



27-Aug-2010

Mark Mumby  
HRL Compliance Solutions  
744 Horizon Ct. Suite 140  
Grand Junction, CO 81506

Re: **Antero Gravel Pit Release 10-422 8/21/10**

Work Order: **1008543**

Dear Mark,

ALS Environmental received 10 samples on 24-Aug-2010 10:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 27.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: IL100452

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

DOV#JURXS#KVD/FRUS#Sdu#k#kh#DOV#Dderudw#u|J#uxs#D#Fdp seha#Eurkhw#Dp l#hg#Frp sdq|

Environmental The ALS logo, a stylized blue triangle with a yellow flame-like shape inside.

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

## ALS Environmental

Date: 27-Aug-10

**Client:** HRL Compliance Solutions  
**Project:** Antero Gravel Pit Release 10-422 8/21/10  
**Work Order:** 1008543

### Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1008543-01	Seep 1	Water		8/21/2010 11:25	8/24/2010 10:45	<input type="checkbox"/>
1008543-02	Seep 2	Water		8/21/2010 11:30	8/24/2010 10:45	<input type="checkbox"/>
1008543-03	Seep 3	Water		8/21/2010 11:35	8/24/2010 10:45	<input type="checkbox"/>
1008543-04	Seep 4	Water		8/21/2010 11:40	8/24/2010 10:45	<input type="checkbox"/>
1008543-05	Seep 5	Water		8/21/2010 12:05	8/24/2010 10:45	<input type="checkbox"/>
1008543-06	DG 1	Water		8/21/2010 12:00	8/24/2010 10:45	<input type="checkbox"/>
1008543-07	DG 2	Water		8/21/2010 12:15	8/24/2010 10:45	<input type="checkbox"/>
1008543-08	Pond 1	Water		8/21/2010 12:30	8/24/2010 10:45	<input type="checkbox"/>
1008543-09	Pond 2	Water		8/21/2010 12:25	8/24/2010 10:45	<input type="checkbox"/>
1008543-10	Outlet Pond	Water		8/21/2010 12:20	8/24/2010 10:45	<input type="checkbox"/>

---

**Client:** HRL Compliance Solutions  
**Project:** Antero Gravel Pit Release 10-422 8/21/10  
**Work Order:** 1008543

---

**Case Narrative**

Samples Seep 1 and Outlet Pond were received after the 48 hour hold time for Nitrate and Nitrite had expired.

Batch R80348 sample Seep 1 MSD recovery for Sulfate was above control limits, but the amount of Sulfate in the unspiked parent sample was greater than 4 times the amount spiked.

Batch R80383 MS/MSD data for Chloride is not related to this project's samples.

**Client:** HRL Compliance Solutions  
**Project:** Antero Gravel Pit Release 10-422 8/21/10  
**WorkOrder:** 1008543

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

# ALS Environmental

Date: 27-Aug-10

**Client:** HRL Compliance Solutions  
**Project:** Antero Gravel Pit Release 10-422 8/21/10  
**Sample ID:** Seep 1  
**Collection Date:** 8/21/2010 11:25 AM

**Work Order:** 1008543  
**Lab ID:** 1008543-01  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS (DISSOLVED)</b>						
			<b>SW6020A</b>		Prep Date: <b>8/25/2010</b>	Analyst: <b>RH</b>
Calcium	85		0.50	mg/L	1	8/25/2010 11:07 PM
Iron	1.7		0.080	mg/L	1	8/25/2010 11:07 PM
Magnesium	32		0.20	mg/L	1	8/25/2010 11:07 PM
Manganese	0.95		0.0050	mg/L	1	8/25/2010 11:07 PM
Potassium	4.8		0.20	mg/L	1	8/25/2010 11:07 PM
Sodium	180		2.0	mg/L	10	8/26/2010 12:19 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	280		5.0	µg/L	5	8/25/2010 11:32 PM
Ethylbenzene	27		5.0	µg/L	5	8/25/2010 11:32 PM
m,p-Xylene	160		5.0	µg/L	5	8/25/2010 11:32 PM
o-Xylene	14		5.0	µg/L	5	8/25/2010 11:32 PM
Toluene	54		5.0	µg/L	5	8/25/2010 11:32 PM
Xylenes, Total	170		15	µg/L	5	8/25/2010 11:32 PM
Surr: 1,2-Dichloroethane-d4	114		70-120	%REC	5	8/25/2010 11:32 PM
Surr: 4-Bromofluorobenzene	108		75-120	%REC	5	8/25/2010 11:32 PM
Surr: Dibromofluoromethane	111		85-115	%REC	5	8/25/2010 11:32 PM
Surr: Toluene-d8	100		85-120	%REC	5	8/25/2010 11:32 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>						
			<b>SW9056</b>			Analyst: <b>ED</b>
Bromide	0.26		0.10	mg/L	1	8/24/2010 01:04 PM
Chloride	160		10	mg/L	10	8/24/2010 03:42 PM
Fluoride	0.51		0.10	mg/L	1	8/24/2010 01:04 PM
Nitrogen, Nitrate	0.028	H	0.020	mg/L	1	8/24/2010 01:04 PM
Nitrogen, Nitrite	ND	H	0.020	mg/L	1	8/24/2010 01:04 PM
Sulfate	170		10	mg/L	10	8/24/2010 03:42 PM
Nitrogen, Nitrate-Nitrite	0.028		0.020	mg/L	1	8/24/2010 01:04 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Environmental**

Date: 27-Aug-10

**Client:** HRL Compliance Solutions  
**Project:** Antero Gravel Pit Release 10-422 8/21/10  
**Sample ID:** Seep 2  
**Collection Date:** 8/21/2010 11:30 AM

**Work Order:** 1008543  
**Lab ID:** 1008543-02  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	1,500		50	µg/L	50	8/26/2010 04:53 PM
Ethylbenzene	190		5.0	µg/L	5	8/26/2010 03:03 PM
m,p-Xylene	2,200		50	µg/L	50	8/26/2010 04:53 PM
o-Xylene	390		50	µg/L	50	8/26/2010 04:53 PM
Toluene	2,800		50	µg/L	50	8/26/2010 04:53 PM
Xylenes, Total	2,600		150	µg/L	50	8/26/2010 04:53 PM
Surr: 1,2-Dichloroethane-d4	113		70-120	%REC	50	8/26/2010 04:53 PM
Surr: 1,2-Dichloroethane-d4	104		70-120	%REC	5	8/26/2010 03:03 PM
Surr: 4-Bromofluorobenzene	105		75-120	%REC	50	8/26/2010 04:53 PM
Surr: 4-Bromofluorobenzene	110		75-120	%REC	5	8/26/2010 03:03 PM
Surr: Dibromofluoromethane	109		85-115	%REC	50	8/26/2010 04:53 PM
Surr: Dibromofluoromethane	105		85-115	%REC	5	8/26/2010 03:03 PM
Surr: Toluene-d8	96.8		85-120	%REC	50	8/26/2010 04:53 PM
Surr: Toluene-d8	101		85-120	%REC	5	8/26/2010 03:03 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	610		50	mg/L	50	8/25/2010 05:33 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Environmental**

Date: 27-Aug-10

Client: HRL Compliance Solutions

Project: Antero Gravel Pit Release 10-422 8/21/10

Sample ID: Seep 3

Collection Date: 8/21/2010 11:35 AM

Work Order: 1008543

Lab ID: 1008543-03

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	49		1.0	µg/L	1	8/25/2010 07:53 PM
Ethylbenzene	8.1		1.0	µg/L	1	8/25/2010 07:53 PM
m,p-Xylene	39		1.0	µg/L	1	8/25/2010 07:53 PM
o-Xylene	4.8		1.0	µg/L	1	8/25/2010 07:53 PM
Toluene	10		1.0	µg/L	1	8/25/2010 07:53 PM
Xylenes, Total	44		3.0	µg/L	1	8/25/2010 07:53 PM
Surr: 1,2-Dichloroethane-d4	109		70-120	%REC	1	8/25/2010 07:53 PM
Surr: 4-Bromofluorobenzene	107		75-120	%REC	1	8/25/2010 07:53 PM
Surr: Dibromofluoromethane	107		85-115	%REC	1	8/25/2010 07:53 PM
Surr: Toluene-d8	100		85-120	%REC	1	8/25/2010 07:53 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	190		20	mg/L	20	8/25/2010 03:15 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Environmental**

Date: 27-Aug-10

Client: HRL Compliance Solutions

Project: Antero Gravel Pit Release 10-422 8/21/10

Work Order: 1008543

Sample ID: Seep 4

Lab ID: 1008543-04

Collection Date: 8/21/2010 11:40 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	ND		1.0	µg/L	1	8/25/2010 08:21 PM
Ethylbenzene	ND		1.0	µg/L	1	8/25/2010 08:21 PM
m,p-Xylene	ND		1.0	µg/L	1	8/25/2010 08:21 PM
o-Xylene	ND		1.0	µg/L	1	8/25/2010 08:21 PM
Toluene	ND		1.0	µg/L	1	8/25/2010 08:21 PM
Xylenes, Total	ND		3.0	µg/L	1	8/25/2010 08:21 PM
Surr: 1,2-Dichloroethane-d4	109		70-120	%REC	1	8/25/2010 08:21 PM
Surr: 4-Bromofluorobenzene	99.2		75-120	%REC	1	8/25/2010 08:21 PM
Surr: Dibromofluoromethane	107		85-115	%REC	1	8/25/2010 08:21 PM
Surr: Toluene-d8	98.3		85-120	%REC	1	8/25/2010 08:21 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	190		20	mg/L	20	8/25/2010 03:35 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.



**ALS Environmental**

Date: 27-Aug-10

Client: HRL Compliance Solutions

Project: Antero Gravel Pit Release 10-422 8/21/10

Work Order: 1008543

Sample ID: Seep 5

Lab ID: 1008543-05

Collection Date: 8/21/2010 12:05 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	ND		1.0	µg/L	1	8/25/2010 08:48 PM
Ethylbenzene	ND		1.0	µg/L	1	8/25/2010 08:48 PM
m,p-Xylene	ND		1.0	µg/L	1	8/25/2010 08:48 PM
o-Xylene	ND		1.0	µg/L	1	8/25/2010 08:48 PM
Toluene	ND		1.0	µg/L	1	8/25/2010 08:48 PM
Xylenes, Total	ND		3.0	µg/L	1	8/25/2010 08:48 PM
Surr: 1,2-Dichloroethane-d4	111		70-120	%REC	1	8/25/2010 08:48 PM
Surr: 4-Bromofluorobenzene	100		75-120	%REC	1	8/25/2010 08:48 PM
Surr: Dibromofluoromethane	110		85-115	%REC	1	8/25/2010 08:48 PM
Surr: Toluene-d8	95.8		85-120	%REC	1	8/25/2010 08:48 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	150		20	mg/L	20	8/25/2010 03:54 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Environmental**

Date: 27-Aug-10

Client: HRL Compliance Solutions

Project: Antero Gravel Pit Release 10-422 8/21/10

Work Order: 1008543

Sample ID: DG 1

Lab ID: 1008543-06

Collection Date: 8/21/2010 12:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	ND		1.0	µg/L	1	8/25/2010 09:15 PM
Ethylbenzene	ND		1.0	µg/L	1	8/25/2010 09:15 PM
m,p-Xylene	ND		1.0	µg/L	1	8/25/2010 09:15 PM
o-Xylene	ND		1.0	µg/L	1	8/25/2010 09:15 PM
Toluene	ND		1.0	µg/L	1	8/25/2010 09:15 PM
Xylenes, Total	ND		3.0	µg/L	1	8/25/2010 09:15 PM
Surr: 1,2-Dichloroethane-d4	113		70-120	%REC	1	8/25/2010 09:15 PM
Surr: 4-Bromofluorobenzene	99.0		75-120	%REC	1	8/25/2010 09:15 PM
Surr: Dibromofluoromethane	109		85-115	%REC	1	8/25/2010 09:15 PM
Surr: Toluene-d8	97.8		85-120	%REC	1	8/25/2010 09:15 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	180		20	mg/L	20	8/25/2010 04:14 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Environmental**

Date: 27-Aug-10

Client: HRL Compliance Solutions

Project: Antero Gravel Pit Release 10-422 8/21/10

Work Order: 1008543

Sample ID: DG 2

Lab ID: 1008543-07

Collection Date: 8/21/2010 12:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	ND		1.0	µg/L	1	8/25/2010 09:43 PM
Ethylbenzene	ND		1.0	µg/L	1	8/25/2010 09:43 PM
m,p-Xylene	ND		1.0	µg/L	1	8/25/2010 09:43 PM
o-Xylene	ND		1.0	µg/L	1	8/25/2010 09:43 PM
Toluene	ND		1.0	µg/L	1	8/25/2010 09:43 PM
Xylenes, Total	ND		3.0	µg/L	1	8/25/2010 09:43 PM
Surr: 1,2-Dichloroethane-d4	113		70-120	%REC	1	8/25/2010 09:43 PM
Surr: 4-Bromofluorobenzene	99.8		75-120	%REC	1	8/25/2010 09:43 PM
Surr: Dibromofluoromethane	109		85-115	%REC	1	8/25/2010 09:43 PM
Surr: Toluene-d8	97.3		85-120	%REC	1	8/25/2010 09:43 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	140		20	mg/L	20	8/25/2010 04:34 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Environmental**

Date: 27-Aug-10

**Client:** HRL Compliance Solutions**Project:** Antero Gravel Pit Release 10-422 8/21/10**Work Order:** 1008543**Sample ID:** Pond 1**Lab ID:** 1008543-08**Collection Date:** 8/21/2010 12:30 PM**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	ND		1.0	µg/L	1	8/25/2010 10:10 PM
Ethylbenzene	ND		1.0	µg/L	1	8/25/2010 10:10 PM
m,p-Xylene	ND		1.0	µg/L	1	8/25/2010 10:10 PM
o-Xylene	ND		1.0	µg/L	1	8/25/2010 10:10 PM
Toluene	ND		1.0	µg/L	1	8/25/2010 10:10 PM
Xylenes, Total	ND		3.0	µg/L	1	8/25/2010 10:10 PM
Surr: 1,2-Dichloroethane-d4	115		70-120	%REC	1	8/25/2010 10:10 PM
Surr: 4-Bromofluorobenzene	100		75-120	%REC	1	8/25/2010 10:10 PM
Surr: Dibromofluoromethane	111		85-115	%REC	1	8/25/2010 10:10 PM
Surr: Toluene-d8	96.3		85-120	%REC	1	8/25/2010 10:10 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	180		20	mg/L	20	8/25/2010 04:53 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**ALS Environmental**

Date: 27-Aug-10

Client: HRL Compliance Solutions

Project: Antero Gravel Pit Release 10-422 8/21/10

Sample ID: Pond 2

Collection Date: 8/21/2010 12:25 PM

Work Order: 1008543

Lab ID: 1008543-09

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	ND		1.0	µg/L	1	8/25/2010 10:37 PM
Ethylbenzene	ND		1.0	µg/L	1	8/25/2010 10:37 PM
m,p-Xylene	ND		1.0	µg/L	1	8/25/2010 10:37 PM
o-Xylene	ND		1.0	µg/L	1	8/25/2010 10:37 PM
Toluene	ND		1.0	µg/L	1	8/25/2010 10:37 PM
Xylenes, Total	ND		3.0	µg/L	1	8/25/2010 10:37 PM
Surr: 1,2-Dichloroethane-d4	115		70-120	%REC	1	8/25/2010 10:37 PM
Surr: 4-Bromofluorobenzene	100		75-120	%REC	1	8/25/2010 10:37 PM
Surr: Dibromofluoromethane	111		85-115	%REC	1	8/25/2010 10:37 PM
Surr: Toluene-d8	97.7		85-120	%REC	1	8/25/2010 10:37 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300.0</b>			Analyst: <b>ED</b>
Chloride	190		20	mg/L	20	8/25/2010 05:13 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Environmental

Date: 27-Aug-10

**Client:** HRL Compliance Solutions  
**Project:** Antero Gravel Pit Release 10-422 8/21/10  
**Sample ID:** Outlet Pond  
**Collection Date:** 8/21/2010 12:20 PM

**Work Order:** 1008543  
**Lab ID:** 1008543-10  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS (DISSOLVED)</b>			<b>SW6020A</b>		Prep Date: <b>8/25/2010</b>	Analyst: <b>RH</b>
Calcium	77		0.50	mg/L	1	8/25/2010 11:12 PM
Iron	ND		0.080	mg/L	1	8/25/2010 11:12 PM
Magnesium	40		0.20	mg/L	1	8/25/2010 11:12 PM
Manganese	0.046		0.0050	mg/L	1	8/25/2010 11:12 PM
Potassium	5.0		0.20	mg/L	1	8/25/2010 11:12 PM
Sodium	200		2.0	mg/L	10	8/26/2010 12:24 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>CW</b>
Benzene	ND		1.0	µg/L	1	8/25/2010 11:05 PM
Ethylbenzene	ND		1.0	µg/L	1	8/25/2010 11:05 PM
m,p-Xylene	ND		1.0	µg/L	1	8/25/2010 11:05 PM
o-Xylene	ND		1.0	µg/L	1	8/25/2010 11:05 PM
Toluene	ND		1.0	µg/L	1	8/25/2010 11:05 PM
Xylenes, Total	ND		3.0	µg/L	1	8/25/2010 11:05 PM
Surr: 1,2-Dichloroethane-d4	114		70-120	%REC	1	8/25/2010 11:05 PM
Surr: 4-Bromofluorobenzene	99.1		75-120	%REC	1	8/25/2010 11:05 PM
Surr: Dibromofluoromethane	111		85-115	%REC	1	8/25/2010 11:05 PM
Surr: Toluene-d8	96.8		85-120	%REC	1	8/25/2010 11:05 PM
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>SW9056</b>			Analyst: <b>ED</b>
Bromide	0.18		0.10	mg/L	1	8/24/2010 02:11 PM
Chloride	160		20	mg/L	20	8/24/2010 04:02 PM
Fluoride	0.46		0.10	mg/L	1	8/24/2010 02:11 PM
Nitrogen, Nitrate	ND	H	0.020	mg/L	1	8/24/2010 02:11 PM
Nitrogen, Nitrite	ND	H	0.020	mg/L	1	8/24/2010 02:11 PM
Sulfate	300		20	mg/L	20	8/24/2010 04:02 PM
Nitrogen, Nitrate-Nitrite	ND		0.020	mg/L	1	8/24/2010 02:11 PM

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Environmental

Date: 27-Aug-10

**Client:** HRL Compliance Solutions

**Work Order:** 1008543

**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **28801** Instrument ID **ICPMS2** Method: **SW6020A**

<b>MBLK</b>	Sample ID: <b>MBLK-28801-28801</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/26/2010 12:14 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100826A</b>			SeqNo: <b>1394354</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	0.06077	0.50								J
Iron	ND	0.080								
Magnesium	0.03245	0.20								J
Manganese	0.0002949	0.0050								J
Potassium	0.005911	0.20								J
Sodium	0.02323	0.20								J

<b>LCS</b>	Sample ID: <b>LCS-28801-28801</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 10:00 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100825B</b>			SeqNo: <b>1394166</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	10.44	0.50	10	0	104	80-120	0			
Iron	10.52	0.080	10	0	105	80-120	0			
Magnesium	10.8	0.20	10	0	108	80-120	0			
Manganese	0.1049	0.0050	0.1	0	105	80-120	0			
Potassium	10.55	0.20	10	0	106	80-120	0			

<b>LCS</b>	Sample ID: <b>LCS-28801-28801</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/26/2010 12:04 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100826A</b>			SeqNo: <b>1394352</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.45	0.20	10	0	104	80-120	0			

<b>LCSD</b>	Sample ID: <b>LCSD-28801-28801</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 10:05 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100825B</b>			SeqNo: <b>1394167</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	10.66	0.50	10	0	107	80-120	10.44	2.09	20	
Iron	10.69	0.080	10	0	107	80-120	10.52	1.6	20	
Magnesium	10.96	0.20	10	0	110	80-120	10.8	1.47	20	
Manganese	0.1067	0.0050	0.1	0	107	80-120	0.1049	1.7	20	
Potassium	10.75	0.20	10	0	108	80-120	10.55	1.88	20	

<b>LCSD</b>	Sample ID: <b>LCSD-28801-28801</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/26/2010 12:10 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100826A</b>			SeqNo: <b>1394353</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.52	0.20	10	0	105	80-120	10.45	0.668	20	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **28801** Instrument ID **ICPMS2** Method: **SW6020A**

<b>MS</b>	Sample ID: <b>1008550-04B MS</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 11:31 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100825B</b>			SeqNo: <b>1394184</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	10.75	0.50	10	-0.03575	108	80-120	0			
Iron	10.76	0.080	10	0.01714	107	80-120	0			
Magnesium	11.35	0.20	10	0.01703	113	80-120	0			
Manganese	0.1073	0.0050	0.1	0.0001766	107	80-120	0			
Potassium	10.87	0.20	10	0.01684	109	80-120	0			

<b>MS</b>	Sample ID: <b>1008550-04B MS</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/26/2010 12:39 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100826A</b>			SeqNo: <b>1394359</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.55	0.20	10	0.8724	96.8	80-120	0			

<b>MSD</b>	Sample ID: <b>1008550-04B MSD</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 11:36 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100825B</b>			SeqNo: <b>1394185</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	10.64	0.50	10	-0.03575	107	80-120	10.75	1.03	20	
Iron	10.76	0.080	10	0.01714	107	80-120	10.76	0	20	
Magnesium	11.25	0.20	10	0.01703	112	80-120	11.35	0.885	20	
Manganese	0.1075	0.0050	0.1	0.0001766	107	80-120	0.1073	0.186	20	
Potassium	10.81	0.20	10	0.01684	108	80-120	10.87	0.554	20	

<b>MSD</b>	Sample ID: <b>1008550-04B MSD</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/26/2010 12:43 PM</b>			
Client ID:	Run ID: <b>ICPMS2_100826A</b>			SeqNo: <b>1394360</b>			Prep Date: <b>8/25/2010</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.47	0.20	10	0.8724	96	80-120	10.55	0.761	20	

The following samples were analyzed in this batch:

1008543-01B	1008543-10B
-------------	-------------

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

# QC BATCH REPORT

Batch ID: **R80391**      Instrument ID **VMS7**      Method: **SW8260**

<b>MBLK</b>	Sample ID: <b>VBLKW1-100822-R80391</b>				Units: <b>µg/L</b>		Analysis Date: <b>8/25/2010 07:26 PM</b>			
Client ID:	Run ID: <b>VMS7_100825A</b>				SeqNo: <b>1394405</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	110.7	0	100	0	111	70-120	0			
Surr: 4-Bromofluorobenzene	99.08	0	100	0	99.1	75-120	0			
Surr: Dibromofluoromethane	106.2	0	100	0	106	85-115	0			
Surr: Toluene-d8	98.44	0	100	0	98.4	85-120	0			

<b>LCS</b>	Sample ID: <b>VLCSW1-100822-R80391</b>				Units: <b>µg/L</b>		Analysis Date: <b>8/25/2010 06:04 PM</b>			
Client ID:	Run ID: <b>VMS7_100825A</b>				SeqNo: <b>1394402</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.09	1.0	20	0	110	80-120	0			
Ethylbenzene	21.96	1.0	20	0	110	75-125	0			
m,p-Xylene	44.24	2.0	40	0	111	75-130	0			
o-Xylene	21.48	1.0	20	0	107	80-120	0			
Toluene	22	1.0	20	0	110	75-120	0			
Xylenes, Total	65.72	2.0	60	0	110	75-130	0			
Surr: 1,2-Dichloroethane-d4	99.78	0	100	0	99.8	70-120	0			
Surr: 4-Bromofluorobenzene	101.6	0	100	0	102	75-120	0			
Surr: Dibromofluoromethane	102	0	100	0	102	85-115	0			
Surr: Toluene-d8	103.6	0	100	0	104	85-120	0			

<b>LCSD</b>	Sample ID: <b>VLCSDW1-100822-R80391</b>				Units: <b>µg/L</b>		Analysis Date: <b>8/25/2010 06:31 PM</b>			
Client ID:	Run ID: <b>VMS7_100825A</b>				SeqNo: <b>1394404</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.86	1.0	20	0	104	80-120	22.09	5.73	30	
Ethylbenzene	20.65	1.0	20	0	103	75-125	21.96	6.15	30	
m,p-Xylene	41.55	2.0	40	0	104	75-130	44.24	6.27	30	
o-Xylene	20.53	1.0	20	0	103	80-120	21.48	4.52	30	
Toluene	20.55	1.0	20	0	103	75-120	22	6.82	30	
Xylenes, Total	62.08	2.0	60	0	103	75-130	65.72	5.7	30	
Surr: 1,2-Dichloroethane-d4	100.6	0	100	0	101	70-120	99.78	0.809	30	
Surr: 4-Bromofluorobenzene	102.7	0	100	0	103	75-120	101.6	0.998	30	
Surr: Dibromofluoromethane	102.1	0	100	0	102	85-115	102	0.0882	30	
Surr: Toluene-d8	102.6	0	100	0	103	85-120	103.6	0.941	30	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **R80391**      Instrument ID **VMS7**      Method: **SW8260**

MS				Sample ID: 1008543-06B MS			Units: µg/L		Analysis Date: 8/26/2010 04:05 AM		
Client ID: DG 1		Run ID: VMS7_100825A			SeqNo: 1394415		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	21.89	1.0	20	0	109	80-120	0				
Ethylbenzene	21.43	1.0	20	0	107	75-125	0				
m,p-Xylene	43.09	2.0	40	0	108	75-130	0				
o-Xylene	20.83	1.0	20	0	104	80-120	0				
Toluene	21.49	1.0	20	0	107	75-120	0				
Xylenes, Total	63.92	2.0	60	0	107	75-130	0				
Surr: 1,2-Dichloroethane-d4	108.3	0	100	0	108	70-120	0				
Surr: 4-Bromofluorobenzene	106	0	100	0	106	75-120	0				
Surr: Dibromofluoromethane	108.7	0	100	0	109	85-115	0				
Surr: Toluene-d8	103.9	0	100	0	104	85-120	0				

MSD				Sample ID: 1008543-06B MSD		Units: µg/L		Analysis Date: 8/26/2010 04:32 AM		
Client ID: DG 1		Run ID: VMS7_100825A			SeqNo: 1394416		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.44	1.0	20	0	107	80-120	21.89	2.08	30	
Ethylbenzene	21.47	1.0	20	0	107	75-125	21.43	0.186	30	
m,p-Xylene	43.08	2.0	40	0	108	75-130	43.09	0.0232	30	
o-Xylene	20.75	1.0	20	0	104	80-120	20.83	0.385	30	
Toluene	20.85	1.0	20	0	104	75-120	21.49	3.02	30	
Xylenes, Total	63.83	2.0	60	0	106	75-130	63.92	0.141	30	
Surr: 1,2-Dichloroethane-d4	105.8	0	100	0	106	70-120	108.3	2.28	30	
Surr: 4-Bromofluorobenzene	106	0	100	0	106	75-120	106	0.0377	30	
Surr: Dibromofluoromethane	106.1	0	100	0	106	85-115	108.7	2.47	30	
Surr: Toluene-d8	102.9	0	100	0	103	85-120	103.9	0.958	30	

The following samples were analyzed in this batch:

1008543-01C	1008543-03B	1008543-04B
1008543-05B	1008543-06B	1008543-07B
1008543-08B	1008543-09B	1008543-10C

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **R80421**      Instrument ID **VMS7**      Method: **SW8260**

<b>MBLK</b>	Sample ID: <b>VBLKW1-100826-R80421</b>				Units: <b>µg/L</b>		Analysis Date: <b>8/26/2010 02:36 PM</b>			
Client ID:	Run ID: <b>VMS7_100826A</b>				SeqNo: <b>1394960</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	108.3	0	100	0	108	70-120	0			
Surr: 4-Bromofluorobenzene	99.87	0	100	0	99.9	75-120	0			
Surr: Dibromofluoromethane	105.4	0	100	0	105	85-115	0			
Surr: Toluene-d8	97.5	0	100	0	97.5	85-120	0			

<b>LCS</b>	Sample ID: <b>VLCSW1-100826-R80421</b>				Units: <b>µg/L</b>		Analysis Date: <b>8/26/2010 01:14 PM</b>			
Client ID:	Run ID: <b>VMS7_100826A</b>				SeqNo: <b>1394955</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.43	1.0	20	0	107	80-120	0			
Ethylbenzene	21.31	1.0	20	0	107	75-125	0			
m,p-Xylene	43.72	2.0	40	0	109	75-130	0			
o-Xylene	21.14	1.0	20	0	106	80-120	0			
Toluene	21.48	1.0	20	0	107	75-120	0			
Xylenes, Total	64.86	2.0	60	0	108	75-130	0			
Surr: 1,2-Dichloroethane-d4	101.2	0	100	0	101	70-120	0			
Surr: 4-Bromofluorobenzene	101.9	0	100	0	102	75-120	0			
Surr: Dibromofluoromethane	101.2	0	100	0	101	85-115	0			
Surr: Toluene-d8	102.5	0	100	0	102	85-120	0			

<b>LCSD</b>	Sample ID: <b>VLCSDW1-100826-R80421</b>				Units: <b>µg/L</b>		Analysis Date: <b>8/26/2010 01:41 PM</b>			
Client ID:	Run ID: <b>VMS7_100826A</b>				SeqNo: <b>1394958</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.92	1.0	20	0	105	80-120	21.43	2.41	30	
Ethylbenzene	20.43	1.0	20	0	102	75-125	21.31	4.22	30	
m,p-Xylene	41.64	2.0	40	0	104	75-130	43.72	4.87	30	
o-Xylene	20.29	1.0	20	0	101	80-120	21.14	4.1	30	
Toluene	20.31	1.0	20	0	102	75-120	21.48	5.6	30	
Xylenes, Total	61.93	2.0	60	0	103	75-130	64.86	4.62	30	
Surr: 1,2-Dichloroethane-d4	102.2	0	100	0	102	70-120	101.2	0.974	30	
Surr: 4-Bromofluorobenzene	103.3	0	100	0	103	75-120	101.9	1.37	30	
Surr: Dibromofluoromethane	103	0	100	0	103	85-115	101.2	1.76	30	
Surr: Toluene-d8	101.3	0	100	0	101	85-120	102.5	1.11	30	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **R80421**      Instrument ID **VMS7**      Method: **SW8260**

MS				Units: µg/L			Analysis Date: 8/26/2010 09:26 PM			
Sample ID: <b>1008617-04A MS</b>										
Client ID:				Run ID: <b>VMS7_100826A</b>			SeqNo: <b>1394978</b>		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.74	1.0	20	0	98.7	80-120	0			
Ethylbenzene	19.78	1.0	20	0	98.9	75-125	0			
m,p-Xylene	39.62	2.0	40	0	99	75-130	0			
o-Xylene	19.27	1.0	20	0	96.4	80-120	0			
Toluene	19.85	1.0	20	0	99.2	75-120	0			
Xylenes, Total	58.89	2.0	60	0	98.2	75-130	0			
Surr: 1,2-Dichloroethane-d4	111.1	0	100	0	111	70-120	0			
Surr: 4-Bromofluorobenzene	108.2	0	100	0	108	75-120	0			
Surr: Dibromofluoromethane	110.8	0	100	0	111	85-115	0			
Surr: Toluene-d8	105.4	0	100	0	105	85-120	0			

MSD				Units: µg/L			Analysis Date: 8/26/2010 09:54 PM			
Sample ID: <b>1008617-04A MSD</b>										
Client ID:				Run ID: <b>VMS7_100826A</b>			SeqNo: <b>1394979</b>		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.68	1.0	20	0	103	80-120	19.74	4.65	30	
Ethylbenzene	20.21	1.0	20	0	101	75-125	19.78	2.15	30	
m,p-Xylene	41.36	2.0	40	0	103	75-130	39.62	4.3	30	
o-Xylene	19.7	1.0	20	0	98.5	80-120	19.27	2.21	30	
Toluene	20.19	1.0	20	0	101	75-120	19.85	1.7	30	
Xylenes, Total	61.06	2.0	60	0	102	75-130	58.89	3.62	30	
Surr: 1,2-Dichloroethane-d4	109.7	0	100	0	110	70-120	111.1	1.29	30	
Surr: 4-Bromofluorobenzene	106.8	0	100	0	107	75-120	108.2	1.28	30	
Surr: Dibromofluoromethane	109	0	100	0	109	85-115	110.8	1.66	30	
Surr: Toluene-d8	102.6	0	100	0	103	85-120	105.4	2.74	30	

The following samples were analyzed in this batch:

1008543-02B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **R80348** Instrument ID **IC3** Method: **SW9056**

<b>MBLK</b>	Sample ID: <b>CCB/MBLK-R80348</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/24/2010 11:23 AM</b>			
Client ID:	Run ID: <b>IC3_100824A</b>			SeqNo: <b>1393578</b>			Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	ND	0.10								
Chloride	ND	1.0								
Fluoride	ND	0.10								
Nitrogen, Nitrate	ND	0.020								
Nitrogen, Nitrite	ND	0.020								
Sulfate	ND	1.0								
Nitrogen, Nitrate-Nitrite	ND	0.020								

<b>MBLK</b>	Sample ID: <b>CCB/MBLK-R80348</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/24/2010 11:23 AM</b>			
Client ID:	Run ID: <b>IC3_100824A</b>			SeqNo: <b>1393603</b>			Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	ND	0.10								
Chloride	ND	1.0								
Fluoride	ND	0.10								
Nitrogen, Nitrate	ND	0.030								
Nitrogen, Nitrite	ND	0.010								
Sulfate	ND	1.0								
Nitrogen, Nitrate-Nitrite	ND	0.010								

<b>LCS</b>	Sample ID: <b>CCV/LCS-R80348</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/24/2010 11:43 AM</b>			
Client ID:	Run ID: <b>IC3_100824A</b>			SeqNo: <b>1393579</b>			Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	2.142	0.10	2	0	107	80-120	0			
Chloride	10.05	1.0	10	0	100	80-120	0			
Fluoride	1.967	0.10	2	0	98.4	80-120	0			
Nitrogen, Nitrate	0.2525	0.020	0.25	0	101	80-120	0			
Nitrogen, Nitrite	0.2467	0.020	0.25	0	98.7	80-120	0			
Sulfate	9.939	1.0	10	0	99.4	80-120	0			

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **R80348** Instrument ID **IC3** Method: **SW9056**

<b>LCS</b>	Sample ID: <b>CCV/LCS-R80348</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/24/2010 11:43 AM</b>			
Client ID:	Run ID: <b>IC3_100824A</b>			SeqNo: <b>1393604</b>			Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	2.142	0.10	2	0	107	80-120	0			
Chloride	10.05	1.0	10	0	100	80-120	0			
Fluoride	1.967	0.10	2	0	98.4	80-120	0			
Nitrogen, Nitrate	0.2525	0.030	0.25	0	101	80-120	0			
Nitrogen, Nitrite	0.2467	0.010	0.25	0	98.7	80-120	0			
Sulfate	9.939	1.0	10	0	99.4	80-120	0			

<b>LCSD</b>	Sample ID: <b>CCV/LCSD-R80348</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/24/2010 04:21 PM</b>			
Client ID:	Run ID: <b>IC3_100824A</b>			SeqNo: <b>1393589</b>			Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	2.098	0.10	2	0	105	80-120	2.142	2.04	20	
Chloride	10.3	1.0	10	0	103	80-120	10.05	2.5	20	
Fluoride	2.022	0.10	2	0	101	80-120	1.967	2.76	20	
Nitrogen, Nitrate	0.2507	0.020	0.25	0	100	80-120	0.2525	0.715	20	
Nitrogen, Nitrite	0.2634	0.020	0.25	0	105	80-120	0.2467	6.55	20	
Sulfate	10.15	1.0	10	0	101	80-120	9.939	2.09	20	

<b>MS</b>	Sample ID: <b>1008543-01A MS</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/24/2010 01:32 PM</b>			
Client ID: <b>Seep 1</b>	Run ID: <b>IC3_100824A</b>			SeqNo: <b>1393582</b>			Prep Date:		DF: <b>2</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	2.262	0.20	2	0.256	100	75-125	0			
Fluoride	2.512	0.20	2	0.5099	100	75-125	0			
Nitrogen, Nitrate	0.5626	0.040	0.5	0.028	107	75-125	0			H
Nitrogen, Nitrite	0.425	0.040	0.5	0	85	75-125	0			H

<b>MS</b>	Sample ID: <b>1008543-01A MS</b>			Units: <b>mg/L</b>			Analysis Date: <b>8/24/2010 02:31 PM</b>			
Client ID: <b>Seep 1</b>	Run ID: <b>IC3_100824A</b>			SeqNo: <b>1393585</b>			Prep Date:		DF: <b>10</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	170.5	10	10	160.3	102	75-125	0			O
Sulfate	182.9	10	10	170.8	121	75-125	0			O

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **R80348** Instrument ID **IC3** Method: **SW9056**

<b>MSD</b>		Sample ID: <b>1008543-01A MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>8/24/2010 01:51 PM</b>		
Client ID: <b>Seep 1</b>		Run ID: <b>IC3_100824A</b>				SeqNo: <b>1393583</b>		Prep Date:		DF: <b>2</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	2.116	0.20	2	0.256	93	75-125	2.262	6.68	20	
Fluoride	2.361	0.20	2	0.5099	92.5	75-125	2.512	6.21	20	
Nitrogen, Nitrate	0.526	0.040	0.5	0.028	99.6	75-125	0.5626	6.72	20	H
Nitrogen, Nitrite	0.4166	0.040	0.5	0	83.3	75-125	0.425	2	20	H

<b>MSD</b>		Sample ID: <b>1008543-01A MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>8/24/2010 03:22 PM</b>		
Client ID: <b>Seep 1</b>		Run ID: <b>IC3_100824A</b>				SeqNo: <b>1393586</b>		Prep Date:		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	171.8	10	10	160.3	115	75-125	170.5	0.765	20	O
Sulfate	185.5	10	10	170.8	148	75-125	182.9	1.43	20	SO

The following samples were analyzed in this batch:

1008543-01A	1008543-10A
-------------	-------------

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1008543  
**Project:** Antero Gravel Pit Release 10-422 8/21/10

## QC BATCH REPORT

Batch ID: **R80383** Instrument ID **IC3** Method: **E300.0**

<b>MBLK</b>	Sample ID: <b>CCB/MBLK-R80383</b>				Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 10:28 AM</b>		
Client ID:	Run ID: <b>IC3_100825A</b>				SeqNo: <b>1394231</b>			Prep Date: DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	1.0								

<b>LCS</b>	Sample ID: <b>CCV/LCS-R80383</b>				Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 10:47 AM</b>		
Client ID:	Run ID: <b>IC3_100825A</b>				SeqNo: <b>1394232</b>			Prep Date: DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.59	1.0	10	0	106	80-120	0			

<b>LCSD</b>	Sample ID: <b>CCV/LCSD-R80383</b>				Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 11:07 AM</b>		
Client ID:	Run ID: <b>IC3_100825A</b>				SeqNo: <b>1394233</b>			Prep Date: DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.12	1.0	10	0	101	80-120	10.59	4.6	20	

<b>MS</b>	Sample ID: <b>1008563-01A MS</b>				Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 01:17 PM</b>		
Client ID:	Run ID: <b>IC3_100825A</b>				SeqNo: <b>1394237</b>			Prep Date: DF: <b>10</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	131.1	10	10	124.2	69.4	75-125	0			SO

<b>MSD</b>	Sample ID: <b>1008563-01A MSD</b>				Units: <b>mg/L</b>			Analysis Date: <b>8/25/2010 01:36 PM</b>		
Client ID:	Run ID: <b>IC3_100825A</b>				SeqNo: <b>1394238</b>			Prep Date: DF: <b>10</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	137.4	10	10	124.2	133	75-125	131.1	4.7	20	SO

The following samples were analyzed in this batch:

1008543-02A	1008543-03A	1008543-04A
1008543-05A	1008543-06A	1008543-07A
1008543-08A	1008543-09A	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.





# ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524  
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

## Chain-of-Custody

Form 202r8

WORKORDER #

1008543

PROJECT NAME		SAMPLER		DATE		TURNAROUND		PAGE		By Lab or Return to Client		
ANTERO GRAVEL PIT RELEASE		CASEY RICHARDSON		8.23.10		1-2 DAY		1 of 1				
PROJECT No.		SITE ID						DISPOSAL				
JOB # 10-422												
		EDD FORMAT										
		PURCHASE ORDER										
COMPANY NAME		BILL TO COMPANY										
HRL COMPLIANCE SOLUTIONS INC.		ANTERO RESOURCES										
SEND REPORT TO		INVOICE ATTN TO										
MARK MUMBY		JERRY ALBERTS										
ADDRESS		ADDRESS										
744 HORIZON CT SUITE 140		1625 17th STREET SUITE 300										
CITY/STATE/ZIP		CITY/STATE/ZIP										
GRAND JCT. CO 81506		DENVER, CO. 80202										
PHONE		PHONE										
970.243.3271		303.357.7341										
FAX		FAX										
970.243.3280		303.357.7315										
E-MAIL		E-MAIL										
mmumby@hrlcomp.com		jalberts@anteroresources.com										
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX	GR	BR	Chloride	ANIONS/CATIONS
1	SEEP 1	WATER	8.21.10	1125	5	4%		X				X
2	SEEP 2			1130	4			X		X		
3	SEEP 3			1135	4			X		X		
4	SEEP 4			1140	4			X		X		
5	SEEP 5			1205	4			X		X		
6	OG 1			1200	4			X		X		
7	OG 2			1215	4			X		X		
8	POND 1			1230	4			X		X		
9	POND 2			1225	4			X		X		
10	OUTLET POND			1220	5			X			X	

\*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)
ANION/CATION SAMPLES ARE UNFILTERED	<input checked="" type="checkbox"/> LEVEL II (Standard QC)
	<input type="checkbox"/> LEVEL III (Std QC + forms)
	<input type="checkbox"/> LEVEL IV (Std QC + forms + raw data)
	<input type="checkbox"/>
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035	

SIGNATURE	PRINTED NAME	DATE	TIME
	CASEY RICHARDSON	8.23.10	1730
	KEITH WIERENGA	8/24/10	1045
RELINQUISHED BY			
RECEIVED BY			
RELINQUISHED BY			
RECEIVED BY			
RELINQUISHED BY			
RECEIVED BY			

## Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **24-Aug-10 10:45**

Work Order: **1008543**

Received by: **KRW**

Checklist completed by Keith Wurenga 24-Aug-10  
eSignature Date

Reviewed by: Ann Preston 25-Aug-10  
eSignature Date

Matrices: **Water**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>4.4 C</u>		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:	-		

Login Notes:

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

**1 From**

Date 8/23/10 Sender's FedEx Account Number \_\_\_\_\_

Sender's Name Mark Mumby Phone 970 243-3271

Company HL Compliance Solutions, Inc.

Address 344 Horizon Ct Suite 110

City Grand Junction State CO ZIP 81506

**2 Your Internal Billing Reference**

**3 To**

Recipient's Name Scotch Perceiving Phone 616 399-6070

Company ALS Corp

Recipient's Address 3352 128th Avenue

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address \_\_\_\_\_

To request a package be held at a specific FedEx location, print FedEx address here.

City Holland State MI ZIP 49424

**4a Express Package Service**

☒ **FedEx Priority Overnight** Next business morning. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ **FedEx Standard Overnight** Next business afternoon. Saturday Delivery NOT available.

☐ **FedEx First Overnight** Earliest next business morning delivery to select locations. Saturday Delivery NOT available.

☐ **FedEx 2Day** Second business day. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ **FedEx Express Saver** Third business day. Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

**4b Express Freight Service**

☐ **FedEx 1Day Freight** Next business day. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ **FedEx 2Day Freight** Second business day. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ **FedEx 3Day Freight** Third business day. Saturday Delivery NOT available.

**5 Packaging**

☐ **FedEx Envelope**

☐ **FedEx Pak** Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.

☐ **FedEx Box**

☐ **FedEx Tube**

☒ **Other** Declared value limit \$ \_\_\_\_\_

**6 Special Handling**

☐ **SATURDAY Delivery** Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

☐ **HOLD Weekday at FedEx Location** Not available for FedEx First Overnight.

☐ **HOLD Saturday at FedEx Location** Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

☒ **No** ☐ **Yes** As per attached Shipper's Declaration. ☐ **Yes** Shipper's Declaration not required.

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

☐ **Dry Ice** Dry Ice, 3 UN 1845 ☐ **Cargo Aircraft Only**.

**7 Payment Bill to:**

☐ **Sender** ☒ **Recipient** ☐ **Third Party** ☐ **Credit Card** ☐ **Cash/Check**

Enter FedEx Acct. No. or Credit Card No. below.

**Total Packages** 15 **Total Weight** 30

Your liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

**8 Residential Delivery Signature Options**

☒ **No Signature Required** Package may be left without obtaining a signature for delivery.

☐ **Direct Signature** Someone at recipient's address may sign for delivery. Fee applies.

☐ **Indirect Signature** If no one is available at recipient's address, someone at a neighboring address may sign for delivery. Fee applies.

Rev. Date 10/06/Part #159281 ©1994-2006 FedEx® PRINTED IN U.S.A. SRY



4402

## Terms And Conditions

**Definitions** On this Airbill, "we," "our," "us," and "FedEx" refer to the Federal Express Corporation, its employees, and agents.

**Agreement To Terms** By giving us your package to deliver, you agree to all the terms on this Airbill and in the current FedEx Service Guide, which is available upon request. You agree to these terms on behalf of any third party with an interest in the package.

- We won't be liable:
  - for your acts or omissions, including but not limited to improper or insufficient packing, securing, marking, or addressing, or those of the recipient or anyone else with an interest in the package.
  - if you or the recipient violates any of the terms of our Agreement.
  - for loss of or damage to shipments of prohibited items.

**Filing A Claim** YOU MUST MAKE ALL CLAIMS IN WRITING and notify us of your claim within strict time limits set out in the current FedEx Service Guide.

You may call our Customer Service department at 1.800.GoFedEx 1.800.463.3339 to report a claim; however, you must still file a timely written claim. We aren't obligated to act on any claim until you have paid all transportation charges, and you may not deduct the amount of your claim from the package value.

If the recipient signs for the package without noting any damage on the carrier's receipt, we will assume the package was delivered in good condition. To process your claim, you must provide proof of the original shipping cartons and packing materials.

**C.O.D. Services** C.O.D. SERVICE IS NOT AVAILABLE WITH THIS AIRBILL. If C.O.D. Service is required, please use a FedEx C.O.D. Airbill.

**Air Transportation Tax Included** A federal excise tax when required by the Internal Revenue Code on the air transportation portion of this service, if any, is paid by us.

**Money-Back Guarantee** In the event of untimely delivery, FedEx will, at your request and with some limitations, refund or credit all transportation charges. See the current FedEx Service Guide for more information.

**ALS Laboratory Group**  
 3352 128th Avenue  
 Holland, Michigan 49424  
 Tel. +1 616 399 6070  
 Fax. +1 616 399 6185

**CUSTODY SEAL**

Date: 8-23-10 Time: 1730

Name: CASEY RICHARDSON

Company: HL COMPLIANCE SOLUTIONS INC.

Seal Broken By: \_\_\_\_\_

Date: \_\_\_\_\_

**Responsibility For Payment** Even if you give us different instructions, you will always be primarily responsible for delivery costs, as well as any cost we incur in either returning the package to you or warehousing it pending disposition.

**Limitations On Our Liability And Liabilities Assumed**

Our liability in connection with this shipment is limited to the lesser of your actual damages or \$100, unless you declare a higher value, pay an additional charge, and document your actual loss in a timely manner. You may pay an additional charge for each additional \$100 of declared value. The declared value does not constitute, nor do we provide, cargo liability insurance.

- For other shipments, our liability is limited to \$50,000 unless your package contains a higher declared value, in which case the highest declared value allowed is \$500.
- Items of extraordinary value include shipments containing such items as artwork, jewelry, furs, precious metals, negotiable instruments, and other items listed in the current FedEx Service Guide.
- You may send more than one package on this Airbill and fill in the total declared value for all packages, not to exceed the \$100, \$500, or \$50,000 per package limit described above. (Example: 5 packages can have a total declared value of up to \$250,000.) In that case, our liability is limited to the actual value of the package(s) lost or damaged, but may not exceed the maximum allowable declared value(s) or the total declared value, whichever is less. You are responsible for proving the actual loss or damage.