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February 8, 2011

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, Premier Environmental PC (Premier) is submitting the attached Semi-annual Environmental Monitoring Report for the November 2010 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 Premier Quality Assurance Review of the laboratory data.

The November 2010 sampling activities were conducted by Premier. 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 Premier 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.

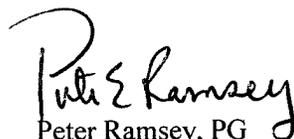
The detected manganese and iron concentrations in site wells are reported within the range of background concentrations for this site. The Solid Waste Section has waived the requirement to prepare a Water Quality Assessment Plan for this site. Premier continues to concur with this waiver and does not 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
Senior Scientist



Peter Ramsey, PG
Senior Geologist

cc: Phil Slowiak, International Paper

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):

Premier Environmental Services, PC

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

Name: Patrick Kelley Phone: 678-569-2860
E-mail: pkelley@premiercorp-usa.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Low Ground Landfill Roanoke Rapids, NC	Kapstone Mill 100 Gaston Road Roanoke Rapids, NC	42 03	.0500	November 19, 2010

Environmental Status: (Check all that apply)

- Initial/Background Monitoring Detection Monitoring Assessment Monitoring Corrective Action

Type of data submitted: (Check all that apply)

- Groundwater monitoring data from monitoring wells 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.

Peter E. Ramsey Senior Geologist 678-569-2882
 Facility Representative Name (Print) Title (Area Code) Telephone Number

Peter E. Ramsey 2/10/11
 Signature Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:



International Paper
Roanoke Rapids Mill

100 Gaston Road Low Ground Landfill
Roanoke Rapids, NC

amples collected on 11/19/10 by Tamar Banks of Premier Environmental PC | Contact: Patrick Kelley, Premier Environmental PC

Roanoke Rapids, NC Monitoring Wells | Contact: Patrick Kelley, Premier Environmental PC
NC Cent. #: 527 Phone 770-973-2100 #2860 or email: pkelley@premiercorp-usa.com

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

FACILITY PERMIT	SAMPLE ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	LAB QUALIFIER	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE
42-03	MW-LG 1	7440-38-2	14	Arsenic	0.46	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	7440-39-3	15	Barium	120	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	316	316	Biochemical Oxygen Demand	2.0	mg/L	U	1.0	11/19/10	NA	11/24/10
42-03	MW-LG 1	7440-43-9	34	Cadmium	0.30	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	317	317	Chemical Oxygen Demand	2	mg/L	U	1.0	11/19/10	NA	11/30/10
42-03	MW-LG 1	16887-00-6	301	Chloride	3.89	mg/L	J	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 1	7440-47-3	51	Chromium	1.6	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	7440-50-8	54	Copper	5.1	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	16984-48-8	312	Fluoride	0.11	mg/L	J	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 1	7439-89-6	340	Iron	2.16	mg/L	U	1.0	11/19/10	11/24/10	11/30/10
42-03	MW-LG 1	7439-92-1	131	Lead	1.4	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	7439-96-5	342	Manganese	183	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/19/10	11/29/10	11/29/10
42-03	MW-LG 1	14797-55-8	303	Nitrate	0.19	mg/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 1	321	321	pH - Lab	6.68	pH UNITS	J	1.0	11/19/10	NA	11/23/10
42-03	MW-LG 1	7782-49-2	183	Selenium	1.0	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	7440-22-4	184	Silver	0.07	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1	14808-79-8	315	Sulfate	25.0	mg/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 1	311	311	Total Dissolved Solids	135	mg/L	U	1.0	11/19/10	NA	11/24/10
42-03	MW-LG 1	E-10195	357	Total Organic Carbon	3.4	mg/L	J	1.0	11/19/10	NA	11/25/10
42-03	MW-LG 1	7440-66-6	213	Zinc	19	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 1			Total Organic Halides	0.03	mg/L	U	1.0	11/19/10	NA	11/29/10
42-03	MW-LG 3	7440-38-2	14	Arsenic	0.40	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	7440-39-3	15	Barium	93	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	316	316	Biochemical Oxygen Demand	2.0	mg/L	U	1.0	11/19/10	NA	11/24/10
42-03	MW-LG 3	7440-43-9	34	Cadmium	0.30	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	317	317	Chemical Oxygen Demand	30	mg/L	J	1.0	11/19/10	NA	11/30/10
42-03	MW-LG 3	16887-00-6	301	Chloride	67	mg/L	J	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 3	7440-47-3	51	Chromium	0.7	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	7440-50-8	54	Copper	1	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	16984-48-8	312	Fluoride	0.21	mg/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 3	7439-89-6	340	Iron	2.95	mg/L	U	1.0	11/19/10	11/24/10	11/30/10
42-03	MW-LG 3	7439-92-1	131	Lead	0.90	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	7439-96-5	342	Manganese	2900	ug/L	U	1.0	11/19/10	11/30/10	12/3/10
42-03	MW-LG 3	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/19/10	11/29/10	11/29/10
42-03	MW-LG 3	14797-55-8	303	Nitrate	16.8	mg/L	J	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 3	321	321	pH - Lab	6.99	pH UNITS	J	1.0	11/19/10	NA	11/23/10
42-03	MW-LG 3	7782-49-2	183	Selenium	1.00	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	7440-22-4	184	Silver	0.070	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3	14808-79-8	315	Sulfate	104	mg/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG 3	311	311	Total Dissolved Solids	1190	mg/L	U	2.0	11/19/10	NA	11/24/10
42-03	MW-LG 3	E-10195	357	Total Organic Carbon	12.3	mg/L	J	1.0	11/19/10	NA	11/25/10
42-03	MW-LG 3	7440-66-6	213	Zinc	4.0	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG 3			Total Organic Halides	0.168	mg/L	U	1.0	11/19/10	NA	11/29/10

International Paper
Roanoke Rapids Mill

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

amples collected on 11/19/10 by Tamar Banks of Premier Environmental PC | Contact: Patrick Kelley, Premier Environmental PC
Samples were analyzed by CAS, Inc NC Cert. #: 52 | Phone 770-973-2100 #2860 or email, pkelley@premiercorp-usa.com

FACILITY PERMIT	SAMPLE ID	CAS Number	SWS ID	PARAMETER	RESULT	UNITS	LAB QUALIFIER	DILUTION FACTOR	COLLECT DATE	EXTRACTION DATE	ANALYSIS DATE
42-03	MW-LG5	7440-38-2	14	Arsenic	1.32	ug/L		1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	7440-39-3	15	Barium	111	ug/L		1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	316	316	Biochemical Oxygen Demand	2.0	mg/L	U	1.0	11/19/10	NA	11/24/10
42-03	MW-LG5	7440-43-9	34	Cadmium	0.3	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	317	317	Chemical Oxygen Demand	16	mg/L	J	1.0	11/19/10	NA	11/30/10
42-03	MW-LG5	16887-00-6	301	Chloride	2.06	mg/L		1.0	11/19/10	NA	11/22/10
42-03	MW-LG5	7440-47-3	51	Chromium	0.4	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	7440-50-8	54	Copper	1.0	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	16884-48-8	312	Fluoride	0.15	mg/L	J	1.0	11/19/10	11/24/10	11/30/10
42-03	MW-LG5	7439-89-6	340	Iron	4.01	mg/L		1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	7439-92-1	131	Lead	0.06	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	7439-96-5	342	Manganese	12000	ug/L		1.0	11/19/10	11/30/10	11/29/10
42-03	MW-LG5	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/19/10	11/29/10	11/29/10
42-03	MW-LG5	14797-55-8	303	Nitrate	0.07	mg/L	U	1.0	11/19/10	NA	11/23/10
42-03	MW-LG5	321	321	pH - Lab	6.76	pH UNITS	J	1.0	11/19/10	NA	12/1/10
42-03	MW-LG5	7782-49-2	183	Selenium	1.0	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5	7440-22-4	184	Silver	0.070	ug/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG5	14808-79-8	315	Sulfate	268	mg/L		2.0	11/19/10	NA	11/24/10
42-03	MW-LG5	311	311	Total Dissolved Solids	675	mg/L		1.0	11/19/10	NA	11/24/10
42-03	MW-LG5	E-10195	357	Total Organic Carbon	5.6	mg/L		1.0	11/19/10	NA	11/25/10
42-03	MW-LG5	7440-56-6	213	Zinc	0.21	ug/L		1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG5			Total Organic Halides	0.03	mg/L	U	1.0	11/19/10	NA	11/29/10
42-03	MW-LG6	7440-38-2	14	Arsenic	0.40	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	7440-39-3	15	Barium	460	ug/L		1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	316	316	Biochemical Oxygen Demand	6.0	mg/L	J	1.0	11/19/10	NA	11/24/10
42-03	MW-LG6	7440-43-9	34	Cadmium	0.30	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	317	317	Chemical Oxygen Demand	61	mg/L		1.0	11/19/10	NA	11/30/10
42-03	MW-LG6	16887-00-6	301	Chloride	43.3	mg/L		1.0	11/19/10	NA	11/22/10
42-03	MW-LG6	7440-47-3	51	Chromium	4.1	ug/L		1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	7440-50-8	54	Copper	1.0	ug/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG6	16884-48-8	312	Fluoride	0.29	mg/L		1.0	11/19/10	11/24/10	11/30/10
42-03	MW-LG6	7439-89-6	340	Iron	0.68	mg/L		1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	7439-92-1	131	Lead	0.2	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	7439-96-5	342	Manganese	1160	ug/L		1.0	11/19/10	11/29/10	11/29/10
42-03	MW-LG6	7439-97-6	342	Mercury	0.08	ug/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG6	14797-55-8	303	Nitrate	0.25	mg/L	J	1.0	11/19/10	NA	11/23/10
42-03	MW-LG6	321	321	pH - Lab	7.46	pH UNITS	J	1.0	11/19/10	NA	11/23/10
42-03	MW-LG6	7782-49-2	183	Selenium	1.0	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	7440-22-4	184	Silver	0.070	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6	14808-79-8	315	Sulfate	301	mg/L		2.0	11/19/10	NA	11/22/10
42-03	MW-LG6	311	311	Total Dissolved Solids	2440	mg/L		4.0	11/19/10	NA	11/24/10
42-03	MW-LG6	E-10195	357	Total Organic Carbon	23	mg/L		1.0	11/19/10	NA	11/25/10
42-03	MW-LG6	7440-56-6	213	Zinc	3	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG6			Total Organic Halides	0.0815	mg/L		1.0	11/19/10	NA	11/29/10

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samples collected on 11/19/10 by Tamar Banks of Premier Environmental PC Contact: Patrick Kelley, Premier Environmental PC
NC Cert. #: 527 Phone 770-973-2100 #2860 or email, pkelley@premiercorp-usa.com

Samples were analyzed by CAS, Inc

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	0.40	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	7440-39-3	15	Barium	72.7	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	316	316	Biochemical Oxygen Demand	2.0	mg/L	U	1.0	11/19/10	NA	11/24/10
42-03	MW-LG7	7440-43-9	34	Cadmium	0.30	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	317	317	Chemical Oxygen Demand	6	mg/L	J	1.0	11/19/10	NA	11/30/10
42-03	MW-LG7	16887-00-6	301	Chloride	27.9	mg/L	J	1.0	11/19/10	NA	11/22/10
42-03	MW-LG7	7440-47-3	51	Chromium	0.60	ug/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	7440-50-8	64	Copper	1.0	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	16984-48-8	312	Fluoride	0.17	mg/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	7439-89-6	340	Iron	0.40	mg/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	7439-92-1	131	Lead	0.06	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	7439-96-5	342	Manganese	161	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	7439-97-6	132	Mercury	0.08	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	14797-55-8	303	Nitrate	0.21	mg/L	J	1.0	11/19/10	NA	11/29/10
42-03	MW-LG7	321	321	pH - Lab	7.55	pH UNITS	J	1.0	11/19/10	NA	11/23/10
42-03	MW-LG7	7782-49-2	183	Selenium	1.0	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	7440-22-4	184	Silver	0.07	ug/L	U	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7	14808-79-8	315	Sulfate	157	mg/L	U	1.0	11/19/10	NA	11/22/10
42-03	MW-LG7	311	311	Total Dissolved Solids	1190	mg/L	U	2.0	11/19/10	NA	11/24/10
42-03	MW-LG7	E-10195	357	Total Organic Carbon	6.5	mg/L	J	1.0	11/19/10	NA	11/25/10
42-03	MW-LG7	7440-66-6	213	Zinc	3	mg/L	J	1.0	11/19/10	11/30/10	12/1/10
42-03	MW-LG7			Total Organic Halides	0.0721	mg/L		1.0	11/19/10	NA	11/29/10

U - Undetected above the MRL/MDL
J - Estimated value

Groundwater Sampling Field Form

WELL No. <u>16-1</u>	PROJECT # <u>209383.10</u>	LOCATION <u>Roanoke Rapids NC.</u>	DATE <u>11/19/10</u>
SAMPLE No. <u>L6-1</u>	PROJECT <u>TP-Roanoke Rapids</u>	FIELD PERSONNEL/CO. <u>T. Banks J. Hughes</u>	
SAMPLE TIME: <u>1540</u>	SITE <u>Keystone</u>	INSTRUMENT CALIBRATION DATE <u>11/19/10</u>	
WELL CONDITION: POOR <input type="radio"/> SATISFACTORY <input checked="" type="radio"/> NEW (if poor, explain) _____			
FIELD CONDITIONS/WEATHER: <u>Sunny 55°</u>			
EQUIPMENT DECONTAMINATION: <u>Liquinox w/ Distilled</u>			

Casing Diameter: (circle one)	<input checked="" type="radio"/> 4" <input type="radio"/> 6" Other: _____	Casing Volume Calculation: $(\pi r^2 h)(7.48 \text{ gal/ft}^3)$ Casing Volume (gallons/ft) <input checked="" type="radio"/> 2" = 0.163; 4" = 0.653; 6" = 1.47
----------------------------------	------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------

Depth to Water (feet): <u>8.82</u>	Casing Volume (gallons): <u>1.28</u>
Depth of Well (feet): <u>16.68</u>	Calculated Purge Volume (gallons): <u>3.84 gallons</u>
Water Column (feet): <u>7.86</u>	Actual Purge Volume (gallons): <u>1.20 gal</u>
Other Remarks: <u>Issues w/ Geopump Equip Restart purge.</u>	

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMP (°C)	pH	CONDUCTIVITY (µs/cm)	DISSOLVED OXYGEN (ppm) mg/L	TURBIDITY (NTU)	ODOR/COLOR/ REMARKS
<u>1452</u>	<u>14570</u>						ORP PURGE START
<u>1459</u>	<u>1.0 L</u>	<u>16.61</u>	<u>5.73</u>	<u>0.226</u>	<u>6.21</u>	<u>157.0</u>	<u>37.70</u>
<u>1504</u>	<u>.25 gal</u>	<u>16.64</u>	<u>5.21</u>	<u>0.204</u>	<u>1.92</u>	<u>92.7</u>	<u>39.90</u>
<u>1509</u>	<u>.35 gal</u>	<u>16.72</u>	<u>4.82</u>	<u>0.178</u>	<u>1.51</u>	<u>71.0</u>	<u>63.70</u>
<u>1514</u>	<u>.50 gal</u>	<u>16.75</u>	<u>4.67</u>	<u>0.165</u>	<u>1.46</u>	<u>71.0</u>	<u>94.9</u>
<u>1522</u>	<u>.75 gal</u>	<u>16.73</u>	<u>4.55</u>	<u>0.154</u>	<u>1.31</u>	<u>68.7</u>	<u>111.3</u>
<u>1528</u>	<u>.90 gal</u>	<u>16.62</u>	<u>4.51</u>	<u>0.151</u>	<u>1.19</u>	<u>49.2</u>	<u>115.1</u>
<u>1533</u>	<u>1.10 gal</u>	<u>16.58</u>	<u>4.51</u>	<u>0.153</u>	<u>.97</u>	<u>49.2</u>	<u>115.2</u>
L6-1 Sampled @ 1540 Dup-1 Sampled @ 1540							

Purging Equipment: <u>Geopump w/ poly tubing</u>	Sampling/Measurement Equip: <u>VSI 556 lamotte 2020 E</u>
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SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
<u>L6-1</u>	<u>TOX</u>	<u>2-1L Amber w/ H₂SO₄</u>	
<u>L6-1</u>	<u>TOC</u>	<u>2-40ml Amber w/ HCl</u>	
<u>L6-1</u>	<u>Metals</u>	<u>1-250ml HDPE w/ HNO₃</u>	
<u>L6-1</u>	<u>COD</u>	<u>1-125 ml HDPE w/ H₂SO₄</u>	
<u>L6-1</u>	<u>BOD, pH, COND, Cl, F, SO₄, NO₃, TDS</u>	<u>1-500 ml HDPE.</u>	

Groundwater Sampling Field Form

WELL No. <u>L6-6</u>	PROJECT # <u>209383.10</u>	LOCATION <u>Roanoke Rapids NC</u>	DATE <u>11/19/10</u>
SAMPLE No. <u>L6-6</u>	PROJECT <u>TP- Roanoke Rapids</u>	FIELD PERSONNEL/CO. <u>T. Banks + B.J. Hughes</u>	
SAMPLE TIME: <u>0940</u>	SITE <u>Kapstone</u>	INSTRUMENT CALIBRATION DATE <u>11/19/10</u>	
WELL CONDITION: POOR <input type="radio"/> SATISFACTORY <input checked="" type="radio"/> NEW (if poor, explain) _____			
FIELD CONDITIONS/WEATHER: <u>Sunny 45°</u>			
EQUIPMENT DECONTAMINATION: <u>Liquinox w/ Disfilled</u>			

Casing Diameter: (circle one)	Casing Volume Calculation: $(\pi r^2 h)(7.48 \text{ gal/ft}^3)$
<input checked="" type="radio"/> 2" <input type="radio"/> 4"	Casing Volume (gallons/ft) for: 2" = 0.163; 4" = 0.653; 6" = 1.47
<input type="radio"/> 6" Other: _____	

Depth to Water (feet): <u>11.40</u>	Casing Volume (gallons): <u>1.20</u>
Depth of Well (feet): <u>18.92</u>	Calculated Purge Volume (gallons): <u>3.60</u>
Water Column (feet): <u>7.52</u>	Actual Purge Volume (gallons): <u>1.00 gal</u>
Other Remarks: _____	

TIME 2400 hrs	CUMULATIVE VOLUME (gal)	TEMP (°C)	pH	CONDUCTIVITY (µs/cm)	DISSOLVED OXYGEN (ppm)	TURBIDITY (NTU)	ODOR/COLOR/ REMARKS
<u>0850</u>	<u>0.020</u>						PURGE START
<u>0905</u>	<u>1.0L</u>	<u>19.21</u>	<u>5.91</u>	<u>3.865</u>	<u>1.64</u>	<u>6.82</u>	<u>-87.6</u>
<u>0910</u>	<u>.25 gal</u>	<u>19.46</u>	<u>6.09</u>	<u>3.983</u>	<u>1.12</u>	<u>5.53</u>	<u>-108.3</u>
<u>0918</u>	<u>.50 gal</u>	<u>19.62</u>	<u>6.11</u>	<u>3.994</u>	<u>0.51</u>	<u>5.83</u>	<u>-120.9</u>
<u>0927</u>	<u>.75 gal</u>	<u>19.50</u>	<u>6.11</u>	<u>3.950</u>	<u>0.32</u>	<u>7.63</u>	<u>-131.6</u>
<u>0932</u>	<u>.85 gal</u>	<u>19.64</u>	<u>6.11</u>	<u>3.912</u>	<u>0.29</u>	<u>3.92</u>	<u>-137.4</u>
<u>L6-6 Sampled @ 0940</u>							

Purging Equipment: <u>Gen pump w/ poly tubing</u>	Sampling/Measurement Equip: <u>YSI 556</u> <u>lanette 2020 E</u>
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SAMPLE NUMBER	ANALYTICAL METHOD	BOTTLE TYPE/ PRESERVATIVES	QA REMARKS
<u>L6-6</u>	<u>TOX</u>	<u>2.1L Amber w/ H2SO4</u>	
<u>L6-6</u>	<u>TOC</u>	<u>2-40ml Amber w/ HCL</u>	
<u>L6-6</u>	<u>metals</u>	<u>1.250L HDPE w/ HNO3</u>	
<u>L6-6</u>	<u>CoD</u>	<u>1.250L HDPE w/ H2SO4</u>	
<u>L6-6</u>	<u>BOD, PH, COND, Cl₂</u>	<u>1-500ml HDPE</u>	

F, SO₄, NO₃, TDS

December 08, 2010

Service Request No: J1005633

Mr. Peter Ramsey
Premo Group, Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, GA 30062

Laboratory Results for: IP - Roanoke Rapids NC/209383.10

Dear Mr. Ramsey:

Enclosed are the results of the sample(s) submitted to our laboratory on November 20, 2010. For your reference, these analyses have been assigned our service request number **J1005633**.

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.

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 38

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Premo Group, Inc.
Project: IP - Roanoke Rapids NC
Sample Matrix: water

Service Request No.: J1005633
Date Received: 11/20/10

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

Six water samples were received for analysis at Columbia Analytical Services on 11/20/10. The following discrepancies were noted upon initial sample inspection. The exceptions are also noted on the cooler receipt and preservation form included in this data package. Samples received on a Saturday. The samples were 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 CVAA

Elevated Method Reporting Limits

Samples LG-5 and LG-3 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

Some quality control samples (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. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

General Chemistry Parameters

Samples were analyzed past the recommended holding time for pH, Nitrate and BOD due to being received on an un-scheduled Saturday. The pH, Nitrate, and Biochemical Oxygen Demand analysis were performed as soon as possible after receipt by the laboratory. The data are flagged to indicate the holding time violation.

Matrix Spike Recovery Exceptions

The matrix spike recovery of Total Organic Carbon for sample LG-6 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. No further corrective action was appropriate.

Subcontracted Analytical Parameters

TOX analyses were sub-contracted to test America Nashville TN.

Approved by Tom D. Thessing Date 12/8/10

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.
- J 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.

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.

Client: Premo Group, Inc.
Project: IP - Roanoke Rapids NC/209383.10

Service Request: J1005633

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J1005633-001	LG-6	11/19/10	09:40
J1005633-002	LG-5	11/19/10	10:50
J1005633-003	LG-3	11/19/10	12:50
J1005633-004	LG-7	11/19/10	14:15
J1005633-005	LG-1	11/19/10	15:40
J1005633-006	Dup-1	11/19/10	00:00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-6
Lab Code: J1005633-001

Service Request: J1005633
Date Collected: 11/19/10 0940
Date Received: 11/20/10

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total Recoverable	6020	ND U	µg/L	0.50	0.40	1	11/30/10	12/1/10 21:14	
Barium, Total Recoverable	6020	460	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:14	
Cadmium, Total Recoverable	6020	ND U	µg/L	0.50	0.30	1	11/30/10	12/1/10 21:14	
Chromium, Total Recoverable	6020	4.1	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:14	
Copper, Total Recoverable	6020	ND U	µg/L	2.0	1.0	1	11/30/10	12/1/10 21:14	
Iron, Total Recoverable	6010B	0.68	mg/L	0.10	0.004	1	11/24/10	11/30/10 18:27	
Lead, Total Recoverable	6020	0.2 J	µg/L	1.0	0.06	1	11/30/10	12/1/10 21:14	
Manganese, Total Recoverable	6020	1160	µg/L	5.0	0.0	1	11/30/10	12/1/10 21:14	
Mercury, Total	7470A	ND U	µg/L	0.20	0.08	1	11/29/10	11/29/10 19:05	
Selenium, Total Recoverable	6020	ND U	µg/L	5.0	1.0	1	11/30/10	12/1/10 21:14	
Silver, Total Recoverable	6020	ND U	µg/L	0.50	0.07	1	11/30/10	12/1/10 21:14	
Zinc, Total Recoverable	6020	3 J	µg/L	10	2	1	11/30/10	12/1/10 21:14	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-5
Lab Code: J1005633-002

Service Request: J1005633
Date Collected: 11/19/10 1050
Date Received: 11/20/10

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total Recoverable	6020	1.32	µg/L	0.50	0.40	1	11/30/10	12/1/10 21:19	
Barium, Total Recoverable	6020	111	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:19	
Cadmium, Total Recoverable	6020	ND U	µg/L	0.50	0.30	1	11/30/10	12/1/10 21:19	
Chromium, Total Recoverable	6020	0.4 J	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:19	
Copper, Total Recoverable	6020	ND U	µg/L	2.0	1.0	1	11/30/10	12/1/10 21:19	
Iron, Total Recoverable	6010B	4.01	mg/L	0.10	0.004	1	11/24/10	11/30/10 18:34	
Lead, Total Recoverable	6020	ND U	µg/L	1.0	0.06	1	11/30/10	12/1/10 21:19	
Manganese, Total Recoverable	6020	12000	µg/L	50	0.0	10	11/30/10	12/3/10 18:33	
Mercury, Total	7470A	ND U	µg/L	0.20	0.08	1	11/29/10	11/29/10 19:07	
Selenium, Total Recoverable	6020	ND U	µg/L	5.0	1.0	1	11/30/10	12/1/10 21:19	
Silver, Total Recoverable	6020	ND U	µg/L	0.50	0.07	1	11/30/10	12/1/10 21:19	
Zinc, Total Recoverable	6020	27	µg/L	10	2	1	11/30/10	12/1/10 21:19	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-3
Lab Code: J1005633-003

Service Request: J1005633
Date Collected: 11/19/10 1250
Date Received: 11/20/10

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total Recoverable	6020	ND U	µg/L	0.50	0.40	1	11/30/10	12/1/10 21:24	
Barium, Total Recoverable	6020	93.0	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:24	
Cadmium, Total Recoverable	6020	ND U	µg/L	0.50	0.30	1	11/30/10	12/1/10 21:24	
Chromium, Total Recoverable	6020	0.7 J	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:24	
Copper, Total Recoverable	6020	ND U	µg/L	2.0	1.0	1	11/30/10	12/1/10 21:24	
Iron, Total Recoverable	6010B	2.95	mg/L	0.10	0.004	1	11/24/10	11/30/10 18:39	
Lead, Total Recoverable	6020	0.9 J	µg/L	1.0	0.06	1	11/30/10	12/1/10 21:24	
Manganese, Total Recoverable	6020	2900	µg/L	50	0.0	10	11/30/10	12/3/10 18:38	
Mercury, Total	7470A	ND U	µg/L	0.20	0.08	1	11/29/10	11/29/10 19:11	
Selenium, Total Recoverable	6020	ND U	µg/L	5.0	1.0	1	11/30/10	12/1/10 21:24	
Silver, Total Recoverable	6020	ND U	µg/L	0.50	0.07	1	11/30/10	12/1/10 21:24	
Zinc, Total Recoverable	6020	4 J	µg/L	10	2	1	11/30/10	12/1/10 21:24	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-7
Lab Code: J1005633-004

Service Request: J1005633
Date Collected: 11/19/10 1415
Date Received: 11/20/10

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total Recoverable	6020	ND U	µg/L	0.50	0.40	1	11/30/10	12/1/10 21:29	
Barium, Total Recoverable	6020	72.7	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:29	
Cadmium, Total Recoverable	6020	ND U	µg/L	0.50	0.30	1	11/30/10	12/1/10 21:29	
Chromium, Total Recoverable	6020	0.6 J	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:29	
Copper, Total Recoverable	6020	ND U	µg/L	2.0	1.0	1	11/30/10	12/1/10 21:29	
Iron, Total Recoverable	6010B	0.40	mg/L	0.10	0.004	1	11/24/10	11/30/10 18:47	
Lead, Total Recoverable	6020	ND U	µg/L	1.0	0.06	1	11/30/10	12/1/10 21:29	
Manganese, Total Recoverable	6020	161	µg/L	5.0	0.0	1	11/30/10	12/1/10 21:29	
Mercury, Total	7470A	ND U	µg/L	0.20	0.08	1	11/29/10	11/29/10 19:12	
Selenium, Total Recoverable	6020	ND U	µg/L	5.0	1.0	1	11/30/10	12/1/10 21:29	
Silver, Total Recoverable	6020	ND U	µg/L	0.50	0.07	1	11/30/10	12/1/10 21:29	
Zinc, Total Recoverable	6020	3 J	µg/L	10	2	1	11/30/10	12/1/10 21:29	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-1
Lab Code: J1005633-005

Service Request: J1005633
Date Collected: 11/19/10 1540
Date Received: 11/20/10

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total Recoverable	6020	0.46	J	µg/L	0.50	0.40	1	11/30/10	12/1/10 21:34	
Barium, Total Recoverable	6020	120		µg/L	2.0	0.3	1	11/30/10	12/1/10 21:34	
Cadmium, Total Recoverable	6020	ND	U	µg/L	0.50	0.30	1	11/30/10	12/1/10 21:34	
Chromium, Total Recoverable	6020	1.6	J	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:34	
Copper, Total Recoverable	6020	5.1		µg/L	2.0	1.0	1	11/30/10	12/1/10 21:34	
Iron, Total Recoverable	6010B	2.16		mg/L	0.10	0.004	1	11/24/10	11/30/10 18:54	
Lead, Total Recoverable	6020	1.4		µg/L	1.0	0.06	1	11/30/10	12/1/10 21:34	
Manganese, Total Recoverable	6020	183		µg/L	5.0	0.0	1	11/30/10	12/1/10 21:34	
Mercury, Total	7470A	ND	U	µg/L	0.20	0.08	1	11/29/10	11/29/10 19:14	
Selenium, Total Recoverable	6020	ND	U	µg/L	5.0	1.0	1	11/30/10	12/1/10 21:34	
Silver, Total Recoverable	6020	ND	U	µg/L	0.50	0.07	1	11/30/10	12/1/10 21:34	
Zinc, Total Recoverable	6020	19		µg/L	10	2	1	11/30/10	12/1/10 21:34	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: Dup-1
Lab Code: J1005633-006

Service Request: J1005633
Date Collected: 11/19/10 0000
Date Received: 11/20/10

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total Recoverable	6020	ND	U	µg/L	0.50	0.40	1	11/30/10	12/1/10 21:39	
Barium, Total Recoverable	6020	115		µg/L	2.0	0.3	1	11/30/10	12/1/10 21:39	
Cadmium, Total Recoverable	6020	ND	U	µg/L	0.50	0.30	1	11/30/10	12/1/10 21:39	
Chromium, Total Recoverable	6020	1.4	J	µg/L	2.0	0.3	1	11/30/10	12/1/10 21:39	
Copper, Total Recoverable	6020	4.9		µg/L	2.0	1.0	1	11/30/10	12/1/10 21:39	
Iron, Total Recoverable	6010B	2.05		mg/L	0.10	0.004	1	11/24/10	11/30/10 19:07	
Lead, Total Recoverable	6020	1.3		µg/L	1.0	0.06	1	11/30/10	12/1/10 21:39	
Manganese, Total Recoverable	6020	181		µg/L	5.0	0.0	1	11/30/10	12/1/10 21:39	
Mercury, Total	7470A	ND	U	µg/L	0.20	0.08	1	11/29/10	11/29/10 19:21	
Selenium, Total Recoverable	6020	ND	U	µg/L	5.0	1.0	1	11/30/10	12/1/10 21:39	
Silver, Total Recoverable	6020	ND	U	µg/L	0.50	0.07	1	11/30/10	12/1/10 21:39	
Zinc, Total Recoverable	6020	17		µg/L	10	2	1	11/30/10	12/1/10 21:39	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J1005633-MB

Service Request: J1005633
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total Recoverable	6020	ND	U	µg/L	0.50	0.40	1	11/30/10	12/1/10 20:39	
Barium, Total Recoverable	6020	1.6	J	µg/L	2.0	0.3	1	11/30/10	12/1/10 20:39	
Cadmium, Total Recoverable	6020	ND	U	µg/L	0.50	0.30	1	11/30/10	12/1/10 20:39	
Chromium, Total Recoverable	6020	ND	U	µg/L	2.0	0.3	1	11/30/10	12/1/10 20:39	
Copper, Total Recoverable	6020	ND	U	µg/L	2.0	1.0	1	11/30/10	12/1/10 20:39	
Iron, Total Recoverable	6010B	ND	U	mg/L	0.10	0.004	1	11/24/10	11/30/10 16:48	
Lead, Total Recoverable	6020	ND	U	µg/L	1.0	0.06	1	11/30/10	12/1/10 20:39	
Manganese, Total Recoverable	6020	0.1	J	µg/L	5.0	0.0	1	11/30/10	12/1/10 20:39	
Mercury, Total	7470A	ND	U	µg/L	0.20	0.08	1	11/29/10	11/29/10 19:02	
Selenium, Total Recoverable	6020	ND	U	µg/L	5.0	1.0	1	11/30/10	12/1/10 20:39	
Silver, Total Recoverable	6020	ND	U	µg/L	0.50	0.07	1	11/30/10	12/1/10 20:39	
Zinc, Total Recoverable	6020	ND	U	µg/L	10	2	1	11/30/10	12/1/10 20:39	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-6
Lab Code: J1005633-001

Service Request: J1005633
Date Collected: 11/19/10 0940
Date Received: 11/20/10

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Biochemical Oxygen Demand (BOD)	405.1	6.0	X	mg/L	2.0	2.0	1	NA	11/24/10 07:40	*
Carbon, Total Organic (TOC)	415.1	23.1		mg/L	1.0	0.3	1	NA	11/25/10 01:44	
Chemical Oxygen Demand, Total	SM21 5220 D	61		mg/L	20	2	1	NA	11/30/10 14:32	
Chloride	300.0	43.3		mg/L	0.50	0.09	1	NA	11/22/10 13:51	
Conductivity at 25 Degrees Celsius	120.1	3570		µMHOS/cm	1.0	1.0	1	NA	11/23/10 19:59	
Fluoride	300.0	0.29		mg/L	0.20	0.08	1	NA	11/22/10 13:51	
Nitrate as Nitrogen	300.0	0.25	X	mg/L	0.20	0.07	1	NA	11/22/10 13:51	*
pH	9040B	7.46	X	pH Units			1	NA	11/23/10 19:59	*
Solids, Total Dissolved (TDS)	160.1	2440		mg/L	40	40	4	NA	11/24/10 10:38	
Sulfate	300.0	301		mg/L	5.0	1.0	10	NA	11/23/10 12:23	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-5
Lab Code: J1005633-002

Service Request: J1005633
Date Collected: 11/19/10 1050
Date Received: 11/20/10

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Biochemical Oxygen Demand (BOD)	405.1	ND	UX	mg/L	2.0	2.0	1	NA	11/24/10 07:40	*
Carbon, Total Organic (TOC)	415.1	5.6		mg/L	1.0	0.3	1	NA	11/25/10 02:55	
Chemical Oxygen Demand, Total	SM21 5220 D	16	J	mg/L	20	2	1	NA	11/30/10 14:33	
Chloride	300.0	2.06		mg/L	0.50	0.09	1	NA	11/22/10 14:06	
Conductivity at 25 Degrees Celsius	120.1	915		µMHOS/cm	1.0	1.0	1	NA	11/23/10 20:12	
Fluoride	300.0	0.15	J	mg/L	0.20	0.08	1	NA	11/22/10 14:06	
Nitrate as Nitrogen	300.0	ND	UX	mg/L	0.20	0.07	1	NA	11/22/10 14:06	*
pH	9040B	6.76	X	pH Units			1	NA	11/23/10 20:12	*
Solids, Total Dissolved (TDS)	160.1	675		mg/L	10	10	1	NA	11/24/10 10:38	
Sulfate	300.0	268		mg/L	5.0	1.0	10	NA	11/23/10 12:38	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-3
Lab Code: J1005633-003

Service Request: J1005633
Date Collected: 11/19/10 1250
Date Received: 11/20/10

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Biochemical Oxygen Demand (BOD)	405.1	ND	UX	mg/L	2.0	2.0	1	NA	11/24/10 07:40	*
Carbon, Total Organic (TOC)	415.1	12.3		mg/L	1.0	0.3	1	NA	11/25/10 03:11	
Chemical Oxygen Demand, Total	SM21 5220 D	30		mg/L	20	2	1	NA	11/30/10 14:33	
Chloride	300.0	67.0		mg/L	0.50	0.09	1	NA	11/22/10 14:21	
Conductivity at 25 Degrees Celsius	120.1	1960		µMHOS/cm	1.0	1.0	1	NA	11/23/10 20:17	
Fluoride	300.0	0.21		mg/L	0.20	0.08	1	NA	11/22/10 14:21	
Nitrate as Nitrogen	300.0	16.8	X	mg/L	0.20	0.07	1	NA	11/22/10 14:21	*
pH	9040B	6.99	X	pH Units			1	NA	11/23/10 20:17	*
Solids, Total Dissolved (TDS)	160.1	1190		mg/L	20	20	2	NA	11/24/10 10:38	
Sulfate	300.0	104		mg/L	0.50	0.10	1	NA	11/22/10 14:21	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-7
Lab Code: J1005633-004

Service Request: J1005633
Date Collected: 11/19/10 1415
Date Received: 11/20/10

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Biochemical Oxygen Demand (BOD)	405.1	ND	UX	mg/L	2.0	2.0	1	NA	11/24/10 07:40	*
Carbon, Total Organic (TOC)	415.1	6.5		mg/L	1.0	0.3	1	NA	11/25/10 03:27	
Chemical Oxygen Demand, Total	SM21 5220 D	6	J	mg/L	20	2	1	NA	11/30/10 14:34	
Chloride	300.0	27.9		mg/L	0.50	0.09	1	NA	11/22/10 14:36	
Conductivity at 25 Degrees Celsius	120.1	1930		µMHOS/cm	1.0	1.0	1	NA	11/23/10 20:23	
Fluoride	300.0	0.17	J	mg/L	0.20	0.08	1	NA	11/22/10 14:36	
Nitrate as Nitrogen	300.0	0.21	X	mg/L	0.20	0.07	1	NA	11/22/10 14:36	*
pH	9040B	7.55	X	pH Units			1	NA	11/23/10 20:23	*
Solids, Total Dissolved (TDS)	160.1	1190		mg/L	20	20	2	NA	11/24/10 10:38	
Sulfate	300.0	157		mg/L	0.50	0.10	1	NA	11/22/10 14:36	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: LG-1
Lab Code: J1005633-005

Service Request: J1005633
Date Collected: 11/19/10 1540
Date Received: 11/20/10

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Biochemical Oxygen Demand (BOD)	405.1	ND	UX	mg/L	2.0	2.0	1	NA	11/24/10 07:40	*
Carbon, Total Organic (TOC)	415.1	3.4		mg/L	1.0	0.3	1	NA	11/25/10 03:43	
Chemical Oxygen Demand, Total	SM21 5220 D	ND	U	mg/L	20	2	1	NA	11/30/10 14:34	
Chloride	300.0	3.89		mg/L	0.50	0.09	1	NA	11/22/10 14:51	
Conductivity at 25 Degrees Celsius	120.1	188		µMHOS/cm	1.0	1.0	1	NA	11/23/10 20:29	
Fluoride	300.0	0.11	J	mg/L	0.20	0.08	1	NA	11/22/10 14:51	
Nitrate as Nitrogen	300.0	0.19	JX	mg/L	0.20	0.07	1	NA	11/22/10 14:51	*
pH	9040B	6.68	X	pH Units			1	NA	11/23/10 20:29	*
Solids, Total Dissolved (TDS)	160.1	135		mg/L	10	10	1	NA	11/24/10 10:38	
Sulfate	300.0	25.0		mg/L	0.50	0.10	1	NA	11/22/10 14:51	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: Dup-1
Lab Code: J1005633-006

Service Request: J1005633
Date Collected: 11/19/10 0000
Date Received: 11/20/10

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Biochemical Oxygen Demand (BOD)	405.1	ND UX	mg/L	2.0	2.0	1	NA	11/24/10 07:40	*
Carbon, Total Organic (TOC)	415.1	3.2	mg/L	1.0	0.3	1	NA	11/25/10 04:00	
Chemical Oxygen Demand, Total	SM21 5220 D	ND U	mg/L	20	2	1	NA	11/30/10 14:34	
Chloride	300.0	3.93	mg/L	0.50	0.09	1	NA	11/22/10 15:06	
Conductivity at 25 Degrees Celsius	120.1	188	µMHOS/cm	1.0	1.0	1	NA	11/23/10 20:53	
Fluoride	300.0	0.11 J	mg/L	0.20	0.08	1	NA	11/22/10 15:06	
Nitrate as Nitrogen	300.0	0.19 JX	mg/L	0.20	0.07	1	NA	11/22/10 15:06	*
pH	9040B	6.67 X	pH Units			1	NA	11/23/10 20:53	*
Solids, Total Dissolved (TDS)	160.1	131	mg/L	10	10	1	NA	11/24/10 10:38	
Sulfate	300.0	25.0	mg/L	0.50	0.10	1	NA	11/22/10 15:06	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J1005633-MB

Service Request: J1005633
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Biochemical Oxygen Demand (BOD)	405.1	ND U	mg/L	2.0	2.0	1	NA	11/24/10 07:40	
Carbon, Total Organic (TOC)	415.1	ND U	mg/L	1.0	0.3	1	NA	11/25/10 01:15	
Chemical Oxygen Demand, Total	SM21 5220 D	ND U	mg/L	20	2	1	NA	11/30/10 14:32	
Chloride	300.0	ND U	mg/L	0.50	0.09	1	NA	11/22/10 13:07	
Conductivity at 25 Degrees Celsius	120.1	ND U	µMHOS/cm	1.0	1.0	1	NA	11/23/10 19:49	
Fluoride	300.0	ND U	mg/L	0.20	0.08	1	NA	11/22/10 13:07	
Nitrate as Nitrogen	300.0	ND U	mg/L	0.20	0.07	1	NA	11/22/10 13:07	
Solids, Total Dissolved (TDS)	160.1	ND U	mg/L	10	10	1	NA	11/24/10 10:38	
Sulfate	300.0	ND U	mg/L	0.50	0.10	1	NA	11/22/10 13:07	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water

Service Request: J1005633
Date Collected: 11/19/10
Date Received: 11/20/10
Date Analyzed: 11/29/10

**Matrix Spike Summary
 Inorganic Parameters**

Sample Name: LG-1
Lab Code: J1005633-005

Units: µg/L
Basis: NA

Analytical Method: 7470A
Prep Method: Method

Analyte Name	Sample Result	LG-1MS Matrix Spike J1005633-005MS			LG-1DMS Duplicate Matrix Spike J1005633-D005MS			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Mercury, Total	ND	5.37	5.26	102	5.63	5.26	107	75 - 125	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water

Service Request: J1005633
Date Analyzed: 11/29/10 -
 12/ 1/10

**Lab Control Sample Summary
 Inorganic Parameters**

Units: µg/L
Basis: NA

Lab Control Sample J1005633-LCS					
Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total Recoverable	6020	52.6	50.0	105	80 - 120
Barium, Total Recoverable	6020	53.9	50.0	108	80 - 120
Cadmium, Total Recoverable	6020	51.0	50.0	102	80 - 120
Chromium, Total Recoverable	6020	51.4	50.0	103	80 - 120
Copper, Total Recoverable	6020	51.1	50.0	102	80 - 120
Lead, Total Recoverable	6020	51.3	50.0	103	80 - 120
Manganese, Total Recoverable	6020	51.7	50.0	103	80 - 120
Mercury, Total	7470A	5.73	5.26	109	80 - 120
Selenium, Total Recoverable	6020	54.7	50.0	109	80 - 120
Silver, Total Recoverable	6020	52.4	50.0	105	80 - 120
Zinc, Total Recoverable	6020	107	100	107	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water

Service Request: J1005633
Date Collected: 11/19/10
Date Received: 11/20/10
Date Analyzed: 11/25/10 -
 11/30/10

**Matrix Spike Summary
 General Chemistry Parameters**

Sample Name: LG-6
Lab Code: J1005633-001

Units: mg/L
Basis: NA

LG-6MS
Matrix Spike
 J1005633-001MS

Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	415.1	23.1	80.5	50.0	115 *	90 - 110
Chemical Oxygen Demand, Total	SM21 5220 D	61	573	500	102	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water

Service Request: J1005633
Date Collected: 11/19/10
Date Received: 11/20/10
Date Analyzed: 11/23/10 -
 11/30/10

**Replicate Sample Summary
 General Chemistry Parameters**

Sample Name: LG-6
Lab Code: J1005633-001

Units: mg/L
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	LG-6DUP Duplicate Sample		RPD	RPD Limit
					J1005633-001DUP Result	Average		
Biochemical Oxygen Demand (BOD)	405.1	2.0	2.0	6.0 X	ND UX	NC	NC	20
Carbon, Total Organic (TOC)	415.1	1.0	0.3	23.1	23.2	23.2	<1	20
Chemical Oxygen Demand, Total	SM21 5220 D	20	2	61	57	59.0	6	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water

Service Request: J1005633
Date Collected: 11/19/10
Date Received: 11/20/10
Date Analyzed: 11/23/10 -
 11/30/10

**Replicate Sample Summary
 General Chemistry Parameters**

Sample Name: LG-6
Lab Code: J1005633-001

Units: μMHOS/cm
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	LG-6DUP Duplicate Sample		RPD	RPD Limit
					J1005633-001DUP Result	Average		
Conductivity at 25 Degrees Celsius	120.1	1.0	1.0	3570	3570	3570	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water

Service Request: J1005633
Date Analyzed: 11/22/10 -
 11/23/10

**Lab Control Sample Summary
 General Chemistry Parameters**

Units: μMHOS/cm
Basis: NA

Analyte Name	Method	Lab Control Sample J1005633-LCS1			Duplicate Lab Control Sample J1005633-DLCS1			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Conductivity at 25 Degrees Celsius	120.1	173	168	103	171	168	101	90 - 110	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Premo, Inc.
Project: IP - Roanoke Rapids NC/209383.10
Sample Matrix: Water

Service Request: J1005633
Date Analyzed: 11/24/10 -
 11/30/10

**Lab Control Sample Summary
 General Chemistry Parameters**

Units: mg/L
Basis: NA

Lab Control Sample
 J1005633-LCS2

Analyte Name	Method	Result	Spike		% Rec Limits
			Amount	% Rec	
Biochemical Oxygen Demand (BOD)	405.1	183	198	93	84.6 - 115.
Carbon, Total Organic (TOC)	415.1	52.5	50.0	105	90 - 110
Chemical Oxygen Demand, Total	SM21 5220 D	487	500	97	90 - 110
Solids, Total Dissolved (TDS)	160.1	284	300	95	85 - 115

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Premier Service Request #: J1005633
 Project: EP-RR
 Cooler received on 11/20/10 and opened on 11-22-10 by SL
 COURIER: CAS UPS FEDEX Client Other _____ Airbill # 8700 7955 4315

- 1 Were custody seals on outside of cooler? Yes No
 If yes, how many and where? #: 1 on lid other
- 2 Were seals intact and signature and date correct? Yes No N/A
- 3 Were custody papers properly filled out? Yes No N/A
- 4 Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C) 0.7 1.2 _____
- 5 Thermometer ID T12 T12 _____
- 6 Temperature Blank Present? Yes No
- 7 Were Ice or Ice Packs present Ice Packs No
- 8 Did all bottles arrive in good condition (unbroken, etc....)? Yes No N/A
- 9 Type of packing material present Netting Vial Holder Bubble Wrap
 Paper Styrofoam Other N/A
- 10 Were all bottle labels complete (sample ID, preservation, etc....)? Yes No N/A
- 11 Did all bottle labels and tags agree with custody papers? Yes No N/A
- 12 Were the correct bottles used for the tests indicated? Yes No N/A
- 13 Were all of the preserved bottles received with the appropriate preservative?
~~HNO3 pH<2~~ ~~H2SO4 pH<2~~ ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2
 Preservative additions noted below Yes No N/A
- 14 Were all samples received within analysis holding times? Yes No N/A
- 15 Were VOA vials checked for absence of air bubbles? If present, note below Yes No N/A
- 16 Where did the bottles originate? CAS Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time
LG-6	HNO ₃	MET-11-75G	2ml	CKR 11-22-10 0912
LG-3	↓	↓	1ml	
LG-7	↓	↓	1ml	

Additional comments and/or explanation of all discrepancies noted above:
BOD out of hold
NO₃
pH ↓

Client approval to run samples if discrepancies noted: _____ Date: 29



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

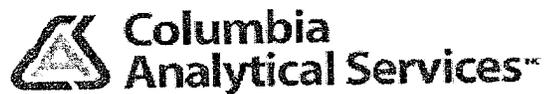
9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR # 51005633
CAS Contact

www.caslab.com

Project Name <u>IP - Roanoke Rapids NC</u>		Project Number <u>209383.10</u>		ANALYSIS REQUESTED (Include Method Number and Container Preservative) <u>3 1 2 3 0</u>		REMARKS/ ALTERNATE DESCRIPTION 1. H ₂ O 2. H ₂ SO ₄ 3. NaOH 4. Zn. Acetate 5. MeOH 6. NaHSO ₄ 7. Other _____ 8. Other _____
Project Manager <u>Roanoke Rapids NC</u>		Email Address <u>209383.10</u>		PRESERVATIVE <u>3 1 2 3 0</u>		
Company/Address <u>Premier Environmental</u>		Address <u>1880 West Oak Pkwy Bldg 100 Ste 106</u>		NUMBER OF CONTAINERS <u>TOX</u> <u>Metals Total</u> <u>COND. TOX</u> <u>COND. TOX/NO₃</u> <u>COND. TOX/NO₂</u>		PREPARATION 1. H ₂ O 2. H ₂ SO ₄ 3. NaOH 4. Zn. Acetate 5. MeOH 6. NaHSO ₄ 7. Other _____ 8. Other _____
Phone # <u>770-973-2100</u>		FAX # <u>770-973-7395</u>		TOX <u>Metals Total</u> <u>COND. TOX</u> <u>COND. TOX/NO₃</u> <u>COND. TOX/NO₂</u>		
Sampler's Signature <u>Tamar Banks</u>		Sampler's Printed Name <u>Tamar Banks</u>		TOX <u>Metals Total</u> <u>COND. TOX</u> <u>COND. TOX/NO₃</u> <u>COND. TOX/NO₂</u>		PREPARATION 1. H ₂ O 2. H ₂ SO ₄ 3. NaOH 4. Zn. Acetate 5. MeOH 6. NaHSO ₄ 7. Other _____ 8. Other _____
CLIENT SAMPLE ID <u>L6-6</u> <u>L6-5</u> <u>L6-3</u> <u>L6-7</u> <u>L6-1</u> <u>Dup-1</u>		LAB ID <u>119110</u> <u>1050</u> <u>1250</u> <u>1415</u> <u>1540</u> <u>—</u>		MATRIX <u>GW</u> <u>GW</u> <u>GW</u> <u>GW</u> <u>GW</u> <u>GW</u>		
SPECIAL INSTRUCTIONS/COMMENTS See OAPP <input type="checkbox"/>		TURNAROUND REQUIREMENTS <input checked="" type="checkbox"/> RUSH (SURCHARGES APPLY) <input type="checkbox"/> STANDARD REQUESTED FAX DATE _____ REQUESTED REPORT DATE _____		REPORT REQUIREMENTS I. Results Only _____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data _____ V. Specialized Forms / Custom Report _____ Edata Yes _____ No _____		INVOICE INFORMATION PO# _____ BILL TO: _____
SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ RECEIVED BY <u>WJ</u>		CUSTODY SEALS: Y N RELINQUISHED BY Signature: <u>Tamar Banks</u> Printed Name: <u>Tamar Banks</u> Firm: <u>Premier</u> Date/Time: <u>11/19/10 1705</u>		RELINQUISHED BY Signature: <u>Tamar Banks</u> Printed Name: <u>Tamar Banks</u> Firm: <u>Premier</u> Date/Time: <u>11/19/10 1705</u>		



Columbia Analytical Services
9143 Philips Highway, Suite 200
Jacksonville, FL 32256
Tel 904-739-2277
Fax 904-739-2011

Appendix A

Subcontracted Analytical Results

12/8/2010 3:24:07PM

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

Work Order: NTK2951
Project Name: Columbia Analytical Services
Project Number: [none]
Date Received: 11/23/10

Attn: Mandy Sullivan

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
LG-6	NTK2951-01	11/19/10 09:40
LG-5	NTK2951-02	11/19/10 10:50
LG-3	NTK2951-03	11/19/10 12:50
LG-7	NTK2951-04	11/19/10 14:15
LG-1	NTK2951-05	11/19/10 15:40
Dup-1	NTK2951-06	11/19/10 00:01

Samples were received into laboratory at a temperature of 0.80 °C.

Comments:

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.

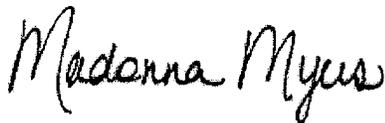
These results relate only to the items tested

Estimated uncertainty is available upon request.

Florida Certification Number: E87358

This report has been electronically signed.

Approved By:



TestAmerica Nashville
Madonna Myers
Analyst

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

Work Order: NTK2951
 Project: Columbia Analytical Services
 Project Number: [none]

Sampled: 11/19/10
 Received: 11/23/10

LABORATORY REPORT
Sample ID: LG-6 - Lab Number: NTK2951-01 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0815		mg/L	0.0600	1	11/29/10 11:23	SHJ	SW846 9020B	10K5533

LABORATORY REPORT
Sample ID: LG-5 - Lab Number: NTK2951-02 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0300	U	mg/L	0.0300	1	11/29/10 11:23	SHJ	SW846 9020B	10K5533

LABORATORY REPORT
Sample ID: LG-3 - Lab Number: NTK2951-03 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.168		mg/L	0.0300	1	11/29/10 11:23	SHJ	SW846 9020B	10K5533

LABORATORY REPORT
Sample ID: LG-7 - Lab Number: NTK2951-04 - Matrix: Water

CAS #	Analyte	Result	Q	Units	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
General Chemistry Parameters										
TOX	Total Organic Halides	0.0721		mg/L	0.0300	1	11/29/10 11:23	SHJ	SW846 9020B	10K5533

LABORATORY REPORT
Sample ID: LG-1 - Lab Number: NTK2951-05 - 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	11/29/10 11:23	SHJ	SW846 9020B	10K5533

LABORATORY REPORT
Sample ID: Dup-1 - Lab Number: NTK2951-06 - 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	11/29/10 11:23	SHJ	SW846 9020B	10K5533

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

Work Order: NTK2951
 Project: Columbia Analytical Services
 Project Number: [none]

Sampled: 11/19/10
 Received: 11/23/10

SAMPLE EXTRACTION DATA

Parameter	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Method
General Chemistry Parameters	NTK2951-01	50.0 mL	1.0 mL	11/29/2010	SHJ	NO PREP
General Chemistry Parameters	NTK2951-02	100.0 mL	1.0 mL	11/29/2010	SHJ	NO PREP
General Chemistry Parameters	NTK2951-03	100.0 mL	1.0 mL	11/29/2010	SHJ	NO PREP
General Chemistry Parameters	NTK2951-04	100.0 mL	1.0 mL	11/29/2010	SHJ	NO PREP
General Chemistry Parameters	NTK2951-05	100.0 mL	1.0 mL	11/29/2010	SHJ	NO PREP
General Chemistry Parameters	NTK2951-06	100.0 mL	1.0 mL	11/29/2010	SHJ	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	10K5533	10K5533-BLK1

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	0.259		mg/L	104	90 - 120	10K5533

PROJECT QUALITY CONTROL DATA

LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	RPD	RPD Limit	Q.C. Batch	Sample Duplicated
General Chemistry Parameters										
Total Organic Halides		0.260		mg/L	0.250	104	0.4	40	10K5533	

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

Work Order: NTK2951
Project: Columbia Analytical Services
Project Number: [none]

Sampled: 11/19/10
Received: 11/23/10

CERTIFICATION SUMMARY

TestAmerica Nashville

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

DATA QUALIFIERS AND DEFINITIONS

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 RECEIPT

NTK2951

Cooler Received/Opened On 11/23/2010 @ 1000

1. Tracking # 1ZWSW098042582403

Courier: UPS IR Gun ID 95610068

2. Temperature of rep. sample or temp blank when opened: 0.8 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) MS

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 # NA

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

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

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) JH

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) JH

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

21. Were there Non-Conformance issues at login? YES...NO Was a PIPE generated? YES...NO...# 0

Project Number: J1005633
 Project Manager: Tom Kissinger

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

CAS Contact: Tom Kissinger

TDK

Lab Code	Sample ID	# of Cont.	Matrix	Date	Time	Lab ID
J1005633-001	LG-6	2	Water	11/19/10	0940	123456789
J1005633-002	LG-5		Water	11/19/10	1050	123456789
J1005633-003	LG-3		Water	11/19/10	1250	123456789
J1005633-004	LG-7		Water	11/19/10	1415	123456789
J1005633-005	LG-1		Water	11/19/10	1540	123456789
J1005633-006	Dup-1		Water	11/19/10	0000	123456789

MISC_OUT_1
 None
 90208 TOX

Test Comments: MISC_OUT_1 - None
 J1005633-001,2,3,4,5,6
 90208 TOX - North Carolina samples
 Send to Test America Nashville TN

NTK2951
 12/09/10 23:59

Special Instructions/Comments		
PLEASE SEND RESULTS TO MANDY SULLIVAN		
Turnaround Requirements	Report Requirements	Invoice Information
RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 STANDARD Requested FAX Date: Requested Report Date: 12/06/10	<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/MDU/ EDD Y Y	PO# J1005633 Bill to

Relinquished By: *Mandy Sullivan* 11/22/10
 Received By: *Shirley Sullivan* 11-23-10 10:05 AM Initial Number