-89-6	

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: UNDERDRAIN **Lab ID: 9275629005** Collected: 08/16/10 13:45 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:18	7439-92-1	
Manganese	**578**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:18	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:18	7782-49-2	
Silver	**0.29J**	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:18	7440-22-4	
Vanadium	**75.4**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:18	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:18	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**4230**	umhos/cm	10.0	10.0	1		08/27/10 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**2950**	mg/L	100	100	1		08/19/10 18:02		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.7**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**11.0**	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:39		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.27**	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**264**	mg/L	90.0	90.0	18		08/25/10 19:43	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**307**	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**82.9**	mg/L	5.0	5.0	5		08/25/10 18:45	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**7.9**	mg/L	5.0	5.0	1		08/27/10 14:37	14808-79-8	

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-7A **Lab ID: 9275629006** Collected: 08/16/10 14:35 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**14.6**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:22	7440-38-2	
Barium	**43.3**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:22	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:22	7440-43-9	
Chromium	**3.3J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:22	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:22	7440-50-8	
Iron	**16000**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:22	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:22	7439-92-1	
Manganese	**398**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:22	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:22	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:22	7440-22-4	
Vanadium	**12.6**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:22	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:22	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1980**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1190**	mg/L	50.0	50.0	1		08/19/10 18:03		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.9**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**15.0**	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:04		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.11**	mg/L	0.050	0.050	1		08/17/10 23:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**227**	mg/L	75.0	75.0	15		08/25/10 19:44	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**126**	mg/L	25.0	25.0	1		08/20/10 15:26		

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-7A **Lab ID: 9275629006** Collected: 08/16/10 14:35 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**55.4**	mg/L	5.0	5.0	5		08/25/10 18:56	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**56.0**	mg/L	15.0	15.0	3		08/27/10 16:27	14808-79-8	

Sample: MW-4A **Lab ID: 9275629007** Collected: 08/16/10 15:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**2.8J**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:26	7440-38-2	
Barium	**72.8**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:26	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:26	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:26	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:26	7440-50-8	
Iron	**8810**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:26	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:26	7439-92-1	
Manganese	**57.7**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:26	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:26	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:26	7440-22-4	
Vanadium	**2.0J**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:26	7440-62-2	
Zinc	**11.2**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:26	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.14J**	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**311**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**183**	mg/L	25.0	25.0	1		08/19/10 18:03		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/24/10 15:19	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**4.9**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:05		

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-4A **Lab ID: 9275629007** Collected: 08/16/10 15:15 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	ND	mg/L	0.050	0.050	1		08/18/10 00:00		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**33.2**	mg/L	5.0	5.0	1		08/25/10 19:09	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**13.2**	mg/L	1.0	1.0	1		08/24/10 18:43	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**64.2**	mg/L	10.0	10.0	2		08/27/10 15:19	14808-79-8	M1

Sample: MW-8A **Lab ID: 9275629008** Collected: 08/16/10 15:50 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**7.3**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:29	7440-38-2	
Barium	**57.8**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:29	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:29	7440-43-9	
Chromium	**0.41J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:29	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:29	7440-50-8	
Iron	**16400**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:29	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:29	7439-92-1	
Manganese	**1030**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:29	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:29	7782-49-2	
Silver	**0.24J**	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:29	7440-22-4	
Vanadium	ND	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:29	7440-62-2	
Zinc	**6.6J**	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:29	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1250**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**998**	mg/L	25.0	25.0	1		08/19/10 18:04		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/31/10 12:53	16984-48-8	

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-8A **Lab ID: 9275629008** Collected: 08/16/10 15:50 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.7**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		B2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:06		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	ND	mg/L	0.050	0.050	1		08/18/10 00:00		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**6.7**	mg/L	5.0	5.0	1		08/27/10 10:35	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**17.0**	mg/L	1.0	1.0	1		08/24/10 18:53	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**259**	mg/L	50.0	50.0	10		08/30/10 10:23	14808-79-8	

Sample: MW-5A **Lab ID: 9275629009** Collected: 08/16/10 16:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**3.1J**	ug/L	5.0	2.7	1	08/23/10 13:00	08/25/10 22:33	7440-38-2	
Barium	**130**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:33	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	08/23/10 13:00	08/25/10 22:33	7440-43-9	
Chromium	**3.3J**	ug/L	5.0	0.40	1	08/23/10 13:00	08/25/10 22:33	7440-47-3	
Copper	ND	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:33	7440-50-8	
Iron	**608**	ug/L	50.0	14.0	1	08/23/10 13:00	08/25/10 22:33	7439-89-6	
Lead	ND	ug/L	5.0	4.0	1	08/23/10 13:00	08/25/10 22:33	7439-92-1	
Manganese	**332**	ug/L	5.0	0.30	1	08/23/10 13:00	08/25/10 22:33	7439-96-5	
Selenium	ND	ug/L	10.0	3.8	1	08/23/10 13:00	08/25/10 22:33	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	08/23/10 13:00	08/25/10 22:33	7440-22-4	
Vanadium	**7.7**	ug/L	5.0	0.20	1	08/23/10 13:00	08/25/10 22:33	7440-62-2	
Zinc	ND	ug/L	10.0	0.40	1	08/23/10 13:00	08/25/10 22:33	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.070	1	08/25/10 17:05	08/26/10 13:05	7439-97-6	

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ANALYTICAL RESULTS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Sample: MW-5A **Lab ID: 9275629009** Collected: 08/16/10 16:30 Received: 08/17/10 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
120.1 Specific Conductance	Analytical Method: EPA 120.1								
Specific Conductance	**1600**	umhos/cm	10.0	10.0	1		08/27/10 14:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1150**	mg/L	25.0	25.0	1		08/19/10 18:04		
4500FC Fluoride	Analytical Method: SM 4500F/C								
Fluoride	ND	mg/L	0.10	0.10	1		08/31/10 12:53	16984-48-8	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**6.8**	Std. Units	1.0		1		08/19/10 18:41		H6
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**6.3**	mg/L	2.0	2.0	1	08/17/10 19:15	08/22/10 13:00		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		08/17/10 18:08		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1								
Orthophosphate as P	**0.067**	mg/L	0.050	0.050	1		08/18/10 00:00		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**234**	mg/L	40.0	40.0	8		08/27/10 11:13	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**114**	mg/L	25.0	25.0	1		08/20/10 15:26		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**46.6**	mg/L	5.0	5.0	5		08/25/10 19:06	7440-44-0	
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90								
Sulfate	**568**	mg/L	75.0	75.0	15		08/27/10 15:22	14808-79-8	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: MPRP/6918 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 487025 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	5.0	08/25/10 21:18	
Barium	ug/L	ND	5.0	08/25/10 21:18	
Cadmium	ug/L	ND	1.0	08/25/10 21:18	
Chromium	ug/L	ND	5.0	08/25/10 21:18	
Copper	ug/L	ND	5.0	08/25/10 21:18	
Iron	ug/L	ND	50.0	08/25/10 21:18	
Lead	ug/L	ND	5.0	08/25/10 21:18	
Manganese	ug/L	ND	5.0	08/25/10 21:18	
Selenium	ug/L	ND	10.0	08/25/10 21:18	
Silver	ug/L	ND	5.0	08/25/10 21:18	
Vanadium	ug/L	0.21J	5.0	08/25/10 21:18	
Zinc	ug/L	ND	10.0	08/25/10 21:18	

LABORATORY CONTROL SAMPLE: 487026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	489	98	80-120	
Barium	ug/L	500	489	98	80-120	
Cadmium	ug/L	500	496	99	80-120	
Chromium	ug/L	500	494	99	80-120	
Copper	ug/L	500	487	97	80-120	
Iron	ug/L	5000	4870	97	80-120	
Lead	ug/L	500	486	97	80-120	
Manganese	ug/L	500	490	98	80-120	
Selenium	ug/L	500	485	97	80-120	
Silver	ug/L	250	202	81	80-120	
Vanadium	ug/L	500	491	98	80-120	
Zinc	ug/L	500	484	97	80-120	

MATRIX SPIKE SAMPLE: 487145

Parameter	Units	9275813001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	ND	500	503	100	75-125	
Barium	ug/L	150	500	632	96	75-125	
Cadmium	ug/L	ND	500	508	102	75-125	
Chromium	ug/L	ND	500	505	100	75-125	
Copper	ug/L	ND	500	486	97	75-125	
Iron	ug/L	13800	5000	17800	80	75-125	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

MATRIX SPIKE SAMPLE: 487145

Parameter	Units	9275813001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	493	98	75-125	
Manganese	ug/L	750	500	1200	89	75-125	
Selenium	ug/L	ND	500	494	99	75-125	
Silver	ug/L	ND	250	197	79	75-125	
Vanadium	ug/L	5.2	500	500	99	75-125	
Zinc	ug/L	12.7	500	512	100	75-125	

SAMPLE DUPLICATE: 487146

Parameter	Units	9275813002 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	ug/L	ND	ND		20	
Barium	ug/L	147	147	0	20	
Cadmium	ug/L	ND	ND		20	
Chromium	ug/L	ND	2.8J		20	
Copper	ug/L	ND	1.1J		20	
Iron	ug/L	2280	2170	5	20	
Lead	ug/L	ND	ND		20	
Manganese	ug/L	158	161	2	20	
Selenium	ug/L	ND	ND		20	
Silver	ug/L	ND	ND		20	
Vanadium	ug/L	5.8	5.7	2	20	
Zinc	ug/L	12.1	4.7J		20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: MERP/2975 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 488347 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	08/26/10 13:05	

LABORATORY CONTROL SAMPLE: 488348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 488349 488350

Parameter	Units	9275941004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.6	2.6	103	106	75-125	3	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 488351 488352

Parameter	Units	9275941005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.6	2.6	104	106	75-125	2	25	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WET/13589 Analysis Method: EPA 120.1
QC Batch Method: EPA 120.1 Analysis Description: 120.1 Specific Conductance
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 489570 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Specific Conductance	umhos/cm	ND	10.0	08/27/10 14:49	

LABORATORY CONTROL SAMPLE: 489571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance	umhos/cm	1410	1410	100	90-110	

SAMPLE DUPLICATE: 489572

Parameter	Units	9275629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	506	506	0	20	

SAMPLE DUPLICATE: 489573

Parameter	Units	9275629002 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	159	157	1	20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WET/13482 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 485668 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	08/19/10 17:59	

LABORATORY CONTROL SAMPLE: 485669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	233	93	80-120	

SAMPLE DUPLICATE: 485670

Parameter	Units	9275629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	282	285	1	10	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WET/13526 Analysis Method: SM 4500F/C
QC Batch Method: SM 4500F/C Analysis Description: SM4500FC Fluoride Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007

METHOD BLANK: 487334 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	08/24/10 15:19	

LABORATORY CONTROL SAMPLE: 487335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE SAMPLE: 487336

Parameter	Units	9275126005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	2.5	2.4	96	75-125	

SAMPLE DUPLICATE: 487337

Parameter	Units	9275126006 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WET/13613
QC Batch Method: SM 4500F/C
Analysis Method: SM 4500F/C
Analysis Description: SM4500FC Fluoride Water
Associated Lab Samples: 9275629008, 9275629009

METHOD BLANK: 490343
Matrix: Water
Associated Lab Samples: 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	08/31/10 12:53	

LABORATORY CONTROL SAMPLE: 490344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE SAMPLE: 490345

Parameter	Units	9275629008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	2.5	2.8	109	75-125	

SAMPLE DUPLICATE: 490346

Parameter	Units	9275629009 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WET/13483 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

SAMPLE DUPLICATE: 485704

Parameter	Units	9275629001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	0	20	H6

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WET/13459 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 484350 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	08/22/10 13:00	

LABORATORY CONTROL SAMPLE: 484351

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	180	91	84-115	

SAMPLE DUPLICATE: 484352

Parameter	Units	9275629001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WETA/7953 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 484323 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	08/17/10 17:32	

LABORATORY CONTROL SAMPLE: 484324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	5	5.2	104	90-110	

MATRIX SPIKE SAMPLE: 484325

Parameter	Units	9275609001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	6.1	120	90-110	M1

MATRIX SPIKE SAMPLE: 484327

Parameter	Units	9275629001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	5.6	111	90-110	M1

SAMPLE DUPLICATE: 484326

Parameter	Units	9275609001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	D7

SAMPLE DUPLICATE: 484328

Parameter	Units	9275629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	D7

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WETA/7958 Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 Analysis Description: 365.1 Orthophosphate as P
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 484376 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.050	08/17/10 23:58	

LABORATORY CONTROL SAMPLE: 484377

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	.5	0.52	105	90-110	

MATRIX SPIKE SAMPLE: 484378

Parameter	Units	9275629001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	ND	.5	0.47	92	90-110	

SAMPLE DUPLICATE: 484379

Parameter	Units	9275629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	ND	ND		20	D7

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WETA/8026 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007

METHOD BLANK: 488791 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	5.0	08/25/10 19:01	

LABORATORY CONTROL SAMPLE: 488792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.3	102	90-110	

MATRIX SPIKE SAMPLE: 488793

Parameter	Units	9275561002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	67100 ug/L	20	89.9	114	75-125	

MATRIX SPIKE SAMPLE: 488795

Parameter	Units	9275214013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	23.5	20	41.0	88	75-125	

SAMPLE DUPLICATE: 488794

Parameter	Units	9275561002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	67100 ug/L	67.7	1	20	

SAMPLE DUPLICATE: 488796

Parameter	Units	9275214013 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	23.5	23.6	1	20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WETA/8035
Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E
Analysis Description: 4500 Chloride
Associated Lab Samples: 9275629008, 9275629009

METHOD BLANK: 489107
Matrix: Water
Associated Lab Samples: 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	5.0	08/27/10 10:56	

LABORATORY CONTROL SAMPLE: 489108

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	

MATRIX SPIKE SAMPLE: 489109

Parameter	Units	9275629008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	6.7	20	25.1	92	75-125	

MATRIX SPIKE SAMPLE: 489111

Parameter	Units	9275753003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	23.1	20	38.4	77	75-125	

SAMPLE DUPLICATE: 489110

Parameter	Units	9275629009 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	234	229	2	20	

SAMPLE DUPLICATE: 489112

Parameter	Units	9275756001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	7.2	7.2	1	20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WETA/7991 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 486512 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	08/20/10 15:26	

LABORATORY CONTROL SAMPLE: 486513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	757	101	90-110	

MATRIX SPIKE SAMPLE: 486519

Parameter	Units	9275805001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	37.0	750	841	107	75-125	

MATRIX SPIKE SAMPLE: 486521

Parameter	Units	9275805002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	750	810	108	75-125	

SAMPLE DUPLICATE: 486520

Parameter	Units	9275805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	37.0	37.0	0	20	

SAMPLE DUPLICATE: 486522

Parameter	Units	9275805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WETA/8010 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 487476 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	08/24/10 15:25	

LABORATORY CONTROL SAMPLE: 487477

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	26.0	104	90-110	

MATRIX SPIKE SAMPLE: 487478

Parameter	Units	3516544001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	18.8	25	43.6	99	75-125	

MATRIX SPIKE SAMPLE: 487479

Parameter	Units	3516544009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	45.5	25	60.5	60	75-125	M1

SAMPLE DUPLICATE: 487480

Parameter	Units	9275629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	10.8	10.6	2	20	

SAMPLE DUPLICATE: 487481

Parameter	Units	9275629002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	22.3	22.2	0	20	

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QUALITY CONTROL DATA

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

QC Batch: WETA/8044 Analysis Method: ASTM D516-90
QC Batch Method: ASTM D516-90 Analysis Description: ASTM D516-90 Sulfate Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

METHOD BLANK: 489495 Matrix: Water
Associated Lab Samples: 9275629001, 9275629002, 9275629003, 9275629004, 9275629005, 9275629006, 9275629007, 9275629008, 9275629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	5.0	08/27/10 14:29	

LABORATORY CONTROL SAMPLE: 489496

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	18.7	94	90-110	

MATRIX SPIKE SAMPLE: 489497

Parameter	Units	9275897003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	32.0	20	54.9	115	75-125	

MATRIX SPIKE SAMPLE: 489499

Parameter	Units	9275629007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	64.2	20	90.4	131	75-125	M1

SAMPLE DUPLICATE: 489498

Parameter	Units	9275897004 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 489500

Parameter	Units	9275629008 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	259	302	16	20	

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QUALIFIERS

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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LABORATORIES

PASI-A	Pace Analytical Services - Asheville

ANALYTE QUALIFIERS

B2	Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D7	The sample and/or duplicate results for this parameter are less than the reporting limit, calculations are based on estimated values and may be statistically unreliable.
H6	Analysis initiated more than 15 minutes after sample collection.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9275629001	**MW-1B**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629002	**MW-1A**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629003	**PRIMARY**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629004	**SECONDARY**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629005	**UNDERDRAIN**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629006	**MW-7A**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629007	**MW-4A**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629008	**MW-8A**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629009	**MW-5A**	EPA 3010	MPRP/6918	EPA 6010	ICP/6386
9275629001	**MW-1B**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629002	**MW-1A**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629003	**PRIMARY**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629004	**SECONDARY**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629005	**UNDERDRAIN**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629006	**MW-7A**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629007	**MW-4A**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629008	**MW-8A**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629009	**MW-5A**	EPA 7470	MERP/2975	EPA 7470	MERC/2935
9275629001	**MW-1B**	EPA 120.1	WET/13589		
9275629002	**MW-1A**	EPA 120.1	WET/13589		
9275629003	**PRIMARY**	EPA 120.1	WET/13589		
9275629004	**SECONDARY**	EPA 120.1	WET/13589		
9275629005	**UNDERDRAIN**	EPA 120.1	WET/13589		
9275629006	**MW-7A**	EPA 120.1	WET/13589		
9275629007	**MW-4A**	EPA 120.1	WET/13589		
9275629008	**MW-8A**	EPA 120.1	WET/13589		
9275629009	**MW-5A**	EPA 120.1	WET/13589		
9275629001	**MW-1B**	SM 2540C	WET/13482		
9275629002	**MW-1A**	SM 2540C	WET/13482		
9275629003	**PRIMARY**	SM 2540C	WET/13482		
9275629004	**SECONDARY**	SM 2540C	WET/13482		
9275629005	**UNDERDRAIN**	SM 2540C	WET/13482		
9275629006	**MW-7A**	SM 2540C	WET/13482		
9275629007	**MW-4A**	SM 2540C	WET/13482		
9275629008	**MW-8A**	SM 2540C	WET/13482		
9275629009	**MW-5A**	SM 2540C	WET/13482		
9275629001	**MW-1B**	SM 4500F/C	WET/13526		
9275629002	**MW-1A**	SM 4500F/C	WET/13526		
9275629003	**PRIMARY**	SM 4500F/C	WET/13526		
9275629004	**SECONDARY**	SM 4500F/C	WET/13526		
9275629005	**UNDERDRAIN**	SM 4500F/C	WET/13526		
9275629006	**MW-7A**	SM 4500F/C	WET/13526		
9275629007	**MW-4A**	SM 4500F/C	WET/13526		
9275629008	**MW-8A**	SM 4500F/C	WET/13613		
9275629009	**MW-5A**	SM 4500F/C	WET/13613		
9275629001	**MW-1B**	SM 4500-H+B	WET/13483		

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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9275629002	**MW-1A**	SM 4500-H+B	WET/13483		
9275629003	**PRIMARY**	SM 4500-H+B	WET/13483		
9275629004	**SECONDARY**	SM 4500-H+B	WET/13483		
9275629005	**UNDERDRAIN**	SM 4500-H+B	WET/13483		
9275629006	**MW-7A**	SM 4500-H+B	WET/13483		
9275629007	**MW-4A**	SM 4500-H+B	WET/13483		
9275629008	**MW-8A**	SM 4500-H+B	WET/13483		
9275629009	**MW-5A**	SM 4500-H+B	WET/13483		
9275629001	**MW-1B**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629002	**MW-1A**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629003	**PRIMARY**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629004	**SECONDARY**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629005	**UNDERDRAIN**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629006	**MW-7A**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629007	**MW-4A**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629008	**MW-8A**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629009	**MW-5A**	SM 5210B	WET/13459	SM 5210B	WET/13503
9275629001	**MW-1B**	EPA 353.2	WETA/7953		
9275629002	**MW-1A**	EPA 353.2	WETA/7953		
9275629003	**PRIMARY**	EPA 353.2	WETA/7953		
9275629004	**SECONDARY**	EPA 353.2	WETA/7953		
9275629005	**UNDERDRAIN**	EPA 353.2	WETA/7953		
9275629006	**MW-7A**	EPA 353.2	WETA/7953		
9275629007	**MW-4A**	EPA 353.2	WETA/7953		
9275629008	**MW-8A**	EPA 353.2	WETA/7953		
9275629009	**MW-5A**	EPA 353.2	WETA/7953		
9275629001	**MW-1B**	EPA 365.1	WETA/7958		
9275629002	**MW-1A**	EPA 365.1	WETA/7958		
9275629003	**PRIMARY**	EPA 365.1	WETA/7958		
9275629004	**SECONDARY**	EPA 365.1	WETA/7958		
9275629005	**UNDERDRAIN**	EPA 365.1	WETA/7958		
9275629006	**MW-7A**	EPA 365.1	WETA/7958		
9275629007	**MW-4A**	EPA 365.1	WETA/7958		
9275629008	**MW-8A**	EPA 365.1	WETA/7958		
9275629009	**MW-5A**	EPA 365.1	WETA/7958		
9275629001	**MW-1B**	SM 4500-Cl-E	WETA/8026		
9275629002	**MW-1A**	SM 4500-Cl-E	WETA/8026		
9275629003	**PRIMARY**	SM 4500-Cl-E	WETA/8026		
9275629004	**SECONDARY**	SM 4500-Cl-E	WETA/8026		
9275629005	**UNDERDRAIN**	SM 4500-Cl-E	WETA/8026		
9275629006	**MW-7A**	SM 4500-Cl-E	WETA/8026		
9275629007	**MW-4A**	SM 4500-Cl-E	WETA/8026		
9275629008	**MW-8A**	SM 4500-Cl-E	WETA/8035		
9275629009	**MW-5A**	SM 4500-Cl-E	WETA/8035		
9275629001	**MW-1B**	SM 5220D	WETA/7991		
9275629002	**MW-1A**	SM 5220D	WETA/7991		

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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: IP RIEGELWOOD-LANDFILL
Pace Project No.: 9275629

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9275629003	**PRIMARY**	SM 5220D	WETA/7991		
9275629004	**SECONDARY**	SM 5220D	WETA/7991		
9275629005	**UNDERDRAIN**	SM 5220D	WETA/7991		
9275629006	**MW-7A**	SM 5220D	WETA/7991		
9275629007	**MW-4A**	SM 5220D	WETA/7991		
9275629008	**MW-8A**	SM 5220D	WETA/7991		
9275629009	**MW-5A**	SM 5220D	WETA/7991		
9275629001	**MW-1B**	SM 5310B	WETA/8010		
9275629002	**MW-1A**	SM 5310B	WETA/8010		
9275629003	**PRIMARY**	SM 5310B	WETA/8010		
9275629004	**SECONDARY**	SM 5310B	WETA/8010		
9275629005	**UNDERDRAIN**	SM 5310B	WETA/8010		
9275629006	**MW-7A**	SM 5310B	WETA/8010		
9275629007	**MW-4A**	SM 5310B	WETA/8010		
9275629008	**MW-8A**	SM 5310B	WETA/8010		
9275629009	**MW-5A**	SM 5310B	WETA/8010		
9275629001	**MW-1B**	ASTM D516-90	WETA/8044		
9275629002	**MW-1A**	ASTM D516-90	WETA/8044		
9275629003	**PRIMARY**	ASTM D516-90	WETA/8044		
9275629004	**SECONDARY**	ASTM D516-90	WETA/8044		
9275629005	**UNDERDRAIN**	ASTM D516-90	WETA/8044		
9275629006	**MW-7A**	ASTM D516-90	WETA/8044		
9275629007	**MW-4A**	ASTM D516-90	WETA/8044		
9275629008	**MW-8A**	ASTM D516-90	WETA/8044		
9275629009	**MW-5A**	ASTM D516-90	WETA/8044		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of

Section A Required Client Information:

Company:	URS Corporation
Address:	1600 Perimeter Park, Suite 400
	Morrisville, NC 27560
Email To:	martha_meyers-lee@urscorp.com
Phone:	919-461-1519
Fax:	919-461-1415
Requested Due Date/TAT:	14-Days (calendar)

Section B Required Project Information:

Report To:	Martha Meyers-Lee
Copy To:	Conan Fitzgerald
Purchase Order No.:	227435.US
Project Name:	IP Riegelwood-Landfill
Project Number:	31826692.00002

Section C Invoice Information:

Attention:	Per Subcontract 227435.US
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☒ NC ☐ OH ☐ SC ☐ WI ☐ OTHER____

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis: pH (SM 4500 H+B)	EPA 300.0 (X)	BOD (SM5210B)	COD (EPA 410.4)	TDS (SM2540C)	TOX (SM5320B)	TPH (SM5520B)	3rd Cond (E120.1)	Metals **	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
1	MW-1B	WT	G			8-16-10	1145		10	X	X	X	X					X	X	X	X	X	X	X	X	X		001
2	MW-1A						1215		10	X	X	X	X					X	X	X	X	X	X	X	X	X		002
3	Primary						1315		11	X	X	X	X					X	X	X	X	X	X	X	X	X		003
4	Secondary						1330		11	X	X	X	X					X	X	X	X	X	X	X	X	X		004
5	Underdrain						1345		11	X	X	X	X					X	X	X	X	X	X	X	X	X		005
6	MW-7A						1435		10	X	X	X	X					X	X	X	X	X	X	X		X		006
7	MW-9A						1515		10	X	X	X	X					X	X	X	X	X	X	X	X	X		007
8	MW-8A						1550		10	X	X	X	X					X	X	X	X	X	X	X	X	X		008
9	MW-5A					8-16-10	1630		10	X	X	X	X					X	X	X	X	X	X	X	X	X		009
10																												
11																												
12																												

Pace Project No. Lab I.D.: 92725629

Additional Comments:

* Chloride, Fluoride, Nitrate, Sulfate, + Orthophosphate by EPA 300.0

** Total Metals (As, Ba, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Se, V, Ag, + Zn) by SW-846 6010C/7470A

Refer to attached SOW.

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Michael Meese / URS	8-16-10	1700	Janell Cloud Pace	8/17/10	930

SAMPLE CONDITIONS: 8/17/10

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
4.1	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Michael Meese

SIGNATURE of SAMPLER: Michael Meese

DATE Signed (MM/DD/YY): 8/16/10

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of

Section A Required Client Information:

Company: URS Corporation
Address: 1600 Perimeter Park, Suite 400
Morrisville, NC 27560
Email To: martha_meyers-lee@urscorp.com
Phone: 919-461-1519 Fax: 919-461-1415
Requested Due Date/TAT: 14-Days (calendar)

Section B Required Project Information:

Report To: Martha Meyers-Lee
Copy To: Conan Fitzgerald
Purchase Order No.: 227435.US
Project Name: IP Riegelwood-Landfill
Project Number: 31826692.00002

Section C Invoice Information:

Attention: Per Subcontract 227435.US
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☒ NC ☐ OH ☐ SC ☐ WI ☐ OTHER

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AIR, OTHER OT, TISSUE TS

ITEM #	Section D Required Client Information — SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	pH (SM 4500 H+B)	EPA 300.0 (E)	BOD (SM5210B)	COD (EPA 410.4)	TOC (SM5310B)	TOX (SM5320B)	TDS (SM2540C)	Cond (E120.1)	Metals **	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	MW-1B	WT	G			8-16-10	1145		10	X	X	X	X					X	X	X								
2	MW-1A						1215		10	X	X	X	X					X	X	X								
3	Primary						1330		11	X	X	X	X					X	X	X								
4	Secondary						1330		11	X	X	X	X					X	X	X								
5	Underdrain						1345		11	X	X	X	X					X	X	X								
6	MW-7A						1435		10	X	X	X	X					X	X	X								
7	MW-4A						1515		10	X	X	X	X					X	X	X								
8	MW-8A						1550		10	X	X	X	X					X	X	X								
9	MW-5A					8-16-10	1630		10	X	X	X	X					X	X	X								
10																												
11																												
12																												

Filtered (Y/N)
Requested Analysis:

Additional Comments:

* Chloride, Fluoride, Nitrate, Sulfate, + Orthophosphate by EPA 300.0

** Total Metals (As, Ba, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Se, V, Ag, + Zn) by SW-846 6010C/7470A

Refer to attached SOW.

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Michael Meesl / URS	8/16/10	1700	Kevin Chad Pace	8/17/10	930

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
4.1	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Michael Meesl

SIGNATURE of SAMPLER: Michael Meesl

DATE Signed (MM/DD/YY): 8/16/10

Sample Condition Upon Receipt

Pace Analytical

Client Name: URS Corporation Project # 9275629

Where Received: ☑ Huntersville ☐ Asheville ☐ Eden

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: IR Gun : T809 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor: Add / Subtract _____ 0 _____ C

Corrected Cooler Temp.: 4.1 C **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: 8/17/10

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out: 8/17/10	☑Yes ☐No ☐N/A	2. Received 8/17/10 COD, TOC, TOX, TDS
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3. Spec. Cond. Metals
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: 8/17/10 (yes)	☑Yes ☐No ☐N/A	12. ~~Received Extra Bottles Not on COC~~ 8/17/10
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13. metals
All containers needing preservation are found to be in compliance with EPA recommendation. 8/17/10	☑Yes ☐No ☐N/A	pH = 7 for Underdrain + Primary
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☑Yes ☐No ☐N/A	15. MW-5 + Underdrain has one
Trip Blank Present:	☐Yes ☐No ☑N/A	16. Vial with AIR Bubble
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 8/18/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

F-CHR-CS-003-rev.00

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

LABORATORY REPORT

Client
Pace Analytical Services Inc
9800 Kincey Avenue Suite 100
Huntersville, NC 28078

Order Number
1013003
REVISED REPORT

Project Number
N/A

Issued
Tuesday, September 28, 2010

Total Number of Pages
4 (excluding C.O.C. and cooler receipt form)

Approved By :_____

QA Manager

NELAC Accreditation #E87688

Sample Summary

Client: Pace Analytical Services Inc
Order Number: 1013003

Laboratory ID	Client ID	Matrix	Sampling Date
1013003-01	MW-1B	Liquid	8/16/2010
1013003-02	MW-1A	Liquid	8/16/2010
1013003-03	PRIMARY	Liquid	8/16/2010
1013003-04	SECONDARY	Liquid	8/16/2010
1013003-05	UNDERDRAIN	Liquid	8/16/2010
1013003-06	MW-7A	Liquid	8/16/2010
1013003-07	MW-4A	Liquid	8/16/2010
1013003-08	MW-8A	Liquid	8/16/2010
1013003-09	MW-5A	Liquid	8/16/2010

Report Narrative

Client: Pace Analytical Services Inc

Order Number: 1013003

No problems were encountered during analysis of this order number, except as noted.

* Client ID for 1013003-07 revised per client request.

Data Qualifiers:
B = Analyte found in the method blank
J = Estimated concentration of analyte between MDL (LOD) and Reporting Limit (LOQ)
C = Analyte has been confirmed by another instrument or method
E = Analyte exceeds the upper limit of the calibration curve.
D = Sample or extract was analyzed at a higher dilution
X = User defined data qualifier.
S = Surrogate out of control limits
U = Undetected
a = Not Accredited by NELAC

ND = Non Detected at LOQ
DF = Dilution Factor

Limit Of Quantitation (LOQ) = Laboratory Reporting Limit (not adjusted for dilution factor)
Limit Of Detection (LOD) = Laboratory Detection Limit

Matrices:
A = Air
C = Cream
DW = Drinking Water
L = Liquid
O = Oil
SL = Sludge
SO = Soil
S = Solid
T = Tablet
TC = TCLP Extract
WW = Waste Water
W = Wipe

Estimated uncertainty values are available upon request.

The test results meet the requirements of the NELAC standard, except where noted. The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the client. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the client for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

September 28, 2010

Client: Pace Analytical Services Inc
Address: 9800 Kincey Avenue Suite 100
Huntersville, NC 28078

Received: 8/19/2010
Project #: N/A

Client ID#	Lab ID#	Collected	Analyte	Result	Units	Matrix	Method	DF	LOQ	Run	Analyst
MW-1B	1013003-01	16-Aug-10	TOX	ND	mg/L	L	9020	1	0.1	01-Sep-10	CXS
MW-1A	1013003-02	16-Aug-10	TOX	ND	mg/L	L	9020	1	0.1	01-Sep-10	CXS
PRIMARY	1013003-03	16-Aug-10	TOX	1.4	mg/L	L	9020	1	0.1	01-Sep-10	CXS
SECONDARY	1013003-04	16-Aug-10	TOX	0.2	mg/L	L	9020	1	0.1	01-Sep-10	CXS
UNDERDRAIN	1013003-05	16-Aug-10	TOX	0.5	mg/L	L	9020	1	0.1	01-Sep-10	CXS
MW-7A	1013003-06	16-Aug-10	TOX	1.1	mg/L	L	9020	1	0.1	01-Sep-10	CXS
MW-4A	1013003-07	16-Aug-10	TOX	0.1	mg/L	L	9020	1	0.1	01-Sep-10	CXS
MW-8A	1013003-08	16-Aug-10	TOX	ND	mg/L	L	9020	1	0.1	01-Sep-10	CXS
MW-5A	1013003-09	16-Aug-10	TOX	0.8	mg/L	L	9020	1	0.1	01-Sep-10	CXS

"Analytical Integrity" · EPA Certified · NELAP Certified
3310 Win Street · Cuyahoga Falls, Ohio 44223 • Phone: 330-253-8211 · Fax: 330-253-4489
Web Site: www.settek.com

TOX QC Report

Client: Pace Analytical Charlotte
Address: 9800 Kincey Ave Suite 100
Huntersville, NC 28078
Project ID: NA

Batch #: TOX090110

ACCURACY

	Blank mg/L
BLANK TOX	<0.1

METHOD	LAB PROJECT #	LAB SAMPLE ID	EXTRACTED	ANALYZED
9020B	1013003	Blank	9/1/2010	9/1/2010

ACCURACY

LABORATORY CONTROL SAMPLE	SPK CONC mg/L	LCS mg/L	LCS % REC	ACP %
TOX	0.33	0.34	103.3	81-114

METHOD	LAB. PROJECT #	LAB SAMPLE ID	EXTRACTED	ANALYZED
9020B	1013003	LCS	9/1/2010	9/1/2010

ACCURACY

CELL CHECK	SPIKE	RESULT	ACP
TOX	10 ug	9.9	9.0-11.0 ug

METHOD	LAB. PROJECT #	LAB SAMPLE ID	EXTRACTED	ANALYZED
9020B	1013003	Cell Check	9/1/2010	9/1/2010

			ACCURACY					PRECISION	
MATRIX SPIKE/ MATRIX SPIKE DUPLICATE	SAMP AMT	SPK CONC mg/L	MS mg/L	MS % REC	MSD mg/L	MSD % REC	ACP %	RPD %	ACP %RPD
TOX	0.8	1.0	1.8	100	1.8	100	78-116	0	0-40

METHOD	LAB. PROJECT #	LAB SAMPLE ID	EXTRACTED	ANALYZED
9020B	1013003	1013400-01	9/1/2010	9/1/2010

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 9275629 **Workorder Name:** IP RIEGELWOOD-LANDFILL **Results Requested** 8/31/2010

Report / Invoice To	Subcontract To
Kevin Herring Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: kevin.herring@pacelabs.com	Summit P.O. ds08917

Requested Analysis: TOC

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4	LAB USE ONLY
1	MW-1B	8/16/2010 11:45	9275629001	Water	(	
2	MW-1A	8/16/2010 12:15	9275629002	Water	(	
3	PRIMARY	8/16/2010 13:15	9275629003	Water	(	
4	SECONDARY	8/16/2010 13:30	9275629004	Water	(	
5	UNDERDRAIN	8/16/2010 13:45	9275629005	Water	(	
6	MW-7A	8/16/2010 14:35	9275629006	Water	(	
7	MW-9A	8/16/2010 15:15	9275629007	Water	(	
8	MW-8A	8/16/2010 15:50	9275629008	Water	(	
9	MW-5A	8/16/2010 16:30	9275629009	Water	(	
10						
11						
12						
13						

1013003-01→09

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	8/17/10 1700	Fed Ex	8/17/10 1700
2			[signature]	8-18-10
3				
4				
5				

Comments

* LEVEL III DATA PACKAGE REQUIRED *

Summit Environmental Technologies, Inc.
Organic Halides QC Report Sheet

Method (Circle): TOX (Method 9020B) EOX (Method 9023) AOX (Method 1650)

Order ID: 1013003 Date: 9-1-10

Blank Results

Result	Units
ND	µg/L

LCS Results

Spike Conc.	LCS Result	% Recovery	Limits
0.33	0.34		81 - 114

Cell Check

Spike Conc.	Check Result	Limits
10	9.9	9.0 – 11.0 ug

MS Results

Sample ID: 13400-01

Sample Amount	Spike Conc.	MS Result	% Recovery	Limits
0.8	1.0	1.8	100	78 – 116

MSD Results

Sample ID:

Sample Amount	Spike Conc.	MSD Result	% Recovery	Limits
0.8	1.0	1.8	100	78 – 116

RPD Results

% RPD	Limits
0	0 - 20

APPENDIX C
FIELD DOCUMENTATION

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. MW-1B

WELL NO. MW-1B

DATE/TIME COLLECTED 8-16-10/ 1145

SAMPLE METHOD Peristaltic pump w ⅛" tubing

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE MEDIA: (Groundwater) Surface Water Waste Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
1 - 250mL Poly	unpres.	SpCond/pH
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date 8-16-10

Time Started 1120

Time Completed 1145

Well Depth (ft. BTOC) ~~29.5~~ MM 50.06

Depth to Water (ft BTOC) 15.98

Actual Purge (liters) 5

Purge rate (liters/min) 0.33

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1124	1	15.99	19.46	0.401	5.30	8.13	-19.7	3.1
1127	2	16.00	19.20	0.393	4.12	7.69	-8.3	6.7
1130	3	16.00	19.18	0.392	3.70	7.85	-16.7	6.4
1133	4	16.00	19.18	0.391	3.70	7.88	-17.3	6.0
1136	5	16.00	19.16	0.390	3.70	7.90	-17.4	5.9

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	Solinst 100'	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. MW-1A

WELL NO. MW-1A

DATE/TIME COLLECTED 8-16-10 / 1215

SAMPLE METHOD Peristaltic pump w ⅛" tubing

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE MEDIA: (Groundwater) Surface Water Waste Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
1 - 250mL Poly	unpres.	SpCond/pH
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date: 8-16-10

Time Started: 1155

Time Completed: 1215

Well Depth (ft. BTOC): 29.50

Depth to Water (ft BTOC): 16.53

Actual Purge (liters): ~~1~~ MM 5

Purge rate (liters/min): 0.33

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1158	1	16.57	19.33	0.124	1.45	6.22	134.7	5.7
1201	2	16.55	19.46	0.123	1.40	5.94	133.9	5.2
1204	3	16.55	19.54	0.123	1.38	5.69	141.1	5.0
1207	4	16.55	19.56	0.123	1.37	5.70	142.3	4.9
1210	5	16.54	19.53	0.123	1.35	5.67	142.7	4.9

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	Solinst 100'	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. Primary

WELL NO. —

DATE/TIME COLLECTED 8-16-10 / 1315

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE METHOD Collected from existing pump system sample port

SAMPLE MEDIA: Groundwater Surface Water Waste Water (Leachate)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
2 - 250mL Poly	unpres.	SpCond/pH and Ortho Phosphorus
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date

Time Started

Time Completed

Well Depth (ft. BTOC) NA

Depth to Water (ft BTOC) NA

Actual Purge (liters)

Purge rate (liters/min) NA

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1315	—	—	31.24	9.266	1.23	7.68	-348.1	260

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	NA	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. Secondary

WELL NO. Secondary

DATE/TIME COLLECTED 8/6/10/1330

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE METHOD Collected from existing pump system sample port

SAMPLE MEDIA: Groundwater Surface Water Waste Water (Leachate)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
2 - 250mL Poly	unpres.	SpCond/pH and Ortho Phosphorus
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date

Time Started

Time Completed

Well Depth (ft. BTOC) NA

Depth to Water (ft BTOC) NA

Actual Purge (liters)

Purge rate (liters/min) NA

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1330			26.84	2.312	0.12	7.43	-270.7	19.6

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	NA	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. Underdrain

WELL NO. —

DATE/TIME COLLECTED 8-16-10 / 1345

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE METHOD Collected by bailer in under drain through vault

SAMPLE MEDIA: ~~Groundwater~~ / Surface Water Waste Water Leachate

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
2 - 250mL Poly	unpres.	SpCond/pH and Ortho Phosphorus
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date

Time Started

Time Completed

Well Depth (ft. BTOC) NA

Depth to Water (ft BTOC) NA

Actual Purge (liters)

Purge rate (liters/min) NA

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1345	—	—	26.97	3.86	1.14	7.17	-188.6	15.9

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	NA	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. MW-7A

WELL NO. MW-7A

DATE/TIME COLLECTED 8-16-10 / 1435

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE METHOD Peristaltic pump w ⅛" tubing

SAMPLE MEDIA: (Groundwater) Surface Water Waste Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
1 - 250mL Poly	unpres.	SpCond/pH
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date 8-16-10

Time Started 1410

Time Completed

Well Depth (ft. BTOC) 13.90

Depth to Water (ft BTOC) 6.64

Actual Purge (liters) ~~7.26~~ MMS

Purge rate (liters/min) 0.33

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1415	1	6.68	21.37	1.635	0.23	7.87	-152.1	6.0
1418	2	6.68	21.55	1.644	0.20	7.80	-154.3	7.9
1421	3	6.66	21.65	1.613	0.20	7.77	-151.0	8.9
1424	4	6.66	21.70	1.607	0.20	7.72	-145.8	8.8
1427	5	6.65	21.72	1.603	0.18	7.68	-139.9	8.0

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	Solinst 100'	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. MW-4A

WELL NO. MW-4A

DATE/TIME COLLECTED 8-16-10 / 1515

SAMPLE METHOD Peristaltic pump w ⅛" tubing

PERSONNEL Mike Meese
Phillip Ledford

SAMPLE MEDIA: (Groundwater) Surface Water Waste Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
1 - 250mL Poly	unpres.	SpCond/pH
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date 8-16-10

Time Started 1450

Time Completed 1515

Well Depth (ft. BTOC) 11.90

Depth to Water (ft BTOC) 8.03

Actual Purge (liters) ~~3.87~~ 6

Purge rate (liters/min) 0.33

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1455	1	8.08	22.61	0.294	2.20	5.91	149.2	58.8
1458	2	8.08	22.53	0.294	2.10	5.85	153.5	50.2
1501	3	8.07	22.50	0.286	2.15	5.64	167.6	36.7
1504	4	8.05	22.50	0.289	2.15	5.57	170.2	34.1
1507	5	8.05	22.47	0.288	2.12	5.51	172.3	14.2
1510	6	8.09	22.46	0.285	2.11	5.47	173.3	9.8

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	Solinst 100'	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. MW-8A

WELL NO. MW-8A

DATE/TIME COLLECTED 8-16-10 / 1550

SAMPLE METHOD Peristaltic pump w ⅛" tubing

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE MEDIA: (Groundwater) Surface Water Waste Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
1 - 250mL Poly	unpres.	SpCond/pH
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date: 8-16-10

Time Started: 1525

Time Completed: 1550

Well Depth (ft. BTOC): 12.50

Depth to Water (ft BTOC): 10.41

Actual Purge (liters): 5

Purge rate (liters/min): 0.33

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1529	1	10.44	21.45	1.096	2.01	7.06	-97.1	20.7
1532	2	10.44	21.17	1.088	1.70	7.18	-112.8	9.5
1535	3	10.42	20.99	1.088	1.40	7.22	-108.1	9.3
1538	4	10.42	20.88	1.087	1.38	7.24	-106.7	9.0
1541	5	10.42	20.91	1.090	1.36	7.21	-105.9	9.0

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	Solinst 100'	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

WATER SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: IP Riegelwood Landfill

PROJECT NO. 31826692.00002

SAMPLE NO. MW-5A

WELL NO. MW-5A

DATE/TIME COLLECTED 8-16-10 / 1630

SAMPLE METHOD Peristaltic pump w ⅛" tubing

PERSONNEL Mike Meese, Phillip Ledford

SAMPLE MEDIA: (Groundwater) Surface Water Waste Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 - 40mL amber voa	H_2SO_4	TOC
1 - 1L Poly	unpres.	BOD
1 - 500mL Poly	unpres.	TDS
2 - 250mL Poly	unpres.	Chloride/Fluoride and Sulfate/NO3
1 - 250mL Poly	unpres.	SpCond/pH
1 - 125mL Poly	H_2SO_4	COD
1 - 125mL amber glass	H_2SO_4/Orange	TOX
1 - 250mL Poly	HNO_3/Red	Metals 200.7

WELL PURGING DATA

Date 8-16-10

Time Started 1605

Time Completed 1630

Well Depth (ft. BTOC) 20.00

Depth to Water (ft BTOC) 9.85

Actual Purge (liters) 6

Purge rate (liters/min) 0.33

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox (mV)	Turbidity (NTUs)
1610	1	9.88	21.40	1.691	7.41	7.13	-36.2	4.9
1613	2	9.88	21.32	1.690	7.01	7.12	-44.8	4.8
1616	3	9.87	21.40	1.687	1.88	7.07	-64.7	4.5
1619	4	9.87	21.55	1.683	1.40	7.06	-70.7	4.5
1622	5	9.87	21.58	1.694	1.34	7.06	-74.8	4.5
1625	6	9.86	21.62	1.693	1.32	7.05	-75.9	4.5

FIELD EQUIPMENT AND CALIBRATION

	Model	Calibration
Water Level Probe	Solinst 100'	NA
Water Quality Meter	YSI 556-MPS	pH 4 &7, Cond., Zobell's Solutions
Turbidity Meter	Lamotte 20/20	1 NTU & 10 NTU Solutions

GENERAL COMMENTS

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1354196

Section A Required Client Information:

Company: URS Corporation
Address: 1600 Perimeter Park Dr. Morrisville, NC 27560
Email To: Martha.Meyers-Lee@URScorp.com
Phone: (919) 461-1100 Fax: (919) 461-1415
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: ~~Conan~~ + Martha Meyers-Lee
Copy To: Conan Fitzgerald
Purchase Order No.:
Project Name: ID: Ridgelwood - Landfill
Project Number: 31826692.00002

Section C Invoice Information:

Attention: SAME
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 2324-1

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): Chloride, BOD, COD, Specif. pH, Total Metals, Fluoride/Nitrate, TOX, Sulfate, TDS, TOC, Ortho Phosphate

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Chloride	BOD	COD	Specif. pH	Total Metals	Fluoride/Nitrate	TOX	Sulfate	TDS	TOC	Ortho Phosphate	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1A	WT	G			3-15-10	1145		11	X	X	X	X					X	X	X	X	X	X	X	X	X				92605331
2	MW-1B	WT					1220		11									X	X	X	X	X	X	X	X	X				001
3	UNDER DRAIN	WT					1315		12									X	X	X	X	X	X	X	X	X				002
4	PRIMARY	WT					1345		12									X	X	X	X	X	X	X	X	X				003
5	SECONDARY	WT					1400		12									X	X	X	X	X	X	X	X	X				004
6	MW-7A	WT					1445		11									X	X	X	X	X	X	X	X	X				005
7	MW-4A	WT					1545		11									X	X	X	X	X	X	X	X	X				006
8	MW-8A	WT					1625		11									X	X	X	X	X	X	X	X	X				
9	MW-5A	WT	G			3-15-10	1700		11	X	X	X	X					X	X	X	X	X	X	X	X	X				
10																														
11																														
12																														

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
[signature] / URS Corp	3-15-10	1750	[signature] / PACE	03/16/10	0930	4.9	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Michael Meisel

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3-15-10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007