



Ms. Jessica Vickers  
Tetra Tech EM, Inc.  
1955 Evergreen Blvd  
Suite 300  
Duluth, GA 30096

February 18, 2011

DOH ELAP# 11626

Account# 17302

Login# L234047

Dear Ms. Vickers:

Enclosed are the analytical results for the samples received by our laboratory on February 18, 2011. All test results meet the quality control requirements of AIHA and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

OSHA has issued a revised version of the OSHA ID-215 method for hexavalent chromium sampling. Method Number ID-215 (version 2), Control Number T-ID215-FV-02-0604-M. The significant modification related to sample collection in the method is that when using the 37 or 25 mm PVC filter with cellulose back-up pad for welding operations or chromium plating operations special handling requirements have been added.

A summary of the new special handling requirements follows:

1. Samples collected on PVC filters must be shipped overnight to the laboratory within 24 hours of sampling.
2. Samples collected on PVC filters from welding operations must be analyzed within 8 days of sampling.
3. Samples collected on PVC filters from chromium plating operations must be analyzed within 6 days of sampling or be stabilized at the laboratory upon receipt.

If the special handling requirements are not met there is the possibility that the sample results may be biased low.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report.

Please contact Heidi Fruhlinger at (877) 386-0035, if you would like any additional information regarding this report.

Thank you for using Galson Laboratories.

Sincerely,

Galson Laboratories

Mary G. Unangst  
Laboratory Director

Enclosure(s)



## LABORATORY ANALYSIS REPORT

6601 Kirkville Road  
East Syracuse, NY 13057  
(315) 432-5227  
FAX: (315) 437-0571  
www.galsonlabs.com

Client : Tetra Tech EM, Inc.  
Site : Agrium, Hartsville, SC  
  
Date Sampled : 16-FEB-11  
Date Received : 18-FEB-11  
Date Analyzed : 18-FEB-11  
Report ID : 681556

Account No.: 17302  
Login No. : L234047

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Client ID : 02-AA-021611      Lab ID : L234047-1      Air Volume : 990.1 Liter  
Date Sampled : 02/16/11      Date Analyzed : 02/18/11

<u>Parameter</u>	<u>LOQ</u> <u>ug</u>	<u>Total</u> <u>ug</u>	<u>Conc</u>	<u>Units</u>
Arsenic	0.30	<0.30	<0.00030	MG/M3
Barium	0.15	<0.15	<0.00015	MG/M3
Cadmium	0.15	<0.15	<0.00015	MG/M3
Chromium	3.0	<3.0	<0.0030	MG/M3
Lead	0.38	<0.38	<0.00038	MG/M3
Selenium	2.3	<2.3	<0.0023	MG/M3
Silver	0.30	<0.30	<0.00030	MG/M3
Zinc	2.3	3.6	0.0036	MG/M3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

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Collection Media : Filter

Submitted by: cju

Approved by : DEH

Date : 18-FEB-11 NYS DOH # : 11626

QC by: Tom Burgess

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< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	LOQ-Limit of Quantitation

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.



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Site : Agrium, Hartsville, SC

Date Sampled : 16-FEB-11  
Date Received : 18-FEB-11  
Date Analyzed : 18-FEB-11  
Report ID : 681556

Account No.: 17302  
Login No. : L234047

Client ID : 13-AA-021611      Lab ID : L234047-2      Air Volume : 991.6 Liter  
Date Sampled : 02/16/11      Date Analyzed : 02/18/11

Parameter	LOQ ug	Total ug	Conc	Units
Arsenic	0.30	<0.30	<0.00030	MG/M3
Barium	0.15	<0.15	<0.00015	MG/M3
Cadmium	0.15	<0.15	<0.00015	MG/M3
Chromium	3.0	<3.0	<0.0030	MG/M3
Lead	0.38	<0.38	<0.00038	MG/M3
Selenium	2.3	<2.3	<0.0023	MG/M3
Silver	0.30	<0.30	<0.00030	MG/M3
Zinc	2.3	<2.3	<0.0023	MG/M3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media : Filter

Submitted by: cju

Approved by : DEH

Date : 18-FEB-11 NYS DOH # : 11626

QC by: Tom Burgess

< -Less Than      mg -Milligrams      m3 -Cubic Meters      kg -Kilograms  
> -Greater Than      ug -Micrograms      l -Liters      NS -Not Specified  
NA -Not Applicable      ND -Not Detected      ppm -Parts per Million      LOQ-Limit of Quantitation

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Site : Agrium, Hartsville, SC  
  
Date Sampled : 16-FEB-11  
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Date Analyzed : 18-FEB-11  
Report ID : 681556

Account No.: 17302  
Login No. : L234047

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Client ID : 14-AA-021611      Lab ID : L234047-3      Air Volume : 995.8 Liter  
Date Sampled : 02/16/11      Date Analyzed : 02/18/11

Parameter	LOQ ug	Total ug	Conc	Units
Arsenic	0.30	<0.30	<0.00030	MG/M3
Barium	0.15	<0.15	<0.00015	MG/M3
Cadmium	0.15	<0.15	<0.00015	MG/M3
Chromium	3.0	<3.0	<0.0030	MG/M3
Lead	0.38	<0.38	<0.00038	MG/M3
Selenium	2.3	<2.3	<0.0023	MG/M3
Silver	0.30	<0.30	<0.00030	MG/M3
Zinc	2.3	<2.3	<0.0023	MG/M3

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

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Collection Media : Filter

Submitted by: cju

Approved by : DEH

Date : 18-FEB-11 NYS DOH # : 11626

QC by: Tom Burgess

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< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	LOQ-Limit of Quantitation

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.



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Site : Agrium, Hartsville, SC

Date Sampled : 16-FEB-11  
Date Received : 18-FEB-11  
Date Analyzed : 18-FEB-11  
Report ID : 681553

Account No.: 17302  
Login No. : L234047

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**Hexavalent Chromium**

<u>Sample ID</u>	<u>Lab ID</u>	<u>Air Vol</u> <u>liter</u>	<u>Total</u> <u>ug</u>	<u>Conc</u> <u>ug/m3</u>
13-AA-021611	L234047-4	419.6	<0.029	<0.069
14-AA-021611	L234047-5	443.2	<0.029	<0.065

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

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Level of quantitation: 0.030 ug  
Analytical Method : mod. OSHA ID-215; IC  
OSHA PEL (TWA) : 5 ug/m3  
Collection Media : 37mm PVC

Submitted by: tmk  
Approved by : tns  
Date : 18-FEB-11 NYS DOH # : 11626  
QC by: Tom Burgess

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< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	



## LABORATORY FOOTNOTE REPORT

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Site : Agrium, Hartsville, SC

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Date Received: 18-FEB-11  
Date Analyzed: 18-FEB-11

Account No.: 17302  
Login No. : L234047

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

## L234047 (Report ID: 681556):

Reported results reflect elemental analysis of the requested metals. Certain compounds may not be solubilized during digestion, resulting in data that is biased low.

SOPs: MT-SOP-9(11), im-mwvfilt(13)

Due to different digestion requirements, silver should be collected on a separate filter. Results for silver may be biased low.

OSHA PEL: Chromium II and III = 0.5 mg/m<sup>3</sup>; Chromium metal (as Cr) = 1 mg/m<sup>3</sup>

Blank spikes recovered above the control limit of 120% for Selenium at 122%,126%,123%,125%.

Sample data is not affected as the bias would be high and the samples are non detect.

Parameter	Method	PEL
Arsenic	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	0.010 mg/m <sup>3</sup>
Barium	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	0.5 mg/m <sup>3</sup> (soluble)
Cadmium	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	0.005 mg/m <sup>3</sup>
Chromium	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	Varies, see footnote
Lead	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	0.05 mg/m <sup>3</sup>
Selenium	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	NA
Silver	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	0.01 mg/m <sup>3</sup>
Zinc	mod. NIOSH 7300/OSHA 125G; ICP/ICPMS	Varies

## L234047 (Report ID: 681553):

SOPs: IC-SOP-15(2)

Total ug corrected for a desorption efficiency of 104%.

Samples were prepared and analyzed within method-specified hold times.

< -Less Than      mg -Milligrams      m<sup>3</sup> -Cubic Meters      kg -Kilograms  
> -Greater Than      ug -Micrograms      l -Liters      NS -Not Specified  
NA -Not Applicable      ND -Not Detected      ppm -Parts per Million



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☐ Check if change of address  
☐ New Client ? ☐ yes ☐ no

Report To : Tetra Tech  
1955 Evergreen Blvd  
Duluth, GA 30096  
 Phone No. : Jessica Vukobratovic 678 775-3104  
 Fax No. : \_\_\_\_\_

Invoice To : \_\_\_\_\_  
RUS  
 Phone No. : \_\_\_\_\_  
 Fax No. : \_\_\_\_\_

Site Name : Aggum, ARVINUE, S project

Sampled By : C. Jones

☒ Samples submitted using the FreePumpLoan™ Program. ☐ Samples submitted using the FreeSamplingBadges™ Program.

Client Account No. : \_\_\_\_\_  
 Purchase Order No. : \_\_\_\_\_  
 Credit Card No. : \_\_\_\_\_  
 Card Holder Name : \_\_\_\_\_  
 Exp. : \_\_\_\_\_

Email / Fax Results To : \_\_\_\_\_  
 Email Address : \_\_\_\_\_  
 Fax No. : \_\_\_\_\_

Need Results By:	(surcharge)	Date Sampled	Collection Medium	*Air Volume (Liters)	Passive Monitors (Min)	Analysis Requested	Method Reference	Specific DL Needed
1. <u>02-AA-021611</u>	0%	<u>2/16/11</u>	<u>MCE 3000</u>	<u>990.1 L</u>		<u>Metals (BCRA) + ZINC</u>		
2. <u>03-AA-021611</u>	35%	<u>2/16/11</u>	<u>MCE 3000</u>	<u>MCE=991.6L</u>		<u>PCMA Metals + ZINC / Chromium (VI)</u>		
3. <u>04-AA-021611</u>	50%	<u>2/16/11</u>	<u>MCE 3000</u>	<u>PVC=419.6L</u>		<u>PCMA Metals + ZINC / Chromium (VI)</u>		
4. <u>05-AA-021611</u>	75%							
5. <u>06-AA-021611</u>	100%							
6. _____	150%							
7. _____	200%							
8. _____								
9. _____								
10. _____								
11. _____								

☐ Yes ☐ No We normally add a laboratory blank for each analyte. We will charge you for this at our normal rate. If you agree please check "Yes" otherwise check "No".  
 List description of industry or process / interference's present in sampling area: PCMA Metals - Ag, As, Ba, Cd, Cr, Pb, Se per client.  
 Comments: Received by FedEx Florence, SC at 2/17/11 1100 anal 2/18/11

Chain of Custody

Relinquished by : Eric Turner Signature ACostello Date/Time 2/17/11 1100

Received by LAB : ACostello Signature ACostello Date/Time 2/18/11 1024