



11028 #DIN	/ / Date	4302 Fac/Perm/Co ID #
---------------	-------------	--------------------------

1880 West Oak Parkway
Building 100, Suite 106
Marietta, GA 30062

Phone 770.973.2100
Fax 770.973.7395
www.premoteam.com

December 30, 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 November 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 November 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 iron and 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 the iron and manganese NC 2L standards of 300 ug/L and 50 ug/L, respectively. 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.

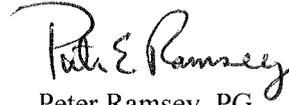
The detected manganese concentrations in site wells are reported within the range of background concentrations for this site. The Solid Waste Section has waived the requirement to prepare a Water Quality Assessment Plan for this site. PREMO concurs with this waiver and does not recommend any changes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

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

Sincerely,

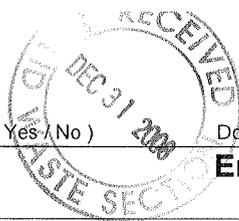


Patrick Kelley, CHMM
Project Manager



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):

Premio 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 x2860*

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)
<i>Low Ground Landfill Roanoke Rapids, NC</i>	<i>100 Gaston Rd. Roanoke Rapids, NC</i>	<i>42 03</i>	<i>.0500</i>	<i>Nov. 11, 2008</i>

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

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

12/30/08

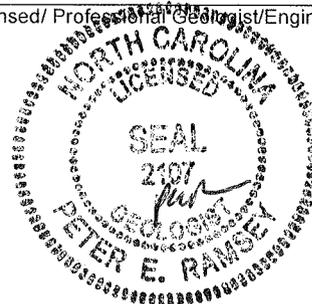
Signature

Date

Peter E Ramsey, PG # 2107

12/30/08

Affix NC Licensed/Professional Geologist/Engineer Seal here:



**International Paper
Roanoke Rapids Mill**

**100 Gaston Road Low Ground Landfill
Roanoke Rapids, NC Monitoring Wells**

Samples collected on 11/11/08 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	1.70	ug/L		1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 1	7440-39-3	15	Barium	372	ug/L		1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 1	316	316	Biochemical Oxygen Demand	2.4	mg/L	J	1.0	11/11/08	NA	11/12/08
42-03	MW-LG 1	7440-43-9	34	Cadmium	0.50	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 1	317	317	Chemical Oxygen Demand	30	mg/L		1.0	11/11/08	NA	11/24/08
42-03	MW-LG 1	16887-00-6	301	Chloride	24	mg/L		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 1	7440-47-3	51	Chromium	0.9	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 1	7440-50-8	54	Copper	0.7	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 1	16984-48-8	312	Fluoride	0.21	mg/L		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 1	7438-89-6	340	Iron	44	mg/L		5.0	11/11/08	11/19/08	11/20/08
42-03	MW-LG 1	7439-92-1	131	Lead	0.4	ug/L	J	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 1	7439-96-5	342	Manganese	3470	ug/L		20.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 1	7438-97-6	132	Mercury	0.08	ug/L	U	1.0	11/11/08	11/17/08	11/17/08
42-03	MW-LG 1	14797-55-8	303	Nitrate	0.150	mg/L	J	1.0	11/11/08	NA	11/12/08
42-03	MW-LG 1	321	321	pH - Lab	6.4	pH UNITS		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 1	7782-49-2	183	Selenium	0.70	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 1	7440-22-4	184	Silver	0.08	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 1	14808-79-8	315	Sulfate	8.3	mg/L		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 1	311	311	Total Dissolved Solids	650	mg/L		1.0	11/11/08	NA	11/13/08
42-03	MW-LG 1	E-10195	357	Total Organic Carbon	7.9	mg/L	J	1.0	11/11/08	NA	11/14/08
42-03	MW-LG 1	7440-66-6	213	Zinc	7	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 1			Total Organic Halides	65	ug/L	U	1.0	11/11/08	NA	11/18/08
42-03	MW-LG 3	7440-38-2	14	Arsenic	0.20	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 3	7440-39-3	15	Barium	80	ug/L		1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 3	316	316	Biochemical Oxygen Demand	0.86	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG 3	7440-43-9	34	Cadmium	0.50	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 3	317	317	Chemical Oxygen Demand	38	mg/L		1.0	11/11/08	NA	11/24/08
42-03	MW-LG 3	16887-00-6	301	Chloride	61	mg/L		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 3	7440-47-3	51	Chromium	0.8	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 3	7440-50-8	54	Copper	0.7	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 3	16984-48-8	312	Fluoride	0.23	mg/L		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 3	7438-89-6	340	Iron	0.62	mg/L		1.0	11/11/08	11/19/08	11/20/08
42-03	MW-LG 3	7439-92-1	131	Lead	0.20	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 3	7439-96-5	342	Manganese	3100	ug/L		10.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 3	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/11/08	11/17/08	11/17/08
42-03	MW-LG 3	14797-55-8	303	Nitrate	0.79	mg/L		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 3	7782-49-2	321	pH - Lab	6.5	pH UNITS	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG 3	7440-22-4	184	Selenium	0.70	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG 3	14808-79-8	315	Silver	0.080	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 3	311	311	Sulfate	90	mg/L		1.0	11/11/08	NA	11/12/08
42-03	MW-LG 3	E-10195	357	Total Dissolved Solids	1000	mg/L		1.0	11/11/08	NA	11/13/08
42-03	MW-LG 3	7440-66-6	213	Total Organic Carbon	13	mg/L	J	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG 3			Total Organic Halides	82	ug/L	U	1.0	11/11/08	NA	11/18/08

**International Paper
Roanoke Rapids Mill**

**100 Gaston Road Low Ground Landfill
Roanoke Rapids, NC Monitoring Wells**

Samples collected on 11/11/08 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	0.45	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG5	7440-39-3	15	Barium	121	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG5	316	316	Biochemical Oxygen Demand	0.86	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG5	7440-43-9	34	Cadmium	0.5	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG5	317	317	Chemical Oxygen Demand	16	mg/L	U	1.0	11/11/08	NA	11/24/08
42-03	MW-LG5	16887-00-6	301	Chloride	2.8	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG5	7440-47-3	51	Chromium	0.8	mg/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG5	7440-50-8	54	Copper	0.5	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG5	16984-48-8	312	Fluoride	0.24	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG5	7439-89-6	340	Iron	5.6	mg/L	U	1.0	11/11/08	11/19/08	11/20/08
42-03	MW-LG5	7439-92-1	131	Lead	0.20	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG5	7439-96-5	342	Manganese	7410	ug/L	U	20.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG5	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/11/08	11/17/08	11/17/08
42-03	MW-LG5	14797-55-8	303	Nitrate	0.16	mg/L	J	1.0	11/11/08	NA	11/12/08
42-03	MW-LG5	321	321	pH - Lab	6.3	pH UNITS	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG5	7782-49-2	183	Selenium	0.70	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG5	7440-22-4	184	Silver	0.080	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG5	14808-79-8	315	Sulfate	150	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG5	311	311	Total Dissolved Solids	550	mg/L	U	1.0	11/11/08	NA	11/13/08
42-03	MW-LG5	E-10195	357	Total Organic Carbon	5.1	mg/L	U	1.0	11/11/08	NA	11/20/08
42-03	MW-LG5	7440-66-6	213	Zinc	19	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG5			Total Organic Halides	30	ug/L	U	1.0	11/11/08	NA	11/18/08
42-03	MW-LG6	7440-38-2	14	Arsenic	0.2	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG6	7440-39-3	15	Barium	570	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG6	316	316	Biochemical Oxygen Demand	0.86	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG6	7440-43-9	34	Cadmium	0.50	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG6	317	317	Chemical Oxygen Demand	57	mg/L	U	1.0	11/11/08	NA	11/24/08
42-03	MW-LG6	16887-00-6	301	Chloride	60	mg/L	U	1.0	11/11/08	NA	11/18/08
42-03	MW-LG6	7440-47-3	51	Chromium	3.2	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG6	7440-50-8	54	Copper	1.4	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG6	16984-48-8	312	Fluoride	0.32	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG6	7439-89-6	340	Iron	2.3	mg/L	U	1.0	11/11/08	11/19/08	11/20/08
42-03	MW-LG6	7439-92-1	131	Lead	0.20	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG6	7439-96-5	342	Manganese	1900	ug/L	U	10.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG6	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/11/08	11/17/08	11/17/08
42-03	MW-LG6	14797-55-8	303	Nitrate	0.24	mg/L	J	1.0	11/11/08	NA	11/12/08
42-03	MW-LG6	321	321	pH - Lab	6.9	pH UNITS	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG6	7782-49-2	183	Selenium	0.70	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG6	7440-22-4	184	Silver	0.080	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG6	14808-79-8	315	Sulfate	36.2	mg/L	U	1.0	11/11/08	NA	11/18/08
42-03	MW-LG6	311	311	Total Dissolved Solids	1900	mg/L	U	2.0	11/11/08	NA	11/13/08
42-03	MW-LG6	E-10195	357	Total Organic Carbon	18	mg/L	U	2.0	11/11/08	NA	11/14/08
42-03	MW-LG6	7440-66-6	213	Zinc	5	mg/L	J	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG6			Total Organic Halides	41	ug/L	U	1.0	11/11/08	NA	11/18/08

**International Paper
Roanoke Rapids Mill**

**100 Gaston Road Low Ground Landfill
Roanoke Rapids, NC Monitoring Wells**

Samples collected on 11/11/08 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	0.20	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG7	7440-39-3	15	Barium	102	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG7	316	316	Biochemical Oxygen Demand	0.86	mg/L	U	1.0	11/11/08	NA	11/24/08
42-03	MW-LG7	7440-43-9	34	Cadmium	0.50	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG7	317	317	Chemical Oxygen Demand	17	mg/L	U	1.0	11/11/08	NA	11/24/08
42-03	MW-LG7	16887-00-6	301	Chloride	31	mg/L	U	1.0	11/11/08	NA	11/24/08
42-03	MW-LG7	7440-47-3	51	Chromium	0.80	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG7	7440-50-8	54	Copper	0.7	ug/L	J	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG7	16984-48-8	312	Fluoride	0.21	mg/L	U	1.0	11/11/08	NA	11/24/08
42-03	MW-LG7	7439-89-6	340	Iron	3.75	mg/L	U	1.0	11/11/08	11/19/08	11/20/08
42-03	MW-LG7	7439-92-1	131	Lead	0.20	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG7	7439-96-5	342	Manganese	3820	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG7	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/11/08	11/17/08	11/17/08
42-03	MW-LG7	14797-55-8	303	Nitrate	0.17	mg/L	J	10.0	11/11/08	NA	11/12/08
42-03	MW-LG7	321	321	pH - Lab	6.4	pH UNITS	J	1.0	11/11/08	NA	11/12/08
42-03	MW-LG7	7782-49-2	183	Selenium	0.7	ug/L	U	1.0	11/11/08	11/21/08	11/24/08
42-03	MW-LG7	7440-22-4	184	Silver	0.080	ug/L	U	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG7	14808-79-8	315	Sulfate	160	mg/L	U	1.0	11/11/08	NA	11/12/08
42-03	MW-LG7	311	311	Total Dissolved Solids	920	mg/L	U	1.0	11/11/08	NA	11/13/08
42-03	MW-LG7	E-10195	357	Total Organic Carbon	6.1	mg/L	J	1.0	11/11/08	NA	11/14/08
42-03	MW-LG7	7440-66-6	213	Zinc	5.0	ug/L	J	1.0	11/11/08	11/21/08	11/25/08
42-03	MW-LG7			Total Organic Halides	30	ug/L	U	1.0	11/11/08	NA	11/18/08

U - Undetected above the MRL/MDL

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

Low-Flow Groundwater Sampling Log Sheet

Facility ID Former IP Low Ground Landfill Site URS Project No. 31826335 Date 11/11/08

Well No. LG-7 Well Depth 16.85' 17.0' Screen Length 5' Well Diameter 2"

Casing Type II - SCH40 PVC Tubing Type dedic. poly (new) Initial Water Depth 11.97

Sampling Device Geo-Pump 2, variable speed peristaltic Measuring Point Top of We

Sampling Personnel PAUL FARRIS / BRYAN ANDERSON (URS)

Samples Collected 1-125ml HDPE BOTTLE w/HNO₃ pres. for METALS; 1-125ml HDPE BOTTLE w/HCl pres. for TOC; 1-500ml HDPE BOTTLE UNPRES for BOD, TDS, Cl, NO₃, F, pH; 1-1L Glass amber bottle w/H₂SO₄ pres. for TOX; 1-125ml HDPE BOTTLE w/H₂SO₄ pres for COD.

Time (24-hr)	pH -log[H ₃₀ ⁺]	Temp (°C)	Conductivity (mS/cm)	D.O. (mg/l)	Turbidity (NTU)	O.R.P. (mV)	Water Depth (feet)	Pump Rate (liters/minute)
1005	-	-	-	-	-	-	11.97	-
1012	6.72	15.96	1.728	1.64	26	235	12.42	190
1018	6.70	16.39	1.695	1.84	18	101	12.78	190
1024	6.61	16.40	1.596	1.04	14	57	12.99	190
1029	6.56	16.41	1.537	.71	10	53	13.07	190
1035	6.49	16.51	1.515	0.51	8	48	13.12	190
1040	6.45	16.50	1.455	0.40	6.6	51	13.16	190
1045	6.40	16.48	1.414	0.23	4.8	53	13.21	190
1052	6.39	16.47	1.407	0.24	4.2	53	13.23	190
1057	6.39	16.48	1.396	0.22	4.0	52	13.25	190
1100	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 :

$$1 \text{ purge vol} = (16.85 - 11.97) \cdot (0.16) \cdot (1) = 0.78 \text{ gal}$$

$$\text{TOTAL VOL. purged prior to sample collection} = 2.6 \text{ gal}$$

Nov/11/2008 LONGGROUNDS LANDFILL
SAMPLING.

0830: PAUL FARRIS & BRYAN
ANDERSON ARRIVE ON
SITE, CHECK IN AT

CONTRACTOR/SECURITY STATION
FOR SITE SPECIFIC CONTRACTOR
TRAINING.

0910: COMPLETE CONTRACTOR TRAINING
MOBILIZE TO KAPSTONE CHEM,
LAGS TO MEET WITH NEIL
DAVIS & P/U KEYS TO
LOW GROUND GATES/WELLS.

SCOPE OF WORK IS TO SAMPLE
5 WELLS (LG-1, LG-3, LG-5,
LG-6, & LG-7) BY LOW FLOW
MINIMAL DRAWDOWN (EPA 1996)

PROCEDURES, DEDICATED POLY
TUBING IN WELLS, NEW SILICONE
TUBING, GEDPUMP 2 PERISTALTIC
PUMP, YSI 556 WATER QUALITY
METER, SOLINST WATER LEVEL
METER, LAMOTT 2020
TURBIDITY METER IS EQUIPMENT
TO BE USED.
PPE IS LEVEL D, INCLUDING

11/11/08 Low Ground and Fill Groundwater Sampling

NEW DISPOSABLE NITRILE GLOVES AT EACH WELL.

COLUMBIA ANALYTICAL SERVICES LABORATORY (CAS) HAS BEEN CONTRACTED BY PHEMO GROUP AND PROVIDED NEW BOTTLES SHIPPED TO PAUL FARRIS UNDER CHAIN OF CUSTODY.

SAMPLES TO BE COLLECTED AT EACH WELL INCLUDE:

- 1-125 ml HDPE BOTTLE w/ HNO₃ PRESERVATIVE FOR METALS
- 1-125 ml HDPE BOTTLE w/ HCl PRESERVATIVE FOR TOC
- 1-500 ml HDPE BOTTLE UNPRESERVED FOR BOD, TDS, CL, NO₃, F, PH
- 1-1L Glass bottle w/ H₂SO₄ PRESERVATIVE FOR TOX
- 1-125 ml HDPE Bottle w/ H₂SO₄ PRESERVATIVE FOR COD

0935: ARRIVE AT LOW GROUND AREA, WELL LG-7, SAMPLE ROOM IS UPS STAFF PAUL F. & BRYAN A.

CALIBRATE YSI 336 & LAMOTT 2020

11/11/08 LOW GROUND LANDFILL GW SAMPLING

PER MANUFACTURER'S INSTRUCTIONS, DECONTAMINATION OF EQUIPMENT CONDUCTED WITH LIQUINOX SOAP. DI WATER -- w/ DI WATER RINSE. DI WATER PROVIDED BY KAPSTONE LABS. EQUIPMENT BLANK WILL BE COLLECTED AND ANALYZED BY CAS LAB FOR SAME ANALYSES AS GROUNDWATER SAMPLES.

0945: SET UP AT WELL LG-7.

DTW = 11.97' BTOC
 BTB = 16.85' BTOC
 W.C. = 4.88'

(LOWFLOW PARAMETERS DURING PURGING LOGGED ON APPENDIX WELL LOG SHEET.)

10:05: BEGIN PURGING @ 190 ml/min
 11:00: COLLECT SAMPLE LG-7, STABILIZES

PARAMETERS AS FOLLOWS:

pH = 6.39
 Temp = 16.48°C
 CONDUCTIVITY = 1,396 μS/cm
 D.O. = 0.22 mg/L
 TURB. = 4.0 NTU
 ORP = 52 mV

FINAL DTW = 13.25' BTOC / 216 gal purged.

PHEMO INTAKE (RISIN) SET AT 14.8' BTOC DURING PURGE SAMPLE

11/11/08 LOW GROUND LANDFILL GW SAMPLING

1110: DECON EQUIPMENT, SAMPLES
 PLACED ON ICE IN COOLER,
 LOCK/WELL LG-7 okay.

1120: ARRIVE AT LG-1, LOCK ROSTER
 SHUT. - REMOVE LOCK - W/IN APPROPRIATE,
 SET UP ON WELL LG-1
 DTW = 9.20 BTOC
 DTB = 16.50 BTOC
 W.C. = 7.30'

1130: BEGIN LOW FLOW PURGE AT LG-1
 STABILIZATION PARAMETERS RECORDED
 ON ADDENDUM LOG SHEET FOR WELL,
 INTAKE FOR PUMP @ 14.5' btoC,
 1215: COLLECT SAMPLE LG-1, STABILIZED
 PARAMETERS ARE:
 PH = 6.42
 TEMP = 16.58 °C
 COND = 1.157 MS/CM
 D.O. = 0.11 MG/L
 TURB = 9.6 NTU
 ORP = -76 mV
 FINAL DTW = 11.07
 AVG PUMP RATE = 240 ml/min TOTAL
 VOLUME PURGED = 2.25 gal
 1230: DECON EQUIPMENT; MOBILIZE TO

11/11/08 LOW GROUND LANDFILL GW SAMPLING

LG-3 WELL, SAMPLES ON ICE IN COOLER.
 1240: SETUP TO LOW FLOW PURGE AT LG-3,
 (BEGIN LOW FLOW PURGE)
 DTW = 9.83
 DTB = 19.85
 W.C. = 10.02

1320: COLLECT SAMPLE LG-3
 STABILIZED WATER QUAL. PARAMETERS ARE:
 PH = 6.27
 TEMP = 18.11 °C
 COND = 1.567 MS/CM
 DO = 0.49 MG/L
 TURB = 6.9 NTU
 ORP = 152
 FINAL DTW = 12.35
 AVG PURGE RATE = 205 ml/min
 TOTAL VOLUME PURGED = 1.6 gal - prior to sample
 1330: DECON EQUIPMENT. SAMPLES PLACED
 ON ICE IN COOLER, LOGGED ON CHAIN
 of custody,
 MOBILIZE TO LG-5
 1345: SETUP ON LG-5, BEGIN PURGE.
 DTW = 13.25
 DTB = 19.00

LOW GROUND LANDFILL
11/11/08

1410: COLLECT SAMPLE LG-5

(*) PLACE SAMPLES ON ICE
DECON EQUIPMENT SPEAK

WITH NEAR DAVIS OF KAPSTONE
TO HAVE GATE TO LG-6 UNLOCKED,
MOBILIZE TO LG-6,

1440: SETUP TO LOW-FLOW PURGE AT

LG-6 WELL, PUMP INTAKE @ 16.5' BDC.

(*) PARAMETERS STABILIZED

AT WELL LG-5 AS FOLLOWS:

pH = 6.25

TEMP = 20.00 °C

COND = 0.828 mS/cm

DO = 0.22 mg/L

TURB = 4.2 NTU

ORP = 73 mV

FINAL DTW = 15.01

AUG PUMP RATE = 230 ml/min

DIRTY VOL, PURGED PRIOR TO

SAMPLE COLLECTION = 1.5 gal.

LG-6 INITIAL CONDITIONS

DTW: 12.73' BTOC

DTB: 18.73' BTOC

W.C. = 6.00'

LOW GROUND LANDFILL
GW SAMPLING

11/11/08

1510: COLLECT SAMPLE LG-6

STABILIZED PARAMETERS ARE:

pH = 6.83

TEMP = 19.56 °C

COND = 3.051 mS/cm

DO = 0.14

TURB = 6.4 NTU

ORP = -73

FINAL DTW = 14.27'

AUG PUMP RATE = 170 ml/min

TOTAL VOLUME PURGED PRIOR TO SAMPLE

COLLECTION = 1.25 GAL,

1525: DECON EQUIPMENT, PUT

SAMPLES IN COOLER ON ICE.

1530: COLLECT EQUIPMENT BLANK

SAMPLE BY RUNNING D.I.

WATER USED FOR DECON, OVER

THE WATER LEVEL METER

AND COLLECTING THE RINSE

IN SAMPLE CONTAINERS,

1540: LOCK GATE TO LG-6 AND

MOBILIZE TO KAPSTONE BREAK

ROOM TO REPACK COOLER

WITH MORE ICE FOR SAMPLE

SAMPLEMENT,

11/11/08 LOWGROUND LANDFILL
GW SAMPLES,

1615: DEPART SITE FOR RAVERGA
TO DELIVER SAMPLE COOLER
(SAMPLES UNDER CHAIN-OF-CUSTODY)

TO FED EX @ RDW AIRPORT
FOR OVERNIGHT DELIVERY TO
COLUMBIA ANALYTICAL SERVICES
9143 PHILIPS HWY STE 200
JACKSONVILLE, FL 32256

FED EX AIRBILL # 8607 4197 3873
1830: SAMPLE COOLER TURNED OVER

TO FED EX AT RDW,
COMPLETING SAMPLING EVENT,

~~NO FURTHER STEPS~~
C
11/11/08



December 01, 2008

Service Request No: J0805486

Mr. Pat Kelley
 Premier Environmental Services
 1880 West Oak Parkway
 Building 100, Suite 106
 Marietta, GA 30062

Laboratory Results for: Former IP Lowground Landfill

Dear Mr. Kelley:

Enclosed are the results of the sample(s) submitted to our laboratory on November 12, 2008. For your reference, these analyses have been assigned our service request number **J0805486**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4408. You may also contact me via email at TKissinger@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
 Project Manager

Page 1 of 36

*Laboratory Manager: Greg Jordan
 Quality Assurance Officer: Kathy Brungard*

CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/09. Other state accreditations include: Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/09; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/08; South Carolina, #96021001 valid through 6/30/08.

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Premier Environmental Services
Project: Former IP Lowground Landfill
Sample Matrix: water

Service Request No.: J0805486
Date Received: 11/12/08

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

6 water samples were received for analysis at Columbia Analytical Services on 11/12/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at $4\pm 2^{\circ}\text{C}$ upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

Metals by ICP-OES / Metals by ICP-MS / Mercury by CVAAMatrix Spike Recovery Exceptions

The control criteria for matrix spike recovery of Iron for sample LG-1 is not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Elevated Method Reporting Limits

Samples LG-1, LG-3, LG-5 and LG-7 required dilution due to the presence of elevated levels of target analyte Manganese. The reporting limits are adjusted to reflect the dilution.

Batch QC Notes and Discussion

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

General Chemistry Parameters

Batch QC Notes and Discussion

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

Subcontracted Analytical Parameters

TOX Analyses were sub-contracted to TestAmerica Nashville TN.

Approved by Tam D. Hissinger Date 12/1/08

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Data Qualifiers

Inorganic Data

- * The result is an outlier. See case narrative.
- # The control limit criteria are not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimated amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.
- i The MRL/MDL has been elevated due to matrix interference.
- X See case narrative.

Metals Data

- * The result is an outlier. See case narrative.
- # The control limit criteria are not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The reported value is estimated because of the presence of matrix interference.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The result was determined by Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data

- * The result is an outlier. See case narrative.
- # The control limit criteria are not applicable. See case narrative.
- A The tentatively identified compound is a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria were exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides)
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Petroleum Hydrocarbon Specific

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Client: Premier Environmental Services
Project: Former IP Lowground Landfill

Service Request: J0805486

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0805486-001	LG-1	11/11/08	12:15
J0805486-002	LG-3	11/11/08	13:20
J0805486-003	LG-5	11/11/08	14:10
J0805486-004	LG-6	11/11/08	15:10
J0805486-005	LG-7	11/11/08	11:00
J0805486-006	EQUIPMENT BLANK	11/11/08	15:30

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number: NA
 Matrix: WATER

Service Request: J0805486
 Date Collected: 11/11/2008
 Date Received: 11/12/2008

Total Metals

Sample Name: LG-1
 Lab Code: J0805486-001

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	1.7	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	372	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.37	B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	0.9	B
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.7	B
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	44100	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	0.4	B
Manganese	EPA 3020A	6020	5.0	1.0	5.0	11/21/2008	11/25/2008	3470	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	7	B

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number: NA
 Matrix: WATER

Service Request: J0805486
 Date Collected: 11/11/2008
 Date Received: 11/12/2008

Total Metals

Sample Name: LG-3
 Lab Code: J0805486-002

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	80	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.44	B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	0.8	B
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.7	B
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	617	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	5.0	1.0	5.0	11/21/2008	11/25/2008	3100	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	5	B

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number: NA
 Matrix: WATER

Service Request: J0805486
 Date Collected: 11/11/2008
 Date Received: 11/12/2008

Total Metals

Sample Name: LG-5
 Lab Code: J0805486-003

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	0.45	B
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	121	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.32	B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.5	B
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	5580	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	10	2.0	10.0	11/21/2008	11/25/2008	7410	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	19	

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
Project Name: Former IP Lowground Landfill
Project Number: NA
Matrix: WATER

Service Request: J0805486
Date Collected: 11/11/2008
Date Received: 11/12/2008

Total Metals

Sample Name: LG-6
Lab Code: J0805486-004

Units: ug/L
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	570	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.30	B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	3.2	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	1.4	B
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	2270	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/24/2008	1900	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	5	B

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
Project Name: Former IP Lowground Landfill
Project Number: NA
Matrix: WATER

Service Request: J0805486
Date Collected: 11/11/2008
Date Received: 11/12/2008

Total Metals

Sample Name: LG-7
Lab Code: J0805486-005

Units: ug/L
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	102	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.38	B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.7	B
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	3750	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	5.0	1.0	5.0	11/21/2008	11/25/2008	3820	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	5	B

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
Project Name: Former IP Lowground Landfill
Project Number: NA
Matrix: WATER

Service Request: J0805486
Date Collected: 11/11/2008
Date Received: 11/12/2008

Total Metals

Sample Name: EQUIPMENT BLANK
Lab Code: J0805486-006

Units: ug/L
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	1.4	B
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.36	B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/24/2008	0.8	B
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	U	

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number: NA
 Matrix: WATER

Service Request: J0805486
 Date Collected: N/A
 Date Received: N/A

Total Metals

Sample Name: Method Blank
 Lab Code: MB21121

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.14	B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	U	
Iron	EPA 3010A	6010B	50.0	4.0	1.0	11/19/2008	11/20/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/24/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	U	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-1
Lab Code : J0805486-001
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	2.4	J
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	7.9	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	30	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	24	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	1100	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 22:55	0.15	J
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.4	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	650	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	8.3	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
 Project Name : Former IP Lowground Landfill
 Project Number : NA
 Sample Matrix : WATER

Service Request : J0805486
 Date Collected : 11/11/08
 Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-3
 Lab Code : J0805486-002
 Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	13	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	38	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	61	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	1500	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.25	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:10	0.79	
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.5	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	1000	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	90	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-5
Lab Code : J0805486-003
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/20/05 16:33	5.1	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	16	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	2.8	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	780	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.24	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:25	0.16	J
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.3	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	550	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	150	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-6
Lab Code : J0805486-004
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	18	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	57	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/18/08 13:11	60	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	2600	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.32	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:40	0.24	
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.9	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	20	9.6	2	11/13/08 17:30	1900	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/18/08 13:11	36.2	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-7
Lab Code : J0805486-005
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	6.1	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	17	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	31	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	1400	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:55	0.17	J
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.4	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	920	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	160	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : EQUIPMENT BLANK
Lab Code : J0805486-006
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/20/05 16:33	U	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	2.5	J
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	0.24	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	2.1	J
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 00:10	U	
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	5.3	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	U	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	U	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : NA
Date Received : NA

Inorganic Parameters

Sample Name : Method Blank
Lab Code : J0805486-MB
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/20/05 16:33	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	U	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/18/08 13:11	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/18/08 13:11	U	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	U	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 16:12	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	U	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/18/08 13:11	U	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	U	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/18/08 13:11	U	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	U	

COLUMBIA ANALYTICAL SERVICES, INC

QA/QC Report

Client: Premo, Inc.
Project Name: Former IP Lowground Landfill
Project Number:
Matrix: WATER

Service Request: J0805486
Date Collected: 11/11/2008
Date Received: 11/12/2008
Date Extracted: 11/19/2008
Date Analyzed: 11/20/2008

Matrix Spike/Matrix Spike Duplicate Summary Total Metals

Sample Name: LG-1
Lab Code: J0805486-001

J0805486-001S

Units: ug/L
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Iron	EPA 3010	6010B	50	2000	2000	44100	46000	45000	NC	NC	2	75 - 125	
Mercury	METHOD	7470A	0.50	5.00	5.00	U	4.11	4.12	82	82	<1	75 - 125	

COLUMBIA ANALYTICAL SERVICES, INC

QA/QC Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number:
 Matrix: WATER

Service Request: J0805486
 Date Collected: N/A
 Date Received: N/A
 Date Extracted: 11/21/2008
 Date Analyzed: 11/24/2008

Laboratory Control Sample Summary
 Total Metals

Sample Name: Lab Control Sample
 Lab Code: LCS21121

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Arsenic	EPA 3020A	6020	50.0	45.8	92	80 - 120	
Barium	EPA 3020A	6020	50.0	47.4	95	80 - 120	
Cadmium	EPA 3020A	6020	50.0	47.1	94	80 - 120	
Chromium	EPA 3020A	6020	50.0	48.7	97	80 - 120	
Copper	EPA 3020A	6020	50.0	49.4	99	80 - 120	
Iron	EPA 3010A	6010B	2000	1930	96	80 - 120	
Lead	EPA 3020A	6020	50.0	50.5	101	80 - 120	
Manganese	EPA 3020A	6020	50.0	49.2	98	80 - 120	
Mercury	METHOD	7470A	5.00	4.81	96	80 - 120	
Selenium	EPA 3020A	6020	50.0	45.2	90	80 - 120	
Silver	EPA 3020A	6020	50.0	49.6	99	80 - 120	
Zinc	EPA 3020A	6020	100	90.0	90	80 - 120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08
Date Extracted : NA
Date Analyzed : 11/12-24/08

Duplicate Summary
 Inorganic Parameters

Sample Name : LG-1
Lab Code : J0805486-001DUP
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample		Relative Percent Difference	Result Notes
					Result	Average		
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	2.4	2.2	2.3	9	J
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	30	28	29	7	
Conductivity	uMHOS/cm	120.1	5	1100	1100	1100	<1	
pH	pH UNITS	9040B	-	6.4	6.5	6.45	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08
Date Extracted : NA
Date Analyzed : 11/24/08

Matrix Spike Summary
 Inorganic Parameters

Sample Name : LG-1
Lab Code : J0805486-001MS
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	50	30	79.0	98	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08
Date Extracted : NA
Date Analyzed : 11/13/08

Duplicate Summary
Inorganic Parameters

Sample Name : LG-5
Lab Code : J0805486-003DUP
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	550	560	555	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : NA
Date Received : NA
Date Extracted : NA
Date Analyzed : 11/20-24/08

Laboratory Control Sample Summary
 Inorganic Parameters

Sample Name : Laboratory Control Sample
Lab Code : J0805486-LCS
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Acceptance Limits	
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	198	201	102	85-115	
Carbon, Total Organic	mg/L (ppm)	415.1	50	50.2	100	90-110	
Carbon, Total Organic	mg/L (ppm)	415.1	50	53.3	107	90-110	
Chemical Oxygen Demand	mg/L (ppm)	410.2	85.8	86.4	101	85-115	
Chloride	mg/L (ppm)	300.0	100	103	103	90-110	
Chloride	mg/L (ppm)	300.0	5.00	5.31	106	90-110	
Chloride	mg/L (ppm)	300.0	100	98.3	98	90-110	
Chloride	mg/L (ppm)	300.0	5.00	5.40	108	90-110	
Conductivity	uMHOS/cm	120.1	168	168	100	85-115	
Fluoride	mg/L (ppm)	300.0	5.0	5.21	104	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	5.0	5.27	105	90-110	
pH	pH UNITS	9040B	7.00	7.01	100	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	295	98	85-115	
Sulfate	mg/L (ppm)	300.0	5.00	5.34	107	90-110	
Sulfate	mg/L (ppm)	300.0	5.00	5.13	103	90-110	
Sulfate	mg/L (ppm)	300.0	100	97.6	98	90-110	
Sulfate	mg/L (ppm)	300.0	100	104	104	90-110	

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Premier Env. SCS Service Request # 50805486

Project: Former JP Low Ground Landfill

Cooler received on 11/12/08 and opened on 11/12/08 by TOK

COURIER: CAS UPS FEDEX DHL CLIENT Tracking #

- | | | | | |
|----|--|------------|--------|------------|
| 1 | Were custody seals on outside of cooler? | <u>Yes</u> | No | N/A |
| 2 | Were seals intact, signed and dated? | <u>Yes</u> | No | N/A |
| 3 | Were custody papers properly filled out? | <u>Yes</u> | No | N/A |
| 4 | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C) | <u>2.1</u> | | |
| 5 | Correct Temperature? | <u>Yes</u> | No | N/A |
| 6 | Were Ice or Ice Packs present | <u>Yes</u> | No | N/A |
| 7 | Did all bottles arrive in good condition (unbroken, etc....)? | <u>Yes</u> | No | N/A |
| 8 | Were all bottle labels complete (sample ID, preservation, etc....)? | <u>Yes</u> | No | N/A |
| 9 | Did all bottle labels and tags agree with custody papers? | <u>Yes</u> | No | N/A |
| 10 | Were the correct bottles used for the tests indicated? | <u>Yes</u> | No | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No | N/A |
| | <u>HNO3 pH<2</u> <u>H2SO4 pH<2</u> ZnAc2/NaOH pH>9 NaOH pH>12 <u>HCl pH<2</u> | | | |
| | <small>Preservative additions noted below</small> | | | |
| 12 | Were all samples received within analysis holding times? | <u>Yes</u> | No | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below | <u>Yes</u> | No | <u>N/A</u> |
| 14 | Where did the bottles originate? | <u>CAS</u> | Client | |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: _____ Date: 26

Columbia Analytical Services, Inc. Chain of Custody

9143 Philips Highway • Jacksonville, FL 32256 • 904-739-2277 • FAX 904-739-2011

CAS Contact: Tom Kissinger

Project Number: J0805486
 Project Manager: Tom Kissinger

28

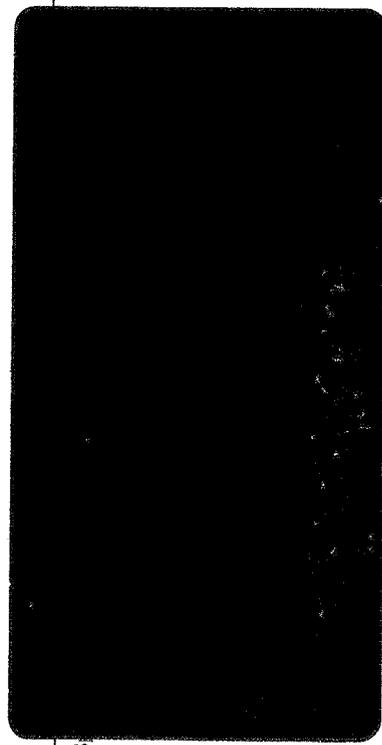
Lab Code	Sample ID	# of Cont.	Matrix	Sample		Lab ID
				Date	Time	
J0805486-001	LG-1	1	Water	11/11/08	1215	H2MLab <i>Test America</i>
J0805486-002	LG-3	1	Water	11/11/08	1320	H2MLab
J0805486-003	LG-5	1	Water	11/11/08	1410	H2MLab
J0805486-004	LG-6	1	Water	11/11/08	1510	H2MLab
J0805486-005	LG-7	1	Water	11/11/08	1100	H2MLab
J0805486-006	EQUIPMENT BLANK	1	Water	11/11/08	1530	H2MLab

TOX
9020B

Test Comments
TOX - 9020B

J0805486-001,2,3,4,5,6

Send to Test America Nashville TN



Turnaround Requirements <input type="checkbox"/> RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: 11/26/08	Report Requirements <input type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data FQI/MDL/J <u>Y</u> EDD <u>Y</u>	Invoice Information PO# J0805486 Bill to

Relinquished By: *Shawn Leggett 11-16-08*

Received By: _____
 Airbill Number: _____



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

SR #

70805486
CAS Contact

Project Name: **FAWNER IP LONGROAD LANDFILL** Project Number: [REDACTED]

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: **Paul Farris** Sampler's Printed Name: **PAUL FARRIS (URS)**

CLIENT SAMPLE ID	LAB ID	DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	ANALYSIS REQUESTED (Include Method Number and CAS Contact)	REMARKS/ALTERNATE DESCRIPTION
LG-1		11/10/08	1215	GW	5		TQC METALS COD BOD/CI/TDS/PH/NO ₃ -N/NO ₂ -N/TK/TOX	
LG-3			1320					
LG-5			1410					
LG-6			1510					
LG-7			1100					
EQUIPMENT BANK			1530	W				

SPECIAL INSTRUCTIONS/COMMENTS

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

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

INVOICE INFORMATION
 PO# _____
 BILL TO: _____

RECEIVED BY: _____ RECEIVED BY: _____

RELINQUISHED BY: _____ RECEIVED BY: _____

Signature: **Paul Farris** Signature: **Tand. Kissinger**
 Printed Name: **PAUL FARRIS** Printed Name: **Tand. Kissinger**
 Firm: **URS Corp.** Firm: **GAS**
 Date/Time: **11/10/08 1530** Date/Time: **11/12/08 900**

CUSTOMY SEALS: Y N
 SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____
 RELINQUISHED BY: _____ RECEIVED BY: _____

Appendix A

Subcontracted Analytical Results

11/21/2008 3:01:00PM

Client: Columbia Analytical Services (9477)
9143 Philips Highway, Suite 200
Jacksonville, FL 32256

Work Order: NRK1113
Project Name: Columbia Analytical Services
Project Number: J0805486
Date Received: 11/13/08

Attn: Mandy Sullivan

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
J0805486-001 LG-1	NRK1113-01	11/11/08 12:15
J0805486-002 LG-3	NRK1113-02	11/11/08 13:20
J0805486-003 LG-5	NRK1113-03	11/11/08 14:10
J0805486-004 LG-6	NRK1113-04	11/11/08 15:10
J0805486-005 LG-7	NRK1113-05	11/11/08 11:00
J0805486-006 EQUIPMENT BLANK	NRK1113-06	11/11/08 15:30

Samples were received into laboratory at a temperature of 0.70 °C.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately.

Results are reported on a wet weight basis unless otherwise noted

The reported results were obtained in compliance with 2003 NELAC standards unless otherwise noted.

These results relate only to the items tested

Estimated uncertainty is available upon request.

This report has been electronically signed.

Approved By:



TestAmerica Nashville
Andrea Runnels
Project Manager

Client: Columbia Analytical Services (9477)
 9143 Philips Highway, Suite 200
 Jacksonville, FL 32256
 Attn: Mandy Sullivan

Work Order: NRK1113
 Project: Columbia Analytical Services
 Project Number: J0805486

Sampled: 11/11/08
 Received: 11/13/08

LABORATORY REPORT

Sample ID: J0805486-001 LG-1 - Lab Number: NRK1113-01 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0647		mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-002 LG-3 - Lab Number: NRK1113-02 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0820		mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-003 LG-5 - Lab Number: NRK1113-03 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0300	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-004 LG-6 - Lab Number: NRK1113-04 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0414		mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-005 LG-7 - Lab Number: NRK1113-05 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0300	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-006 EQUIPMENT BLANK - Lab Number: NRK1113-06 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0300	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

Client: Columbia Analytical Services (9477)
 9143 Philips Highway, Suite 200
 Jacksonville, FL 32256
 Attn: Mandy Sullivan

Work Order: NRK1113
 Project: Columbia Analytical Services
 Project Number: J0805486

Sampled: 11/11/08
 Received: 11/13/08

SAMPLE EXTRACTION DATA

Parameter	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Method
General Chemistry Parameters	NRK1113-01	100.0 mL	1.0 mL	11/14/2008	DML	NO PREP
General Chemistry Parameters	NRK1113-02	100.0 mL	1.0 mL	11/14/2008	DML	NO PREP
General Chemistry Parameters	NRK1113-03	100.0 mL	1.0 mL	11/14/2008	DML	NO PREP
General Chemistry Parameters	NRK1113-04	100.0 mL	1.0 mL	11/14/2008	DML	NO PREP
General Chemistry Parameters	NRK1113-05	100.0 mL	1.0 mL	11/14/2008	DML	NO PREP
General Chemistry Parameters	NRK1113-06	100.0 mL	1.0 mL	11/14/2008	DML	NO PREP

PROJECT QUALITY CONTROL DATA

Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number
General Chemistry Parameters					
Total Organic Halides	0.0300		mg/L	8112150	8112150-BLK1

PROJECT QUALITY CONTROL DATA

Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	RPD Limit	Q.C. Batch	Sample Duplicated
General Chemistry Parameters								
Total Organic Halides	<0.0300	0.0483		mg/L		50	8112150	NRK0858-02
Total Organic Halides	<0.0300	0.0300		mg/L		50	8112150	NRK1113-06

PROJECT QUALITY CONTROL DATA

LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Q.C. Batch
General Chemistry Parameters							
Total Organic Halides	0.250	0.291		mg/L	116	90 - 130	8112150

PROJECT QUALITY CONTROL DATA

Matrix Spike

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked
General Chemistry Parameters									
Total Organic Halides	0.0456	0.140		mg/L	0.100	94	74 - 131	8112150	NRK0858-01

PROJECT QUALITY CONTROL DATA

Matrix Spike Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	RPD	RPD Limit	Q.C. Batch	Sample Duplicated
General Chemistry Parameters										
Total Organic Halides	0.0456	0.107	J4	mg/L	0.100	62	26	50	8112150	NRK0858-01

Client: Columbia Analytical Services (9477)
9143 Philips Highway, Suite 200
Jacksonville, FL 32256
Attn: Mandy Sullivan

Work Order: NRK1113
Project: Columbia Analytical Services
Project Number: J0805486

Sampled: 11/11/08
Received: 11/13/08

CERTIFICATION SUMMARY

TestAmerica Nashville

Method	Matrix	A2LA	AIHA	Nelac	Florida
SW846 9020B	Water		N/A	X	X

DATA QUALIFIERS AND DEFINITIONS

J4 The sample matrix interfered with the ability to make an accurate determination.

ADDITIONAL COMMENTS

When insufficient sample volume is received for Matrix Spike and Matrix Spike Duplicate, Laboratory Control Spike and Laboratory Control Spike Duplicate data is used for batch QC.

COOLER REC



Cooler Received/Opened On 11/13/2008 @ 0950

IRK1113

1. Tracking # 12XEW698014195 3073

Courier: UPS IR Gun ID 96210146

2. Temperature of rep. sample or temp blank when opened: 0.7 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) MB

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) MB

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used? YES...NO...NA

If preservation in-house was needed, record standard ID of preservative used here _____

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) MB

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) MB

I certify that I attached a label with the unique LIMS number to each container (initial) MB

21. Were there Non-Conformance issues at login? YES...NO... Was a PIPE generated? YES...NO...# _____

Columbia Analytical Services, Inc. Chain of Custody
 9143 Phillips Highway • Jacksonville, FL 32256 • 904-739-2277 • FAX 904-739-2011

CAS Contact: Tom Kissinger

Project Number: J0805486
 Project Manager: Tom Kissinger

9020B
 TOX

NRK11113
 11/20/08 03:50

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Time	Lab ID
01	J0805486-001 LG-1	1	Water	11/11/08	1215	HEM Lab
02	J0805486-002 LG-3	1	Water	11/11/08	1320	HEM Lab
03	J0805486-003 LG-5	1	Water	11/11/08	1410	HEM Lab
04	J0805486-004 LG-6	1	Water	11/11/08	1510	HEM Lab
05	J0805486-005 LG-7	1	Water	11/11/08	1100	HEM Lab
06	J0805486-006 EQUIPMENT BLANK	1	Water	11/11/08	1530	HEM Lab

Test Comments
 TOX - 9020B

J0805486-001,2,3,4,5,6

Send to Test America Nashville TN

Special Instructions/Comments PLEASE SEND RESULTS TO MANDY SULLIVAN	Turnaround Requirements <input type="checkbox"/> RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: 11/26/08	Report Requirements <input type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/ <u>Y</u> EDD <u>Y</u>	Invoice Information PO# J0805486 Bill to _____
	Relinquished By: <u>Mandy Sullivan</u> 11-12-08 Received By: <u>Tom Kissinger</u> 11/12 8:10 Airbill Number: _____ 6.7°C		

Memorandum

Date: December 9, 2008
To: Pat Kelley
From: Mary Ann Brookshire
Subject: Quality Assurance Review
Project: International Paper - Roanoke Rapids, NC - Low Ground Landfill
Sampling Dates: November 11, 2008
Project Number: 300018

1.0 Introduction

This memorandum presents the cursory validation of the water sample analyses listed in Table 1. The analyses were performed by Columbia Analytical Services, Inc. with the exception of the total organic halide analysis that was subcontracted to Test America. The criteria used to qualify data are from the *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA 2004), the analytical methods, or the professional judgment of the validation chemist. The following laboratory deliverables were reviewed during the validation process:

- Chain-of-custody (COC) documentation to assess holding times and verify report completeness
- Laboratory quality control (QC) sample results, including method blanks, laboratory control samples (LCSs), matrix spike/matrix spike duplicates (MS/MSDs), and laboratory duplicates
- Analytical results to verify reporting limits

Table 1—Sample Data Reviewed

Sample ID	Laboratory ID	Metals^a	Wet Chem^b
LG-1	J0805486-001	X	X
LG-3	J0805486-002	X	X
LG-5	J0805486-003	X	X
LG-6	J0805486-004	X	X
LG-7	J0805486-005	X	X
EQUIPMENT	J0805486-006	X	X
BLANK			

^a Total metals by methods 6010B, 6020, and 7470A (USPEPA 1996)

^b BOD by method 405.1, TOC by method 415.1, COD by method 410.2, pH by method 9040B, TDS by 160.1, TOX by method 9020B and nitrate, sulfate, fluoride and chloride by method 300 (SM 1992, USEPA 1983, USEPA 1996, and USEPA 1999b)

2.0 Data Validation

2.1 Custody, Preservation, and Completeness

Sample custody was maintained from sample collection to receipt at the laboratory. The reports are complete and contain results for the samples and tests requested on the COC forms. The samples were received intact and were properly preserved.

2.2 Metals Analyses

The samples noted on Table 1 were analyzed for total metals by methods 6010B, 6020 and 7470A.

2.2.1 Holding Times

The samples were analyzed within the required holding times.

2.2.2 Blank Analyses

2.2.2.1 Method Blanks

Method blanks were analyzed at the required frequency. Target analytes were not detected at concentrations above the method detection limits in the method blank with the following exception.

Cadmium was detected in the method blank at a concentration of 0.14 ug/L, which is below the reporting limit.

Functional Guidelines prescribes three inorganic qualification schemes for blank contamination between the MDL and reporting limit, (1) associated sample concentrations that are non-detect are not qualified, (2) associated sample concentrations less than the reporting limit and greater than the MDL are qualified as undetected (U) at the reporting

limit, and (3) associated sample concentrations greater than the reporting limit are qualified based upon professional judgment. Data are qualified as shown in Section 5.

2.2.2.2 Field Blanks

One equipment rinsate blank was collected with the samples. The following analytes were detected in the rinsate blank at concentrations below the reporting limits after qualifying for method blank contamination.

- Barium at a concentration of 1.4 ug/L.
- Manganese at a concentration of 0.8 ug/L.

Because these concentrations are estimated values below the method reporting limits and dedicated sampling equipment was used for sample collection, the associated sample results are not qualified.

2.2.3 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSDs were analyzed as required. The only site-specific MS/MSDs analyzed were for iron and mercury. The recoveries and RPDs for the mercury MS/MSD analyses are within the QC limits. The recovery and RPD values for iron are not applicable as the concentration of iron in the parent sample is greater than four times the spike value.

2.2.4 Laboratory Control Sample

LCS samples were analyzed as required. The percent recovery values are within the laboratory QC limits.

2.2.5 Laboratory Reporting Limits

The reporting limits are consistent with method reporting limits (MRL) with the exception of samples requiring dilutions. The B qualifiers for the results less than the MRL but above the method detection limit are changed to J qualifiers for consistency with the project database.

2.2.6 Field Duplicates

Field duplicate samples were not collected with these samples. Data qualification is not required.

2.2.7 Overall Assessment of Data Usability

The usability of the data is based on the EPA guidance documents noted previously. Based upon the information presented here, the data are acceptable with qualification.

2.3 General Chemistry Analyses

The samples were analyzed for biochemical oxygen demand (BOD), total organic carbon (TOC), chemical oxygen demand (COD), pH, total dissolved solids (TDS), nitrate, fluoride, sulfate, chloride, and total organic halides (TOX).

2.3.1 Holding Times

The samples were analyzed within the required holding times.

2.3.2 Blank Analyses

2.3.2.1 Method Blanks

Method blanks were analyzed at the required frequency. Target analytes were not detected in the method blanks with the following exception.

- TOX was detected in the method blank at a concentration of 0.030 mg/L.

Functional Guidelines prescribes three qualifications schemes for blank contamination between the MDL and reporting limit, (1) associated sample concentrations that are non-detect are not qualified, (2) associated sample concentrations less than the reporting limit and greater than the MDL are qualified as undetected (U) at the reporting limit, and (3) associated sample concentrations greater than the reporting limit are qualified based upon professional judgment. Data are qualified as shown in Section 5.

2.3.2.2 Field Blanks

One equipment rinsate blank was collected with the samples. Target analytes were not detected in the rinsate blank with the following exceptions.

- COD was detected in the rinsate blank at a concentration of 0.25 mg/L.
- Chloride was detected in the rinsate blank at a concentration of 0.24 mg/L.
- Conductivity was measured in the equipment blank at 2.1 umhos/cm.

Because dedicated sampling equipment was used to collect the field samples, the associated sample results are not qualified.

2.3.3 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSDs were analyzed as required for the TOX analysis. The following recoveries and RPDs exceed QC limits.

- The recovery of sample LG-1 MSD is 62 percent, which is below the 74 to 131 percent QC limits. Data qualification is not required as the associated MS recovery is within QC limits.

2.3.4 Matrix Spike Analyses

An MS sample was analyzed for COD. The MS recovery is within the QC limits. Batch MS/MSD samples were analyzed with the other parameters and were not provided in the laboratory report.

2.3.5 Matrix Duplicate Analyses

Matrix duplicates (MD) were analyzed as required for the BOD, COD, conductivity, pH, and TDS. The RPDs are within the QC limits. Batch MS/MSD samples were analyzed with the other parameters and were not provided in the laboratory report.

2.3.6 Laboratory Control Sample

LCS samples were analyzed as required for the BOD, TOC, COD, TDS, TOX, pH, conductivity, nitrate, sulfate, chloride, and fluoride analyses. The percent recovery values are within the laboratory QC limits.

2.3.7 Laboratory Reporting Limits

The reporting limits are consistent with method reporting limits.

2.3.8 Field Duplicates

Field duplicate samples were not collected with these samples. Data qualification is not required.

2.3.9 Overall Assessment of Data Usability

The usability of the data is based on the EPA guidance documents noted previously. Based upon the information presented here, the data are acceptable with qualification.

3.0 Data Qualifier Definitions

The following data validation qualifiers were used in the review of this data set. These qualifiers are from the Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA 1999).

- U The analyte was analyzed for but not detected above the reported sample quantitation limit.
- 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 above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.
- NJ The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the samples and meet quality control criteria. The presence or absence of the analyte cannot be verified.

4.0 References

SM 1992. Standard Methods for the Examination of Water and Waste, 18th Edition. 1992.

USEPA. 1983. Methods for Chemical Analysis of Water and Waste EPA/600/4-79/020. United States Environmental Protection Agency. Office of Research and Development. March 1983.

USEPA. 1996. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) Third Edition, Updates I, II, IIA, IIB, and III. United States Environmental Protection Agency. Office of Solid Waste. December 1996.

USEPA. 1999a. Contract Laboratory Program National Functional Guidelines for Organic Data Review. U.S. Environmental Protection Agency Office of Emergency and Remedial Response. EPA540/R-99/008. October 1999.

USEPA. 1999b. Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated N-Hexane Extractable Material by Extraction and Gravimetry EPA-821-R-98-002. United States Environmental Protection Agency. Office of Water. February 1999.

USEPA. 2004. Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. U.S. Environmental Protection Agency Office of Superfund Remediation and Technology Innovation. EPA 540-R-04-004. October 2004.

5.0 SUMMARY OF QUALIFIED DATA

Sample ID	Analyte	Qualifier	Reason for Qualification
LG-1	Cadmium	U at MRL	Method blank contamination, result < MRL
LG-3	Cadmium	U at MRL	Method blank contamination, result < MRL
LG-5	Cadmium	U at MRL	Method blank contamination, result < MRL
LG-6	Cadmium	U at MRL	Method blank contamination, result < MRL
LG-7	Cadmium	U at MRL	Method blank contamination, result < MRL
EQUIPMENT BLANK	Cadmium	U at MRL	Method blank contamination, result < MRL
LG-1	TOX	U	Method blank contamination, result > MRL
LG-3	TOX	U	Method blank contamination, result > MRL
LG-6	TOX	U	Method blank contamination, result > MRL

MRL – method reporting limit

In addition, the B qualifiers for the results less than the MRL but above the method detection limit are changed to J qualifiers for consistency with the project database.

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
Project Name: Former IP Lowground Landfill
Project Number: NA
Matrix: WATER

Service Request: J0805486
Date Collected: 11/11/2008
Date Received: 11/12/2008

Total Metals

Sample Name: LG-1
Lab Code: J0805486-001

Units: ug/L
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	1.7	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	372	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.37	0.5 UB
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	0.9	BJ
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.7	BJ
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	44100	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	0.4	BJ
Manganese	EPA 3020A	6020	5.0	1.0	5.0	11/21/2008	11/25/2008	3470	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	7	BJ

MB
 12/9/08

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number: NA
 Matrix: WATER

Service Request: J0805486
 Date Collected: 11/11/2008
 Date Received: 11/12/2008

Total Metals

Sample Name: LG-3
 Lab Code: J0805486-002

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	80	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.44	ASU B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	0.8	BJ
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.7	BJ
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	617	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	5.0	1.0	5.0	11/21/2008	11/25/2008	3100	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	5	BJ

MB
 12/9/08

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number: NA
 Matrix: WATER

Service Request: J0805486
 Date Collected: 11/11/2008
 Date Received: 11/12/2008

Total Metals

Sample Name: LG-5
 Lab Code: J0805486-003

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	0.45	B'J
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	121	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.32-0.50	B'
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.5	B'J
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	5580	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	10	2.0	10.0	11/21/2008	11/25/2008	7410	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	19	

MB
12/9/08

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
Project Name: Former IP Lowground Landfill
Project Number: NA
Matrix: WATER

Service Request: J0805486
Date Collected: 11/11/2008
Date Received: 11/12/2008

Total Metals

Sample Name: LG-6
Lab Code: J0805486-004

Units: ug/L
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	570	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.30	0.5 u B
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	3.2	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	1.4	B J
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	2270	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/24/2008	1900	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	5	B J

MB
 12/9/08

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
Project Name: Former IP Lowground Landfill
Project Number: NA
Matrix: WATER

Service Request: J0805486
Date Collected: 11/11/2008
Date Received: 11/12/2008

Total Metals

Sample Name: LG-7
Lab Code: J0805486-005

Units: ug/L
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	102	
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.38	0.5 UB
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	0.7	B-J
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	3750	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	5.0	1.0	5.0	11/21/2008	11/25/2008	3820	
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	5	B-J

MB
 12/9/08

COLUMBIA ANALYTICAL SERVICES, INC

Analytical Report

Client: Premo, Inc.
 Project Name: Former IP Lowground Landfill
 Project Number: NA
 Matrix: WATER

Service Request: J0805486
 Date Collected: 11/11/2008
 Date Received: 11/12/2008

Total Metals

Sample Name: EQUIPMENT BLANK
 Lab Code: J0805486-006

Units: ug/L
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	11/21/2008	11/24/2008	U	
Barium	EPA 3020A	6020	2.0	0.5	1.0	11/21/2008	11/24/2008	1.4	BJ
Cadmium	EPA 3020A	6020	0.50	0.12	1.0	11/21/2008	11/24/2008	0.36	0.5 uB
Chromium	EPA 3020A	6020	2.0	0.8	1.0	11/21/2008	11/24/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	11/21/2008	11/24/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	11/19/2008	11/20/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/25/2008	U	
Manganese	EPA 3020A	6020	1.0	0.2	1.0	11/21/2008	11/24/2008	0.8	BJ
Mercury	METHOD	7470A	0.50	0.08	1.0	11/17/2008	11/17/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	11/21/2008	11/24/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	11/21/2008	11/25/2008	U	
Zinc	EPA 3020A	6020	10	4	1.0	11/21/2008	11/24/2008	U	

MB
 12/19/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-1
Lab Code : J0805486-001
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	2.4	J
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	7.9	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	30	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	24	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	1100	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 22:55	0.15	J
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.4	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	650	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	8.3	

MB
12/19/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-3
Lab Code : J0805486-002
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	13	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	38	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	61	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	1500	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.25	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:10	0.79	
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.5	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	1000	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	90	

MB
12/9/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-5
Lab Code : J0805486-003
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/20/05 16:33	5.1	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	16	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	2.8	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	780	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.24	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:25	0.16	J
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.3	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	550	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	150	

MB
12/9/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-6
Lab Code : J0805486-004
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	18	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	57	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/18/08 13:11	60	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	2600	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.32	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:40	0.24	
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.9	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	20	9.6	2	11/13/08 17:30	1900	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/18/08 13:11	36.2	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : LG-7
Lab Code : J0805486-005
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/14/08 12:49	6.1	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	17	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	31	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	1400	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	0.21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 23:55	0.17	J
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	6.4	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	920	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	160	

MB
12/9/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premo, Inc.
Project Name : Former IP Lowground Landfill
Project Number : NA
Sample Matrix : WATER

Service Request : J0805486
Date Collected : 11/11/08
Date Received : 11/12/08

Inorganic Parameters

Sample Name : EQUIPMENT BLANK
Lab Code : J0805486-006
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	11/12/08 15:40	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	11/20/05 16:33	U	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	11/24/08 19:00	2.5	J
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/08 16:12	0.24	
Conductivity	uMHOS/cm	120.1	5	1.1	1	11/21/08 10:30	2.1	J
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/08 16:12	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/12/08 00:10	U	
pH	pH UNITS	9040B	-	-	1	11/12/08 10:30	5.3	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	11/13/08 17:30	U	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/08 16:12	U	

MB
12/9/08

Client: Columbia Analytical Services (9477)
 9143 Philips Highway, Suite 200
 Jacksonville, FL 32256
 Attn: Mandy Sullivan

Work Order: NRK1113
 Project: Columbia Analytical Services
 Project Number: J0805486

Sampled: 11/11/08
 Received: 11/13/08

LABORATORY REPORT

Sample ID: J0805486-001 LG-1 - Lab Number: NRK1113-01 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0647	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-002 LG-3 - Lab Number: NRK1113-02 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0820	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-003 LG-5 - Lab Number: NRK1113-03 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0300	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-004 LG-6 - Lab Number: NRK1113-04 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0414	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-005 LG-7 - Lab Number: NRK1113-05 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0300	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

LABORATORY REPORT

Sample ID: J0805486-006 EQUIPMENT BLANK - Lab Number: NRK1113-06 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0300	U	mg/L	0.0300	1	11/18/08 13:32	DML	SW846 9020B	8112150

MB
12/9/08