PREPARED FOR:

COASTAL REGIONAL SOLID WASTE MANAGEMENT AUTHORITY
P.O. BOX 128
COVE CITY, NORTH CAROLINA 28523

COASTAL REGIONAL SOLID WASTE MANAGEMENT AUTHORITY
TUSCARORA LANDFILL
PERMIT NO. 25-09

REPORT OF BACKGROUND MONITORING FOR THE PHASE 3 EXPANSION

JANUARY 2012

PREPARED BY:

JOYCE ENGINEERING
2211 WEST MEADOWVIEW RD. SUITE 101
GREENSBORO, NORTH CAROLINA 27407
PHONE: (336) 323-0092
FAX: (336) 323-0093
JEI PROJECT NO. 00618.1101.12.02
NC LICENSE NO. C-0782

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

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

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

Instructions:

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

Solid Waste Monitoring Data Submittal Information

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

Joyce Engineering

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

Name: Jeremey J. Kerly Phone: (336) 323-0092

E-mail: jkerly@joyceengineering.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Coastal Regional Solid Waste Management Authority Tuscarora Landfill, Phase 3 Expansion	7400 Old Hwy 70 West New Bern, NC 28562	25-09	.1600	August 24-25, 2011 September 26-27, 2011 October 25-26, 2011 November 28-29, 2011

Environmental Status: (Check all that apply)

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

Type of data submitted: (Check all that apply)

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

Notification attached?

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

Certification

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

Jeremey J. Kerly — Facility Representative Name (Print)

Senior Project Consultant — Title

(336) 323-0092 — (Area Code) Telephone Number

Signature

1-25-12 — Date

Affix NC Licensed Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 2097 GEOLOGIST JEREMEY JOHN KERLY

2211 W. Meadowview Rd., Ste. 101 Greensboro, NC 27407

Facility Representative Address

C-0782

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

Revised 6/2009

JOYCE ENGINEERING

2211 W. Meadowview Rd., #101
Greensboro, NC 27409
tel: 336/323-0092
fax: 336/323-0093
www.JoyceEngineering.com

January 25, 2012

Mr. Ervin Lane
Compliance Hydrogeologist
Division of Waste Management/Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

RE: Report of Background Monitoring for the Phase 3 Expansion
Coastal Regional Solid Waste Management Authority Tuscarora Landfill
Permit No. 25-09
JE Project No. 00618.1101.12, Task No. 02

Dear Ervin:

The purpose of this letter is to provide results and summarize the data collected from the four background sampling events for monitoring wells MW-15S, -15D, -16S, -16D, -17S, -17D, -18S, -18D, -19S, and -19D at the Tuscarora Landfill. Samples obtained from wells MW-15S, -15D, -16S, -16D, -17S, -17D, -18S, -18D, -19S, and -19D were analyzed for the NC Appendix I list of constituents during four background events which were performed on August 24-25, 2011, September 26-27, 2011, October 25-26, 2011, and November 28-29, 2011. Attached is a summary table (Part 1) of the four sampling events and the laboratory analytical reports and field data logs (Part 2-5).

The submittal of this document concludes the background sampling for MW-15S, -15D, -16S, -16D, -17S, -17D, -18S, -18D, -19S, and -19D at the Tuscarora Landfill. If you have any questions or concerns as you review this submittal, please do not hesitate to call me at (336) 323-0092.

Sincerely,
JOYCE ENGINEERING

Jeremey J. Kerly, P.G.
Senior Project Consultant

Attachments

Part 1 – Background Data for Phase 3, Summary of Detected Constituents
Part 2 – Laboratory Analytical Report – Background Event No. 1 (August 2011)
Part 3 – Laboratory Analytical Report – Background Event No. 2 (September 2011)
Part 4 – Laboratory Analytical Report – Background Event No. 3 (October 2011)
Part 5 – Laboratory Analytical Report – Background Event No. 4 (November 2011)

C: Bobby Darden – Coastal Regional Solid Waste Management Authority
File

Report of Background Monitoring for the Phase 3 Expansion
Coastal Regional Solid Waste Management Authority Tuscarora Landfill
Craven County, North Carolina

January 2012

Part 1 - Background Data for Phase 3, Summary of Detected Constituents

Part 2 – Laboratory Analytical Report - Background Event No. 1 (August 2011)
Laboratory Report of Analysis
Field Data Logs

Part 3 - Laboratory Analytical Report - Background Event No. 2 (September 2011)
Laboratory Report of Analysis
Field Data Logs

Part 4 - Laboratory Analytical Report - Background Event No. 3 (October 2011)
Laboratory Report of Analysis
Field Data Logs

Part 5 - Laboratory Analytical Report - Background Event No. 4 (November 2011)
Laboratory Report of Analysis
Field Data Logs

Part 1 - Background Data for Phase 3, Summary of Detected Constituents

Background Data for Phase 3
Summary of Detected Constituents

Constituent	Date	Concentration (µg/L)																					
		DL	RL	MW-15S		MW-15D		MW-16S		MW-16D		MW-17S		MW-17D		MW-18S		MW-18D		MW-19S		MW-19D		Blanks	
Antimony	25-Aug-11	0.437	60.0	ND		0.500	J,D	ND		ND		ND		0.500	J,D	ND		ND		ND		ND		ND	
GWPS = 1 ug/L	27-Sep-11	0.437	6.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	26-Oct-11	0.437	5.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	0.437	5.00	1.00	J,D	0.600	J,D	0.600	J,D	0.500	J,D	0.500	J,D	0.500	J,D	ND		ND		ND		ND		ND	
Arsenic	25-Aug-11	3.69	10.0	34.3		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NC 2L = 10 ug/L	27-Sep-11	3.69	10.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	26-Oct-11	3.69	10.0	4.13	J	ND		ND		ND		ND		ND		7.36	J	ND		ND		ND		ND	
	29-Nov-11	3.69	10.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Barium	25-Aug-11	0.394	100	306		26.0	J	32.2	J	73.7	J	17.3	B	34.7	J	89.4	J	39.1	J	5.81	B	36.2	J	5.06	J
NC 2L = 700 ug/L	27-Sep-11	0.394	100	25.0	B	399		65.7	B	69.6	J	40.1	B	37.8	B	66.1	B	2.48	B	40.2	B	8.39	B	13.3	J
	26-Oct-11	0.394	100	66.4	B	41.6	B	64.2	B	65.4	B	54.6	B	41.4	B	56.9	B	36.0	B	20.3	B	44.9	B	15.4	J
	29-Nov-11	0.394	100	79.3	B	48.3	B	94.2	B	76.2	B	96.8	B	45.8	B	55.3	B	43.8	B	38.6	B	54.4	B	31.4	J
Beryllium	25-Aug-11	0.119	2.00	0.120	J,D	ND		0.120	J,D	ND		ND		ND		0.240	J,D	ND		ND		0.140	J,D	ND	
GWPS = 4 ug/L	27-Sep-11	0.119	1.00	ND		ND		0.180	J,D	ND		ND		ND		0.200	J,D	ND		ND		ND		ND	
	26-Oct-11	0.119	1.00	0.120	J,D	ND		0.200	J,D	ND		ND		ND		2.04		ND		ND		ND		ND	
	29-Nov-11	0.119	1.00	0.200	J,D	ND		0.220	J,D	ND		0.220	J,D	ND		0.300	J,D	ND		ND		ND		ND	
Cadmium	25-Aug-11	0.0556	2.00	2.54	J,D	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NC 2L = 2 ug/L	27-Sep-11	0.0556	1.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	26-Oct-11	0.0556	1.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	0.0556	1.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chromium	25-Aug-11	1.47	10.0	160		1.72	J	ND		ND		ND		ND		ND		3.32	J	ND		3.66	J	ND	
NC 2L = 10 ug/L	27-Sep-11	1.47	10.0	1.63	B	1.52	B	1.75	B	ND		1.52	B	ND		1.52	B	5.64	B	3.17	B	2.10	B	1.75	J
	26-Oct-11	1.47	10.0	5.69	B	2.08	B	2.19	B	2.87	B	14.3		2.76	B	2.98	B	2.30	B	2.64	B	2.42	B	2.08	J
	29-Nov-11	1.47	10.0	1.52	J	2.24	J	1.65	J	2.12	J	2.72	J	ND		2.01	J	3.19	J	1.53	J	2.60	J	ND	
Cobalt	25-Aug-11	3.39	10.0	35.4		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
GWPS = 1 ug/L	27-Sep-11	3.39	10.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	26-Oct-11	3.39	10.0	ND		ND		ND		ND		ND		ND		12.1		ND		ND		ND		ND	
	29-Nov-11	3.39	10.0	4.72	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Copper	25-Aug-11	0.672	10.0	60.7		ND		ND		ND		ND		ND		ND		11.0		1.00	J	ND		ND	
NC 2L = 1,000 ug/L	27-Sep-11	0.672	10.0	1.88	B	3.56	B	3.28	B	4.03	B	4.28	B	3.89	B	3.58	B	4.85	B	3.83	B	2.58	B	3.38	J
	26-Oct-11	0.672	10.0	3.10	B	1.88	B	2.25	B	3.06	B	4.53	B	2.48	B	3.93	B	2.71	B	2.71	B	2.41	B	2.24	J
	29-Nov-11	0.672	10.0	1.77	B	0.880	B	1.61	B	0.920	B	1.73	B	1.22	B	1.21	B	0.920	B	1.74	B	1.64	B	0.740	J
Lead	25-Aug-11	5.41	10.0	68.2		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NC 2L = 15 ug/L	27-Sep-11	5.41	10.0	7.22	J	7.42	J	ND		ND		6.42	J	ND		ND		ND		ND		ND		ND	
	26-Oct-11	5.41	10.0	ND		ND		ND		ND		5.92	J	ND		7.22	J	ND		ND		ND		ND	
	29-Nov-11	5.41	10.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Nickel	25-Aug-11	3.06	50.0	43.6	J	ND		ND		ND		ND		ND		3.54	J	ND		ND		5.78	J	ND	
NC 2L = 100 ug/L	27-Sep-11	3.06	50.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	26-Oct-11	3.06	50.0	ND		ND		ND		ND		ND		ND		19.8	J	ND		ND		ND		ND	
	29-Nov-11	3.06	50.0	7.70	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Selenium	25-Aug-11	0.824	100	3.90	B,D	ND		ND		ND		ND		ND		ND		ND		ND		ND		1.00	J,D
NC 2L = 20 ug/L	27-Sep-11	0.824	10.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		1.70	J,D
	26-Oct-11	0.824	5.00	ND		ND		0.900	J,D	ND		ND		ND		3.10	J,D	ND		ND		ND		ND	
	29-Nov-11	0.824	5.00	ND		ND		1.40	J,D	ND		ND		1.00	J,D	ND		ND		ND		ND		ND	

Background Data for Phase 3
Summary of Detected Constituents

Constituent	Date	Concentration (µg/L)																							
		DL	RL	MW-15S		MW-15D		MW-16S		MW-16D		MW-17S		MW-17D		MW-18S		MW-18D		MW-19S		MW-19D		Blanks	
Silver	25-Aug-11	1.05	10.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NC 2L = 20 ug/L	27-Sep-11	1.05	10.0	1.08	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	26-Oct-11	1.05	10.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	1.05	10.0	2.22	B	2.37	B	2.85	B	2.29	B	1.66	B	2.01	B	2.78	B	2.57	B	3.10	B	3.12	B	2.52	J
Thallium	25-Aug-11	0.297	55.0	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
GWPS = 0.28 ug/L	27-Sep-11	0.297	5.50	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	26-Oct-11	0.297	5.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	0.297	5.00	0.500	B,D	0.500	B,D	0.500	B,D	0.400	B,D	0.500	B,D	0.400	B,D	0.400	B,D	0.400	B,D	0.400	B,D	0.400	B,D	0.500	J,D
Vanadium	25-Aug-11	6.61	2500	355	J,D	13.0	B,D	8.70	B,D	6.60	B,D	10.7	B,D	9.80	B,D	8.30	B,D	13.9	B,D	10.3	B,D	14.4	B,D	10.1	J,D
GWPS = 0.3 ug/L	27-Sep-11	0.661	25.0	8.70	B,D	7.10	B,D	9.80	B,D	8.70	B,D	10.8	B,D	10.5	B,D	7.12	B,D	21.6	B,D	4.80	B,D	5.70	B,D	7.00	J,D
	26-Oct-11	0.661	5.00	12.6	D	2.60	B,D	4.70	B,D	1.80	B,D	23.6	D	4.30	B,D	2.90	B,D	2.40	B,D	4.90	B,D	1.00	B,D	2.00	J,D
	29-Nov-11	0.661	5.00	14.4	B,D	11.2	B,D	13.1	B,D	8.50	B,D	11.0	B,D	11.2	B,D	14.1	B,D	10.9	B,D	9.40	B,D	9.00	B,D	7.90	D
Zinc	25-Aug-11	2.26	10.0	158		8.61	B	8.06	B	5.93	B	9.44	B	6.02	B	14.2	B	13.5	B	9.05	B	33.2		4.21	J
NC 2L = 1,000 ug/L	27-Sep-11	2.26	10.0	8.71	J	ND		ND		ND		5.78	J	ND		9.21	J	ND		2.89	J	2.36	J	ND	
	26-Oct-11	2.26	10.0	8.92	J	ND		ND		ND		5.08	J	ND		26.5		ND		ND		3.41	J	ND	
	29-Nov-11	2.26	10.0	7.47	J	ND		2.78	J	ND		5.94	J	ND		3.15	J	ND		3.26	J	4.49	J	ND	
Acetone	25-Aug-11	0.864	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NC 2L = 6,000 ug/L	27-Sep-11	0.864	100	ND		ND		ND		ND		ND		2.62	J	ND		3.25	J	1.13	J	ND		1.22	J
	26-Oct-11	0.864	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	0.864	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bromoform	25-Aug-11	0.0974	3.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NC 2L = 4 ug/L	27-Sep-11	0.0974	3.00	ND		ND		ND		ND		ND		ND		0.750	J	ND		ND		ND		ND	
	26-Oct-11	0.0974	3.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	0.0974	3.00	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Carbon Disulfide	25-Aug-11	0.106	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NC 2L = 700 ug/L	27-Sep-11	0.106	100	ND		ND		ND		ND		ND		ND		ND		0.450	J	ND		ND		ND	
	26-Oct-11	0.106	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	0.106	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone	25-Aug-11	0.558	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
GWPS = 560 ug/L	27-Sep-11	0.558	100	ND		ND		ND		ND		ND		ND		ND		1.43	J	ND		ND		ND	
	26-Oct-11	0.558	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	29-Nov-11	0.558	100	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

Notes:
1. MW = Groundwater monitoring well
2. ND = Not detected
3. DL = Detection limit
4. RL = Reporting limit
5. B = Reported concentration considered to represent blank contamination.
6. J = Reported concentration considered to represent an estimate of constituent concentration.
7. NC 2L = North Carolina 2L Groundwater Standard.
8. GWPS = Groundwater Protection Standard.
9. Highlighted data are quantified detections above the NC 2L/GWPS.
10. D = Sample dilution

Part 2 – Laboratory Analytical Report - Background Event No. 1 (August 2011)

Laboratory Report of Analysis
Field Data Logs

Laboratory Report of Analysis

To: Jeremy Kerly
Joyce Engineering, Inc.
2211 West Meadowview Rd
Suite 101
Greensboro, NC 27407

Report Number: **31102309**

Client Project: **CRSWMA Tuscarora Landfill**

Dear Jeremy Kerly,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Michael D. Page at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Michael D. Page Date
Project Manager
michael.page@sgs.com

Print Date: 01/24/2012 N.C. Certification # 481

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Estimated Concentration.
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
2509-MW15S	31102309001	08/25/2011 07:45	08/29/2011 09:15	Water
2509-MW15D	31102309002	08/25/2011 08:05	08/29/2011 09:15	Water
2509-MW16S	31102309003	08/25/2011 08:45	08/29/2011 09:15	Water
2509-MW16D	31102309004	08/25/2011 09:00	08/29/2011 09:15	Water
2509-MW17S	31102309005	08/25/2011 09:15	08/29/2011 09:15	Water
2509-MW17D	31102309006	08/25/2011 09:20	08/29/2011 09:15	Water
2509-MW18S	31102309007	08/25/2011 09:40	08/29/2011 09:15	Water
2509-MW18D	31102309008	08/25/2011 09:50	08/29/2011 09:15	Water
2509-MW19S	31102309009	08/25/2011 10:10	08/29/2011 09:15	Water
2509-MW19D	31102309010	08/25/2011 10:20	08/29/2011 09:15	Water
2509-Field Blank	31102309011	08/25/2011 10:25	08/29/2011 09:15	Water
2509-Trip Blank	31102309012	08/25/2011 00:00	08/29/2011 09:15	Water

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Case Narrative

2509-Trip Blank

Volatiles - This Trip Blank has a reported 'J' concentration for Methylene Chloride.

LCS for HBN 11003 [VXX/2022]

Chloromethane and Bromomethane have recoveries above the acceptance criteria at 134% and 142% respectively. None of the associated samples have hits for these compounds.

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309001-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 07:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 18:31
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 18:31
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 18:31
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 18:31
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 18:31
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 18:31
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 18:31
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 18:31
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 18:31
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 18:31
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 18:31
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 18:31
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 18:31
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 18:31
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 18:31
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 18:31
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 18:31
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 18:31
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 18:31
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 18:31
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 18:31
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 18:31
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 18:31
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 18:31
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 18:31
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 18:31
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 18:31
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 18:31
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 18:31
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 18:31
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 18:31
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 18:31
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 18:31
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 18:31
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 18:31
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 18:31
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 18:31
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 18:31
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 18:31
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 18:31
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 18:31
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 18:31
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 18:31

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309001-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 07:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 18:31
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 18:31
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 18:31
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 18:31
Surrogates							
1,2-Dichloroethane-d4	99.0			64.0-140	%	1	09/1/2011 18:31
Toluene d8	100			82.0-117	%	1	09/1/2011 18:31
4-Bromofluorobenzene	96.0			85.0-115	%	1	09/1/2011 18:31

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 18:31**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309001-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 07:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	**34.3**		3.69	10.0	ug/L	1	08/30/2011 10:34
Barium	**306**		0.394	100	ug/L	1	08/30/2011 10:34
Chromium	**160**		1.47	10.0	ug/L	1	08/30/2011 10:34
Cobalt	**35.4**		3.39	10.0	ug/L	1	08/30/2011 10:34
Copper	**60.7**		0.672	10.0	ug/L	1	08/30/2011 10:34
Lead	**68.2**		5.41	10.0	ug/L	1	08/30/2011 10:34
Nickel	**43.6**	J	3.06	50.0	ug/L	1	08/30/2011 10:34
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 10:34
Zinc	**158**		2.26	10.0	ug/L	1	08/30/2011 10:34

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 10:34**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309001-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 07:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/2/2011 13:52
Beryllium	**0.120**	J	0.119	2.00	ug/L	2	09/2/2011 13:49
Cadmium	**2.54**		0.0556	2.00	ug/L	2	09/7/2011 12:53
Selenium	**3.90**	J	0.824	100	ug/L	10	09/2/2011 13:52
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 13:52
Vanadium	**355**	J	6.61	2500	ug/L	100	09/7/2011 12:59

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 13:52**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1087**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 12:53**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309002-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:05
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 18:06
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 18:06
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 18:06
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 18:06
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 18:06
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 18:06
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 18:06
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 18:06
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 18:06
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 18:06
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 18:06
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 18:06
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 18:06
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 18:06
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 18:06
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 18:06
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 18:06
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 18:06
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 18:06
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 18:06
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 18:06
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 18:06
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 18:06
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 18:06
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 18:06
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 18:06
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 18:06
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 18:06
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 18:06
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 18:06
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 18:06
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 18:06
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 18:06
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 18:06
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 18:06
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 18:06
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 18:06
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 18:06
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 18:06
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 18:06
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 18:06
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 18:06
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 18:06

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309002-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:05
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 18:06
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 18:06
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 18:06
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 18:06
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/1/2011 18:06
Toluene d8	100			82.0-117	%	1	09/1/2011 18:06
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/1/2011 18:06

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 18:06**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309002-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:05
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:19
Barium	**26.0**	J	0.394	100	ug/L	1	08/30/2011 11:19
Chromium	**1.72**	J	1.47	10.0	ug/L	1	08/30/2011 11:19
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:19
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 11:19
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:19
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 11:19
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:19
Zinc	**8.61**	J	2.26	10.0	ug/L	1	08/30/2011 11:19

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:19**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309002-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:05
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	**0.500**	J	0.437	60.0	ug/L	10	09/7/2011 19:14
Beryllium	ND	U	0.119	2.00	ug/L	2	09/2/2011 14:02
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 13:45
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 14:13
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 14:13
Vanadium	**13.0**	J	0.661	250	ug/L	10	09/7/2011 19:14

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 14:02**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:14**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 13:45**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309003-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 17:41
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 17:41
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 17:41
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 17:41
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 17:41
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 17:41
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 17:41
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 17:41
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 17:41
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 17:41
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 17:41
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 17:41
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 17:41
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 17:41
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 17:41
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 17:41
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 17:41
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 17:41
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 17:41
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 17:41
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 17:41
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 17:41
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 17:41
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 17:41
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 17:41
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 17:41
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 17:41
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 17:41
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 17:41
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 17:41
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 17:41
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 17:41
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 17:41
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 17:41
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 17:41
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 17:41
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 17:41
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 17:41
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 17:41
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 17:41
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 17:41
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 17:41
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 17:41

Print Date: 01/24/2012

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309003-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 17:41
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 17:41
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 17:41
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 17:41
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/1/2011 17:41
Toluene d8	100			82.0-117	%	1	09/1/2011 17:41
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/1/2011 17:41

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 17:41**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309003-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:24
Barium	**32.2**	J	0.394	100	ug/L	1	08/30/2011 11:24
Chromium	ND	U	1.47	10.0	ug/L	1	08/30/2011 11:24
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:24
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 11:24
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:24
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 11:24
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:24
Zinc	**8.06**	J	2.26	10.0	ug/L	1	08/30/2011 11:24

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:24**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309003-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 08:45
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:17
Beryllium	**0.120**	J	0.119	2.00	ug/L	2	09/2/2011 14:16
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 13:47
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 14:19
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 14:19
Vanadium	**8.70**	J	0.661	250	ug/L	10	09/7/2011 19:17

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 14:16**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:17**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 13:47**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/25/2012

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309004-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:00
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 17:15
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 17:15
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 17:15
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 17:15
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 17:15
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 17:15
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 17:15
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 17:15
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 17:15
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 17:15
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 17:15
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 17:15
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 17:15
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 17:15
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 17:15
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 17:15
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 17:15
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 17:15
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 17:15
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 17:15
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 17:15
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 17:15
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 17:15
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 17:15
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 17:15
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 17:15
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 17:15
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 17:15
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 17:15
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 17:15
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 17:15
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 17:15
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 17:15
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 17:15
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 17:15
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 17:15
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 17:15
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 17:15
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 17:15
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 17:15
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 17:15
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 17:15
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 17:15

Print Date: 01/24/2012

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309004-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:00
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 17:15
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 17:15
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 17:15
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 17:15
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/1/2011 17:15
Toluene d8	100			82.0-117	%	1	09/1/2011 17:15
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/1/2011 17:15

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 17:15**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309004-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:00
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:29
Barium	**73.7**	J	0.394	100	ug/L	1	08/30/2011 11:29
Chromium	ND	U	1.47	10.0	ug/L	1	08/30/2011 11:29
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:29
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 11:29
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:29
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 11:29
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:29
Zinc	**5.93**	J	2.26	10.0	ug/L	1	08/30/2011 11:29

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:29**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309004-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:00
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:21
Beryllium	ND	U	0.119	2.00	ug/L	2	09/2/2011 14:23
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 13:50
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 14:26
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 14:26
Vanadium	**6.60**	J	0.661	250	ug/L	10	09/7/2011 19:21

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 14:23**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:21**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 13:50**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309005-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:15
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 16:50
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 16:50
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 16:50
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 16:50
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 16:50
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 16:50
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 16:50
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 16:50
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 16:50
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 16:50
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 16:50
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 16:50
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 16:50
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 16:50
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 16:50
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 16:50
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 16:50
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 16:50
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 16:50
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 16:50
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 16:50
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 16:50
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 16:50
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 16:50
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 16:50
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 16:50
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 16:50
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 16:50
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 16:50
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 16:50
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 16:50
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 16:50
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 16:50
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 16:50
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 16:50
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 16:50
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 16:50
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 16:50
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 16:50
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 16:50
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 16:50
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 16:50
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 16:50

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Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309005-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:15
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 16:50
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 16:50
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 16:50
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 16:50
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/1/2011 16:50
Toluene d8	99.0			82.0-117	%	1	09/1/2011 16:50
4-Bromofluorobenzene	98.0			85.0-115	%	1	09/1/2011 16:50

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 16:50**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309005-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:15
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:33
Barium	**17.3**	J	0.394	100	ug/L	1	08/30/2011 11:33
Chromium	ND	U	1.47	10.0	ug/L	1	08/30/2011 11:33
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:33
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 11:33
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:33
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 11:33
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:33
Zinc	**9.44**	J	2.26	10.0	ug/L	1	08/30/2011 11:33

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:33**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309005-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:15
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:24
Beryllium	ND	U	0.119	2.00	ug/L	2	09/2/2011 14:29
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 13:52
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 14:33
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 14:33
Vanadium	**10.7**	J	0.661	250	ug/L	10	09/7/2011 19:24

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 14:29**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:24**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 13:52**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309006-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 16:25
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 16:25
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 16:25
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 16:25
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 16:25
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 16:25
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 16:25
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 16:25
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 16:25
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 16:25
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 16:25
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 16:25
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 16:25
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 16:25
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 16:25
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 16:25
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 16:25
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 16:25
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 16:25
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 16:25
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 16:25
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 16:25
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 16:25
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 16:25
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 16:25
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 16:25
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 16:25
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 16:25
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 16:25
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 16:25
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 16:25
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 16:25
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 16:25
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 16:25
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 16:25
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 16:25
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 16:25
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 16:25
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 16:25
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 16:25
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 16:25
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 16:25
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 16:25

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309006-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 16:25
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 16:25
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 16:25
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 16:25
Surrogates							
1,2-Dichloroethane-d4	103			64.0-140	%	1	09/1/2011 16:25
Toluene d8	103			82.0-117	%	1	09/1/2011 16:25
4-Bromofluorobenzene	96.0			85.0-115	%	1	09/1/2011 16:25

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 16:25**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309006-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:38
Barium	**34.7**	J	0.394	100	ug/L	1	08/30/2011 11:38
Chromium	ND	U	1.47	10.0	ug/L	1	08/30/2011 11:38
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:38
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 11:38
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:38
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 11:38
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:38
Zinc	**6.02**	J	2.26	10.0	ug/L	1	08/30/2011 11:38

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:38**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309006-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	**0.500**	J	0.437	60.0	ug/L	10	09/7/2011 19:28
Beryllium	ND	U	0.119	2.00	ug/L	2	09/2/2011 14:36
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 13:55
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 14:39
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 14:39
Vanadium	**9.80**	J	0.661	250	ug/L	10	09/7/2011 19:28

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 14:36**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:28**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 13:55**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309007-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:40
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 15:59
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 15:59
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 15:59
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 15:59
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 15:59
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 15:59
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 15:59
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 15:59
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 15:59
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 15:59
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 15:59
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 15:59
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 15:59
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 15:59
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 15:59
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 15:59
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 15:59
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 15:59
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 15:59
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 15:59
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 15:59
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 15:59
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 15:59
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 15:59
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 15:59
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 15:59
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 15:59
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 15:59
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 15:59
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 15:59
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 15:59
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 15:59
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 15:59
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 15:59
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 15:59
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 15:59
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 15:59
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 15:59
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 15:59
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 15:59
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 15:59
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 15:59
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 15:59

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309007-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:40
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 15:59
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 15:59
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 15:59
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 15:59
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/1/2011 15:59
Toluene d8	98.0			82.0-117	%	1	09/1/2011 15:59
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/1/2011 15:59

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 15:59**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309007-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:40
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:43
Barium	**89.4**	J	0.394	100	ug/L	1	08/30/2011 11:43
Chromium	ND	U	1.47	10.0	ug/L	1	08/30/2011 11:43
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:43
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 11:43
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:43
Nickel	**3.54**	J	3.06	50.0	ug/L	1	08/30/2011 11:43
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:43
Zinc	**14.2**		2.26	10.0	ug/L	1	08/30/2011 11:43

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:43**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309007-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:40
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:31
Beryllium	**0.240**	J	0.119	2.00	ug/L	2	09/2/2011 14:43
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 13:57
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 14:53
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 14:53
Vanadium	**8.30**	J	0.661	250	ug/L	10	09/7/2011 19:31

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 14:43**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:31**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 13:57**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309008-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:50
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 15:34
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 15:34
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 15:34
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 15:34
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 15:34
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 15:34
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 15:34
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 15:34
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 15:34
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 15:34
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 15:34
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 15:34
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 15:34
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 15:34
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 15:34
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 15:34
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 15:34
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 15:34
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 15:34
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 15:34
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 15:34
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 15:34
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 15:34
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 15:34
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 15:34
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 15:34
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 15:34
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 15:34
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 15:34
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 15:34
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 15:34
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 15:34
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 15:34
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 15:34
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 15:34
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 15:34
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 15:34
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 15:34
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 15:34
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 15:34
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 15:34
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 15:34
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 15:34

Print Date: 01/24/2012

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309008-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:50
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 15:34
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 15:34
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 15:34
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 15:34
Surrogates							
1,2-Dichloroethane-d4	103			64.0-140	%	1	09/1/2011 15:34
Toluene d8	102			82.0-117	%	1	09/1/2011 15:34
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/1/2011 15:34

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 15:34**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309008-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:50
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:48
Barium	**39.1**	J	0.394	100	ug/L	1	08/30/2011 11:48
Chromium	**3.32**	J	1.47	10.0	ug/L	1	08/30/2011 11:48
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:48
Copper	**11.0**		0.672	10.0	ug/L	1	08/30/2011 11:48
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:48
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 11:48
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:48
Zinc	**13.5**		2.26	10.0	ug/L	1	08/30/2011 11:48

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:48**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309008-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 09:50
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:35
Beryllium	ND	U	0.119	2.00	ug/L	2	09/2/2011 14:56
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 13:59
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 15:00
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 15:00
Vanadium	**13.9**	J	0.661	250	ug/L	10	09/7/2011 19:35

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 14:56**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:35**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 13:59**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309009-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:10
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 15:09
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 15:09
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 15:09
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 15:09
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 15:09
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 15:09
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 15:09
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 15:09
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 15:09
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 15:09
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 15:09
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 15:09
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 15:09
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 15:09
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 15:09
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 15:09
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 15:09
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 15:09
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 15:09
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 15:09
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 15:09
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 15:09
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 15:09
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 15:09
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 15:09
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 15:09
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 15:09
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 15:09
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 15:09
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 15:09
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 15:09
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 15:09
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 15:09
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 15:09
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 15:09
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 15:09
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 15:09
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 15:09
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 15:09
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 15:09
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 15:09
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 15:09
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 15:09

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309009-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:10
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 15:09
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 15:09
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 15:09
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 15:09
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/1/2011 15:09
Toluene d8	99.0			82.0-117	%	1	09/1/2011 15:09
4-Bromofluorobenzene	94.0			85.0-115	%	1	09/1/2011 15:09

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 15:09**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309009-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:10
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:53
Barium	**5.81**	J	0.394	100	ug/L	1	08/30/2011 11:53
Chromium	ND	U	1.47	10.0	ug/L	1	08/30/2011 11:53
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:53
Copper	**1.00**	J	0.672	10.0	ug/L	1	08/30/2011 11:53
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:53
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 11:53
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:53
Zinc	**9.05**	J	2.26	10.0	ug/L	1	08/30/2011 11:53

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:53**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309009-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:10
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:38
Beryllium	ND	U	0.119	2.00	ug/L	2	09/2/2011 15:03
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 14:02
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 15:06
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 15:06
Vanadium	**10.3**	J	0.661	250	ug/L	10	09/7/2011 19:38

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 15:03**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:38**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 14:02**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309010-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 14:44
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 14:44
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 14:44
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 14:44
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 14:44
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 14:44
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 14:44
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 14:44
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 14:44
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 14:44
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 14:44
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 14:44
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 14:44
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 14:44
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 14:44
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 14:44
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 14:44
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 14:44
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 14:44
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 14:44
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 14:44
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 14:44
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 14:44
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 14:44
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 14:44
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 14:44
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 14:44
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 14:44
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 14:44
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 14:44
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 14:44
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 14:44
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/1/2011 14:44
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 14:44
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 14:44
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 14:44
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 14:44
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 14:44
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 14:44
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 14:44
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 14:44
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 14:44
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 14:44

Print Date: 01/24/2012

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Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309010-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 14:44
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 14:44
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 14:44
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 14:44
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/1/2011 14:44
Toluene d8	99.0			82.0-117	%	1	09/1/2011 14:44
4-Bromofluorobenzene	99.0			85.0-115	%	1	09/1/2011 14:44

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 14:44**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309010-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 11:58
Barium	**36.2**	J	0.394	100	ug/L	1	08/30/2011 11:58
Chromium	**3.66**	J	1.47	10.0	ug/L	1	08/30/2011 11:58
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 11:58
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 11:58
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 11:58
Nickel	**5.78**	J	3.06	50.0	ug/L	1	08/30/2011 11:58
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 11:58
Zinc	**33.2**		2.26	10.0	ug/L	1	08/30/2011 11:58

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 11:58**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309010-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:20
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:48
Beryllium	**0.140**	J	0.119	2.00	ug/L	2	09/2/2011 15:10
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 14:04
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 15:13
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 15:13
Vanadium	**14.4**	J	0.661	250	ug/L	10	09/7/2011 19:48

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 15:10**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:48**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 14:04**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

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Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309011-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:25
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 14:19
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 14:19
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 14:19
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 14:19
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 14:19
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 14:19
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 14:19
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 14:19
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 14:19
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 14:19
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 14:19
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 14:19
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 14:19
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 14:19
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 14:19
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 14:19
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 14:19
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 14:19
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 14:19
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 14:19
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 14:19
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 14:19
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 14:19
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 14:19
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 14:19
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 14:19
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 14:19
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 14:19
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 14:19
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 14:19
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 14:19
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 14:19
Methylene chloride	**6.79**		0.152	1.00	ug/L	1	09/1/2011 14:19
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 14:19
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 14:19
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 14:19
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 14:19
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 14:19
Toluene	**0.540**	J	0.133	1.00	ug/L	1	09/1/2011 14:19
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 14:19
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 14:19
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 14:19
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 14:19

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309011-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:25
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 14:19
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 14:19
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 14:19
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 14:19
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/1/2011 14:19
Toluene d8	99.0			82.0-117	%	1	09/1/2011 14:19
4-Bromofluorobenzene	96.0			85.0-115	%	1	09/1/2011 14:19

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 14:19**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309011-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:25
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	08/30/2011 12:03
Barium	**5.06**	J	0.394	100	ug/L	1	08/30/2011 12:03
Chromium	ND	U	1.47	10.0	ug/L	1	08/30/2011 12:03
Cobalt	ND	U	3.39	10.0	ug/L	1	08/30/2011 12:03
Copper	ND	U	0.672	10.0	ug/L	1	08/30/2011 12:03
Lead	ND	U	5.41	10.0	ug/L	1	08/30/2011 12:03
Nickel	ND	U	3.06	50.0	ug/L	1	08/30/2011 12:03
Silver	ND	U	1.05	10.0	ug/L	1	08/30/2011 12:03
Zinc	**4.21**	J	2.26	10.0	ug/L	1	08/30/2011 12:03

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **08/30/2011 12:03**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 01/24/2012

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Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309011-D
Lab Project ID: 31102309

Collection Date: 08/25/2011 10:25
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	60.0	ug/L	10	09/7/2011 19:52
Beryllium	ND	U	0.119	2.00	ug/L	2	09/2/2011 15:17
Cadmium	ND	U	0.0556	2.00	ug/L	2	09/12/2011 14:07
Selenium	ND	U	0.824	100	ug/L	10	09/2/2011 15:20
Thallium	ND	U	0.297	55.0	ug/L	10	09/2/2011 15:20
Vanadium	**10.1**	J	0.661	250	ug/L	10	09/2/2011 15:20

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/02/2011 15:17**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1088**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/07/2011 19:52**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1091**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **09/12/2011 14:07**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-Trip Blank**

Client Sample ID: **2509-Trip Blank**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309012-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 00:00
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/1/2011 13:53
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/1/2011 13:53
Benzene	ND	U	0.113	1.00	ug/L	1	09/1/2011 13:53
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/1/2011 13:53
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/1/2011 13:53
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/1/2011 13:53
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/1/2011 13:53
2-Butanone	ND	U	0.723	100	ug/L	1	09/1/2011 13:53
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/1/2011 13:53
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/1/2011 13:53
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/1/2011 13:53
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/1/2011 13:53
Chloroform	ND	U	0.139	5.00	ug/L	1	09/1/2011 13:53
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/1/2011 13:53
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/1/2011 13:53
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/1/2011 13:53
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/1/2011 13:53
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/1/2011 13:53
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/1/2011 13:53
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/1/2011 13:53
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/1/2011 13:53
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/1/2011 13:53
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/1/2011 13:53
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/1/2011 13:53
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/1/2011 13:53
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/1/2011 13:53
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/1/2011 13:53
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/1/2011 13:53
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/1/2011 13:53
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/1/2011 13:53
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/1/2011 13:53
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/1/2011 13:53
Methylene chloride	**0.420**	J	0.152	1.00	ug/L	1	09/1/2011 13:53
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/1/2011 13:53
Styrene	ND	U	0.102	1.00	ug/L	1	09/1/2011 13:53
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/1/2011 13:53
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/1/2011 13:53
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/1/2011 13:53
Toluene	ND	U	0.133	1.00	ug/L	1	09/1/2011 13:53
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/1/2011 13:53
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/1/2011 13:53
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/1/2011 13:53
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/1/2011 13:53

Print Date: 01/24/2012

N.C. Certification # 481

Results of **2509-Trip Blank**

Client Sample ID: **2509-Trip Blank**
Client Project ID: **CRSWMA Tuscarora Landfill**
Lab Sample ID: 31102309012-A
Lab Project ID: 31102309

Collection Date: 08/25/2011 00:00
Received Date: 08/29/2011 09:15
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/1/2011 13:53
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/1/2011 13:53
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/1/2011 13:53
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/1/2011 13:53
Surrogates							
1,2-Dichloroethane-d4	97.0			64.0-140	%	1	09/1/2011 13:53
Toluene d8	96.0			82.0-117	%	1	09/1/2011 13:53
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/1/2011 13:53

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **09/01/2011 13:53**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Batch Summary

Analytical Method: SW-846 8260B

Prep Method: SW-846 5030B
Prep Batch: VXX2022
Prep Date: 09/01/2011 09:12

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 11003 [VXX/2022]	38073	09/01/2011 10:32	VMS1517	MSD4	BWS
LCSD for HBN 11003 [VXX/2022]	38074	09/01/2011 10:57	VMS1517	MSD4	BWS
MB for HBN 11003 [VXX/2022]	38075	09/01/2011 11:47	VMS1517	MSD4	BWS
2509-Trip Blank	31102309012	09/01/2011 13:53	VMS1517	MSD4	BWS
2509-Field Blank	31102309011	09/01/2011 14:19	VMS1517	MSD4	BWS
2509-MW19D	31102309010	09/01/2011 14:44	VMS1517	MSD4	BWS
2509-MW19S	31102309009	09/01/2011 15:09	VMS1517	MSD4	BWS
2509-MW18D	31102309008	09/01/2011 15:34	VMS1517	MSD4	BWS
2509-MW18S	31102309007	09/01/2011 15:59	VMS1517	MSD4	BWS
2509-MW17D	31102309006	09/01/2011 16:25	VMS1517	MSD4	BWS
2509-MW17S	31102309005	09/01/2011 16:50	VMS1517	MSD4	BWS
2509-MW16D	31102309004	09/01/2011 17:15	VMS1517	MSD4	BWS
2509-MW16S	31102309003	09/01/2011 17:41	VMS1517	MSD4	BWS
2509-MW15D	31102309002	09/01/2011 18:06	VMS1517	MSD4	BWS
2509-MW15S	31102309001	09/01/2011 18:31	VMS1517	MSD4	BWS
MW-2(37342MS)	38190	09/01/2011 21:03	VMS1517	MSD4	BWS
MW-2(37342MSD)	38191	09/01/2011 21:28	VMS1517	MSD4	BWS

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Method Blank

Blank ID: MB for HBN 11003 [VXX/2022] Matrix: Water
Blank Lab ID: 38075
QC for Samples:
31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011, 31102309012

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Chloromethane	ND	U	0.448	1.00	ug/L	1
Vinyl chloride	ND	U	0.124	1.00	ug/L	1
Bromomethane	ND	U	0.237	1.00	ug/L	1
Chloroethane	ND	U	0.311	1.00	ug/L	1
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1
1,1-Dichloroethene	ND	U	0.212	1.00	ug/L	1
Acetone	ND	U	0.864	25.0	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	1.00	ug/L	1
Acrylonitrile	ND	U	3.04	25.0	ug/L	1
1,1-Dichloroethane	ND	U	0.165	1.00	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	1.00	ug/L	1
2-Butanone	ND	U	0.723	25.0	ug/L	1
Bromochloromethane	ND	U	0.211	1.00	ug/L	1
Chloroform	ND	U	0.139	1.00	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1
Benzene	ND	U	0.113	1.00	ug/L	1
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1
Trichloroethene	ND	U	0.125	1.00	ug/L	1
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1
Dibromomethane	ND	U	0.168	1.00	ug/L	1
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1
4-Methyl-2-pentanone	ND	U	0.558	5.00	ug/L	1
Toluene	ND	U	0.133	1.00	ug/L	1
Methyl iodide	ND	U	0.115	1.00	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1
Vinyl acetate	ND	U	0.882	2.00	ug/L	1
Carbon disulfide	ND	U	0.106	1.00	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1
2-Hexanone	ND	U	0.728	5.00	ug/L	1
Dibromochloromethane	ND	U	0.134	1.00	ug/L	1
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1
Chlorobenzene	ND	U	0.116	1.00	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	1.00	ug/L	1
Bromoform	ND	U	0.0974	1.00	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	1.00	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1

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Method Blank

Blank ID: MB for HBN 11003 [VXX/2022]
Matrix: Water
Blank Lab ID: 38075
QC for Samples:
31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011, 31102309012

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Styrene	ND	U	0.102	1.00	ug/L	1
Xylene (total)	ND	U	0.182	2.00	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	1.00	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
trans-1,4-Dichloro-2-butene	ND	U	0.414	5.00	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	102			64.0-140	%	1
Toluene d8	99.0			82.0-117	%	1
4-Bromofluorobenzene	97.0			85.0-115	%	1

Batch Information

Analytical Batch: VMS1517
Analytical Method: SW-846 8260B
Instrument: MSD4
Analyst: BWS
Analytical Date/Time: 9/1/2011 11:47:00AM

Prep Batch: VXX2022
Prep Method: SW-846 5030B
Prep Date/Time: 9/1/2011 9:12:11AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 11003 [VXX/2022]
Blank Spike Lab ID: 38073
Date Analyzed: 09/01/2011 10:32

Spike Duplicate ID: LCSD for HBN 11003 [VXX/2022]
Spike Duplicate Lab ID: 38074
Date Analyzed: 09/01/2011 10:57
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011, 31102309012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloromethane	5.00	6.71	**134***	5.00	6.34	127	57.0-132	5.7	30.00
Vinyl chloride	5.00	6.21	124	5.00	6.03	121	59.0-138	2.9	30.00
Bromomethane	5.00	7.10	**142***	5.00	6.21	124	51.0-134	13	30.00
Chloroethane	5.00	6.18	124	5.00	6.08	122	64.0-145	1.6	30.00
Trichlorofluoromethane	5.00	6.11	122	5.00	5.92	118	64.0-133	3.2	30.00
1,1-Dichloroethene	5.00	5.38	108	5.00	5.03	101	71.0-128	6.7	30.00
Acetone	25.0	31.9	128	25.0	29.9	119	52.0-140	6.5	30.00
Methylene chloride	5.00	5.32	106	5.00	5.16	103	70.0-113	3.1	30.00
trans-1,2-Dichloroethene	5.00	5.54	111	5.00	5.16	103	57.0-138	7.1	30.00
Acrylonitrile	125	137	109	125	134	107	55.0-141	2.2	30.00
1,1-Dichloroethane	5.00	5.40	108	5.00	5.11	102	68.0-133	5.5	30.00
cis-1,2-Dichloroethene	5.00	5.56	111	5.00	5.25	105	73.0-128	5.7	30.00
2-Butanone	25.0	29.0	116	25.0	26.0	104	58.0-134	11	30.00
Bromochloromethane	5.00	5.69	114	5.00	5.19	104	73.0-128	9.2	30.00
Chloroform	5.00	5.60	112	5.00	5.30	106	74.0-124	5.5	30.00
1,1,1-Trichloroethane	5.00	5.15	103	5.00	4.72	94	76.0-119	8.7	30.00
Carbon tetrachloride	5.00	5.42	108	5.00	5.37	107	75.0-120	0.93	30.00
Benzene	5.00	5.34	107	5.00	5.03	101	76.0-124	6.0	30.00
1,2-Dichloroethane	5.00	5.40	108	5.00	5.02	100	76.0-119	7.3	30.00
Trichloroethene	5.00	5.09	102	5.00	4.77	95	74.0-121	6.5	30.00
1,2-Dichloropropane	5.00	5.24	105	5.00	5.15	103	74.0-124	1.7	30.00
Dibromomethane	5.00	5.51	110	5.00	4.94	99	71.0-128	11	30.00
Bromodichloromethane	5.00	5.77	115	5.00	5.52	110	72.0-120	4.4	30.00
cis-1,3-Dichloropropene	5.00	5.56	111	5.00	5.19	104	73.0-122	6.9	30.00
4-Methyl-2-pentanone	25.0	26.8	107	25.0	25.1	100	65.0-124	6.6	30.00
Toluene	5.00	5.46	109	5.00	5.21	104	75.0-123	4.7	30.00
Methyl iodide	5.00	5.01	100	5.00	4.62	92	55.0-123	8.1	30.00
trans-1,3-Dichloropropene	5.00	5.80	116	5.00	5.49	110	70.0-125	5.5	30.00
Vinyl acetate	12.5	19.7	**157***	12.5	18.3	**146***	40.0-141	7.4	30.00
Carbon disulfide	5.00	5.80	116	5.00	5.43	109	65.0-132	6.6	30.00
1,1,2-Trichloroethane	5.00	5.23	105	5.00	5.04	101	76.0-121	3.7	30.00
Tetrachloroethene	5.00	5.19	104	5.00	4.74	95	59.0-112	9.1	30.00
2-Hexanone	25.0	28.2	113	25.0	25.8	103	56.0-133	8.9	30.00
Dibromochloromethane	5.00	5.54	111	5.00	5.03	101	67.0-122	9.6	30.00

Print Date: 01/24/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 11003 [VXX/2022]
Blank Spike Lab ID: 38073
Date Analyzed: 09/01/2011 10:32

Spike Duplicate ID: LCSD for HBN 11003 [VXX/2022]
Spike Duplicate Lab ID: 38074
Date Analyzed: 09/01/2011 10:57
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011, 31102309012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	5.00	5.36	107	5.00	4.98	100	74.0-119	7.4	30.00
Chlorobenzene	5.00	5.04	101	5.00	4.82	96	74.0-120	4.5	30.00
1,1,1,2-Tetrachloroethane	5.00	5.65	113	5.00	5.33	107	73.0-119	5.8	30.00
Bromoform	5.00	5.68	114	5.00	5.08	102	62.0-127	11	30.00
1,1,2,2-Tetrachloroethane	5.00	5.83	117	5.00	5.26	105	68.0-129	10	30.00
1,2,3-Trichloropropane	5.00	5.31	106	5.00	4.88	98	67.0-126	8.4	30.00
Ethyl Benzene	5.00	5.12	102	5.00	5.07	101	76.0-123	0.98	30.00
Styrene	5.00	5.17	103	5.00	5.31	106	76.0-121	2.7	30.00
1,4-Dichlorobenzene	5.00	5.14	103	5.00	5.03	101	70.0-125	2.2	30.00
1,2-Dichlorobenzene	5.00	5.18	104	5.00	4.91	98	76.0-118	5.4	30.00
1,2-Dibromo-3-chloropropane	30.0	34.3	114	30.0	33.1	110	62.0-130	3.6	30.00
trans-1,4-Dichloro-2-butene	25.0	26.3	105	25.0	25.7	103	61.0-132	2.3	30.00
Surrogates									
1,2-Dichloroethane-d4			103			100	64.0-140		
Toluene d8			104			103	82.0-117		
4-Bromofluorobenzene			100			100	85.0-115		

Batch Information

Analytical Batch: **VMS1517**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**

Prep Batch: **VXX2022**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/01/2011 09:12**
Spike Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**
Dupe Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**

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Batch Summary

Analytical Method: SW-846 6010C

Prep Method: SW-846 3010A
Prep Batch: MXX1473
Prep Date: 08/29/2011 16:39

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 10854 [MXX/1473]	37689	08/30/2011 10:19	MIP1223	ICP1	NTM
LCS for HBN 10854 [MXX/1473]	37690	08/30/2011 10:24	MIP1223	ICP1	NTM
LCSD for HBN 10854 [MXX/1473]	37691	08/30/2011 10:29	MIP1223	ICP1	NTM
2509-MW15S	31102309001	08/30/2011 10:34	MIP1223	ICP1	NTM
2509-MW15S(37491MS)	37692	08/30/2011 10:39	MIP1223	ICP1	NTM
2509-MW15S(37491MSD)	37693	08/30/2011 10:44	MIP1223	ICP1	NTM
2509-MW15D	31102309002	08/30/2011 11:19	MIP1223	ICP1	NTM
2509-MW16S	31102309003	08/30/2011 11:24	MIP1223	ICP1	NTM
2509-MW16D	31102309004	08/30/2011 11:29	MIP1223	ICP1	NTM
2509-MW17S	31102309005	08/30/2011 11:33	MIP1223	ICP1	NTM
2509-MW17D	31102309006	08/30/2011 11:38	MIP1223	ICP1	NTM
2509-MW18S	31102309007	08/30/2011 11:43	MIP1223	ICP1	NTM
2509-MW18D	31102309008	08/30/2011 11:48	MIP1223	ICP1	NTM
2509-MW19S	31102309009	08/30/2011 11:53	MIP1223	ICP1	NTM
2509-MW19D	31102309010	08/30/2011 11:58	MIP1223	ICP1	NTM
2509-Field Blank	31102309011	08/30/2011 12:03	MIP1223	ICP1	NTM
2509-Field Blank(37501DUP)	37694	08/30/2011 12:18	MIP1223	ICP1	NTM

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Method Blank

Blank ID: MB for HBN 10854 [MXX/1473]
Matrix: Water
Blank Lab ID: 37689
QC for Samples:
31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Arsenic	ND	U	0.00369	0.0100	mg/L	1
Zinc	**0.00314**	J	0.00226	0.0200	mg/L	1
Lead	ND	U	0.00541	0.0100	mg/L	1
Cobalt	ND	U	0.00339	0.0100	mg/L	1
Nickel	ND	U	0.00306	0.0100	mg/L	1
Barium	ND	U	0.000394	0.100	mg/L	1
Chromium	ND	U	0.00147	0.0100	mg/L	1
Copper	ND	U	0.000672	0.0100	mg/L	1
Silver	ND	U	0.00105	0.0100	mg/L	1

Batch Information

Analytical Batch: MIP1223
Analytical Method: SW-846 6010C
Instrument: ICP1
Analyst: NTM
Analytical Date/Time: 8/30/2011 10:19:09AM

Prep Batch: MXX1473
Prep Method: SW-846 3010A
Prep Date/Time: 8/29/2011 4:39:01PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 10854 [MXX/1473]
Blank Spike Lab ID: 37690
Date Analyzed: 08/30/2011 10:24

Spike Duplicate ID: LCSD for HBN 10854 [MXX/1473]
Spike Duplicate Lab ID: 37691
Date Analyzed: 08/30/2011 10:29
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6010C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	0.400	0.434	109	0.400	0.437	109	80.0-120	0.69	20.00
Zinc	0.400	0.389	97	0.400	0.393	98	80.0-120	1.0	20.00
Lead	0.400	0.392	98	0.400	0.393	98	80.0-120	0.25	20.00
Cobalt	0.400	0.402	100	0.400	0.407	102	80.0-120	1.2	20.00
Nickel	0.400	0.402	100	0.400	0.407	102	80.0-120	1.2	20.00
Barium	2.00	2.02	101	2.00	2.01	101	80.0-120	0.50	20.00
Chromium	0.400	0.401	100	0.400	0.403	101	80.0-120	0.50	20.00
Copper	0.400	0.404	101	0.400	0.410	102	80.0-120	1.5	20.00
Silver	0.400	0.395	99	0.400	0.396	99	80.0-120	0.25	20.00

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31102309001 (2509-MW15S) — Analysis Date: 08/30/2011 10:34
MS Sample ID: 37692 — Analysis Date: 08/30/2011 10:39
MSD Sample ID: 37693 — Analysis Date: 08/30/2011 10:44
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6010C**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	34.3	0.400	0.461	107	0.400	0.437	101	75.0-125	5.3	20.00
Barium	306	2.00	2.35	102	2.00	2.29	99	75.0-125	2.6	20.00
Chromium	160	0.400	0.592	108	0.400	0.567	102	75.0-125	4.3	20.00
Cobalt	35.4	0.400	0.445	102	0.400	0.422	97	75.0-125	5.3	20.00
Copper	60.7	0.400	0.503	111	0.400	0.483	105	75.0-125	4.1	20.00
Lead	68.2	0.400	0.477	102	0.400	0.457	97	75.0-125	4.3	20.00
Nickel	43.6	0.400	0.448	112	0.400	0.430	108	75.0-125	4.1	20.00
Silver	ND	0.400	0.392	98	0.400	0.371	93	75.0-125	5.5	20.00
Zinc	158	0.400	0.596	110	0.400	0.571	103	75.0-125	4.3	20.00

Batch Information

Analytical Batch: **MIP1223**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

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Duplicate Sample Summary

Original Sample ID: 31102309011-D
Duplicate Sample ID: 37694

Analysis Date: 08/30/2011 12:03
Analysis Date: 08/30/2011 12:18
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6010C**

PARAMETER	Original (ug/L)	Duplicate (mg/L)	RPD (%)	RPD CL
Arsenic	ND	ND	0	20.00
Barium	5.06	0.00381	**28***	20.00
Chromium	ND	ND	0	20.00
Cobalt	ND	ND	0	20.00
Copper	ND	ND	0	20.00
Lead	ND	ND	0	20.00
Nickel	ND	ND	0	20.00
Silver	ND	ND	0	20.00
Zinc	4.21	0.00352	18	20.00

Batch Information

Analytical Batch: MIP1223
Analytical Method: SW-846 6010C
Instrument: ICP1
Analyst: NTM

Prep Batch: MXX1473
Prep Method: SW-846 3010A
Prep Date/Time: 08/29/2011 16:39

Print Date: 01/24/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 6020A

Prep Method: SW-846 3010A
Prep Batch: MXX1473
Prep Date: 08/29/2011 16:39

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 10854 [MXX/1473]	37689	09/02/2011 13:36	MMS1086	ICPMS2	PSW
MB for HBN 10854 [MXX/1473]	37689	09/02/2011 13:39	MMS1086	ICPMS2	PSW
LCS for HBN 10854 [MXX/1473]	37690	09/02/2011 13:42	MMS1086	ICPMS2	PSW
LCSD for HBN 10854 [MXX/1473]	37691	09/02/2011 13:42	MMS1086	ICPMS2	PSW
2509-MW15S	31102309001	09/02/2011 13:49	MMS1086	ICPMS2	PSW
2509-MW15S	31102309001	09/02/2011 13:52	MMS1086	ICPMS2	PSW
2509-MW15S(37491MS)	37692	09/02/2011 13:56	MMS1086	ICPMS2	PSW
2509-MW15S(37491MSD)	37693	09/02/2011 13:59	MMS1086	ICPMS2	PSW
2509-MW15D	31102309002	09/02/2011 14:02	MMS1086	ICPMS2	PSW
2509-MW15D	31102309002	09/02/2011 14:13	MMS1086	ICPMS2	PSW
2509-MW16S	31102309003	09/02/2011 14:16	MMS1086	ICPMS2	PSW
2509-MW16S	31102309003	09/02/2011 14:19	MMS1086	ICPMS2	PSW
2509-MW16D	31102309004	09/02/2011 14:23	MMS1086	ICPMS2	PSW
2509-MW16D	31102309004	09/02/2011 14:26	MMS1086	ICPMS2	PSW
2509-MW17S	31102309005	09/02/2011 14:29	MMS1086	ICPMS2	PSW
2509-MW17S	31102309005	09/02/2011 14:33	MMS1086	ICPMS2	PSW
2509-MW17D	31102309006	09/02/2011 14:36	MMS1086	ICPMS2	PSW
2509-MW17D	31102309006	09/02/2011 14:39	MMS1086	ICPMS2	PSW
2509-MW18S	31102309007	09/02/2011 14:43	MMS1086	ICPMS2	PSW
2509-MW18S	31102309007	09/02/2011 14:53	MMS1086	ICPMS2	PSW
2509-MW18D	31102309008	09/02/2011 14:56	MMS1086	ICPMS2	PSW
2509-MW18D	31102309008	09/02/2011 15:00	MMS1086	ICPMS2	PSW
2509-MW19S	31102309009	09/02/2011 15:03	MMS1086	ICPMS2	PSW
2509-MW19S	31102309009	09/02/2011 15:06	MMS1086	ICPMS2	PSW
2509-MW19D	31102309010	09/02/2011 15:10	MMS1086	ICPMS2	PSW
2509-MW19D	31102309010	09/02/2011 15:13	MMS1086	ICPMS2	PSW
2509-Field Blank	31102309011	09/02/2011 15:17	MMS1086	ICPMS2	PSW
2509-Field Blank	31102309011	09/02/2011 15:20	MMS1086	ICPMS2	PSW
2509-Field Blank(37501DUP)	37694	09/02/2011 15:23	MMS1086	ICPMS2	PSW
LCS for HBN 10854 [MXX/1473]	37690	09/07/2011 12:44	MMS1087	ICPMS2	PSW
LCSD for HBN 10854 [MXX/1473]	37691	09/07/2011 12:50	MMS1087	ICPMS2	PSW
2509-MW15S	31102309001	09/07/2011 12:53	MMS1087	ICPMS2	PSW
2509-MW15S	31102309001	09/07/2011 12:59	MMS1087	ICPMS2	PSW
2509-MW15S(37491MS)	37692	09/07/2011 13:02	MMS1087	ICPMS2	PSW
2509-MW15S(37491MSD)	37693	09/07/2011 13:05	MMS1087	ICPMS2	PSW
2509-MW15S(37491MS)	37692	09/07/2011 19:07	MMS1088	ICPMS2	PSW
2509-MW15S(37491MSD)	37693	09/07/2011 19:10	MMS1088	ICPMS2	PSW
2509-MW15D	31102309002	09/07/2011 19:14	MMS1088	ICPMS2	PSW
2509-MW16S	31102309003	09/07/2011 19:17	MMS1088	ICPMS2	PSW
2509-MW16D	31102309004	09/07/2011 19:21	MMS1088	ICPMS2	PSW
2509-MW17S	31102309005	09/07/2011 19:24	MMS1088	ICPMS2	PSW

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Batch Summary

Analytical Method: SW-846 6020A

Prep Method: SW-846 3010A
Prep Batch: MXX1473
Prep Date: 08/29/2011 16:39

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
2509-MW17D	31102309006	09/07/2011 19:28	MMS1088	ICPMS2	PSW
2509-MW18S	31102309007	09/07/2011 19:31	MMS1088	ICPMS2	PSW
2509-MW18D	31102309008	09/07/2011 19:35	MMS1088	ICPMS2	PSW
2509-MW19S	31102309009	09/07/2011 19:38	MMS1088	ICPMS2	PSW
2509-MW19D	31102309010	09/07/2011 19:48	MMS1088	ICPMS2	PSW
2509-Field Blank	31102309011	09/07/2011 19:52	MMS1088	ICPMS2	PSW
LCS for HBN 10854 [MXX/1473]	37690	09/09/2011 15:52	MMS1089	ICPMS2	PSW
LCSD for HBN 10854 [MXX/1473]	37691	09/09/2011 15:55	MMS1089	ICPMS2	PSW
2509-MW15D	31102309002	09/12/2011 13:45	MMS1091	ICPMS2	PSW
2509-MW16S	31102309003	09/12/2011 13:47	MMS1091	ICPMS2	PSW
2509-MW16D	31102309004	09/12/2011 13:50	MMS1091	ICPMS2	PSW
2509-MW17S	31102309005	09/12/2011 13:52	MMS1091	ICPMS2	PSW
2509-MW17D	31102309006	09/12/2011 13:55	MMS1091	ICPMS2	PSW
2509-MW18S	31102309007	09/12/2011 13:57	MMS1091	ICPMS2	PSW
2509-MW18D	31102309008	09/12/2011 13:59	MMS1091	ICPMS2	PSW
2509-MW19S	31102309009	09/12/2011 14:02	MMS1091	ICPMS2	PSW
2509-MW19D	31102309010	09/12/2011 14:04	MMS1091	ICPMS2	PSW
2509-Field Blank	31102309011	09/12/2011 14:07	MMS1091	ICPMS2	PSW

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Method Blank

Blank ID: MB for HBN 10854 [MXX/1473]
Matrix: Water
Blank Lab ID: 37689
QC for Samples:
31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Beryllium	ND	U	0.000119	0.00100	mg/L	2
Vanadium	ND	U	0.000661	0.00500	mg/L	10
Selenium	**0.00100**	J	0.000824	0.00500	mg/L	10
Cadmium	ND	U	0.0000556	0.00100	mg/L	2
Antimony	ND	U	0.000437	0.00500	mg/L	10
Thallium	ND	U	0.000297	0.00500	mg/L	10

Batch Information

Analytical Batch: MMS1086
Analytical Method: SW-846 6020A
Instrument: ICPMS2
Analyst: PSW
Analytical Date/Time: 9/2/2011 1:36:02PM

Prep Batch: MXX1473
Prep Method: SW-846 3010A
Prep Date/Time: 8/29/2011 4:39:01PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 10854 [MXX/1473]
Blank Spike Lab ID: 37690
Date Analyzed: 09/02/2011 13:42

Spike Duplicate ID: LCSD for HBN 10854 [MXX/1473]
Spike Duplicate Lab ID: 37691
Date Analyzed: 09/02/2011 13:42
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6020A**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Beryllium	0.400	0.460	115	0.400	0.460	115	80.0-120	0.0	20.00
Vanadium	0.400	0.426	107	0.400	0.412	103	80.0-120	3.3	20.00
Selenium	0.400	0.436	109	0.400	0.431	108	80.0-120	1.2	20.00
Cadmium	0.400	0.447	112	0.400	0.447	112	80.0-120	0.0	20.00
Antimony	0.400	0.448	112	0.400	0.448	112	80.0-120	0.0	20.00
Thallium	0.400	0.440	110	0.400	0.440	110	80.0-120	0.0	20.00

Batch Information

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

Analytical Batch: **MMS1087**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

Analytical Batch: **MMS1089**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31102309001 (2509-MW15S)
MS Sample ID: 37692
MSD Sample ID: 37693

Analysis Date: 09/02/2011 13:52
Analysis Date: 09/07/2011 13:02
Analysis Date: 09/07/2011 13:05
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6020A**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Antimony	ND	0.400	0.0480	12 *	0.400	0.0520	13 *	75.0-125	8.0	25.00
Beryllium	0.120	0.400	0.319	80	0.400	0.310	78	75.0-125	2.9	25.00
Cadmium	2.54	0.400	0.434	108	0.400	0.420	104	75.0-125	3.3	25.00
Selenium	3.90	0.400	0.456	114	0.400	0.458	115	75.0-125	0.44	25.00
Thallium	ND	0.400	0.418	105	0.400	0.412	103	75.0-125	1.4	25.00
Vanadium	355	0.400	0.808	202 *	0.400	0.786	197 *	75.0-125	2.8	25.00

Batch Information

Analytical Batch: **MMS1087**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

Analytical Batch: **MMS1086**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1473**
Prep Method: **SW-846 3010A**
Prep Date/Time: **08/29/2011 16:39**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

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Duplicate Sample Summary

Original Sample ID: 31102309011-D
Duplicate Sample ID: 37694

Analysis Date: 09/07/2011 19:52
Analysis Date: 09/02/2011 15:23
Matrix: Water

QC for Samples: 31102309001, 31102309002, 31102309003, 31102309004, 31102309005, 31102309006, 31102309007, 31102309008, 31102309009, 31102309010, 31102309011

Results by **SW-846 6020A**

PARAMETER	Original (ug/L)	Duplicate (mg/L)	RPD (%)	RPD CL
Antimony	ND	ND	0	20.00
Beryllium	ND	ND	0	20.00
Cadmium	ND	ND	0	20.00
Selenium	ND	ND	0	20.00
Thallium	ND	ND	0	20.00
Vanadium	10.1	0.00900	12	20.00

Batch Information

Analytical Batch: MMS1086
Analytical Method: SW-846 6020A
Instrument: ICPMS2
Analyst: PSW

Prep Batch: MXX1473
Prep Method: SW-846 3010A
Prep Date/Time: 08/29/2011 16:39

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SGS North America Inc.

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio

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101391

(1)

CLIENT: JOYCE ENGINEERING, INC.

CONTACT: JEREMEY KERLY PHONE NO: (336) 323-0092

PROJECT: CRSWMA TUSCARORA LANDFILL SITE/PWSID#: 25-09

REPORTS TO: JEREMEY KERLY
2211 W. MEADOWVIEW RD., STE 101
GREENSBORO, NC 27407 FAX NO.: (336) 323-0093

INVOICE TO: LECIA JONES
1604 OWNBY LANE
RICHMOND VA 23222
QUOTE #:
P.O. NUMBER: 00618.1101.11.02

SGS Reference: 31102309

PAGE 1 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	Preservatives Used: Pre-HNO3	Pre-HCl								REMARKS
							Analysis Required (3): METALS - NC App. I	VOCs - NC App. I								
	2509-MW15S	8/25/11	07:45	WATER	4	G	X	X								
	2509-MW15D	8/25/11	08:05	WATER	4	G	X	X								
	2509-MW16S	"	08:45	"	"	"	X	X								
	2509-MW16D		09:00				X	X								
	2509-MW17S		09:15				X	X								
	2509-MW17D		09:20				X	X								
	2509-MW18S		09:40				X	X								
	2509-MW18D		09:50				X	X								
	2509-MW19S		10:10				X	X								
	2509-MW19D		10:20				X	X								

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Daniel J. Hendrix/JEI	8/25/11	1325	[signature]
Relinquished By: (2)	Date	Time	Received By:
[signature]	8/29/11	0915	[signature]
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 0.2°C

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:
☐ RUSH _____ Date Needed ☑ STD

☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio

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(1)

CLIENT: JOYCE ENGINEERING, INC

CONTACT: J. KERLY PHONE NO:(336) 323-0092

PROJECT: CRSWMA TUSCARORA LANDFILL SITE/PWSID#: 2509

REPORTS TO: J. KERLY

GREENSBORO, NC FAX NO.:(336) 323-0092

INVOICE TO: L. JONES QUOTE #:

RICHMOND, VA P.O. NUMBER: 618.1101.11.02

SGS Reference: 31102309

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	METALS - NC App. I	VOCs - NC App. I	REMARKS
	2509-FIELD BLANK	8/25/11	10:25	WATER	4	G	X	X	
	2509-TRIP BLANK	8/18/11		WATER	2			X	

Preservatives Used

Analysis Required (3)

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Daniel S. Gardner/JEI	8/25/11	1325	[signature]
Relinquished By: (2)	Date	Time	Received By:
[signature]	8/29/11	0915	[signature]
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 0.2°C

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☑ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **Joyce Engineering, Inc.** Work Order No.: **31102309**

1. ___ Shipped
   X Hand Delivered

2. X COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. ___ Custody Tape on Container
   X No Custody Tape

4. X Samples Intact
   ___ Samples Broken / Leaking

5. X Chilled on Receipt Actual Temp.(s) in °C: 0.2
   ___ Ambient on Receipt
   X Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. X Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   X HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. X Received Within Holding Time
   ___ Not Received Within Holding Time

9. X No Discrepancies Noted
   ___ Discrepancies Noted

10. X No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: JJ

Date: Mon-8/29/11 00:00

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 S **Sampler(s):** D. Girdner

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.92 feet

Depth to Bottom (DTB): 19.00 feet

Water Column Thickness (WCT): 13.08 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.1 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 6.3 gallons

Actual Amount Purged/Bailed : 6.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.98 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1014	25.8	5.62	103.1	323	DG
2.1	1018	25.6	5.24	68.7	>1000	DG
4.2	1022	24.4	5.26	70.7	>1000	DG
6.3	1026	24.2	5.18	72.9	>1000	DG
	8/25/11@					
Before Sampling	0745	24.7	5.55	141.3	138	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Sunny 80's. 1st bailers red sediment or algae, then thick gray very fine sediment.

8/25 – Mostly sunny, 70's

Sample did not appear to match turbidity result, looked opaque, ultra-fine sediment.

Signature: Daniel S. Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 D **Sampler(s):** D. Girdner

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 19.01 feet

Depth to Bottom (DTB): 40.00 feet

Water Column Thickness (WCT): 20.99 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.4 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 10.3 gallons

Actual Amount Purged/Bailed : 10.3 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 19.01 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1034	20.4	6.58	381	72	DG
3.4	1040	19.5	7.19	383	>1000	DG
6.8	1045	18.8	7.28	387	>1000	DG
10.3	1050	19.6	7.34	379	>1000	DG
	8/25/11@					
Before Sampling	0805	19.7	6.99	387	26.8	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Sunny 80's. Brown-gray fine sediment.

8/25 – Mostly sunny, 70's

Signature: Garnet L Gardner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16S **Sampler(s):** D. Girdner

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 7.20 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 7.80 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.3 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.9 gallons

Actual Amount Purged/Bailed : 4.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 7.28 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1113	25.3	5.68	88.2	115	DG
1.3	1117	25.5	5.68	72.9	881	DG
2.6	1120	24.4	5.32	75.1	934	DG
3.9	1123	23.9	5.22	75.3	959	DG
	8/25/11@					
Before Sampling	0845	26.6	5.08	74.7	20.5	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Mostly sunny 80's. 1st bailers red sediment or algae, then brown-gray fine sediment

8/25 – Mostly sunny, 70's

Signature: Daniel J Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16D **Sampler(s):** D. Girdner

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 17.75 feet

Depth to Bottom (DTB): 36.00 feet

Water Column Thickness (WCT): 18.25 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.97 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 8.91 gallons

Actual Amount Purged/Bailed : 9.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 17.78 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1134	20.9	6.99	587	200	DG
2.97	1139	19.9	7.05	584	1000	DG
5.94	1144	19.2	7.10	556	>1000	DG
8.91	1150	19.1	7.11	529	> 1000	DG
	8/25/11@					
Before Sampling	0900	21.3	6.95	484	22.9	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Mostly sunny 80's. Brown fine-medium sediment

8/25 – Mostly sunny, 70's

Signature: Daniel J Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17S **Sampler(s):** D. Girdner

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.76 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 9.24 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.51 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.53 gallons

Actual Amount Purged/Bailed : 4.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.88 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1214	26.0	6.42	76.5	41.4	DG
1.51	1218	25.3	5.72	64.1	347	DG
3.02	1221	24.1	5.49	64.2	986	DG
4.53	1224	23.9	5.44	64.8	881	DG
	8/25/11@					
Before Sampling	0915	25.6	5.72	64.9	49.1	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Mostly sunny 80's. Gray sediment

8/25 – Mostly sunny, 70's

Signature: Daniel S. Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17D **Sampler(s):** D. Girdner

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 15.74 feet

Depth to Bottom (DTB): 39.00 feet

Water Column Thickness (WCT): 23.26 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.79 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 11.37 gallons

Actual Amount Purged/Bailed : 11.5 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 15.77 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1229	21.2	10.97	236	34.6	DG
3.79	1237	19.0	8.66	273	294	DG
7.58	1243	18.3	8.00	352	756	DG
11.37	1248	19.0	7.59	361	833	DG
	8/25/11@					
Before Sampling	0920	21.3	7.84	353	28.8	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Sunny 80's. Gray fine sediment.

8/25 – Mostly sunny, 70's

Signature: Daniel S. Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18S **Sampler(s):** D. Girdner

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 4.41 feet

Depth to Bottom (DTB): 14.00 feet

Water Column Thickness (WCT): 9.59 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.56 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.69 gallons

Actual Amount Purged/Bailed : 5.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 4.77 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1315	23.7	5.67	129.5	76.2	DG
1.56	1319	23.3	5.35	189.9	973	DG
3.12	1322	22.5	5.23	186	992	DG
4.69	1326	22.8	5.07	190	> 1000	DG
	8/25/11@					
Before Sampling	0940	26.2	5.86	121.7	26.1	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Sunny 80's. Gray-ultra fine sediment.

8/25 – Mostly sunny, 70's

Signature: Daniel J Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18D **Sampler(s):** D. Girdner

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 15.79 feet

Depth to Bottom (DTB): 38.00 feet

Water Column Thickness (WCT): 22.21 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.62 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 10.86 gallons

Actual Amount Purged/Bailed : 11.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 15.83 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1334	19.8	7.31	390	503	DG
3.62	1339	17.9	7.39	431	>1000	DG
7.24	1345	17.9	7.29	431	>1000	DG
10.86	1350	18.5	7.33	416	991	DG
	8/25/11@					
Before Sampling	0950	20.3	7.03	422	38.1	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Sunny 80's. Red sediment or algae in 1st bailers, turbidity increased ultra-fine, gray.

8/25 – Mostly sunny, 70's

Signature: Daniel S. Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19S **Sampler(s):** D. Girdner

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.61 feet

Depth to Bottom (DTB): 13.00 feet

Water Column Thickness (WCT): 7.39 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.20 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.60 gallons

Actual Amount Purged/Bailed : 3.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.65 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1428	25.1	6.65	141.8	16.1	DG
1.20	1430	24.4	6.10	95.6	465	DG
2.40	1433	24.6	5.65	72.4	809	DG
3.60	1436	24.1	5.80	87.3	>1000	DG
	8/25/11@					
Before Sampling	1010	26.5	6.07	76.8	35.2	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Sunny 80's. Light-brown sediment.

8/25 – Mostly sunny, 70's

Signature: Daniel A Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

DATE: 8/24-25/11

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19D **Sampler(s):** D. Girdner

Well Location: SE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 16.41 feet

Depth to Bottom (DTB): 28.00 feet

Water Column Thickness (WCT): 11.59 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.89 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 5.66 gallons

Actual Amount Purged/Bailed : 5.7 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 16.45 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1410	20.3	7.40	412	60.5	DG
1.89	1414	19.5	7.24	409	>1000	DG
3.78	1417	18.9	7.29	409	>1000	DG
5.66	1420	18.8	7.28	410	>1000	DG
	8/25/11@					
Before Sampling	1020	21.9	7.11	396	54.5	DG

Comments (weather conditions, odor, color, silt, etc.):

8/24- Sunny 80's. Red sediment or algae 1st bailers, increasing gray ultra-fine turbidity.

8/25 – Mostly sunny, 70's

Signature: Daniel S Girdner **Date:** 8/25/11

QA/QC Sign Off: [illegible] **Date:** 1-20-12

Part 3 – Laboratory Analytical Report - Background Event No. 2 (September 2011)

Laboratory Report of Analysis
Field Data Logs

Laboratory Report of Analysis

To: Jeremy Kerly
Joyce Engineering, Inc.
2211 West Meadowview Rd
Suite 101
Greensboro, NC 27407

Report Number: **31102677**

Client Project: **CRSWMA-Tuscarora LF**

Dear Jeremy Kerly,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Michael D. Page at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Michael D. Page Date
Project Manager
michael.page@sgs.com

Print Date: 10/14/2011 N.C. Certification # 481

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < LOD)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Amount detected is between the Method Detection Limit and the Lower Calibration Limit
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

SGS North America Inc.
5500 Business Drive, Wilmington, NC 28405
t 910.350.1903 f 910.350.1557 www.us.sgs.com
Member of SGS Group

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
2509-MW15S	31102677001	09/27/2011 08:40	09/29/2011 09:00	Water
2509-MW15D	31102677002	09/27/2011 08:55	09/29/2011 09:00	Water
2509-MW16S	31102677003	09/27/2011 09:25	09/29/2011 09:00	Water
2509-MW16D	31102677004	09/27/2011 09:40	09/29/2011 09:00	Water
2509-MW17S	31102677005	09/27/2011 10:00	09/29/2011 09:00	Water
2509-MW17D	31102677006	09/27/2011 10:15	09/29/2011 09:00	Water
2509-MW18S	31102677007	09/27/2011 10:35	09/29/2011 09:00	Water
2509-MW18D	31102677008	09/27/2011 10:50	09/29/2011 09:00	Water
2509-MW19S	31102677009	09/27/2011 13:10	09/29/2011 09:00	Water
2509-MW19D	31102677010	09/27/2011 13:30	09/29/2011 09:00	Water
2509-Trip Blank	31102677011	09/27/2011 00:00	09/29/2011 09:00	Water
2509-Field Blank	31102677012	09/27/2011 14:00	09/29/2011 09:00	Water

SGS North America Inc.
5500 Business Drive, Wilmington, NC 28405
t 910.350.1903 f 910.350.1557 www.us.sgs.com
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Case Narrative

MIP1264 [MXX1541]

6010C - The Method Blank associated with batch MIP1264 has reported concentrations for Barium and Copper that are below the LOQ. These analytes have been 'J' flagged on the data.

SGS North America Inc.

5500 Business Drive, Wilmington, NC 28405

t 910.350.1903 f 910.350.1557 www.us.sgs.com

Member of SGS Group

Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677001-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 18:47
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 18:47
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 18:47
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 18:47
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 18:47
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 18:47
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 18:47
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 18:47
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 18:47
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 18:47
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 18:47
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 18:47
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 18:47
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 18:47
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 18:47
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 18:47
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 18:47
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 18:47
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 18:47
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 18:47
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 18:47
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 18:47
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 18:47
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 18:47
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 18:47
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 18:47
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 18:47
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 18:47
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 18:47
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 18:47
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 18:47
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 18:47
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 18:47
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 18:47
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 18:47
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 18:47
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 18:47
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 18:47
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 18:47
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 18:47
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 18:47
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 18:47
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 18:47

Print Date: 10/14/2011

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677001-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 18:47
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 18:47
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 18:47
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 18:47
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/30/2011 18:47
Toluene d8	100			82.0-117	%	1	09/30/2011 18:47
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/30/2011 18:47

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 18:47**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677001-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 19:45
Barium	**25.0**	J	0.394	100	ug/L	1	09/30/2011 19:45
Chromium	**1.63**	J	1.47	10.0	ug/L	1	09/30/2011 19:45
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 19:45
Copper	**1.88**	J	0.672	10.0	ug/L	1	09/30/2011 19:45
Lead	**7.22**	J	5.41	10.0	ug/L	1	09/30/2011 19:45
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 19:45
Silver	**1.08**	J	1.05	10.0	ug/L	1	09/30/2011 19:45
Zinc	**8.71**	J	2.26	10.0	ug/L	1	09/30/2011 19:45

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 19:45**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677001-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/7/2011 13:31
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 13:27
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/7/2011 13:27
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 13:31
Thallium	ND	U	0.297	5.50	ug/L	10	10/7/2011 13:31
Vanadium	**8.70**	J	0.661	25.0	ug/L	10	10/7/2011 13:31

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 13:31**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677002-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:55
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 14:10
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 14:10
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 14:10
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 14:10
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 14:10
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 14:10
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 14:10
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 14:10
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 14:10
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 14:10
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 14:10
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 14:10
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 14:10
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 14:10
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 14:10
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 14:10
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 14:10
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 14:10
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 14:10
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 14:10
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 14:10
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 14:10
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 14:10
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 14:10
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 14:10
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 14:10
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 14:10
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 14:10
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 14:10
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 14:10
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 14:10
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 14:10
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 14:10
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 14:10
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 14:10
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 14:10
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 14:10
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 14:10
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 14:10
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 14:10
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 14:10
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 14:10
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 14:10

Print Date: 10/14/2011

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677002-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:55
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 14:10
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 14:10
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 14:10
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 14:10
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/30/2011 14:10
Toluene d8	99.0			82.0-117	%	1	09/30/2011 14:10
4-Bromofluorobenzene	98.0			85.0-115	%	1	09/30/2011 14:10

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 14:10**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677002-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:55
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:00
Barium	**399**		0.394	100	ug/L	1	09/30/2011 20:00
Chromium	**1.52**	J	1.47	10.0	ug/L	1	09/30/2011 20:00
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:00
Copper	**3.56**	J	0.672	10.0	ug/L	1	09/30/2011 20:00
Lead	**7.42**	J	5.41	10.0	ug/L	1	09/30/2011 20:00
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:00
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:00
Zinc	ND	U	2.26	10.0	ug/L	1	09/30/2011 20:00

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:00**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677002-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 08:55
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/7/2011 13:47
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 13:43
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/7/2011 13:43
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 13:47
Thallium	ND	U	0.297	5.50	ug/L	10	10/7/2011 13:47
Vanadium	**7.10**	J	0.661	25.0	ug/L	10	10/7/2011 13:47

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 13:47**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677003-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:25
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 14:35
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 14:35
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 14:35
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 14:35
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 14:35
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 14:35
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 14:35
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 14:35
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 14:35
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 14:35
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 14:35
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 14:35
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 14:35
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 14:35
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 14:35
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 14:35
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 14:35
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 14:35
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 14:35
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 14:35
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 14:35
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 14:35
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 14:35
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 14:35
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 14:35
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 14:35
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 14:35
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 14:35
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 14:35
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 14:35
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 14:35
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 14:35
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 14:35
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 14:35
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 14:35
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 14:35
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 14:35
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 14:35
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 14:35
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 14:35
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 14:35
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 14:35
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 14:35

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677003-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:25
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 14:35
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 14:35
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 14:35
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 14:35
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/30/2011 14:35
Toluene d8	99.0			82.0-117	%	1	09/30/2011 14:35
4-Bromofluorobenzene	99.0			85.0-115	%	1	09/30/2011 14:35

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 14:35**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677003-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:25
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:10
Barium	**65.7**	J	0.394	100	ug/L	1	09/30/2011 20:10
Chromium	**1.75**	J	1.47	10.0	ug/L	1	09/30/2011 20:10
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:10
Copper	**3.28**	J	0.672	10.0	ug/L	1	09/30/2011 20:10
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 20:10
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:10
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:10
Zinc	ND	U	2.26	10.0	ug/L	1	09/30/2011 20:10

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:10**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677003-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:25
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/7/2011 14:12
Beryllium	**0.180**	J	0.119	1.00	ug/L	2	10/7/2011 14:08
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/7/2011 14:08
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 14:12
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:23
Vanadium	**9.80**	J	0.661	25.0	ug/L	10	10/7/2011 16:49

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 14:12**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 16:49**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:23**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677004-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 15:00
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 15:00
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 15:00
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 15:00
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 15:00
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 15:00
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 15:00
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 15:00
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 15:00
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 15:00
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 15:00
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 15:00
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 15:00
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 15:00
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 15:00
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 15:00
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 15:00
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 15:00
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 15:00
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 15:00
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 15:00
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 15:00
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 15:00
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 15:00
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 15:00
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 15:00
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 15:00
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 15:00
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 15:00
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 15:00
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 15:00
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 15:00
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 15:00
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 15:00
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 15:00
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 15:00
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 15:00
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 15:00
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 15:00
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 15:00
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 15:00
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 15:00
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 15:00

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677004-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 15:00
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 15:00
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 15:00
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 15:00
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/30/2011 15:00
Toluene d8	99.0			82.0-117	%	1	09/30/2011 15:00
4-Bromofluorobenzene	98.0			85.0-115	%	1	09/30/2011 15:00

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 15:00**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677004-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:25
Barium	**69.6**	J	0.394	100	ug/L	1	09/30/2011 20:25
Chromium	ND	U	1.47	10.0	ug/L	1	09/30/2011 20:25
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:25
Copper	**4.03**	J	0.672	10.0	ug/L	1	09/30/2011 20:25
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 20:25
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:25
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:25
Zinc	ND	U	2.26	10.0	ug/L	1	09/30/2011 20:25

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:25**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677004-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 09:40
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/7/2011 14:20
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 14:16
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/7/2011 14:16
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 14:20
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:25
Vanadium	**8.70**	J	0.661	25.0	ug/L	10	10/7/2011 16:52

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 14:20**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 16:52**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:25**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677005-B
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 15:25
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 15:25
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 15:25
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 15:25
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 15:25
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 15:25
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 15:25
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 15:25
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 15:25
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 15:25
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 15:25
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 15:25
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 15:25
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 15:25
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 15:25
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 15:25
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 15:25
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 15:25
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 15:25
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 15:25
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 15:25
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 15:25
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 15:25
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 15:25
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 15:25
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 15:25
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 15:25
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 15:25
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 15:25
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 15:25
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 15:25
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 15:25
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 15:25
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 15:25
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 15:25
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 15:25
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 15:25
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 15:25
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 15:25
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 15:25
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 15:25
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 15:25
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 15:25

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677005-B
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 15:25
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 15:25
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 15:25
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 15:25
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	09/30/2011 15:25
Toluene d8	100			82.0-117	%	1	09/30/2011 15:25
4-Bromofluorobenzene	99.0			85.0-115	%	1	09/30/2011 15:25

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 15:25**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677005-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:30
Barium	**40.1**	J	0.394	100	ug/L	1	09/30/2011 20:30
Chromium	**1.52**	J	1.47	10.0	ug/L	1	09/30/2011 20:30
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:30
Copper	**4.28**	J	0.672	10.0	ug/L	1	09/30/2011 20:30
Lead	**6.42**	J	5.41	10.0	ug/L	1	09/30/2011 20:30
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:30
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:30
Zinc	**5.78**	J	2.26	10.0	ug/L	1	09/30/2011 20:30

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:30**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677005-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/7/2011 14:28
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 14:24
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/7/2011 14:24
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 14:28
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:28
Vanadium	**10.8**	J	0.661	25.0	ug/L	10	10/7/2011 16:55

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 14:28**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 16:55**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:28**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677006-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:15
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	**2.62**	J	0.864	100	ug/L	1	09/30/2011 15:51
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 15:51
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 15:51
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 15:51
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 15:51
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 15:51
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 15:51
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 15:51
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 15:51
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 15:51
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 15:51
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 15:51
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 15:51
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 15:51
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 15:51
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 15:51
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 15:51
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 15:51
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 15:51
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 15:51
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 15:51
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 15:51
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 15:51
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 15:51
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 15:51
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 15:51
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 15:51
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 15:51
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 15:51
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 15:51
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 15:51
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 15:51
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 15:51
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 15:51
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 15:51
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 15:51
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 15:51
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 15:51
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 15:51
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 15:51
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 15:51
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 15:51
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 15:51

Print Date: 10/14/2011

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677006-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:15
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 15:51
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 15:51
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 15:51
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 15:51
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/30/2011 15:51
Toluene d8	99.0			82.0-117	%	1	09/30/2011 15:51
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/30/2011 15:51

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 15:51**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677006-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:15
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:35
Barium	**37.8**	J	0.394	100	ug/L	1	09/30/2011 20:35
Chromium	ND	U	1.47	10.0	ug/L	1	09/30/2011 20:35
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:35
Copper	**3.89**	J	0.672	10.0	ug/L	1	09/30/2011 20:35
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 20:35
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:35
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:35
Zinc	ND	U	2.26	10.0	ug/L	1	09/30/2011 20:35

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:35**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677006-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:15
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/7/2011 14:36
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 14:32
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/7/2011 14:32
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 14:36
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:30
Vanadium	**10.5**	J	0.661	25.0	ug/L	10	10/7/2011 16:58

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 14:36**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 16:58**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:30**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677007-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:35
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 16:16
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 16:16
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 16:16
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 16:16
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 16:16
Bromoform	**0.750**	J	0.0974	3.00	ug/L	1	09/30/2011 16:16
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 16:16
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 16:16
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 16:16
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 16:16
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 16:16
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 16:16
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 16:16
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 16:16
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 16:16
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 16:16
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 16:16
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 16:16
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 16:16
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 16:16
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 16:16
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 16:16
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 16:16
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 16:16
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 16:16
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 16:16
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 16:16
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 16:16
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 16:16
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 16:16
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 16:16
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 16:16
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 16:16
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 16:16
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 16:16
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 16:16
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 16:16
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 16:16
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 16:16
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 16:16
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 16:16
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 16:16
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 16:16

Print Date: 10/14/2011

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677007-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:35
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 16:16
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 16:16
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 16:16
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 16:16
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/30/2011 16:16
Toluene d8	99.0			82.0-117	%	1	09/30/2011 16:16
4-Bromofluorobenzene	98.0			85.0-115	%	1	09/30/2011 16:16

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 16:16**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677007-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:35
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:40
Barium	**66.1**	J	0.394	100	ug/L	1	09/30/2011 20:40
Chromium	**1.52**	J	1.47	10.0	ug/L	1	09/30/2011 20:40
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:40
Copper	**3.58**	J	0.672	10.0	ug/L	1	09/30/2011 20:40
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 20:40
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:40
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:40
Zinc	**9.21**	J	2.26	10.0	ug/L	1	09/30/2011 20:40

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:40**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677007-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:35
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/13/2011 17:00
Beryllium	**0.200**	J	0.119	1.00	ug/L	2	10/7/2011 17:01
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/13/2011 14:33
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 14:52
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:35
Vanadium	**7.12**	J	0.132	25.0	ug/L	2	10/7/2011 17:01

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 14:52**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 17:01**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:33**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1106**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 17:00**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677008-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:50
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	**3.25**	J	0.864	100	ug/L	1	09/30/2011 16:41
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 16:41
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 16:41
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 16:41
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 16:41
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 16:41
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 16:41
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 16:41
Carbon disulfide	**0.450**	J	0.106	100	ug/L	1	09/30/2011 16:41
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 16:41
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 16:41
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 16:41
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 16:41
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 16:41
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 16:41
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 16:41
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 16:41
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 16:41
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 16:41
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 16:41
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 16:41
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 16:41
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 16:41
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 16:41
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 16:41
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 16:41
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 16:41
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 16:41
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 16:41
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 16:41
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 16:41
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 16:41
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 16:41
4-Methyl-2-pentanone	**1.43**	J	0.558	100	ug/L	1	09/30/2011 16:41
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 16:41
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 16:41
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 16:41
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 16:41
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 16:41
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 16:41
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 16:41
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 16:41
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 16:41

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677008-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:50
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 16:41
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 16:41
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 16:41
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 16:41
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/30/2011 16:41
Toluene d8	99.0			82.0-117	%	1	09/30/2011 16:41
4-Bromofluorobenzene	100			85.0-115	%	1	09/30/2011 16:41

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 16:41**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677008-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:50
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:45
Barium	**2.48**	J	0.394	100	ug/L	1	09/30/2011 20:45
Chromium	**5.64**	J	1.47	10.0	ug/L	1	09/30/2011 20:45
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:45
Copper	**4.85**	J	0.672	10.0	ug/L	1	09/30/2011 20:45
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 20:45
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:45
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:45
Zinc	ND	U	2.26	10.0	ug/L	1	09/30/2011 20:45

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:45**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677008-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 10:50
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/7/2011 17:10
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 17:07
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/13/2011 14:38
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 15:00
Thallium	ND	U	0.297	5.50	ug/L	10	10/7/2011 17:10
Vanadium	**21.6**	J	0.661	25.0	ug/L	10	10/7/2011 17:10

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 15:00**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 17:10**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:38**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677009-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:10
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	**1.13**	J	0.864	100	ug/L	1	09/30/2011 17:06
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 17:06
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 17:06
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 17:06
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 17:06
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 17:06
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 17:06
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 17:06
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 17:06
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 17:06
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 17:06
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 17:06
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 17:06
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 17:06
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 17:06
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 17:06
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 17:06
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 17:06
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 17:06
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 17:06
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 17:06
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 17:06
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 17:06
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 17:06
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 17:06
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 17:06
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 17:06
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 17:06
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 17:06
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 17:06
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 17:06
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 17:06
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 17:06
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 17:06
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 17:06
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 17:06
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 17:06
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 17:06
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 17:06
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 17:06
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 17:06
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 17:06
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 17:06

Print Date: 10/14/2011

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677009-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:10
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 17:06
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 17:06
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 17:06
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 17:06
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/30/2011 17:06
Toluene d8	99.0			82.0-117	%	1	09/30/2011 17:06
4-Bromofluorobenzene	97.0			85.0-115	%	1	09/30/2011 17:06

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 17:06**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677009-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:10
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:50
Barium	**40.2**	J	0.394	100	ug/L	1	09/30/2011 20:50
Chromium	**3.17**	J	1.47	10.0	ug/L	1	09/30/2011 20:50
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:50
Copper	**3.83**	J	0.672	10.0	ug/L	1	09/30/2011 20:50
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 20:50
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:50
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:50
Zinc	**2.89**	J	2.26	10.0	ug/L	1	09/30/2011 20:50

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:50**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677009-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:10
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/13/2011 17:02
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 17:19
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/7/2011 17:19
Selenium	ND	U	0.824	10.0	ug/L	10	10/7/2011 15:08
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:40
Vanadium	**4.80**	J	0.661	25.0	ug/L	10	10/13/2011 14:40

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 15:08**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 17:19**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:40**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1106**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 17:02**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677010-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:30
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 17:31
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 17:31
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 17:31
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 17:31
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 17:31
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 17:31
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 17:31
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 17:31
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 17:31
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 17:31
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 17:31
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 17:31
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 17:31
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 17:31
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 17:31
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 17:31
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 17:31
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 17:31
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 17:31
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 17:31
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 17:31
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 17:31
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 17:31
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 17:31
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 17:31
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 17:31
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 17:31
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 17:31
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 17:31
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 17:31
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 17:31
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 17:31
Methylene chloride	ND	U	0.152	1.00	ug/L	1	09/30/2011 17:31
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 17:31
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 17:31
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 17:31
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 17:31
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 17:31
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 17:31
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 17:31
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 17:31
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 17:31
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 17:31

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677010-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:30
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 17:31
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 17:31
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 17:31
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 17:31
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	09/30/2011 17:31
Toluene d8	98.0			82.0-117	%	1	09/30/2011 17:31
4-Bromofluorobenzene	98.0			85.0-115	%	1	09/30/2011 17:31

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 17:31**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677010-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:30
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 20:55
Barium	**8.39**	J	0.394	100	ug/L	1	09/30/2011 20:55
Chromium	**2.10**	J	1.47	10.0	ug/L	1	09/30/2011 20:55
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 20:55
Copper	**2.58**	J	0.672	10.0	ug/L	1	09/30/2011 20:55
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 20:55
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 20:55
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 20:55
Zinc	**2.36**	J	2.26	10.0	ug/L	1	09/30/2011 20:55

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 20:55**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677010-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 13:30
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/13/2011 17:04
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 17:25
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/13/2011 14:50
Selenium	ND	U	0.165	10.0	ug/L	2	10/7/2011 17:25
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:43
Vanadium	**5.70**	J	0.661	25.0	ug/L	10	10/13/2011 14:43

Batch Information

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 17:25**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:50**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1106**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 17:04**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-Trip Blank**

Client Sample ID: **2509-Trip Blank**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677011-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 00:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	09/30/2011 12:05
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 12:05
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 12:05
Bromochloromethane	ND	U	0.211	1.00	ug/L	1	09/30/2011 12:05
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 12:05
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 12:05
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 12:05
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 12:05
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 12:05
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 12:05
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 12:05
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 12:05
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 12:05
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 12:05
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 12:05
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 12:05
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 12:05
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 12:05
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 12:05
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 12:05
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 12:05
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 12:05
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 12:05
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 12:05
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 12:05
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 12:05
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 12:05
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 12:05
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 12:05
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 12:05
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 12:05
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 12:05
Methylene chloride	**1.06**		0.152	1.00	ug/L	1	09/30/2011 12:05
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 12:05
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 12:05
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 12:05
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 12:05
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 12:05
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 12:05
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 12:05
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 12:05
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 12:05
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 12:05

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-Trip Blank**

Client Sample ID: **2509-Trip Blank**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677011-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 00:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 12:05
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 12:05
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 12:05
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 12:05
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/30/2011 12:05
Toluene d8	99.0			82.0-117	%	1	09/30/2011 12:05
4-Bromofluorobenzene	98.0			85.0-115	%	1	09/30/2011 12:05

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 12:05**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677012-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 14:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	**1.22**	J	0.864	100	ug/L	1	09/30/2011 12:30
Acrylonitrile	ND	U	3.04	200	ug/L	1	09/30/2011 12:30
Benzene	ND	U	0.113	1.00	ug/L	1	09/30/2011 12:30
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	09/30/2011 12:30
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	09/30/2011 12:30
Bromoform	ND	U	0.0974	3.00	ug/L	1	09/30/2011 12:30
Bromomethane	ND	U	0.237	10.0	ug/L	1	09/30/2011 12:30
2-Butanone	ND	U	0.723	100	ug/L	1	09/30/2011 12:30
Carbon disulfide	ND	U	0.106	100	ug/L	1	09/30/2011 12:30
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	09/30/2011 12:30
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	09/30/2011 12:30
Chloroethane	ND	U	0.311	10.0	ug/L	1	09/30/2011 12:30
Chloroform	ND	U	0.139	5.00	ug/L	1	09/30/2011 12:30
Chloromethane	ND	U	0.448	1.00	ug/L	1	09/30/2011 12:30
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	09/30/2011 12:30
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	09/30/2011 12:30
Dibromomethane	ND	U	0.168	10.0	ug/L	1	09/30/2011 12:30
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	09/30/2011 12:30
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	09/30/2011 12:30
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	09/30/2011 12:30
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	09/30/2011 12:30
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	09/30/2011 12:30
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	09/30/2011 12:30
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	09/30/2011 12:30
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	09/30/2011 12:30
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	09/30/2011 12:30
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	09/30/2011 12:30
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	09/30/2011 12:30
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	09/30/2011 12:30
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	09/30/2011 12:30
2-Hexanone	ND	U	0.728	50.0	ug/L	1	09/30/2011 12:30
Methyl iodide	ND	U	0.115	10.0	ug/L	1	09/30/2011 12:30
Methylene chloride	**2.55**		0.152	1.00	ug/L	1	09/30/2011 12:30
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	09/30/2011 12:30
Styrene	ND	U	0.102	1.00	ug/L	1	09/30/2011 12:30
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	09/30/2011 12:30
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	09/30/2011 12:30
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	09/30/2011 12:30
Toluene	ND	U	0.133	1.00	ug/L	1	09/30/2011 12:30
Trichloroethene	ND	U	0.125	1.00	ug/L	1	09/30/2011 12:30
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	09/30/2011 12:30
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	09/30/2011 12:30
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	09/30/2011 12:30

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677012-A
Lab Project ID: 31102677

Collection Date: 09/27/2011 14:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	09/30/2011 12:30
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	09/30/2011 12:30
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	09/30/2011 12:30
Xylene (total)	ND	U	0.182	5.00	ug/L	1	09/30/2011 12:30
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/30/2011 12:30
Toluene d8	99.0			82.0-117	%	1	09/30/2011 12:30
4-Bromofluorobenzene	98.0			85.0-115	%	1	09/30/2011 12:30

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **09/30/2011 12:30**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677012-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 14:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	09/30/2011 21:00
Barium	**13.3**	J	0.394	100	ug/L	1	09/30/2011 21:00
Chromium	**1.75**	J	1.47	10.0	ug/L	1	09/30/2011 21:00
Cobalt	ND	U	3.39	10.0	ug/L	1	09/30/2011 21:00
Copper	**3.38**	J	0.672	10.0	ug/L	1	09/30/2011 21:00
Lead	ND	U	5.41	10.0	ug/L	1	09/30/2011 21:00
Nickel	ND	U	3.06	50.0	ug/L	1	09/30/2011 21:00
Silver	ND	U	1.05	10.0	ug/L	1	09/30/2011 21:00
Zinc	ND	U	2.26	10.0	ug/L	1	09/30/2011 21:00

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**
Analytical Date/Time: **09/30/2011 21:00**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF**
Lab Sample ID: 31102677012-D
Lab Project ID: 31102677

Collection Date: 09/27/2011 14:00
Received Date: 09/29/2011 09:00
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	6.00	ug/L	10	10/13/2011 17:06
Beryllium	ND	U	0.119	1.00	ug/L	2	10/7/2011 17:28
Cadmium	ND	U	0.0556	1.00	ug/L	2	10/13/2011 14:52
Selenium	**1.70**	J	0.824	10.0	ug/L	10	10/7/2011 17:32
Thallium	ND	U	0.297	5.50	ug/L	10	10/13/2011 14:55
Vanadium	**7.00**	J	0.661	25.0	ug/L	10	10/13/2011 14:55

Batch Information

Analytical Batch: **MMS1103**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/07/2011 17:28**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1105**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 14:52**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1106**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **10/13/2011 17:06**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8260B

Prep Method: SW-846 5030B
Prep Batch: VXX2146
Prep Date: 09/30/2011 07:55

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 12612 [VXX/2146]	41904	09/30/2011 09:09	VMS1583	MSD4	DVO
LCSD for HBN 12612 [VXX/2146]	41905	09/30/2011 09:34	VMS1583	MSD4	DVO
MB for HBN 12612 [VXX/2146]	41906	09/30/2011 11:14	VMS1583	MSD4	DVO
2509-Trip Blank	31102677011	09/30/2011 12:05	VMS1583	MSD4	DVO
2509-Field Blank	31102677012	09/30/2011 12:30	VMS1583	MSD4	DVO
2509-MW15D	31102677002	09/30/2011 14:10	VMS1583	MSD4	DVO
2509-MW16S	31102677003	09/30/2011 14:35	VMS1583	MSD4	DVO
2509-MW16D	31102677004	09/30/2011 15:00	VMS1583	MSD4	DVO
2509-MW17S	31102677005	09/30/2011 15:25	VMS1583	MSD4	DVO
2509-MW17D	31102677006	09/30/2011 15:51	VMS1583	MSD4	DVO
2509-MW18S	31102677007	09/30/2011 16:16	VMS1583	MSD4	DVO
2509-MW18D	31102677008	09/30/2011 16:41	VMS1583	MSD4	DVO
2509-MW19S	31102677009	09/30/2011 17:06	VMS1583	MSD4	DVO
2509-MW19D	31102677010	09/30/2011 17:31	VMS1583	MSD4	DVO
2509-MW15S	31102677001	09/30/2011 18:47	VMS1583	MSD4	DVO
2509-MW15D(41698DUP)	42207	09/30/2011 19:37	VMS1583	MSD4	DVO
2509-MW16S(41699MS)	42208	09/30/2011 20:02	VMS1583	MSD4	DVO

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Method Blank

Blank ID: MB for HBN 12612 [VXX/2146] Matrix: Water
Blank Lab ID: 41906
QC for Samples:
31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Chloromethane	ND	U	0.448	1.00	ug/L	1
Vinyl chloride	ND	U	0.124	1.00	ug/L	1
Bromomethane	ND	U	0.237	1.00	ug/L	1
Chloroethane	ND	U	0.311	1.00	ug/L	1
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1
1,1-Dichloroethene	ND	U	0.212	1.00	ug/L	1
Acetone	ND	U	0.864	25.0	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	1.00	ug/L	1
Acrylonitrile	ND	U	3.04	25.0	ug/L	1
1,1-Dichloroethane	ND	U	0.165	1.00	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	1.00	ug/L	1
2-Butanone	ND	U	0.723	25.0	ug/L	1
Bromochloromethane	ND	U	0.211	1.00	ug/L	1
Chloroform	ND	U	0.139	1.00	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1
Benzene	ND	U	0.113	1.00	ug/L	1
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1
Trichloroethene	ND	U	0.125	1.00	ug/L	1
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1
Dibromomethane	ND	U	0.168	1.00	ug/L	1
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1
4-Methyl-2-pentanone	ND	U	0.558	5.00	ug/L	1
Toluene	ND	U	0.133	1.00	ug/L	1
Methyl iodide	ND	U	0.115	1.00	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1
Vinyl acetate	ND	U	0.882	2.00	ug/L	1
Carbon disulfide	ND	U	0.106	1.00	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1
2-Hexanone	ND	U	0.728	5.00	ug/L	1
Dibromochloromethane	ND	U	0.134	1.00	ug/L	1
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1
Chlorobenzene	ND	U	0.116	1.00	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	1.00	ug/L	1
Bromoform	ND	U	0.0974	1.00	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	1.00	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1

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Method Blank

Blank ID: MB for HBN 12612 [VXX/2146] Matrix: Water
Blank Lab ID: 41906
QC for Samples:
31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Styrene	ND	U	0.102	1.00	ug/L	1
Xylene (total)	ND	U	0.182	2.00	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	1.00	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
trans-1,4-Dichloro-2-butene	ND	U	0.414	5.00	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	98.0			64.0-140	%	1
Toluene d8	99.0			82.0-117	%	1
4-Bromofluorobenzene	99.0			85.0-115	%	1

Batch Information

Analytical Batch: VMS1583
Analytical Method: SW-846 8260B
Instrument: MSD4
Analyst: DVO
Analytical Date/Time: 9/30/2011 11:14:00AM

Prep Batch: VXX2146
Prep Method: SW-846 5030B
Prep Date/Time: 9/30/2011 7:55:03AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 12612 [VXX/2146]
Blank Spike Lab ID: 41904
Date Analyzed: 09/30/2011 09:09

Spike Duplicate ID: LCSD for HBN 12612 [VXX/2146]
Spike Duplicate Lab ID: 41905
Date Analyzed: 09/30/2011 09:34
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloromethane	5.00	5.51	110	5.00	5.31	106	57.0-132	3.7	30.00
Vinyl chloride	5.00	5.32	106	5.00	5.08	102	59.0-138	4.6	30.00
Bromomethane	5.00	6.48	130	5.00	5.91	118	51.0-134	9.2	30.00
Chloroethane	5.00	6.05	121	5.00	5.88	118	64.0-145	2.8	30.00
Trichlorofluoromethane	5.00	5.99	120	5.00	5.63	113	64.0-133	6.2	30.00
1,1-Dichloroethene	5.00	5.01	100	5.00	5.04	101	71.0-128	0.60	30.00
Acetone	25.0	27.0	108	25.0	30.1	120	52.0-140	11	30.00
Methylene chloride	5.00	5.03	101	5.00	5.12	102	70.0-113	1.8	30.00
trans-1,2-Dichloroethene	5.00	5.04	101	5.00	5.07	101	57.0-138	0.59	30.00
Acrylonitrile	125	121	97	125	119	96	55.0-141	1.7	30.00
1,1-Dichloroethane	5.00	5.28	106	5.00	5.17	103	68.0-133	2.1	30.00
cis-1,2-Dichloroethene	5.00	5.09	102	5.00	4.97	99	73.0-128	2.4	30.00
2-Butanone	25.0	24.9	100	25.0	27.2	109	58.0-134	8.8	30.00
Bromochloromethane	5.00	4.89	98	5.00	4.99	100	73.0-128	2.0	30.00
Chloroform	5.00	5.13	103	5.00	5.09	102	74.0-124	0.78	30.00
1,1,1-Trichloroethane	5.00	5.07	101	5.00	5.00	100	76.0-119	1.4	30.00
Carbon tetrachloride	5.00	4.95	99	5.00	4.93	99	75.0-120	0.40	30.00
Benzene	5.00	5.17	103	5.00	5.15	103	76.0-124	0.39	30.00
1,2-Dichloroethane	5.00	5.16	103	5.00	5.28	106	76.0-119	2.3	30.00
Trichloroethene	5.00	5.02	100	5.00	4.96	99	74.0-121	1.2	30.00
1,2-Dichloropropane	5.00	5.08	102	5.00	4.90	98	74.0-124	3.6	30.00
Dibromomethane	5.00	4.80	96	5.00	5.07	101	71.0-128	5.5	30.00
Bromodichloromethane	5.00	4.87	97	5.00	4.93	99	72.0-120	1.2	30.00
cis-1,3-Dichloropropene	5.00	5.06	101	5.00	5.06	101	73.0-122	0.0	30.00
4-Methyl-2-pentanone	25.0	22.9	92	25.0	24.5	98	65.0-124	6.8	30.00
Toluene	5.00	5.21	104	5.00	5.25	105	75.0-123	0.76	30.00
Methyl iodide	5.00	4.93	99	5.00	4.91	98	55.0-123	0.41	30.00
trans-1,3-Dichloropropene	5.00	4.76	95	5.00	4.82	96	70.0-125	1.3	30.00
Vinyl acetate	12.5	13.7	109	12.5	13.6	109	40.0-141	0.73	30.00
Carbon disulfide	5.00	5.08	102	5.00	4.86	97	65.0-132	4.4	30.00
1,1,2-Trichloroethane	5.00	4.93	99	5.00	4.92	98	76.0-121	0.20	30.00
Tetrachloroethene	5.00	5.02	100	5.00	5.06	101	59.0-112	0.79	30.00
2-Hexanone	25.0	23.3	93	25.0	25.5	102	56.0-133	9.0	30.00
Dibromochloromethane	5.00	4.85	97	5.00	4.78	96	67.0-122	1.5	30.00

Print Date: 10/14/2011

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 12612 [VXX/2146]
Blank Spike Lab ID: 41904
Date Analyzed: 09/30/2011 09:09

Spike Duplicate ID: LCSD for HBN 12612 [VXX/2146]
Spike Duplicate Lab ID: 41905
Date Analyzed: 09/30/2011 09:34
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	5.00	4.76	95	5.00	4.88	98	74.0-119	2.5	30.00
Chlorobenzene	5.00	5.13	103	5.00	4.96	99	74.0-120	3.4	30.00
1,1,1,2-Tetrachloroethane	5.00	4.91	98	5.00	4.57	91	73.0-119	7.2	30.00
Bromoform	5.00	4.66	93	5.00	4.47	89	62.0-127	4.2	30.00
1,1,2,2-Tetrachloroethane	5.00	4.84	97	5.00	4.85	97	68.0-129	0.21	30.00
1,2,3-Trichloropropane	5.00	4.50	90	5.00	4.81	96	67.0-126	6.7	30.00
Ethyl Benzene	5.00	5.26	105	5.00	5.11	102	76.0-123	2.9	30.00
Styrene	5.00	5.13	103	5.00	5.06	101	76.0-121	1.4	30.00
1,4-Dichlorobenzene	5.00	5.14	103	5.00	5.14	103	70.0-125	0.0	30.00
1,2-Dichlorobenzene	5.00	4.94	99	5.00	5.02	100	76.0-118	1.6	30.00
1,2-Dibromo-3-chloropropane	30.0	25.4	85	30.0	25.7	86	62.0-130	1.2	30.00
trans-1,4-Dichloro-2-butene	25.0	20.4	82	25.0	20.4	82	61.0-132	0.0	30.00
Surrogates									
1,2-Dichloroethane-d4			98			100	64.0-140		
Toluene d8			100			101	82.0-117		
4-Bromofluorobenzene			100			98	85.0-115		

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 07:55**
Spike Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**
Dupe Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**

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Matrix Spike Summary

Original Sample ID: 31102677003 (2509-MW16S)
MS Sample ID: 42208
MSD Sample ID:

Analysis Date: 09/30/2011 14:35
Analysis Date: 09/30/2011 20:02
Analysis Date:
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Acetone	ND	25.0	13.7	55				18.0-85.0		
Acrylonitrile	ND	125	117	94				85.0-175		
Benzene	ND	5.00	5.12	102				62.0-135		
Bromochloromethane	ND	5.00	5.04	101				76.0-126		
Bromodichloromethane	ND	5.00	4.34	87				74.0-123		
Bromoform	ND	5.00	3.75	75				52.0-122		
Bromomethane	ND	5.00	6.03	121				10.0-284		
2-Butanone	ND	25.0	16.7	67				36.0-107		
Carbon disulfide	ND	5.00	4.58	92				69.0-129		
Carbon tetrachloride	ND	5.00	4.29	86				72.0-122		
Chlorobenzene	ND	5.00	4.82	96				77.0-118		
Chloroethane	ND	5.00	6.18	124				10.0-233		
Chloroform	ND	5.00	4.95	99				74.0-128		
Chloromethane	ND	5.00	5.62	112				72.0-138		
Dibromochloromethane	ND	5.00	4.08	82				69.0-117		
1,2-Dibromo-3-chloropropane	ND	30.0	19.8	66				20.0-171		
Dibromomethane	ND	5.00	4.59	92				71.0-137		
1,2-Dibromoethane	ND	5.00	4.49	90				79.0-123		
1,2-Dichlorobenzene	ND	5.00	4.86	97				75.0-120		
1,4-Dichlorobenzene	ND	5.00	4.95	99				75.0-118		
trans-1,4-Dichloro-2-butene	ND	25.0	17.5	70				26.0-149		
1,1-Dichloroethane	ND	5.00	5.14	103				76.0-128		
1,1-Dichloroethene	ND	5.00	5.06	101				64.0-130		
1,2-Dichloroethane	ND	5.00	5.06	101				71.0-127		
cis-1,2-Dichloroethene	ND	5.00	5.04	101				73.0-134		
trans-1,2-Dichloroethene	ND	5.00	5.04	101				75.0-124		
1,2-Dichloropropane	ND	5.00	4.94	99				77.0-129		
cis-1,3-Dichloropropene	ND	5.00	4.11	82				67.0-132		
trans-1,3-Dichloropropene	ND	5.00	3.83	77				45.0-144		
Ethyl Benzene	ND	5.00	5.03	101				74.0-126		
2-Hexanone	ND	25.0	16.5	66				42.0-111		
Methyl iodide	ND	5.00	4.61	92				41.0-126		
Methylene chloride	ND	5.00	5.02	100				49.0-155		
4-Methyl-2-pentanone	ND	25.0	20.7	83				6.90-166		
Styrene	ND	5.00	5.01	100				73.0-123		
1,1,1,2-Tetrachloroethane	ND	5.00	3.93	79				69.0-120		
1,1,2,2-Tetrachloroethane	ND	5.00	4.19	84				76.0-136		
Tetrachloroethene	ND	5.00	4.84	97				46.0-153		

Print Date: 10/14/2011

N.C. Certification # 481

Matrix Spike Summary

Original Sample ID: 31102677003 (2509-MW16S)
MS Sample ID: 42208
MSD Sample ID:

Analysis Date: 09/30/2011 14:35
Analysis Date: 09/30/2011 20:02
Analysis Date:
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Toluene	ND	5.00	5.12	102				66.0-128		
Trichloroethene	ND	5.00	4.95	99				85.0-136		
1,1,1-Trichloroethane	ND	5.00	4.71	94				78.0-121		
1,1,2-Trichloroethane	ND	5.00	4.62	92				65.0-128		
Trichlorofluoromethane	ND	5.00	6.09	122				77.0-132		
1,2,3-Trichloropropane	ND	5.00	4.14	83				10.0-218		
Vinyl acetate	ND	12.5	11.8	95				0.00-355		
Vinyl chloride	ND	5.00	5.32	106				68.0-137		
Surrogates										
1,2-Dichloroethane-d4				99				64.0-140		
Toluene d8				99				82.0-117		
4-Bromofluorobenzene				100				85.0-115		

Batch Information

Analytical Batch: **VMS1583**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**

Prep Batch: **VXX2146**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/30/2011 12:03**
MS Init Wt./Vol.: **40 mL** Extract Vol.: **40 mL**
MSD Init Wt./Vol.: Extract Vol.:

Print Date: 10/14/2011

N.C. Certification # 481

Duplicate Sample Summary

Original Sample ID: 31102677002-A
Duplicate Sample ID: 42207

Analysis Date: 09/30/2011 14:10
Analysis Date: 09/30/2011 19:37
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

PARAMETER	Original (ug/L)	Duplicate (ug/L)	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	ND	ND	0.0	30.00
1,1,1-Trichloroethane	ND	ND	0.0	30.00
1,1,2,2-Tetrachloroethane	ND	ND	0.0	30.00
1,1,2-Trichloroethane	ND	ND	0.0	30.00
1,1-Dichloroethane	ND	ND	0.0	30.00
1,1-Dichloroethene	ND	ND	0.0	30.00
1,2,3-Trichloropropane	ND	ND	0.0	30.00
1,2-Dibromo-3-chloropropane	ND	ND	0.0	30.00
1,2-Dibromoethane	ND	ND	0.0	30.00
1,2-Dichlorobenzene	ND	ND	0.0	30.00
1,2-Dichloroethane	ND	ND	0.0	30.00
1,2-Dichloropropane	ND	ND	0.0	30.00
1,4-Dichlorobenzene	ND	ND	0.0	30.00
2-Butanone	ND	ND	0.0	30.00
2-Hexanone	ND	ND	0.0	30.00
4-Methyl-2-pentanone	ND	ND	0.0	30.00
Acetone	ND	ND	0.0	30.00
Acrylonitrile	ND	ND	0.0	30.00
Benzene	ND	ND	0.0	30.00
Bromochloromethane	ND	ND	0.0	30.00
Bromodichloromethane	ND	ND	0.0	30.00
Bromoform	ND	ND	0.0	30.00
Bromomethane	ND	ND	0.0	30.00
Carbon disulfide	ND	ND	0.0	30.00
Carbon tetrachloride	ND	ND	0.0	30.00
Chlorobenzene	ND	ND	0.0	30.00
Chloroethane	ND	ND	0.0	30.00
Chloroform	ND	ND	0.0	30.00
Chloromethane	ND	ND	0.0	30.00
cis-1,2-Dichloroethene	ND	ND	0.0	30.00
cis-1,3-Dichloropropene	ND	ND	0.0	30.00
Dibromochloromethane	ND	ND	0.0	30.00
Dibromomethane	ND	ND	0.0	30.00
Ethyl Benzene	ND	ND	0.0	30.00
Methyl iodide	ND	ND	0.0	30.00
Methylene chloride	ND	ND	**200***	30.00
Styrene	ND	ND	0.0	30.00
Tetrachloroethene	ND	ND	0.0	30.00
Toluene	ND	ND	0.0	30.00
trans-1,2-Dichloroethene	ND	ND	0.0	30.00

Print Date: 10/14/2011

N.C. Certification # 481

Duplicate Sample Summary

Original Sample ID: 31102677002-A
Duplicate Sample ID: 42207

Analysis Date: 09/30/2011 14:10
Analysis Date: 09/30/2011 19:37
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677011, 31102677012

Results by **SW-846 8260B**

PARAMETER	Original (ug/L)	Duplicate (ug/L)	RPD (%)	RPD CL
trans-1,3-Dichloropropene	ND	ND	0.0	30.00
trans-1,4-Dichloro-2-butene	ND	ND	0.0	30.00
Trichloroethene	ND	ND	0.0	30.00
Trichlorofluoromethane	ND	ND	0.0	30.00
Vinyl acetate	ND	ND	0.0	30.00
Vinyl chloride	ND	ND	0.0	30.00
Xylene (total)	ND	ND	0.0	
Surrogates				
1,2-Dichloroethane-d4	100	99.0	0.67	
4-Bromofluorobenzene	98.0	98.0	0.68	
Toluene d8	99.0	100	0.34	

Batch Information

Analytical Batch: VMS1583
Analytical Method: SW-846 8260B
Instrument: MSD4
Analyst: DVO

Prep Batch: VXX2146
Prep Method: SW-846 5030B
Prep Date/Time: 09/30/2011 12:03

Print Date: 10/14/2011

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 6010C

Prep Method: SW-846 3010A
Prep Batch: MXX1541
Prep Date: 09/29/2011 16:42

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 12548 [MXX/1541]	41888	09/30/2011 19:29	MIP1264	ICP1	NTM
LCS for HBN 12548 [MXX/1541]	41889	09/30/2011 19:35	MIP1264	ICP1	NTM
LCSD for HBN 12548 [MXX/1541]	41890	09/30/2011 19:40	MIP1264	ICP1	NTM
2509-MW15S	31102677001	09/30/2011 19:45	MIP1264	ICP1	NTM
2509-MW15S(41697MS)	41891	09/30/2011 19:50	MIP1264	ICP1	NTM
2509-MW15S(41697MSD)	41892	09/30/2011 19:55	MIP1264	ICP1	NTM
2509-MW15D	31102677002	09/30/2011 20:00	MIP1264	ICP1	NTM
2509-MW15D(41698DUP)	41893	09/30/2011 20:05	MIP1264	ICP1	NTM
2509-MW16S	31102677003	09/30/2011 20:10	MIP1264	ICP1	NTM
2509-MW16D	31102677004	09/30/2011 20:25	MIP1264	ICP1	NTM
2509-MW17S	31102677005	09/30/2011 20:30	MIP1264	ICP1	NTM
2509-MW17D	31102677006	09/30/2011 20:35	MIP1264	ICP1	NTM
2509-MW18S	31102677007	09/30/2011 20:40	MIP1264	ICP1	NTM
2509-MW18D	31102677008	09/30/2011 20:45	MIP1264	ICP1	NTM
2509-MW19S	31102677009	09/30/2011 20:50	MIP1264	ICP1	NTM
2509-MW19D	31102677010	09/30/2011 20:55	MIP1264	ICP1	NTM
2509-Field Blank	31102677012	09/30/2011 21:00	MIP1264	ICP1	NTM

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Method Blank

Blank ID: MB for HBN 12548 [MXX/1541]
Matrix: Water
Blank Lab ID: 41888
QC for Samples:
31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Arsenic	ND	U	0.00369	0.0100	mg/L	1
Zinc	ND	U	0.00226	0.0200	mg/L	1
Lead	ND	U	0.00541	0.0100	mg/L	1
Cobalt	ND	U	0.00339	0.0100	mg/L	1
Nickel	ND	U	0.00306	0.0100	mg/L	1
Barium	**0.000660**	J	0.000394	0.100	mg/L	1
Chromium	ND	U	0.00147	0.0100	mg/L	1
Copper	**0.00299**	J	0.000672	0.0100	mg/L	1
Silver	ND	U	0.00105	0.0100	mg/L	1

Batch Information

Analytical Batch: MIP1264
Analytical Method: SW-846 6010C
Instrument: ICP1
Analyst: NTM
Analytical Date/Time: 9/30/2011 7:29:56PM

Prep Batch: MXX1541
Prep Method: SW-846 3010A
Prep Date/Time: 9/29/2011 4:42:06PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 12548 [MXX/1541]
Blank Spike Lab ID: 41889
Date Analyzed: 09/30/2011 19:35

Spike Duplicate ID: LCSD for HBN 12548 [MXX/1541]
Spike Duplicate Lab ID: 41890
Date Analyzed: 09/30/2011 19:40
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6010C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	0.400	0.377	94	0.400	0.384	96	80.0-120	1.8	20.00
Zinc	0.400	0.355	89	0.400	0.355	89	80.0-120	0.0	20.00
Lead	0.400	0.356	89	0.400	0.354	88	80.0-120	0.56	20.00
Cobalt	0.400	0.382	95	0.400	0.376	94	80.0-120	1.6	20.00
Nickel	0.400	0.379	95	0.400	0.376	94	80.0-120	0.79	20.00
Barium	2.00	1.86	93	2.00	1.85	93	80.0-120	0.54	20.00
Chromium	0.400	0.371	93	0.400	0.371	93	80.0-120	0.0	20.00
Copper	0.400	0.381	95	0.400	0.378	94	80.0-120	0.79	20.00
Silver	0.400	0.388	97	0.400	0.387	97	80.0-120	0.26	20.00

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31102677001 (2509-MW15S)
MS Sample ID: 41891
MSD Sample ID: 41892

Analysis Date: 09/30/2011 19:45
Analysis Date: 09/30/2011 19:50
Analysis Date: 09/30/2011 19:55
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6010C**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	ND	0.400	0.368	92	0.400	0.374	94	75.0-125	1.6	20.00
Barium	25.0	2.00	1.82	91	2.00	1.87	93	75.0-125	2.7	20.00
Chromium	1.63	0.400	0.360	90	0.400	0.367	92	75.0-125	1.9	20.00
Cobalt	ND	0.400	0.370	92	0.400	0.377	94	75.0-125	1.9	20.00
Copper	1.88	0.400	0.370	92	0.400	0.379	95	75.0-125	2.4	20.00
Lead	7.22	0.400	0.340	85	0.400	0.346	86	75.0-125	1.7	20.00
Nickel	ND	0.400	0.368	92	0.400	0.374	93	75.0-125	1.6	20.00
Silver	1.08	0.400	0.372	93	0.400	0.381	95	75.0-125	2.4	20.00
Zinc	8.71	0.400	0.350	87	0.400	0.356	89	75.0-125	1.7	20.00

Batch Information

Analytical Batch: **MIP1264**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **NTM**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Duplicate Sample Summary

Original Sample ID: 31102677002-D
Duplicate Sample ID: 41893

Analysis Date: 09/30/2011 20:00
Analysis Date: 09/30/2011 20:05
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6010C**

PARAMETER	Original (ug/L)	Duplicate (mg/L)	RPD (%)	RPD CL
Arsenic	ND	ND	-48	20.00
Barium	399	0.387	3.1	20.00
Chromium	1.52	0.00222	**37***	20.00
Cobalt	ND	ND	-20	20.00
Copper	3.56	0.00319	11	20.00
Lead	7.42	0.00570	**26***	20.00
Nickel	ND	ND	-37	20.00
Silver	ND	ND	**53***	20.00
Zinc	ND	0.00290	**26***	20.00

Batch Information

Analytical Batch: MIP1264
Analytical Method: SW-846 6010C
Instrument: ICP1
Analyst: NTM

Prep Batch: MXX1541
Prep Method: SW-846 3010A
Prep Date/Time: 09/29/2011 16:42

Print Date: 10/14/2011

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 6020A

Prep Method: SW-846 3010A
Prep Batch: MXX1541
Prep Date: 09/29/2011 16:42

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 12548 [MXX/1541]	41888	10/07/2011 13:11	MMS1102	ICPMS2	PSW
MB for HBN 12548 [MXX/1541]	41888	10/07/2011 13:15	MMS1102	ICPMS2	PSW
LCS for HBN 12548 [MXX/1541]	41889	10/07/2011 13:19	MMS1102	ICPMS2	PSW
LCSD for HBN 12548 [MXX/1541]	41890	10/07/2011 13:23	MMS1102	ICPMS2	PSW
2509-MW15S	31102677001	10/07/2011 13:27	MMS1102	ICPMS2	PSW
2509-MW15S	31102677001	10/07/2011 13:31	MMS1102	ICPMS2	PSW
2509-MW15S(41697MS)	41891	10/07/2011 13:35	MMS1102	ICPMS2	PSW
2509-MW15S(41697MSD)	41892	10/07/2011 13:39	MMS1102	ICPMS2	PSW
2509-MW15D	31102677002	10/07/2011 13:43	MMS1102	ICPMS2	PSW
2509-MW15D	31102677002	10/07/2011 13:47	MMS1102	ICPMS2	PSW
2509-MW15D(41698DUP)	41893	10/07/2011 13:59	MMS1102	ICPMS2	PSW
2509-MW15D(41698DUP)	41893	10/07/2011 14:04	MMS1102	ICPMS2	PSW
2509-MW16S	31102677003	10/07/2011 14:08	MMS1102	ICPMS2	PSW
2509-MW16S	31102677003	10/07/2011 14:12	MMS1102	ICPMS2	PSW
2509-MW16D	31102677004	10/07/2011 14:16	MMS1102	ICPMS2	PSW
2509-MW16D	31102677004	10/07/2011 14:20	MMS1102	ICPMS2	PSW
2509-MW17S	31102677005	10/07/2011 14:24	MMS1102	ICPMS2	PSW
2509-MW17S	31102677005	10/07/2011 14:28	MMS1102	ICPMS2	PSW
2509-MW17D	31102677006	10/07/2011 14:32	MMS1102	ICPMS2	PSW
2509-MW17D	31102677006	10/07/2011 14:36	MMS1102	ICPMS2	PSW
2509-MW18S	31102677007	10/07/2011 14:52	MMS1102	ICPMS2	PSW
2509-MW18D	31102677008	10/07/2011 15:00	MMS1102	ICPMS2	PSW
2509-MW19S	31102677009	10/07/2011 15:08	MMS1102	ICPMS2	PSW
2509-MW15D(41698DUP)	41893	10/07/2011 16:46	MMS1103	ICPMS2	PSW
2509-MW16S	31102677003	10/07/2011 16:49	MMS1103	ICPMS2	PSW
2509-MW16D	31102677004	10/07/2011 16:52	MMS1103	ICPMS2	PSW
2509-MW17S	31102677005	10/07/2011 16:55	MMS1103	ICPMS2	PSW
2509-MW17D	31102677006	10/07/2011 16:58	MMS1103	ICPMS2	PSW
2509-MW18S	31102677007	10/07/2011 17:01	MMS1103	ICPMS2	PSW
2509-MW18D	31102677008	10/07/2011 17:07	MMS1103	ICPMS2	PSW
2509-MW18D	31102677008	10/07/2011 17:10	MMS1103	ICPMS2	PSW
2509-MW19S	31102677009	10/07/2011 17:19	MMS1103	ICPMS2	PSW
2509-MW19D	31102677010	10/07/2011 17:25	MMS1103	ICPMS2	PSW
2509-Field Blank	31102677012	10/07/2011 17:28	MMS1103	ICPMS2	PSW
2509-Field Blank	31102677012	10/07/2011 17:32	MMS1103	ICPMS2	PSW
2509-MW15D(41698DUP)	41893	10/13/2011 14:20	MMS1105	ICPMS2	PSW
2509-MW16S	31102677003	10/13/2011 14:23	MMS1105	ICPMS2	PSW
2509-MW16D	31102677004	10/13/2011 14:25	MMS1105	ICPMS2	PSW
2509-MW17S	31102677005	10/13/2011 14:28	MMS1105	ICPMS2	PSW
2509-MW17D	31102677006	10/13/2011 14:30	MMS1105	ICPMS2	PSW
2509-MW18S	31102677007	10/13/2011 14:33	MMS1105	ICPMS2	PSW

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Batch Summary

Analytical Method: SW-846 6020A

Prep Method: SW-846 3010A
Prep Batch: MXX1541
Prep Date: 09/29/2011 16:42

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
2509-MW18S	31102677007	10/13/2011 14:35	MMS1105	ICPMS2	PSW
2509-MW18D	31102677008	10/13/2011 14:38	MMS1105	ICPMS2	PSW
2509-MW19S	31102677009	10/13/2011 14:40	MMS1105	ICPMS2	PSW
2509-MW19D	31102677010	10/13/2011 14:43	MMS1105	ICPMS2	PSW
2509-MW19D	31102677010	10/13/2011 14:50	MMS1105	ICPMS2	PSW
2509-Field Blank	31102677012	10/13/2011 14:52	MMS1105	ICPMS2	PSW
2509-Field Blank	31102677012	10/13/2011 14:55	MMS1105	ICPMS2	PSW
2509-MW18S	31102677007	10/13/2011 17:00	MMS1106	ICPMS2	PSW
2509-MW19S	31102677009	10/13/2011 17:02	MMS1106	ICPMS2	PSW
2509-MW19D	31102677010	10/13/2011 17:04	MMS1106	ICPMS2	PSW
2509-Field Blank	31102677012	10/13/2011 17:06	MMS1106	ICPMS2	PSW

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Method Blank

Blank ID: MB for HBN 12548 [MXX/1541]
Matrix: Water
Blank Lab ID: 41888
QC for Samples:
31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Beryllium	ND	U	0.000119	0.00100	mg/L	2
Vanadium	ND	U	0.000661	0.00500	mg/L	10
Selenium	ND	U	0.000824	0.00500	mg/L	10
Cadmium	ND	U	0.0000556	0.00100	mg/L	2
Antimony	ND	U	0.000437	0.00500	mg/L	10
Thallium	ND	U	0.000297	0.00500	mg/L	10

Batch Information

Analytical Batch: MMS1102
Analytical Method: SW-846 6020A
Instrument: ICPMS2
Analyst: PSW
Analytical Date/Time: 10/7/2011 1:11:22PM

Prep Batch: MXX1541
Prep Method: SW-846 3010A
Prep Date/Time: 9/29/2011 4:42:06PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 12548 [MXX/1541]
Blank Spike Lab ID: 41889
Date Analyzed: 10/07/2011 13:19

Spike Duplicate ID: LCSD for HBN 12548 [MXX/1541]
Spike Duplicate Lab ID: 41890
Date Analyzed: 10/07/2011 13:23
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6020A**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Beryllium	0.400	0.437	109	0.400	0.441	110	80.0-120	0.91	20.00
Vanadium	0.400	0.427	107	0.400	0.417	104	80.0-120	2.4	20.00
Selenium	0.400	0.457	114	0.400	0.463	116	80.0-120	1.3	20.00
Cadmium	0.400	0.413	103	0.400	0.405	101	80.0-120	2.0	20.00
Antimony	0.400	0.404	101	0.400	0.392	98	80.0-120	3.0	20.00
Thallium	0.400	0.411	103	0.400	0.405	101	80.0-120	1.5	20.00

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31102677001 (2509-MW15S)
MS Sample ID: 41891
MSD Sample ID: 41892

Analysis Date: 10/07/2011 13:31
Analysis Date: 10/07/2011 13:35
Analysis Date: 10/07/2011 13:39
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6020A**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Antimony	ND	0.400	0.384	96	0.400	0.379	95	75.0-125	1.3	25.00
Beryllium	ND	0.400	0.411	103	0.400	0.413	103	75.0-125	0.49	25.00
Cadmium	ND	0.400	0.397	99	0.400	0.392	98	75.0-125	1.3	25.00
Selenium	ND	0.400	0.450	113	0.400	0.469	117	75.0-125	4.1	25.00
Thallium	ND	0.400	0.394	99	0.400	0.398	100	75.0-125	1.0	25.00
Vanadium	8.70	0.400	0.434	109	0.400	0.435	109	75.0-125	0.23	25.00

Batch Information

Analytical Batch: **MMS1102**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1541**
Prep Method: **SW-846 3010A**
Prep Date/Time: **09/29/2011 16:42**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

Print Date: 10/14/2011

N.C. Certification # 481

Duplicate Sample Summary

Original Sample ID: 31102677002-D
Duplicate Sample ID: 41893

Analysis Date: 10/07/2011 13:47
Analysis Date: 10/07/2011 14:04
Matrix: Water

QC for Samples: 31102677001, 31102677002, 31102677003, 31102677004, 31102677005, 31102677006, 31102677007, 31102677008, 31102677009, 31102677010, 31102677012

Results by **SW-846 6020A**

PARAMETER	Original (ug/L)	Duplicate (mg/L)	RPD (%)	RPD CL
Antimony	ND	ND	0.0	20.00
Beryllium	ND	ND	0.0	20.00
Cadmium	ND	ND	-67	20.00
Selenium	ND	ND	-250	20.00
Thallium	ND	ND	-93	20.00
Vanadium	7.10	0.00830	16	20.00

Batch Information

Analytical Batch: MMS1102
Analytical Method: SW-846 6020A
Instrument: ICPMS2
Analyst: PSW

Prep Batch: MXX1541
Prep Method: SW-846 3010A
Prep Date/Time: 09/29/2011 16:42

Print Date: 10/14/2011

N.C. Certification # 481

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio

www.us.sgs.com

102732

(1)

CLIENT: JOYCE ENGINEERING

CONTACT: JEREMEY KERLY PHONE NO:(336) 323-0092

PROJECT: CRSWMA-TUSCARORA LANDFILL SITE/PWSID#: 25-09

REPORTS TO: JEREMEY KERLY
2211 W. MEADOWVIEW RD. STE101
GREENSBORO, NC 27407 FAX NO.:(336) 323-0093

INVOICE TO: LECIA JONES
1604 OWNBY LANE
RICHMOND VA 23222 QUOTE #:
P.O. NUMBER: 618.1101.11.02

SGS Reference: 31102677

PAGE 1 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	Preservatives Used: Pre-HNO_3	Pre-HCl								REMARKS
							Analysis Required (3): METALS-NC APP. I	VOCs-NC APP. I								
	2509-MW15S	9/27/11	8:40	WATER	4	G	X	X								
	2509-MW15D		8:55				X	X								
	2509-MW16S		9:25				X	X								
	2509-MW16D		9:40				X	X								
	2509-MW17S		10:00				X	X								
	2509-MW17D		10:15				X	X								
	2509-MW18S		10:35				X	X								
	2509-MW18D		10:50				X	X								
	2509-MW19S		13:10				X	X								
	2509-MW19D		13:30				X	X								

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
[signature]	9/28/11	1300	[signature]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:
[signature]	9/29/11	9:00	[signature]

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 3.6

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:
☐ RUSH _____ Date Needed ☑ STD

☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
☑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio

www.us.sgs.com

103901

(1)

CLIENT: JOYCE ENGINEERING

CONTACT: JEREMEY KERLY PHONE NO:(336) 323-0092

PROJECT: CRSWMA - TUSCARORA LANDFILL SITE/PWSID#: 25-09

REPORTS TO: JEREMEY KERLY
2211 W. MEADOWVIEW RD, STE. 101
GREENSBORO NC 27407 FAX NO.:(336) 323-0093

INVOICE TO: LECIA JONES
1604 OWNBY LN
RICHMOND VA 23222 QUOTE #:
P.O. NUMBER: 618.1101.11.02

SGS Reference: 31102677

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	Preservatives Used: Pre-HNO3	Pre-HCl								REMARKS
							Analysis Required (3): METALS - NC App. 1	VOCs - NC App. 1								
	2509 TRIP BLANK			WATER	2	G		X								
	2509 FIELD BLANK	9/27/11	14:00	↓	4	↓	X	X								

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
[signature]	9/28/11	1300	[signature]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:
[signature]	9/29/11	9:00	[signature]

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 3.6

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:
☐ RUSH _____ Date Needed ☐ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **Joyce Engineering** Work Order No.: **31102677**

1. ___ Shipped
   X Hand Delivered

2. X COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. X Custody Tape on Container
   ___ No Custody Tape

4. X Samples Intact
   ___ Samples Broken / Leaking

5. X Chilled on Receipt Actual Temp.(s) in °C: 3.6
   ___ Ambient on Receipt
   X Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. X Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   X HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. X Received Within Holding Time
   ___ Not Received Within Holding Time

9. X No Discrepancies Noted
   ___ Discrepancies Noted

10. X No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: JJ

Date: Thu-9/29/11 00:00

MI_11.5

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 S **Sampler(s):** R. Winfield

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.77 feet

Depth to Bottom (DTB): 19.00 feet

Water Column Thickness (WCT): 13.23 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.2 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 6.6 gallons

Actual Amount Purged/Bailed : 6.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.80 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1247	24.7	5.55	90.2	67.2	RW
2.2	1250	24.5	5.43	88.7	>1000	RW
4.4	1253	24.1	5.39	84.6	>1000	RW
6.6	1257	24.0	5.28	81.3	>1000	RW
	9/27/11@					
Before Sampling	0840	24.9	5.43	96.2	51.7	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy 70's 9/27/2011 Cloudy 60's

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 D **Sampler(s):** R. Winfield

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 18.92 feet

Depth to Bottom (DTB): 40.00 feet

Water Column Thickness (WCT): 21.08 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.4 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 10.2 gallons

Actual Amount Purged/Bailed : 10.2 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 18.91 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1311	19.2	6.76	372	51.6	RW
3.4	1316	18.7	6.84	365	>1000	RW
6.8 .	1321	18.5	6.91	370	>1000	RW
10.2	1327	18.4	6.97	377	>1000	RW
	9/27/11@					
Before Sampling	0855	19.7	7.02	360	22.7	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy 70's

9/27/2011 Cloudy 60's

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16S **Sampler(s):** R. Winfield

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 7.06 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 7.94 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.3 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.9 gallons

Actual Amount Purged/Bailed : 4.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 7.10 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1344	24.6	5.81	94.1	82	RW
1.3	1347	24.1	5.70	86.3	>1000	RW
2.6	1350	23.3	5.59	84.7	>1000	RW
3.9	1353	23.1	5.52	83.2	>1000	RW
	9/27/11@					
Before Sampling	0925	24.3	5.56	84.7	36.1	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy 70's

9/27/2011 Cloudy 60's, rain

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16D **Sampler(s):** R. Winfield

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 17.59 feet

Depth to Bottom (DTB): 36.00 feet

Water Column Thickness (WCT): 18.41 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.0 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 9.0 gallons

Actual Amount Purged/Bailed : 9.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 17.62 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1404	19.1	6.8	550	74.3	RW
3	1408	18.5	6.95	562	>1000	RW
6	1412	18.4	7.00	555	>1000	RW
9	1416	18.2	7.01	549	> 1000	RW
	9/27/11@					
Before Sampling	0940	20.7	6.91	536	27.5	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy 70's

9/27/2011 Cloudy 60's, rain

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17S **Sampler(s):** R. Winfield

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.54 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 9.46 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.51 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.53 gallons

Actual Amount Purged/Bailed : 4.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.57 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1438	24.9	6.11	80.4	30.7	RW
1.51	1441	24.1	5.94	77.7	444	RW
3.02	1444	23.7	5.79	74.2	>1000	RW
4.53	1448	23.5	5.68	71.6	>1000	RW
	9/27/11@					
Before Sampling	1000	24.2	5.84	71.4	38.3	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy, 70's

9/27/2011 Cloudy, 60's rain

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17D **Sampler(s):** R. Winfield

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 15.59 feet

Depth to Bottom (DTB): 39.00 feet

Water Column Thickness (WCT): 23.41 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.8 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 11.4 gallons

Actual Amount Purged/Bailed : 11.5 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 15.58 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1459	20.7	8.61	252	22.1	RW
3.8	1505	20.0	8.44	283	396	RW
7.6	1511	19.2	8.30	298	>1000	RW
11.4	1517	19.0	8.17	309	>1000	RW
	9/27/11@					
Before Sampling	1015	20.4	8.04	266	29.4	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy 70's

9/27/2011 Cloudy 60's rain

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18S **Sampler(s):** R. Winfield

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 4.23 feet

Depth to Bottom (DTB): 14.00 feet

Water Column Thickness (WCT): 9.77 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.6 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.8 gallons

Actual Amount Purged/Bailed : 5.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 4.30 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1542	22.6	5.40	153	44.7	RW
1.6	1545	22.1	5.31	166	>1000	RW
3.2	1548	22.0	5.26	182	>1000	RW
4.8	1551	21.7	5.24	187	> 1000	RW
	9/27/11@					
Before Sampling	1035	23.4	5.56	164	30.7	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy 70's rain

9/27/2011 Cloudy 70's

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/26-27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18D **Sampler(s):** R. Winfield

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 15.66 feet

Depth to Bottom (DTB): 38.00 feet

Water Column Thickness (WCT): 22.34 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.62 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 10.86 gallons

Actual Amount Purged/Bailed : 11.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 15.70 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1604	18.7	7.26	460	82.6	RW
3.62	1611	18.4	7.18	444	>1000	RW
7.24	1618	18.0	7.15	438	>1000	RW
10.86	1626	17.9	7.11	429	>1000	RW
	9/27/11@					
Before Sampling	1050	20.1	7.17	436	29.7	RW

Comments (weather conditions, odor, color, silt, etc.):

9/26/2011 Cloudy 70's rain

9/27/2011 Cloudy 70's

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19S **Sampler(s):** R. Winfield

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.47 feet

Depth to Bottom (DTB): 13.00 feet

Water Column Thickness (WCT): 7.53 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.20 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.60 gallons

Actual Amount Purged/Bailed : 3.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.96 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	0741	23.8	6.24	112.1	21.4	RW
1.20	0744	23.4	6.01	103.2	562	RW
2.40	0748	23.1	5.96	90.1	>1000	RW
3.60	0751	23.0	5.90	88.4	>1000	RW
	9/27/11@					
Before Sampling	1310	23.1	5.84	80.3	80.1	RW

Comments (weather conditions, odor, color, silt, etc.):

9/27/2011 Cloudy 70's

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

DATE: 9/27/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19D **Sampler(s):** R. Winfield

Well Location: SE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 16.27 feet

Depth to Bottom (DTB): 28.00 feet

Water Column Thickness (WCT): 11.73 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.89 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 5.66 gallons

Actual Amount Purged/Bailed : 5.7 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 16.41 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	0801	19.7	7.10	403	39.6	RW
1.89	0804	19.2	7.26	426	>1000	RW
3.78	0808	19.1	7.17	429	>1000	RW
5.66	0813	19.3	7.20	436	>1000	RW
	9/27/11@					
Before Sampling	1330	20.2	7.06	410	62.4	RW

Comments (weather conditions, odor, color, silt, etc.):

9/27/2011 Cloudy 70's

Field blank @ 1400

Signature: [signature] **Date:** 9/27/11

QA/QC Sign Off: [signature] **Date:** 1-20-12

Part 4 – Laboratory Analytical Report - Background Event No. 3 (October 2011)

Laboratory Report of Analysis
Field Data Logs

Laboratory Report of Analysis

To: Jeremy Kerly
Joyce Engineering, Inc.
2211 West Meadowview Rd
Suite 101
Greensboro, NC 27407

Report Number: **31103061**

Client Project: **CRSWMA-Tuscarora LF 25-09**

Dear Jeremy Kerly,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Michael D. Page at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Digitally signed by: Michael Page
Date: 2011.11.09 13:33:19 -05'00'

Michael D. Page
Project Manager
michael.page@sgs.com

Date

Print Date: 11/09/2011

N.C. Certification # 481

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Amount detected is between the Method Detection Limit and the Lower Calibration Limit
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
2509-MW15S	31103061001	10/26/2011 09:10	10/27/2011 12:30	Water
2509-MW15D	31103061002	10/26/2011 09:20	10/27/2011 12:30	Water
2509-MW16S	31103061003	10/26/2011 09:35	10/27/2011 12:30	Water
2509-MW16D	31103061004	10/26/2011 09:50	10/27/2011 12:30	Water
2509-MW17S	31103061005	10/26/2011 08:45	10/27/2011 12:30	Water
2509-MW17D	31103061006	10/26/2011 08:55	10/27/2011 12:30	Water
2509-MW18S	31103061007	10/26/2011 08:15	10/27/2011 12:30	Water
2509-MW18D	31103061008	10/26/2011 08:25	10/27/2011 12:30	Water
2509-MW19S	31103061009	10/26/2011 07:50	10/27/2011 12:30	Water
2509-MW19D	31103061010	10/26/2011 08:05	10/27/2011 12:30	Water
2509-Trip Blank	31103061011	10/25/2011 04:00	10/27/2011 12:30	Water
2509-Field Blank	31103061012	10/26/2011 10:00	10/27/2011 12:30	Water

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Case Narrative

2509-Trip Blank

8260B - This Trip Blank has a reported 'J' concentration for Methylene Chloride.

MIP1315 [MXX1600]

6010C - The Method Blank associated with batch MIP1315 has reported concentrations for Barium, Chromium and Copper that are below the LOQ. These analytes have been 'J' flagged on the data.

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061001-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:10
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/2/2011 17:49
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/2/2011 17:49
Benzene	ND	U	0.113	1.00	ug/L	1	11/2/2011 17:49
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/2/2011 17:49
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/2/2011 17:49
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/2/2011 17:49
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/2/2011 17:49
2-Butanone	ND	U	0.723	100	ug/L	1	11/2/2011 17:49
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/2/2011 17:49
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/2/2011 17:49
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/2/2011 17:49
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/2/2011 17:49
Chloroform	ND	U	0.139	5.00	ug/L	1	11/2/2011 17:49
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/2/2011 17:49
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/2/2011 17:49
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/2/2011 17:49
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/2/2011 17:49
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/2/2011 17:49
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/2/2011 17:49
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/2/2011 17:49
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/2/2011 17:49
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/2/2011 17:49
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/2/2011 17:49
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/2/2011 17:49
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/2/2011 17:49
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/2/2011 17:49
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/2/2011 17:49
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/2/2011 17:49
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/2/2011 17:49
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/2/2011 17:49
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/2/2011 17:49
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/2/2011 17:49
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/2/2011 17:49
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/2/2011 17:49
Styrene	ND	U	0.102	1.00	ug/L	1	11/2/2011 17:49
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/2/2011 17:49
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/2/2011 17:49
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/2/2011 17:49
Toluene	ND	U	0.133	1.00	ug/L	1	11/2/2011 17:49
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/2/2011 17:49
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/2/2011 17:49
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/2/2011 17:49
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/2/2011 17:49

Print Date: 11/09/2011

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061001-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:10
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/2/2011 17:49
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/2/2011 17:49
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/2/2011 17:49
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/2/2011 17:49
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	11/2/2011 17:49
Toluene d8	98.0			82.0-117	%	1	11/2/2011 17:49
4-Bromofluorobenzene	98.0			85.0-115	%	1	11/2/2011 17:49

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/02/2011 17:49**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061001-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:10
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	**4.13**	J	3.69	10.0	ug/L	1	11/6/2011 16:51
Barium	**66.4**	J	0.394	100	ug/L	1	11/6/2011 16:51
Chromium	**5.69**	J	1.47	10.0	ug/L	1	11/6/2011 16:51
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 16:51
Copper	**3.10**	J	0.672	10.0	ug/L	1	11/6/2011 16:51
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 16:51
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 16:51
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 16:51
Zinc	**8.92**	J	2.26	10.0	ug/L	1	11/6/2011 16:51

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 16:51**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **2509-MW15S**

Client Sample ID: **2509-MW15S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061001-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:10
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 16:34
Beryllium	**0.120**	J	0.119	1.00	ug/L	2	11/7/2011 16:30
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 16:30
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 16:34
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 16:34
Vanadium	**12.6**		0.661	5.00	ug/L	10	11/7/2011 16:34

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 16:34**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061002-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:20
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/2/2011 18:14
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/2/2011 18:14
Benzene	ND	U	0.113	1.00	ug/L	1	11/2/2011 18:14
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/2/2011 18:14
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/2/2011 18:14
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/2/2011 18:14
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/2/2011 18:14
2-Butanone	ND	U	0.723	100	ug/L	1	11/2/2011 18:14
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/2/2011 18:14
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/2/2011 18:14
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/2/2011 18:14
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/2/2011 18:14
Chloroform	ND	U	0.139	5.00	ug/L	1	11/2/2011 18:14
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/2/2011 18:14
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/2/2011 18:14
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/2/2011 18:14
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/2/2011 18:14
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/2/2011 18:14
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/2/2011 18:14
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/2/2011 18:14
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/2/2011 18:14
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/2/2011 18:14
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/2/2011 18:14
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/2/2011 18:14
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/2/2011 18:14
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/2/2011 18:14
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/2/2011 18:14
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/2/2011 18:14
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/2/2011 18:14
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/2/2011 18:14
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/2/2011 18:14
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/2/2011 18:14
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/2/2011 18:14
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/2/2011 18:14
Styrene	ND	U	0.102	1.00	ug/L	1	11/2/2011 18:14
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/2/2011 18:14
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/2/2011 18:14
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/2/2011 18:14
Toluene	ND	U	0.133	1.00	ug/L	1	11/2/2011 18:14
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/2/2011 18:14
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/2/2011 18:14
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/2/2011 18:14
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/2/2011 18:14

Print Date: 11/09/2011

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061002-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:20
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/2/2011 18:14
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/2/2011 18:14
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/2/2011 18:14
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/2/2011 18:14
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	11/2/2011 18:14
Toluene d8	99.0			82.0-117	%	1	11/2/2011 18:14
4-Bromofluorobenzene	97.0			85.0-115	%	1	11/2/2011 18:14

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/02/2011 18:14**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061002-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:20
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 17:25
Barium	**41.6**	J	0.394	100	ug/L	1	11/6/2011 17:25
Chromium	**2.08**	J	1.47	10.0	ug/L	1	11/6/2011 17:25
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 17:25
Copper	**1.88**	J	0.672	10.0	ug/L	1	11/6/2011 17:25
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 17:25
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 17:25
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 17:25
Zinc	ND	U	2.26	10.0	ug/L	1	11/6/2011 17:25

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 17:25**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW15D**

Client Sample ID: **2509-MW15D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061002-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:20
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 16:50
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 16:46
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 16:46
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 16:50
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 16:50
Vanadium	**2.60**	J	0.661	5.00	ug/L	10	11/7/2011 16:50

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 16:50**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061003-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:35
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/2/2011 18:40
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/2/2011 18:40
Benzene	ND	U	0.113	1.00	ug/L	1	11/2/2011 18:40
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/2/2011 18:40
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/2/2011 18:40
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/2/2011 18:40
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/2/2011 18:40
2-Butanone	ND	U	0.723	100	ug/L	1	11/2/2011 18:40
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/2/2011 18:40
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/2/2011 18:40
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/2/2011 18:40
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/2/2011 18:40
Chloroform	ND	U	0.139	5.00	ug/L	1	11/2/2011 18:40
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/2/2011 18:40
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/2/2011 18:40
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/2/2011 18:40
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/2/2011 18:40
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/2/2011 18:40
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/2/2011 18:40
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/2/2011 18:40
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/2/2011 18:40
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/2/2011 18:40
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/2/2011 18:40
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/2/2011 18:40
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/2/2011 18:40
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/2/2011 18:40
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/2/2011 18:40
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/2/2011 18:40
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/2/2011 18:40
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/2/2011 18:40
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/2/2011 18:40
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/2/2011 18:40
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/2/2011 18:40
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/2/2011 18:40
Styrene	ND	U	0.102	1.00	ug/L	1	11/2/2011 18:40
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/2/2011 18:40
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/2/2011 18:40
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/2/2011 18:40
Toluene	ND	U	0.133	1.00	ug/L	1	11/2/2011 18:40
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/2/2011 18:40
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/2/2011 18:40
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/2/2011 18:40
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/2/2011 18:40

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061003-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:35
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/2/2011 18:40
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/2/2011 18:40
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/2/2011 18:40
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/2/2011 18:40
Surrogates							
1,2-Dichloroethane-d4	99.0			64.0-140	%	1	11/2/2011 18:40
Toluene d8	98.0			82.0-117	%	1	11/2/2011 18:40
4-Bromofluorobenzene	98.0			85.0-115	%	1	11/2/2011 18:40

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/02/2011 18:40**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061003-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:35
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 17:32
Barium	**64.2**	J	0.394	100	ug/L	1	11/6/2011 17:32
Chromium	**2.19**	J	1.47	10.0	ug/L	1	11/6/2011 17:32
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 17:32
Copper	**2.25**	J	0.672	10.0	ug/L	1	11/6/2011 17:32
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 17:32
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 17:32
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 17:32
Zinc	ND	U	2.26	10.0	ug/L	1	11/6/2011 17:32

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 17:32**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW16S**

Client Sample ID: **2509-MW16S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061003-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:35
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 17:06
Beryllium	**0.200**	J	0.119	1.00	ug/L	2	11/7/2011 17:02
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 17:02
Selenium	**0.900**	J	0.824	5.00	ug/L	10	11/7/2011 17:06
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 17:06
Vanadium	**4.70**	J	0.661	5.00	ug/L	10	11/7/2011 17:06

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 17:06**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061004-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/2/2011 19:05
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/2/2011 19:05
Benzene	ND	U	0.113	1.00	ug/L	1	11/2/2011 19:05
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/2/2011 19:05
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/2/2011 19:05
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/2/2011 19:05
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/2/2011 19:05
2-Butanone	ND	U	0.723	100	ug/L	1	11/2/2011 19:05
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/2/2011 19:05
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/2/2011 19:05
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/2/2011 19:05
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/2/2011 19:05
Chloroform	ND	U	0.139	5.00	ug/L	1	11/2/2011 19:05
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/2/2011 19:05
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/2/2011 19:05
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/2/2011 19:05
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/2/2011 19:05
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/2/2011 19:05
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/2/2011 19:05
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/2/2011 19:05
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/2/2011 19:05
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/2/2011 19:05
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/2/2011 19:05
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/2/2011 19:05
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/2/2011 19:05
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/2/2011 19:05
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/2/2011 19:05
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/2/2011 19:05
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/2/2011 19:05
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/2/2011 19:05
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/2/2011 19:05
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/2/2011 19:05
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/2/2011 19:05
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/2/2011 19:05
Styrene	ND	U	0.102	1.00	ug/L	1	11/2/2011 19:05
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/2/2011 19:05
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/2/2011 19:05
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/2/2011 19:05
Toluene	ND	U	0.133	1.00	ug/L	1	11/2/2011 19:05
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/2/2011 19:05
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/2/2011 19:05
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/2/2011 19:05
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/2/2011 19:05

Print Date: 11/09/2011

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061004-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/2/2011 19:05
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/2/2011 19:05
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/2/2011 19:05
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/2/2011 19:05
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	11/2/2011 19:05
Toluene d8	99.0			82.0-117	%	1	11/2/2011 19:05
4-Bromofluorobenzene	98.0			85.0-115	%	1	11/2/2011 19:05

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/02/2011 19:05**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061004-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 17:38
Barium	**65.4**	J	0.394	100	ug/L	1	11/6/2011 17:38
Chromium	**2.87**	J	1.47	10.0	ug/L	1	11/6/2011 17:38
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 17:38
Copper	**3.06**	J	0.672	10.0	ug/L	1	11/6/2011 17:38
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 17:38
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 17:38
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 17:38
Zinc	ND	U	2.26	10.0	ug/L	1	11/6/2011 17:38

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 17:38**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW16D**

Client Sample ID: **2509-MW16D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061004-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 09:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 17:14
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 17:10
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 17:10
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 17:14
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 17:14
Vanadium	**1.80**	J	0.661	5.00	ug/L	10	11/7/2011 17:14

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 17:14**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061005-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:45
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/2/2011 19:30
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/2/2011 19:30
Benzene	ND	U	0.113	1.00	ug/L	1	11/2/2011 19:30
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/2/2011 19:30
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/2/2011 19:30
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/2/2011 19:30
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/2/2011 19:30
2-Butanone	ND	U	0.723	100	ug/L	1	11/2/2011 19:30
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/2/2011 19:30
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/2/2011 19:30
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/2/2011 19:30
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/2/2011 19:30
Chloroform	ND	U	0.139	5.00	ug/L	1	11/2/2011 19:30
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/2/2011 19:30
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/2/2011 19:30
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/2/2011 19:30
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/2/2011 19:30
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/2/2011 19:30
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/2/2011 19:30
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/2/2011 19:30
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/2/2011 19:30
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/2/2011 19:30
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/2/2011 19:30
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/2/2011 19:30
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/2/2011 19:30
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/2/2011 19:30
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/2/2011 19:30
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/2/2011 19:30
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/2/2011 19:30
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/2/2011 19:30
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/2/2011 19:30
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/2/2011 19:30
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/2/2011 19:30
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/2/2011 19:30
Styrene	ND	U	0.102	1.00	ug/L	1	11/2/2011 19:30
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/2/2011 19:30
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/2/2011 19:30
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/2/2011 19:30
Toluene	ND	U	0.133	1.00	ug/L	1	11/2/2011 19:30
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/2/2011 19:30
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/2/2011 19:30
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/2/2011 19:30
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/2/2011 19:30

Print Date: 11/09/2011

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Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061005-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:45
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/2/2011 19:30
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/2/2011 19:30
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/2/2011 19:30
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/2/2011 19:30
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	11/2/2011 19:30
Toluene d8	99.0			82.0-117	%	1	11/2/2011 19:30
4-Bromofluorobenzene	97.0			85.0-115	%	1	11/2/2011 19:30

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/02/2011 19:30**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061005-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:45
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 17:45
Barium	**54.6**	J	0.394	100	ug/L	1	11/6/2011 17:45
Chromium	**14.3**		1.47	10.0	ug/L	1	11/6/2011 17:45
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 17:45
Copper	**4.53**	J	0.672	10.0	ug/L	1	11/6/2011 17:45
Lead	**5.92**	J	5.41	10.0	ug/L	1	11/6/2011 17:45
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 17:45
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 17:45
Zinc	**5.08**	J	2.26	10.0	ug/L	1	11/6/2011 17:45

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 17:45**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW17S**

Client Sample ID: **2509-MW17S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061005-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:45
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 17:22
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 17:18
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 17:18
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 17:22
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 17:22
Vanadium	**23.6**		0.661	5.00	ug/L	10	11/7/2011 17:22

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 17:22**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061006-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:55
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/3/2011 13:42
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/3/2011 13:42
Benzene	ND	U	0.113	1.00	ug/L	1	11/3/2011 13:42
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/3/2011 13:42
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/3/2011 13:42
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/3/2011 13:42
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/3/2011 13:42
2-Butanone	ND	U	0.723	100	ug/L	1	11/3/2011 13:42
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/3/2011 13:42
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/3/2011 13:42
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/3/2011 13:42
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/3/2011 13:42
Chloroform	ND	U	0.139	5.00	ug/L	1	11/3/2011 13:42
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/3/2011 13:42
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/3/2011 13:42
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/3/2011 13:42
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/3/2011 13:42
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/3/2011 13:42
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/3/2011 13:42
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/3/2011 13:42
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/3/2011 13:42
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/3/2011 13:42
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/3/2011 13:42
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/3/2011 13:42
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/3/2011 13:42
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/3/2011 13:42
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/3/2011 13:42
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/3/2011 13:42
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/3/2011 13:42
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/3/2011 13:42
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/3/2011 13:42
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/3/2011 13:42
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/3/2011 13:42
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/3/2011 13:42
Styrene	ND	U	0.102	1.00	ug/L	1	11/3/2011 13:42
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/3/2011 13:42
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/3/2011 13:42
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/3/2011 13:42
Toluene	ND	U	0.133	1.00	ug/L	1	11/3/2011 13:42
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/3/2011 13:42
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/3/2011 13:42
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/3/2011 13:42
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/3/2011 13:42

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061006-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:55
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/3/2011 13:42
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/3/2011 13:42
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/3/2011 13:42
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/3/2011 13:42
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	11/3/2011 13:42
Toluene d8	99.0			82.0-117	%	1	11/3/2011 13:42
4-Bromofluorobenzene	99.0			85.0-115	%	1	11/3/2011 13:42

Batch Information

Analytical Batch: **VMS1674**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/03/2011 13:42**

Prep Batch: **VXX2314**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/03/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061006-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:55
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 17:52
Barium	**41.4**	J	0.394	100	ug/L	1	11/6/2011 17:52
Chromium	**2.76**	J	1.47	10.0	ug/L	1	11/6/2011 17:52
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 17:52
Copper	**2.48**	J	0.672	10.0	ug/L	1	11/6/2011 17:52
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 17:52
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 17:52
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 17:52
Zinc	ND	U	2.26	10.0	ug/L	1	11/6/2011 17:52

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 17:52**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW17D**

Client Sample ID: **2509-MW17D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061006-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:55
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 17:30
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 17:26
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 17:26
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 17:30
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 17:30
Vanadium	**4.30**	J	0.661	5.00	ug/L	10	11/7/2011 17:30

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 17:30**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061007-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:15
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/3/2011 14:07
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/3/2011 14:07
Benzene	ND	U	0.113	1.00	ug/L	1	11/3/2011 14:07
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/3/2011 14:07
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/3/2011 14:07
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/3/2011 14:07
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/3/2011 14:07
2-Butanone	ND	U	0.723	100	ug/L	1	11/3/2011 14:07
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/3/2011 14:07
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/3/2011 14:07
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/3/2011 14:07
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/3/2011 14:07
Chloroform	ND	U	0.139	5.00	ug/L	1	11/3/2011 14:07
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/3/2011 14:07
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/3/2011 14:07
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/3/2011 14:07
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/3/2011 14:07
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/3/2011 14:07
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/3/2011 14:07
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/3/2011 14:07
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/3/2011 14:07
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/3/2011 14:07
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/3/2011 14:07
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/3/2011 14:07
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/3/2011 14:07
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/3/2011 14:07
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/3/2011 14:07
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/3/2011 14:07
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/3/2011 14:07
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/3/2011 14:07
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/3/2011 14:07
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/3/2011 14:07
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/3/2011 14:07
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/3/2011 14:07
Styrene	ND	U	0.102	1.00	ug/L	1	11/3/2011 14:07
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/3/2011 14:07
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/3/2011 14:07
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/3/2011 14:07
Toluene	ND	U	0.133	1.00	ug/L	1	11/3/2011 14:07
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/3/2011 14:07
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/3/2011 14:07
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/3/2011 14:07
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/3/2011 14:07

Print Date: 11/09/2011

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061007-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:15
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/3/2011 14:07
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/3/2011 14:07
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/3/2011 14:07
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/3/2011 14:07
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	11/3/2011 14:07
Toluene d8	99.0			82.0-117	%	1	11/3/2011 14:07
4-Bromofluorobenzene	97.0			85.0-115	%	1	11/3/2011 14:07

Batch Information

Analytical Batch: **VMS1674**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/03/2011 14:07**

Prep Batch: **VXX2314**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/03/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061007-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:15
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	**7.36**	J	3.69	10.0	ug/L	1	11/6/2011 17:59
Barium	**56.9**	J	0.394	100	ug/L	1	11/6/2011 17:59
Chromium	**2.98**	J	1.47	10.0	ug/L	1	11/6/2011 17:59
Cobalt	**12.1**		3.39	10.0	ug/L	1	11/6/2011 17:59
Copper	**3.93**	J	0.672	10.0	ug/L	1	11/6/2011 17:59
Lead	**7.22**	J	5.41	10.0	ug/L	1	11/6/2011 17:59
Nickel	**19.8**	J	3.06	50.0	ug/L	1	11/6/2011 17:59
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 17:59
Zinc	**26.5**		2.26	10.0	ug/L	1	11/6/2011 17:59

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 17:59**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW18S**

Client Sample ID: **2509-MW18S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061007-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:15
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 17:38
Beryllium	**2.04**		0.119	1.00	ug/L	2	11/7/2011 17:34
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 17:34
Selenium	**3.10**	J	0.824	5.00	ug/L	10	11/7/2011 17:38
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 17:38
Vanadium	**2.90**	J	0.661	5.00	ug/L	10	11/7/2011 17:38

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 17:38**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061008-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:25
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/3/2011 14:33
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/3/2011 14:33
Benzene	ND	U	0.113	1.00	ug/L	1	11/3/2011 14:33
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/3/2011 14:33
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/3/2011 14:33
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/3/2011 14:33
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/3/2011 14:33
2-Butanone	ND	U	0.723	100	ug/L	1	11/3/2011 14:33
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/3/2011 14:33
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/3/2011 14:33
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/3/2011 14:33
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/3/2011 14:33
Chloroform	ND	U	0.139	5.00	ug/L	1	11/3/2011 14:33
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/3/2011 14:33
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/3/2011 14:33
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/3/2011 14:33
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/3/2011 14:33
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/3/2011 14:33
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/3/2011 14:33
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/3/2011 14:33
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/3/2011 14:33
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/3/2011 14:33
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/3/2011 14:33
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/3/2011 14:33
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/3/2011 14:33
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/3/2011 14:33
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/3/2011 14:33
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/3/2011 14:33
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/3/2011 14:33
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/3/2011 14:33
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/3/2011 14:33
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/3/2011 14:33
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/3/2011 14:33
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/3/2011 14:33
Styrene	ND	U	0.102	1.00	ug/L	1	11/3/2011 14:33
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/3/2011 14:33
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/3/2011 14:33
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/3/2011 14:33
Toluene	ND	U	0.133	1.00	ug/L	1	11/3/2011 14:33
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/3/2011 14:33
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/3/2011 14:33
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/3/2011 14:33
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/3/2011 14:33

Print Date: 11/09/2011

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061008-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:25
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/3/2011 14:33
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/3/2011 14:33
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/3/2011 14:33
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/3/2011 14:33
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	11/3/2011 14:33
Toluene d8	98.0			82.0-117	%	1	11/3/2011 14:33
4-Bromofluorobenzene	99.0			85.0-115	%	1	11/3/2011 14:33

Batch Information

Analytical Batch: **VMS1674**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/03/2011 14:33**

Prep Batch: **VXX2314**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/03/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 11/09/2011

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061008-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:25
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 18:06
Barium	**36.0**	J	0.394	100	ug/L	1	11/6/2011 18:06
Chromium	**2.30**	J	1.47	10.0	ug/L	1	11/6/2011 18:06
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 18:06
Copper	**2.71**	J	0.672	10.0	ug/L	1	11/6/2011 18:06
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 18:06
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 18:06
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 18:06
Zinc	ND	U	2.26	10.0	ug/L	1	11/6/2011 18:06

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 18:06**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW18D**

Client Sample ID: **2509-MW18D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061008-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:25
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 17:54
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 17:50
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 17:50
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 17:54
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 17:54
Vanadium	**2.40**	J	0.661	5.00	ug/L	10	11/7/2011 17:54

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 17:54**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061009-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 07:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/3/2011 14:58
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/3/2011 14:58
Benzene	ND	U	0.113	1.00	ug/L	1	11/3/2011 14:58
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/3/2011 14:58
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/3/2011 14:58
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/3/2011 14:58
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/3/2011 14:58
2-Butanone	ND	U	0.723	100	ug/L	1	11/3/2011 14:58
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/3/2011 14:58
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/3/2011 14:58
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/3/2011 14:58
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/3/2011 14:58
Chloroform	ND	U	0.139	5.00	ug/L	1	11/3/2011 14:58
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/3/2011 14:58
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/3/2011 14:58
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/3/2011 14:58
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/3/2011 14:58
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/3/2011 14:58
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/3/2011 14:58
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/3/2011 14:58
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/3/2011 14:58
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/3/2011 14:58
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/3/2011 14:58
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/3/2011 14:58
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/3/2011 14:58
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/3/2011 14:58
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/3/2011 14:58
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/3/2011 14:58
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/3/2011 14:58
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/3/2011 14:58
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/3/2011 14:58
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/3/2011 14:58
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/3/2011 14:58
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/3/2011 14:58
Styrene	ND	U	0.102	1.00	ug/L	1	11/3/2011 14:58
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/3/2011 14:58
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/3/2011 14:58
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/3/2011 14:58
Toluene	ND	U	0.133	1.00	ug/L	1	11/3/2011 14:58
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/3/2011 14:58
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/3/2011 14:58
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/3/2011 14:58
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/3/2011 14:58

Print Date: 11/09/2011

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061009-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 07:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/3/2011 14:58
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/3/2011 14:58
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/3/2011 14:58
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/3/2011 14:58
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	11/3/2011 14:58
Toluene d8	100			82.0-117	%	1	11/3/2011 14:58
4-Bromofluorobenzene	99.0			85.0-115	%	1	11/3/2011 14:58

Batch Information

Analytical Batch: **VMS1674**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/03/2011 14:58**

Prep Batch: **VXX2314**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/03/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 11/09/2011

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061009-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 07:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 18:13
Barium	**20.3**	J	0.394	100	ug/L	1	11/6/2011 18:13
Chromium	**2.64**	J	1.47	10.0	ug/L	1	11/6/2011 18:13
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 18:13
Copper	**2.71**	J	0.672	10.0	ug/L	1	11/6/2011 18:13
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 18:13
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 18:13
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 18:13
Zinc	ND	U	2.26	10.0	ug/L	1	11/6/2011 18:13

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 18:13**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW19S**

Client Sample ID: **2509-MW19S**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061009-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 07:50
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 18:02
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 17:58
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 17:58
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 18:02
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 18:02
Vanadium	**4.90**	J	0.661	5.00	ug/L	10	11/7/2011 18:02

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 18:02**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

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Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061010-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:05
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/3/2011 15:24
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/3/2011 15:24
Benzene	ND	U	0.113	1.00	ug/L	1	11/3/2011 15:24
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/3/2011 15:24
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/3/2011 15:24
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/3/2011 15:24
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/3/2011 15:24
2-Butanone	ND	U	0.723	100	ug/L	1	11/3/2011 15:24
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/3/2011 15:24
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/3/2011 15:24
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/3/2011 15:24
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/3/2011 15:24
Chloroform	ND	U	0.139	5.00	ug/L	1	11/3/2011 15:24
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/3/2011 15:24
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/3/2011 15:24
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/3/2011 15:24
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/3/2011 15:24
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/3/2011 15:24
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/3/2011 15:24
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/3/2011 15:24
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/3/2011 15:24
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/3/2011 15:24
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/3/2011 15:24
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/3/2011 15:24
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/3/2011 15:24
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/3/2011 15:24
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/3/2011 15:24
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/3/2011 15:24
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/3/2011 15:24
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/3/2011 15:24
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/3/2011 15:24
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/3/2011 15:24
Methylene chloride	ND	U	0.152	1.00	ug/L	1	11/3/2011 15:24
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/3/2011 15:24
Styrene	ND	U	0.102	1.00	ug/L	1	11/3/2011 15:24
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/3/2011 15:24
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/3/2011 15:24
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/3/2011 15:24
Toluene	ND	U	0.133	1.00	ug/L	1	11/3/2011 15:24
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/3/2011 15:24
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/3/2011 15:24
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/3/2011 15:24
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/3/2011 15:24

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Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061010-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:05
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/3/2011 15:24
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/3/2011 15:24
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/3/2011 15:24
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/3/2011 15:24
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	11/3/2011 15:24
Toluene d8	100			82.0-117	%	1	11/3/2011 15:24
4-Bromofluorobenzene	98.0			85.0-115	%	1	11/3/2011 15:24

Batch Information

Analytical Batch: **VMS1674**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/03/2011 15:24**

Prep Batch: **VXX2314**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/03/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061010-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:05
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 18:33
Barium	**44.9**	J	0.394	100	ug/L	1	11/6/2011 18:33
Chromium	**2.42**	J	1.47	10.0	ug/L	1	11/6/2011 18:33
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 18:33
Copper	**2.41**	J	0.672	10.0	ug/L	1	11/6/2011 18:33
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 18:33
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 18:33
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 18:33
Zinc	**3.41**	J	2.26	10.0	ug/L	1	11/6/2011 18:33

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 18:33**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-MW19D**

Client Sample ID: **2509-MW19D**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061010-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 08:05
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 18:11
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 18:07
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 18:07
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 18:11
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 18:11
Vanadium	**1.00**	J	0.661	5.00	ug/L	10	11/7/2011 18:11

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 18:11**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-Trip Blank**

Client Sample ID: **2509-Trip Blank**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061011-A
Lab Project ID: 31103061

Collection Date: 10/25/2011 04:00
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/2/2011 12:20
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/2/2011 12:20
Benzene	ND	U	0.113	1.00	ug/L	1	11/2/2011 12:20
Bromochloromethane	ND	U	0.211	1.00	ug/L	1	11/2/2011 12:20
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/2/2011 12:20
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/2/2011 12:20
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/2/2011 12:20
2-Butanone	ND	U	0.723	100	ug/L	1	11/2/2011 12:20
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/2/2011 12:20
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/2/2011 12:20
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/2/2011 12:20
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/2/2011 12:20
Chloroform	ND	U	0.139	5.00	ug/L	1	11/2/2011 12:20
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/2/2011 12:20
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/2/2011 12:20
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/2/2011 12:20
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/2/2011 12:20
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/2/2011 12:20
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/2/2011 12:20
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/2/2011 12:20
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/2/2011 12:20
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/2/2011 12:20
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/2/2011 12:20
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/2/2011 12:20
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/2/2011 12:20
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/2/2011 12:20
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/2/2011 12:20
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/2/2011 12:20
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/2/2011 12:20
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/2/2011 12:20
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/2/2011 12:20
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/2/2011 12:20
Methylene chloride	**0.690**	J	0.152	1.00	ug/L	1	11/2/2011 12:20
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/2/2011 12:20
Styrene	ND	U	0.102	1.00	ug/L	1	11/2/2011 12:20
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/2/2011 12:20
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/2/2011 12:20
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/2/2011 12:20
Toluene	ND	U	0.133	1.00	ug/L	1	11/2/2011 12:20
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/2/2011 12:20
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/2/2011 12:20
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/2/2011 12:20
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/2/2011 12:20

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-Trip Blank**

Client Sample ID: **2509-Trip Blank**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061011-A
Lab Project ID: 31103061

Collection Date: 10/25/2011 04:00
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/2/2011 12:20
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/2/2011 12:20
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/2/2011 12:20
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/2/2011 12:20
Surrogates							
1,2-Dichloroethane-d4	99.0			64.0-140	%	1	11/2/2011 12:20
Toluene d8	98.0			82.0-117	%	1	11/2/2011 12:20
4-Bromofluorobenzene	99.0			85.0-115	%	1	11/2/2011 12:20

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/02/2011 12:20**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061012-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 10:00
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	11/2/2011 13:36
Acrylonitrile	ND	U	3.04	200	ug/L	1	11/2/2011 13:36
Benzene	ND	U	0.113	1.00	ug/L	1	11/2/2011 13:36
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	11/2/2011 13:36
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	11/2/2011 13:36
Bromoform	ND	U	0.0974	3.00	ug/L	1	11/2/2011 13:36
Bromomethane	ND	U	0.237	10.0	ug/L	1	11/2/2011 13:36
2-Butanone	ND	U	0.723	100	ug/L	1	11/2/2011 13:36
Carbon disulfide	ND	U	0.106	100	ug/L	1	11/2/2011 13:36
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	11/2/2011 13:36
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	11/2/2011 13:36
Chloroethane	ND	U	0.311	10.0	ug/L	1	11/2/2011 13:36
Chloroform	ND	U	0.139	5.00	ug/L	1	11/2/2011 13:36
Chloromethane	ND	U	0.448	1.00	ug/L	1	11/2/2011 13:36
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	11/2/2011 13:36
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	11/2/2011 13:36
Dibromomethane	ND	U	0.168	10.0	ug/L	1	11/2/2011 13:36
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	11/2/2011 13:36
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	11/2/2011 13:36
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	11/2/2011 13:36
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	11/2/2011 13:36
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	11/2/2011 13:36
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	11/2/2011 13:36
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	11/2/2011 13:36
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	11/2/2011 13:36
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	11/2/2011 13:36
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	11/2/2011 13:36
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	11/2/2011 13:36
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	11/2/2011 13:36
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	11/2/2011 13:36
2-Hexanone	ND	U	0.728	50.0	ug/L	1	11/2/2011 13:36
Methyl iodide	ND	U	0.115	10.0	ug/L	1	11/2/2011 13:36
Methylene chloride	**2.97**		0.152	1.00	ug/L	1	11/2/2011 13:36
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	11/2/2011 13:36
Styrene	ND	U	0.102	1.00	ug/L	1	11/2/2011 13:36
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	11/2/2011 13:36
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	11/2/2011 13:36
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	11/2/2011 13:36
Toluene	ND	U	0.133	1.00	ug/L	1	11/2/2011 13:36
Trichloroethene	ND	U	0.125	1.00	ug/L	1	11/2/2011 13:36
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	11/2/2011 13:36
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	11/2/2011 13:36
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	11/2/2011 13:36

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061012-A
Lab Project ID: 31103061

Collection Date: 10/26/2011 10:00
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	11/2/2011 13:36
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	11/2/2011 13:36
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	11/2/2011 13:36
Xylene (total)	ND	U	0.182	5.00	ug/L	1	11/2/2011 13:36
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	11/2/2011 13:36
Toluene d8	99.0			82.0-117	%	1	11/2/2011 13:36
4-Bromofluorobenzene	98.0			85.0-115	%	1	11/2/2011 13:36

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **11/02/2011 13:36**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061012-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 10:00
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	11/6/2011 18:40
Barium	**15.4**	J	0.394	100	ug/L	1	11/6/2011 18:40
Chromium	**2.08**	J	1.47	10.0	ug/L	1	11/6/2011 18:40
Cobalt	ND	U	3.39	10.0	ug/L	1	11/6/2011 18:40
Copper	**2.22**	J	0.672	10.0	ug/L	1	11/6/2011 18:40
Lead	ND	U	5.41	10.0	ug/L	1	11/6/2011 18:40
Nickel	ND	U	3.06	50.0	ug/L	1	11/6/2011 18:40
Silver	ND	U	1.05	10.0	ug/L	1	11/6/2011 18:40
Zinc	ND	U	2.26	10.0	ug/L	1	11/6/2011 18:40

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **11/06/2011 18:40**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Results of **2509-Field Blank**

Client Sample ID: **2509-Field Blank**
Client Project ID: **CRSWMA-Tuscarora LF 25-09**
Lab Sample ID: 31103061012-D
Lab Project ID: 31103061

Collection Date: 10/26/2011 10:00
Received Date: 10/27/2011 12:30
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	11/7/2011 18:19
Beryllium	ND	U	0.119	1.00	ug/L	2	11/7/2011 18:15
Cadmium	ND	U	0.0556	1.00	ug/L	2	11/7/2011 18:15
Selenium	ND	U	0.824	5.00	ug/L	10	11/7/2011 18:19
Thallium	ND	U	0.297	5.00	ug/L	10	11/7/2011 18:19
Vanadium	**2.00**	J	0.661	5.00	ug/L	10	11/7/2011 18:19

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **11/07/2011 18:19**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 11/09/2011

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8260B

Prep Method: SW-846 5030B
Prep Batch: VXX2309
Prep Date: 11/02/2011 08:25

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 14291 [VXX/2309]	46521	11/02/2011 09:23	VMS1670	MSD4	DVO
LCSD for HBN 14291 [VXX/2309]	46522	11/02/2011 09:48	VMS1670	MSD4	DVO
MB for HBN 14291 [VXX/2309]	46523	11/02/2011 11:55	VMS1670	MSD4	DVO
2509-Trip Blank	31103061011	11/02/2011 12:20	VMS1670	MSD4	DVO
2509-Field Blank	31103061012	11/02/2011 13:36	VMS1670	MSD4	DVO
2509-MW15S	31103061001	11/02/2011 17:49	VMS1670	MSD4	DVO
2509-MW15D	31103061002	11/02/2011 18:14	VMS1670	MSD4	DVO
2509-MW16S	31103061003	11/02/2011 18:40	VMS1670	MSD4	DVO
2509-MW16D	31103061004	11/02/2011 19:05	VMS1670	MSD4	DVO
2509-MW17S	31103061005	11/02/2011 19:30	VMS1670	MSD4	DVO
AM-PPA-MW13-004(46015DUP)	46732	11/02/2011 19:55	VMS1670	MSD4	DVO
AM-PPA-MW12-004(46016MS)	46733	11/02/2011 20:21	VMS1670	MSD4	DVO

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Method Blank

Blank ID: MB for HBN 14291 [VXX/2309] Matrix: Water
Blank Lab ID: 46523
QC for Samples:
31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061011, 31103061012

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Chloromethane	ND	U	0.448	1.00	ug/L	1
Vinyl chloride	ND	U	0.124	1.00	ug/L	1
Bromomethane	ND	U	0.237	1.00	ug/L	1
Chloroethane	ND	U	0.311	1.00	ug/L	1
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1
1,1-Dichloroethene	ND	U	0.212	1.00	ug/L	1
Acetone	ND	U	0.864	25.0	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	1.00	ug/L	1
Acrylonitrile	ND	U	3.04	25.0	ug/L	1
1,1-Dichloroethane	ND	U	0.165	1.00	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	1.00	ug/L	1
2-Butanone	ND	U	0.723	25.0	ug/L	1
Bromochloromethane	ND	U	0.211	1.00	ug/L	1
Chloroform	ND	U	0.139	1.00	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1
Benzene	ND	U	0.113	1.00	ug/L	1
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1
Trichloroethene	ND	U	0.125	1.00	ug/L	1
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1
Dibromomethane	ND	U	0.168	1.00	ug/L	1
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1
4-Methyl-2-pentanone	ND	U	0.558	5.00	ug/L	1
Toluene	ND	U	0.133	1.00	ug/L	1
Methyl iodide	ND	U	0.115	1.00	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1
Vinyl acetate	ND	U	0.882	2.00	ug/L	1
Carbon disulfide	ND	U	0.106	1.00	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1
2-Hexanone	ND	U	0.728	5.00	ug/L	1
Dibromochloromethane	ND	U	0.134	1.00	ug/L	1
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1
Chlorobenzene	ND	U	0.116	1.00	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	1.00	ug/L	1
Bromoform	ND	U	0.0974	1.00	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	1.00	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1

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Method Blank

Blank ID: MB for HBN 14291 [VXX/2309] Matrix: Water
Blank Lab ID: 46523
QC for Samples:
31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061011, 31103061012

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Styrene	ND	U	0.102	1.00	ug/L	1
Xylene (total)	ND	U	0.182	2.00	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	1.00	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
trans-1,4-Dichloro-2-butene	ND	U	0.414	5.00	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	99.0			64.0-140	%	1
Toluene d8	99.0			82.0-117	%	1
4-Bromofluorobenzene	98.0			85.0-115	%	1

Batch Information

Analytical Batch: VMS1670
Analytical Method: SW-846 8260B
Instrument: MSD4
Analyst: DVO
Analytical Date/Time: 11/2/2011 11:55:00AM

Prep Batch: VXX2309
Prep Method: SW-846 5030B
Prep Date/Time: 11/2/2011 8:25:47AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 14291 [VXX/2309]
Blank Spike Lab ID: 46521
Date Analyzed: 11/02/2011 09:23

Spike Duplicate ID: LCSD for HBN 14291 [VXX/2309]
Spike Duplicate Lab ID: 46522
Date Analyzed: 11/02/2011 09:48
Matrix: Water

QC for Samples: 31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061011, 31103061012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloromethane	5.00	5.52	110	5.00	4.71	94	57.0-132	16	30.00
Vinyl chloride	5.00	5.08	102	5.00	4.56	91	59.0-138	11	30.00
Bromomethane	5.00	6.84	**137***	5.00	5.32	106	51.0-134	25	30.00
Chloroethane	5.00	5.74	115	5.00	5.08	102	64.0-145	12	30.00
Trichlorofluoromethane	5.00	5.40	108	5.00	5.01	100	64.0-133	7.5	30.00
1,1-Dichloroethene	5.00	4.96	99	5.00	4.85	97	71.0-128	2.2	30.00
Acetone	25.0	23.6	94	25.0	23.0	92	52.0-140	2.6	30.00
Methylene chloride	5.00	4.91	98	5.00	5.01	100	70.0-113	2.0	30.00
trans-1,2-Dichloroethene	5.00	4.92	98	5.00	4.92	98	57.0-138	0.0	30.00
Acrylonitrile	125	134	107	125	124	99	55.0-141	7.8	30.00
1,1-Dichloroethane	5.00	4.84	97	5.00	4.88	98	68.0-133	0.82	30.00
cis-1,2-Dichloroethene	5.00	4.96	99	5.00	4.96	99	73.0-128	0.0	30.00
2-Butanone	25.0	22.9	92	25.0	22.7	91	58.0-134	0.88	30.00
Bromochloromethane	5.00	4.76	95	5.00	4.87	97	73.0-128	2.3	30.00
Chloroform	5.00	4.92	98	5.00	4.80	96	74.0-124	2.5	30.00
1,1,1-Trichloroethane	5.00	4.79	96	5.00	4.75	95	76.0-119	0.84	30.00
Carbon tetrachloride	5.00	4.94	99	5.00	4.74	95	75.0-120	4.1	30.00
Benzene	5.00	4.95	99	5.00	5.08	102	76.0-124	2.6	30.00
1,2-Dichloroethane	5.00	5.03	101	5.00	5.06	101	76.0-119	0.59	30.00
Trichloroethene	5.00	4.87	97	5.00	4.86	97	74.0-121	0.21	30.00
1,2-Dichloropropane	5.00	4.87	97	5.00	4.83	97	74.0-124	0.82	30.00
Dibromomethane	5.00	4.96	99	5.00	4.88	98	71.0-128	1.6	30.00
Bromodichloromethane	5.00	4.87	97	5.00	4.79	96	72.0-120	1.7	30.00
cis-1,3-Dichloropropene	5.00	5.10	102	5.00	5.09	102	73.0-122	0.20	30.00
4-Methyl-2-pentanone	25.0	23.5	94	25.0	24.1	97	65.0-124	2.5	30.00
Toluene	5.00	5.07	101	5.00	5.02	100	75.0-123	0.99	30.00
Methyl iodide	5.00	4.60	92	5.00	4.61	92	55.0-123	0.22	30.00
trans-1,3-Dichloropropene	5.00	4.97	99	5.00	4.87	97	70.0-125	2.0	30.00
Vinyl acetate	12.5	13.8	110	12.5	14.0	112	40.0-141	1.4	30.00
Carbon disulfide	5.00	5.11	102	5.00	4.95	99	65.0-132	3.2	30.00
1,1,2-Trichloroethane	5.00	4.95	99	5.00	5.09	102	76.0-121	2.8	30.00
Tetrachloroethene	5.00	5.05	101	5.00	5.02	100	59.0-112	0.60	30.00
2-Hexanone	25.0	22.7	91	25.0	23.0	92	56.0-133	1.3	30.00
Dibromochloromethane	5.00	4.91	98	5.00	4.90	98	67.0-122	0.20	30.00

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Blank Spike Summary

Blank Spike ID: LCS for HBN 14291 [VXX/2309]
Blank Spike Lab ID: 46521
Date Analyzed: 11/02/2011 09:23

Spike Duplicate ID: LCSD for HBN 14291 [VXX/2309]
Spike Duplicate Lab ID: 46522
Date Analyzed: 11/02/2011 09:48
Matrix: Water

QC for Samples: 31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061011, 31103061012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	5.00	4.91	98	5.00	4.87	97	74.0-119	0.82	30.00
Chlorobenzene	5.00	4.83	97	5.00	4.92	98	74.0-120	1.8	30.00
1,1,1,2-Tetrachloroethane	5.00	4.76	95	5.00	4.68	94	73.0-119	1.7	30.00
Bromoform	5.00	4.67	93	5.00	4.90	98	62.0-127	4.8	30.00
1,1,2,2-Tetrachloroethane	5.00	4.86	97	5.00	5.20	104	68.0-129	6.8	30.00
1,2,3-Trichloropropane	5.00	4.86	97	5.00	4.95	99	67.0-126	1.8	30.00
Ethyl Benzene	5.00	5.00	100	5.00	4.89	98	76.0-123	2.2	30.00
Styrene	5.00	5.01	100	5.00	5.00	100	76.0-121	0.20	30.00
1,4-Dichlorobenzene	5.00	5.06	101	5.00	5.10	102	70.0-125	0.79	30.00
1,2-Dichlorobenzene	5.00	5.01	100	5.00	5.07	101	76.0-118	1.2	30.00
1,2-Dibromo-3-chloropropane	30.0	29.3	98	30.0	28.9	96	62.0-130	1.4	30.00
trans-1,4-Dichloro-2-butene	25.0	25.5	102	25.0	25.2	101	61.0-132	1.2	30.00
Surrogates									
1,2-Dichloroethane-d4			99			98	64.0-140		
Toluene d8			101			100	82.0-117		
4-Bromofluorobenzene			100			100	85.0-115		

Batch Information

Analytical Batch: **VMS1670**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**

Prep Batch: **VXX2309**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/02/2011 08:25**
Spike Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**
Dupe Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**

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Batch Summary

Analytical Method: SW-846 8260B

Prep Method: SW-846 5030B
Prep Batch: VXX2314
Prep Date: 11/03/2011 08:08

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 14412 [VXX/2314]	46693	11/03/2011 09:29	VMS1674	MSD4	DVO
LCSD for HBN 14412 [VXX/2314]	46694	11/03/2011 09:54	VMS1674	MSD4	DVO
MB for HBN 14412 [VXX/2314]	46695	11/03/2011 11:35	VMS1674	MSD4	DVO
2509-MW17D	31103061006	11/03/2011 13:42	VMS1674	MSD4	DVO
2509-MW18S	31103061007	11/03/2011 14:07	VMS1674	MSD4	DVO
2509-MW18D	31103061008	11/03/2011 14:33	VMS1674	MSD4	DVO
2509-MW19S	31103061009	11/03/2011 14:58	VMS1674	MSD4	DVO
2509-MW19D	31103061010	11/03/2011 15:24	VMS1674	MSD4	DVO
8260 Influent(46486MS)	46807	11/03/2011 20:02	VMS1674	MSD4	DVO
8260 Influent(46486MSD)	46808	11/03/2011 20:27	VMS1674	MSD4	DVO

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Method Blank

Blank ID: MB for HBN 14412 [VXX/2314] Matrix: Water
Blank Lab ID: 46695
QC for Samples:
31103061006, 31103061007, 31103061008, 31103061009, 31103061010

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Chloromethane	ND	U	0.448	1.00	ug/L	1
Vinyl chloride	ND	U	0.124	1.00	ug/L	1
Bromomethane	ND	U	0.237	1.00	ug/L	1
Chloroethane	ND	U	0.311	1.00	ug/L	1
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1
1,1-Dichloroethene	ND	U	0.212	1.00	ug/L	1
Acetone	ND	U	0.864	25.0	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	1.00	ug/L	1
Acrylonitrile	ND	U	3.04	25.0	ug/L	1
1,1-Dichloroethane	ND	U	0.165	1.00	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	1.00	ug/L	1
2-Butanone	ND	U	0.723	25.0	ug/L	1
Bromochloromethane	ND	U	0.211	1.00	ug/L	1
Chloroform	ND	U	0.139	1.00	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1
Benzene	ND	U	0.113	1.00	ug/L	1
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1
Trichloroethene	ND	U	0.125	1.00	ug/L	1
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1
Dibromomethane	ND	U	0.168	1.00	ug/L	1
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1
4-Methyl-2-pentanone	ND	U	0.558	5.00	ug/L	1
Toluene	ND	U	0.133	1.00	ug/L	1
Methyl iodide	ND	U	0.115	1.00	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1
Vinyl acetate	ND	U	0.882	2.00	ug/L	1
Carbon disulfide	ND	U	0.106	1.00	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1
2-Hexanone	ND	U	0.728	5.00	ug/L	1
Dibromochloromethane	ND	U	0.134	1.00	ug/L	1
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1
Chlorobenzene	ND	U	0.116	1.00	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	1.00	ug/L	1
Bromoform	ND	U	0.0974	1.00	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	1.00	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1

Print Date: 11/09/2011 N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 14412 [VXX/2314]
Matrix: Water
Blank Lab ID: 46695
QC for Samples:
31103061006, 31103061007, 31103061008, 31103061009, 31103061010

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Styrene	ND	U	0.102	1.00	ug/L	1
Xylene (total)	ND	U	0.182	2.00	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	1.00	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
trans-1,4-Dichloro-2-butene	ND	U	0.414	5.00	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	100			64.0-140	%	1
Toluene d8	98.0			82.0-117	%	1
4-Bromofluorobenzene	99.0			85.0-115	%	1

Batch Information

Analytical Batch: VMS1674
Analytical Method: SW-846 8260B
Instrument: MSD4
Analyst: DVO
Analytical Date/Time: 11/3/2011 11:35:00AM

Prep Batch: VXX2314
Prep Method: SW-846 5030B
Prep Date/Time: 11/3/2011 8:08:59AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 14412 [VXX/2314]
Blank Spike Lab ID: 46693
Date Analyzed: 11/03/2011 09:29

Spike Duplicate ID: LCSD for HBN 14412 [VXX/2314]
Spike Duplicate Lab ID: 46694
Date Analyzed: 11/03/2011 09:54
Matrix: Water

QC for Samples: 31103061006, 31103061007, 31103061008, 31103061009, 31103061010

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloromethane	5.00	5.38	108	5.00	5.18	104	57.0-132	3.8	30.00
Vinyl chloride	5.00	4.64	93	5.00	4.50	90	59.0-138	3.1	30.00
Bromomethane	5.00	5.77	115	5.00	6.35	127	51.0-134	9.6	30.00
Chloroethane	5.00	5.04	101	5.00	5.11	102	64.0-145	1.4	30.00
Trichlorofluoromethane	5.00	5.08	102	5.00	4.83	97	64.0-133	5.0	30.00
1,1-Dichloroethene	5.00	4.97	99	5.00	4.82	96	71.0-128	3.1	30.00
Acetone	25.0	22.1	88	25.0	22.8	91	52.0-140	3.1	30.00
Methylene chloride	5.00	5.06	101	5.00	5.00	100	70.0-113	1.2	30.00
trans-1,2-Dichloroethene	5.00	5.02	100	5.00	5.05	101	57.0-138	0.60	30.00
Acrylonitrile	125	125	100	125	124	99	55.0-141	0.80	30.00
1,1-Dichloroethane	5.00	4.96	99	5.00	4.91	98	68.0-133	1.0	30.00
cis-1,2-Dichloroethene	5.00	5.00	100	5.00	4.92	98	73.0-128	1.6	30.00
2-Butanone	25.0	22.6	91	25.0	23.2	93	58.0-134	2.6	30.00
Bromochloromethane	5.00	5.03	101	5.00	4.82	96	73.0-128	4.3	30.00
Chloroform	5.00	4.94	99	5.00	4.79	96	74.0-124	3.1	30.00
1,1,1-Trichloroethane	5.00	4.92	98	5.00	4.88	98	76.0-119	0.82	30.00
Carbon tetrachloride	5.00	4.82	96	5.00	4.65	93	75.0-120	3.6	30.00
Benzene	5.00	5.22	104	5.00	4.92	98	76.0-124	5.9	30.00
1,2-Dichloroethane	5.00	5.17	103	5.00	5.12	102	76.0-119	0.97	30.00
Trichloroethene	5.00	4.87	97	5.00	4.83	97	74.0-121	0.82	30.00
1,2-Dichloropropane	5.00	4.86	97	5.00	4.76	95	74.0-124	2.1	30.00
Dibromomethane	5.00	4.86	97	5.00	4.90	98	71.0-128	0.82	30.00
Bromodichloromethane	5.00	5.00	100	5.00	4.85	97	72.0-120	3.0	30.00
cis-1,3-Dichloropropene	5.00	5.09	102	5.00	5.01	100	73.0-122	1.6	30.00
4-Methyl-2-pentanone	25.0	23.9	96	25.0	24.5	98	65.0-124	2.5	30.00
Toluene	5.00	5.11	102	5.00	5.03	101	75.0-123	1.6	30.00
Methyl iodide	5.00	4.87	97	5.00	4.71	94	55.0-123	3.3	30.00
trans-1,3-Dichloropropene	5.00	4.87	97	5.00	4.76	95	70.0-125	2.3	30.00
Vinyl acetate	12.5	14.5	116	12.5	14.4	115	40.0-141	0.69	30.00
Carbon disulfide	5.00	4.97	99	5.00	4.84	97	65.0-132	2.7	30.00
1,1,2-Trichloroethane	5.00	4.87	97	5.00	4.95	99	76.0-121	1.6	30.00
Tetrachloroethene	5.00	4.96	99	5.00	5.05	101	59.0-112	1.8	30.00
2-Hexanone	25.0	22.1	89	25.0	22.5	90	56.0-133	1.8	30.00
Dibromochloromethane	5.00	5.05	101	5.00	4.78	96	67.0-122	5.5	30.00

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Blank Spike Summary

Blank Spike ID: LCS for HBN 14412 [VXX/2314]
Blank Spike Lab ID: 46693
Date Analyzed: 11/03/2011 09:29

Spike Duplicate ID: LCSD for HBN 14412 [VXX/2314]
Spike Duplicate Lab ID: 46694
Date Analyzed: 11/03/2011 09:54
Matrix: Water

QC for Samples: 31103061006, 31103061007, 31103061008, 31103061009, 31103061010

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	5.00	4.91	98	5.00	4.80	96	74.0-119	2.3	30.00
Chlorobenzene	5.00	5.00	100	5.00	4.86	97	74.0-120	2.8	30.00
1,1,1,2-Tetrachloroethane	5.00	4.81	96	5.00	4.60	92	73.0-119	4.5	30.00
Bromoform	5.00	4.84	97	5.00	4.74	95	62.0-127	2.1	30.00
1,1,2,2-Tetrachloroethane	5.00	5.09	102	5.00	4.97	99	68.0-129	2.4	30.00
1,2,3-Trichloropropane	5.00	4.84	97	5.00	4.98	100	67.0-126	2.9	30.00
Ethyl Benzene	5.00	5.03	101	5.00	4.87	97	76.0-123	3.2	30.00
Styrene	5.00	5.00	100	5.00	4.87	97	76.0-121	2.6	30.00
1,4-Dichlorobenzene	5.00	5.16	103	5.00	4.91	98	70.0-125	5.0	30.00
1,2-Dichlorobenzene	5.00	5.03	101	5.00	4.95	99	76.0-118	1.6	30.00
1,2-Dibromo-3-chloropropane	30.0	29.5	98	30.0	29.1	97	62.0-130	1.4	30.00
trans-1,4-Dichloro-2-butene	25.0	25.2	101	25.0	25.8	103	61.0-132	2.4	30.00
Surrogates									
1,2-Dichloroethane-d4			101			99	64.0-140		
Toluene d8			100			99	82.0-117		
4-Bromofluorobenzene			99			99	85.0-115		

Batch Information

Analytical Batch: **VMS1674**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**

Prep Batch: **VXX2314**
Prep Method: **SW-846 5030B**
Prep Date/Time: **11/03/2011 08:08**
Spike Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**
Dupe Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**

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Batch Summary

Analytical Method: SW-846 6010C

Prep Method: SW-846 3010A
Prep Batch: MXX1600
Prep Date: 10/28/2011 10:25

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 14033 [MXX/1600]	46146	11/06/2011 16:30	MIP1315	ICP1	PSW
LCS for HBN 14033 [MXX/1600]	46147	11/06/2011 16:37	MIP1315	ICP1	PSW
LCSD for HBN 14033 [MXX/1600]	46148	11/06/2011 16:44	MIP1315	ICP1	PSW
2509-MW15S	31103061001	11/06/2011 16:51	MIP1315	ICP1	PSW
2509-MW15S(46071MS)	46150	11/06/2011 17:11	MIP1315	ICP1	PSW
2509-MW15S(46071MSD)	46151	11/06/2011 17:18	MIP1315	ICP1	PSW
2509-MW15D	31103061002	11/06/2011 17:25	MIP1315	ICP1	PSW
2509-MW16S	31103061003	11/06/2011 17:32	MIP1315	ICP1	PSW
2509-MW16D	31103061004	11/06/2011 17:38	MIP1315	ICP1	PSW
2509-MW17S	31103061005	11/06/2011 17:45	MIP1315	ICP1	PSW
2509-MW17D	31103061006	11/06/2011 17:52	MIP1315	ICP1	PSW
2509-MW18S	31103061007	11/06/2011 17:59	MIP1315	ICP1	PSW
2509-MW18D	31103061008	11/06/2011 18:06	MIP1315	ICP1	PSW
2509-MW19S	31103061009	11/06/2011 18:13	MIP1315	ICP1	PSW
2509-MW19D	31103061010	11/06/2011 18:33	MIP1315	ICP1	PSW
2509-Field Blank	31103061012	11/06/2011 18:40	MIP1315	ICP1	PSW
Rinseate-102611(45966DUP)	46149	11/06/2011 19:34	MIP1315	ICP1	PSW
Rinseate-102611(45966DUP)	46149	11/07/2011 17:16	MIP1316	ICP1	PSW

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Method Blank

Blank ID: MB for HBN 14033 [MXX/1600]
Matrix: Water
Blank Lab ID: 46146
QC for Samples:
31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061006, 31103061007, 31103061008, 31103061009, 31103061010, 31103061012

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Arsenic	ND	U	0.00369	0.0100	mg/L	1
Zinc	ND	U	0.00226	0.0200	mg/L	1
Lead	ND	U	0.00541	0.0100	mg/L	1
Cobalt	ND	U	0.00339	0.0100	mg/L	1
Nickel	ND	U	0.00306	0.0100	mg/L	1
Barium	**0.00222**	J	0.000394	0.100	mg/L	1
Chromium	**0.00151**	J	0.00147	0.0100	mg/L	1
Copper	**0.00224**	J	0.000672	0.0100	mg/L	1
Silver	ND	U	0.00105	0.0100	mg/L	1

Batch Information

Analytical Batch: MIP1315
Analytical Method: SW-846 6010C
Instrument: ICP1
Analyst: PSW
Analytical Date/Time: 11/6/2011 4:30:50PM

Prep Batch: MXX1600
Prep Method: SW-846 3010A
Prep Date/Time: 10/28/2011 10:25:06AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 14033 [MXX/1600]
Blank Spike Lab ID: 46147
Date Analyzed: 11/06/2011 16:37

Spike Duplicate ID: LCSD for HBN 14033 [MXX/1600]
Spike Duplicate Lab ID: 46148
Date Analyzed: 11/06/2011 16:44
Matrix: Water

QC for Samples: 31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061006, 31103061007, 31103061008, 31103061009, 31103061010, 31103061012

Results by **SW-846 6010C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	0.400	0.408	102	0.400	0.411	103	80.0-120	0.73	20.00
Zinc	0.400	0.378	95	0.400	0.382	95	80.0-120	1.1	20.00
Lead	0.400	0.373	93	0.400	0.377	94	80.0-120	1.1	20.00
Cobalt	0.400	0.397	99	0.400	0.399	100	80.0-120	0.50	20.00
Nickel	0.400	0.395	99	0.400	0.398	99	80.0-120	0.76	20.00
Barium	2.00	1.95	98	2.00	1.96	98	80.0-120	0.51	20.00
Chromium	0.400	0.393	98	0.400	0.397	99	80.0-120	1.0	20.00
Copper	0.400	0.398	99	0.400	0.405	101	80.0-120	1.7	20.00
Silver	0.400	0.410	102	0.400	0.413	103	80.0-120	0.73	20.00

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31103061001 (2509-MW15S) — Analysis Date: 11/06/2011 16:51
MS Sample ID: 46150 — Analysis Date: 11/06/2011 17:11
MSD Sample ID: 46151 — Analysis Date: 11/06/2011 17:18
Matrix: Water

QC for Samples: 31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061006, 31103061007, 31103061008, 31103061009, 31103061010, 31103061012

Results by **SW-846 6010C**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	4.13	0.400	0.394	99	0.400	0.409	102	75.0-125	3.7	20.00
Barium	66.4	2.00	1.93	96	2.00	1.98	99	75.0-125	2.6	20.00
Chromium	5.69	0.400	0.381	95	0.400	0.389	97	75.0-125	2.1	20.00
Cobalt	ND	0.400	0.385	96	0.400	0.397	99	75.0-125	3.1	20.00
Copper	3.10	0.400	0.394	99	0.400	0.406	102	75.0-125	3.0	20.00
Lead	ND	0.400	0.352	88	0.400	0.367	92	75.0-125	4.2	20.00
Nickel	ND	0.400	0.383	96	0.400	0.391	98	75.0-125	2.1	20.00
Silver	ND	0.400	0.391	98	0.400	0.400	100	75.0-125	2.3	20.00
Zinc	8.92	0.400	0.376	94	0.400	0.388	97	75.0-125	3.1	20.00

Batch Information

Analytical Batch: **MIP1315**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

Print Date: 11/09/2011 — N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 6020A

Prep Method: SW-846 3010A
Prep Batch: MXX1600
Prep Date: 10/28/2011 10:25

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 14033 [MXX/1600]	46146	11/07/2011 16:14	MMS1113	ICPMS2	PSW
MB for HBN 14033 [MXX/1600]	46146	11/07/2011 16:18	MMS1113	ICPMS2	PSW
LCS for HBN 14033 [MXX/1600]	46147	11/07/2011 16:22	MMS1113	ICPMS2	PSW
LCSD for HBN 14033 [MXX/1600]	46148	11/07/2011 16:26	MMS1113	ICPMS2	PSW
2509-MW15S	31103061001	11/07/2011 16:30	MMS1113	ICPMS2	PSW
2509-MW15S	31103061001	11/07/2011 16:34	MMS1113	ICPMS2	PSW
2509-MW15S(46071MS)	46150	11/07/2011 16:38	MMS1113	ICPMS2	PSW
2509-MW15S(46071MSD)	46151	11/07/2011 16:42	MMS1113	ICPMS2	PSW
2509-MW15D	31103061002	11/07/2011 16:46	MMS1113	ICPMS2	PSW
2509-MW15D	31103061002	11/07/2011 16:50	MMS1113	ICPMS2	PSW
2509-MW16S	31103061003	11/07/2011 17:02	MMS1113	ICPMS2	PSW
2509-MW16S	31103061003	11/07/2011 17:06	MMS1113	ICPMS2	PSW
2509-MW16D	31103061004	11/07/2011 17:10	MMS1113	ICPMS2	PSW
2509-MW16D	31103061004	11/07/2011 17:14	MMS1113	ICPMS2	PSW
2509-MW17S	31103061005	11/07/2011 17:18	MMS1113	ICPMS2	PSW
2509-MW17S	31103061005	11/07/2011 17:22	MMS1113	ICPMS2	PSW
2509-MW17D	31103061006	11/07/2011 17:26	MMS1113	ICPMS2	PSW
2509-MW17D	31103061006	11/07/2011 17:30	MMS1113	ICPMS2	PSW
2509-MW18S	31103061007	11/07/2011 17:34	MMS1113	ICPMS2	PSW
2509-MW18S	31103061007	11/07/2011 17:38	MMS1113	ICPMS2	PSW
2509-MW18D	31103061008	11/07/2011 17:50	MMS1113	ICPMS2	PSW
2509-MW18D	31103061008	11/07/2011 17:54	MMS1113	ICPMS2	PSW
2509-MW19S	31103061009	11/07/2011 17:58	MMS1113	ICPMS2	PSW
2509-MW19S	31103061009	11/07/2011 18:02	MMS1113	ICPMS2	PSW
2509-MW19D	31103061010	11/07/2011 18:07	MMS1113	ICPMS2	PSW
2509-MW19D	31103061010	11/07/2011 18:11	MMS1113	ICPMS2	PSW
2509-Field Blank	31103061012	11/07/2011 18:15	MMS1113	ICPMS2	PSW
2509-Field Blank	31103061012	11/07/2011 18:19	MMS1113	ICPMS2	PSW

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Method Blank

Blank ID: MB for HBN 14033 [MXX/1600]
Matrix: Water
Blank Lab ID: 46146
QC for Samples:
31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061006, 31103061007, 31103061008, 31103061009, 31103061010, 31103061012

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Beryllium	ND	U	0.000119	0.00100	mg/L	2
Vanadium	ND	U	0.000661	0.00500	mg/L	10
Selenium	ND	U	0.000824	0.00500	mg/L	10
Cadmium	ND	U	0.0000556	0.00100	mg/L	2
Antimony	ND	U	0.000437	0.00500	mg/L	10
Thallium	ND	U	0.000297	0.00500	mg/L	10

Batch Information

Analytical Batch: MMS1113
Analytical Method: SW-846 6020A
Instrument: ICPMS2
Analyst: PSW
Analytical Date/Time: 11/7/2011 4:14:03PM

Prep Batch: MXX1600
Prep Method: SW-846 3010A
Prep Date/Time: 10/28/2011 10:25:06AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 14033 [MXX/1600]
Blank Spike Lab ID: 46147
Date Analyzed: 11/07/2011 16:22

Spike Duplicate ID: LCSD for HBN 14033 [MXX/1600]
Spike Duplicate Lab ID: 46148
Date Analyzed: 11/07/2011 16:26
Matrix: Water

QC for Samples: 31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061006, 31103061007, 31103061008, 31103061009, 31103061010, 31103061012

Results by **SW-846 6020A**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Beryllium	0.400	0.406	102	0.400	0.439	110	80.0-120	7.8	20.00
Vanadium	0.400	0.404	101	0.400	0.425	106	80.0-120	5.1	20.00
Selenium	0.400	0.416	104	0.400	0.434	109	80.0-120	4.2	20.00
Cadmium	0.400	0.402	101	0.400	0.429	107	80.0-120	6.5	20.00
Antimony	0.400	0.390	98	0.400	0.428	107	80.0-120	9.3	20.00
Thallium	0.400	0.390	98	0.400	0.422	106	80.0-120	7.9	20.00

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31103061001 (2509-MW15S) — Analysis Date: 11/07/2011 16:34
MS Sample ID: 46150 — Analysis Date: 11/07/2011 16:38
MSD Sample ID: 46151 — Analysis Date: 11/07/2011 16:42
Matrix: Water

QC for Samples: 31103061001, 31103061002, 31103061003, 31103061004, 31103061005, 31103061006, 31103061007, 31103061008, 31103061009, 31103061010, 31103061012

Results by **SW-846 6020A**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Antimony	ND	0.400	0.398	100	0.400	0.383	96	75.0-125	3.8	25.00
Beryllium	0.120	0.400	0.432	108	0.400	0.416	104	75.0-125	3.8	25.00
Cadmium	ND	0.400	0.432	108	0.400	0.416	104	75.0-125	3.8	25.00
Selenium	ND	0.400	0.438	110	0.400	0.405	101	75.0-125	7.8	25.00
Thallium	ND	0.400	0.407	102	0.400	0.403	101	75.0-125	0.99	25.00
Vanadium	12.6	0.400	0.453	110	0.400	0.425	103	75.0-125	6.4	25.00

Batch Information

Analytical Batch: **MMS1113**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1600**
Prep Method: **SW-846 3010A**
Prep Date/Time: **10/28/2011 10:25**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

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(1)

CLIENT: Joyce Engineering

CONTACT: Jeremey Kerly PHONE NO:(336) 323 0092

PROJECT: CRSWMA- Tuscarora LF SITE/PWSID#: 25-09

REPORTS TO: Jeremey Kerly
2211 W. Meadowview Rd
Greensboro NC 27404 FAX NO.:( )

INVOICE TO: Lecia Jones
1604 Ownby Ln
Richmond VA 23222 QUOTE #:
P.O. NUMBER: 618.1101.11.02

SGS Reference: 31103061

PAGE 1 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	NC Appendix I Metals	NC App I VOCs	REMARKS
	2509 - MW 15S	10/26/11	410	Water	4	G	X	X	
	2509 - MW 15D	10/26/11	920				X	X	
	2509 - MW 16S		935				X	X	
	2509 - MW 16D		950				X	X	
	2509 - MW 17S		845				X	X	
	2509 - MW 17D		855				X	X	
	2509 - MW 18S		815				X	X	
	2509 - MW 18D		825				X	X	
	2509 - MW 19S		750				X	X	
	2509 - MW 19D		805				X	X	

Preservatives Used: HNO3 | HCl

(3) Analysis Required

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
[signature]	10/26/11	1500	[signature]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:
[signature]	10/27/11	1230	[signature]

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 2.5

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:
☐ RUSH _____ Date Needed ☒ STD

❑ 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

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(1)

CLIENT: Joyce Engineering

CONTACT: Jeremey Kerly PHONE NO:(336) 323-0092

PROJECT: CRSWMA SITE/PWSID# :

REPORTS TO: Jeremey Kerly FAX NO.:( )

INVOICE TO: Lecia Jones QUOTE #:

P.O. NUMBER: 618.101.11.02

SGS Reference: 31103061

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	Preservatives Used: HNO_3	HCl								REMARKS
							Analysis Required (3): NC App 1 Metal	NC APPI VOCs								
	2509 - Tripblank	10/25/11	400	Water	2			X								
	2509 - Field Blank	10/26/11	1000	water	4		X	X								

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
[signature]	10/26/11	1500	[signature]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:
[signature]	10/27/11	1230	

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 2.5

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☒ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **Joyce Engineering** Work Order No.: **31103061**

1. ___ Shipped
   X Hand Delivered

Notes:

2. X COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. X Custody Tape on Container
   ___ No Custody Tape

4. X Samples Intact
   ___ Samples Broken / Leaking

5. X Chilled on Receipt Actual Temp.(s) in °C: 2.5
   ___ Ambient on Receipt
   X Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. X Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   X HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. X Received Within Holding Time
   ___ Not Received Within Holding Time

9. X No Discrepancies Noted
   ___ Discrepancies Noted

10. X No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Comments:

Inspected and Logged in by: JJ

Date: Thu-10/27/11 00:00

MI_11.5

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 S **Sampler(s):** A. Everhart

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.73 feet

Depth to Bottom (DTB): 19.00 feet

Water Column Thickness (WCT): 13.27 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.2 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 6.6 gallons

Actual Amount Purged/Bailed : 6.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.75 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1613	20.52	6.04	146	296	AE
2.2	1616	20.53	5.53	126	>1000	AE
4.4	1619	20.58	5.27	119	>1000	AE
6.6	1623	20.59	5.15	118	>1000	AE
	10/26/11 @					
Before Sampling	0910	18.42	5.62	130	49.6	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's 10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 D **Sampler(s):** A. Everhart

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 16.79 feet

Depth to Bottom (DTB): 40.00 feet

Water Column Thickness (WCT): 23.4 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.8 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 11.4 gallons

Actual Amount Purged/Bailed : 11.4 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 16.79 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1550	20.7	6.67	383	7.28	AE
3.8	1557	18.3	7.06	371	491	AE
7.6	1603	17.93	7.1	361	>1000	AE
11.4	1610	18.06	7.16	361	>1000	AE
	10/26/11 @					
Before Sampling	920	18.43	6.56	351	54.0	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16S **Sampler(s):** A. Everhart

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 6.88 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 8.12 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.3 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.9 gallons

Actual Amount Purged/Bailed : 4.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 7.06 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1735	20.62	5.45	107	49.3	AE
1.3	1738	20.63	4.69	76	>1000	AE
2.6	1741	20.96	4.50	71	>1000	AE
3.9	1744	20.85	4.54	72	>1000	AE
	10/26/11 @					
Before Sampling	0935	20.04	4.87	77	9.22	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-25-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16D **Sampler(s):** A. Everhart

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 16.39 feet

Depth to Bottom (DTB): 36.00 feet

Water Column Thickness (WCT): 19.61 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.2 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 9.6 gallons

Actual Amount Purged/Bailed : 9.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 16.40 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1714	20.76	6.67	492	18.43	AE
3.2	1721	18.79	6.97	479	854	AE
6.4	1726	18.38	7.05	444	>1000	AE
9.6	1731	18.31	7.05	424	> 1000	AE
	10/26/11 @					
Before Sampling	0950	19.4	6.86	412	28.1	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's Field Blank @ 1000

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17S **Sampler(s):** A. Everhart

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 6.29 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 8.71 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.4 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.2 gallons

Actual Amount Purged/Bailed : 4.2 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1450	20.94	5.50	77	31.8	AE
1.4	1453	21.08	4.93	66	>1000	AE
2.8	1454	21.20	4.86	64	>1000	AE
4.2	1455	21.22	4.84	67	>1000	AE
	10/26/11 @					
Before Sampling	0845	19.72	5.24	66	89.6	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17D **Sampler(s):** A. Everhart

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 13.08 feet

Depth to Bottom (DTB): 39.00 feet

Water Column Thickness (WCT): 25.92 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 4.2 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 12.6 gallons

Actual Amount Purged/Bailed : 12.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1430	21.42	11.33	629	26.9	AE
4.2	1436	18.60	7.94	355	783	AE
8.4	1440	18.51	7.37	357	>1000	AE
12.6	1445	18.29	7.31	357	>1000	AE
	10/26/11 @					
Before Sampling	0855	20.31	6.69	341	22.3	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-25-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18S **Sampler(s):** A. Everhart

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.31 feet

Depth to Bottom (DTB): 14.00 feet

Water Column Thickness (WCT): 8.69 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.4 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.2 gallons

Actual Amount Purged/Bailed : 4.2 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 5.31 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1530	20.94	5.27	154	18.36	AE
1.4	1532	21.11	4.36	565	>1000	AE
2.8	1534	20.99	4.25	647	>1000	AE
4.2	1536	20.92	4.17	677	> 1000	AE
	10/26/11 @					
Before Sampling	0815	18.59	4.40	459	11.13	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18D **Sampler(s):** A. Everhart

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 13.20 feet

Depth to Bottom (DTB): 38.00 feet

Water Column Thickness (WCT): 24.8 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 4.0 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 12.0 gallons

Actual Amount Purged/Bailed : 12.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 13.23 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1510	20.41	6.75	348	37.7	AE
4.0	1516	18.14	7.00	387	>1000	AE
8.0	1521	18.31	7.09	393	>1000	AE
12.0	1527	17.83	7.08	376	>1000	AE
	10/26/11 @					
Before Sampling	0825	18.43	6.67	370	21.9	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19S **Sampler(s):** A. Everhart

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 7.15 feet

Depth to Bottom (DTB): 13.00 feet

Water Column Thickness (WCT): 5.85 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.0 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.0 gallons

Actual Amount Purged/Bailed : 3.0 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 7.10 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1352	21.06	6.64	63	11.84	AE
1.0	1355	21.39	6.12	67	496	AE
2.0	1358	21.76	5.90	70	783	AE
3.0	1400	22.27	5.90	76	>1000	AE
	10/26/11 @					
Before Sampling	0750	18.35	4.83	59	22.5	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 sunny 70's

10/26/2011 sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 10/25-26/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19D **Sampler(s):** A. Everhart

Well Location: SE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 13.84 feet

Depth to Bottom (DTB): 28.00 feet

Water Column Thickness (WCT): 14.16 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.3 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 6.9 gallons

Actual Amount Purged/Bailed : 6.9 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 13.84 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1334	21.83	7.07	385	26.7	AE
2.3	1337	20.30	7.13	337	>1000	AE
4.6	1344	20.13	7.15	403	>1000	AE
6.9	1347	19.54	7.18	394	>1000	AE
	10/26/11 @					
Before Sampling	0805	17.44	6.56	350	30.7	AE

Comments (weather conditions, odor, color, silt, etc.):

10/25/2011 Sunny 70's

10/26/2011 Sunny 60's

Signature: [signature] **Date:** 10/26/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

Part 5 – Laboratory Analytical Report - Background Event No. 4 (November 2011)

Laboratory Report of Analysis
Field Data Logs

Laboratory Report of Analysis

To: Jeremy Kerly
Joyce Engineering, Inc.
2211 West Meadowview Rd
Suite 101
Greensboro, NC 27407

Report Number: **31103382**

Client Project: **CRSWMA Phase 3**

Dear Jeremy Kerly,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Michael D. Page at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Michael D. Page
Project Manager
michael.page@sgs.com

Date

Print Date: 12/16/2011

N.C. Certification # 481

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Amount detected is between the Method Detection Limit and the Lower Calibration Limit
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

SGS North America Inc.
5500 Business Drive, Wilmington, NC 28405
t 910.350.1903 f 910.350.1557 www.us.sgs.com
Member of SGS Group

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW-15S	31103382001	11/29/2011 10:25	11/30/2011 10:25	Water
MW-15D	31103382002	11/29/2011 10:35	11/30/2011 10:25	Water
MW-16S	31103382003	11/29/2011 10:50	11/30/2011 10:25	Water
MW-16D	31103382004	11/29/2011 11:00	11/30/2011 10:25	Water
MW-17S	31103382005	11/29/2011 11:15	11/30/2011 10:25	Water
MW-17D	31103382006	11/29/2011 11:25	11/30/2011 10:25	Water
MW-18S	31103382007	11/29/2011 13:05	11/30/2011 10:25	Water
MW-18D	31103382008	11/29/2011 13:15	11/30/2011 10:25	Water
MW-19S	31103382009	11/29/2011 13:35	11/30/2011 10:25	Water
MW-19D	31103382010	11/29/2011 13:45	11/30/2011 10:25	Water
Field Blank	31103382011	11/29/2011 14:10	11/30/2011 10:25	Water
Trip Blank	31103382012	11/29/2011 00:00	11/30/2011 10:25	Water

SGS North America Inc.
5500 Business Drive, Wilmington, NC 28405
t 910.350.1903 f 910.350.1557 www.us.sgs.com
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Case Narrative

MIP1361/MIP1363 [MXX1694]

6010C - The Method Blank associated with batches MIP1361 and MIP1363 have reported concentrations for Barium, Copper and Silver that are below the LOQ. These analytes have been 'J' flagged on the data.

MMS1128/MMS1130 [MXX1694]

6020A - The Method Blank associated with batches MMS1128 and MMS 1130 have reported concentrations for Cadmium and Thallium that are below the LOQ. These analytes have been 'J' flagged on the data.

SGS North America Inc.
5500 Business Drive, Wilmington, NC 28405
t 910.350.1903 f 910.350.1557 www.us.sgs.com
Member of SGS Group

Results of **MW-15S**

Client Sample ID: **MW-15S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382001-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 15:06
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 15:06
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 15:06
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 15:06
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 15:06
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 15:06
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 15:06
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 15:06
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 15:06
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 15:06
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 15:06
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 15:06
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 15:06
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 15:06
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 15:06
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 15:06
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 15:06
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 15:06
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 15:06
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 15:06
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 15:06
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 15:06
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 15:06
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 15:06
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 15:06
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 15:06
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 15:06
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 15:06
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 15:06
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 15:06
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 15:06
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 15:06
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 15:06
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 15:06
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 15:06
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 15:06
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 15:06
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 15:06
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 15:06
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 15:06
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 15:06
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 15:06
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 15:06

Print Date: 12/16/2011

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Results of **MW-15S**

Client Sample ID: **MW-15S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382001-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 15:06
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 15:06
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 15:06
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 15:06
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	12/1/2011 15:06
Toluene d8	98.0			82.0-117	%	1	12/1/2011 15:06
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/1/2011 15:06

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 15:06**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-15S**

Client Sample ID: **MW-15S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382001-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 16:21
Zinc	**7.47**	J	2.26	10.0	ug/L	1	12/11/2011 16:21
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 16:21
Cobalt	**4.72**	J	3.39	10.0	ug/L	1	12/11/2011 16:21
Nickel	**7.70**	J	3.06	50.0	ug/L	1	12/11/2011 16:21
Barium	**79.3**	J	0.394	100	ug/L	1	12/12/2011 16:46
Chromium	**1.52**	J	1.47	10.0	ug/L	1	12/11/2011 16:21
Copper	**1.77**	J	0.672	10.0	ug/L	1	12/11/2011 16:21
Silver	**2.22**	J	1.05	10.0	ug/L	1	12/11/2011 16:21

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 16:21**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 16:46**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-15S**

Client Sample ID: **MW-15S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382001-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 13:31
Vanadium	**14.4**		0.661	5.00	ug/L	10	12/13/2011 11:31
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 11:31
Beryllium	**0.200**	J	0.119	1.00	ug/L	2	12/14/2011 13:31
Antimony	**1.00**	J	0.437	5.00	ug/L	10	12/13/2011 11:31
Thallium	**0.500**	J	0.297	5.00	ug/L	10	12/13/2011 11:31

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 11:31**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 13:31**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-15D**

Client Sample ID: **MW-15D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382002-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 15:32
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 15:32
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 15:32
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 15:32
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 15:32
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 15:32
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 15:32
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 15:32
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 15:32
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 15:32
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 15:32
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 15:32
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 15:32
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 15:32
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 15:32
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 15:32
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 15:32
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 15:32
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 15:32
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 15:32
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 15:32
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 15:32
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 15:32
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 15:32
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 15:32
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 15:32
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 15:32
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 15:32
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 15:32
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 15:32
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 15:32
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 15:32
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 15:32
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 15:32
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 15:32
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 15:32
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 15:32
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 15:32
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 15:32
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 15:32
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 15:32
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 15:32
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 15:32

Print Date: 12/16/2011

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Results of **MW-15D**

Client Sample ID: **MW-15D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382002-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 15:32
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 15:32
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 15:32
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 15:32
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	12/1/2011 15:32
Toluene d8	98.0			82.0-117	%	1	12/1/2011 15:32
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/1/2011 15:32

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 15:32**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-15D**

Client Sample ID: **MW-15D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382002-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 16:41
Zinc	ND	U	2.26	10.0	ug/L	1	12/11/2011 16:41
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 16:41
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 16:41
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 16:41
Barium	**48.3**	J	0.394	100	ug/L	1	12/12/2011 17:01
Chromium	**2.24**	J	1.47	10.0	ug/L	1	12/11/2011 16:41
Copper	**0.880**	J	0.672	10.0	ug/L	1	12/11/2011 16:41
Silver	**2.37**	J	1.05	10.0	ug/L	1	12/11/2011 16:41

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 16:41**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:01**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-15D**

Client Sample ID: **MW-15D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382002-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 13:43
Vanadium	**11.2**		0.661	5.00	ug/L	10	12/13/2011 11:40
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 11:40
Beryllium	ND	U	0.119	1.00	ug/L	2	12/14/2011 13:43
Antimony	**0.600**	J	0.437	5.00	ug/L	10	12/13/2011 11:40
Thallium	**0.500**	J	0.297	5.00	ug/L	10	12/13/2011 11:40

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 11:40**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 13:43**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-16S**

Client Sample ID: **MW-16S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382003-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:50
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 15:57
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 15:57
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 15:57
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 15:57
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 15:57
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 15:57
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 15:57
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 15:57
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 15:57
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 15:57
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 15:57
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 15:57
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 15:57
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 15:57
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 15:57
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 15:57
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 15:57
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 15:57
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 15:57
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 15:57
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 15:57
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 15:57
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 15:57
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 15:57
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 15:57
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 15:57
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 15:57
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 15:57
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 15:57
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 15:57
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 15:57
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 15:57
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 15:57
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 15:57
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 15:57
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 15:57
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 15:57
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 15:57
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 15:57
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 15:57
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 15:57
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 15:57
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 15:57

Print Date: 12/16/2011

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Results of **MW-16S**

Client Sample ID: **MW-16S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382003-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:50
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 15:57
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 15:57
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 15:57
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 15:57
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	12/1/2011 15:57
Toluene d8	98.0			82.0-117	%	1	12/1/2011 15:57
4-Bromofluorobenzene	97.0			85.0-115	%	1	12/1/2011 15:57

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 15:57**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-16S**

Client Sample ID: **MW-16S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382003-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:50
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:01
Zinc	**2.78**	J	2.26	10.0	ug/L	1	12/11/2011 17:01
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:01
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:01
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:01
Barium	**94.2**	J	0.394	100	ug/L	1	12/12/2011 17:05
Chromium	**1.65**	J	1.47	10.0	ug/L	1	12/11/2011 17:01
Copper	**1.61**	J	0.672	10.0	ug/L	1	12/11/2011 17:01
Silver	**2.85**	J	1.05	10.0	ug/L	1	12/11/2011 17:01

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:01**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:05**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-16S**

Client Sample ID: **MW-16S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382003-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 10:50
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 13:47
Vanadium	**13.1**		0.661	5.00	ug/L	10	12/13/2011 11:42
Selenium	**1.40**	J	0.824	5.00	ug/L	10	12/13/2011 11:42
Beryllium	**0.220**	J	0.119	1.00	ug/L	2	12/14/2011 13:47
Antimony	**0.600**	J	0.437	5.00	ug/L	10	12/13/2011 11:42
Thallium	**0.500**	J	0.297	5.00	ug/L	10	12/13/2011 11:42

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 11:42**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 13:47**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-16D**

Client Sample ID: **MW-16D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382004-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:00
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 16:22
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 16:22
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 16:22
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 16:22
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 16:22
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 16:22
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 16:22
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 16:22
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 16:22
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 16:22
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 16:22
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 16:22
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 16:22
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 16:22
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 16:22
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 16:22
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 16:22
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 16:22
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 16:22
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 16:22
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 16:22
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 16:22
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 16:22
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 16:22
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 16:22
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 16:22
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 16:22
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 16:22
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 16:22
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 16:22
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 16:22
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 16:22
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 16:22
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 16:22
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 16:22
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 16:22
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 16:22
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 16:22
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 16:22
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 16:22
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 16:22
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 16:22
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 16:22

Print Date: 12/16/2011

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Results of **MW-16D**

Client Sample ID: **MW-16D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382004-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:00
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 16:22
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 16:22
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 16:22
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 16:22
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	12/1/2011 16:22
Toluene d8	97.0			82.0-117	%	1	12/1/2011 16:22
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/1/2011 16:22

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 16:22**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-16D**

Client Sample ID: **MW-16D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382004-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:00
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:08
Zinc	ND	U	2.26	10.0	ug/L	1	12/11/2011 17:08
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:08
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:08
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:08
Barium	**76.2**	J	0.394	100	ug/L	1	12/12/2011 17:10
Chromium	**2.12**	J	1.47	10.0	ug/L	1	12/11/2011 17:08
Copper	**0.920**	J	0.672	10.0	ug/L	1	12/11/2011 17:08
Silver	**2.29**	J	1.05	10.0	ug/L	1	12/11/2011 17:08

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:08**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:10**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

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Results of **MW-16D**

Client Sample ID: **MW-16D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382004-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:00
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 13:51
Vanadium	**8.50**		0.661	5.00	ug/L	10	12/13/2011 11:45
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 11:45
Beryllium	ND	U	0.119	1.00	ug/L	2	12/14/2011 13:51
Antimony	**0.500**	J	0.437	5.00	ug/L	10	12/13/2011 11:45
Thallium	**0.400**	J	0.297	5.00	ug/L	10	12/13/2011 11:45

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 11:45**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 13:51**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-17S**

Client Sample ID: **MW-17S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382005-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 16:48
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 16:48
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 16:48
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 16:48
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 16:48
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 16:48
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 16:48
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 16:48
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 16:48
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 16:48
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 16:48
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 16:48
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 16:48
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 16:48
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 16:48
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 16:48
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 16:48
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 16:48
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 16:48
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 16:48
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 16:48
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 16:48
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 16:48
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 16:48
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 16:48
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 16:48
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 16:48
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 16:48
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 16:48
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 16:48
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 16:48
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 16:48
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 16:48
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 16:48
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 16:48
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 16:48
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 16:48
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 16:48
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 16:48
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 16:48
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 16:48
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 16:48
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 16:48

Print Date: 12/16/2011

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Results of **MW-17S**

Client Sample ID: **MW-17S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382005-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 16:48
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 16:48
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 16:48
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 16:48
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	12/1/2011 16:48
Toluene d8	97.0			82.0-117	%	1	12/1/2011 16:48
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/1/2011 16:48

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 16:48**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-17S**

Client Sample ID: **MW-17S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382005-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:15
Zinc	**5.94**	J	2.26	10.0	ug/L	1	12/11/2011 17:15
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:15
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:15
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:15
Barium	**96.8**	J	0.394	100	ug/L	1	12/12/2011 17:15
Chromium	**2.72**	J	1.47	10.0	ug/L	1	12/11/2011 17:15
Copper	**1.73**	J	0.672	10.0	ug/L	1	12/11/2011 17:15
Silver	**1.66**	J	1.05	10.0	ug/L	1	12/11/2011 17:15

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:15**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:15**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-17S**

Client Sample ID: **MW-17S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382005-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 13:55
Vanadium	**11.0**		0.661	5.00	ug/L	10	12/13/2011 11:48
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 11:48
Beryllium	**0.220**	J	0.119	1.00	ug/L	2	12/14/2011 13:55
Antimony	**0.500**	J	0.437	5.00	ug/L	10	12/13/2011 11:48
Thallium	**0.500**	J	0.297	5.00	ug/L	10	12/13/2011 11:48

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 11:48**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 13:55**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-17D**

Client Sample ID: **MW-17D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382006-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 17:13
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 17:13
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 17:13
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 17:13
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 17:13
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 17:13
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 17:13
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 17:13
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 17:13
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 17:13
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 17:13
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 17:13
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 17:13
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 17:13
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 17:13
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 17:13
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 17:13
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 17:13
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 17:13
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 17:13
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 17:13
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 17:13
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 17:13
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 17:13
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 17:13
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 17:13
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 17:13
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 17:13
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 17:13
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 17:13
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 17:13
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 17:13
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 17:13
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 17:13
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 17:13
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 17:13
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 17:13
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 17:13
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 17:13
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 17:13
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 17:13
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 17:13
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 17:13

Print Date: 12/16/2011

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Results of **MW-17D**

Client Sample ID: **MW-17D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382006-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 17:13
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 17:13
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 17:13
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 17:13
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	12/1/2011 17:13
Toluene d8	99.0			82.0-117	%	1	12/1/2011 17:13
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/1/2011 17:13

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 17:13**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-17D**

Client Sample ID: **MW-17D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382006-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:22
Zinc	ND	U	2.26	10.0	ug/L	1	12/11/2011 17:22
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:22
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:22
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:22
Barium	**45.8**	J	0.394	100	ug/L	1	12/12/2011 17:29
Chromium	ND	U	1.47	10.0	ug/L	1	12/11/2011 17:22
Copper	**1.22**	J	0.672	10.0	ug/L	1	12/11/2011 17:22
Silver	**2.01**	J	1.05	10.0	ug/L	1	12/11/2011 17:22

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:22**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:29**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-17D**

Client Sample ID: **MW-17D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382006-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 11:25
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 14:07
Vanadium	**11.2**		0.661	5.00	ug/L	10	12/13/2011 11:56
Selenium	**1.00**	J	0.824	5.00	ug/L	10	12/13/2011 11:56
Beryllium	ND	U	0.119	1.00	ug/L	2	12/14/2011 14:07
Antimony	**0.500**	J	0.437	5.00	ug/L	10	12/13/2011 11:56
Thallium	**0.400**	J	0.297	5.00	ug/L	10	12/13/2011 11:56

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 11:56**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 14:07**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-18S**

Client Sample ID: **MW-18S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382007-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:05
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 17:39
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 17:39
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 17:39
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 17:39
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 17:39
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 17:39
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 17:39
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 17:39
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 17:39
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 17:39
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 17:39
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 17:39
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 17:39
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 17:39
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 17:39
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 17:39
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 17:39
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 17:39
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 17:39
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 17:39
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 17:39
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 17:39
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 17:39
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 17:39
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 17:39
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 17:39
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 17:39
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 17:39
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 17:39
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 17:39
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 17:39
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 17:39
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 17:39
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 17:39
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 17:39
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 17:39
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 17:39
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 17:39
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 17:39
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 17:39
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 17:39
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 17:39
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 17:39

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-18S**

Client Sample ID: **MW-18S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382007-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:05
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 17:39
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 17:39
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 17:39
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 17:39
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	12/1/2011 17:39
Toluene d8	98.0			82.0-117	%	1	12/1/2011 17:39
4-Bromofluorobenzene	97.0			85.0-115	%	1	12/1/2011 17:39

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 17:39**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-18S**

Client Sample ID: **MW-18S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382007-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:05
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:29
Zinc	**3.15**	J	2.26	10.0	ug/L	1	12/11/2011 17:29
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:29
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:29
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:29
Barium	**55.3**	J	0.394	100	ug/L	1	12/12/2011 17:34
Chromium	**2.01**	J	1.47	10.0	ug/L	1	12/11/2011 17:29
Copper	**1.21**	J	0.672	10.0	ug/L	1	12/11/2011 17:29
Silver	**2.78**	J	1.05	10.0	ug/L	1	12/11/2011 17:29

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:29**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:34**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-18S**

Client Sample ID: **MW-18S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382007-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:05
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 14:11
Vanadium	**14.1**		0.661	5.00	ug/L	10	12/13/2011 11:59
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 11:59
Beryllium	**0.300**	J	0.119	1.00	ug/L	2	12/14/2011 14:11
Antimony	ND	U	0.437	5.00	ug/L	10	12/13/2011 11:59
Thallium	**0.400**	J	0.297	5.00	ug/L	10	12/13/2011 11:59

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 11:59**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 14:11**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-18D**

Client Sample ID: **MW-18D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382008-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/1/2011 18:04
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/1/2011 18:04
Benzene	ND	U	0.113	1.00	ug/L	1	12/1/2011 18:04
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/1/2011 18:04
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/1/2011 18:04
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/1/2011 18:04
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/1/2011 18:04
2-Butanone	ND	U	0.723	100	ug/L	1	12/1/2011 18:04
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/1/2011 18:04
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/1/2011 18:04
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/1/2011 18:04
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/1/2011 18:04
Chloroform	ND	U	0.139	5.00	ug/L	1	12/1/2011 18:04
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/1/2011 18:04
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/1/2011 18:04
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/1/2011 18:04
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/1/2011 18:04
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/1/2011 18:04
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/1/2011 18:04
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/1/2011 18:04
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/1/2011 18:04
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/1/2011 18:04
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/1/2011 18:04
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/1/2011 18:04
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/1/2011 18:04
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/1/2011 18:04
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/1/2011 18:04
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/1/2011 18:04
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/1/2011 18:04
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/1/2011 18:04
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/1/2011 18:04
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/1/2011 18:04
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/1/2011 18:04
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/1/2011 18:04
Styrene	ND	U	0.102	1.00	ug/L	1	12/1/2011 18:04
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/1/2011 18:04
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/1/2011 18:04
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/1/2011 18:04
Toluene	ND	U	0.133	1.00	ug/L	1	12/1/2011 18:04
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/1/2011 18:04
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/1/2011 18:04
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/1/2011 18:04
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/1/2011 18:04

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Results of **MW-18D**

Client Sample ID: **MW-18D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382008-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/1/2011 18:04
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/1/2011 18:04
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/1/2011 18:04
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/1/2011 18:04
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	12/1/2011 18:04
Toluene d8	99.0			82.0-117	%	1	12/1/2011 18:04
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/1/2011 18:04

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/01/2011 18:04**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:51**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-18D**

Client Sample ID: **MW-18D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382008-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:36
Zinc	ND	U	2.26	10.0	ug/L	1	12/11/2011 17:36
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:36
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:36
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:36
Barium	**43.8**	J	0.394	100	ug/L	1	12/12/2011 17:39
Chromium	**3.19**	J	1.47	10.0	ug/L	1	12/11/2011 17:36
Copper	**0.920**	J	0.672	10.0	ug/L	1	12/11/2011 17:36
Silver	**2.57**	J	1.05	10.0	ug/L	1	12/11/2011 17:36

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:36**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:39**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

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Results of **MW-18D**

Client Sample ID: **MW-18D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382008-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:15
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 14:15
Vanadium	**10.9**		0.661	5.00	ug/L	10	12/13/2011 12:02
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 12:02
Beryllium	ND	U	0.119	1.00	ug/L	2	12/14/2011 14:15
Antimony	ND	U	0.437	5.00	ug/L	10	12/13/2011 12:02
Thallium	**0.400**	J	0.297	5.00	ug/L	10	12/13/2011 12:02

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 12:02**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 14:15**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-19S**

Client Sample ID: **MW-19S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382009-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/2/2011 13:13
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/2/2011 13:13
Benzene	ND	U	0.113	1.00	ug/L	1	12/2/2011 13:13
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/2/2011 13:13
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/2/2011 13:13
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/2/2011 13:13
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/2/2011 13:13
2-Butanone	ND	U	0.723	100	ug/L	1	12/2/2011 13:13
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/2/2011 13:13
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/2/2011 13:13
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/2/2011 13:13
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/2/2011 13:13
Chloroform	ND	U	0.139	5.00	ug/L	1	12/2/2011 13:13
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/2/2011 13:13
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/2/2011 13:13
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/2/2011 13:13
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/2/2011 13:13
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/2/2011 13:13
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/2/2011 13:13
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/2/2011 13:13
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/2/2011 13:13
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/2/2011 13:13
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/2/2011 13:13
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/2/2011 13:13
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/2/2011 13:13
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/2/2011 13:13
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/2/2011 13:13
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/2/2011 13:13
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/2/2011 13:13
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/2/2011 13:13
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/2/2011 13:13
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/2/2011 13:13
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/2/2011 13:13
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/2/2011 13:13
Styrene	ND	U	0.102	1.00	ug/L	1	12/2/2011 13:13
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/2/2011 13:13
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/2/2011 13:13
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/2/2011 13:13
Toluene	ND	U	0.133	1.00	ug/L	1	12/2/2011 13:13
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/2/2011 13:13
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/2/2011 13:13
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/2/2011 13:13
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/2/2011 13:13

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Results of **MW-19S**

Client Sample ID: **MW-19S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382009-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/2/2011 13:13
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/2/2011 13:13
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/2/2011 13:13
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/2/2011 13:13
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	12/2/2011 13:13
Toluene d8	98.0			82.0-117	%	1	12/2/2011 13:13
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/2/2011 13:13

Batch Information

Analytical Batch: **VMS1746**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/02/2011 13:13**

Prep Batch: **VXX2452**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-19S**

Client Sample ID: **MW-19S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382009-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:42
Zinc	**3.26**	J	2.26	10.0	ug/L	1	12/11/2011 17:42
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:42
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:42
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:42
Barium	**38.6**	J	0.394	100	ug/L	1	12/12/2011 17:44
Chromium	**1.53**	J	1.47	10.0	ug/L	1	12/11/2011 17:42
Copper	**1.74**	J	0.672	10.0	ug/L	1	12/11/2011 17:42
Silver	**3.10**	J	1.05	10.0	ug/L	1	12/11/2011 17:42

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:42**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:44**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

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Results of **MW-19S**

Client Sample ID: **MW-19S**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382009-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:35
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 14:19
Vanadium	**9.40**		0.661	5.00	ug/L	10	12/13/2011 12:05
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 12:05
Beryllium	ND	U	0.119	1.00	ug/L	2	12/14/2011 14:19
Antimony	ND	U	0.437	5.00	ug/L	10	12/13/2011 12:05
Thallium	**0.400**	J	0.297	5.00	ug/L	10	12/13/2011 12:05

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 12:05**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 14:19**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **MW-19D**

Client Sample ID: **MW-19D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382010-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:45
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/2/2011 13:38
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/2/2011 13:38
Benzene	ND	U	0.113	1.00	ug/L	1	12/2/2011 13:38
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/2/2011 13:38
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/2/2011 13:38
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/2/2011 13:38
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/2/2011 13:38
2-Butanone	ND	U	0.723	100	ug/L	1	12/2/2011 13:38
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/2/2011 13:38
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/2/2011 13:38
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/2/2011 13:38
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/2/2011 13:38
Chloroform	ND	U	0.139	5.00	ug/L	1	12/2/2011 13:38
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/2/2011 13:38
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/2/2011 13:38
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/2/2011 13:38
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/2/2011 13:38
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/2/2011 13:38
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/2/2011 13:38
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/2/2011 13:38
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/2/2011 13:38
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/2/2011 13:38
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/2/2011 13:38
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/2/2011 13:38
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/2/2011 13:38
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/2/2011 13:38
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/2/2011 13:38
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/2/2011 13:38
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/2/2011 13:38
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/2/2011 13:38
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/2/2011 13:38
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/2/2011 13:38
Methylene chloride	ND	U	0.152	1.00	ug/L	1	12/2/2011 13:38
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/2/2011 13:38
Styrene	ND	U	0.102	1.00	ug/L	1	12/2/2011 13:38
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/2/2011 13:38
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/2/2011 13:38
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/2/2011 13:38
Toluene	ND	U	0.133	1.00	ug/L	1	12/2/2011 13:38
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/2/2011 13:38
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/2/2011 13:38
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/2/2011 13:38
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/2/2011 13:38

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Results of **MW-19D**

Client Sample ID: **MW-19D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382010-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:45
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/2/2011 13:38
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/2/2011 13:38
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/2/2011 13:38
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/2/2011 13:38
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	12/2/2011 13:38
Toluene d8	97.0			82.0-117	%	1	12/2/2011 13:38
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/2/2011 13:38

Batch Information

Analytical Batch: **VMS1746**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/02/2011 13:38**

Prep Batch: **VXX2452**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

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Results of **MW-19D**

Client Sample ID: **MW-19D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382010-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:45
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:49
Barium	**54.4**	J	0.394	100	ug/L	1	12/12/2011 17:48
Chromium	**2.60**	J	1.47	10.0	ug/L	1	12/11/2011 17:49
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:49
Copper	**1.64**	J	0.672	10.0	ug/L	1	12/11/2011 17:49
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:49
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:49
Silver	**3.12**	J	1.05	10.0	ug/L	1	12/11/2011 17:49
Zinc	**4.49**	J	2.26	10.0	ug/L	1	12/11/2011 17:49

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:49**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:48**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **MW-19D**

Client Sample ID: **MW-19D**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382010-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 13:45
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Antimony	ND	U	0.437	5.00	ug/L	10	12/13/2011 12:07
Beryllium	ND	U	0.119	1.00	ug/L	2	12/14/2011 14:23
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 14:23
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 12:07
Thallium	**0.400**	J	0.297	5.00	ug/L	10	12/13/2011 12:07
Vanadium	**9.00**		0.661	5.00	ug/L	10	12/13/2011 12:07

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 12:07**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 14:23**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **Field Blank**

Client Sample ID: **Field Blank**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382011-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 14:10
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/2/2011 12:48
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/2/2011 12:48
Benzene	ND	U	0.113	1.00	ug/L	1	12/2/2011 12:48
Bromochloromethane	ND	U	0.211	3.00	ug/L	1	12/2/2011 12:48
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/2/2011 12:48
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/2/2011 12:48
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/2/2011 12:48
2-Butanone	ND	U	0.723	100	ug/L	1	12/2/2011 12:48
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/2/2011 12:48
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/2/2011 12:48
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/2/2011 12:48
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/2/2011 12:48
Chloroform	ND	U	0.139	5.00	ug/L	1	12/2/2011 12:48
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/2/2011 12:48
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/2/2011 12:48
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/2/2011 12:48
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/2/2011 12:48
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/2/2011 12:48
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/2/2011 12:48
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/2/2011 12:48
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/2/2011 12:48
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/2/2011 12:48
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/2/2011 12:48
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/2/2011 12:48
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/2/2011 12:48
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/2/2011 12:48
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/2/2011 12:48
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/2/2011 12:48
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/2/2011 12:48
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/2/2011 12:48
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/2/2011 12:48
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/2/2011 12:48
Methylene chloride	**5.44**		0.152	1.00	ug/L	1	12/2/2011 12:48
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/2/2011 12:48
Styrene	ND	U	0.102	1.00	ug/L	1	12/2/2011 12:48
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/2/2011 12:48
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/2/2011 12:48
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/2/2011 12:48
Toluene	ND	U	0.133	1.00	ug/L	1	12/2/2011 12:48
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/2/2011 12:48
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/2/2011 12:48
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/2/2011 12:48
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/2/2011 12:48

Print Date: 12/16/2011

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Results of **Field Blank**

Client Sample ID: **Field Blank**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382011-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 14:10
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/2/2011 12:48
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/2/2011 12:48
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/2/2011 12:48
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/2/2011 12:48
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	12/2/2011 12:48
Toluene d8	98.0			82.0-117	%	1	12/2/2011 12:48
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/2/2011 12:48

Batch Information

Analytical Batch: **VMS1746**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/02/2011 12:48**

Prep Batch: **VXX2452**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **Field Blank**

Client Sample ID: **Field Blank**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382011-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 14:10
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Arsenic	ND	U	3.69	10.0	ug/L	1	12/11/2011 17:56
Zinc	ND	U	2.26	10.0	ug/L	1	12/11/2011 17:56
Lead	ND	U	5.41	10.0	ug/L	1	12/11/2011 17:56
Cobalt	ND	U	3.39	10.0	ug/L	1	12/11/2011 17:56
Nickel	ND	U	3.06	50.0	ug/L	1	12/11/2011 17:56
Barium	**31.4**	J	0.394	100	ug/L	1	12/12/2011 17:53
Chromium	ND	U	1.47	10.0	ug/L	1	12/11/2011 17:56
Copper	**0.740**	J	0.672	10.0	ug/L	1	12/11/2011 17:56
Silver	**1.74**	J	1.05	10.0	ug/L	1	12/11/2011 17:56

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/11/2011 17:56**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**
Analytical Date/Time: **12/12/2011 17:53**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Results of **Field Blank**

Client Sample ID: **Field Blank**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382011-D
Lab Project ID: 31103382

Collection Date: 11/29/2011 14:10
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Cadmium	ND	U	0.0556	1.00	ug/L	2	12/14/2011 14:27
Vanadium	**7.90**		0.661	5.00	ug/L	10	12/13/2011 12:10
Selenium	ND	U	0.824	5.00	ug/L	10	12/13/2011 12:10
Beryllium	ND	U	0.119	1.00	ug/L	2	12/14/2011 14:27
Antimony	ND	U	0.437	5.00	ug/L	10	12/13/2011 12:10
Thallium	**0.500**	J	0.297	5.00	ug/L	10	12/13/2011 12:10

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/13/2011 12:10**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**
Analytical Date/Time: **12/14/2011 14:27**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Prep Initial Wt./Vol.: **50 mL**
Prep Extract Vol: **50 mL**

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Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382012-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 00:00
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Acetone	ND	U	0.864	100	ug/L	1	12/2/2011 12:22
Acrylonitrile	ND	U	3.04	200	ug/L	1	12/2/2011 12:22
Benzene	ND	U	0.113	1.00	ug/L	1	12/2/2011 12:22
Bromochloromethane	ND	U	0.211	1.00	ug/L	1	12/2/2011 12:22
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1	12/2/2011 12:22
Bromoform	ND	U	0.0974	3.00	ug/L	1	12/2/2011 12:22
Bromomethane	ND	U	0.237	10.0	ug/L	1	12/2/2011 12:22
2-Butanone	ND	U	0.723	100	ug/L	1	12/2/2011 12:22
Carbon disulfide	ND	U	0.106	100	ug/L	1	12/2/2011 12:22
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1	12/2/2011 12:22
Chlorobenzene	ND	U	0.116	3.00	ug/L	1	12/2/2011 12:22
Chloroethane	ND	U	0.311	10.0	ug/L	1	12/2/2011 12:22
Chloroform	ND	U	0.139	5.00	ug/L	1	12/2/2011 12:22
Chloromethane	ND	U	0.448	1.00	ug/L	1	12/2/2011 12:22
Dibromochloromethane	ND	U	0.134	3.00	ug/L	1	12/2/2011 12:22
1,2-Dibromo-3-chloropropane	ND	U	0.748	13.0	ug/L	1	12/2/2011 12:22
Dibromomethane	ND	U	0.168	10.0	ug/L	1	12/2/2011 12:22
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1	12/2/2011 12:22
1,2-Dichlorobenzene	ND	U	0.137	5.00	ug/L	1	12/2/2011 12:22
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1	12/2/2011 12:22
trans-1,4-Dichloro-2-butene	ND	U	0.414	100	ug/L	1	12/2/2011 12:22
1,1-Dichloroethane	ND	U	0.165	5.00	ug/L	1	12/2/2011 12:22
1,1-Dichloroethene	ND	U	0.212	5.00	ug/L	1	12/2/2011 12:22
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1	12/2/2011 12:22
cis-1,2-Dichloroethene	ND	U	0.136	5.00	ug/L	1	12/2/2011 12:22
trans-1,2-Dichloroethene	ND	U	0.223	5.00	ug/L	1	12/2/2011 12:22
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1	12/2/2011 12:22
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1	12/2/2011 12:22
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1	12/2/2011 12:22
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1	12/2/2011 12:22
2-Hexanone	ND	U	0.728	50.0	ug/L	1	12/2/2011 12:22
Methyl iodide	ND	U	0.115	10.0	ug/L	1	12/2/2011 12:22
Methylene chloride	**0.480**	J	0.152	1.00	ug/L	1	12/2/2011 12:22
4-Methyl-2-pentanone	ND	U	0.558	100	ug/L	1	12/2/2011 12:22
Styrene	ND	U	0.102	1.00	ug/L	1	12/2/2011 12:22
1,1,1,2-Tetrachloroethane	ND	U	0.104	5.00	ug/L	1	12/2/2011 12:22
1,1,2,2-Tetrachloroethane	ND	U	0.156	3.00	ug/L	1	12/2/2011 12:22
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1	12/2/2011 12:22
Toluene	ND	U	0.133	1.00	ug/L	1	12/2/2011 12:22
Trichloroethene	ND	U	0.125	1.00	ug/L	1	12/2/2011 12:22
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1	12/2/2011 12:22
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1	12/2/2011 12:22
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1	12/2/2011 12:22

Print Date: 12/16/2011

N.C. Certification # 481

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **CRSWMA Phase 3**
Lab Sample ID: 31103382012-A
Lab Project ID: 31103382

Collection Date: 11/29/2011 00:00
Received Date: 11/30/2011 10:25
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1	12/2/2011 12:22
Vinyl acetate	ND	U	0.882	50.0	ug/L	1	12/2/2011 12:22
Vinyl chloride	ND	U	0.124	1.00	ug/L	1	12/2/2011 12:22
Xylene (total)	ND	U	0.182	5.00	ug/L	1	12/2/2011 12:22
Surrogates							
1,2-Dichloroethane-d4	101			64.0-140	%	1	12/2/2011 12:22
Toluene d8	99.0			82.0-117	%	1	12/2/2011 12:22
4-Bromofluorobenzene	98.0			85.0-115	%	1	12/2/2011 12:22

Batch Information

Analytical Batch: **VMS1746**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**
Analytical Date/Time: **12/02/2011 12:22**

Prep Batch: **VXX2452**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/02/2011 08:00**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 12/16/2011

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8260B

Prep Method: SW-846 5030B
Prep Batch: VXX2443
Prep Date: 12/01/2011 08:21

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 17115 [VXX/2443]	50052	12/01/2011 09:34	VMS1743	MSD4	DVO
LCSD for HBN 17115 [VXX/2443]	50053	12/01/2011 09:59	VMS1743	MSD4	DVO
MB for HBN 17115 [VXX/2443]	50054	12/01/2011 10:50	VMS1743	MSD4	DVO
MW-15S	31103382001	12/01/2011 15:06	VMS1743	MSD4	DVO
MW-15D	31103382002	12/01/2011 15:32	VMS1743	MSD4	DVO
MW-16S	31103382003	12/01/2011 15:57	VMS1743	MSD4	DVO
MW-16D	31103382004	12/01/2011 16:22	VMS1743	MSD4	DVO
MW-17S	31103382005	12/01/2011 16:48	VMS1743	MSD4	DVO
MW-17D	31103382006	12/01/2011 17:13	VMS1743	MSD4	DVO
MW-18S	31103382007	12/01/2011 17:39	VMS1743	MSD4	DVO
MW-18D	31103382008	12/01/2011 18:04	VMS1743	MSD4	DVO
MW-9(49717MS)	50165	12/01/2011 19:45	VMS1743	MSD4	DVO
MW-9(49717MSD)	50166	12/01/2011 20:10	VMS1743	MSD4	DVO

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Method Blank

Blank ID: MB for HBN 17115 [VXX/2443] Matrix: Water
Blank Lab ID: 50054
QC for Samples:
31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Chloromethane	ND	U	0.448	1.00	ug/L	1
Vinyl chloride	ND	U	0.124	1.00	ug/L	1
Bromomethane	ND	U	0.237	1.00	ug/L	1
Chloroethane	ND	U	0.311	1.00	ug/L	1
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1
1,1-Dichloroethene	ND	U	0.212	1.00	ug/L	1
Acetone	ND	U	0.864	25.0	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	1.00	ug/L	1
Acrylonitrile	ND	U	3.04	25.0	ug/L	1
1,1-Dichloroethane	ND	U	0.165	1.00	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	1.00	ug/L	1
2-Butanone	ND	U	0.723	25.0	ug/L	1
Bromochloromethane	ND	U	0.211	1.00	ug/L	1
Chloroform	ND	U	0.139	1.00	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1
Benzene	ND	U	0.113	1.00	ug/L	1
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1
Trichloroethene	ND	U	0.125	1.00	ug/L	1
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1
Dibromomethane	ND	U	0.168	1.00	ug/L	1
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1
4-Methyl-2-pentanone	ND	U	0.558	5.00	ug/L	1
Toluene	ND	U	0.133	1.00	ug/L	1
Methyl iodide	ND	U	0.115	1.00	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1
Vinyl acetate	ND	U	0.882	2.00	ug/L	1
Carbon disulfide	ND	U	0.106	1.00	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1
2-Hexanone	ND	U	0.728	5.00	ug/L	1
Dibromochloromethane	ND	U	0.134	1.00	ug/L	1
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1
Chlorobenzene	ND	U	0.116	1.00	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	1.00	ug/L	1
Bromoform	ND	U	0.0974	1.00	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	1.00	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1

Print Date: 12/16/2011 N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 17115 [VXX/2443] Matrix: Water
Blank Lab ID: 50054
QC for Samples:
31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Styrene	ND	U	0.102	1.00	ug/L	1
Xylene (total)	ND	U	0.182	2.00	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	1.00	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
trans-1,4-Dichloro-2-butene	ND	U	0.414	5.00	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	100			64.0-140	%	1
Toluene d8	98.0			82.0-117	%	1
4-Bromofluorobenzene	97.0			85.0-115	%	1

Batch Information

Analytical Batch: VMS1743
Analytical Method: SW-846 8260B
Instrument: MSD4
Analyst: DVO
Analytical Date/Time: 12/1/2011 10:50:00AM

Prep Batch: VXX2443
Prep Method: SW-846 5030B
Prep Date/Time: 12/1/2011 8:21:53AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 17115 [VXX/2443]
Blank Spike Lab ID: 50052
Date Analyzed: 12/01/2011 09:34

Spike Duplicate ID: LCSD for HBN 17115 [VXX/2443]
Spike Duplicate Lab ID: 50053
Date Analyzed: 12/01/2011 09:59
Matrix: Water

QC for Samples: 31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloromethane	5.00	4.74	95	5.00	5.08	102	57.0-132	6.9	30.00
Vinyl chloride	5.00	4.78	96	5.00	4.96	99	59.0-138	3.7	30.00
Bromomethane	5.00	5.45	109	5.00	5.76	115	51.0-134	5.5	30.00
Chloroethane	5.00	5.00	100	5.00	5.36	107	64.0-145	6.9	30.00
Trichlorofluoromethane	5.00	4.95	99	5.00	5.24	105	64.0-133	5.7	30.00
1,1-Dichloroethene	5.00	4.99	100	5.00	5.00	100	71.0-128	0.20	30.00
Acetone	25.0	29.7	119	25.0	29.5	118	52.0-140	0.68	30.00
Methylene chloride	5.00	5.01	100	5.00	4.91	98	70.0-113	2.0	30.00
trans-1,2-Dichloroethene	5.00	5.10	102	5.00	5.03	101	57.0-138	1.4	30.00
Acrylonitrile	125	120	96	125	125	100	55.0-141	4.1	30.00
1,1-Dichloroethane	5.00	4.99	100	5.00	5.03	101	68.0-133	0.80	30.00
cis-1,2-Dichloroethene	5.00	5.10	102	5.00	4.93	99	73.0-128	3.4	30.00
2-Butanone	25.0	25.3	101	25.0	25.9	103	58.0-134	2.3	30.00
Bromochloromethane	5.00	5.14	103	5.00	5.09	102	73.0-128	0.98	30.00
Chloroform	5.00	4.99	100	5.00	4.85	97	74.0-124	2.8	30.00
1,1,1-Trichloroethane	5.00	5.03	101	5.00	4.86	97	76.0-119	3.4	30.00
Carbon tetrachloride	5.00	5.32	106	5.00	5.24	105	75.0-120	1.5	30.00
Benzene	5.00	4.95	99	5.00	4.87	97	76.0-124	1.6	30.00
1,2-Dichloroethane	5.00	5.07	101	5.00	5.07	101	76.0-119	0.0	30.00
Trichloroethene	5.00	4.76	95	5.00	4.69	94	74.0-121	1.5	30.00
1,2-Dichloropropane	5.00	4.97	99	5.00	4.90	98	74.0-124	1.4	30.00
Dibromomethane	5.00	4.91	98	5.00	4.95	99	71.0-128	0.81	30.00
Bromodichloromethane	5.00	4.90	98	5.00	4.87	97	72.0-120	0.61	30.00
cis-1,3-Dichloropropene	5.00	5.28	106	5.00	5.11	102	73.0-122	3.3	30.00
4-Methyl-2-pentanone	25.0	24.6	98	25.0	24.2	97	65.0-124	1.6	30.00
Toluene	5.00	5.08	102	5.00	5.03	101	75.0-123	0.99	30.00
Methyl iodide	5.00	4.65	93	5.00	4.75	95	55.0-123	2.1	30.00
trans-1,3-Dichloropropene	5.00	5.14	103	5.00	4.70	94	70.0-125	8.9	30.00
Vinyl acetate	12.5	19.5	**156***	12.5	19.1	**153***	40.0-141	2.1	30.00
Carbon disulfide	5.00	5.33	107	5.00	5.20	104	65.0-132	2.5	30.00
1,1,2-Trichloroethane	5.00	5.02	100	5.00	5.06	101	76.0-121	0.79	30.00
Tetrachloroethene	5.00	5.06	101	5.00	5.03	101	59.0-112	0.59	30.00
2-Hexanone	25.0	25.5	102	25.0	25.4	101	56.0-133	0.39	30.00
Dibromochloromethane	5.00	5.05	101	5.00	5.08	102	67.0-122	0.59	30.00

Print Date: 12/16/2011

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 17115 [VXX/2443]
Blank Spike Lab ID: 50052
Date Analyzed: 12/01/2011 09:34

Spike Duplicate ID: LCSD for HBN 17115 [VXX/2443]
Spike Duplicate Lab ID: 50053
Date Analyzed: 12/01/2011 09:59
Matrix: Water

QC for Samples: 31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	5.00	5.06	101	5.00	4.95	99	74.0-119	2.2	30.00
Chlorobenzene	5.00	4.99	100	5.00	4.97	99	74.0-120	0.40	30.00
1,1,1,2-Tetrachloroethane	5.00	4.96	99	5.00	4.72	94	73.0-119	5.0	30.00
Bromoform	5.00	5.11	102	5.00	4.85	97	62.0-127	5.2	30.00
1,1,2,2-Tetrachloroethane	5.00	5.58	112	5.00	5.36	107	68.0-129	4.0	30.00
1,2,3-Trichloropropane	5.00	5.02	100	5.00	4.94	99	67.0-126	1.6	30.00
Ethyl Benzene	5.00	4.93	99	5.00	4.88	98	76.0-123	1.0	30.00
Styrene	5.00	5.11	102	5.00	5.02	100	76.0-121	1.8	30.00
1,4-Dichlorobenzene	5.00	5.11	102	5.00	5.15	103	70.0-125	0.78	30.00
1,2-Dichlorobenzene	5.00	5.10	102	5.00	5.09	102	76.0-118	0.20	30.00
1,2-Dibromo-3-chloropropane	30.0	29.6	99	30.0	29.1	97	62.0-130	1.7	30.00
trans-1,4-Dichloro-2-butene	25.0	26.7	107	25.0	27.8	111	61.0-132	4.0	30.00
Surrogates									
1,2-Dichloroethane-d4			99			100	64.0-140		
Toluene d8			101			99	82.0-117		
4-Bromofluorobenzene			101			100	85.0-115		

Batch Information

Analytical Batch: **VMS1743**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**

Prep Batch: **VXX2443**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/01/2011 08:21**
Spike Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**
Dupe Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**

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Batch Summary

Analytical Method: SW-846 8260B

Prep Method: SW-846 5030B
Prep Batch: VXX2452
Prep Date: 12/02/2011 08:09

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 17216 [VXX/2452]	50151	12/02/2011 09:25	VMS1746	MSD4	DVO
LCSD for HBN 17216 [VXX/2452]	50152	12/02/2011 09:50	VMS1746	MSD4	DVO
MB for HBN 17216 [VXX/2452]	50153	12/02/2011 11:32	VMS1746	MSD4	DVO
Trip Blank	31103382012	12/02/2011 12:22	VMS1746	MSD4	DVO
Field Blank	31103382011	12/02/2011 12:48	VMS1746	MSD4	DVO
MW-19S	31103382009	12/02/2011 13:13	VMS1746	MSD4	DVO
MW-19D	31103382010	12/02/2011 13:38	VMS1746	MSD4	DVO
MW-14(49718MS)	50390	12/02/2011 20:00	VMS1746	MSD4	DVO
MW-14(49718MSD)	50391	12/02/2011 20:25	VMS1746	MSD4	DVO

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Method Blank

Blank ID: MB for HBN 17216 [VXX/2452]
Blank Lab ID: 50153
QC for Samples:
31103382009, 31103382010, 31103382011, 31103382012

Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Chloromethane	ND	U	0.448	1.00	ug/L	1
Vinyl chloride	ND	U	0.124	1.00	ug/L	1
Bromomethane	ND	U	0.237	1.00	ug/L	1
Chloroethane	ND	U	0.311	1.00	ug/L	1
Trichlorofluoromethane	ND	U	0.137	1.00	ug/L	1
1,1-Dichloroethene	ND	U	0.212	1.00	ug/L	1
Acetone	ND	U	0.864	25.0	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	1.00	ug/L	1
Acrylonitrile	ND	U	3.04	25.0	ug/L	1
1,1-Dichloroethane	ND	U	0.165	1.00	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	1.00	ug/L	1
2-Butanone	ND	U	0.723	25.0	ug/L	1
Bromochloromethane	ND	U	0.211	1.00	ug/L	1
Chloroform	ND	U	0.139	1.00	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	1.00	ug/L	1
Carbon tetrachloride	ND	U	0.101	1.00	ug/L	1
Benzene	ND	U	0.113	1.00	ug/L	1
1,2-Dichloroethane	ND	U	0.167	1.00	ug/L	1
Trichloroethene	ND	U	0.125	1.00	ug/L	1
1,2-Dichloropropane	ND	U	0.163	1.00	ug/L	1
Dibromomethane	ND	U	0.168	1.00	ug/L	1
Bromodichloromethane	ND	U	0.110	1.00	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	1.00	ug/L	1
4-Methyl-2-pentanone	ND	U	0.558	5.00	ug/L	1
Toluene	ND	U	0.133	1.00	ug/L	1
Methyl iodide	ND	U	0.115	1.00	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	1.00	ug/L	1
Vinyl acetate	ND	U	0.882	2.00	ug/L	1
Carbon disulfide	ND	U	0.106	1.00	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	1.00	ug/L	1
Tetrachloroethene	ND	U	0.155	1.00	ug/L	1
2-Hexanone	ND	U	0.728	5.00	ug/L	1
Dibromochloromethane	ND	U	0.134	1.00	ug/L	1
1,2-Dibromoethane	ND	U	0.120	1.00	ug/L	1
Chlorobenzene	ND	U	0.116	1.00	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	1.00	ug/L	1
Bromoform	ND	U	0.0974	1.00	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	1.00	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	1.00	ug/L	1
Ethyl Benzene	ND	U	0.0877	1.00	ug/L	1

Print Date: 12/16/2011

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 17216 [VXX/2452]
Blank Lab ID: 50153
QC for Samples:
31103382009, 31103382010, 31103382011, 31103382012

Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Styrene	ND	U	0.102	1.00	ug/L	1
Xylene (total)	ND	U	0.182	2.00	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	1.00	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	1.00	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
trans-1,4-Dichloro-2-butene	ND	U	0.414	5.00	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	100			64.0-140	%	1
Toluene d8	98.0			82.0-117	%	1
4-Bromofluorobenzene	96.0			85.0-115	%	1

Batch Information

Analytical Batch: VMS1746
Analytical Method: SW-846 8260B
Instrument: MSD4
Analyst: DVO
Analytical Date/Time: 12/2/2011 11:32:00AM

Prep Batch: VXX2452
Prep Method: SW-846 5030B
Prep Date/Time: 12/2/2011 8:09:04AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 17216 [VXX/2452]
Blank Spike Lab ID: 50151
Date Analyzed: 12/02/2011 09:25

Spike Duplicate ID: LCSD for HBN 17216 [VXX/2452]
Spike Duplicate Lab ID: 50152
Date Analyzed: 12/02/2011 09:50
Matrix: Water

QC for Samples: 31103382009, 31103382010, 31103382011, 31103382012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloromethane	5.00	4.95	99	5.00	4.85	97	57.0-132	2.0	30.00
Vinyl chloride	5.00	4.87	97	5.00	4.84	97	59.0-138	0.62	30.00
Bromomethane	5.00	5.82	116	5.00	5.54	111	51.0-134	4.9	30.00
Chloroethane	5.00	5.40	108	5.00	5.03	101	64.0-145	7.1	30.00
Trichlorofluoromethane	5.00	5.10	102	5.00	5.17	103	64.0-133	1.4	30.00
1,1-Dichloroethene	5.00	5.17	103	5.00	5.10	102	71.0-128	1.4	30.00
Acetone	25.0	30.7	123	25.0	30.7	123	52.0-140	0.0	30.00
Methylene chloride	5.00	5.14	103	5.00	5.17	103	70.0-113	0.58	30.00
trans-1,2-Dichloroethene	5.00	5.11	102	5.00	5.15	103	57.0-138	0.78	30.00
Acrylonitrile	125	122	97	125	124	99	55.0-141	1.6	30.00
1,1-Dichloroethane	5.00	5.20	104	5.00	5.06	101	68.0-133	2.7	30.00
cis-1,2-Dichloroethene	5.00	5.13	103	5.00	5.17	103	73.0-128	0.78	30.00
2-Butanone	25.0	26.3	105	25.0	26.2	105	58.0-134	0.38	30.00
Bromochloromethane	5.00	5.20	104	5.00	5.08	102	73.0-128	2.3	30.00
Chloroform	5.00	5.10	102	5.00	4.96	99	74.0-124	2.8	30.00
1,1,1-Trichloroethane	5.00	5.20	104	5.00	5.07	101	76.0-119	2.5	30.00
Carbon tetrachloride	5.00	5.65	113	5.00	5.52	110	75.0-120	2.3	30.00
Benzene	5.00	5.05	101	5.00	4.92	98	76.0-124	2.6	30.00
1,2-Dichloroethane	5.00	5.16	103	5.00	5.15	103	76.0-119	0.19	30.00
Trichloroethene	5.00	4.78	96	5.00	4.85	97	74.0-121	1.5	30.00
1,2-Dichloropropane	5.00	5.15	103	5.00	5.01	100	74.0-124	2.8	30.00
Dibromomethane	5.00	5.18	104	5.00	5.00	100	71.0-128	3.5	30.00
Bromodichloromethane	5.00	5.47	109	5.00	5.07	101	72.0-120	7.6	30.00
cis-1,3-Dichloropropene	5.00	5.56	111	5.00	5.21	104	73.0-122	6.5	30.00
4-Methyl-2-pentanone	25.0	25.2	101	25.0	25.2	101	65.0-124	0.0	30.00
Toluene	5.00	5.09	102	5.00	5.07	101	75.0-123	0.39	30.00
Methyl iodide	5.00	4.89	98	5.00	4.70	94	55.0-123	4.0	30.00
trans-1,3-Dichloropropene	5.00	5.15	103	5.00	5.07	101	70.0-125	1.6	30.00
Vinyl acetate	12.5	20.7	**166***	12.5	19.7	**158***	40.0-141	5.0	30.00
Carbon disulfide	5.00	5.68	114	5.00	5.38	108	65.0-132	5.4	30.00
1,1,2-Trichloroethane	5.00	5.30	106	5.00	5.25	105	76.0-121	0.95	30.00
Tetrachloroethene	5.00	4.98	100	5.00	5.10	102	59.0-112	2.4	30.00
2-Hexanone	25.0	25.8	103	25.0	26.8	107	56.0-133	3.8	30.00
Dibromochloromethane	5.00	5.41	108	5.00	5.07	101	67.0-122	6.5	30.00

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Blank Spike Summary

Blank Spike ID: LCS for HBN 17216 [VXX/2452]
Blank Spike Lab ID: 50151
Date Analyzed: 12/02/2011 09:25

Spike Duplicate ID: LCSD for HBN 17216 [VXX/2452]
Spike Duplicate Lab ID: 50152
Date Analyzed: 12/02/2011 09:50
Matrix: Water

QC for Samples: 31103382009, 31103382010, 31103382011, 31103382012

Results by **SW-846 8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2-Dibromoethane	5.00	5.29	106	5.00	5.08	102	74.0-119	4.1	30.00
Chlorobenzene	5.00	5.04	101	5.00	4.97	99	74.0-120	1.4	30.00
1,1,1,2-Tetrachloroethane	5.00	5.18	104	5.00	5.10	102	73.0-119	1.6	30.00
Bromoform	5.00	5.68	114	5.00	5.32	106	62.0-127	6.5	30.00
1,1,2,2-Tetrachloroethane	5.00	5.65	113	5.00	5.60	112	68.0-129	0.89	30.00
1,2,3-Trichloropropane	5.00	5.50	110	5.00	5.16	103	67.0-126	6.4	30.00
Ethyl Benzene	5.00	5.02	100	5.00	4.94	99	76.0-123	1.6	30.00
Styrene	5.00	5.23	105	5.00	5.12	102	76.0-121	2.1	30.00
1,4-Dichlorobenzene	5.00	5.26	105	5.00	5.07	101	70.0-125	3.7	30.00
1,2-Dichlorobenzene	5.00	5.31	106	5.00	5.15	103	76.0-118	3.1	30.00
1,2-Dibromo-3-chloropropane	30.0	32.3	108	30.0	30.8	103	62.0-130	4.8	30.00
trans-1,4-Dichloro-2-butene	25.0	27.2	109	25.0	26.6	106	61.0-132	2.2	30.00
Surrogates									
1,2-Dichloroethane-d4			101			101	64.0-140		
Toluene d8			101			100	82.0-117		
4-Bromofluorobenzene			99			100	85.0-115		

Batch Information

Analytical Batch: **VMS1746**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **DVO**

Prep Batch: **VXX2452**
Prep Method: **SW-846 5030B**
Prep Date/Time: **12/02/2011 08:09**
Spike Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**
Dupe Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**

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Batch Summary

Analytical Method: SW-846 6010C

Prep Method: SW-846 3010A
Prep Batch: MXX1694
Prep Date: 12/08/2011 15:02

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 17582 [MXX/1694]	50900	12/11/2011 16:00	MIP1361	ICP1	PSW
LCS for HBN 17582 [MXX/1694]	50901	12/11/2011 16:07	MIP1361	ICP1	PSW
LCSD for HBN 17582 [MXX/1694]	50902	12/11/2011 16:14	MIP1361	ICP1	PSW
MW-15S	31103382001	12/11/2011 16:21	MIP1361	ICP1	PSW
MW-15S(49930MS)	50903	12/11/2011 16:27	MIP1361	ICP1	PSW
MW-15S(49930MSD)	50904	12/11/2011 16:34	MIP1361	ICP1	PSW
MW-15D	31103382002	12/11/2011 16:41	MIP1361	ICP1	PSW
MW-16S	31103382003	12/11/2011 17:01	MIP1361	ICP1	PSW
MW-16D	31103382004	12/11/2011 17:08	MIP1361	ICP1	PSW
MW-17S	31103382005	12/11/2011 17:15	MIP1361	ICP1	PSW
MW-17D	31103382006	12/11/2011 17:22	MIP1361	ICP1	PSW
MW-18S	31103382007	12/11/2011 17:29	MIP1361	ICP1	PSW
MW-18D	31103382008	12/11/2011 17:36	MIP1361	ICP1	PSW
MW-19S	31103382009	12/11/2011 17:42	MIP1361	ICP1	PSW
MW-19D	31103382010	12/11/2011 17:49	MIP1361	ICP1	PSW
Field Blank	31103382011	12/11/2011 17:56	MIP1361	ICP1	PSW
Photo Waste(50107DUP)	50905	12/11/2011 19:18	MIP1361	ICP1	PSW
MB for HBN 17582 [MXX/1694]	50900	12/12/2011 16:32	MIP1363	ICP1	PSW
LCS for HBN 17582 [MXX/1694]	50901	12/12/2011 16:37	MIP1363	ICP1	PSW
LCSD for HBN 17582 [MXX/1694]	50902	12/12/2011 16:42	MIP1363	ICP1	PSW
MW-15S	31103382001	12/12/2011 16:46	MIP1363	ICP1	PSW
MW-15S(49930MS)	50903	12/12/2011 16:51	MIP1363	ICP1	PSW
MW-15S(49930MSD)	50904	12/12/2011 16:56	MIP1363	ICP1	PSW
MW-15D	31103382002	12/12/2011 17:01	MIP1363	ICP1	PSW
MW-16S	31103382003	12/12/2011 17:05	MIP1363	ICP1	PSW
MW-16D	31103382004	12/12/2011 17:10	MIP1363	ICP1	PSW
MW-17S	31103382005	12/12/2011 17:15	MIP1363	ICP1	PSW
MW-17D	31103382006	12/12/2011 17:29	MIP1363	ICP1	PSW
MW-18S	31103382007	12/12/2011 17:34	MIP1363	ICP1	PSW
MW-18D	31103382008	12/12/2011 17:39	MIP1363	ICP1	PSW
MW-19S	31103382009	12/12/2011 17:44	MIP1363	ICP1	PSW
MW-19D	31103382010	12/12/2011 17:48	MIP1363	ICP1	PSW
Field Blank	31103382011	12/12/2011 17:53	MIP1363	ICP1	PSW

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Method Blank

Blank ID: MB for HBN 17582 [MXX/1694]
Matrix: Water
Blank Lab ID: 50900
QC for Samples:
31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008, 31103382009, 31103382010, 31103382011

Results by **SW-846 6010C**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Arsenic	ND	U	0.00369	0.0100	mg/L	1
Zinc	ND	U	0.00226	0.0200	mg/L	1
Lead	ND	U	0.00541	0.0100	mg/L	1
Cobalt	ND	U	0.00339	0.0100	mg/L	1
Nickel	ND	U	0.00306	0.0100	mg/L	1
Barium	**0.0183**	J	0.000394	0.100	mg/L	1
Chromium	ND	U	0.00147	0.0100	mg/L	1
Copper	**0.00121**	J	0.000672	0.0100	mg/L	1
Silver	**0.00252**	J	0.00105	0.0100	mg/L	1

Batch Information

Analytical Batch: MIP1361
Analytical Method: SW-846 6010C
Instrument: ICP1
Analyst: PSW
Analytical Date/Time: 12/11/2011 4:00:42PM

Prep Batch: MXX1694
Prep Method: SW-846 3010A
Prep Date/Time: 12/8/2011 3:02:54PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Analytical Batch: MIP1363
Analytical Method: SW-846 6010C
Instrument: ICP1
Analyst: PSW
Analytical Date/Time: 12/12/2011 4:32:32PM

Prep Batch: MXX1694
Prep Method: SW-846 3010A
Prep Date/Time: 12/8/2011 3:02:54PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 17582 [MXX/1694]
Blank Spike Lab ID: 50901
Date Analyzed: 12/11/2011 16:07

Spike Duplicate ID: LCSD for HBN 17582 [MXX/1694]
Spike Duplicate Lab ID: 50902
Date Analyzed: 12/11/2011 16:14
Matrix: Water

QC for Samples: 31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008, 31103382009, 31103382010, 31103382011

Results by **SW-846 6010C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	0.400	0.395	99	0.400	0.394	99	80.0-120	0.25	20.00
Zinc	0.400	0.371	93	0.400	0.370	92	80.0-120	0.27	20.00
Lead	0.400	0.378	95	0.400	0.376	94	80.0-120	0.53	20.00
Cobalt	0.400	0.397	99	0.400	0.396	99	80.0-120	0.25	20.00
Nickel	0.400	0.379	95	0.400	0.383	96	80.0-120	1.0	20.00
Barium	2.00	1.75	88	2.00	1.75	88	80.0-120	0.0	20.00
Chromium	0.400	0.396	99	0.400	0.396	99	80.0-120	0.0	20.00
Copper	0.400	0.396	99	0.400	0.398	99	80.0-120	0.50	20.00
Silver	0.400	0.403	101	0.400	0.409	102	80.0-120	1.5	20.00

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31103382001 (MW-15S)
MS Sample ID: 50903
MSD Sample ID: 50904

Analysis Date: 12/11/2011 16:21
Analysis Date: 12/11/2011 16:27
Analysis Date: 12/11/2011 16:34
Matrix: Water

QC for Samples: 31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008, 31103382009, 31103382010, 31103382011

Results by **SW-846 6010C**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Arsenic	ND	0.400	0.399	100	0.400	0.397	99	75.0-125	0.50	20.00
Zinc	7.47	0.400	0.384	96	0.400	0.380	95	75.0-125	1.0	20.00
Lead	ND	0.400	0.371	93	0.400	0.367	92	75.0-125	1.1	20.00
Cobalt	4.72	0.400	0.405	101	0.400	0.402	100	75.0-125	0.74	20.00
Nickel	7.70	0.400	0.387	97	0.400	0.383	96	75.0-125	1.0	20.00
Barium	79.3	2.00	1.82	91	2.00	1.80	90	75.0-125	1.1	20.00
Chromium	1.52	0.400	0.394	99	0.400	0.391	98	75.0-125	0.76	20.00
Copper	1.77	0.400	0.403	101	0.400	0.400	100	75.0-125	0.75	20.00
Silver	2.22	0.400	0.400	100	0.400	0.403	101	75.0-125	0.75	20.00

Batch Information

Analytical Batch: **MIP1361**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

Analytical Batch: **MIP1363**
Analytical Method: **SW-846 6010C**
Instrument: **ICP1**
Analyst: **PSW**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

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Batch Summary

Analytical Method: SW-846 6020A

Prep Method: SW-846 3010A
Prep Batch: MXX1694
Prep Date: 12/08/2011 15:02

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 17582 [MXX/1694]	50900	12/13/2011 11:23	MMS1128	ICPMS2	PSW
LCS for HBN 17582 [MXX/1694]	50901	12/13/2011 11:26	MMS1128	ICPMS2	PSW
LCSD for HBN 17582 [MXX/1694]	50902	12/13/2011 11:29	MMS1128	ICPMS2	PSW
MW-15S	31103382001	12/13/2011 11:31	MMS1128	ICPMS2	PSW
MW-15S(49930MS)	50903	12/13/2011 11:34	MMS1128	ICPMS2	PSW
MW-15S(49930MSD)	50904	12/13/2011 11:37	MMS1128	ICPMS2	PSW
MW-15D	31103382002	12/13/2011 11:40	MMS1128	ICPMS2	PSW
MW-16S	31103382003	12/13/2011 11:42	MMS1128	ICPMS2	PSW
MW-16D	31103382004	12/13/2011 11:45	MMS1128	ICPMS2	PSW
MW-17S	31103382005	12/13/2011 11:48	MMS1128	ICPMS2	PSW
MW-17D	31103382006	12/13/2011 11:56	MMS1128	ICPMS2	PSW
MW-18S	31103382007	12/13/2011 11:59	MMS1128	ICPMS2	PSW
MW-18D	31103382008	12/13/2011 12:02	MMS1128	ICPMS2	PSW
MW-19S	31103382009	12/13/2011 12:05	MMS1128	ICPMS2	PSW
MW-19D	31103382010	12/13/2011 12:07	MMS1128	ICPMS2	PSW
Field Blank	31103382011	12/13/2011 12:10	MMS1128	ICPMS2	PSW
MB for HBN 17582 [MXX/1694]	50900	12/14/2011 13:18	MMS1130	ICPMS2	PSW
MW-15S	31103382001	12/14/2011 13:31	MMS1130	ICPMS2	PSW
MW-15D	31103382002	12/14/2011 13:43	MMS1130	ICPMS2	PSW
MW-16S	31103382003	12/14/2011 13:47	MMS1130	ICPMS2	PSW
MW-16D	31103382004	12/14/2011 13:51	MMS1130	ICPMS2	PSW
MW-17S	31103382005	12/14/2011 13:55	MMS1130	ICPMS2	PSW
MW-17D	31103382006	12/14/2011 14:07	MMS1130	ICPMS2	PSW
MW-18S	31103382007	12/14/2011 14:11	MMS1130	ICPMS2	PSW
MW-18D	31103382008	12/14/2011 14:15	MMS1130	ICPMS2	PSW
MW-19S	31103382009	12/14/2011 14:19	MMS1130	ICPMS2	PSW
MW-19D	31103382010	12/14/2011 14:23	MMS1130	ICPMS2	PSW
Field Blank	31103382011	12/14/2011 14:27	MMS1130	ICPMS2	PSW

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Method Blank

Blank ID: MB for HBN 17582 [MXX/1694] Matrix: Water
Blank Lab ID: 50900
QC for Samples:
31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008, 31103382009, 31103382010, 31103382011

Results by **SW-846 6020A**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Beryllium	ND	U	0.000594	0.00500	mg/L	10
Cadmium	ND	U	0.0000556	0.00100	mg/L	2
Vanadium	ND	U	0.000661	0.00500	mg/L	10
Selenium	ND	U	0.000824	0.00500	mg/L	10
Beryllium	ND	U	0.000119	0.00100	mg/L	2
Cadmium	**0.000700**	J	0.000278	0.00500	mg/L	10
Antimony	ND	U	0.000437	0.00500	mg/L	10
Thallium	**0.000400**	J	0.000297	0.00500	mg/L	10

Batch Information

Analytical Batch: MMS1128
Analytical Method: SW-846 6020A
Instrument: ICPMS2
Analyst: PSW
Analytical Date/Time: 12/13/2011 11:23:31AM

Prep Batch: MXX1694
Prep Method: SW-846 3010A
Prep Date/Time: 12/8/2011 3:02:54PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS1130
Analytical Method: SW-846 6020A
Instrument: ICPMS2
Analyst: PSW
Analytical Date/Time: 12/14/2011 1:18:53PM

Prep Batch: MXX1694
Prep Method: SW-846 3010A
Prep Date/Time: 12/8/2011 3:02:54PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 17582 [MXX/1694]
Blank Spike Lab ID: 50901
Date Analyzed: 12/13/2011 11:26

Spike Duplicate ID: LCSD for HBN 17582 [MXX/1694]
Spike Duplicate Lab ID: 50902
Date Analyzed: 12/13/2011 11:29
Matrix: Water

QC for Samples: 31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008, 31103382009, 31103382010, 31103382011

Results by **SW-846 6020A**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Beryllium	0.400	0.422	106	0.400	0.411	103	80.0-120	0.49	20.00
Vanadium	0.400	0.409	102	0.400	0.405	101	80.0-120	0.98	20.00
Selenium	0.400	0.432	108	0.400	0.434	109	80.0-120	0.46	20.00
Cadmium	0.400	0.430	108	0.400	0.419	105	80.0-120	0.48	20.00
Antimony	0.400	0.421	105	0.400	0.415	104	80.0-120	1.4	20.00
Thallium	0.400	0.404	101	0.400	0.397	99	80.0-120	1.7	20.00

Batch Information

Analytical Batch: **MMS1128**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
Spike Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**
Dupe Init Wt./Vol.: **50 mL** Extract Vol: **50 mL**

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Matrix Spike Summary

Original Sample ID: 31103382001 (MW-15S) — Analysis Date: 12/14/2011 13:31
MS Sample ID: 50903 — Analysis Date: 12/13/2011 11:34
MSD Sample ID: 50904 — Analysis Date: 12/13/2011 11:37
Matrix: Water

QC for Samples: 31103382001, 31103382002, 31103382003, 31103382004, 31103382005, 31103382006, 31103382007, 31103382008, 31103382009, 31103382010, 31103382011

Results by **SW-846 6020A**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Cadmium	ND	0.400	0.450	113	0.400	0.450	113	75.0-125	12	25.00
Vanadium	14.4	0.400	0.424	104	0.400	0.418	102	75.0-125	1.4	25.00
Selenium	ND	0.400	0.446	112	0.400	0.428	107	75.0-125	4.1	25.00
Beryllium	0.000200	0.400	0.414	104	0.400	0.409	102	75.0-125	1.7	25.00
Antimony	1.00	0.400	0.444	111	0.400	0.438	110	75.0-125	1.4	25.00
Thallium	0.500	0.400	0.417	104	0.400	0.413	103	75.0-125	0.96	25.00

Batch Information

Analytical Batch: **MMS1130**
Analytical Method: **SW-846 6020A**
Instrument: **ICPMS2**
Analyst: **PSW**

Prep Batch: **MXX1694**
Prep Method: **SW-846 3010A**
Prep Date/Time: **12/08/2011 15:02**
MS Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**
MSD Init Wt./Vol.: **50 mL** Extract Vol.: **50 mL**

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CLIENT: Joyce Engineering

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PROJECT: CRSWMA Phase 3 SITE/PWSID#:

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INVOICE TO: Lecia Jones QUOTE #: P.O. NUMBER:

SGS Reference: 31103382

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(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	App I Metals	App I VOC's								REMARKS
	MW-15S	11/29/11	10:25	WT	4	G	X	X								
	MW-15D		10:35				X	X								
	MW-16S		10:50				X	X								
	MW-16D		11:00				X	X								
	MW-17S		11:15				X	X								
	MW-17D		11:25				X	X								
	MW-18S		13:05				X	X								
	MW-18D		13:15				X	X								
	MW-19S		13:35				X	X								
	MW-19D		13:45				X	X								

(3) Preservatives Used: Analysis Required

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
JEI	11/29/11	16:20	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	11/30/11	10:25	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 5.2

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time: ☐ RUSH _____ Date Needed ☒ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio

www.us.sgs.com

106721

(1)

CLIENT: Joyce Engineering

CONTACT: Jeremey Kerly PHONE NO: (336) 323-0092

PROJECT: CRSWMA Phase 3 SITE/PWSID#:

REPORTS TO: Jeremey Kerly, Dan Gidner FAX NO.: (336) 323-0093

INVOICE TO: Lecia Jones QUOTE #:

P.O. NUMBER:

SGS Reference: 31103382

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	App I Metals (3)	App I VOCs								REMARKS
	Field Blank	11/29/11	14:10	WT	4	G	X	X								
	Trip Blank	11/28/11	10:30	↓	2	↓		X								

Preservatives Used

Analysis Required

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
[signature]	11/29/11	16:20	[signature]
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4) [signature]	11/30/11	10:25	Received By: [signature]

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 5.2

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☒ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **Joyce Engineering** Work Order No.: **31103382**

1. x Shipped
   ___ Hand Delivered

2. x COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. x Custody Tape on Container
   ___ No Custody Tape

4. x Samples Intact
   ___ Samples Broken / Leaking

5. x Chilled on Receipt Actual Temp.(s) in °C: 5.2
   ___ Ambient on Receipt
   ___ Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. x Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   x HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. x Received Within Holding Time
   ___ Not Received Within Holding Time

9. x No Discrepancies Noted
   ___ Discrepancies Noted
   ___ NCDENR notified of Descrepancies*

10. x No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: TP

Date: Wed-11/30/11 00:00

*NCDENR must be notified when collection, holding time or preservation requirements are not met. MI_11.6

DATE: 11/28-29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 S **Sampler(s):** R. Winfield

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 6.10 feet

Depth to Bottom (DTB): 19.00 feet

Water Column Thickness (WCT): 12.90 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.1 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 6.3 gallons

Actual Amount Purged/Bailed : 6.3 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1442	18.9	5.67	102.1	45.7	RW
2.1	1445	18.4	5.60	109.6	>1000	RW
4.2	1448	18.1	5.58	111.4	>1000	RW
6.3	1451	17.9	5.59	116.8	>1000	RW
	11/29/11 @					
Before Sampling	1025	19.1	5.48	96.7	39.7	RW

Comments (weather conditions, odor, color, silt, etc.):

11/28/11 partly cloudy, 50's 11/29/11 cloudy, rain, 40's

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 11/28-29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW15 D **Sampler(s):** R. Winfield

Well Location: NW end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 17.43 feet

Depth to Bottom (DTB): 40.00 feet

Water Column Thickness (WCT): 22.57 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.7 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 11.1 gallons

Actual Amount Purged/Bailed : 11.1 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1503	19.4	6.90	358	36.1	RW
3.7	1508	19.1	6.97	364	>1000	RW
7.4	1513	18.5	7.07	366	>1000	RW
11.1	1518	18.5	7.11	367	>1000	RW
	11/29/11 @					
Before Sampling	1035	19.0	6.78	364	31.7	RW

Comments (weather conditions, odor, color, silt, etc.):

11/28/11 Cloudy 50's

11/29/11 Cloudy, rain 40's

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-23-12

DATE: 11/28-29/2011

ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16S **Sampler(s):** R. Winfield

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 7.36 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 7.64 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.2 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.6 gallons

Actual Amount Purged/Bailed : 3.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1539	19.7	5.61	88.4	66	RW
1.2	1542	19.4	5.47	80.1	>1000	RW
2.4	1545	19.2	5.38	78.9	>1000	RW
3.6	1550	19.4	5.31	76.4	>1000	RW
	11/29/11 @					
Before Sampling	1050	19.1	5.46	79.6	36.0	RW

Comments (weather conditions, odor, color, silt, etc.):

11/28/11 partly cloudy, 50's

11/29/11 cloudy, rain 40's

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-29-12

DATE: 11/28-29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW16D **Sampler(s):** R. Winfield

Well Location: N edge of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 15.99 feet

Depth to Bottom (DTB): 36.00 feet

Water Column Thickness (WCT): 20.01 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.3 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 9.9 gallons

Actual Amount Purged/Bailed : 9.9 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1604	18.7	6.8	526	52.1	RW
3.3	1609	18.1	6.94	521	>1000	RW
6.6	1614	18.0	6.99	518	>1000	RW
9.9	1619	17.7	7.01	516	> 1000	RW
	11/29/11 @					
Before Sampling	1100	18.5	6.88	520	29.2	RW

Comments (weather conditions, odor, color, silt, etc.):

11/28/11 partly cloudy, 50's

11/29/11 cloudy, rain, 40's

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-29-12

DATE: 11/28-29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17S **Sampler(s):** R. Winfield

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 6.15 feet

Depth to Bottom (DTB): 15.00 feet

Water Column Thickness (WCT): 8.85 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.4 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.2 gallons

Actual Amount Purged/Bailed : 4.2 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1642	20.4	5.71	74.1	34.8	RW
1.4	1645	20.0	5.60	73.7	>1000	RW
2.8	1648	19.6	5.52	71.8	>1000	RW
4.2	1652	19.4	5.40	70.6	>1000	RW
	11/29/11 @					
Before Sampling	1115	20.1	5.49	67.7	28.7	RW

Comments (weather conditions, odor, color, silt, etc.):

11/28/11 partly cloudy 50's

11/29/11 cloudy rain 40's

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-29-12

DATE: 11/28-29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW17D **Sampler(s):** R. Winfield

Well Location: NE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 13.84 feet

Depth to Bottom (DTB): 39.00 feet

Water Column Thickness (WCT): 25.16 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 4.1 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 12.3 gallons

Actual Amount Purged/Bailed : 12.3 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	1705	19.6	8.11	323	22.1	RW
4.1	1711	19.2	8.00	328	477	RW
8.2	1717	19.0	7.81	320	>1000	RW
12.3	1724	18.8	7.63	316	>1000	RW
	11/29/11 @					
Before Sampling	1125	19.3	7.44	308	28.8	RW

Comments (weather conditions, odor, color, silt, etc.):

11/28/11 partly cloudy 50's

11/29/11 cloudy, rain 40's

Signature: R. Winfield **Date:** 11/29/11

QA/QC Sign Off: [illegible] **Date:** 1-24-12

DATE: 11/29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18S **Sampler(s):** R. Winfield

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.45 feet

Depth to Bottom (DTB): 14.00 feet

Water Column Thickness (WCT): 8.55 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.4 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.2 gallons

Actual Amount Purged/Bailed : 4.2 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	0752	19.9	5.22	144.6	60.7	RW
1.4	0756	19.9	5.15	202	>1000	RW
2.8	0800	19.7	5.03	226	>1000	RW
4.2	0805	19.6	4.97	240	> 1000	RW
	11/29/11 @					
Before Sampling	1305	19.4	4.99	252	70.7	RW

Comments (weather conditions, odor, color, silt, etc.):

11/29/11 cloudy 40's rust colored algae

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-24-12

DATE: 11/29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW18D **Sampler(s):** R. Winfield

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 13.99 feet

Depth to Bottom (DTB): 38.00 feet

Water Column Thickness (WCT): 24.01 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 3.9 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 11.7 gallons

Actual Amount Purged/Bailed : 11.7 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	0822	17.7	6.61	392	39.7	RW
3.9	0830	17.4	6.94	401	>1000	RW
7.8	0838	17.0	7.08	404	>1000	RW
11.7	0846	17.0	7.27	412	>1000	RW
	11/29/11 @					
Before Sampling	1315	18.1	7.40	382	61.2	RW

Comments (weather conditions, odor, color, silt, etc.):

11/29/11 cloudy 40's

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-24-12

DATE: 11/29/2011

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19S **Sampler(s):** R. Winfield

Well Location: E end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 7.89 feet

Depth to Bottom (DTB): 13.00 feet

Water Column Thickness (WCT): 5.11 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 0.8 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 2.4 gallons

Actual Amount Purged/Bailed : 2.4 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	0908	20.6	6.40	90.1	20.7	RW
0.8	0912	20.1	6.11	88.7	402	RW
1.6	0916	20.0	5.97	80.4	>1000	RW
2.4	0920	19.8	5.89	80.1	>1000	RW
	11/29/11 @					
Before Sampling	1345	19.9	5.42	67.7	31.8	RW

Comments (weather conditions, odor, color, silt, etc.):

11/29/11 cloudy 40's

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-24-12

DATE: 11/29/2011

ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: CRSWMA Phase 3 **Project No./Task No.:** 618.1101.11.02

Well ID: 2509-MW19D **Sampler(s):** R. Winfield

Well Location: SE end of Phase 3 cell

Well Diameter: 2 inches

Initial Depth to Water (DTW): 14.63 feet

Depth to Bottom (DTB): 28.00 feet

Water Column Thickness (WCT): 13.37 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.2 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 6.6 gallons

Actual Amount Purged/Bailed : 6.6 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: _____ feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	0938	19.7	7.24	401	35.7	RW
2.2	0942	19.6	7.15	382	>1000	RW
4.4	0946	19.4	7.10	390	>1000	RW
6.6	0951	19.3	7.07	394	>1000	RW
	11/29/11 @					
Before Sampling	1345	19.2	6.93	386	40.2	RW

Comments (weather conditions, odor, color, silt, etc.):

11/29/11 cloudy 40's

field blank @1410

Signature: [signature] **Date:** 11/29/11

QA/QC Sign Off: [signature] **Date:** 1-24-12