

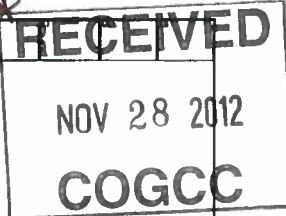


02231314

Form 19 # 2216891

Page 1  
FORM  
4  
Rev 12/05State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)884-2100 Fax: (303)884-2109



## SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 10079	4. Contact Name: Cole Kilstrom	Complete the Attachment Checklist	OP OGCC
2. Name of Operator: Antero Resources Piceance Corporation	Cole Kilstrom		
3. Address: 1625 17th St STE 300 ATTN: Cole Kilstrom	Phone: 303-357-6709	Survey Plat Directional Survey Surface Equip Diagram Technical Info Page Other	
City: Denver State: CO Zip: 80202	Fax: 303-357-7315		
5. API Number: 05-045-19392	OGCC Facility ID Number: 416703		
6. Well/Facility Name: Valley Farms	7. Well/Facility Number: J1		
8. Location (Qtr/Sec, Twp, Rng, Meridian): NWNW 13 6S 92W 6	10. Field Name: Kokopelli		
9. County: Garfield	11. Federal, Indian or State Lease Number:		

Location ID  
OK

## General Notice

☐ CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qr is substantive and requires a new permit)

Change of Surface Footage from Exterior Section Lines:	PNL/FSL	FEL/FWL
Change of Surface Footage to Exterior Section Lines:		
Change of Bottomhole Footage from Exterior Section Lines:		
Change of Bottomhole Footage to Exterior Section Lines:		

Bottomhole location Qtr/Sec, Twp, Rng, Mer

Latitude \_\_\_\_\_ Distance to nearest property line \_\_\_\_\_ Distance to nearest bldg, public rd, utility or RR \_\_\_\_\_

Longitude \_\_\_\_\_ Distance to nearest lease line \_\_\_\_\_ Is location in a High Density Area (rule 603b)? Yes/No \_\_\_\_\_

Ground Elevation \_\_\_\_\_ Distance to nearest well same formation \_\_\_\_\_ Surface owner consultation date: \_\_\_\_\_

GPS DATA:

Date of Measurement: \_\_\_\_\_ PDOP Reading: \_\_\_\_\_ Instrument Operator's Name: \_\_\_\_\_

☐ CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ Remove from surface bond  
Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):

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

Plugging Bond: ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME

From: \_\_\_\_\_ NUMBER \_\_\_\_\_

To: \_\_\_\_\_

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

☐ ABANDONED LOCATION:

Was location ever built? ☐ Yes ☐ No

Is site ready for inspection? ☐ Yes ☐ No

Date Ready for inspection: \_\_\_\_\_

☐ NOTICE OF CONTINUED SHUT IN STATUS

Date well shut in or temporarily abandoned: \_\_\_\_\_

Has Production Equipment been removed from site? ☐ Yes ☐ No

MIT required if shut in longer than two years. Date of last MIT: \_\_\_\_\_

☐ SPUD DATE: \_\_\_\_\_

☐ REQUEST FOR CONFIDENTIAL STATUS (3 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

\*submit cbl and cement job summaries

☐ RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.

Final reclamation will commence on approximately \_\_\_\_\_ ☐ Final reclamation is completed and site is ready for inspection.

## Technical Engineering/Environmental Notice

☐ Notice of Intent

Approximate Start Date: \_\_\_\_\_

☐ Report of Work Done

Date Work Completed: \_\_\_\_\_

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input checked="" type="checkbox"/> Status Update/Change of Remediation Plans
<input type="checkbox"/> Casing/Cementing Program Change	<input type="checkbox"/> Other: _____	for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Cole Kilstrom  
Print Name: Cole KilstromDate: 11/19/12 Email: CKilstrom@anteroresources.com  
Title: ENV SpecialistCOGCC Approved: [Signature]  
CONDITIONS OF APPROVAL IF ANY:Title: 12/14/12 Date: En. Sup.

See attached comments

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: 10079 API Number: 05-045-19392
2. Name of Operator: Antero Resources Piceance Corp. OGCC Facility ID # 416703
3. Well/Facility Name: Valley Farms Well/Facility Number: J1
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNW 13 6S 92W 6

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

Summary of Corrective Actions and Request for Spill Report Closure:

On October 23, 2011, a spill of approximately 216 bbls of frac water resulted from a hose malfunction (disengagement) at Antero's Valley Farms J1 well in Garfield County. Upon discovery, Antero immediately shut off the pump and called a vacuum truck, which recovered the spill water. Antero further fixed the malfunctioning valves.

COGCC Form 19 Spill Report # 2216891 stated that following confirmation sampling results, Antero would submit a Form 27 for COGCC approval with details on site remediation plans.

Antero submitted a Form 4 to the COGCC with analytical results from the confirmation sampling on November 21, 2011. The confirmation sampling results demonstrated that the site was in compliance with COGCC Table 910-1 concentration levels for contaminants.

Additionally, a site inspection (document # 668100101) was conducted by Shaun Kellerby on June 12, 2012 found the Valley Farms J Pad to be "Satisfactory" and made no mention of continuing spill impacts.

Because Antero demonstrated that the site was in compliance with COGCC standards, Antero respectfully requests final COGCC closure of Spill Report # 2216891 in accordance with COGCC Rule 909(e).

Based on review of data presented, it appears that no further action is necessary at this time at this site. However, should future conditions at the site be discovered of contaminant concentrations in soils exceeding COGCC standards or if groundwater is found to be significantly impacted, COGCC may require that further investigation and/or remediation be conducted.

**State of Colorado**

**Oil and Gas Conservation Commission**

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303)894-2100 Fax: (303)894-2109



## SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form), identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b).

1. OGCC Operator Number: <u>10079</u>		4. Contact Name <u>Gerald G. Alberts</u>		Complete the Attachment Checklist	
2. Name of Operator: <u>Antero Resources Corporation</u>		Phone: <u>303-357-7341</u>			
3. Address: <u>1625 17th St</u> <u>City: Denver</u> <u>State: CO</u> <u>Zip: 80202</u>		Fax: <u>303-357-7315</u>			
5. API Number <u>05-045-19392</u>		OGCC Facility ID Number <u>416703</u>		OP 0000	
6. Well/Facility Name: <u>Valley Farms J Pad</u>		7. Well/Facility Number <u>#11</u>		Survey Plot	
8. Location (City, Sec, Twp, Rng, Meridian): <u>SESE 7 6S 92W 6th</u>		9. County: <u>Garfield</u>		Directional Survey	
10. Field Name: <u>Piceance</u>		11. Federal, Indian or State Lease Number:		Surface Expert Diagram	
				Technical Info Page	
				Other	

## General Notice

<b>CHANGE OF LOCATION:</b> Attach New Survey Plat Change of Surface Footage from Exterior Section Lines: Change of Surface Footage to Exterior Section Lines: Change of Bottomhole Footage from Exterior Section Lines: Change of Bottomhole Footage to Exterior Section Lines: Bottomhole location Ctr/Ctr, Sec, Twp, Rng, Mer Latitude _____ Distance to nearest property line _____ Distance to nearest hldg, public rd, utility or RR _____ Longitude _____ Distance to nearest lease line _____ Is location in a High Density Area (rule 603b)? Yes/No _____ Ground Elevation _____ Distance to nearest well same formation _____ Surface owner consultation date: _____		(a change of surface gcr/gr is substantive and requires a new permit) <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">RUL/FSL</div> <div style="text-align: center;">FEL/FWL</div> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div> </div> <div style="text-align: right; margin-top: 10px;">attach directional survey</div>	
<b>GPS DATA:</b> Date of Measurement _____ PDOP Reading _____ Instrument Operator's Name _____			
<b>CHANGE SPACING UNIT</b> Formation _____ Formation Code _____ Spacing order number _____ Unit Acreage _____ Unit configuration _____ <div style="border: 1px solid black; height: 20px; width: 100%;"></div>		<input type="checkbox"/> Remove from surface bond Signed surface use agreement attached	
<input type="checkbox"/> <b>CHANGE OF OPERATOR</b> (prior to drilling): Effective Date: _____ Plugging Bend: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual		<input type="checkbox"/> <b>CHANGE WELL NAME</b> <b>NUMBER</b> From: _____ To: _____ Effective Date: _____	
<input type="checkbox"/> <b>ABANDONED LOCATION:</b> Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No Date Ready for inspection: _____		<input type="checkbox"/> <b>NOTICE OF CONTINUED SHUT IN STATUS</b> Date well shut in or temporarily abandoned: _____ Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No MIT required if shut in longer than two years. Date of last MIT _____	
<input type="checkbox"/> <b>SPUD DATE:</b> _____		<input type="checkbox"/> <b>REQUEST FOR CONFIDENTIAL STATUS</b> (if more than date drilling out)	
<input type="checkbox"/> <b>SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK</b> *submit ocl and cement job summaries <div style="display: flex; justify-content: space-between;"> <div style="width: 15%;">Method used</div> <div style="width: 25%;">Cementing tool setting/ert depth</div> <div style="width: 15%;">Cement volume</div> <div style="width: 15%;">Cement top</div> <div style="width: 15%;">Cement bottom</div> <div style="width: 10%;">Date</div> </div> <div style="display: flex; justify-content: space-between; height: 20px; border: 1px solid black; margin-top: 5px;"></div>			
<input type="checkbox"/> <b>RECLAMATION:</b> Attach technical page describing final reclamation procedures per Rule 1004. Final reclamation will commence on approximately _____ <input type="checkbox"/> Final reclamation is completed and site is ready for inspection.			

## Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent Approximate Start Date: _____	<input checked="" type="checkbox"/> Report of Work Done Date Work Completed: <u>October 27, 2011</u>
Details of work must be described in full on Technical Information Page (Page 2 must be submitted)	
<input type="checkbox"/> Intent to Recomplete (submit form 2) <input type="checkbox"/> Change Drilling Plans <input type="checkbox"/> Gross Interval Changed? <input type="checkbox"/> Casing/Cementing Program Change	<input type="checkbox"/> Request to Vent or Flare <input type="checkbox"/> Repair Well <input type="checkbox"/> Rule 602 variance requested <input type="checkbox"/> Other: _____
<input type="checkbox"/> E&P Waste Disposal <input type="checkbox"/> Beneficial Reuse of E&P Waste <input checked="" type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases	

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed:  Date: Nov 21, 2011 Email: jalberts@anteroresources.com

Print Name: Gerald G. Alberts

**Title:** Manager, Environmental and Regulatory

**COGCC Approved:**

**Title**

## Defects

**CONDITIONS OF APPROVAL, IF ANY:**

FORM  
4  
Rev 12/05

Page 2

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: 10079 API Number: 05-045-19392
2. Name of Operator: Antero Resources Corporation OGCC Facility ID # 418703
3. Well/Facility Name: Valley Farms J Well/Facility Number: # J1
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): SESE 7 6S 02W 0th

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. DESCRIBE PROPOSED OR COMPLETED OPERATIONS

Please see attached analytical results in reference to Spill # 2216891. Confirmation sampling was taken on October 27, 2011.



07-Nov-2011

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

Re: **Antero Valley Farms J Pad Prod. W. Release 11-288**

Work Order: **1111066**

Dear Mark,

ALS Environmental received 4 samples on 02-Nov-2011 10:00 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 28.

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  
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental The ALS logo, a stylized 'A' with a flame inside a circle.

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

RIGHT SOLUTIONS RIGHT PARTNER

# ALS Group USA, Corp

Date: 07-Nov-11

**Client:** HRL Compliance Solutions  
**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288  
**Work Order:** 1111066

## 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>
1111066-01	Point Of Origin	Soil		10/27/2011 14:50	11/2/2011 10:00	<input type="checkbox"/>
1111066-02	BKGD 1	Soil		10/27/2011 15:00	11/2/2011 10:00	<input type="checkbox"/>
1111066-03	BKGD 2	Soil		10/27/2011 15:05	11/2/2011 10:00	<input type="checkbox"/>
1111066-04	BKGD 3	Soil		10/27/2011 15:10	11/2/2011 10:00	<input type="checkbox"/>

---

**Client:** HRL Compliance Solutions  
**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288  
**Work Order:** 1111066

---

**Case Narrative**

Batch 37147 MS/MSD data for Hexavalent Chromium is not related to this project's samples.

Batch 37086 MS/MSD data for Metals is not related to this project's samples.

The samples for pH were received after the hold time had expired

**Client:** HRL Compliance Solutions  
**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288  
**WorkOrder:** 1111066

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	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

<u>Acronym</u>	<u>Description</u>
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry as noted	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
s.u.	Standard Units



**ALS Group USA, Corp**
**Date:** 07-Nov-11

**Client:** HRL Compliance Solutions

**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288

**Work Order:** 1111066

**Sample ID:** Point Of Origin

**Lab ID:** 1111066-01

**Collection Date:** 10/27/2011 02:50 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	11		<b>SW8015M</b>		Prep Date: 11/3/2011	Analyst: RM
			5.4	mg/Kg-dry	1	11/3/2011 12:39 PM
Surr: 4-Terphenyl-d14	82.2		39-115	%REC	1	11/3/2011 12:39 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	19		<b>SW8015</b>			Analyst: JD
			6.7	mg/Kg-dry	100	11/3/2011 08:56 AM
Surr: Toluene-d8	94.9		50-150	%REC	100	11/3/2011 08:56 AM
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep Date: 11/2/2011	Analyst: LR
			0.020	mg/Kg-dry	1	11/3/2011 01:49 PM
<b>METALS BY ICP-MS</b>						
			<b>SW6020A</b>		Prep Date: 11/2/2011	Analyst: CES
Arsenic	3.1		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Barium	190		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Cadmium	ND		0.34	mg/Kg-dry	2	11/3/2011 03:15 PM
Chromium	13		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Copper	9.2		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Lead	9.8		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Nickel	11		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Selenium	ND		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Silver	ND		0.86	mg/Kg-dry	2	11/3/2011 03:15 PM
Zinc	40		1.7	mg/Kg-dry	2	11/3/2011 03:15 PM
<b>SUBCONTRACTED ANALYSES</b>						
Subcontracted Analyses	Rcvd 11/5/11		<b>SUBCONTRACT</b>			Analyst: A&LGL
			as noted		1	11/5/2011
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep Date: 11/3/2011	Analyst: JJ
Acenaphthene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Anthracene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Benzo(a)anthracene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Benzo(a)pyrene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Benzo(b)fluoranthene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Benzo(g,h,i)perylene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Benzo(k)fluoranthene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Chrysene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Dibenzo(a,h)anthracene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Fluoranthene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Fluorene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Indeno(1,2,3-cd)pyrene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Naphthalene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Pyrene	ND		39	µg/Kg-dry	1	11/3/2011 02:48 PM
Surr: 2,4,6-Tribromophenol	76.1		34-140	%REC	1	11/3/2011 02:48 PM

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

# ALS Group USA, Corp

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111066

Sample ID: Point Of Origin

Lab ID: 1111066-01

Collection Date: 10/27/2011 02:50 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	63.3		12-100	%REC	1	11/3/2011 02:48 PM
Surr: 2-Fluorophenol	82.1		33-117	%REC	1	11/3/2011 02:48 PM
Surr: 4-Terphenyl-d14	88.3		25-137	%REC	1	11/3/2011 02:48 PM
Surr: Nitrobenzene-d5	75.8		37-107	%REC	1	11/3/2011 02:48 PM
Surr: Phenol-d6	84.8		40-106	%REC	1	11/3/2011 02:48 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>BG</b>
Benzene	ND		130	µg/Kg-dry	100	11/3/2011 07:16 AM
Ethylbenzene	ND		270	µg/Kg-dry	100	11/3/2011 07:16 AM
m,p-Xylene	310		270	µg/Kg-dry	100	11/3/2011 07:16 AM
o-Xylene	ND		130	µg/Kg-dry	100	11/3/2011 07:16 AM
Toluene	ND		200	µg/Kg-dry	100	11/3/2011 07:16 AM
Xylenes, Total	ND		400	µg/Kg-dry	100	11/3/2011 07:16 AM
Surr: 1,2-Dichloroethane-d4	105		70-120	%REC	100	11/3/2011 07:16 AM
Surr: 4-Bromofluorobenzene	98.9		75-120	%REC	100	11/3/2011 07:16 AM
Surr: Dibromofluoromethane	98.0		85-115	%REC	100	11/3/2011 07:16 AM
Surr: Toluene-d8	101		85-115	%REC	100	11/3/2011 07:16 AM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>MB</b>
Chromium, Trivalent	13		0.67	mg/Kg-dry	1	11/3/2011 05:00 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 11/3/2011	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.66	mg/Kg-dry	1	11/3/2011 04:30 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>CG</b>
Moisture	25		0.050	% of sample	1	11/2/2011 01:11 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>JJG</b>
pH	8.50	H		s.u.	1	11/2/2011 08:30 AM

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

**ALS Group USA, Corp**

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111066

Sample ID: BKGD 1

Lab ID: 1111066-02

Collection Date: 10/27/2011 03:00 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: 11/2/2011	Analyst: CES
Arsenic	2.9		1.1	mg/Kg-dry	2	11/3/2011 03:20 PM
<b>SUBCONTRACTED ANALYSES</b>			<b>SUBCONTRACT</b>			Analyst: A&LGL
Subcontracted Analyses	Rcvd 11/5/11		as noted		1	11/5/2011
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: CG
Moisture	25		0.050	% of sample	1	11/2/2011 01:11 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: JJG
pH	8.27	H		s.u.	1	11/2/2011 08:30 AM

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

**ALS Group USA, Corp**

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111066

Sample ID: BKGD 2

Lab ID: 1111066-03

Collection Date: 10/27/2011 03:05 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: 11/2/2011	Analyst: CES
Arsenic	3.5		0.90	mg/Kg-dry	2	11/3/2011 03:25 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: CG
Moisture	22		0.050	% of sample	1	11/2/2011 01:11 PM

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

**ALS Group USA, Corp****Date:** 07-Nov-11**Client:** HRL Compliance Solutions**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288**Work Order:** 1111066**Sample ID:** BKGD 3**Lab ID:** 1111066-04**Collection Date:** 10/27/2011 03:10 PM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: 11/2/2011	Analyst: <b>CES</b>
Arsenic	3.5		1.1	mg/Kg-dry	2	11/3/2011 03:31 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>CG</b>
Moisture	24		0.050	% of sample	1	11/2/2011 01:11 PM

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

Report Number: F11307-0735

Account Number: 91000

## A & L GREAT LAKES LABORATORIES, INC.

3505 Conestoga Drive • Fort Wayne, Indiana 46808-4413 • Phone 260-483-4759 • Fax 260-483-5274

www.algreatlakes.com • lab@algreatlakes.com



**QUALITY ANALYSES FOR INFORMED DECISIONS**

TO: ALS LABORATORY GROUP  
3352 128TH AVE  
HOLLAND, MI 49424-9263

RE: 1111066

DATE RECEIVED: 11/03/2011

DATE REPORTED: 11/05/2011

PAGE: 1

P.O. NUMBER: 20-122011148

ATTN: ANN PRESTON

### REPORT OF ANALYSIS

43759	01C	Sat'd Paste Extraction with DIW	1		USDA Handbook 60
		Conductivity (ECe)	2.87	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	50	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	23	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	2369	ppm	USDA Handbook 60
		Sodium Adsorption Ratio	69.3	-	USDA Handbook 60
43760	02B	Sat'd Paste Extraction with DIW	1		USDA Handbook 60
		Conductivity (ECe)	0.65	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	50	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	27	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	302	ppm	USDA Handbook 60
		Sodium Adsorption Ratio	8.5	-	USDA Handbook 60

# ALS Group USA, Corp

Date: 07-Nov-11

Client: HRL Compliance Solutions

Work Order: 1111066

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

## QC BATCH REPORT

Batch ID: 37092 Instrument ID GC8 Method: SW8015M

<b>MBLK</b>		Sample ID: DBLKS1-37092-37092			Units: mg/Kg		Analysis Date: 11/3/2011 11:55 AM			
Client ID:		Run ID: GC8_111103A			SeqNo: 1806126		Prep Date: 11/3/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.151	0	1.667	0	69	39-115	0			

<b>LCS</b>		Sample ID: DLCSS1-37092-37092			Units: mg/Kg		Analysis Date: 11/3/2011 11:10 AM			
Client ID:		Run ID: GC8_111103A			SeqNo: 1810008		Prep Date: 11/3/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	161.8	4.2	166.7	0	97.1	60-130	0			
Surr: 4-Terphenyl-d14	1.102	0	1.667	0	66.1	39-115	0			

<b>LCSD</b>		Sample ID: DLCSDS1-37092-37092			Units: mg/Kg		Analysis Date: 11/3/2011 11:10 AM			
Client ID:		Run ID: GC8_111103A			SeqNo: 1810010		Prep Date: 11/3/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	164.1	4.2	166.7	0	98.5	60-130	161.8	1.43	30	
Surr: 4-Terphenyl-d14	1.044	0	1.667	0	62.6	39-115	1.102	5.44	30	

The following samples were analyzed in this batch:

1111066-01B

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

☐ ☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 1111066  
☐ ☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: R97189 Instrument ID GC10 Method: SW8015

MBLK Sample ID: MBLK-R97189-R97189				Units: µg/L		Analysis Date: 11/3/2011 01:51 AM				
Client ID:		Run ID: GC10_111103A		SeqNo: 1805947		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
Surr: Toluene-d8	93.35	0	100	0	93.4	70-130	0			

LCS Sample ID: LCS-R97189-R97189				Units: µg/L		Analysis Date: 11/3/2011 12:36 PM				
Client ID:		Run ID: GC10_111103A		SeqNo: 1805948		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	25710	200	25000	0	103	70-130	0			
Surr: Toluene-d8	89.25	0	100	0	89.2	70-130	0			

LCSD Sample ID: LCSD-R97189-R97189				Units: µg/L		Analysis Date: 11/3/2011 01:01 AM				
Client ID:		Run ID: GC10_111103A			SeqNo: 1805946		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	24860	200	25000	0	99.4	70-130	25710	3.36	30	
Surr: Toluene-d8	90.34	0	100	0	90.3	70-130	89.25	1.21	30	

The following samples were analyzed in this batch: 1111066-01A

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



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☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: 37082 Instrument ID HG1 Method: SW7471

<b>MBLK</b>	Sample ID: <b>MBLK-37082-37082</b>				Units: mg/Kg		Analysis Date: 11/3/2011 01:12 PM			
Client ID:	Run ID: HG1_111103A				SeqNo: 1805727		Prep Date: 11/2/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

<b>LCS</b>	Sample ID: <b>LCS-37082-37082</b>				Units: mg/Kg		Analysis Date: 11/3/2011 01:14 PM			
Client ID:	Run ID: HG1_111103A				SeqNo: 1805728		Prep Date: 11/2/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1666 0.020 0.1665 0 100 80-120 0

<b>LCSD</b>	Sample ID: <b>LCSD-37082-37082</b>				Units: mg/Kg		Analysis Date: 11/3/2011 01:16 PM			
Client ID:	Run ID: HG1_111103A				SeqNo: 1805729		Prep Date: 11/2/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1668 0.020 0.1665 0 100 80-120 0.1666 0.15 20

<b>MS</b>	Sample ID: <b>1111055-02BMS</b>				Units: mg/Kg		Analysis Date: 11/3/2011 01:25 PM			
Client ID:	Run ID: HG1_111103A				SeqNo: 1805733		Prep Date: 11/2/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1482 0.017 0.1409 0.001573 104 75-125 0

<b>MSD</b>	Sample ID: <b>1111055-02BMSD</b>				Units: mg/Kg		Analysis Date: 11/3/2011 01:27 PM			
Client ID:	Run ID: HG1_111103A				SeqNo: 1805734		Prep Date: 11/2/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1491 0.017 0.1452 0.001573 102 75-125 0.1482 0.599 35

The following samples were analyzed in this batch:

1111066-01B

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

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☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: 37086 Instrument ID ICPMS1 Method: SW6020A

MBLK Sample ID: MBLK-37086-37086			Units: mg/Kg			Analysis Date: 11/3/2011 01:35 PM				
Client ID:		Run ID: ICPMS1_111103A		SeqNo: 1805872		Prep Date: 11/2/2011		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS				Sample ID: LCS-37086-37086				Units: mg/Kg				Analysis Date: 11/3/2011 01:40 PM											
Client ID:				Run ID: ICPMS1_111103A				SeqNo: 1805873				Prep Date: 11/2/2011				DF: 2							
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	
Arsenic				4.219		0.50		5		0		84.4		80-120		0							
Barium				4.283		0.50		5		0		85.7		80-120		0							
Cadmium				4.552		0.20		5		0		91		80-120		0							
Chromium				4.311		0.50		5		0		86.2		80-120		0							
Copper				4.364		0.50		5		0		87.3		80-120		0							
Lead				4.319		0.50		5		0		86.4		80-120		0							
Nickel				4.377		0.50		5		0		87.5		80-120		0							
Selenium				4.056		0.50		5		0		81.1		80-120		0							
Zinc				4.374		1.0		5		0		87.5		80-120		0							

LCS		Sample ID: LCS-37086-37086				Units: mg/Kg		Analysis Date: 11/3/2011 02:54 PM		
Client ID:		Run ID: ICPMS1_111103A				SeqNo: 1805884		Prep Date: 11/2/2011		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	4.012	0.50	5	0	80.2	80-120	0			

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

HRL Compliance Solutions  
 1111066  
 Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: 37086 Instrument ID ICPMS1 Method: SW6020A

LCSD		Sample ID: LCSD-37086-37086				Units: mg/Kg		Analysis Date: 11/3/2011 01:46 PM		
Client ID:		Run ID: ICPMS1_111103A				SeqNo: 1805874		Prep Date: 11/2/2011		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.523	0.50	5	0	90.5	80-120	4.33	4.36	20	
Barium	4.52	0.50	5	0	90.4	80-120	4.669	3.24	20	
Cadmium	4.848	0.20	5	0	97	80-120	4.795	1.1	20	
Chromium	4.583	0.50	5	0	91.7	80-120	4.428	3.44	20	
Copper	4.869	0.50	5	0	97.4	80-120	4.601	5.66	20	
Lead	4.645	0.50	5	0	92.9	80-120	4.565	1.74	20	
Nickel	4.654	0.50	5	0	93.1	80-120	4.428	4.98	20	
Selenium	4.434	0.50	5	0	88.7	80-120	4.303	3	20	
Silver	4.093	0.50	5	0	81.9	80-120	4.012	2	20	
Zinc	4.772	1.0	5	0	95.4	80-120	4.59	3.89	20	

MS		Sample ID: 1111055-02BMS				Units: mg/Kg		Analysis Date: 11/3/2011 01:56 PM		
Client ID:		Run ID: ICPMS1_111103A				SeqNo: 1805876		Prep Date: 11/2/2011		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.534	0.80	8	0.7559	84.7	80-120	0			
Barium	13.04	0.80	8	6.206	85.4	80-120	0			
Cadmium	7.374	0.32	8	0.02514	91.9	80-120	0			
Chromium	13.19	0.80	8	4.449	109	80-120	0			
Copper	9.734	0.80	8	2.927	85.1	80-120	0			
Lead	8.701	0.80	8	1.352	91.9	80-120	0			
Nickel	9.648	0.80	8	2.859	84.9	80-120	0			
Selenium	6.624	0.80	8	0.08396	81.8	80-120	0			
Silver	5.666	0.80	8	0.001869	70.8	80-120	0			S
Zinc	12.82	1.6	8	7.04	72.2	80-120	0			S

MSD		Sample ID: 1111055-02BMSD				Units: mg/Kg		Analysis Date: 11/3/2011 02:01 PM		
Client ID:		Run ID: ICPMS1_111103A				SeqNo: 1805877		Prep Date: 11/2/2011		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.447	0.79	7.924	0.7559	84.4	80-120	7.534	1.17	25	
Barium	14.33	0.79	7.924	6.206	102	80-120	13.04	9.44	25	
Cadmium	7.258	0.32	7.924	0.02514	91.3	80-120	7.374	1.59	25	
Chromium	10.6	0.79	7.924	4.449	77.7	80-120	13.19	21.8	25	S
Copper	9.087	0.79	7.924	2.927	77.7	80-120	9.734	6.88	25	S
Lead	8.588	0.79	7.924	1.352	91.3	80-120	8.701	1.31	25	
Nickel	9.431	0.79	7.924	2.859	82.9	80-120	9.648	2.27	25	
Selenium	6.536	0.79	7.924	0.08396	81.4	80-120	6.624	1.34	25	
Silver	5.583	0.79	7.924	0.001869	70.4	80-120	5.666	1.47	25	S
Zinc	12.99	1.6	7.924	7.04	75	80-120	12.82	1.29	25	S

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

Client: HRL Compliance Solutions

Report Date: 11/28/2011

Sample ID: 1111066

Location: Antero Valley Farms J Pad Prod. W. Release 11-288

Batch ID: 37086

Instrument ID ICPMS1

Method: SW6020A

The following samples were analyzed in this batch:

1111066-01B	1111066-02A	1111066-03A
1111066-04A		

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐ 1111066  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: 37090 Instrument ID SVMS5 Method: SW8270

MBLK Sample ID: SBLKS1-37090-37090 Units: µg/Kg Analysis Date: 11/3/2011 10:34 AM

Client ID: Run ID: SVMS5\_111103A SeqNo: 1805577 Prep Date: 11/3/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
Surr: 2,4,6-Tribromophenol	1286	0	1667	0	77.2	34-140	0			
Surr: 2-Fluorobiphenyl	1352	0	1667	0	81.1	12-100	0			
Surr: 2-Fluorophenol	1487	0	1667	0	89.2	33-117	0			
Surr: 4-Terphenyl-d14	1831	0	1667	0	110	25-137	0			
Surr: Nitrobenzene-d5	1426	0	1667	0	85.6	37-107	0			
Surr: Phenol-d6	1523	0	1667	0	91.4	40-106	0			

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐ 1111066  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: 37090 Instrument ID SVMS5 Method: SW8270

LCS		Sample ID: SLCSS1-37090-37090				Units: $\mu\text{g/Kg}$		Analysis Date: 11/3/2011 11:10 AM		
Client ID:		Run ID: SVMS5_111103A				Seq No: 1805578		Prep Date: 11/3/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1016	30	1333	0	76.2	45-110	0			
Anthracene	1036	30	1333	0	77.7	55-105	0			
Benzo(a)anthracene	1085	30	1333	0	81.4	50-110	0			
Benzo(a)pyrene	1106	30	1333	0	83	50-110	0			
Benzo(b)fluoranthene	1069	30	1333	0	80.2	45-115	0			
Benzo(g,h,i)perylene	1192	30	1333	0	89.4	40-125	0			
Benzo(k)fluoranthene	1302	30	1333	0	97.6	45-115	0			
Chrysene	1054	30	1333	0	79.1	55-110	0			
Dibenzo(a,h)anthracene	1200	30	1333	0	90	40-125	0			
Fluoranthene	1123	30	1333	0	84.3	55-115	0			
Fluorene	1087	30	1333	0	81.6	50-110	0			
Indeno(1,2,3-cd)pyrene	1188	30	1333	0	89.1	40-120	0			
Naphthalene	996.3	30	1333	0	74.7	40-105	0			
Pyrene	1101	30	1333	0	82.6	45-125	0			
Surr: 2,4,6-Tribromophenol	1397	0	1667	0	83.8	34-140	0			
Surr: 2-Fluorobiphenyl	1218	0	1667	0	73.1	12-100	0			
Surr: 2-Fluorophenol	1250	0	1667	0	75	33-117	0			
Surr: 4-Terphenyl-d14	1457	0	1667	0	87.4	25-137	0			
Surr: Nitrobenzene-d5	1290	0	1667	0	77.4	37-107	0			
Surr: Phenol-d6	1264	0	1667	0	75.8	40-106	0			

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

☐ ☐ ☐ HRL Compliance Solutions  
☐ ☐ ☐ ☐ 1111066  
☐ ☐ ☐ Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: 37090 Instrument ID SVMS5 Method: SW8270

LCSD		Sample ID: SLCSDS1-37090-37090				Units: µg/Kg	Analysis Date: 11/3/2011 11:46 AM			
Client ID:		Run ID: SVMS5_111103A				SeqNo: 1805579	Prep Date: 11/3/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1137	30	1333	0	85.3	45-110	1016	11.2	25	
Anthracene	1126	30	1333	0	84.5	55-105	1036	8.39	25	
Benzo(a)anthracene	1196	30	1333	0	89.7	50-110	1085	9.7	25	
Benzo(a)pyrene	1205	30	1333	0	90.4	50-110	1106	8.57	25	
Benzo(b)fluoranthene	1239	30	1333	0	92.9	45-115	1069	14.7	25	
Benzo(g,h,i)perylene	1285	30	1333	0	96.4	40-125	1192	7.54	25	
Benzo(k)fluoranthene	1290	30	1333	0	96.7	45-115	1302	0.926	25	
Chrysene	1106	30	1333	0	83	55-110	1054	4.78	25	
Dibenzo(a,h)anthracene	1309	30	1333	0	98.2	40-125	1200	8.69	25	
Fluoranthene	1225	30	1333	0	91.9	55-115	1123	8.63	25	
Fluorene	1202	30	1333	0	90.1	50-110	1087	9.99	25	
Indeno(1,2,3-cd)pyrene	1288	30	1333	0	96.6	40-120	1188	8.05	25	
Naphthalene	1108	30	1333	0	83.1	40-105	996.3	10.6	25	
Pyrene	1192	30	1333	0	89.4	45-125	1101	7.88	25	
Surr: 2,4,6-Tribromophenol	1491	0	1667	0	89.4	34-140	1397	6.51	40	
Surr: 2-Fluorobiphenyl	1354	0	1667	0	81.2	12-100	1218	10.6	40	
Surr: 2-Fluorophenol	1416	0	1667	0	85	33-117	1250	12.5	40	
Surr: 4-Terphenyl-d14	1559	0	1667	0	93.6	25-137	1457	6.79	40	
Surr: Nitrobenzene-d5	1462	0	1667	0	87.7	37-107	1290	12.5	40	
Surr: Phenol-d6	1381	0	1667	0	82.9	40-106	1264	8.9	40	

The following samples were analyzed in this batch: 1111066-01B

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐: 1111066  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: R97163 Instrument ID VMS6 Method: SW8260

MBLK				Sample ID: VBLKW2-111102-R97163				Units: µg/L		Analysis Date: 11/2/2011 10:57 PM	
Client ID:		Run ID: VMS6_111102A		SeqNo: 1805525		Prep Date:		DF: 1			
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	3.0									
Surr: 1,2-Dichloroethane-d4	102.2	0	100	0	102	70-120	0				
Surr: 4-Bromofluorobenzene	97.87	0	100	0	97.9	75-120	0				
Surr: Dibromofluoromethane	101	0	100	0	101	85-115	0				
Surr: Toluene-d8	99.49	0	100	0	99.5	85-120	0				

LCS		Sample ID: VLCSW1-111102-R97163				Units: µg/L		Analysis Date: 11/2/2011 09:43 PM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805523		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	21.22	1.0	20	0	106	80-120	0				
Ethylbenzene	21.43	1.0	20	0	107	75-125	0				
m,p-Xylene	43.16	2.0	40	0	108	75-130	0				
o-Xylene	21.05	1.0	20	0	105	80-120	0				
Toluene	21.56	1.0	20	0	108	75-120	0				
Xylenes, Total	64.21	3.0	60	0	107	75-130	0				
Surr: 1,2-Dichloroethane-d4	100.7	0	100	0	101	70-120	0				
Surr: 4-Bromofluorobenzene	100.4	0	100	0	100	75-120	0				
Surr: Dibromofluoromethane	103.4	0	100	0	103	85-115	0				
Surr: Toluene-d8	100.4	0	100	0	100	85-120	0				

LCSD		Sample ID: VLCSDW1-111102-R97163				Units: µg/L		Analysis Date: 11/2/2011 10:07 PM		
Client ID:		Run ID: VMS6_111102A			SeqNo: 1805524		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.48	1.0	20	0	112	80-120	21.22	5.77	30	
Ethylbenzene	22.5	1.0	20	0	112	75-125	21.43	4.87	30	
m,p-Xylene	45.58	2.0	40	0	114	75-130	43.16	5.45	30	
o-Xylene	22.27	1.0	20	0	111	80-120	21.05	5.63	30	
Toluene	22.67	1.0	20	0	113	75-120	21.56	5.02	30	
Xylenes, Total	67.85	3.0	60	0	113	75-130	64.21	5.51	30	
Surr: 1,2-Dichloroethane-d4	101.1	0	100	0	101	70-120	100.7	0.327	30	
Surr: 4-Bromofluorobenzene	99.53	0	100	0	99.5	75-120	100.4	0.88	30	
Surr: Dibromofluoromethane	103	0	100	0	103	85-115	103.4	0.329	30	
Surr: Toluene-d8	100.2	0	100	0	100	85-120	100.4	0.189	30	

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



☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐: 1111066  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: R97163 Instrument ID VMS6 Method: SW8260

<b>MS</b>		Sample ID: 1110959-01A MS				Units: µg/L	Analysis Date: 11/3/2011 07:41 AM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805538	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	23.18	1.0	20	0	116	80-120	0			
Ethylbenzene	22.12	1.0	20	0	111	75-125	0			
m,p-Xylene	45.17	2.0	40	0	113	75-130	0			
o-Xylene	21.77	1.0	20	0	109	80-120	0			
Toluene	22.61	1.0	20	0	113	75-120	0			
Xylenes, Total	66.94	3.0	60	0	112	75-130	0			
Surr: 1,2-Dichloroethane-d4	104	0	100	0	104	70-120	0			
Surr: 4-Bromofluorobenzene	100.2	0	100	0	100	75-120	0			
Surr: Dibromofluoromethane	103.8	0	100	0	104	85-115	0			
Surr: Toluene-d8	99.18	0	100	0	99.2	85-120	0			

<b>MSD</b>		Sample ID: 1110959-01A MSD				Units: µg/L	Analysis Date: 11/3/2011 08:08 AM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805539	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.88	1.0	20	0	114	80-120	23.18	1.3	30	
Ethylbenzene	21.95	1.0	20	0	110	75-125	22.12	0.771	30	
m,p-Xylene	44.48	2.0	40	0	111	75-130	45.17	1.54	30	
o-Xylene	21.81	1.0	20	0	109	80-120	21.77	0.184	30	
Toluene	22.49	1.0	20	0	112	75-120	22.61	0.532	30	
Xylenes, Total	66.29	3.0	60	0	110	75-130	66.94	0.976	30	
Surr: 1,2-Dichloroethane-d4	103.7	0	100	0	104	70-120	104	0.327	30	
Surr: 4-Bromofluorobenzene	98.84	0	100	0	98.8	75-120	100.2	1.38	30	
Surr: Dibromofluoromethane	104.2	0	100	0	104	85-115	103.8	0.327	30	
Surr: Toluene-d8	99.76	0	100	0	99.8	85-120	99.18	0.583	30	

The following samples were analyzed in this batch:

1111066-01A

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐: 1111066  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: 37147 Instrument ID WETCHEM Method: SW7196A

MBLK				Sample ID: MBLK-37147-37147				Units: mg/Kg				Analysis Date: 11/3/2011 04:30 PM											
Client ID:				Run ID: WETCHEM_1111030				SeqNo: 1806147				Prep Date: 11/3/2011				DF: 1							
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Chromium, Hexavalent ND 0.50

LCS				Sample ID: LCS-37147-37147				Units: mg/Kg				Analysis Date: 11/3/2011 04:30 PM									
Client ID:				Run ID: WETCHEM_1111030				SeqNo: 1806145				Prep Date: 11/3/2011				DF: 1					
Analyte		Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Chromium, Hexavalent 1.972 0.50 2 0 98.6 75-110 0

LCSD		Sample ID: LCSD-37147-37147				Units: mg/Kg		Analysis Date: 11/3/2011 04:30 PM		
Client ID:		Run ID: WETCHEM_1111030				SeqNo: 1806146		Prep Date: 11/3/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.924 0.50 2 0 96.2 75-110 1.972 2.46 20

MS				Sample ID: 1111083-01B MS			Units: mg/Kg		Analysis Date: 11/3/2011 04:30 PM		
Client ID:				Run ID: WETCHEM_1111030			SeqNo: 1806143		Prep Date: 11/3/2011		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.7448 0.50 1.991 0 37.4 60-130 0 S

MSD				Sample ID: 1111083-01B MSD				Units: mg/Kg		Analysis Date: 11/3/2011 04:30 PM	
Client ID:				Run ID: WETCHEM_1111030				SeqNo: 1806144		Prep Date: 11/3/2011	
DF: 1											
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.7797 0.49 1.949 0 40 60-130 0.7448 4.59 30 S

The following samples were analyzed in this batch: 1111066-01B

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ 1111066  
☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: **R97104** Instrument ID **WETCHEM** Method: **A4500-H B**

<b>LCS</b>		Sample ID: <b>LCS-R97104-R97104</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/2/2011 08:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_111102D</b>				SeqNo: <b>1804045</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
pH	4.43	0	4.4	0	101	90-110	0			

<b>LCS</b>		Sample ID: <b>LCS-R97104-R97104</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/2/2011 08:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_111102D</b>				SeqNo: <b>1804048</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
pH	4.43	0	4.4	0	101	90-110	0			

<b>DUP</b>		Sample ID: <b>1111061-01B DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/2/2011 08:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_111102D</b>				SeqNo: <b>1804047</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
pH	7.3	0	0	0	0	0-0	7.3	0	20	

<b>DUP</b>		Sample ID: <b>1111041-01A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/2/2011 08:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_111102D</b>				SeqNo: <b>1804050</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
pH	7.77	0	0	0	0	0-0	7.77	0	20	

<b>DUP</b>		Sample ID: <b>1111055-05B DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>11/2/2011 08:30 AM</b>		
Client ID:		Run ID: <b>WETCHEM_111102D</b>				SeqNo: <b>1804051</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
pH	8.46	0	0	0	0	0-0	8.46	0	20	

The following samples were analyzed in this batch:

1111066-01B 1111066-02A

HRL Compliance Solutions  
 1111066  
 Antero Valley Farms J Pad Prod. W. Release 11-288

11/2/2011 01:11 PM

Batch ID: R97156 Instrument ID MOIST Method: A2540 G

MBLK Sample ID: WBLKS1-R97156 Units: % of sample Analysis Date: 11/2/2011 01:11 PM  
 Client ID: Run ID: MOIST\_111102D SeqNo: 1805320 Prep Date: DF: 1  
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Moisture ND 0.050

LCS Sample ID: LCS-R97156 Units: % of sample Analysis Date: 11/2/2011 01:11 PM  
 Client ID: Run ID: MOIST\_111102D SeqNo: 1805319 Prep Date: DF: 1  
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP Sample ID: 1111043-01ADUP Units: % of sample Analysis Date: 11/2/2011 01:11 PM  
 Client ID: Run ID: MOIST\_111102D SeqNo: 1805298 Prep Date: DF: 1  
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Moisture 13.55 0.050 0 0 0 0-0 13.9 2.55 20

DUP Sample ID: 1111043-05ADUP Units: % of sample Analysis Date: 11/2/2011 01:11 PM  
 Client ID: Run ID: MOIST\_111102D SeqNo: 1805303 Prep Date: DF: 1  
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Moisture 14.87 0.050 0 0 0 0-0 14.28 4.05 20

The following samples were analyzed in this batch:

1111066-01B 1111066-02A 1111066-03A  
 1111066-04A

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





1111066

Form 202r8

\*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.**

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		DANIEL PINEDA	10/31/2011	1700
RECEIVED BY		Diane Pineda	11/2/11	1000
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				



**Environmental**

**Subcontractor:**

A & L Great Lakes Agricultural Lab  
3505 Conestoga Dr

TEL: (260) 483-4759

FAX: (260) 483-5274

Flt Wayne, IN 46808

Acct #: 91000

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: **02-Nov-11**

COC ID: **3272**

Due Date: **03-Nov-11**

Salesperson: **Debbie Fazio**

Customer Information		Project Information		Parameter/Method Requested											
Purchase Order	20-122011148	Project Name	1111066	Subcontracted Analyses (SUBCONTRACT) <b>SAR-EC</b>											
Work Order		Project Number													
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp												
Send Report To	Ann Preston	Inv Attn	Accounts Payable												
Address	3352 128th Avenue	Address	3352 128th Avenue												
City/State/Zip	Holland, Michigan 49424-9263	City/State/Zip	Holland, Michigan 49424-9263												
Phone	(616) 399-6070	Phone	(616) 399-6070												
Fax	(616) 399-6185	Fax	(616) 399-6185												
eMail Address	ann.preston@alsglobal.com	eMail CC													
Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J		
1111066-01C	Soil	27/Oct/2011 14:50	(1) MISC	X											
1111066-02B	Soil	27/Oct/2011 15:00	(1) MISC	X											

**Comments:**

Please analyze for SAR-EC. Email results to Ann Preston.

Relinquished by:

Date/Time

Received by:

Date/Time

Cooler IDs

Report/QC Level

Relinquished by:

Date/Time

Received by:

Date/Time

# ALS Group USA, Corp

## Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 02-Nov-11 10:00

Work Order: 1111066

Received by: DS

Checklist completed by Diane Shaw 02-Nov-11  
eSignature Date

Reviewed by: Alex Conzalez 02-Nov-11  
eSignature Date

Matrices: Soil  
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):

4.4 c

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐ No ☐ N/A ☒

pH adjusted?

Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

DATE: 10-30-16  
SIGNATURE: [Signature]

**QEC**  
Quality Environmental Containers  
800-255-3950 • 304-255-3900

**FedEx** NEW Package Express **US Airbill**

FedEx Tracking Number: 8769 1479 5772

0200 Form 10 No.

FedEx Retrieval Copy

1 From  
Date: 10/30/16  
Sender's Name: [Name]  
Company: [Company]  
Address: [Address]  
City: [City] State: [State] ZIP: [ZIP]

2 Your Internal Filing Reference

3 To  
Recipient's Name: [Name]  
Company: [Company]  
Address: [Address]  
City: [City] State: [State] ZIP: [ZIP]

4 Express Package Service  
NOTE: Service order may change. Please select carefully.

06: FedEx First Overnight  
01: FedEx Priority Overnight  
05: FedEx Standard Overnight

2 or 3 Business Days  
NEW FedEx 2Day A.M.  
FedEx 2Day  
FedEx Express Saver

5 Packaging  
06: FedEx Envelope 02: FedEx Pak 03: FedEx Box 04: FedEx Tube 01: Other

6 Special Handling and Delivery Signature Options  
03: SATURDAY DELIVERY

No Signature Required  
Direct Signature  
Indirect Signature

Does this shipment contain dangerous goods?  
No 04: Yes

7 Payment Bill to:  
Sender Recipient Third Party Credit Card Cash/Check

Total Packages: 13  
Total Weight: [Weight]  
612



8769 1479 5772

fedex.com 1.800.GoFedEx 1.800.463.3339

fedex.com 1.800.GoFedEx 1.800.463.3339





07-Nov-2011

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

Re: **Antero Valley Farms J Pad Prod. W. Release 11-288**

Work Order: **1111065**

Dear Mark,

ALS Environmental received 3 samples on 02-Nov-2011 10:00 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 31.

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

Sincerely,

A handwritten signature in cursive script 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  
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental The ALS logo, a stylized 'A' with a flame inside a circle.

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

RIGHT SOLUTIONS RIGHT PARTNER

# ALS Group USA, Corp

Date: 07-Nov-11

**Client:** HRL Compliance Solutions  
**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288  
**Work Order:** 1111065

## 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>
1111065-01	Spill Area East	Soil		10/28/2011 12:10	11/2/2011 10:00	<input type="checkbox"/>
1111065-02	Spill Area North	Soil		10/28/2011 11:50	11/2/2011 10:00	<input type="checkbox"/>
1111065-03	Off Site Sample	Soil		10/31/2011 11:50	11/2/2011 10:00	<input type="checkbox"/>

**ALS Group USA, Corp***Date: 07-Nov-11*

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**Client:** HRL Compliance Solutions  
**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288  
**Work Order:** 1111065

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**Ca Narrative**

Batch 37147 MS/MSD data for Hexavalent Chromium is not related to this project's samples.

Batch 37086 MS/MSD data for Metals is not related to this project's samples.

**ALS Group USA, Corp**

Date: 07-Nov-11

**Client:** HRL Compliance Solutions  
**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288  
**WorkOrder:** 1111065

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	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

<u>Acronym</u>	<u>Description</u>
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

<u>Unit Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry as noted	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
s.u.	Standard Units

**ALS Group USA, Corp**

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111065

Sample ID: Spill Area East

Lab ID: 1111065-01

Collection Date: 10/28/2011 12:10 PM

Matrix: SOIL

Analyte	Result	Qual	Report Limit	Unit	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
DRO (C10-C28)	10		SW8015M	mg/Kg-dry	1	Analyst: RM
Surr: 4-Terphenyl-d14	64.7		39-115	%REC	1	11/3/2011 12:17 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
GRO (C6-C10)	26		SW8015	mg/Kg-dry	100	Analyst: JD
Surr: Toluene-d8	102		50-150	%REC	100	11/3/2011 07:41 AM
<b>MERCURY BY CVAA</b>						
Mercury	ND		SW7471	mg/Kg-dry	1	Prep Date: 11/2/2011 Analyst: LR
<b>METALS BY ICP-MS</b>						
Arsenic	1.8		SW6020A	mg/Kg-dry	2	Prep Date: 11/2/2011 Analyst: CES
Barium	140			mg/Kg-dry	2	11/3/2011 02:59 PM
Cadmium	ND			mg/Kg-dry	2	11/3/2011 02:59 PM
Chromium	7.8			mg/Kg-dry	2	11/3/2011 02:59 PM
Copper	6.7			mg/Kg-dry	2	11/3/2011 02:59 PM
Lead	7.1			mg/Kg-dry	2	11/3/2011 02:59 PM
Nickel	8.6			mg/Kg-dry	2	11/3/2011 02:59 PM
Selenium	ND			mg/Kg-dry	2	11/3/2011 02:59 PM
Silver	ND			mg/Kg-dry	2	11/3/2011 02:59 PM
Zinc	42			mg/Kg-dry	2	11/3/2011 02:59 PM
<b>SUBCONTRACTED ANALYSES</b>						
Subcontracted Analyses	Rcvd 11/5/11		SUBCONTRACT	as noted	1	Analyst: A&LGL
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
Acenaphthene	ND		SW8270	µg/Kg-dry	1	Prep Date: 11/3/2011 Analyst: JJ
Anthracene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Benzo(a)anthracene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Benzo(a)pyrene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Benzo(b)fluoranthene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Benzo(g,h,i)perylene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Benzo(k)fluoranthene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Chrysene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Dibenzo(a,h)anthracene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Fluoranthene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Fluorene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Indeno(1,2,3-cd)pyrene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Naphthalene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Pyrene	ND			µg/Kg-dry	1	11/3/2011 12:59 PM
Surr: 2,4,6-Tribromophenol	75.4		34-140	%REC	1	11/3/2011 12:59 PM

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

# ALS Group USA, Corp

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111065

Sample ID: Spill Area East

Lab ID: 1111065-01

Collection Date: 10/28/2011 12:10 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	61.9		12-100	%REC	1	11/3/2011 12:59 PM
Surr: 2-Fluorophenol	79.8		33-117	%REC	1	11/3/2011 12:59 PM
Surr: 4-Terphenyl-d14	86.6		25-137	%REC	1	11/3/2011 12:59 PM
Surr: Nitrobenzene-d5	74.7		37-107	%REC	1	11/3/2011 12:59 PM
Surr: Phenol-d6	83.1		40-106	%REC	1	11/3/2011 12:59 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>BG</b>
Benzene	ND		120	µg/Kg-dry	100	11/3/2011 06:01 AM
Ethylbenzene	ND		230	µg/Kg-dry	100	11/3/2011 06:01 AM
m,p-Xylene	ND		230	µg/Kg-dry	100	11/3/2011 06:01 AM
o-Xylene	ND		120	µg/Kg-dry	100	11/3/2011 06:01 AM
Toluene	ND		180	µg/Kg-dry	100	11/3/2011 06:01 AM
Xylenes, Total	ND		350	µg/Kg-dry	100	11/3/2011 06:01 AM
Surr: 1,2-Dichloroethane-d4	106		70-120	%REC	100	11/3/2011 06:01 AM
Surr: 4-Bromofluorobenzene	98.9		75-120	%REC	100	11/3/2011 06:01 AM
Surr: Dibromofluoromethane	98.4		85-115	%REC	100	11/3/2011 06:01 AM
Surr: Toluene-d8	100		85-115	%REC	100	11/3/2011 06:01 AM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>MB</b>
Chromium, Trivalent	7.8		0.58	mg/Kg-dry	1	11/3/2011 05:00 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 11/3/2011	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	11/3/2011 04:30 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>CG</b>
Moisture	14		0.050	% of sample	1	11/2/2011 02:47 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>JJG</b>
pH	8.65			s.u.	1	11/2/2011 08:40 AM

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

**ALS Group USA, Corp**

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111065

Sample ID: Spill Area North

Lab ID: 1111065-02

Collection Date: 10/28/2011 11:50 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep Date: 11/3/2011	Analyst: RM
DRO (C10-C28)	11		4.8	mg/Kg-dry	1	11/3/2011 12:17 PM
Surr: 4-Terphenyl-d14	83.9		39-115	%REC	1	11/3/2011 12:17 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015</b>			Analyst: JD
GRO (C6-C10)	10		5.9	mg/Kg-dry	100	11/3/2011 08:06 AM
Surr: Toluene-d8	102		50-150	%REC	100	11/3/2011 08:06 AM
<b>MERCURY BY CVAA</b>						
			<b>SW7471</b>		Prep Date: 11/2/2011	Analyst: LR
Mercury	ND		0.022	mg/Kg-dry	1	11/3/2011 01:45 PM
<b>METALS BY ICP-MS</b>						
			<b>SW6020A</b>		Prep Date: 11/2/2011	Analyst: CES
Arsenic	1.6		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Barium	88		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Cadmium	ND		0.42	mg/Kg-dry	2	11/3/2011 03:05 PM
Chromium	6.7		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Copper	6.4		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Lead	7.0		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Nickel	6.5		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Selenium	ND		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Silver	ND		1.1	mg/Kg-dry	2	11/3/2011 03:05 PM
Zinc	25		2.1	mg/Kg-dry	2	11/3/2011 03:05 PM
<b>SUBCONTRACTED ANALYSES</b>						
Subcontracted Analyses	Rcvd 11/5/11		<b>SUBCONTRACT</b>	as noted	1	Analyst: A&LGL 11/5/2011
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep Date: 11/3/2011	Analyst: JJ
Acenaphthene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Anthracene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Benzo(a)anthracene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Benzo(a)pyrene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Benzo(b)fluoranthene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Benzo(g,h,i)perylene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Benzo(k)fluoranthene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Chrysene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Dibenzo(a,h)anthracene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Fluoranthene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Fluorene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Indeno(1,2,3-cd)pyrene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Naphthalene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Pyrene	ND		35	µg/Kg-dry	1	11/3/2011 01:35 PM
Surr: 2,4,6-Tribromophenol	81.5		34-140	%REC	1	11/3/2011 01:35 PM

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

**ALS Group USA, Corp**

Date: 07-Nov-11

**Client:** HRL Compliance Solutions**Project:** Antero Valley Farms J Pad Prod. W. Release 11-288**Work Order:** 1111065**Sample ID:** Spill Area North**Lab ID:** 1111065-02**Collection Date:** 10/28/2011 11:50 AM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: 2-Fluorobiphenyl</i>	73.8		12-100	%REC	1	11/3/2011 01:35 PM
<i>Surr: 2-Fluorophenol</i>	83.8		33-117	%REC	1	11/3/2011 01:35 PM
<i>Surr: 4-Terphenyl-d14</i>	95.5		25-137	%REC	1	11/3/2011 01:35 PM
<i>Surr: Nitrobenzene-d5</i>	79.2		37-107	%REC	1	11/3/2011 01:35 PM
<i>Surr: Phenol-d6</i>	87.0		40-106	%REC	1	11/3/2011 01:35 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>BG</b>
Benzene	ND		120	µg/Kg-dry	100	11/3/2011 06:26 AM
Ethylbenzene	ND		230	µg/Kg-dry	100	11/3/2011 06:26 AM
m,p-Xylene	ND		230	µg/Kg-dry	100	11/3/2011 06:26 AM
o-Xylene	ND		120	µg/Kg-dry	100	11/3/2011 06:26 AM
Toluene	ND		180	µg/Kg-dry	100	11/3/2011 06:26 AM
Xylenes, Total	ND		350	µg/Kg-dry	100	11/3/2011 06:26 AM
<i>Surr: 1,2-Dichloroethane-d4</i>	105		70-120	%REC	100	11/3/2011 06:26 AM
<i>Surr: 4-Bromofluorobenzene</i>	98.0		75-120	%REC	100	11/3/2011 06:26 AM
<i>Surr: Dibromofluoromethane</i>	96.9		85-115	%REC	100	11/3/2011 06:26 AM
<i>Surr: Toluene-d8</i>	101		85-115	%REC	100	11/3/2011 06:26 AM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>MB</b>
Chromium, Trivalent	6.7		0.59	mg/Kg-dry	1	11/3/2011 05:00 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 11/3/2011	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.58	mg/Kg-dry	1	11/3/2011 04:30 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>CG</b>
Moisture	15		0.050	% of sample	1	11/2/2011 01:11 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>JJG</b>
pH	8.96			s.u.	1	11/2/2011 08:30 AM

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



**ALS Group USA, Corp**

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111065

Sample ID: Off Site Sample

Lab ID: 1111065-03

Collection Date: 10/31/2011 11:50 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>6.1</b>		<b>SW8015M</b>		Prep Date: 11/3/2011	Analyst: RM
			<b>5.2</b>	<b>mg/Kg-dry</b>	1	11/3/2011 12:39 PM
Surr: 4-Terphenyl-d14	66.0		39-115	%REC	1	11/3/2011 12:39 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>			Analyst: JD
			<b>6.4</b>	<b>mg/Kg-dry</b>	100	11/3/2011 08:31 AM
Surr: Toluene-d8	99.1		50-150	%REC	100	11/3/2011 08:31 AM
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep Date: 11/2/2011	Analyst: LR
			<b>0.027</b>	<b>mg/Kg-dry</b>	1	11/3/2011 01:47 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>3.3</b>		<b>SW6020A</b>		Prep Date: 11/2/2011	Analyst: CES
			<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Barium</b>	<b>160</b>		<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Cadmium</b>	<b>ND</b>		<b>0.36</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Chromium</b>	<b>15</b>		<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Copper</b>	<b>10</b>		<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Lead</b>	<b>11</b>		<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Nickel</b>	<b>12</b>		<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Selenium</b>	<b>ND</b>		<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Silver</b>	<b>ND</b>		<b>0.90</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>Zinc</b>	<b>48</b>		<b>1.8</b>	<b>mg/Kg-dry</b>	2	11/3/2011 03:10 PM
<b>SUBCONTRACTED ANALYSES</b>						
Subcontracted Analyses	Rcvd 11/5/11		<b>SUBCONTRACT</b>			Analyst: A&LGL
			<b>as noted</b>		1	11/5/2011
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: 11/3/2011	Analyst: JJ
			<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Anthracene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Benzo(a)anthracene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Benzo(a)pyrene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Chrysene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Fluoranthene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Fluorene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Naphthalene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
<b>Pyrene</b>	<b>ND</b>		<b>37</b>	<b>µg/Kg-dry</b>	1	11/3/2011 02:12 PM
Surr: 2,4,6-Tribromophenol	75.4		34-140	%REC	1	11/3/2011 02:12 PM

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

**ALS Group USA, Corp**

Date: 07-Nov-11

Client: HRL Compliance Solutions

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

Work Order: 1111065

Sample ID: Off Site Sample

Lab ID: 1111065-03

Collection Date: 10/31/2011 11:50 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	61.0		12-100	%REC	1	11/3/2011 02:12 PM
Surr: 2-Fluorophenol	79.6		33-117	%REC	1	11/3/2011 02:12 PM
Surr: 4-Terphenyl-d14	93.6		25-137	%REC	1	11/3/2011 02:12 PM
Surr: Nitrobenzene-d5	77.8		37-107	%REC	1	11/3/2011 02:12 PM
Surr: Phenol-d6	84.0		40-106	%REC	1	11/3/2011 02:12 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>BG</b>
Benzene	ND		130	µg/Kg-dry	100	11/3/2011 06:51 AM
Ethylbenzene	ND		260	µg/Kg-dry	100	11/3/2011 06:51 AM
m,p-Xylene	ND		260	µg/Kg-dry	100	11/3/2011 06:51 AM
o-Xylene	ND		130	µg/Kg-dry	100	11/3/2011 06:51 AM
Toluene	ND		190	µg/Kg-dry	100	11/3/2011 06:51 AM
Xylenes, Total	ND		380	µg/Kg-dry	100	11/3/2011 06:51 AM
Surr: 1,2-Dichloroethane-d4	104		70-120	%REC	100	11/3/2011 06:51 AM
Surr: 4-Bromofluorobenzene	98.0		75-120	%REC	100	11/3/2011 06:51 AM
Surr: Dibromofluoromethane	96.9		85-115	%REC	100	11/3/2011 06:51 AM
Surr: Toluene-d8	101		85-115	%REC	100	11/3/2011 06:51 AM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>MB</b>
Chromium, Trivalent	15		0.64	mg/Kg-dry	1	11/3/2011 05:00 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 11/3/2011	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.63	mg/Kg-dry	1	11/3/2011 04:30 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>CG</b>
Moisture	22		0.050	% of sample	1	11/2/2011 01:11 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>JJG</b>
pH	8.68			s.u.	1	11/2/2011 08:30 AM

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

Report Number: F11307-0734

Account Number: 91000

# A & L GREAT LAKES LABORATORIES, INC.

3505 Conestoga Drive • Fort Wayne, Indiana 46808-4413 • Phone 260-483-4759 • Fax 260-483-5274

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

TO: ALS LABORATORY GROUP  
3352 128TH AVE  
HOLLAND, MI 49424-9263

RE: 1111065

DATE RECEIVED: 11/03/2011

DATE REPORTED: 11/05/2011

PAGE: 1

P.O. NUMBER: 20-122011146

ATTN: ANN PRESTON

## REPORT OF ANALYSIS

43756	01B	Sat'd Paste Extraction with DIW	1		USDA Handbook 60
		Conductivity (ECe)	3.71	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	76	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	22	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	1048	ppm	USDA Handbook 60
		Sodium Adsorption Ratio	27.2	-	USDA Handbook 60
43757	02B	Sat'd Paste Extraction with DIW	1		USDA Handbook 60
		Conductivity (ECe)	1.39	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	41	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	11	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	1081	ppm	USDA Handbook 60
		Sodium Adsorption Ratio	38.6	-	USDA Handbook 60
43758	03B	Sat'd Paste Extraction with DIW	1		USDA Handbook 60
		Conductivity (ECe)	0.66	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	40	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	20	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	367	ppm	USDA Handbook 60
		Sodium Adsorption Ratio	11.8	-	USDA Handbook 60

# ALS Group USA, Corp

Date: 07-Nov-11

Client: HRL Compliance Solutions

Work Order: 1111065

Project: Antero Valley Farms J Pad Prod. W. Release 11-288

## QC BATCH REPORT

Batch ID: 37092 Instrument ID GC8 Method: SW8015M

<b>MBLK</b>		Sample ID: DBLKS1-37092-37092				Units: mg/Kg		Analysis Date: 11/3/2011 11:55 AM		
Client ID:		Run ID: GC8_111103A				SeqNo: 1806126		Prep Date: 11/3/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.151	0	1.667	0	69	39-115	0			

<b>LCS</b>		Sample ID: DLCSS1-37092-37092				Units: mg/Kg		Analysis Date: 11/3/2011 11:10 AM		
Client ID:		Run ID: GC8_111103A				SeqNo: 1810008		Prep Date: 11/3/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	161.8	4.2	166.7	0	97.1	60-130	0			
Surr: 4-Terphenyl-d14	1.102	0	1.667	0	66.1	39-115	0			

<b>LCSD</b>		Sample ID: DLCSDS1-37092-37092				Units: mg/Kg		Analysis Date: 11/3/2011 11:10 AM		
Client ID:		Run ID: GC8_111103A				SeqNo: 1810010		Prep Date: 11/3/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	164.1	4.2	166.7	0	98.5	60-130	161.8	1.43	30	
Surr: 4-Terphenyl-d14	1.044	0	1.667	0	62.6	39-115	1.102	5.44	30	

The following samples were analyzed in this batch: 1111065-01A 1111065-02A 1111065-03A

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐ 1111065  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: R97189 Instrument ID GC10 Method: SW8015

<b>MBLK</b>		Sample ID: MBLK-R97189-R97189				Units: µg/L		Analysis Date: 11/3/2011 01:51 AM		
Client ID:		Run ID: GC10_111103A				SeqNo: 1805947		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
Surr: Toluene-d8	93.35	0	100	0	93.4	70-130	0			

<b>LCS</b>		Sample ID: LCS-R97189-R97189				Units: µg/L		Analysis Date: 11/3/2011 12:36 PM		
Client ID:		Run ID: GC10_111103A				SeqNo: 1805948		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	25710	200	25000	0	103	70-130	0			
Surr: Toluene-d8	89.25	0	100	0	89.2	70-130	0			

<b>LCSD</b>		Sample ID: LCSD-R97189-R97189				Units: µg/L		Analysis Date: 11/3/2011 01:01 AM		
Client ID:		Run ID: GC10_111103A				SeqNo: 1805946		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	24860	200	25000	0	99.4	70-130	25710	3.36	30	
Surr: Toluene-d8	90.34	0	100	0	90.3	70-130	89.25	1.21	30	

The following samples were analyzed in this batch:

1111065-01A	1111065-02A	1111065-03A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

☐ ☐ ☐ ☐: HRL Compliance Solutions  
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Batch ID: 37082 Instrument ID HG1 Method: SW7471

MBLK		Sample ID: MBLK-37082-37082				Units: mg/Kg		Analysis Date: 11/3/2011 01:12 PM		
Client ID:		Run ID: HG1_111103A				SeqNo: 1805727		Prep Date: 11/2/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-37082-37082				Units: mg/Kg		Analysis Date: 11/3/2011 01:14 PM		
Client ID:		Run ID: HG1_111103A				SeqNo: 1805728		Prep Date: 11/2/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1666 0.020 0.1665 0 100 80-120 0

LCSD		Sample ID: LCSD-37082-37082				Units: mg/Kg		Analysis Date: 11/3/2011 01:16 PM			
Client ID:		Run ID: HG1_111103A				SeqNo: 1805729		Prep Date: 11/2/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 0.1668 0.020 0.1665 0 100 80-120 0.1666 0.15 20

MS		Sample ID: 1111055-02BMS				Units: mg/Kg		Analysis Date: 11/3/2011 01:25 PM		
Client ID:		Run ID: HG1_111103A				SeqNo: 1805733		Prep Date: 11/2/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1482 0.017 0.1409 0.001573 104 75-125 0

MSD		Sample ID: 1111055-02BMSD				Units: mg/Kg		Analysis Date: 11/3/2011 01:27 PM		
Client ID:		Run ID: HG1_111103A				SeqNo: 1805734		Prep Date: 11/2/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1491 0.017 0.1452 0.001573 102 75-125 0.1482 0.599 35

The following samples were analyzed in this batch: 1111065-01A 1111065-02A 1111065-03A

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

☐ ☐ ☐: HRL Compliance Solutions  
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☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: 37086      Instrument ID ICPMS1      Method: SW6020A

**MBLK**      Sample ID: MBLK-37086-37086      Units: mg/Kg      Analysis Date: 11/3/2011 01:35 PM

Client ID:      Run ID: ICPMS1\_111103A      SeqNo: 1805872      Prep Date: 11/2/2011      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

**LCS**      Sample ID: LCS-37086-37086      Units: mg/Kg      Analysis Date: 11/3/2011 01:40 PM

Client ID:      Run ID: ICPMS1\_111103A      SeqNo: 1805873      Prep Date: 11/2/2011      DF: 2

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.219	0.50	5	0	84.4	80-120	0			
Barium	4.283	0.50	5	0	85.7	80-120	0			
Cadmium	4.552	0.20	5	0	91	80-120	0			
Chromium	4.311	0.50	5	0	86.2	80-120	0			
Copper	4.364	0.50	5	0	87.3	80-120	0			
Lead	4.319	0.50	5	0	86.4	80-120	0			
Nickel	4.377	0.50	5	0	87.5	80-120	0			
Selenium	4.056	0.50	5	0	81.1	80-120	0			
Zinc	4.374	1.0	5	0	87.5	80-120	0			

**LCS**      Sample ID: LCS-37086-37086      Units: mg/Kg      Analysis Date: 11/3/2011 02:54 PM

Client ID:      Run ID: ICPMS1\_111103A      SeqNo: 1805884      Prep Date: 11/2/2011      DF: 2

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	4.012	0.50	5	0	80.2	80-120	0			

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

☐ ☐ ☐: HRL Compliance Solutions  
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☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: 37086 Instrument ID ICPMS1 Method: SW6020A

LCSD		Sample ID: LCSD-37086-37086				Units: mg/Kg		Analysis Date: 11/3/2011 01:46 PM		
Client ID:		Run ID: ICPMS1_111103A				SeqNo: 1805874		Prep Date: 11/2/2011		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.523	0.50	5	0	90.5	80-120	4.33	4.36	20	
Barium	4.52	0.50	5	0	90.4	80-120	4.669	3.24	20	
Cadmium	4.848	0.20	5	0	97	80-120	4.795	1.1	20	
Chromium	4.583	0.50	5	0	91.7	80-120	4.428	3.44	20	
Copper	4.869	0.50	5	0	97.4	80-120	4.601	5.66	20	
Lead	4.645	0.50	5	0	92.9	80-120	4.565	1.74	20	
Nickel	4.654	0.50	5	0	93.1	80-120	4.428	4.98	20	
Selenium	4.434	0.50	5	0	88.7	80-120	4.303	3	20	
Silver	4.093	0.50	5	0	81.9	80-120	4.012	2	20	
Zinc	4.772	1.0	5	0	95.4	80-120	4.59	3.89	20	

MS		Sample ID: 1111055-02BMS				Units: mg/Kg		Analysis Date: 11/3/2011 01:56 PM		
Client ID:		Run ID: ICPMS1_111103A				SeqNo: 1805876		Prep Date: 11/2/2011		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.534	0.80	8	0.7559	84.7	80-120	0			
Barium	13.04	0.80	8	6.206	85.4	80-120	0			
Cadmium	7.374	0.32	8	0.02514	91.9	80-120	0			
Chromium	13.19	0.80	8	4.449	109	80-120	0			
Copper	9.734	0.80	8	2.927	85.1	80-120	0			
Lead	8.701	0.80	8	1.352	91.9	80-120	0			
Nickel	9.648	0.80	8	2.859	84.9	80-120	0			
Selenium	6.624	0.80	8	0.08396	81.8	80-120	0			
Silver	5.666	0.80	8	0.001869	70.8	80-120	0			S
Zinc	12.82	1.6	8	7.04	72.2	80-120	0			S

MSD		Sample ID: 1111055-02BMSD				Units: mg/Kg		Analysis Date: 11/3/2011 02:01 PM		
Client ID:		Run ID: ICPMS1_111103A				SeqNo: 1805877		Prep Date: 11/2/2011		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.447	0.79	7.924	0.7559	84.4	80-120	7.534	1.17	25	
Barium	14.33	0.79	7.924	6.206	102	80-120	13.04	9.44	25	
Cadmium	7.258	0.32	7.924	0.02514	91.3	80-120	7.374	1.59	25	
Chromium	10.6	0.79	7.924	4.449	77.7	80-120	13.19	21.8	25	S
Copper	9.087	0.79	7.924	2.927	77.7	80-120	9.734	6.88	25	S
Lead	8.588	0.79	7.924	1.352	91.3	80-120	8.701	1.31	25	
Nickel	9.431	0.79	7.924	2.859	82.9	80-120	9.648	2.27	25	
Selenium	6.536	0.79	7.924	0.08396	81.4	80-120	6.624	1.34	25	
Silver	5.583	0.79	7.924	0.001869	70.4	80-120	5.666	1.47	25	S
Zinc	12.99	1.6	7.924	7.04	75	80-120	12.82	1.29	25	S

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



Client: HRL Compliance Solutions

Report Date: 11/11/2015

Sample ID: 1111065

Location: Antero Valley Farms J Pad Prod. W. Release 11-288

Batch ID: 37086

Instrument ID ICPMS1

Method: SW6020A

The following samples were analyzed in this batch:

1111065-01A	1111065-02A	1111065-03A
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☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐ 1111065  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Batch ID: 37090 Instrument ID SVMS5 Method: SW8270

MBLK Sample ID: SBLKS1-37090-37090 Units:  $\mu\text{g/Kg}$  Analysis Date: 11/3/2011 10:34 AM

Client ID: Run ID: SVMS5\_111103A Seq No: 1805577 Prep Date: 11/3/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
Surr: 2,4,6-Tribromophenol	1286	0	1667	0	77.2	34-140		0		
Surr: 2-Fluorobiphenyl	1352	0	1667	0	81.1	12-100		0		
Surr: 2-Fluorophenol	1487	0	1667	0	89.2	33-117		0		
Surr: 4-Terphenyl-d14	1831	0	1667	0	110	25-137		0		
Surr: Nitrobenzene-d5	1426	0	1667	0	85.6	37-107		0		
Surr: Phenol-d6	1523	0	1667	0	91.4	40-106		0		

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ ☐ ☐ ☐ ☐ ☐ 1111065  
☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: 37090 Instrument ID SVMS5 Method: SW8270

LCS		Sample ID: SLCSS1-37090-37090				Units: µg/Kg		Analysis Date: 11/3/2011 11:10 AM		
Client ID:		Run ID: SVMS5_111103A				SeqNo: 1805578		Prep Date: 11/3/2011		DE: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1016	30	1333	0	76.2	45-110	0			
Anthracene	1036	30	1333	0	77.7	55-105	0			
Benzo(a)anthracene	1085	30	1333	0	81.4	50-110	0			
Benzo(a)pyrene	1106	30	1333	0	83	50-110	0			
Benzo(b)fluoranthene	1069	30	1333	0	80.2	45-115	0			
Benzo(g,h,i)perylene	1192	30	1333	0	89.4	40-125	0			
Benzo(k)fluoranthene	1302	30	1333	0	97.6	45-115	0			
Chrysene	1054	30	1333	0	79.1	55-110	0			
Dibenzo(a,h)anthracene	1200	30	1333	0	90	40-125	0			
Fluoranthene	1123	30	1333	0	84.3	55-115	0			
Fluorene	1087	30	1333	0	81.6	50-110	0			
Indeno(1,2,3-cd)pyrene	1188	30	1333	0	89.1	40-120	0			
Naphthalene	996.3	30	1333	0	74.7	40-105	0			
Pyrene	1101	30	1333	0	82.6	45-125	0			
Surr: 2,4,6-Tribromophenol	1397	0	1667	0	83.8	34-140	0			
Surr: 2-Fluorobiphenyl	1218	0	1667	0	73.1	12-100	0			
Surr: 2-Fluorophenol	1250	0	1667	0	75	33-117	0			
Surr: 4-Terphenyl-d14	1457	0	1667	0	87.4	25-137	0			
Surr: Nitrobenzene-d5	1290	0	1667	0	77.4	37-107	0			
Surr: Phenol-d6	1264	0	1667	0	75.8	40-106	0			

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

☐ ☐ ☐: HRL Compliance Solutions  
☐ o ☐ ☐ ☐ ☐ 1111065  
☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: 37090 Instrument ID SVMS5 Method: SW8270

LCSD		Sample ID: SLCSDS1-37090-37090				Units: µg/Kg		Analysis Date: 11/3/2011 11:46 AM		
Client ID:		Run ID: SVMS5 111103A				SeqNo: 1805579		Prep Date: 11/3/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1137	30	1333	0	85.3	45-110	1016	11.2	25	
Anthracene	1126	30	1333	0	84.5	55-105	1036	8.39	25	
Benzo(a)anthracene	1196	30	1333	0	89.7	50-110	1085	9.7	25	
Benzo(a)pyrene	1205	30	1333	0	90.4	50-110	1106	8.57	25	
Benzo(b)fluoranthene	1239	30	1333	0	92.9	45-115	1069	14.7	25	
Benzo(g,h,i)perylene	1285	30	1333	0	96.4	40-125	1192	7.54	25	
Benzo(k)fluoranthene	1290	30	1333	0	96.7	45-115	1302	0.926	25	
Chrysene	1106	30	1333	0	83	55-110	1054	4.78	25	
Dibenzo(a,h)anthracene	1309	30	1333	0	98.2	40-125	1200	8.69	25	
Fluoranthene	1225	30	1333	0	91.9	55-115	1123	8.63	25	
Fluorene	1202	30	1333	0	90.1	50-110	1087	9.99	25	
Indeno(1,2,3-cd)pyrene	1288	30	1333	0	96.6	40-120	1188	8.05	25	
Naphthalene	1108	30	1333	0	83.1	40-105	996.3	10.6	25	
Pyrene	1192	30	1333	0	89.4	45-125	1101	7.88	25	
Surr: 2,4,6-Tribromophenol	1491	0	1667	0	89.4	34-140	1397	6.51	40	
Surr: 2-Fluorobiphenyl	1354	0	1667	0	81.2	12-100	1218	10.6	40	
Surr: 2-Fluorophenol	1416	0	1667	0	85	33-117	1250	12.5	40	
Surr: 4-Terphenyl-d14	1559	0	1667	0	93.6	25-137	1457	6.79	40	
Surr: Nitrobenzene-d5	1462	0	1667	0	87.7	37-107	1290	12.5	40	
Surr: Phenol-d6	1381	0	1667	0	82.9	40-106	1264	8.9	40	

The following samples were analyzed in this batch: 1111065-01A 1111065-02A 1111065-03A

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

☐ ☐ ☐ HRL Compliance Solutions  
☐ ☐ ☐ ☐ 1111065  
☐ ☐ ☐ Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: R97163 Instrument ID VMS6 Method: SW8260

<b>MBLK</b>		Sample ID: VBLKW2-111102-R97163				Units: µg/L	Analysis Date: 11/2/2011 10:57 PM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805525	Prep Date:		DF: 1	
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	3.0								
Surr: 1,2-Dichloroethane-d4	102.2	0	100	0	102	70-120	0			
Surr: 4-Bromofluorobenzene	97.87	0	100	0	97.9	75-120	0			
Surr: Dibromofluoromethane	101	0	100	0	101	85-115	0			
Surr: Toluene-d8	99.49	0	100	0	99.5	85-120	0			

<b>LCS</b>		Sample ID: VLCSW1-111102-R97163				Units: µg/L	Analysis Date: 11/2/2011 09:43 PM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805523	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.22	1.0	20	0	106	80-120	0			
Ethylbenzene	21.43	1.0	20	0	107	75-125	0			
m,p-Xylene	43.16	2.0	40	0	108	75-130	0			
o-Xylene	21.05	1.0	20	0	105	80-120	0			
Toluene	21.56	1.0	20	0	108	75-120	0			
Xylenes, Total	64.21	3.0	60	0	107	75-130	0			
Surr: 1,2-Dichloroethane-d4	100.7	0	100	0	101	70-120	0			
Surr: 4-Bromofluorobenzene	100.4	0	100	0	100	75-120	0			
Surr: Dibromofluoromethane	103.4	0	100	0	103	85-115	0			
Surr: Toluene-d8	100.4	0	100	0	100	85-120	0			

<b>LCSD</b>		Sample ID: VLCSDW1-111102-R97163				Units: µg/L	Analysis Date: 11/2/2011 10:07 PM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805524	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.48	1.0	20	0	112	80-120	21.22	5.77	30	
Ethylbenzene	22.5	1.0	20	0	112	75-125	21.43	4.87	30	
m,p-Xylene	45.58	2.0	40	0	114	75-130	43.16	5.45	30	
o-Xylene	22.27	1.0	20	0	111	80-120	21.05	5.63	30	
Toluene	22.67	1.0	20	0	113	75-120	21.56	5.02	30	
Xylenes, Total	67.85	3.0	60	0	113	75-130	64.21	5.51	30	
Surr: 1,2-Dichloroethane-d4	101.1	0	100	0	101	70-120	100.7	0.327	30	
Surr: 4-Bromofluorobenzene	99.53	0	100	0	99.5	75-120	100.4	0.88	30	
Surr: Dibromofluoromethane	103	0	100	0	103	85-115	103.4	0.329	30	
Surr: Toluene-d8	100.2	0	100	0	100	85-120	100.4	0.189	30	

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

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☐ ☐ ☐ ☐: Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: R97163 Instrument ID VMS6 Method: SW8260

<b>MS</b>		Sample ID: 1110959-01A MS				Units: µg/L	Analysis Date: 11/3/2011 07:41 AM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805538	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	23.18	1.0	20	0	116	80-120	0			
Ethylbenzene	22.12	1.0	20	0	111	75-125	0			
m,p-Xylene	45.17	2.0	40	0	113	75-130	0			
o-Xylene	21.77	1.0	20	0	109	80-120	0			
Toluene	22.61	1.0	20	0	113	75-120	0			
Xylenes, Total	66.94	3.0	60	0	112	75-130	0			
Surr: 1,2-Dichloroethane-d4	104	0	100	0	104	70-120	0			
Surr: 4-Bromofluorobenzene	100.2	0	100	0	100	75-120	0			
Surr: Dibromofluoromethane	103.8	0	100	0	104	85-115	0			
Surr: Toluene-d8	99.18	0	100	0	99.2	85-120	0			

<b>MSD</b>		Sample ID: 1110959-01A MSD				Units: µg/L	Analysis Date: 11/3/2011 08:06 AM			
Client ID:		Run ID: VMS6_111102A				SeqNo: 1805539	Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.88	1.0	20	0	114	80-120	23.18	1.3	30	
Ethylbenzene	21.95	1.0	20	0	110	75-125	22.12	0.771	30	
m,p-Xylene	44.48	2.0	40	0	111	75-130	45.17	1.54	30	
o-Xylene	21.81	1.0	20	0	109	80-120	21.77	0.184	30	
Toluene	22.49	1.0	20	0	112	75-120	22.61	0.532	30	
Xylenes, Total	66.29	3.0	60	0	110	75-130	66.94	0.976	30	
Surr: 1,2-Dichloroethane-d4	103.7	0	100	0	104	70-120	104	0.327	30	
Surr: 4-Bromofluorobenzene	98.84	0	100	0	98.8	75-120	100.2	1.38	30	
Surr: Dibromofluoromethane	104.2	0	100	0	104	85-115	103.8	0.327	30	
Surr: Toluene-d8	99.76	0	100	0	99.8	85-120	99.18	0.583	30	

The following samples were analyzed in this batch:

1111065-01A 1111065-02A 1111065-03A

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

HRL Compliance Solutions  
 1111065  
 Antero Valley Farms J Pad Prod. W. Release 11-288

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Batch ID: 37147 Instrument ID WETCHEM Method: SW7196A

MBLK				Sample ID: MBLK-37147-37147				Units: mg/Kg		Analysis Date: 11/3/2011 04:30 PM			
Client ID:				Run ID: WETCHEM_1111030				SeqNo: 1806147		Prep Date: 11/3/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Chromium, Hexavalent	ND	0.50											

LCS				Sample ID: LCS-37147-37147			Units: mg/Kg		Analysis Date: 11/3/2011 04:30 PM		
Client ID:		Run ID: WETCHEM_1111030			SeqNo: 1806145		Prep Date: 11/3/2011		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chromium, Hexavalent	1.972	0.50	2	0	98.6	75-110	0				

LCSD				Sample ID: LCSD-37147-37147				Units: mg/Kg				Analysis Date: 11/3/2011 04:30 PM									
Client ID:				Run ID: WETCHEM_1111030				SeqNo: 1806146				Prep Date: 11/3/2011				DF: 1					
Analyte		Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	
Chromium, Hexavalent		1.924		0.50		2		0		96.2		75-110		1.972		2.46		20			

MS				Sample ID: 1111083-01B MS		Units: mg/Kg		Analysis Date: 11/3/2011 04:30 PM		
Client ID:		Run ID: WETCHEM_1111030			SeqNo: 1806143		Prep Date: 11/3/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.7448	0.50	1.991	0	37.4	60-130	0			S

MSD				Sample ID: 1111083-01B MSD				Units: mg/Kg		Analysis Date: 11/3/2011 04:30 PM			
Client ID:				Run ID: WETCHEM_1111030				SeqNo: 1806144		Prep Date: 11/3/2011		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Chromium, Hexavalent	0.7797	0.49	1.949	0	40	60-130	0.7448	4.59	30	S			

The following samples were analyzed in this batch:

1111065-01A	1111065-02A	1111065-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

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DUP				Sample ID: 1111055-05B DUP				Units: s.u.		Analysis Date: 11/2/2011 08:30 AM	
Client ID:				Run ID: WETCHEM_111102D				SeqNo: 1804061		Prep Date:	
								DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	8.46	0	0	0	0	0-0	8.46	0	20		

1111065-02A	1111065-03A
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Batch ID: R97108 Instrument ID WETCHEM Method: SW9045D

<b>LCS</b>		Sample ID: LCS-R97108-R97108				Units: s.u.		Analysis Date: 11/2/2011 08:40 AM		
Client ID:		Run ID: WETCHEM_111102E				SeqNo: 1804176		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.32	0	4.4	0	98.2	90-110	0			

<b>DUP</b>		Sample ID: 1111065-01A DUP				Units: s.u.		Analysis Date: 11/2/2011 08:40 AM		
Client ID: Spill Area East		Run ID: WETCHEM_111102E				SeqNo: 1804178		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.65	0	0	0	0	0-0	8.65	0	20	

<b>DUP</b>		Sample ID: 1111089-01A DUP				Units: s.u.		Analysis Date: 11/2/2011 08:40 AM		
Client ID:		Run ID: WETCHEM_111102E				SeqNo: 1804191		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.86	0	0	0	0	0-0	7.86	0	20	

The following samples were analyzed in this batch:

1111065-01A

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

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Batch ID: R97156 Instrument ID MOIST Method: A2540 G

MBLK		Sample ID: WBLKS1-R97156			Units: % of sample		Analysis Date: 11/2/2011 01:11 PM			
Client ID:		Run ID: MOIST-111102D		SeqNo: 1805320		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.050								

LCS Sample ID: LCS-R97156				Units: % of sample		Analysis Date: 11/2/2011 01:11 PM				
Client ID:		Run ID: MOIST-111102D			SeqNo: 1805319		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.050	100	0	100	99.5-100.5	0			

DUP				Sample ID: 1111043-01ADUP				Units: % of sample				Analysis Date: 11/2/2011 01:11 PM											
Client ID:				Run ID: MOIST-111102D				SeqNo: 1805298				Prep Date:				DF: 1							
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	
Moisture				13.55		0.050		0		0		0		0-0		13.9		2.55		20			

DUP Sample ID: 1111043-05ADUP				Units: % of sample		Analysis Date: 11/2/2011 01:11 PM				
Client ID:		Run ID: MOIST-111102D		SeqNo: 1805303		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	14.87	0.050	0	0	0	0-0	14.28	4.05	20	

The following samples were analyzed in this batch:

1111065-02A 1111065-03A

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

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Batch ID: R97158 Instrument ID MOIST Method: A2540 G

MBLK		Sample ID: WBLKS1-R97158			Units: % of sample		Analysis Date: 11/2/2011 02:47 PM			
Client ID:		Run ID: MOIST_111102F			SeqNo: 1805421		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.050								

LCS				Sample ID: LCS-R97158		Units: % of sample		Analysis Date: 11/2/2011 02:47 PM		
Client ID:		Run ID: MOIST_111102F			SeqNo: 1805419		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.050	100	0	100	99.5-100.5	0			

DUP		Sample ID: 1111048-12ADUP1				Units: % of sample		Analysis Date: 11/2/2011 02:47 PM		
Client ID:		Run ID: MOIST_111102F				SeqNo: 1805396		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	65.88	0.050	0	0	0	0-0	65.61	0.411	20	

DUP				Sample ID: 1111048-12ADUP2			Units: % of sample		Analysis Date: 11/2/2011 02:47 PM		
Client ID:		Run ID: MOIST_111102F			SeqNo: 1805398		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	66.87	0.050	0	0	0	0-0	65.61	1.9	20		

DUP		Sample ID: 1111048-16ADUP				Units: % of sample		Analysis Date: 11/2/2011 02:47 PM		
Client ID:		Run ID: MOIST_111102F				SeqNo: 1805408		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	67.11	0.050	0	0	0	0-0	67.79	1.01	20	

The following samples were analyzed in this batch:

1111065-01A





WORKORDER #	1111065
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Form 202r8

\*Time Zone (Circle): EST CST **NST** 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.**

<b>Comments:</b>  <div style="text-align: center; font-size: 2em;">4.4'2</div>	<b>QC PACKAGE (check below)</b>	
	x	<b>LEVEL II (Standard QC)</b>
		<b>LEVEL III (Std QC + forms)</b>
		<b>LEVEL IV (Std QC + forms + raw data)</b>
<b>Preservative Key:</b> 1-HCl   2-HNO3   3-H2SO4   4-NaOH   5-NaHSO4   7-Other   8-4 degrees C   9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		DANIEL PINEDAR	10/31/2011	1700
RECEIVED BY		Diane F Shan	11/2/11	1000
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				



Environmental

Subcontractor:

A & L Great Lakes Agricultural Lab  
3505 Conestoga Dr

TEL: (260) 483-4759

FAX: (260) 483-5274

Acct #: 91000

Ft. Wayne, IN 46808

Salesperson

Debbie Fazio

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 02-Nov-11

COC ID: 3270

Due Date: 03-Nov-11

Customer Information		Project Information		Parameter/Method		Analysis	
Purchase Order	20-122011146	Project Name	1111065	A	Subcontracted Analyses (SUBCONTRACT) SAR-EC		
Work Order		Project Number		B			
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C			
Send Report To	Ann Preston	Inv Attn	Accounts Payable	D			
Address	3352 128th Avenue	Address	3352 128th Avenue	E			
City/State/Zip	Holland, Michigan 49424-9263	City/State/Zip	Holland, Michigan 49424-9263	F			
Phone	(616) 399-6070	Phone	(616) 399-6070	G			
Fax	(616) 399-6185	Fax	(616) 399-6185	H			
eMail Address	ann.preston@alsglobal.com	eMail CC		I			
J							

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1111065-01B	Soil	28/Oct/2011 12:10	(1) 80ZGNEAT	X									
1111065-02B	Soil	28/Oct/2011 11:50	(1) 80ZGNEAT	X									
1111065-03B	Soil	31/Oct/2011 11:50	(1) 80ZGNEAT	X									

## Comments:

Please analyze for SAR-EC. Email results to Ann Preston.

Relinquished by: *Ann Preston* Date/Time: 11/2/11 12:30

Received by:

Date/Time

Cooler IDs

Report/QC Level

Relinquished by:

Date/Time

Received by:

Date/Time

# ALS Group USA, Corp

## Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 02-Nov-11 10:00

Work Order: 1111065

Received by: DS

Checklist completed by Diane Shaw  
eSignature

02-Nov-11  
Date

Reviewed by: Ann Preston  
eSignature

03-Nov-11  
Date

Matrices: Soil

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 type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			
Login Notes:			

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

SEAL  
DATE  
SIGNATURE

**QEC**  
Quality Environmental Containers  
800-255-3960 • 304-255-3900

**fedex** NEW Package  
Express US Airbill

8769 1479 5772

0200

FedEx Retrieval Copy

fedex.com 1800.GoFedEx 1800.463.3339

1 From  
Date: 10/1/01 Sender's FedEx Account Number  
Sender's Name: Phone:  
Company:  
Address:  
City: State: ZIP:

2 Your Internal Billing Reference

3 To  
Recipient's Name: Phone:  
Company:  
Address:  
We cannot deliver to PO boxes or PO ZIP codes.  
Address:  
Use this box for the (RTO) for when address is for completion of your shipping address.  
City: State: ZIP:

4 Express Packaging Service

NOTE: Service at this time is limited. Please select carefully.

24/7x24 Business Day

- 06 FedEx First Overnight  
Earliest next business morning delivery to select locations. Today shipments will be delivered on Monday before 7:00 AM. Delivery is subject to selection.
- 01 FedEx Priority Overnight  
Next business morning delivery to select locations. Today shipments will be delivered on Monday before 10:00 AM. Delivery is subject to selection.
- 05 FedEx Standard Overnight  
Next business morning delivery to select locations. Saturday delivery not available.

24/7x24 Business Day

- 49 Next Business Day  
Earliest next business morning delivery to select locations. Saturday delivery not available.
- 03 FedEx 2Day  
Second business morning delivery to select locations. Saturday delivery not available.
- 20 FedEx Express Saver  
Third business day delivery to select locations. Saturday delivery not available.

5 Packaging

- 06 FedEx Envelope 02 FedEx Pak 03 FedEx Box 04 FedEx Tube 01 Other

6 Special Handling and Delivery Signature Options

03 SATURDAY DELIVERY

- No Signature Required  
Signature may be left without obtaining a signature for delivery.
- 10 Direct Signature  
Shipment requires signature of addressee or authorized agent. Fee applies.
- 34 Indirect Signature  
If no one is available at recipient's address, someone at a nearby address may sign for delivery. Fee applies.
- Does this shipment contain dangerous goods?  
One box must be checked.  
Yes No  
No 04 Yes  
Shipper's Declaration Shipper's Declaration  
If dangerous goods are shipped, a Shipper's Declaration must be completed and attached to the shipping label.  
06 Dry Ice  
Dry Ice  
Cargo Aircraft Only

7 Payment By:

- Sender's Account 2 Recipient 3 Third Party 4 Credit Card 5 Cash/Check

Total Packages: 13 Total Weight: 13.5



8769 1479 5772

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Inspector Name: KELLERBY, SHAUN

FORM  
INSP

Rev  
05/11

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109



DE ET OE ES

Inspection Date:

06/12/2012

Document Number:

668100101

Overall Inspection:

Satisfactory

FIELD INSPECTION FORM

Location Identifier Facility ID Loc ID Tracking Type  
416703 416703 Inspector Name: KELLERBY, SHAUN

Operator Information:

OGCC Operator Number: 10079 Name of Operator: ANTERO RESOURCES PICEANCE CORPORATION

Address: 1625 17TH ST STE 300

City: DENVER State: CO Zip: 80202

Contact Information:

Contact Name	Phone	Email	Comment
Black, Jon	970 625 9922/(435) 237-1169	jblack@anteroresources.com	Operations Manager: Piceance Basin

Compliance Summary:

QtrQtr: NWNW Sec: 13 Twp: 6S Range: 92W

Inspector Comment:

Water pipe line on pad. Frac tanks used to store and move water located on pad site. No tanks or equipment on pad, No wells drilled.

Related Facilities:

Facility ID	Type	Status	Status Date	Well Class	API Num	Facility Name	
416703	LOCATION	AC			-	Valley Farms J Pad Valley Farms J1	<input checked="" type="checkbox"/>
416726	WELL	XX	04/20/2010		045-19343	Valley Farms J2	<input checked="" type="checkbox"/>
416730	WELL	XX	04/20/2010		045-19344	Valley Farms J4	<input checked="" type="checkbox"/>
416879	WELL	XX	04/28/2010		045-19392	Valley Farms J1	<input checked="" type="checkbox"/>
416880	WELL	XX	04/28/2010		045-19393	Valley Farms J3	<input checked="" type="checkbox"/>

Equipment:

Location Inventory

Special Purpose Pits:	Drilling Pits:	Wells:	20	Production Pits:
Condensate Tanks: 2	Water Tanks: 4	Separators:	5	Electric Motors:
Gas or Diesel Motors:	Cavity Pumps:	LACT Unit:		Pump Jacks:
Electric Generators:	Gas Pipeline: 1	Oil Pipeline:	1	Water Pipeline: 1
Gas Compressors:	VOC Combustor: 1	Oil Tanks:		Dehydrator Units:
Multi-Well Pits:	Pigging Station: 1	Flare:		Fuel Tanks:

Location

Emergency Contact Number: (S/U/V) Corrective Date:

Comment:

Corrective Action:

Spills:

Type	Area	Volume	Corrective action	CA Date
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☐ Multiple Spills and Releases?

**Venting:**

Yes/No

Comment

**Flaring:**

Type

Satisfactory/Unsatisfactory

Comment

Corrective Action

CA Date

**Predrill**

Location ID: 416703

**Site Preparation:**

Lease Road Adeq.: \_\_\_\_\_

Pads: \_\_\_\_\_

Soil Stockpile: \_\_\_\_\_

Corrective Action: \_\_\_\_\_

Date: \_\_\_\_\_ CDP Num.: \_\_\_\_\_

**Form 2A COAs:**

Group	User	Comment	Date
Agency	kubeczkod	Operator must implement best management practices to contain any unintentional release of fluids.	03/30/2010
Agency	kubeczkod	Location is in a sensitive area because of proximity to surface water; therefore, operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations.	03/30/2010
Agency	kubeczkod	Location may be in a sensitive area because of shallow groundwater; therefore either a lined drilling pit or closed loop system must be implemented.	03/30/2010

**Comment:** \_\_\_\_\_**CA:** \_\_\_\_\_**Date:** \_\_\_\_\_**Wildlife BMPs:****Comment:** \_\_\_\_\_**CA:** \_\_\_\_\_**Date:** \_\_\_\_\_**Stormwater:**

Erosion BMPs	Present	Other BMPs	Present

Corrective Action: \_\_\_\_\_

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

Comments: Erosion BMPs: \_\_\_\_\_

Other BMPs: \_\_\_\_\_

**Comment:** \_\_\_\_\_**Staking:****On Site Inspection (305):****Surface Owner Contact Information:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

**Operator Rep. Contact Information:**

Landman Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Date Onsite Request Received: \_\_\_\_\_

Date of Rule 306 Consultation: \_\_\_\_\_

Request LGD Attendance: \_\_\_\_\_

**LGD Contact Information:**

Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Agreed to Attend: \_\_\_\_\_

**Summary of Landowner Issues:****Summary of Operator Response to Landowner Issues:****Onsite Inspection Memorandum Summarizing Discussions at Inspection as Attachment:****Facility**

Inspector Name: KELLERBY, SHAUN

Facility ID: 416703 Type: LOCATION API Number: - Status: AC Insp. Status: IO

**Complaint**

Comment: Cogcc Doc # 200353142

Facility ID: 416726 Type: WELL API Number: 045-19343 Status: XX Insp. Status: ND

Facility ID: 416730 Type: WELL API Number: 045-19344 Status: XX Insp. Status: ND

Facility ID: 416879 Type: WELL API Number: 045-19392 Status: XX Insp. Status: ND

Facility ID: 416880 Type: WELL API Number: 045-19393 Status: XX Insp. Status: ND

**Environmental**

**Spills/Releases:**

Type of Spill: \_\_\_\_\_ Description: \_\_\_\_\_ Estimated Spill Volume: \_\_\_\_\_

Comment: \_\_\_\_\_

Corrective Action: \_\_\_\_\_ Date: \_\_\_\_\_

Reportable: \_\_\_\_\_ GPS: Lat \_\_\_\_\_ Long \_\_\_\_\_

Proximity to Surface Water: \_\_\_\_\_ Depth to Ground Water: \_\_\_\_\_

**Water Well:**

DWR Receipt Num: \_\_\_\_\_ Owner Name: \_\_\_\_\_ GPS : \_\_\_\_\_ Lat \_\_\_\_\_ Long \_\_\_\_\_

**Field Parameters:**

Sample Location: \_\_\_\_\_

Emission Control Burner (ECB): \_\_\_\_\_

Comment: \_\_\_\_\_

Pilot: \_\_\_\_\_ Wildlife Protection Devices (fired vessels): \_\_\_\_\_

**Reclamation - Storm Water - Pit**

**Interim Reclamation:**

Date Interim Reclamation Started: \_\_\_\_\_ Date Interim Reclamation Completed: \_\_\_\_\_

Land Use: HAY MEADOW, IRRIGATED

Comment: \_\_\_\_\_

1003a. Debris removed? \_\_\_\_\_ CM \_\_\_\_\_

CA \_\_\_\_\_ CA Date \_\_\_\_\_

Waste Material Onsite? \_\_\_\_\_ CM \_\_\_\_\_

CA \_\_\_\_\_ CA Date \_\_\_\_\_

Unused or unneeded equipment onsite? \_\_\_\_\_ CM \_\_\_\_\_

CA \_\_\_\_\_ CA Date \_\_\_\_\_

Pit, cellars, rat holes and other bores closed? \_\_\_\_\_ CM \_\_\_\_\_

Inspector Name: KELLERBY, SHAUN

CA \_\_\_\_\_ CA Date \_\_\_\_\_  
Guy line anchors removed? \_\_\_\_\_ CM \_\_\_\_\_  
CA \_\_\_\_\_ CA Date \_\_\_\_\_  
Guy line anchors marked? \_\_\_\_\_ CM \_\_\_\_\_  
CA \_\_\_\_\_ CA Date \_\_\_\_\_

1003b. Area no longer in use? \_\_\_\_\_ Production areas stabilized? \_\_\_\_\_  
1003c. Compacted areas have been cross ripped? \_\_\_\_\_  
1003d. Drilling pit closed? \_\_\_\_\_ Subsidence over on drill pit? \_\_\_\_\_  
Cuttings management: \_\_\_\_\_  
1003e. Areas no longer needed for drilling or subsequent operations for have been re-vegetated to 80% of pre-existing? \_\_\_\_\_  
Production areas have been stabilized? \_\_\_\_\_ Segregated soils have been replaced? \_\_\_\_\_

**RESTORATION AND REVEGETATION**

Cropland

Top soil replaced \_\_\_\_\_ Recontoured \_\_\_\_\_ Perennial forage re-established \_\_\_\_\_

Non-Cropland

Top soil replaced \_\_\_\_\_ Recontoured \_\_\_\_\_ 80% Revegetation \_\_\_\_\_

1003 f. Weeds Noxious weeds? \_\_\_\_\_

Comment: \_\_\_\_\_

Overall Interim Reclamation

**Final Reclamation/ Abandoned Location:**

Date Final Reclamation Started: \_\_\_\_\_ Date Final Reclamation Completed: \_\_\_\_\_

Final Land Use: HAY MEADOW, IRRIGATED

Reminder: \_\_\_\_\_

Comment: \_\_\_\_\_

Well plugged \_\_\_\_\_ Pit mouse/rat holes, cellars backfilled \_\_\_\_\_

Debris removed \_\_\_\_\_ No disturbance /Location never built \_\_\_\_\_

Access Roads Regraded \_\_\_\_\_ Contoured \_\_\_\_\_ Culverts removed \_\_\_\_\_

Gravel removed \_\_\_\_\_

Location and associated production facilities reclaimed \_\_\_\_\_ Locations, facilities, roads, recontoured \_\_\_\_\_

Compaction alleviation \_\_\_\_\_ Dust and erosion control \_\_\_\_\_

Non cropland: Revegetated 80% \_\_\_\_\_ Cropland: perennial forage \_\_\_\_\_

Weeds present \_\_\_\_\_ Subsidence \_\_\_\_\_

Comment: \_\_\_\_\_

Corrective Action: \_\_\_\_\_ Date \_\_\_\_\_

Overall Final Reclamation

**Storm Water:**

Loc Erosion BMPs	BMP Maintenance	Lease Road Erosion BMPs	Lease BMP Maintenance	Chemical BMPs	Chemical BMP Maintenance	Comment

Inspector Name: KELLERBY, SHAUN

S/UV:	_____	Corrective Date:	_____
Comment:	_____		
CA:	_____		

## **PRIOR HISTORY**

**State of Colorado**  
**Oil and Gas Conservation Commission**

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



FOR OGCC USE ONLY  
Received  
11/3/2011  
Rifle COGCC

**SPILL/RELEASE REPORT**

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

Spill report taken by:

FACILITY ID:

**OPERATOR INFORMATION**

Name of Operator: Antero Resources Piceance Corporation OGCC Operator No: 10079  
Address: 1625 17th Street, Suite 300  
City: Denver State: CO Zip: 80202  
Contact Person: Gerard G. Alberts

Phone Numbers  
No: 303-357-7341  
Fax: 303-357-7315  
E-Mail: jalberts@anteroresources.com

**DESCRIPTION OF SPILL OR RELEASE**

Date of Incident: 10/23/2011 Facility Name & No.: Valley Farms J Pad #416703 County: Garfield County  
Type of Facility (well, tank battery, flow line, pit): Tank Battery at well pad QtrQtr: NWNW Section: 13  
Well Name and Number: Valley Farms #J1 Township: T6S Range: 92 W  
API Number: #05-045-19392 Meridian: 6th  
Specify volume spilled and recovered (in bbls) for the following materials:  
Oil spilled: 0.172 Oil recov'd: 0.172 Water spilled: 216 Water recov'd: 216 Other spilled: \_\_\_\_\_ Other recov'd: \_\_\_\_\_  
Ground Water impacted? ☐ Yes ☒ No Surface Water impacted? ☐ Yes ☒ No  
Contained within berm? ☒ Yes ☐ No Area and vertical extent of spill: estimated 7132 sq ft x estimated 6 inches  
Current land use: Pasture Weather conditions: Rainy, cold  
Soil/geology description: Potts Loam, 3 to 6 percent slopes  
IF LESS THAN A MILE, report distance IN FEET to nearest.... Surface water: 331 wetlands: 944.61 buildings: 431  
Livestock: \_\_\_\_\_ water wells: 773.66 Depth to shallowest ground water: 54  
Cause of spill (e.g., equipment failure, human error, etc.): equipment failure Detailed description of the spill/release incident:

On the Valley Farms J Pad, located within the external 3178 buffer, a portable pump is used to convey water from the 500 bbl frac tanks to a buried water pipeline system. At 10:40 pm on October 23, 2011, a flexible hose used in conjunction with the portable pump to convey frac water to the water pipeline system disengaged. Upon discovery, the pump was immediately shut off and vacuum truck called. While responding to the leak, a second leak developed on a valve of the riser manifold at the Valley Farms J Pad. The valve leak was immediately fixed upon discovery and the released frac water was removed using the vac truck. The water network system was being used to transfer water from the Valley Farms J Pad to support the company's well completion operations on nearby pads.

**CORRECTIVE ACTION**

Describe immediate response (how stopped, contained and recovered):

Pump was immediately shut off and the riser manifold valve fixed upon discovery. A vacuum truck was called to recover the frac water immediately after the pump hose leak was discovered and remained on site to remove the liquids associated with the riser valve leak.

Describe any emergency pits constructed:

N/A

How was the extent of contamination determined:

Extent of contamination was determined using in-field measurements and Trimble GPS unit.

Further remediation activities proposed (attach separate sheet if needed):

Confirmation sampling taken October 27, 2011 to test for Table 910-1 constituents. A Form 27 will be submitted for COGCC approval with details on site remediation plans.

Describe measures taken to prevent problem from reoccurring:

Replace flexible hose with 12" HDPE (High Density Polyethylene Pipe) SDR9, fusion welded, flange fitting. Double check HDPE pipe condition and valve connection prior to turning on the pump. Implement function testing of equipment in water pipeline network.

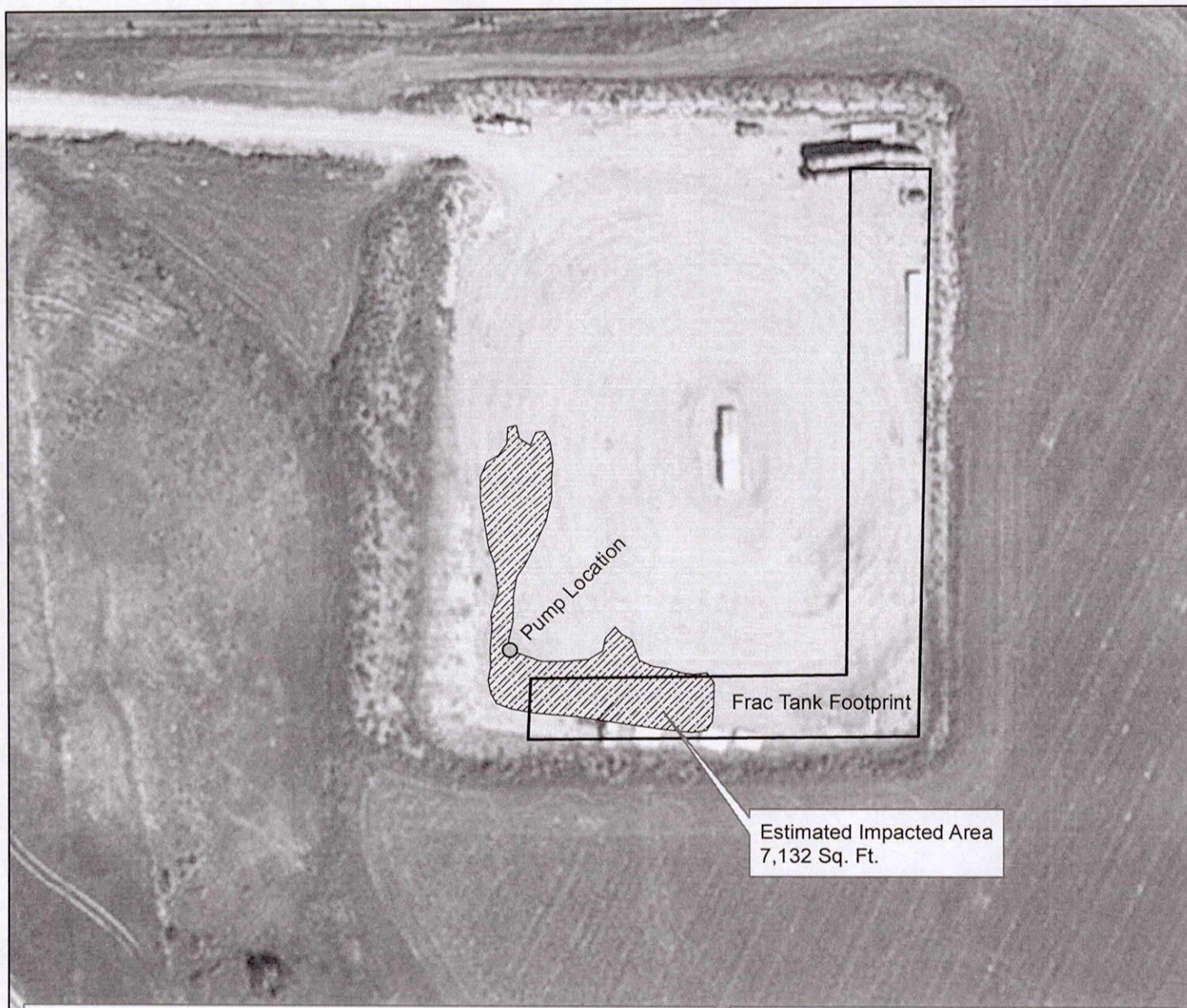
**OTHER NOTIFICATIONS**

List the parties and agencies notified (County, BLM, EPA, DOT, Local Emergency Planning Coordinator or other).

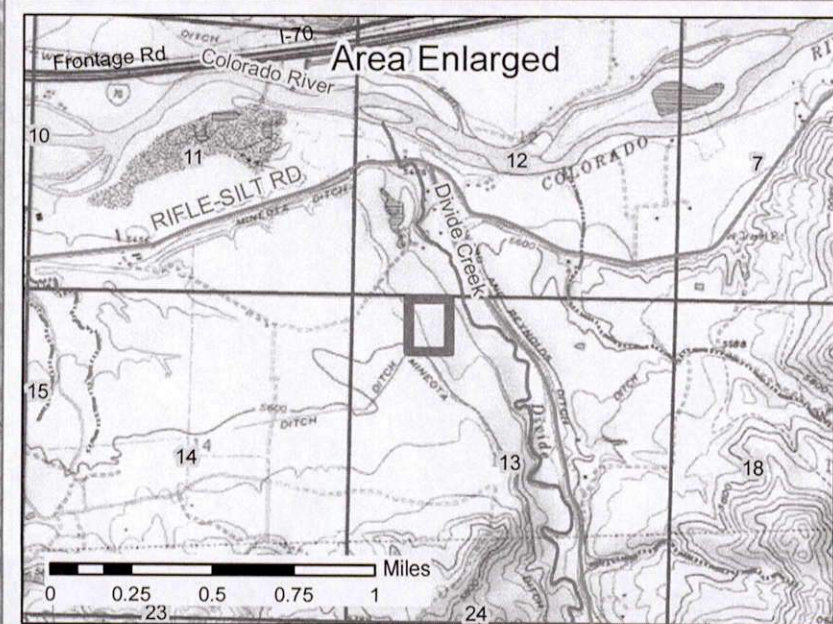
Date	Agency	Contact	Phone	Response
October 27, 2011	CDPHE/ COGCC	Environmental Release/Spill Incident Hotline	1-877-518-5608	Gave information regarding spill, received spill tracking no. 2011- 0782
October 27, 2011	COGCC	Margaret Ash	303-548-6298	Directed us to Linda Spry O'Rourke and Alex Fisher, COGCC
October 27, 2011	COGCC	Linda Spry O'Rourke	970-625-2497	Said she was aware of the spill through Margaret Ash

Spill/Release Tracking No: 2216891





Estimated Impacted Area  
7,132 Sq. Ft.



# Attachment A--Spill Location Map

Location: Valley Farms "J" Pad

Antero Resources Piceance Corp.

## Legend



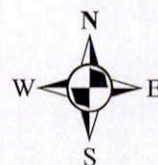
Impacted Area

## Hydrography

— Perennial Stream

--- Intermittent Stream

- - - Ditch/Canal



**HCSI**  
ENVIRONMENTAL CONSULTANTS

0 25 50 100 Feet



# ANTERO RESOURCES

SITE ID: 045-00004  
SITE NAME: Valley Farms J Pad  
SEC. 13 T6S R92W



NOT TO SCALE

## LEGEND

- BARBED WIRE FENCE
- EARTHEN BERM
- STEEL CONTAINMENT BERM
- WELL HEAD
- DRAINAGE FLOW DIRECTION
- ACCESS ROAD
- STRAW WATTLE
- SILT FENCE
- ROCK DITCH
- CULVERT
- PAVED ROAD
- EROSION CONTROL BLANKET
- SEEDING
- HAY BALES
- STOCKPILE

