PREMO GROUP INC

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August 28, 2008

Don Heardon
Compliance Unit
NCDENR-DVM, Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

RE: Facility Permit # 4203
Low Ground Landfill Semi-annual Environmental Monitoring Report
Roanoke Rapids, NC

Dear Mr. Heardon;

On behalf of International Paper, PREMO Group Inc. (PREMO) is submitting the attached Semi-annual Environmental Monitoring Report for the May 2008 sampling event at the above referenced site. Also enclosed is the North Carolina (NC) Solid Waste Section summary table along with the laboratory report from Columbia Analytical Services, and the PREMO Quality Assurance Review of the laboratory data.

The May 2008 sampling activities were conducted by URS Corporation under contract with PREMO. Depth to groundwater measurements were obtained from the five site monitoring wells (MWLG-1, MWLG-3, MWLG-5, MWLG-6, and MWLG-7), and the monitoring wells were then purged and sampled according to EPA protocol. Copies of the field sampling forms and field notes completed by URS personnel are attached to this report. The groundwater samples were preserved according to EPA protocol and shipped to Columbia Analytical Services Laboratory in Jacksonville, FL, a North Carolina certified laboratory. The analytical results for this sampling event are attached.

With the exception of manganese, the laboratory analysis of samples collected from site monitoring wells were below the applicable NC standards. The results of the five (5) groundwater samples exceeded manganese NC 2L standard of 50 ug/L. These results are consistent with historical sampling data, and are considered to be naturally occurring and within the range of background concentrations reported for upgradient monitoring well MWLG-1.

The detected manganese concentrations in site wells are reported within the range of background concentrations for this site. The Solid Waste Section has waived the requirement to prepare a Water Quality Assessment Plan for this site. PREMO concurs with this waiver and does not recommend any changes to the monitoring program at this time.

If you have any questions on this report feel free to call at 770-973-2100.

Sincerely,

Patrick Kelley, CHMM
Project Manager

Peter Ramsey, PG
Senior Geologist

cc: Phil Slowiak, International Paper

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).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- 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):

PREMO GROUP INC. (CONSULTANT)

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

Name: Patrick Kelley Phone: 770-973-2100 x 2860

E-mail: pkelley@premiercorp-usa.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Low Ground Landfill Roanoke Rapids, NC	100 Gaston Rd. Roanoke Rapids, NC	42 03	.0500	May 20, 2008

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.

Patrick Kelley	Project Manager	770-973-2100
Facility Representative Name (Print)	Title	(Area Code) Telephone Number

Patrick Kelley 8/28/08
Signature Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

NORTH CAROLINA PETER E. RAMSEY

Revised 01/2007

International Paper **100 Gaston Road Low Ground Landfill**

Roanoke Rapids Mill **Roanoke Rapids, NC Monitoring Wells**

Samples collected on 5/20/08 by Paul Farris of URS | Contact: Patrick Kelley, Premo Group

Samples were analyzed by CAS, Inc NC Cert. #. 527 | Phone 770-973-2100 #2860 or email, pkelley@premiercorp-usa.com

FACILITY PERMIT	SAMPLE ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	LAB QUALIFIER	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE
42-03	MW-LG 1	7440-38-2	14	Arsenic	0.80	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	7440-39-3	15	Barium	150	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	316	316	Biochemical Oxygen Demand	2.2	mg/L	J	1.0	5/20/08	NA	5/21/08
42-03	MW-LG 1	7440-43-9	34	Cadmium	0.20	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	317	317	Chemical Oxygen Demand	24	mg/L		1.0	5/20/08	NA	6/2/08
42-03	MW-LG 1	16887-00-6	301	Chloride	7	mg/L		1.0	5/20/08	NA	5/21/08
42-03	MW-LG 1	7440-47-3	51	Chromium	1.7	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	7440-50-8	54	Copper	1.8	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	16984-48-8	312	Fluoride	0.20	mg/L		1.0	5/20/08	NA	5/22/08
42-03	MW-LG 1	7439-89-6	340	Iron	18	mg/L		5.0	5/20/08	5/23/08	6/4/08
42-03	MW-LG 1	7439-92-1	131	Lead	0.95	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	7439-96-5	342	Manganese	2500	ug/L		20.0	5/20/08	5/23/08	6/9/08
42-03	MW-LG 1	7439-97-6	132	Mercury	0.08	ug/L	J	1.0	5/20/08	5/30/08	5/30/08
42-03	MW-LG 1	14797-55-8	303	Nitrate	0.180	mg/L	J	1.0	5/20/08	NA	5/21/08
42-03	MW-LG 1	321	321	pH - Lab	6.8	pH UNITS		1.0	5/20/08	NA	5/21/08
42-03	MW-LG 1	7782-49-2	183	Selenium	0.70	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	7440-22-4	184	Silver	0.08	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1	14808-79-8	315	Sulfate	12	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG 1	311	311	Total Dissolved Solids	260	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG 1	E-10195	357	Total Organic Carbon	9.8	mg/L		1.0	5/20/08	NA	5/28/08
42-03	MW-LG 1	7440-66-6	213	Zinc	4.0	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 1			Total Organic Halides	30	ug/L	U	1.0	5/20/08	6/5/08	6/5/08
42-03	MW-LG 3	7440-38-2	14	Arsenic	0.34	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	7440-39-3	15	Barium	60	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	316	316	Biochemical Oxygen Demand	1.1	mg/L	J	1.0	5/20/08	NA	5/21/08
42-03	MW-LG 3	7440-43-9	34	Cadmium	0.20	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	317	317	Chemical Oxygen Demand	27	mg/L		1.0	5/20/08	NA	6/2/08
42-03	MW-LG 3	16887-00-6	301	Chloride	73	mg/L		1.0	5/20/08	NA	5/21/08
42-03	MW-LG 3	7440-47-3	51	Chromium	1.3	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	7440-50-8	54	Copper	0.54	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	16984-48-8	312	Fluoride	0.28	mg/L		1.0	5/20/08	NA	5/22/08
42-03	MW-LG 3	7439-89-6	340	Iron	0.66	mg/L		1.0	5/20/08	5/23/08	6/4/08
42-03	MW-LG 3	7439-92-1	131	Lead	0.20	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	7439-96-5	342	Manganese	2750	ug/L		10.0	5/20/08	5/23/08	6/9/08
42-03	MW-LG 3	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	5/20/08	5/30/08	5/30/08
42-03	MW-LG 3	14797-55-8	303	Nitrate	4.5	mg/L		10.0	5/20/08	NA	5/21/08
42-03	MW-LG 3	321	321	pH - Lab	6.9	pH UNITS		1.0	5/20/08	NA	5/21/08
42-03	MW-LG 3	7782-49-2	183	Selenium	0.70	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	7440-22-4	184	Silver	0.080	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3	14808-79-8	315	Sulfate	210	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG 3	311	311	Total Dissolved Solids	1200	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG 3	E-10195	357	Total Organic Carbon	11	mg/L		1.0	5/20/08	NA	5/28/08
42-03	MW-LG 3	7440-66-6	213	Zinc	4.0	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG 3			Total Organic Halides	108	ug/L		1.0	5/20/08	6/5/08	6/5/08

International Paper **100 Gaston Road** **Low Ground Landfill**

Roanoke Rapids Mill **Roanoke Rapids, NC** **Monitoring Wells**

Samples collected on 5/20/08 by Paul Farris of URS | Contact: Patrick Kelley, Premo Group

Samples were analyzed by CAS, Inc NC Cert. #: 527 | Phone 770-973-2100 #2860 or email, pkelley@premiercorp-usa.com

FACILITY PERMIT	SAMPLE ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	LAB QUALIFIER	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE
42-03	MW-LG5	7440-38-2	14	Arsenic	1.5	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	7440-39-3	15	Barium	109	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	316	316	Biochemical Oxygen Demand	2.0	mg/L	J	1.0	5/20/08	NA	5/21/08
42-03	MW-LG5	7440-43-9	34	Cadmium	0.36	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	317	317	Chemical Oxygen Demand	51	mg/L		1.0	5/20/08	NA	6/2/08
42-03	MW-LG5	16887-00-6	301	Chloride	2.0	mg/L		1.0	5/20/08	NA	5/21/08
42-03	MW-LG5	7440-47-3	51	Chromium	3.4	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	7440-50-8	54	Copper	2.5	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	16984-48-8	312	Fluoride	0.20	mg/L		1.0	5/20/08	NA	5/22/08
42-03	MW-LG5	7439-89-6	340	Iron	27	mg/L		1.0	5/20/08	5/23/08	6/4/08
42-03	MW-LG5	7439-92-1	131	Lead	0.20	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	7439-96-5	342	Manganese	16800	ug/L		20.0	5/20/08	5/23/08	6/9/08
42-03	MW-LG5	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	5/20/08	5/30/08	5/30/08
42-03	MW-LG5	14797-55-8	303	Nitrate	0.18	mg/L	J	1.0	5/20/08	NA	5/21/08
42-03	MW-LG5	321	321	pH - Lab	6.4	pH UNITS		1.0	5/20/08	NA	5/21/08
42-03	MW-LG5	7782-49-2	183	Selenium	0.70	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	7440-22-4	184	Silver	0.080	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5	14808-79-8	315	Sulfate	290	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG5	311	311	Total Dissolved Solids	650	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG5	E-10195	357	Total Organic Carbon	13	mg/L		1.0	5/20/08	NA	5/28/08
42-03	MW-LG5	7440-66-6	213	Zinc	75	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG5			Total Organic Halides	30	ug/L	U	1.0	5/20/08	6/5/08	6/5/08
42-03	MW-LG6	7440-38-2	14	Arsenic	0.59	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	7440-39-3	15	Barium	743	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	316	316	Biochemical Oxygen Demand	8.5	mg/L	U	1.0	5/20/08	NA	5/21/08
42-03	MW-LG6	7440-43-9	34	Cadmium	0.20	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	317	317	Chemical Oxygen Demand	44	mg/L		1.0	5/20/08	NA	6/2/08
42-03	MW-LG6	16887-00-6	301	Chloride	22	mg/L		1.0	5/20/08	NA	5/21/08
42-03	MW-LG6	7440-47-3	51	Chromium	4.0	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	7440-50-8	54	Copper	1.8	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	16984-48-8	312	Fluoride	0.27	mg/L		1.0	5/20/08	NA	5/22/08
42-03	MW-LG6	7439-89-6	340	Iron	0.69	mg/L		1.0	5/20/08	5/23/08	6/4/08
42-03	MW-LG6	7439-92-1	131	Lead	0.37	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	7439-96-5	342	Manganese	1360	ug/L		10.0	5/20/08	5/23/08	6/9/08
42-03	MW-LG6	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	5/20/08	5/30/08	5/30/08
42-03	MW-LG6	14797-55-8	303	Nitrate	0.19	mg/L	J	1.0	5/20/08	NA	5/21/08
42-03	MW-LG6	321	321	pH - Lab	7.7	pH UNITS		1.0	5/20/08	NA	5/21/08
42-03	MW-LG6	7782-49-2	183	Selenium	0.70	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	7440-22-4	184	Silver	0.080	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6	14808-79-8	315	Sulfate	260	mg/L		10.0	5/20/08	NA	5/23/08
42-03	MW-LG6	311	311	Total Dissolved Solids	2000	mg/L		2.0	5/20/08	NA	5/23/08
42-03	MW-LG6	E-10195	357	Total Organic Carbon	14	mg/L		2.0	5/20/08	NA	5/28/08
42-03	MW-LG6	7440-66-6	213	Zinc	4.0	mg/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG6			Total Organic Halides	30	ug/L	U	1.0	5/20/08	6/5/08	6/5/08

International Paper **100 Gaston Road** **Low Ground Landfill**

Roanoke Rapids Mill **Roanoke Rapids, NC** **Monitoring Wells**

Samples collected on 5/20/08 by Paul Farris of URS | Contact: Patrick Kelley, Premo Group

Samples were analyzed by CAS, Inc NC Cert. #: 527 | Phone 770-973-2100 #2860 or email, pkelley@premiercorp-usa.com

FACILITY PERMIT	SAMPLE ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	LAB QUALIFIER	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE
42-03	MW-LG7	7440-38-2	14	Arsenic	0.35	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	7440-39-3	15	Barium	112	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	316	316	Biochemical Oxygen Demand	0.86	mg/L	U	1.0	5/20/08	NA	5/21/08
42-03	MW-LG7	7440-43-9	34	Cadmium	0.20	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	317	317	Chemical Oxygen Demand	30	mg/L		1.0	5/20/08	NA	6/2/08
42-03	MW-LG7	16887-00-6	301	Chloride	18	mg/L		1.0	5/20/08	NA	5/21/08
42-03	MW-LG7	7440-47-3	51	Chromium	0.80	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	7440-50-8	54	Copper	0.65	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	16984-48-8	312	Fluoride	0.23	mg/L		1.0	5/20/08	NA	5/22/08
42-03	MW-LG7	7439-89-6	340	Iron	0.62	mg/L		1.0	5/20/08	5/23/08	6/4/08
42-03	MW-LG7	7439-92-1	131	Lead	0.20	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	7439-96-5	342	Manganese	325	ug/L		1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	5/20/08	5/30/08	5/30/08
42-03	MW-LG7	14797-55-8	303	Nitrate	0.7	mg/L		10.0	5/20/08	NA	5/21/08
42-03	MW-LG7	321	321	pH - Lab	7.4	pH UNITS	J	1.0	5/20/08	NA	5/21/08
42-03	MW-LG7	7782-49-2	183	Selenium	1.2	ug/L	J	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	7440-22-4	184	Silver	0.080	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7	14808-79-8	315	Sulfate	130	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG7	311	311	Total Dissolved Solids	1400	mg/L		1.0	5/20/08	NA	5/23/08
42-03	MW-LG7	E-10195	357	Total Organic Carbon	6.3	mg/L		1.0	5/20/08	NA	5/28/08
42-03	MW-LG7	7440-66-6	213	Zinc	4.0	ug/L	U	1.0	5/20/08	5/23/08	6/8/08
42-03	MW-LG7			Total Organic Halides	30	ug/L	U	1.0	5/20/08	6/5/08	6/5/08

U - Undetected above the MRL/MDL

J - Estimated value above the MDL, but below the MRL

5/20/08

LOW GROUND LANDFILL
GW SAMPLING.

0845: ARRIVE AT KAPSTONE FACILITY. URS PERS. ARE PAUL FARRIS & ANDREW SHULL. CHECK IN AT SECURITY BLDG AND TAKE CONTRACTOR TRAINING COURSE.

0920: SIGN IN AT GATE. WAIT FOR CHRIS PURYEAR TO RECEIVE KEYS FOR WELLS.

1020: CONDUCT CHECK OF WELLS & OPEN GATES.

1030: ARRIVE AT LG-7. UNLOCK WELL AND PREPARE TO SAMPLE. SAMPLING AT ALL WELLS IS TO BE CONDUCTED BY LOW FLOW MINIMAL DRAWDOWN, FOLLOWING EPA APRIL 1996 PUBLISHED PROTOCOL. SAMPLING EQUIP IS AS FOLLOWS (RENTED OR OBTAINED FROM CHOICE ENV. EQUIP OF CARY, NC):

- SOLINST WATER LEVEL METER
- GEOPUMP 2 PERISTALTIC
- YSI 556 w/ FLOW THROUGH CELL
- LAMOTTE 2020 TURB. METER,

5/20/08 LOW GROUND LANDFILL - GW SAMPLING

SAMPLES COLLECTED AT EACH WELL ARE AS FOLLOWS:

1 - 1L AMBER H_2SO_4 PRES. GLASS BOTTLE FOR TOX
1 - 500 ml HDPE UNPRES BOTTLE FOR TDS, Cl, F, NO_3, SO_4, BOD, pH, COND
1 - 125 ml HDPE H_2SO_4 PRES. BOTTLE FOR COD
1 - 125 ml HNO_3 PRES. HDPE BOTTLE FOR METALS
1 - 125 ml HCl PRES. HDPE BOTTLE FOR TOC

- ALSO, LOW FLOW PARAMETER LOGGED ON ADDENDUM SAMPLE SHEETS ARE AS FOLLOWS: pH, TEMP, COND, ORP, D.O., TURB, AND Δ in WATER LEVEL.
- STABILIZED READINGS AT EACH WELL WILL BE RECORDED IN THIS LOG BOOK.
- AN EQUIPMENT BLANK WILL BE SUBMITTED ~~FROM~~ FOR THE SAME ANALYSES ABOVE. DECONTAMINATION of FIELD EQUIP IS CONDUCTED WITH LIQUINOX SOAP, DISTILLED WATER, w/ DISTILLED WATER RINSE. NEW TUBING &

(2/5)

LOW GROUND LANDFILL - 5/20/08
GW SAMPLING.

NEW NITRILE GLOVES (DISPOSABLE) USED AT EACH SAMPLE LOCATION.

1110: COLLECT SAMPLE LG-7.
1125: MOBILIZE TO LG-1
1140: BEGIN PURGING AT LG-1. SUS. SOLIDS IN DISCHARGE & SLIGHT BROWN TINT TO WATER. PURGE BYPASSING FLOW CELL.
1150: PURGE INTO FLOW CELL
1200: PAT KELLY & PETE RAMSEY OF PREMIER ENVIRONMENTAL ARRIVE ON SITE.
1225: PAT & PETE DEPART SITE FOR LUNCH.
1230: COLLECT SAMPLE LG-1.
1245: MOBILIZE TO WELL LG-3.
1250: BEGIN MICROPURGE AT LG-3.
1340: COLLECT SAMPLE LG-3.
1350: MOBILIZE TO WELL LG-5, (P.F.)
1358: A.S. MOBILIZES TO WELL LG-6
1400: BEGIN MICRO PURGE @ LG-5, SEE NOTES CONCERNING HIGH TURB. & SUSP. SOLIDS ON SAMPLE SHEET.
1410: BEGIN MICRO PURGE @ LG-6.
1425: PAT & PETER OF PREMIER DEPART SITE.

(3/5)

5/20/08 LOW GROUND LANDFILL - GW SAMPLING

1500: COLLECT SAMPLE LG-6

1510: COLLECT SAMPLE LG-5.

1530: ENSURE GATES/WELLS LOCKED.

COLLECT "EQUIPTMENT BLANK" SAMPLE

MOBILIZE TO ICE MACHINE TO REPACK SAMPLES ON ICE.

SAMPLES HAVE BEEN LOGGED ON CHAIN OF CUSTODY AS COLLECTED

HEAVY RAIN, HAIL, LIGHTNING BEGIN.

1620: DEPART SITE.

1845: DELIVER SAMPLES (1 COOLER) TO FED EX RDU for PRIORITY OVERNIGHT SHIPMENT TO COLUMBIA ANALYTICAL SERVICES LAB of Jacksonville, FL.

FEDEX AIRBILL# 8656 3906 6021

RETURN TO OFFICE TO UNLOAD EQUIP.

NO FURTHER ENTRIES THIS DATE 5/20/08

(4/5)

STABILIZED PARAMETER SUMMARY TABLE

WELL	DTW. (ft. btoc)	DTWF (ft btoc)	SAMPLE TIME	TEMP (°C)	pH (s.u.)	COND. (mS/cm)	D.O. (mg/L)	O.R.P. (mV)	TURB. (NTU)
LG-1	7.50	9.42	1230	15.51	6.29	0.249	0.52	-104.7	5.5
LG-3	5.97	7.03	1340	16.83	6.46	1.610	0.64	80.2	0.19
LG-5	8.17	12.28	1510	18.82	5.96	0.769	0.54	27.9	9.97
LG-6	9.01	10.29	1500	19.04	6.63	2.770	0.46	-74.4	9.0
LG-7	7.29	7.60	1110	15.24	6.85	1.816	3.03	126.5	2.1

WELL CONDITION AND NOTES:

(5/5)

LG-7: PAD, STICKUP, CASING, SLIP CAP IN GOOD SHAPE. LOCK NEEDS MAINTENANCE

LG-1: PAD, CASING, SLIPCAP IN GOOD SHAPE, STICKUP IS RUSTY BUT OPERATIONALLY IS OKAY. WELL TAG LEGIBLE. LOCK NEEDS MAINTENANCE; POSSIBLY REPLACED.

LG-3: PAD, CASING, SCREWCAP IN GOOD SHAPE. LOCK NEEDS MAINTENANCE. STICKUP HINGE IS BROKEN/RUSTED & SHEARED OFF.

LG-5: PAD, CASING, STICKUP, SLIP CAP IN GOOD CONDITION. LOCK MISSING.

LG-6: PAD, CASING, STICKUP, SLIPCAP IN GOOD CONDITION. LOCK NEEDS MAINTENANCE

5/20/08

FedEx Express **US Airbill**

FedEx Tracking Number 8656 3906 6021

0200 **Sender's Copy**

1 From *Please print and press hard.*

Date 5-20-08 Sender's FedEx Account Number 0276-0775-6

Sender's Name ANDREW SHULL Phone (919) 461-1100

Company URS CORP

Address 1600 PERIMETER PARK DR Dept./Floor/Suite/Room

City MORRISVILLE State NC ZIP 27560-8421

2 Your Internal Billing Reference First 24 characters will appear on invoice. 31826335.00001

3 To

Recipient's Name SAMPLE RECEIVING Phone (904) 739-2277

Company COLUMBIA ANALYTICAL SERVICES

Recipient's Address 8340 BAYCENTER RD

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City JACKSONVILLE State FL ZIP 32256

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.** Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. *To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

*Call for Confirmation: **To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

*Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] **SATURDAY Delivery** NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight
- [ ] **HOLD Weekday** at FedEx Location NOT Available for FedEx First Overnight
- [ ] **HOLD Saturday** at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†
1	58	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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Columbia Analytical Services - Jacksonville Office
Sample Bottle Preparation and Shipment Log
Phone: (904) 739-2277 Fax: (904) 739-2011

CAS Project Chemist: Tom
Client: Premo
Project Name: Premo II Low Ground Landfill
Submittal Date: 5-5-08
Needed By: 5-9-08
Comments: Bag up 6 sets

Attn: Paul Ferris
Ship To: URS Corp
Address: 1600 Perimeter Park Suite 400
City, State Zip: Morrisville NC 27560 Phone Number: 919-461-1100

#Sent	Size and Type of Container	Label Color	Analysis Required
1	Chain of Custody Forms/Seals		
	Trip Blanks, 40ml vials w/ HCl, (36.5-38%) Teflon backed silicone septas	white	
	Sets of 3-40mL Vials, Teflon backed silicone septas(TBSS)	white	
	Set of 3- 40mL vials w/ HCl, (36.5-38%) (TBSS)	white	
	Set of 3-40mL vials with Na2S2O4 (TBSS)	white	
	40mL vial w/H2SO4 (95.7%) (TBSS)	white	
	125ml High Density Polyethylene (HDPE) Bottle	white	
6	125ml HDPE Bottle w/HCl (36.5-38.0%)	white	TOC
6	125ml HDPE Bottle w/HNO3 (69-70%)	pink	Metals
6	125ml HDPE Bottle w/H2SO4 (95.7%)	yellow	COD
	250ml HDPE Bottle	white	
	250ml HDPE Bottle w/H2SO4 (95.7%)	yellow	
	250ml HDPE Bottle w/HNO3 (69-70%)	pink	
	250ml HDPE Bottle w/NaOH(97%)+ZnAc (2.0N)	green	
	250ml HDPE Bottle w/NaOH (97%)	green	
	250ml Glass Bottle	white	
	250ml Glass Bottle w/HNO3 (69-70%)	pink	
6	500ml HDPE Bottle	white	TDS, Cl, F, NO3, SO4, ROD, pH
	500ml HDPE w/H2SO4 (95.7%)	yellow	
	500ml HDPE Bottle w/HNO3 (69-70%)	pink	
	1L HDPE Bottle	white	
	1L HDPE Bottle w/HNO3 (69-70%)	pink	
	1L Glass Bottle, Teflon lined caps (TLC)	white	
	1L Glass Bottle w/HCl (36.5-38%) TLC	white	
6	1L Glass Bottle w/H2SO4 (95.7%) TLC	yellow	TOX
	2oz Glass Jar, TLC	white	
	4oz Glass Jar, TLC	white	
	8oz Glass Jar, TLC	white	
	16oz Glass Jar, TLC	white	
	Encore Samplers	white	
	100ml Coliform HDPE Bottle w/0.008% Na2S2O3	white	
	Syringe Kits		
	Other		

Note: All containers pre-cleaned and certificates of analysis available on request.
All blank analyte-free water is processed at this laboratory location (deionized).

SMO Information:
Date of Sampling Kit Preparation: 5/6/08 Date of Analyte-Free Water Containerization: ____
Date Shipped: 5/6/08 Number Of Coolers: 1 Shipped By: SCD

Shipped Via: FedEx ____ UPS Next Day AM Next Day Next Day Saver Ground Other ____ Pick Up Deliver

Tracking Numbers:

Columbia Analytical Services INC.
An Employee - Owned Company
www.caslab.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR #

CAS Contact

Project Name: LOW GROUND LANDFILL

Project Number:

Project Manager: PAT KELLEY

Email Address: pkelley@premiercorp-usa.com

Company/Address: 1880 WEST OAK PKWY
BLDG 100, STE 106
MARIETTA, GA 30062

Phone #: 770-973-2100

FAX#: 770 973 7395

Sampler's Signature: DAUL FARRIS (URS)

Sampler's Printed Name: SIG. [signature]

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 3 0 3

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	TOC	METALS	COD	BOD/Cl/TDS/pH/NO3/F/SO4/COND	TOX	REMARKS/ ALTERNATE DESCRIPTION
LG-1		5/20/08	1230	GW	5	1	1	1	1	1
LG-3		↓	1340	↓	↓	↓	↓	↓	↓	↓
LG-5		↓	1510	↓	↓	↓	↓	↓	↓	↓
LG-6		↓	1500	↓	↓	↓	↓	↓	↓	↓
LG-7		↓	1100	↓	↓	↓	↓	↓	↓	↓
EQUIPMENT BLANK		↓	1530	W	↓	↓	↓	↓	↓	↓

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE _____
REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
____ I. Results Only CALL PM TO VERIFY
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature [signature]	Signature	Signature	Signature	Signature	Signature
Printed Name DAUL FARRIS	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm URS Corporation	Firm	Firm	Firm	Firm	Firm
Date/Time 1820 / 5-20-08	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

JSCOC-01/29/08

Low-Flow Groundwater Sampling Log Sheet

Facility ID Former IP Low Ground Landfill Site **URS Project No.** 31826335 **Date** 5/20/2008

Well No. LG-1 **Well Depth** 16.5' **Screen Length** 5' **Well Diameter** 2"

Casing Type II - SCH40 PVC **Tubing Type** poly (new) **Initial Water Depth** 7.50'

Sampling Device Geo-Pump 2, variable speed peristaltic **Measuring Point** Top of Well Casing

Sampling Personnel PAUL FARRES / ANDREW SHULL

Samples Collected TOC (125ml HDPE w/ HCl), METALS (125ml HDPE w/ HNO_3), COD (125ml HDPE w/ H_2SO_4), BOD, Cl, TDS, pH, NO_3, SO_4, F, COND (500ml HDPE no pres), & TOX (1L GLASS AMBER BOTTLE w/ H_2SO_4 pres.)

~~Other Information~~

Time (24-hr)	pH -log[H30+]	Temp (°C)	Conductivity (mS/cm)	D.O. (mg/l)	Turbidity (NTU)	O.R.P. (mV)	Water Depth (feet)	Pump Rate (ml/ liters/minute)	
							~~7.50~~		
1150	5.91	15.44	0.172	3.35	35	-91.7	8.61	250	
1155	5.96	15.49	0.186	1.77	29	-100.0	8.92	250	
1200	5.97	15.54	0.189	1.14	23	-101.6	9.10	250	
1205	5.92	15.44	0.192	0.81	16	-100.3	9.28	250	
1210	6.10	15.58	0.209	0.64	10	-100.5	9.32	250	
1215	6.21	15.52	0.242	0.56	8.3	-102.9	9.39	250	
1220	6.29	15.51	0.249	0.52	5.5	-104.7	9.42	250	
1230	COLLECT SAMPLE								

Protocol Reminders :

(1) Adjust pump so that less than 0.33-feet (4-inches) of drawdown occurs in well

(2) Purge rate should not exceed 1.0 l/min (0.26 gal/min). Purge rates of 0.1 - 0.5 l/min are preferred

(3) Record parameters and drawdown every 3-5 minutes, or typically every 1 volume of flow through cell

(4) Three successive readings should be within the variance guideline listed below:

pH	Temp	Conductivity	D.O.	Turbidity	O.R.P.
+/- 0.2 units	+/-3%	+/-3%	+/- 10%	+/- 10%	+/- 20mV

Notes / Calculations :

BEGIN purging @ 1140. A LOT OF SUSP. SOLIDS, WATER SLIGHT BROWNISH COLOR. BEGIN RUNNING THROUGH FLOW CEL AFTER 10 MIN. of purging @ ~ 250-300ml

TOTAL VOL purged ≅ 3.0 gal.

Low-Flow Groundwater Sampling Log Sheet

Facility ID Former IP Low Ground Landfill Site **URS Project No.** 31826335 **Date** 5/20/08

Well No. LG-3 **Well Depth** 20.0' **Screen Length** 5' **Well Diameter** 2"

Casing Type II - SCH40 PVC **Tubing Type** poly (new) **Initial Water Depth** 5.97

Sampling Device Geo-Pump 2, variable speed peristaltic **Measuring Point** Top of Well Casing

Sampling Personnel PAUL FARRIS / ANDREW SHULL

Samples Collected TOC (125 ml HDPE w/HCl), METALS (125 ml HDPE w/ HNO_3), COD (125 ml HDPE w/ H_2SO_4), BOD, Cl, TDS, pH, NO_3, SO_4, F, COND (500 ml HDPE NO PRES), TOX (1L GLASS BOTTLE w/ H_2SO_4)

~~Other Information~~

Time (24-hr)	pH -log[H30+]	Temp (°C)	Conductivity (mS/cm)	D.O. (mg/l)	Turbidity (NTU)	O.R.P. (mV)	Water Depth (feet)	Pump Rate (milliliters/minute) (*)	
1255	-	-	-	-	-	-	6.69	450	
1300	6.44	16.94	1.656	3.40	0.91	40.8	6.71	230	
1305	6.43	17.09	1.668	0.92	0.67	53.6	6.80	230	
1310	6.43	17.08	1.672	0.64	0.43	57.4	6.83	230	
1315	6.44	17.04	1.672	0.51	0.43	63.3	6.89	230	
1320	6.44	16.94	1.668	0.44	0.44	69.7	6.94	230	
1325	6.46	16.87	1.635	0.60	0.20	77.5	7.01	230	
1330	6.47	16.83	1.622	0.62	0.20	78.7	7.03	230	
1335	6.46	16.83	1.610	0.64	0.19	80.2	7.04	230	
1340	COLLECT SAMPLE								

Protocol Reminders :

(1) Adjust pump so that less than 0.33-feet (4-inches) of drawdown occurs in well

(2) Purge rate should not exceed 1.0 l/min (0.26 gal/min). Purge rates of 0.1 - 0.5 l/min are preferred

(3) Record parameters and drawdown every 3-5 minutes, or typically every 1 volume of flow through cell

(4) Three successive readings should be within the variance guideline listed below:

pH	Temp	Conductivity	D.O.	Turbidity	O.R.P.
+/- 0.2 units	+/-3%	+/-3%	+/- 10%	+/- 10%	+/- 20mV

Notes / Calculations :

(*) 230 ml/min is lowest achievable rate with this pump.

TOTAL VOL. PURGED PRIOR TO SAMPLING = 2.2 gal.

Low-Flow Groundwater Sampling Log Sheet

Facility ID Former IP Low Ground Landfill Site **URS Project No.** 31826335 **Date** 5/20/08

Well No. LG-5 **Well Depth** 19.0' **Screen Length** 5' **Well Diameter** 2"

Casing Type II - SCH40 PVC **Tubing Type** poly (new) **Initial Water Depth** 8.17

Sampling Device Geo-Pump 2, variable speed peristaltic **Measuring Point** Top of Well Casing

Sampling Personnel PAUL FARRIS - URS Corp.

Samples Collected TOC (125ml HDPE w/HCl), METALS (125ml HDPE w/HNO_3), COD (125 ml HDPE w/H_2SO_4), BOD, Cl, TDS, pH, NO_3, SO_4, F, COND (500ml HDPE NO PRES.), & TOX (1L GLASS AMBER BOTTLE w/H_2SO_4).

~~**Other Information**~~

Time (24-hr)	pH -log[H30+]	Temp (°C)	Conductivity (mS/cm)	D.O. (mg/l)	Turbidity (NTU)	O.R.P. (mV)	Water Depth (feet)	Pump Rate (milliliters/minute)	
1400	-	-	-	-	-	-	8.17	375	
1405	5.91	20.14	0.747	7.08	1.70	18.3	8.83	230	
1410	5.88	19.34	0.743	0.52	22.9	22.1	9.22	230	
1415	5.88	19.40	0.743	0.44	53.7	22.9	9.51	230	
(*) STOP PURGE TO EMPTY/CLEAN FLOW CELL OF SUSPENDED SOLIDS. TURB IS ↑ NOTABLY.									
1420	5.89	19.00	0.743	1.11	51.3	37.9	9.90	230	
1425	5.89	18.85	.744	0.51	34.5	36.3	10.43	230	
1430	5.89	18.96	0.743	0.50	30.5	34.0	10.60	230	
1435	5.89	18.86	0.744	0.45	31.9	33.2	10.97	230	
1440	5.90	18.89	0.747	0.43	30.4	32.2	11.14	230	
(*) STOP PURGE TO EMPTY/CLEAN FLOW CELL OF SUSPENDED SOLIDS									
1455	5.95	18.82	0.768	0.54	13.8	29.5	11.87	230	
1500	5.96	18.80	0.770	0.53	11.2	28.7	12.07	230	
1505	5.96	18.82	0.769	0.54	9.97	27.9	12.28	230	
1510	COLLECT	SAMPLE							

Protocol Reminders :

(1) Adjust pump so that less than 0.33-feet (4-inches) of drawdown occurs in well

(2) Purge rate should not exceed 1.0 l/min (0.26 gal/min). Purge rates of 0.1 - 0.5 l/min are preferred

(3) Record parameters and drawdown every 3-5 minutes, or typically every 1 volume of flow through cell

(4) Three successive readings should be within the variance guideline listed below:

pH	Temp	Conductivity	D.O.	Turbidity	O.R.P.
+/- 0.2 units	+/-3%	+/-3%	+/- 10%	+/- 10%	+/- 20mV

Notes / Calculations :

230 ml/min, is lowest achievable pump rate

- BEGIN PURGE @ 1400
- SUSPENDED SOLIDS PRESENT DURING INITIAL PURGE. SLIGHT/LIGHT BROWN TINT TO PURGE WATER.

TOTAL VOL. purged prior to sampling ≈ 3.2 gal.

(*) 1416 STOP purge to clean out flow cell of suspended seds. RE-COMMENCE PUMPING AT 1417

(*) 1441 STOP PURGE TO CLEAN OUT FLOW CELL OF SUSP. SOLIDS. RECOMMENCE PUMPING @ 1450 - ~~[illegible]~~ NOTICIBLY LESS SUSP. SOLIDS FROM PURGE WATER.

Low-Flow Groundwater Sampling Log Sheet

Facility ID Former IP Low Ground Landfill Site **URS Project No.** 31826335 **Date** 5/20/2008

Well No. LG-6 **Well Depth** 18.0' **Screen Length** 5' **Well Diameter** 2"

Casing Type II - SCH40 PVC **Tubing Type** poly (new) **Initial Water Depth** 9.01'

Sampling Device Geo-Pump 2, variable speed peristaltic **Measuring Point** Top of Well Casing

Sampling Personnel ANDREW SHULL

Samples Collected TOC (125ml HDPE w/HCl), METALS (125ml HDPE w/HNO_3), COD (125 ml HDPE w/ H_2SO_4), BOD, Cl, TDS, pH, NO_3, SO_4, F, COND (500ml HDPE NO pres.), & TOX (1L GLASS AMBER BOTTLE w/ H_2SO_4)

~~Other Information~~

Time (24-hr)	pH -log[H30+]	Temp (°C)	Conductivity (mS/cm)	D.O. (mg/l)	Turbidity (NTU)	O.R.P. (mV)	Water Depth (feet)	Pump Rate (liters/minute)
1410	—	—	—	—	—	—	9.01	—
1415	6.73	19.22	2.788	1.39	10.0	-71.9	9.55	300
1420	6.69	19.20	2.787	0.73	9.5	-78.1	9.78	250
1425	6.67	19.01	2.781	0.64	9.8	-75.3	9.90	250
1430	6.65	19.06	2.779	0.57	9.1	-74.6	10.07	250
1435	6.65	19.09	2.778	0.53	10	-74.2	10.13	250
1440	6.64	19.05	2.773	0.49	9.5	-75.7	10.21	250
1445	6.63	19.04	2.770	0.46	9.0	-74.4	10.29	250
1300	SAMPLE COLLECTED							

Protocol Reminders :

(1) Adjust pump so that less than 0.33-feet (4-inches) of drawdown occurs in well

(2) Purge rate should not exceed 1.0 l/min (0.26 gal/min). Purge rates of 0.1 - 0.5 l/min are preferred

(3) Record parameters and drawdown every 3-5 minutes, or typically every 1 volume of flow through cell

(4) Three successive readings should be within the variance guideline listed below:

pH	Temp	Conductivity	D.O.	Turbidity	O.R.P.
+/- 0.2 units	+/-3%	+/-3%	+/- 10%	+/- 10%	+/- 20mV

Notes / Calculations :

TOTAL VOLUME PURGED ≅ 3.0 gal prior to sampling.

Low-Flow Groundwater Sampling Log Sheet

Facility ID Former IP Low Ground Landfill Site **URS Project No.** 31826335 **Date** 5/20/08

Well No. LG-7 **Well Depth** 17.0' **Screen Length** 5' **Well Diameter** 2"

Casing Type II - SCH40 PVC **Tubing Type** poly (new) **Initial Water Depth** 7.29'

Sampling Device Geo-Pump 2, variable speed peristaltic **Measuring Point** Top of Well Casing

Sampling Personnel ANDREW SHULL / PAUL FARRIS - URS

Samples Collected TOC (125mL HDPE w/ HCl), metals (125 mL HDPE w/ HNO_3), COD (125mL HDPE w/ H_2SO_4)
BOD, Cl, TDS, pH, NO_3, SO_4, F, Cond (500 mL HDPE)

~~Other Information~~ ~~TDH~~ by 9020B (1 L Glass w/ H_2SO_4)
TOX

Time (24-hr)	pH -log[H30+]	Temp (°C)	Conductivity (mS/cm)	D.O. (mg/l)	Turbidity (NTU)	O.R.P. (mV)	Water Depth (feet)	Pump Rate (liters/minute)
1040	-	-	-	-	-	-	7.29	350
1044	6.91	15.40	1.813	7.07	4.2	156.8	7.51	300
1049	6.69	15.19	1.811	3.61	4.0	168.7	7.56	300
1054	6.74	15.13	1.808	3.38	3.8	153.1	7.57	300
1059	6.81	15.26	1.813	3.18	2.7	139.0	7.52	300
1104	6.84	15.41	1.824	3.10	2.4	131.0	7.50	300
1109	6.85	15.24	1.816	3.03	2.1	126.5	7.60	300
1110	COLLECT SAMPLE							

Protocol Reminders :
(1) Adjust pump so that less than 0.33-feet (4-inches) of drawdown occurs in well
(2) Purge rate should not exceed 1.0 l/min (0.26 gal/min). Purge rates of 0.1 - 0.5 l/min are preferred
(3) Record parameters and drawdown every 3-5 minutes, or typically every 1 volume of flow through cell
(4) Three successive readings should be within the variance guideline listed below:

pH	Temp	Conductivity	D.O.	Turbidity	O.R.P.
+/- 0.2 units	+/-3%	+/-3%	+/- 10%	+/- 10%	+/- 20mV

Notes / Calculations :

TOTAL volume purged ≈ 1.1 gal.