



**CONESTOGA-ROVERS
& ASSOCIATES**

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April 11, 2011

Mr. Nate Nemani
Project Manager
U.S. EPA, Region 5
Waste, Pesticide and Toxins Division
77 West Jackson Boulevard DW-8J
Chicago, Illinois
U.S.A. 60604-3590

Dear Mr. Nemani:

Re: 2010 CA 750 Environmental Indicator Annual Monitoring Results
EPA ID #MID 041 793 340
RACER Nodular Facility - Saginaw, Michigan

This letter summarizes the CA 750 Environmental Indicators (EI) monitoring activities related to the Nodular Facility that is owned and operated by RACER in Saginaw, Michigan.

The annual CA 750 EI monitoring was completed during the week of November 22 and 29, 2010.

The 2010 EI monitoring program was revised in accordance with the letter submitted to U.S. EPA dated August 27, 2010; these revisions included the following:

- Removal of Vanadium from all EI monitoring wells
- Removal of Hexavalent Chromium at MW-04864

Figure 1 presents databoxes for all RACER EI locations showing all data up to and including the 2010 EI results. As indicated on Figure 1:

- Ammonia was reported above the lowest applicable screening criterion (the GSI criterion of 2,120 µg/L) in five monitoring wells ranging in concentration from 2,900 µg/L to 9,100 µg/L
- Hexavalent Chromium was reported above the lowest applicable screening criterion (the GSI criterion of 11 µg/L) at MW-04765 at 40 µg/L
- pH was reported above the acceptable range (6.5 to 8.5) at MW-04250R at 10.05



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In summary, the results of the 2010 EI monitoring results are consistent or lower than the data evaluated in the RCRA CA725 & CA750 Environmental Indicators Supporting Documentation dated September 17, 2003, therefore, the EIs continue to be satisfied.

Based on the results of the annual EI monitoring conducted in 2010, RACER is proposing to modify the EI monitoring program for 2011. Table 1 presents the EI monitoring program and proposed modifications for the 2011 EI sampling event for your review. As indicated on Table 1, RACER is proposing that the following parameters be removed from the 2011 EI monitoring program since the most recent four consecutive rounds reported concentrations below the screening criteria:

- Ammonia at MW-04757
- Hexavalent Chromium at MW-04757, MW-04250R, and MW-03945.

Should you have any questions, please do not hesitate to call.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Michael R. Tomka

MT/ev/58502-2

Encl.

cc: Doug Wagner, Genoa Environmental Inc. on Behalf of RACER
Grant Trigger, RACER
Dave Favero, RACER

MW-04755	1/29/2004	1/21/2005	10/8/2005	8/12/2007	11/12/2008	12/3/2009	11/30/2010
Metals							
Chromium	-	5.0 U	-	4.3 J	5 U/2.1 J	-	-
Chromium VI (hexavalent)	-	-	-	50 U	R/R	9 J	40
Vanadium	-	10.0 U	-	5.5 J	10 U/6.1 J	10.0 U	-
Wet							
Ammonia	-	9000	-	1150	9450/9030	8660	5100
Cyanide (amenable)	-	-	-	-	4 J/10	R	10 U
Cyanide (total)	-	-	-	-	-	R	10 U
pH	7.11	7.02	6.73	7.44	6.81 J/7.02/6.90 J	7.34	6.82

MW-04854	11/16/1998	7/18/2000	1/5/2003	1/29/2004	1/20/2005	10/7/2005	8/31/2006	8/12/2007	11/12/2008	12/2/2009	11/30/2010
Metals											
Chromium	15 J	25.9	-	-	11.1	-	20.2	22.2 J/437 J	8.8 J	-	-
Chromium VI (hexavalent)	-	10 U	-	-	-	-	50 U	50 U/50 U	R	50 U	-
Vanadium	24 J	35	-	-	5.3 J	-	10 U	3.1 J/7.1 J	10 U	-	-
Wet											
Ammonia	-	-	6600	-	2960	-	4100	4050/4480	2370	2140	2900
Cyanide (amenable)	-	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	-	-	-	-	-	-	-	-	-	-	-
pH	10.2	11.17	11.08/11.08	10.15	8.25	8.78	7.78	7.93/8.37	7.81/7.50 J	7.17	7.52

MW-04257	1/29/2004	1/24/2005	8/12/2007	11/12/2008	12/3/2009	11/30/2010
Metals						
Chromium	-	5.0 U	150	116 J	-	-
Chromium VI (hexavalent)	-	-	50 U	R	5 J	10 J
Vanadium	-	10.0 U	10 U	10 U	10.0 U	-
Wet						
Ammonia	-	990	-	1170	1070	1200
Cyanide (amenable)	-	-	-	-	R	10 U
Cyanide (total)	-	-	-	-	R	10 U
pH	6.90	6.79	7.27	7.15/7.13 J	6.64	6.84

MW-04051	1/29/2004	1/21/2005	10/8/2005	8/14/2007	11/5/2008	12/3/2009	11/23/2010
Metals							
Chromium	-	5.0 U	-	5 U	5 U	-	-
Chromium VI (hexavalent)	-	-	-	50 U	50 U	8 J	200 U
Mercury	-	-	-	0.0007 J	0.001 U	R	0.0005 U
Vanadium	-	10.0 U	-	10 U	10 U	10.0 U	-
Wet							
Ammonia	-	3450	-	-	6330	5170	5600
Cyanide (amenable)	-	-	-	-	-	R	10 U
Cyanide (total)	-	-	-	-	-	R	10 U
pH	7.48	6.53	6.69	7.30	6.98 J/6.76	6.05	6.72

MW-03945	1/29/2004	1/21/2005	10/8/2005	8/14/2007	11/5/2008	12/3/2009	11/23/2010
Metals							
Chromium	-	5.0 U/5.0 U	-	5 U	5 U	-	-
Chromium VI (hexavalent)	-	-	-	50 U	50 U	8 J/8 J	200 U/200 U
Mercury	-	-	-	0.0008 J	0.001 U	R/R	0.0005 U/0.0005 U
Vanadium	-	10.0 U/10.0 U	-	10 U	10 U	10.0 U/10.0 U	-
Wet							
Ammonia	-	7700/7700	-	-	8850	7690/8040	7000/7200
Cyanide (amenable)	-	-	-	-	-	R/R	10 U/10 U
Cyanide (total)	-	-	-	-	-	R/R	10 U/10 U
pH	7.31	6.32	6.57	7.22	6.69/6.87 J	6.69	6.89

MW-04250	12/4/1998	7/18/2000
Metals		
Chromium	189/173	28
Chromium VI (hexavalent)	-	10 U
Mercury	0.2/0.2 U	-
Vanadium	89/84	33
Wet		
Cyanide (total)	10 U/10 U	7

MW-04250R	9/28/2005	10/7/2005	8/31/2006	9/13/2007	11/5/2008	12/17/2008	12/3/2009	11/23/2010
Metals								
Chromium	5.5	-	2.2 J/2.2 J	5 U	5 U/5 U	-	-	-
Chromium VI (hexavalent)	-	-	20 J/20 J	50 U	50 U/50 U	-	50 U	40 U
Mercury	-	-	0.0041/0.0043	0.0052	0.0047/0.0042	-	0.0027 J	0.0005 U
Vanadium	13.7	-	6.8 J/6.1 J	10 U	10 U/10 U	-	10.0 U	-
Wet								
Ammonia	-	-	-	-	-	4080	4330	9100
Cyanide (amenable)	-	-	-	-	-	-	R	10 U
Cyanide (total)	-	-	-	-	-	-	R	10 U
pH	10.48	11.16/11.12	10.90	10.76 J/10.85 J	10.38	10.67	10.05	-

0 100 200 ft

LEGEND

A--- INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
 MW-04755 ● INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
 * UNABLE TO LOCATE

SAMPLE LOCATION

MW-04755	1/21/2005	8/12/2007
Metals		
Chromium Total	5.0 U	4.3 J
Chromium VI (hexavalent)	-	50 U
Vanadium	10.0 U	5.5 J
Wet		
Ammonia	9000	1150
Cyanide (total)	-	4 J/10
pH	7.11	7.44

PARAMETER

EXCEEDS CRITERIA

MICHIGAN PART 201 CRITERIA

Location	Parameter	Lowest Criteria (ug/L or SU for pH)
METAL	Chromium (total)	150
METAL	Chromium (VI)	11
METAL	Mercury	0.0013
METAL	Vanadium	12
WET	Ammonia	2126
WET	Cyanide (total)	3.2
WET	Cyanide (amenable)	3.2
WET	pH	6.5-8.5

Chromium (total) and Chromium VI (hexavalent)
 A: Industrial Commercial III and IV Off-Pipe Water-Cable
 B: Groundwater Contact Cable
 C: Industrial Commercial III and IV Groundwater Vials In-Box At-Cable
 D: DDT Cable

NOTES:

1. NOTE THAT THE UNIONIZED FRACTION OF AMMONIA IS A FUNCTION OF THE WATER BODY CLASSIFICATION (WARM WATER OR COLD WATER), PH AND TEMPERATURE OF THE RECEIVING WATER AND IS ESTIMATED AS A PERCENT OF THE TOTAL AMMONIA. THE SAGINAW RIVER HAS BEEN CLASSIFIED AS WARM WATER. THE GENERIC GSI CRITERION (CHROMIUM) FOR UNIONIZED AMMONIA IS 35 ug/L FOR WARM WATER SURFACE WATER. (SEE FOOTNOTE CC OF THE PART 201 CLEANUP CRITERIA PART 213 REBASED SCREENING LEVELS RPD OPERATIONAL MONITORING NO. 1 DATED DECEMBER 16, 2004). THE GENERIC ADGTE TOXICITY CRITERION FOR UNIONIZED AMMONIA IS 425 ug/L (PROVIDED TO CRA BY MDEQ ON MARCH 2, 2007 REGARDING A NEARBY FACILITY).

BASED ON DATA AVAILABLE FOR THE SAGINAW RIVER FROM USGS, THE AVERAGE (1980-2009) TEMPERATURE AND PH FOR THE SAGINAW RIVER DURING THE FALL MONTHS (SEPTEMBER) ARE 12.3 DEGREES CELSIUS AND 8.51 UNITS, RESPECTIVELY. USGS GAUGE 8472666 SOURCE: HTTP://WWW.WATERSDATA.USGS.GOV/WWW/INDEX.HTM. THEREFORE, FOR A PH OF 8 AND A TEMPERATURE OF 12.3 DEGREES CELSIUS, APPROXIMATELY 2.3 PERCENT OF THE TOTAL AMMONIA WILL BE PRESENT IN THE UNIONIZED FORM RESULTING IN A TOTAL AMMONIA GENERIC GSI CRITERION (CHROMIUM) OF 2.12 ug/L (35 ug/L X 0.023).

THEREFORE, FOR A PH OF 8 AND A TEMPERATURE OF 12.3 DEGREES CELSIUS, APPROXIMATELY 2.3 PERCENT OF THE TOTAL AMMONIA WILL BE PRESENT IN THE UNIONIZED FORM OR A MAXIMUM OF 2126 ug/L (8.85 ug/L X 242) FOR THE NOVEMBER 2010 EVENT.

2. NOTE THAT THE GSI CRITERIA DEVELOPED FOR TOTAL CHROMIUM WAS DEVELOPED FROM THE FINAL CHROMIUM CALCULATION FOR TRIVALENT CHROMIUM AS SPECIFIED IN THE MDOQ GUIDANCE. TOTAL CHROMIUM RESULTS WERE COMPARED TO TRIVALENT CHROMIUM CRITERIA SINCE EXTENSIVE SITE DATA SUPPORTS THAT THE MAJORITY OF THE TOTAL CHROMIUM IS TRIVALENT CHROMIUM. HEXAVALENT CHROMIUM IS STILL SAMPLED AT NUMEROUS LOCATIONS AND IS COMPARED TO HEXAVALENT CHROMIUM CRITERIA.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**MLC
 NODULAR FACILITY
 SAGINAW, MICHIGAN**

**SUMMARY OF EI LOCATIONS AND RESULTS
 (1998 - 2010)**

CONESTOGA-ROVERS & ASSOCIATES

Source References

Project Manager:	Reviewed By:	Date:
M.T.	I.R.	JANUARY 2011
Scale:	Project No.:	Report No.:
1"=400'	58502-T09	NEMA002
		Drawing No.:
		figure 1

TABLE 1
EI MONITORING PROGRAM AND PROPOSED MODIFICATIONS
NODULAR FACILITY, SAGINAW, MICHIGAN

<i>IU</i>	<i>Location</i>	<i>Parameter</i>	<i>Monitoring Purpose</i>	<i>Propose to Eliminate from EI Monitoring</i>	<i>Comments</i>
G	MW-04250/MW-04250R	chromium, hexavalent	GSI	Yes	Hexavalent chromium did not exceed criteria for four consecutive rounds, therefore hexavalent chromium will be removed from future EI monitoring.
G	MW-04250/MW-04250R	cyanide (total and amenable)	GSI	No	
G	MW-04250/MW-04250R	mercury	GSI	No	
G	MW-04250/MW-04250R	pH	GSI	No	
G	MW-04250/MW-04250R	ammonia	GSI	No	
G	MW-04757	chromium, hexavalent	GSI	Yes	Hexavalent chromium did not exceed criteria for four consecutive rounds, therefore hexavalent chromium will be removed from future EI monitoring.
G	MW-04757	cyanide (total and amenable)	GSI	No	
G	MW-04757	ammonia	GSI	Yes	Ammonia did not exceed criteria for four consecutive rounds, therefore Ammonia will be removed from future EI monitoring.
G	MW-04864	pH	GSI	No	
G	MW-04864	ammonia	GSI	No	
Wells added in 2007 per EPA's email request dated August 8, 2007.					
G	MW-03945	chromium, hexavalent	GSI	Yes	Hexavalent chromium did not exceed criteria for four consecutive rounds, therefore hexavalent chromium will be removed from future EI monitoring.
G	MW-03945	cyanide (total and amenable)	GSI	No	
G	MW-03945	mercury	GSI	No	
G	MW-03945	pH	GSI	No	
G	MW-03945	ammonia	GSI	No	
G	MW-04051	chromium, hexavalent	GSI	No	
G	MW-04051	cyanide (total and amenable)	GSI	No	
G	MW-04051	mercury	GSI	No	
G	MW-04051	pH	GSI	No	
G	MW-04051	ammonia	GSI	No	
G	MW-04257	chromium, hexavalent	GSI	No	
G	MW-04257	cyanide (total and amenable)	GSI	No	
G	MW-04257	pH	GSI	No	
G	MW-04257	ammonia	GSI	No	
G	MW-04765	chromium, hexavalent	GSI	No	
G	MW-04765	cyanide (total and amenable)	GSI	No	
G	MW-04765	pH	GSI	No	
G	MW-04765	ammonia	GSI	No	

Notes:

- Table updated to remove select parameters based on 4 consecutive rounds below criteria.
- Wells evaluated using most recent groundwater data compared to appropriate EI criteria.
- Since 2005 all samples for metals analyses have been collected using low flow sampling techniques and were unfiltered.
- GSI = Selected to monitor stability based on exceedances of groundwater surface water interface criteria in most recent samples.
- NA - Not applicable.



MEMORANDUM

TO: Mike Tomka REF. NO.: 58502

FROM: Rawa Fleisher^{ak}/rr/1/Det DATE: January 6, 2011

RE: Data Quality Assessment and Full Validation
Annual CA750 Groundwater Sampling–November 2010
Motors Liquidation Company (MLC) – Nodular Site
Saginaw, Michigan

The following details a quality assessment and validation of the analytical data resulting from the November 2010 collection of seven (7) groundwater, and one (1) quality control samples from the MLC Nodular Site in Saginaw, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Test America Laboratories, Inc, in North Canton, OH (TA-NC) in accordance with the methodologies presented in Table 2.

The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

- i. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", EPA-540/R-94/013, February 1994.

This guideline is referred to as "NFGs" in this Memorandum.

Sample Quantitation

The laboratory reported detected concentrations of hexavalent chromium below the laboratory's report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "B". These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum. The laboratory "B" flags may be disregarded.

Sample analyses, with elevated report limits to matrix effects were flagged by the laboratory with an "G"; no further qualification was required. The "G" flag may be disregarded.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are presented in Table 2.

The samples summarized in Table 3 should be qualified due to violation of sample holding time periods.

Sample Preservation and Holding Times – (continued)

The remaining samples were prepared and/or analyzed within the specified holding time periods.

The samples were shipped and maintained in accordance with the sample preservation requirements.

Initial Calibration

The initial calibration for mercury analysis by cold vapor atomic absorption spectroscopy (CVAA) and general chemistry parameters require the analysis of a calibration blank and a minimum of five standards to establish the calibration curve. The coefficient of variation for calibration curves must exceed 0.995.

Initial calibration is verified with an initial calibration verification (ICV) standard which must recover within 80 to 120 percent for mercury by CVAA and laboratory specific criteria for general chemistry parameters.

A review of the laboratory data showed that the inorganic initial calibration curves and ICVs were analyzed at the appropriate frequency and were within the acceptance criteria.

Continuing Calibration

Continuing calibration verification (CCV) standards are analyzed at method specified frequency (one every 10 samples). The CCVs must meet the percent recovery control limits specified above for the ICVs. Criteria for inorganic analyses are the same criteria as used for assessing the initial calibration data.

A review of the laboratory data showed that CCVs were analyzed at the appropriate frequency and the data were within the acceptance criteria.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

The method blank samples did not contain target compounds with concentrations that impacted the investigative samples.

Laboratory Blank Samples

Metals analyses include the analysis of initial calibration blanks (ICB) and continuing calibration blanks (CCB) to assess the presence and the magnitude of sample contamination introduced during sample analysis. The CCBs are analyzed at a minimum frequency of one every 10 samples and target analytes should be non-detect.

Several ICB and CCBs were reported with detectable concentrations of target analytes. The sample presented in Table 4 should be qualified due to CCB contamination above the laboratory MDLs.

Laboratory Blank Samples – (continued)

The remaining ICB and CCBs did not contain elements with concentrations that impacted the investigative samples.

Matrix Spike/Matrix Spike Duplicate Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were determined. The inorganic control limits are defined by the methods or the laboratory and the NFG. The samples selected for MS/MSD analysis are identified in Table 1.

In some sample batches, non-Site-specific samples were utilized as MS/MSDs. Qualification of samples associated with these MS/MSDs was not performed. If MS/MSD analyses could not be completed in an analytical batch due to insufficient sample volume; precision and accuracy were verified by the analysis of the laboratory control sample/laboratory control duplicate (LCS/LCD). The samples that should be qualified due to violation of MS/MSD percent recovery criteria and/or RPD are outlined in Table 5. MS/MSD percent recoveries and associated RPD acceptance criteria were met in the remaining sample analyses.

Laboratory Control Sample/Laboratory Control Duplicate Analyses

The LCS/LCD analyses serve as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS/LCD percent recoveries were evaluated against method and laboratory established control limits.

The LCS/LCD percent recoveries were within the laboratory control limits or did not warrant qualification, indicating that an acceptable level of overall performance was achieved.

Laboratory precision was verified by the RPD of the LCS/LCD when a matrix spike/matrix spike duplicate was not analyzed.

The RPDs were within the laboratory control limits, indicating that an acceptable level of overall laboratory precision was achieved.

Duplicate Sample Analyses

The laboratory precision of pH was monitored by the analyses of duplicate samples.

The duplicate RPD were within the acceptance criteria.

Contract Required Detection Limit (CRDL) Analyses

The instrument calibration near the Contract Required Detection Limit (CRDL) must be verified for each analyte reported. An ICP standard solution at the CRDL (CRI) is evaluated against the control limits provided.

The CRI analysis results were evaluated for all samples and were within the control limits.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. The samples identified in Table 1 were reviewed. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of one (1) field duplicate sample set.

Field Duplicate Samples

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is one or two times the RL value for water and sediment samples, respectively.

The data indicate that an adequate level of precision was achieved for the sampling event.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
 ANNUAL CA750 GROUNDWATER SAMPLING - NOVEMBER 2010
 MLC NODULAR SITE
 SAGINAW, MICHIGAN

CRA SDG No.: T09-01	Sample Identification	Location	Matrix	QC Samples	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis / Parameters								
							Mercury	Cyanide (total/ammenable)	Ammonia	Hexavalent Chromium	pH				
		TA-NC Lot No.: A0K240402													
	GW-58502-112310-SSH-001	MW-03945	water		11/23/2010	11:40:00 AM	X	X	X	X	X	X	X	X	
	GW-58502-112310-SSH-002	MW-03945	water	DUP (-001)	11/23/2010	12:00:00 PM	X	X	X	X	X	X	X	X	
	GW-58502-112310-SSH-003	MW-04051	water	MS/MSD-P	11/23/2010	10:22:00 AM	X	X	X	X	X	X	X	X	
	GW-58502-112310-SSH-004	MW-04250	water		11/23/2010	---	X	X	X	X	X	X	X	X	
		TA-NC Lot No.: A0L010402													
CRA SDG No.: T09-02															
	GW-58502-113010-SSH-005	MW-04864	water		11/30/2010	9:57:00 AM			X	X	X	X	X	X	
	GW-58502-113010-SSH-006	MW-04765	water		11/30/2010	10:56:00 AM			X	X	X	X	X	X	
	GW-58502-113010-SSH-007	MW-04757	water	MS/MSD-P	11/30/2010	12:51:00 PM			X	X	X	X	X	X	
	GW-58502-113010-SSH-008	MW-04257	water		11/30/2010	2:12:00 PM			X	X	X	X	X	X	

Notes:

- DUP - Field Duplicate Sample of sample in parenthesis
- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- QC - Quality Control

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
ANNUAL CA750 GROUNDWATER SAMPLING - NOVEMBER 2010
MLC NODULAR SITE
SAGINAW, MICHIGAN

<i>Parameter</i>	<i>Method</i> ¹	<i>Matrix</i>	<i>Holding Time</i>	<i>Preservation</i>
Site-Specific Metal				
Mercury	SW-846 7470A	Water	- 28 days from sample collection to completion of analysis	pH < 2 and Iced, 4 ± 2° C
General Chemistry				
Cyanide (Amenable)	EPA-WW 335.1	Water	- 14 days from sample collection to analysis	pH > 12 and Iced, 4 ± 2° C
Cyanide (Total)	EPA-WW 335.4	Water	- 14 days from sample collection to analysis	pH > 12 and Iced, 4 ± 2° C
Ammonia	EPA-WW 350.3	Water	- 28 days from sample collection to completion of analysis.	pH < 2 and Iced, 4 ± 2° C
Hexavalent Chromium	SW-846 7196	Water	- Analyze within 15 minutes from collection	Iced, 4 ± 2° C
pH	SW-846 9040B	Water	- Analyze Immediately	Iced, 4 ± 2° C

Notes

¹ Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986
EPA-WW - USEPA Office of Water Method 01A-1677, EPA-821-F-98-001, January 1998.

TABLE 3

SUMMARY OF QUALIFIED SAMPLE RESULTS DUE TO VIOLATION OF HOLDING TIME PERIOD
 ANNUAL CA750 GROUNDWATER SAMPLING - NOVEMBER 2010
 MLC NODULAR SITE
 SAGINAW, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Holding Time</i>	<i>Holding Time Criteria</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
General Chemistry	pH	1 day	Immediately	GW-58502-112310-SSH-001	6.9 J	s.u.
				GW-58502-112310-SSH-002	6.9 J	s.u.
				GW-58502-112310-SSH-003	7.6 J	s.u.
				GW-58502-112310-SSH-004	9.9 J	s.u.
				GW-58502-113010-SSH-005	7.6 J	s.u.
				GW-58502-113010-SSH-006	7.1 J	s.u.
				GW-58502-113010-SSH-008	7.2 J	s.u.

Notes:
 J - Estimated Concentration

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO LABORATORY BLANK CONTAMINATION
 ANNUAL CA750 GROUNDWATER SAMPLING - NOVEMBER 2010
 MLC NODULAR SITE
 SAGINAW, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Analysis Date</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result (1)</i>	<i>Units</i>
Select Metal	Mercury	12/06/10	0.2	GW-58502-112310-SSH-004	0.65 UJ	ng/L

Notes:

UJ - Qualified as Not Detected at the estimated report limit

(1) - Qualification based on further validation of non-compliant quality control parameters.

TABLE 5

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO OUTLYING
 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND/OR RELATIVE PERCENT DIFFERENCE
 ANNUAL CA750 GROUNDWATER SAMPLING - NOVEMBER 2010
 MLC NODULAR SITE
 SAGINAW, MICHIGAN

Parameter	Analyte	MS %Rec	MSD %Rec	RPD	Control Limits		Associated Sample ID	Qualified Result	Units
					%Rec	RPD			
Select Metal	Mercury	64	52	20	71-125	24	GW-58502-112310-SSH-001	0.50 UJ	ng/L
							GW-58502-112310-SSH-002	0.50 UJ	ng/L
							GW-58502-112310-SSH-003	0.50 UJ	ng/L
							GW-58502-112310-SSH-004	0.65 UJ	ng/L

Notes:

UJ - Non-detect with an Estimated Report Limit

MS - Matrix Spike

MSD - Matrix Spike Duplicate

RPD - Relative Percent Difference

%Rec - Percent Recovery