

State of Colorado
Oil and Gas Conservation Commission

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



DOCUMENT
#2232771

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.)

RECEIVED
4/15/2013

1. OGCC Operator Number: 10110	4. Contact Name: Mike Hettinger	Complete the Attachment Checklist OP OGCC
2. Name of Operator: Great Western Oil & Gas, LLC	Phone: 970-686-8831	
3. Address: 2005 Howard Smith Avenue East City: Windsor State: CO Zip: 80550	Fax: N/A	
5. API Number 05-123-24312	OGCC Facility ID Number 333033	Survey Plat
6. Well/Facility Name: Great Western 27-13	7. Well/Facility Number 27-13	Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): SWSW, Sec 27, T6N, R67W, 6th PM		Surface Eqpm Diagram
9. County: Weld	10. Field Name: Wattenburg	Technical Info Page
11. Federal, Indian or State Lease Number: N/A		Other

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FNL/FSL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	Is location in a High Density Area (rule 603b)? Yes/No
	Distance to nearest well same formation
	Surface owner consultation date:
GPS DATA:	
Date of Measurement	PDOP Reading
	Instrument Operator's Name
<input type="checkbox"/> CHANGE SPACING UNIT	
Formation	Formation Code
Spacing order number	Unit Acreage
Unit configuration	<input type="checkbox"/> Remove from surface bond
	Signed surface use agreement attached
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	
Effective Date:	
Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	
<input type="checkbox"/> CHANGE WELL NAME	
From:	NUMBER
To:	
Effective Date:	
<input type="checkbox"/> ABANDONED LOCATION:	
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"/> NOTICE OF CONTINUED SHUT IN STATUS	
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"/> SPUD DATE:	
<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)	
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK	
*submit cbl and cement job summaries	
Method used	Cementing tool setting/perf depth
Cement volume	Cement top
Cement bottom	Date
<input type="checkbox"/> RECLAMATION: 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 checked="" type="checkbox"/> Notice of Intent		<input type="checkbox"/> Report of Work Done
Approximate Start Date: 4/11/2013		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: **Skip Vest** Digitally signed by Skip Vest
DN: cn=Skip Vest, o=HRL Compliance Solutions, ou, email=svest@hrlcomp.com, c=US
Date: 2013.04.15 09:41:30 -0500
Date: 04/11/2013 Email: svest@hrlcomp.com
Print Name: Skip Vest Title: Senior Environmental Program Manager

COGCC Approved: **Robert H. Chesson** Digitally signed by Robert H. Chesson
DN: cn=Robert H. Chesson, o=COGCC, ou, email=robert.chesson@state.co.us, c=US
Date: 2013.04.22 14:00:30 -0500
Title: EPS Date: 4/22/2013
CONDITIONS OF APPROVAL

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: _____ API Number: _____

2. Name of Operator: _____ OGCC Facility ID # _____

3. Well/Facility Name: _____ Well/Facility Number: _____

4. Location (QtrQtr, Sec, Twp, Rng, Meridian): _____

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

Work Completed Great Western 27-13 (COGCC# 333033, Remediation #7411)

Soil Excavation and Sampling Event (12/10/2012- 12/13/2012)

Soil under the produced water tanks containment area was excavated and hauled to a Waste Management facility for disposal. Depth of excavation was approximately 4.5 feet, and groundwater was encountered at this depth. It should be noted that a visible sheen was present on the groundwater in the excavation area. The entire original footprint of the earthen containment area was excavated, and field screenings with a Petroflag kit on the side walls of the excavated area was conducted. Lateral excavation ceased once field screenings indicated the lack of hydrocarbons. Composite grab samples from the excavation side walls were sent to an accredited analytical laboratory for analysis. The analytical report indicated that the grab samples taken from the side walls of the excavation area were in compliance with COGCC Table 910-1 standards. Three (3) background samples were taken on 12/20/2012 from approximately six (6) inches beneath the grounds surface with regards to arsenic.

Groundwater Bioremediation System Installation (12/12/2012-12/13/2012)

The excavated area was leveled with a layer of pea gravel, and a series of heavy schedule slotted PVC piping was installed within the center of the pea gravel layer. The buried manifold of pipes was connected to an above ground piping system to deliver water, nutrients, and bioremediation products to the groundwater below the pea gravel layer in the excavated area. The excavated area was backfilled with clean soil, and the earthen containment area was rebuilt and the tanks were returned to their original location. Bioremediation treatments were originally scheduled to begin in March 2013, once temperatures warmed up and the threat of pumps and the above ground piping freezing could be better managed.

Monitoring Well Installation (1/09/2013- 1/10/2013)

HRL Compliance Solutions, Inc. installed 6 permanent monitoring wells at Great Western Oil & Gas 27-13. Well depths ranged from 12 to 14 ft., and cemented and covered with a lid flush with the ground. Monitoring well locations are indicated on the attached site map.

Monitoring Well Sampling Event (1/25/2013)

The recently installed monitoring wells were developed and groundwater samples were collected and submitted to an analytical laboratory for analysis. The analytical results were in compliance with COGCC Table 910-1 standards.

Temporary Monitoring Well Installation (2/27/2013)

HRL Compliance Solutions, Inc. installed one temporary monitoring well (piezometer) to a depth of 5 feet within the produced water tanks containment to facilitate groundwater sampling under the tanks and containment area where the original spill occurred.

Temporary Monitoring Well Sampling Event (2/27/2013)

Groundwater samples from the newly installed piezometer were collected and sent to an analytical laboratory for analysis. The analytical report indicated that the groundwater samples were in compliance with COGCC Table 910-1 standards.

Conclusion

Based on the analytical results of the above referenced sampling events that indicate groundwater sample analysis to be in compliance with COGCC Table 910-1 standards, HCSI requests the authorization to commence quarterly groundwater sampling for a period of one year as stated in the Remedial Action Work Plan for Well Site 27-13, Section 2.2.2 Groundwater Remediation Closure. No bioremediation products were utilized at this site, as groundwater analytical results from the temporary monitoring well located within the spill site were in compliance with COGCC Table 910-1 standards prior to the beginning of treatment.

Analytical Review

Sample results indicate that the soil within excavation area on Great Western's 27-13 well pad have exceedances of COGCC Table 910-1 allowable concentrations for arsenic (3.3, 4.2, 4.6, 3.5 ppm). The arsenic background concentrations ranged from 3.1 ppm to 2.8 ppm for this area. Based on these results and footnote 1 to COGCC Table 910-1, HCSI requests that the COGCC consider the higher range of background arsenic value(s) as the allowable concentration for this constituent.

Groundwater Analytical Results

Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix	Ground Water									
						Allowable Concentration -->									
						<1.25x BKG	<1.25x BKG	<1.25x BKG	5 ug/L	560-1000 ug/L	700 ug/L	1,400 to 10,000 ug/L	BDL	BDL	BDL
						Chloride	Sulfate	Dissolved Solids	Benzene	Toluene	Ethylbenzene	Total Xylene	TPH (GC/FID) Low Fraction	TPH (GC/FID) Low Fraction	TPH (GC/FID) Low Fraction
Monitor Well 1	1301807-01	1/25/2013	ALS	DP	Water	34	420	990	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 2	1301807-02	1/25/2013	ALS	DP	Water	39	530	1200	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 3	1301807-03	1/25/2013	ALS	DP	Water	38	520	1100	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 4	1301807-04	1/25/2013	ALS	DP	Water	42	520	1100	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 5	1301807-05	1/25/2013	ALS	DP	Water	55	580	1200	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 6	1301807-06	1/25/2013	ALS	DP	Water	39	540	1200	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sample Port	1301807-07	1/25/2013	ALS	DP	Water	33	480	1000	2.2	BDL	BDL	BDL	BDL	BDL	BDL
MW-7	1303024-01	2/27/2013	ALS	DP	Water	35	480	1000	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Soil Analytical Results

						Analytes (BDL = Below Detection Limit; NA = Not Applicable; NS = Not Sampled)																								
						Organics in Soil (mg/Kg)																								
Location Number ID	COC ID	Allowable Concentration -->					500	NA	NA	0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	see below	<12	(6-9)	
		Date:	Lab	Sampler:	Sample Matrix	TPH	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenzo(A,H)anthracene	fluoranthene	fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Pyrene	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH		
Pad 8 East Wall	1212457-01	12/12/2012	ALS	SV	Soil	49	BDL	49	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.025	7.2	8.29		
Pad 8 North Wall	1212457-02	12/12/2012	ALS	SV	Soil	140	BDL	140	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.01	10	7.91		
Pad 8 West Wall	1212457-03	12/12/2012	ALS	SV	Soil	21	BDL	21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	53	30	37	46	BDL	68	BDL	BDL	BDL	60	0.01	3.8	8.02		
Pad 8 South Wall	1212457-04	12/12/2012	ALS	SV	Soil	19	BDL	19	BDL	BDL	BDL	BDL	BDL	BDL	BDL	22	BDL	BDL	24	BDL	33	BDL	BDL	BDL	33	0.01	4.2	8.15		

		Analytes (BDL = Below Detection Limit; NA = Not Applicable; NS = Not Sampled)																		
		Metals in Soil (mg/kg (ppm))																		
		Allowable Concentration -->				0.39	15000	15000	2 (mg/L)	70	120000	23	3100	400	23	1600	390	390	23000	
Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix	Arsenic	Barium - LDNR True Total Barium	Barium - EPA Total Barium	Boron - Hot Water Soluble	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	
Pad 8 East Wall	1212457-01	12/12/2012	ALS	SV	Soil	3.3	140	140	BDL	BDL	13	BDL	9.6	9.2	0.021	9.3	1.2	BDL	36	
Pad 8 North Wall	1212457-02	12/12/2012	ALS	SV	Soil	4.2	280	280	BDL	BDL	12	BDL	17	10	0.026	11	1.4	BDL	39	
Pad 8 West Wall	1212457-03	12/12/2012	ALS	SV	Soil	4.6	110	110	BDL	BDL	14	BDL	12	12	0.028	12	1.3	BDL	49	
Pad 8 South Wall	1212457-04	12/12/2012	ALS	SV	Soil	3.5	120	120	BDL	BDL	16	BDL	11	11	0.021	12	1.3	BDL	46	

Soil Background

						Analyte
						Metals
		Allowable Concentration -->				0.39
Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix	Arsenic
▼	▼	▼	▼	▼	▼	▼
NNW Background	1212831-01	12/20/2012	ALS	SV	Soil	3.1
NNE Background	1212831-02	12/20/2012	ALS	SV	Soil	3.1
S Background	1212831-03	12/20/2012	ALS	SV	Soil	2.8

Groundwater Analytical Results

Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix	Ground Water									
						Allowable Concentration -->									
						<1.25x BKG	<1.25x BKG	<1.25x BKG	5 ug/L	560-1000 ug/L	700 ug/L	1,400 to 10,000 ug/L	BDL	BDL	BDL
						Chloride	Sulfate	Dissolved Solids	Benzene	Toluene	Ethylbenzene	Total Xylene	TPH (GC/FID) Low Fraction	TPH (GC/FID) Low Fraction	TPH (GC/FID) Low Fraction
Monitor Well 1	1301807-01	1/25/2013	ALS	DP	Water	34	420	990	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 2	1301807-02	1/25/2013	ALS	DP	Water	39	530	1200	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 3	1301807-03	1/25/2013	ALS	DP	Water	38	520	1100	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 4	1301807-04	1/25/2013	ALS	DP	Water	42	520	1100	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 5	1301807-05	1/25/2013	ALS	DP	Water	55	580	1200	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Monitor Well 6	1301807-06	1/25/2013	ALS	DP	Water	39	540	1200	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sample Port	1301807-07	1/25/2013	ALS	DP	Water	33	480	1000	2.2	BDL	BDL	BDL	BDL	BDL	BDL
MW-7	1303024-01	2/27/2013	ALS	DP	Water	35	480	1000	BDL	BDL	BDL	BDL	BDL	BDL	BDL

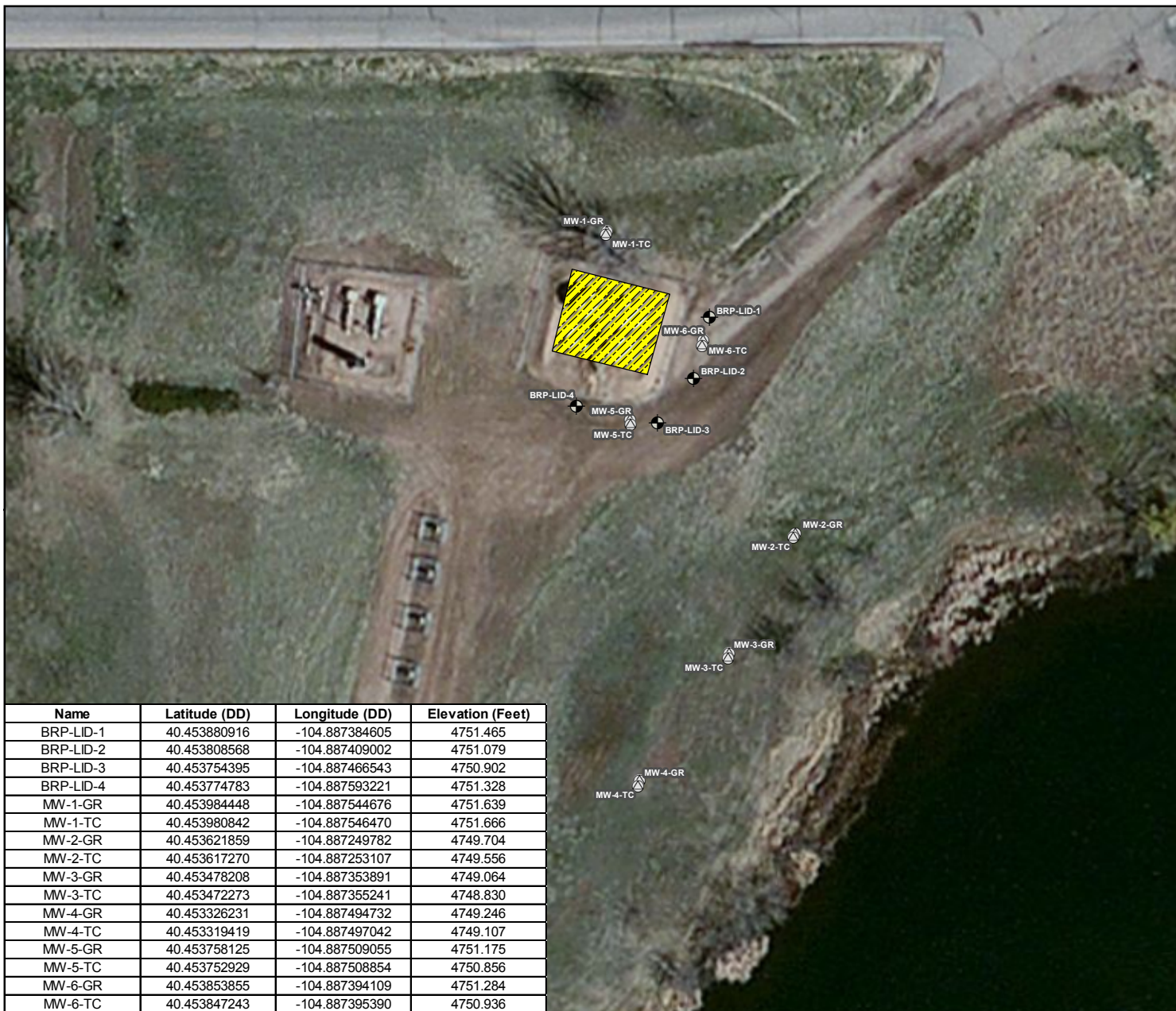
Soil Analytical Results

						Analytes (BDL = Below Detection Limit; NA = Not Applicable; NS = Not Sampled)																																					
						Organics in Soil (mg/Kg)																																					
						Allowable Concentration -->															500	NA	NA	0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000	see below	<12	(6-9)
Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix	TPH	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenzo(A,H)anthracene	fluoranthene	fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Pyrene	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH															
Pad 8 East Wall	1212457-01	12/12/2012	ALS	SV	Soil	49	BDL	49	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.025	7.2	8.29															
Pad 8 North Wall	1212457-02	12/12/2012	ALS	SV	Soil	140	BDL	140	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.01	10	7.91															
Pad 8 West Wall	1212457-03	12/12/2012	ALS	SV	Soil	21	BDL	21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	53	30	37	46	BDL	68	BDL	BDL	BDL	BDL	0.01	3.8	8.02															
Pad 8 South Wall	1212457-04	12/12/2012	ALS	SV	Soil	19	BDL	19	BDL	BDL	BDL	BDL	BDL	BDL	BDL	22	BDL	BDL	24	BDL	33	BDL	BDL	BDL	BDL	0.01	4.2	8.15															

		Analytes (BDL = Below Detection Limit; NA = Not Applicable; NS = Not Sampled)																		
		Metals in Soil (mg/kg (ppm))																		
		Allowable Concentration -->				0.39	15000	15000	2 (mg/L)	70	120000	23	3100	400	23	1600	390	390	23000	
Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix	Arsenic	Barium - LDNR True Total Barium	Barium - EPA Total Barium	Boron - Hot Water Soluble	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	
Pad 8 East Wall	1212457-01	12/12/2012	ALS	SV	Soil	3.3	140	140	BDL	BDL	13	BDL	9.6	9.2	0.021	9.3	1.2	BDL	36	
Pad 8 North Wall	1212457-02	12/12/2012	ALS	SV	Soil	4.2	280	280	BDL	BDL	12	BDL	17	10	0.026	11	1.4	BDL	39	
Pad 8 West Wall	1212457-03	12/12/2012	ALS	SV	Soil	4.6	110	110	BDL	BDL	14	BDL	12	12	0.028	12	1.3	BDL	49	
Pad 8 South Wall	1212457-04	12/12/2012	ALS	SV	Soil	3.5	120	120	BDL	BDL	16	BDL	11	11	0.021	12	1.3	BDL	46	

Soil Background

						Analyte
						Metals
		Allowable Concentration -->				0.39
Location Number ID	COC ID	Date:	Lab	Sampler:	Sample Matrix	Arsenic
▼	▼	▼	▼	▼	▼	▼
NNW Background	1212831-01	12/20/2012	ALS	SV	Soil	3.1
NNE Background	1212831-02	12/20/2012	ALS	SV	Soil	3.1
S Background	1212831-03	12/20/2012	ALS	SV	Soil	2.8



Name	Latitude (DD)	Longitude (DD)	Elevation (Feet)
BRP-LID-1	40.453880916	-104.887384605	4751.465
BRP-LID-2	40.453808568	-104.887409002	4751.079
BRP-LID-3	40.453754395	-104.887466543	4750.902
BRP-LID-4	40.453774783	-104.887593221	4751.328
MW-1-GR	40.453984448	-104.887544676	4751.639
MW-1-TC	40.453980842	-104.887546470	4751.666
MW-2-GR	40.453621859	-104.887249782	4749.704
MW-2-TC	40.453617270	-104.887253107	4749.556
MW-3-GR	40.453478208	-104.887353891	4749.064
MW-3-TC	40.453472273	-104.887355241	4748.830
MW-4-GR	40.453326231	-104.887494732	4749.246
MW-4-TC	40.453319419	-104.887497042	4749.107
MW-5-GR	40.453758125	-104.887509055	4751.175
MW-5-TC	40.453752929	-104.887508854	4750.856
MW-6-GR	40.453853855	-104.887394109	4751.284
MW-6-TC	40.453847243	-104.887395390	4750.936

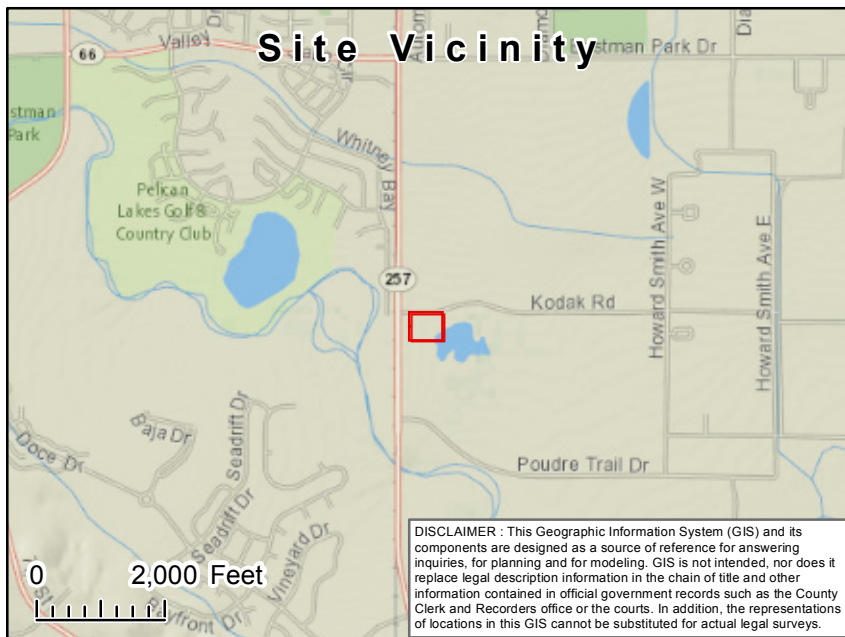
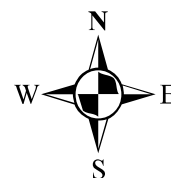


Figure 1 - Monitor Well Location Map
Location: GREAT WESTERN 27-13 (AKA PAD8)
Great Western Oil and Gas

Legend

- Recovery Point
- Monitor Well
- Affected Area



0 25 50 Feet





18-Dec-2012

Skip Vest
HRL Compliance Solutions
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **GW Pad 8 12-271 12/12/12**

Work Order: **1212457**

Dear Skip,

ALS Environmental received 4 samples on 13-Dec-2012 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: Alex Cszaszar

Ann Preston
Project Manager



Certificate No: MN331938

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 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 13-Dec-12 09:30

Work Order: 1212457

Received by: KRW

Checklist completed by Joseph Ribar
eSignature

13-Dec-12
Date

Reviewed by: Ann Preston
eSignature

13-Dec-12
Date

Matrices: Soil

Carrier name: Courier

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>4.8 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/13/2012 11:12:46 AM</u>		
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:

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Work Order: 1212457

Case Narrative**QC Comments:**

Batch 45419, MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch R113918, Method GRO_8015_W, Sample GBLK1-12213: High surrogate does not affect reported samples; all other QC and samples have surrogates within control limits.

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
WorkOrder: 1212457

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
SQL	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	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mhos/cm @25°	
none	
s.u.	Standard Units

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 East Wall
Collection Date: 12/12/2012 11:30 AM

Work Order: 1212457
Lab ID: 1212457-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep Date: 12/13/2012	Analyst: CW
DRO (C10-C28)	49		4.8	mg/Kg-dry	1	12/13/2012 07:50 PM
Surr: 4-Terphenyl-d14	92.2		39-115	%REC	1	12/13/2012 07:50 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015			Analyst: CW
GRO (C6-C10)	ND		2.9	mg/Kg-dry	50	12/13/2012 04:53 PM
Surr: Toluene-d8	101		50-150	%REC	50	12/13/2012 04:53 PM
MERCURY BY CVAA						
			SW7471		Prep Date: 12/14/2012	Analyst: LR
Mercury	0.021		0.019	mg/Kg-dry	1	12/14/2012 02:52 PM
METALS BY ICP-MS						
			SW6020A		Prep Date: 12/14/2012	Analyst: CES
Arsenic	3.3		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Barium	140		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Cadmium	ND		0.34	mg/Kg-dry	2	12/14/2012 08:25 PM
Chromium	13		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Copper	9.6		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Lead	9.2		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Nickel	9.3		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Selenium	1.2		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Silver	ND		0.86	mg/Kg-dry	2	12/14/2012 08:25 PM
Zinc	36		1.7	mg/Kg-dry	2	12/14/2012 08:25 PM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep Date: 12/17/2012	Analyst: CES
Calcium	710		5.8	mg/L-dry	10	12/17/2012 02:15 PM
Magnesium	380		2.3	mg/L-dry	10	12/17/2012 02:15 PM
Sodium	430		2.3	mg/L-dry	10	12/17/2012 02:15 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: CES
Sodium Adsorption Ratio	3.0		0.010	none	1	12/18/2012
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep Date: 12/14/2012	Analyst: RM
Acenaphthene	ND		17	µg/Kg-dry	1	12/14/2012 02:27 PM
Anthracene	ND		17	µg/Kg-dry	1	12/14/2012 02:27 PM
Benzo(a)pyrene	ND		20	µg/Kg-dry	1	12/14/2012 02:27 PM
Benzo(b)fluoranthene	ND		21	µg/Kg-dry	1	12/14/2012 02:27 PM
Benzo(g,h,i)perylene	ND		32	µg/Kg-dry	1	12/14/2012 02:27 PM
Benzo(k)fluoranthene	ND		21	µg/Kg-dry	1	12/14/2012 02:27 PM
Chrysene	ND		17	µg/Kg-dry	1	12/14/2012 02:27 PM
Dibenzo(a,h)anthracene	ND		21	µg/Kg-dry	1	12/14/2012 02:27 PM
Fluoranthene	ND		17	µg/Kg-dry	1	12/14/2012 02:27 PM
Fluorene	ND		17	µg/Kg-dry	1	12/14/2012 02:27 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	12/14/2012 02:27 PM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 East Wall
Collection Date: 12/12/2012 11:30 AM

Work Order: 1212457
Lab ID: 1212457-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Naphthalene	ND		17	µg/Kg-dry	1	12/14/2012 02:27 PM
Pyrene	ND		17	µg/Kg-dry	1	12/14/2012 02:27 PM
Surr: 2-Fluorobiphenyl	76.8		12-100	%REC	1	12/14/2012 02:27 PM
Surr: 4-Terphenyl-d14	102		25-137	%REC	1	12/14/2012 02:27 PM
Surr: Nitrobenzene-d5	78.5		37-107	%REC	1	12/14/2012 02:27 PM
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep Date: 12/13/2012	Analyst: RS
Benzene	ND		35	µg/Kg-dry	1	12/13/2012 03:38 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	12/13/2012 03:38 PM
m,p-Xylene	ND		70	µg/Kg-dry	1	12/13/2012 03:38 PM
o-Xylene	ND		35	µg/Kg-dry	1	12/13/2012 03:38 PM
Toluene	ND		35	µg/Kg-dry	1	12/13/2012 03:38 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	12/13/2012 03:38 PM
Surr: 1,2-Dichloroethane-d4	96.6		70-130	%REC	1	12/13/2012 03:38 PM
Surr: 4-Bromofluorobenzene	96.7		70-130	%REC	1	12/13/2012 03:38 PM
Surr: Dibromofluoromethane	93.1		70-130	%REC	1	12/13/2012 03:38 PM
Surr: Toluene-d8	92.0		70-130	%REC	1	12/13/2012 03:38 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: JB
Electrical Conductivity @ Saturation	7.2		0.025	mmhos/cm @2	5	12/17/2012 02:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	13		0.58	mg/Kg-dry	1	12/17/2012 04:24 PM
CHROMIUM, HEXAVALENT			SW7196A		Prep Date: 12/17/2012	Analyst: JB
Chromium, Hexavalent	ND		0.58	mg/Kg-dry	1	12/17/2012 03:30 PM
MOISTURE			A2540 G			Analyst: LR
Moisture	14		0.050	% of sample	1	12/13/2012 11:00 AM
PH			SW9045D			Analyst: EE
pH	8.29			s.u.	1	12/14/2012 09:45 AM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 North Wall
Collection Date: 12/12/2012 12:30 PM

Work Order: 1212457
Lab ID: 1212457-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep Date: 12/13/2012	Analyst: CW
DRO (C10-C28)	140		4.7	mg/Kg-dry	1	12/13/2012 08:16 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>104</i>		<i>39-115</i>	<i>%REC</i>	1	12/13/2012 08:16 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015			Analyst: CW
GRO (C6-C10)	ND		2.8	mg/Kg-dry	50	12/13/2012 04:03 PM
<i>Surr: Toluene-d8</i>	<i>102</i>		<i>50-150</i>	<i>%REC</i>	50	12/13/2012 04:03 PM
MERCURY BY CVAA						
			SW7471		Prep Date: 12/14/2012	Analyst: LR
Mercury	0.026		0.021	mg/Kg-dry	1	12/14/2012 03:00 PM
METALS BY ICP-MS						
			SW6020A		Prep Date: 12/14/2012	Analyst: CES
Arsenic	4.2		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Barium	280		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Cadmium	ND		0.35	mg/Kg-dry	2	12/14/2012 08:31 PM
Chromium	13		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Copper	17		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Lead	10		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Nickel	11		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Selenium	1.4		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Silver	ND		0.88	mg/Kg-dry	2	12/14/2012 08:31 PM
Zinc	39		1.8	mg/Kg-dry	2	12/14/2012 08:31 PM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep Date: 12/17/2012	Analyst: CES
Calcium	1,500		5.7	mg/L-dry	10	12/18/2012 11:12 AM
Magnesium	470		2.3	mg/L-dry	10	12/18/2012 11:12 AM
Sodium	440		2.3	mg/L-dry	10	12/18/2012 11:12 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: CES
Sodium Adsorption Ratio	2.4		0.010	none	1	12/18/2012
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep Date: 12/14/2012	Analyst: RM
Acenaphthene	ND		17	µg/Kg-dry	1	12/14/2012 02:52 PM
Anthracene	ND		17	µg/Kg-dry	1	12/14/2012 02:52 PM
Benzo(a)pyrene	ND		19	µg/Kg-dry	1	12/14/2012 02:52 PM
Benzo(b)fluoranthene	24		20	µg/Kg-dry	1	12/14/2012 02:52 PM
Benzo(g,h,i)perylene	ND		31	µg/Kg-dry	1	12/14/2012 02:52 PM
Benzo(k)fluoranthene	ND		20	µg/Kg-dry	1	12/14/2012 02:52 PM
Chrysene	52		17	µg/Kg-dry	1	12/14/2012 02:52 PM
Dibenzo(a,h)anthracene	ND		20	µg/Kg-dry	1	12/14/2012 02:52 PM
Fluoranthene	24		17	µg/Kg-dry	1	12/14/2012 02:52 PM
Fluorene	28		17	µg/Kg-dry	1	12/14/2012 02:52 PM
Indeno(1,2,3-cd)pyrene	ND		22	µg/Kg-dry	1	12/14/2012 02:52 PM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 North Wall
Collection Date: 12/12/2012 12:30 PM

Work Order: 1212457
Lab ID: 1212457-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Naphthalene	43		17	µg/Kg-dry	1	12/14/2012 02:52 PM
Pyrene	31		17	µg/Kg-dry	1	12/14/2012 02:52 PM
Surr: 2-Fluorobiphenyl	75.0		12-100	%REC	1	12/14/2012 02:52 PM
Surr: 4-Terphenyl-d14	99.0		25-137	%REC	1	12/14/2012 02:52 PM
Surr: Nitrobenzene-d5	83.0		37-107	%REC	1	12/14/2012 02:52 PM
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep Date: 12/13/2012	Analyst: RS
Benzene	ND		34	µg/Kg-dry	1	12/13/2012 04:03 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	12/13/2012 04:03 PM
m,p-Xylene	ND		68	µg/Kg-dry	1	12/13/2012 04:03 PM
o-Xylene	ND		34	µg/Kg-dry	1	12/13/2012 04:03 PM
Toluene	ND		34	µg/Kg-dry	1	12/13/2012 04:03 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	12/13/2012 04:03 PM
Surr: 1,2-Dichloroethane-d4	98.2		70-130	%REC	1	12/13/2012 04:03 PM
Surr: 4-Bromofluorobenzene	99.4		70-130	%REC	1	12/13/2012 04:03 PM
Surr: Dibromofluoromethane	95.3		70-130	%REC	1	12/13/2012 04:03 PM
Surr: Toluene-d8	92.5		70-130	%REC	1	12/13/2012 04:03 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: JB
Electrical Conductivity @ Saturation	10		0.025	mmhos/cm @2	5	12/17/2012 02:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	13		0.57	mg/Kg-dry	1	12/17/2012 04:24 PM
CHROMIUM, HEXAVALENT			SW7196A		Prep Date: 12/17/2012	Analyst: JB
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	12/17/2012 03:30 PM
MOISTURE			A2540 G			Analyst: LR
Moisture	12		0.050	% of sample	1	12/13/2012 11:00 AM
PH			SW9045D			Analyst: EE
pH	7.91			s.u.	1	12/14/2012 09:45 AM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 West Wall
Collection Date: 12/12/2012 01:15 PM

Work Order: 1212457
Lab ID: 1212457-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep Date: 12/13/2012	Analyst: CW
DRO (C10-C28)	21		4.7	mg/Kg-dry	1	12/13/2012 08:41 PM
Surr: 4-Terphenyl-d14	79.9		39-115	%REC	1	12/13/2012 08:41 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015			Analyst: CW
GRO (C6-C10)	ND		2.9	mg/Kg-dry	50	12/13/2012 04:28 PM
Surr: Toluene-d8	101		50-150	%REC	50	12/13/2012 04:28 PM
MERCURY BY CVAA						
			SW7471		Prep Date: 12/14/2012	Analyst: LR
Mercury	0.028		0.019	mg/Kg-dry	1	12/14/2012 03:02 PM
METALS BY ICP-MS						
			SW6020A		Prep Date: 12/14/2012	Analyst: CES
Arsenic	4.6		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Barium	110		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Cadmium	ND		0.31	mg/Kg-dry	2	12/14/2012 10:25 PM
Chromium	14		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Copper	12		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Lead	12		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Nickel	12		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Selenium	1.3		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Silver	ND		0.77	mg/Kg-dry	2	12/14/2012 10:25 PM
Zinc	49		1.5	mg/Kg-dry	2	12/14/2012 10:25 PM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep Date: 12/17/2012	Analyst: CES
Calcium	510		58	mg/L-dry	100	12/18/2012 11:18 AM
Magnesium	210		23	mg/L-dry	100	12/18/2012 11:18 AM
Sodium	250		23	mg/L-dry	100	12/18/2012 11:18 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: CES
Sodium Adsorption Ratio	2.2		0.010	none	1	12/18/2012
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep Date: 12/14/2012	Analyst: RM
Acenaphthene	ND		17	µg/Kg-dry	1	12/14/2012 03:17 PM
Anthracene	ND		17	µg/Kg-dry	1	12/14/2012 03:17 PM
Benzo(a)pyrene	37		19	µg/Kg-dry	1	12/14/2012 03:17 PM
Benzo(b)fluoranthene	53		20	µg/Kg-dry	1	12/14/2012 03:17 PM
Benzo(g,h,i)perylene	ND		32	µg/Kg-dry	1	12/14/2012 03:17 PM
Benzo(k)fluoranthene	30		20	µg/Kg-dry	1	12/14/2012 03:17 PM
Chrysene	46		17	µg/Kg-dry	1	12/14/2012 03:17 PM
Dibenzo(a,h)anthracene	ND		20	µg/Kg-dry	1	12/14/2012 03:17 PM
Fluoranthene	68		17	µg/Kg-dry	1	12/14/2012 03:17 PM
Fluorene	ND		17	µg/Kg-dry	1	12/14/2012 03:17 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	12/14/2012 03:17 PM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 West Wall
Collection Date: 12/12/2012 01:15 PM

Work Order: 1212457
Lab ID: 1212457-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Naphthalene	ND		17	µg/Kg-dry	1	12/14/2012 03:17 PM
Pyrene	60		17	µg/Kg-dry	1	12/14/2012 03:17 PM
Surr: 2-Fluorobiphenyl	72.0		12-100	%REC	1	12/14/2012 03:17 PM
Surr: 4-Terphenyl-d14	94.3		25-137	%REC	1	12/14/2012 03:17 PM
Surr: Nitrobenzene-d5	77.3		37-107	%REC	1	12/14/2012 03:17 PM
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep Date: 12/13/2012	Analyst: RS
Benzene	ND		35	µg/Kg-dry	1	12/13/2012 04:29 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	12/13/2012 04:29 PM
m,p-Xylene	ND		70	µg/Kg-dry	1	12/13/2012 04:29 PM
o-Xylene	ND		35	µg/Kg-dry	1	12/13/2012 04:29 PM
Toluene	ND		35	µg/Kg-dry	1	12/13/2012 04:29 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	12/13/2012 04:29 PM
Surr: 1,2-Dichloroethane-d4	96.8		70-130	%REC	1	12/13/2012 04:29 PM
Surr: 4-Bromofluorobenzene	97.4		70-130	%REC	1	12/13/2012 04:29 PM
Surr: Dibromofluoromethane	95.8		70-130	%REC	1	12/13/2012 04:29 PM
Surr: Toluene-d8	93.9		70-130	%REC	1	12/13/2012 04:29 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: JB
Electrical Conductivity @ Saturation	3.8		0.010	mmhos/cm @2	2	12/17/2012 02:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	14		0.58	mg/Kg-dry	1	12/17/2012 04:24 PM
CHROMIUM, HEXAVALENT			SW7196A		Prep Date: 12/17/2012	Analyst: JB
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	12/17/2012 03:30 PM
MOISTURE			A2540 G			Analyst: LR
Moisture	14		0.050	% of sample	1	12/13/2012 11:00 AM
PH			SW9045D			Analyst: EE
pH	8.02			s.u.	1	12/14/2012 09:45 AM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 South Wall
Collection Date: 12/12/2012 01:35 PM

Work Order: 1212457
Lab ID: 1212457-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep Date: 12/13/2012	Analyst: CW
DRO (C10-C28)	19		4.8	mg/Kg-dry	1	12/13/2012 09:06 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>80.6</i>		<i>39-115</i>	<i>%REC</i>	1	12/13/2012 09:06 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015			Analyst: CW
GRO (C6-C10)	ND		2.9	mg/Kg-dry	50	12/13/2012 05:18 PM
<i>Surr: Toluene-d8</i>	<i>97.2</i>		<i>50-150</i>	<i>%REC</i>	50	12/13/2012 05:18 PM
MERCURY BY CVAA						
			SW7471		Prep Date: 12/14/2012	Analyst: LR
Mercury	0.021		0.019	mg/Kg-dry	1	12/14/2012 03:04 PM
METALS BY ICP-MS						
			SW6020A		Prep Date: 12/14/2012	Analyst: CES
Arsenic	3.5		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Barium	120		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Cadmium	ND		0.34	mg/Kg-dry	2	12/14/2012 10:31 PM
Chromium	16		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Copper	11		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Lead	11		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Nickel	12		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Selenium	1.3		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Silver	ND		0.85	mg/Kg-dry	2	12/14/2012 10:31 PM
Zinc	46		1.7	mg/Kg-dry	2	12/14/2012 10:31 PM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep Date: 12/17/2012	Analyst: CES
Calcium	340		5.8	mg/L-dry	10	12/18/2012 11:24 AM
Magnesium	190		2.3	mg/L-dry	10	12/18/2012 11:24 AM
Sodium	310		2.3	mg/L-dry	10	12/18/2012 11:24 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: CES
Sodium Adsorption Ratio	3.1		0.010	none	1	12/18/2012
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep Date: 12/14/2012	Analyst: RM
Acenaphthene	ND		17	µg/Kg-dry	1	12/14/2012 03:43 PM
Anthracene	ND		17	µg/Kg-dry	1	12/14/2012 03:43 PM
Benzo(a)pyrene	ND		20	µg/Kg-dry	1	12/14/2012 03:43 PM
Benzo(b)fluoranthene	22		21	µg/Kg-dry	1	12/14/2012 03:43 PM
Benzo(g,h,i)perylene	ND		32	µg/Kg-dry	1	12/14/2012 03:43 PM
Benzo(k)fluoranthene	ND		21	µg/Kg-dry	1	12/14/2012 03:43 PM
Chrysene	24		17	µg/Kg-dry	1	12/14/2012 03:43 PM
Dibenzo(a,h)anthracene	ND		21	µg/Kg-dry	1	12/14/2012 03:43 PM
Fluoranthene	33		17	µg/Kg-dry	1	12/14/2012 03:43 PM
Fluorene	ND		17	µg/Kg-dry	1	12/14/2012 03:43 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	12/14/2012 03:43 PM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Sample ID: Pad 8 South Wall
Collection Date: 12/12/2012 01:35 PM

Work Order: 1212457
Lab ID: 1212457-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Naphthalene	ND		17	µg/Kg-dry	1	12/14/2012 03:43 PM
Pyrene	33		17	µg/Kg-dry	1	12/14/2012 03:43 PM
Surr: 2-Fluorobiphenyl	70.5		12-100	%REC	1	12/14/2012 03:43 PM
Surr: 4-Terphenyl-d14	91.9		25-137	%REC	1	12/14/2012 03:43 PM
Surr: Nitrobenzene-d5	77.5		37-107	%REC	1	12/14/2012 03:43 PM
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep Date: 12/13/2012	Analyst: RS
Benzene	ND		35	µg/Kg-dry	1	12/13/2012 04:54 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	12/13/2012 04:54 PM
m,p-Xylene	ND		70	µg/Kg-dry	1	12/13/2012 04:54 PM
o-Xylene	ND		35	µg/Kg-dry	1	12/13/2012 04:54 PM
Toluene	ND		35	µg/Kg-dry	1	12/13/2012 04:54 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	12/13/2012 04:54 PM
Surr: 1,2-Dichloroethane-d4	97.6		70-130	%REC	1	12/13/2012 04:54 PM
Surr: 4-Bromofluorobenzene	98.4		70-130	%REC	1	12/13/2012 04:54 PM
Surr: Dibromofluoromethane	95.7		70-130	%REC	1	12/13/2012 04:54 PM
Surr: Toluene-d8	93.4		70-130	%REC	1	12/13/2012 04:54 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO		Prep Date: 12/17/2012	Analyst: JB
Electrical Conductivity @ Saturation	4.2		0.025	mmhos/cm @2	5	12/17/2012 02:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	16		0.58	mg/Kg-dry	1	12/17/2012 04:24 PM
CHROMIUM, HEXAVALENT			SW7196A		Prep Date: 12/17/2012	Analyst: JB
Chromium, Hexavalent	ND		0.58	mg/Kg-dry	1	12/17/2012 03:30 PM
MOISTURE			A2540 G			Analyst: LR
Moisture	14		0.050	% of sample	1	12/13/2012 11:00 AM
PH			SW9045D			Analyst: EE
pH	8.15			s.u.	1	12/14/2012 09:45 AM

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

ALS Group USA, Corp

Date: 18-Dec-12

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45381** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-45381-45381				Units: mg/Kg		Analysis Date: 12/13/2012 05:44 PM		
Client ID:		Run ID: GC8_121213A				SeqNo: 2168888		Prep Date: 12/13/2012		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	1.268	0	1.667	0	76.1	39-115	0			

LCS		Sample ID: DLCSS1-45381-45381				Units: mg/Kg		Analysis Date: 12/13/2012 06:09 PM		
Client ID:		Run ID: GC8_121213A				SeqNo: 2168889		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	118.5	4.2	166.7	0	71.1	49-124	0			
Surr: 4-Terphenyl-d14	1.368	0	1.667	0	82.1	39-115	0			

MS		Sample ID: 1212419-04A MS				Units: mg/Kg		Analysis Date: 12/13/2012 06:35 PM		
Client ID:		Run ID: GC8_121213A				SeqNo: 2168890		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	383.4	12	494.2	34.91	70.5	49-130	0			
Surr: 4-Terphenyl-d14	4.149	0	4.942	0	84	39-115	0			

MSD		Sample ID: 1212419-04A MSD				Units: mg/Kg		Analysis Date: 12/13/2012 07:00 PM		
Client ID:		Run ID: GC8_121213A				SeqNo: 2168891		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	337.1	12	462.6	34.91	65.3	49-130	383.4	12.8	30	
Surr: 4-Terphenyl-d14	3.767	0	4.626	0	81.4	39-115	4.149	9.65	30	

The following samples were analyzed in this batch:

1212457-01B	1212457-02B	1212457-03B
1212457-04B		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **R113918** Instrument ID **GC10** Method: **SW8015**

MBLK		Sample ID: GBLK1-12213-R113918				Units: µg/L		Analysis Date: 12/13/2012 03:14 PM		
Client ID:		Run ID: GC10_121213A				SeqNo: 2168857		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								
<i>Surr: Toluene-d8</i>	<i>141.9</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>142</i>	<i>70-130</i>	<i>0</i>			<i>S</i>

LCS		Sample ID: GLCS1-121213-R113918				Units: µg/L		Analysis Date: 12/13/2012 02:24 PM		
Client ID:		Run ID: GC10_121213A				SeqNo: 2168856		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)	8094	200	10000	0	80.9	70-130	0			
<i>Surr: Toluene-d8</i>	<i>119.1</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>119</i>	<i>70-130</i>	<i>0</i>			

MS		Sample ID: 1212457-03C MS				Units: µg/Kg		Analysis Date: 12/13/2012 09:50 PM		
Client ID: Pad 8 West Wall		Run ID: GC10_121213A				SeqNo: 2168870		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	366100	2,500	500000	0	73.2	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5154</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>103</i>	<i>50-150</i>	<i>0</i>			

MSD		Sample ID: 1212457-03C MSD				Units: µg/Kg		Analysis Date: 12/13/2012 10:15 PM		
Client ID: Pad 8 West Wall		Run ID: GC10_121213A				SeqNo: 2168871		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	382300	2,500	500000	0	76.5	70-130	366100	4.35	30	
<i>Surr: Toluene-d8</i>	<i>5592</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>112</i>	<i>50-150</i>	<i>5154</i>	<i>8.15</i>	<i>30</i>	

The following samples were analyzed in this batch:

1212457-01C	1212457-02C	1212457-03C
1212457-04C		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45412** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-45412-45412				Units: mg/Kg		Analysis Date: 12/14/2012 01:58 PM		
Client ID:		Run ID: HG1_121214A				SeqNo: 2169734		Prep Date: 12/14/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.002833	0.020								J

LCS		Sample ID: LCS-45412-45412				Units: mg/Kg		Analysis Date: 12/14/2012 02:07 PM		
Client ID:		Run ID: HG1_121214A				SeqNo: 2169735		Prep Date: 12/14/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.165	0.020	0.1665	0	99.1	80-120	0			

MS		Sample ID: 1212347-01BMS				Units: mg/Kg		Analysis Date: 12/14/2012 02:33 PM		
Client ID:		Run ID: HG1_121214A				SeqNo: 2169869		Prep Date: 12/14/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1617	0.017	0.1448	0.01306	103	75-125	0			

MSD		Sample ID: 1212347-01BMSD				Units: mg/Kg		Analysis Date: 12/14/2012 02:35 PM		
Client ID:		Run ID: HG1_121214A				SeqNo: 2169870		Prep Date: 12/14/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1554	0.017	0.1388	0.01306	103	75-125	0.1617	3.99	35	

The following samples were analyzed in this batch:

1212457-01B	1212457-02B	1212457-03B
1212457-04B		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45383** Instrument ID **ICPMS1** Method: **SW6020A (Dissolve)**

DUP		Sample ID: 1212457-01D DUP				Units: mg/L		Analysis Date: 12/17/2012 02:22 PM		
Client ID: Pad 8 East Wall		Run ID: ICPMS1_121217A				SeqNo: 2171648		Prep Date: 12/17/2012		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	606.5	5.0	0	0	0	-0 0	612.1	0.919		
Magnesium	324.7	2.0	0	0	0	-0 0	326.6	0.583		
Sodium	368	2.0	0	0	0	-0 0	372.4	1.19		

DUP		Sample ID: 1212457-01D DUP				Units: none		Analysis Date: 12/18/2012		
Client ID: Pad 8 East Wall		Run ID: SAR_121218A				SeqNo: 2172909		Prep Date: 12/17/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	2.999	0.010	0	0	0		3.023	0.808	50	

The following samples were analyzed in this batch:

1212457-01D	1212457-02D	1212457-03D
1212457-04D		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45419** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-45419-45419				Units: mg/Kg		Analysis Date: 12/14/2012 06:33 PM		
Client ID:		Run ID: ICPMS1_121214A				SeqNo: 2170713		Prep Date: 12/14/2012		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	0.00913	0.25								J
Copper	0.009965	0.25								J
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS		Sample ID: LCS-45419-45419				Units: mg/Kg		Analysis Date: 12/14/2012 06:40 PM		
Client ID:		Run ID: ICPMS1_121214A				SeqNo: 2170714		Prep Date: 12/14/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.224	0.25	5	0	84.5	80-120	0			
Barium	4.677	0.25	5	0	93.5	80-120	0			
Cadmium	4.683	0.10	5	0	93.7	80-120	0			
Chromium	4.356	0.25	5	0	87.1	80-120	0			
Copper	4.426	0.25	5	0	88.5	80-120	0			
Lead	4.734	0.25	5	0	94.7	80-120	0			
Nickel	4.407	0.25	5	0	88.1	80-120	0			
Selenium	4.042	0.25	5	0	80.8	80-120	0			
Silver	4.473	0.25	5	0	89.5	80-120	0			
Zinc	4.176	0.50	5	0	83.5	80-120	0			

MS		Sample ID: 1212347-02BMS				Units: mg/Kg		Analysis Date: 12/14/2012 08:08 PM		
Client ID:		Run ID: ICPMS1_121214A				SeqNo: 2170725		Prep Date: 12/14/2012		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	7.309	0.31	7.716	0.1854	92.3	75-125	0			
Chromium	14.49	0.77	7.716	8.228	81.2	75-125	0			
Lead	14.52	0.77	7.716	8.116	83.1	75-125	0			
Nickel	14.2	0.77	7.716	7.532	86.4	75-125	0			
Selenium	6.574	0.77	7.716	0.9132	73.4	75-125	0			S
Silver	6.244	0.77	7.716	0.03408	80.5	75-125	0			

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

Client: HRL Compliance Solutions
 Work Order: 1212457
 Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45419** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: 1212347-02BMS				Units: mg/Kg		Analysis Date: 12/14/2012 10:55 PM				
Client ID:		Run ID: ICPMS1_121214A		SeqNo: 2170770		Prep Date: 12/14/2012		DF: 20		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.702	7.7	7.716	2.973	87.2	75-125	0			
Barium	820.7	7.7	7.716	837.8	-222	75-125	0			SO
Copper	17.39	7.7	7.716	10.78	85.7	75-125	0			
Zinc	43.95	15	7.716	38.57	69.7	75-125	0			SO

MSD Sample ID: 1212347-02BMSD				Units: mg/Kg		Analysis Date: 12/14/2012 08:14 PM				
Client ID:		Run ID: ICPMS1_121214A		SeqNo: 2170726		Prep Date: 12/14/2012		DF: 2		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	7.63	0.31	7.874	0.1854	94.5	75-125	7.309	4.3	25	
Chromium	15.19	0.79	7.874	8.228	88.4	75-125	14.49	4.69	25	
Lead	15.39	0.79	7.874	8.116	92.4	75-125	14.52	5.79	25	
Nickel	15.15	0.79	7.874	7.532	96.8	75-125	14.2	6.53	25	
Selenium	7.145	0.79	7.874	0.9132	79.1	75-125	6.574	8.32	25	
Silver	6.487	0.79	7.874	0.03408	81.9	75-125	6.244	3.81	25	

MSD Sample ID: 1212347-02BMSD				Units: mg/Kg		Analysis Date: 12/14/2012 11:01 PM				
Client ID:		Run ID: ICPMS1_121214A		SeqNo: 2170771		Prep Date: 12/14/2012		DF: 20		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.02	7.9	7.874	2.973	76.8	75-125	9.702	7.28	25	
Barium	865.2	7.9	7.874	837.8	348	75-125	820.7	5.28	25	SO
Copper	18.58	7.9	7.874	10.78	99.1	75-125	17.39	6.62	25	
Zinc	46.58	16	7.874	38.57	102	75-125	43.95	5.81	25	O

The following samples were analyzed in this batch:

1212457-01B	1212457-02B	1212457-03B
1212457-04B		

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

Client: HRL Compliance Solutions
 Work Order: 1212457
 Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: 45397 Instrument ID SVMS7 Method: SW8270

MBLK		Sample ID: SBLKS1-45397-45397				Units: µg/Kg		Analysis Date: 12/14/2012 02:13 PM		
Client ID:		Run ID: SVMS7_121214A				SeqNo: 2170018		Prep Date: 12/14/2012		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)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-Fluorobiphenyl	1108	0	1667	0	66.5	12-100	0			
Surr: 4-Terphenyl-d14	1320	0	1667	0	79.2	25-137	0			
Surr: Nitrobenzene-d5	1135	0	1667	0	68.1	37-107	0			

LCS		Sample ID: SLCSS1-45397-45397				Units: µg/Kg		Analysis Date: 12/17/2012 01:39 PM		
Client ID:		Run ID: SVMS7_121217A				SeqNo: 2171507		Prep Date: 12/14/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	555.3	30	666.7	0	83.3	45-110	0			
Anthracene	584	30	666.7	0	87.6	55-105	0			
Benzo(a)pyrene	638.3	30	666.7	0	95.7	50-110	0			
Benzo(b)fluoranthene	558.3	30	666.7	0	83.7	45-115	0			
Benzo(g,h,i)perylene	692.3	30	666.7	0	104	40-125	0			
Benzo(k)fluoranthene	673.7	30	666.7	0	101	45-115	0			
Chrysene	589.3	30	666.7	0	88.4	55-110	0			
Dibenzo(a,h)anthracene	680.3	30	666.7	0	102	40-125	0			
Fluoranthene	603	30	666.7	0	90.4	55-115	0			
Fluorene	575.3	30	666.7	0	86.3	50-110	0			
Indeno(1,2,3-cd)pyrene	687.7	30	666.7	0	103	40-120	0			
Naphthalene	559	30	666.7	0	83.8	40-105	0			
Pyrene	603	30	666.7	0	90.4	45-125	0			
Surr: 2-Fluorobiphenyl	1040	0	1667	0	62.4	12-100	0			
Surr: 4-Terphenyl-d14	1314	0	1667	0	78.8	25-137	0			
Surr: Nitrobenzene-d5	1216	0	1667	0	72.9	37-107	0			

The following samples were analyzed in this batch:

1212457-01B	1212457-02B	1212457-03B
1212457-04B		

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

Client: HRL Compliance Solutions
 Work Order: 1212457
 Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45449** Instrument ID **SVMS5** Method: **SW8270**

MBLK		Sample ID: SBLKS1-45449-45449				Units: µg/Kg		Analysis Date: 12/17/2012 03:41 PM		
Client ID:		Run ID: SVMS5_121217A				SeqNo: 2172005		Prep Date: 12/17/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	ND	30								
Surr: 2-Fluorobiphenyl	1292	0	1667	0	77.5	12-100	0			
Surr: 4-Terphenyl-d14	1640	0	1667	0	98.4	25-137	0			
Surr: Nitrobenzene-d5	1377	0	1667	0	82.6	37-107	0			

LCS		Sample ID: SLCSS1-45449-45449				Units: µg/Kg		Analysis Date: 12/17/2012 04:12 PM		
Client ID:		Run ID: SVMS5_121217A				SeqNo: 2172006		Prep Date: 12/17/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	637	30	666.7	0	95.5	50-110	0			
Surr: 2-Fluorobiphenyl	1280	0	1667	0	76.8	12-100	0			
Surr: 4-Terphenyl-d14	1717	0	1667	0	103	25-137	0			
Surr: Nitrobenzene-d5	1315	0	1667	0	78.9	37-107	0			

MS		Sample ID: 1212560-01B MS				Units: µg/Kg		Analysis Date: 12/17/2012 04:42 PM		
Client ID:		Run ID: SVMS5_121217A				SeqNo: 2172007		Prep Date: 12/17/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	1618	83	1855	0	87.2	50-110	0			
Surr: 2-Fluorobiphenyl	3385	0	4637	0	73	12-100	0			
Surr: 4-Terphenyl-d14	4522	0	4637	0	97.5	25-137	0			
Surr: Nitrobenzene-d5	3489	0	4637	0	75.3	37-107	0			

MSD		Sample ID: 1212560-01B MSD				Units: µg/Kg		Analysis Date: 12/17/2012 05:13 PM		
Client ID:		Run ID: SVMS5_121217A				SeqNo: 2172008		Prep Date: 12/17/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	1668	88	1946	0	85.7	50-110	1618	3.03	30	
Surr: 2-Fluorobiphenyl	3522	0	4866	0	72.4	12-100	3385	3.97	40	
Surr: 4-Terphenyl-d14	4741	0	4866	0	97.4	25-137	4522	4.72	40	
Surr: Nitrobenzene-d5	3688	0	4866	0	75.8	37-107	3489	5.54	40	

The following samples were analyzed in this batch: | 1212457-03E |

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45388** Instrument ID **VMS9** Method: **SW8260**

MBLK		Sample ID: MBLK-45388-45388				Units: µg/Kg		Analysis Date: 12/13/2012 12:39 PM		
Client ID:		Run ID: VMS9_121213A				SeqNo: 2168954		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	996	0	1000	0	99.6	70-130	0			
Surr: 4-Bromofluorobenzene	966	0	1000	0	96.6	70-130	0			
Surr: Dibromofluoromethane	976.5	0	1000	0	97.6	70-130	0			
Surr: Toluene-d8	930.5	0	1000	0	93	70-130	0			

MBLK		Sample ID: MBLK-45388-45388				Units: µg/Kg		Analysis Date: 12/13/2012 03:09 PM		
Client ID:		Run ID: VMS8_121213A				SeqNo: 2169059		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	871.5	0	1000	0	87.2	70-130	0			
Surr: 4-Bromofluorobenzene	966	0	1000	0	96.6	70-130	0			
Surr: Dibromofluoromethane	936	0	1000	0	93.6	70-130	0			
Surr: Toluene-d8	935	0	1000	0	93.5	70-130	0			

MBLK		Sample ID: MBLK-45388-45388				Units: µg/Kg		Analysis Date: 12/14/2012 01:27 A		
Client ID:		Run ID: VMS9_121213B				SeqNo: 2169257		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	964.5	0	1000	0	96.4	70-130	0			
Surr: 4-Bromofluorobenzene	997	0	1000	0	99.7	70-130	0			
Surr: Dibromofluoromethane	961.5	0	1000	0	96.2	70-130	0			
Surr: Toluene-d8	896.5	0	1000	0	89.6	70-130	0			

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

Client: HRL Compliance Solutions
 Work Order: 1212457
 Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45388** Instrument ID **VMS9** Method: **SW8260**

MBLK		Sample ID: MBLK-45388-45388				Units: µg/Kg		Analysis Date: 12/14/2012 01:59 PM		
Client ID:		Run ID: VMS9_121214A				SeqNo: 2170433		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	970.5	0	1000	0	97	70-130	0			
Surr: 4-Bromofluorobenzene	1007	0	1000	0	101	70-130	0			
Surr: Dibromofluoromethane	954	0	1000	0	95.4	70-130	0			
Surr: Toluene-d8	888.5	0	1000	0	88.8	70-130	0			

LCS		Sample ID: LCS-45388-45388				Units: µg/Kg		Analysis Date: 12/13/2012 11:22 A		
Client ID:		Run ID: VMS9_121213A				SeqNo: 2168953		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	915	30	1000	0	91.5	75-125	0			
Ethylbenzene	921.5	30	1000	0	92.2	75-125	0			
m,p-Xylene	1851	60	2000	0	92.6	80-125	0			
o-Xylene	913.5	30	1000	0	91.4	75-125	0			
Toluene	897	30	1000	0	89.7	70-125	0			
Xylenes, Total	2764	90	3000	0	92.2	75-125	0			
Surr: 1,2-Dichloroethane-d4	939	0	1000	0	93.9	70-130	0			
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	0			
Surr: Dibromofluoromethane	1024	0	1000	0	102	70-130	0			
Surr: Toluene-d8	984.5	0	1000	0	98.4	70-130	0			

LCS		Sample ID: LCS-45388-45388				Units: µg/Kg		Analysis Date: 12/13/2012 01:57 PM		
Client ID:		Run ID: VMS8_121213A				SeqNo: 2169056		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	960.5	30	1000	0	96	75-125	0			
Ethylbenzene	1024	30	1000	0	102	75-125	0			
m,p-Xylene	2072	60	2000	0	104	80-125	0			
o-Xylene	1013	30	1000	0	101	75-125	0			
Toluene	1005	30	1000	0	100	70-125	0			
Xylenes, Total	3086	90	3000	0	103	75-125	0			
Surr: 1,2-Dichloroethane-d4	916	0	1000	0	91.6	70-130	0			
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	0			
Surr: Dibromofluoromethane	946	0	1000	0	94.6	70-130	0			
Surr: Toluene-d8	1020	0	1000	0	102	70-130	0			

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45388** Instrument ID **VMS9** Method: **SW8260**

LCS		Sample ID: LCS-45388-45388				Units: µg/Kg		Analysis Date: 12/14/2012 12:10 PM		
Client ID:		Run ID: VMS9_121213B				SeqNo: 2169277		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	952.5	30	1000	0	95.2	75-125	0			
Ethylbenzene	901.5	30	1000	0	90.2	75-125	0			
m,p-Xylene	1827	60	2000	0	91.4	80-125	0			
o-Xylene	912.5	30	1000	0	91.2	75-125	0			
Toluene	890.5	30	1000	0	89	70-125	0			
Xylenes, Total	2740	90	3000	0	91.3	75-125	0			
Surr: 1,2-Dichloroethane-d4	966.5	0	1000	0	96.6	70-130	0			
Surr: 4-Bromofluorobenzene	1016	0	1000	0	102	70-130	0			
Surr: Dibromofluoromethane	1025	0	1000	0	102	70-130	0			
Surr: Toluene-d8	944	0	1000	0	94.4	70-130	0			

LCS		Sample ID: LCS-45388-45388				Units: µg/Kg		Analysis Date: 12/14/2012 12:42 PM		
Client ID:		Run ID: VMS9_121214A				SeqNo: 2170432		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1070	30	1000	0	107	75-125	0			
Ethylbenzene	963.5	30	1000	0	96.4	75-125	0			
m,p-Xylene	1944	60	2000	0	97.2	80-125	0			
o-Xylene	969	30	1000	0	96.9	75-125	0			
Toluene	928.5	30	1000	0	92.8	70-125	0			
Xylenes, Total	2913	90	3000	0	97.1	75-125	0			
Surr: 1,2-Dichloroethane-d4	972	0	1000	0	97.2	70-130	0			
Surr: 4-Bromofluorobenzene	1025	0	1000	0	102	70-130	0			
Surr: Dibromofluoromethane	1046	0	1000	0	105	70-130	0			
Surr: Toluene-d8	905	0	1000	0	90.5	70-130	0			

MS		Sample ID: 1212457-01A MS				Units: µg/Kg		Analysis Date: 12/13/2012 09:36 PM		
Client ID: Pad 8 East Wall		Run ID: VMS9_121213A				SeqNo: 2168969		Prep Date: 12/13/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1023	30	1000	0	102	75-125	0			
Ethylbenzene	947	30	1000	0	94.7	75-125	0			
m,p-Xylene	1926	60	2000	15.5	95.5	80-125	0			
o-Xylene	979.5	30	1000	0	98	75-125	0			
Toluene	890	30	1000	0	89	70-125	0			
Xylenes, Total	2906	90	3000	15.5	96.3	75-125	0			
Surr: 1,2-Dichloroethane-d4	967.5	0	1000	0	96.8	70-130	0			
Surr: 4-Bromofluorobenzene	1042	0	1000	0	104	70-130	0			
Surr: Dibromofluoromethane	1010	0	1000	0	101	70-130	0			
Surr: Toluene-d8	896.5	0	1000	0	89.6	70-130	0			

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

Client: HRL Compliance Solutions
 Work Order: 1212457
 Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45388** Instrument ID **VMS9** Method: **SW8260**

MSD				Sample ID: 1212457-01A MSD			Units: µg/Kg		Analysis Date: 12/13/2012 10:02 PM	
Client ID: Pad 8 East Wall				Run ID: VMS9_121213A			SeqNo: 2168970		Prep Date: 12/13/2012	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	958.5	30	1000	0	95.8	75-125	1023	6.51	30	
Ethylbenzene	912.5	30	1000	0	91.2	75-125	947	3.71	30	
m,p-Xylene	1848	60	2000	15.5	91.6	80-125	1926	4.16	30	
o-Xylene	944.5	30	1000	0	94.4	75-125	979.5	3.64	30	
Toluene	849	30	1000	0	84.9	70-125	890	4.72	30	
Xylenes, Total	2792	90	3000	15.5	92.6	75-125	2906	3.98	30	
Surr: 1,2-Dichloroethane-d4	949.5	0	1000	0	95	70-130	967.5	1.88	30	
Surr: 4-Bromofluorobenzene	1056	0	1000	0	106	70-130	1042	1.38	30	
Surr: Dibromofluoromethane	1002	0	1000	0	100	70-130	1010	0.746	30	
Surr: Toluene-d8	912	0	1000	0	91.2	70-130	896.5	1.71	30	

The following samples were analyzed in this batch:

1212457-01A	1212457-02A	1212457-03A
1212457-04A		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45383** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 1212457-01D DUP				Units: mmhos/cm @25°F		Analysis Date: 12/17/2012 02:00 PM		
Client ID: Pad 8 East Wall		Run ID: WETCHEM_121217G				SeqNo: 2171502		Prep Date: 12/17/2012		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturatio	6.905	0.025	0	0	0		7.16	3.63	50	

The following samples were analyzed in this batch:

1212457-01D	1212457-02D	1212457-03D
1212457-04D		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **45445** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-45445-45445				Units: mg/Kg		Analysis Date: 12/17/2012 03:30 PM		
Client ID:		Run ID: WETCHEM_121217J		SeqNo: 2171628		Prep Date: 12/17/2012		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-45445-45445				Units: mg/Kg		Analysis Date: 12/17/2012 03:30 PM		
Client ID:		Run ID: WETCHEM_121217J		SeqNo: 2171629		Prep Date: 12/17/2012		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.884 0.50 1.992 0 94.6 75-110 0

MS		Sample ID: 1212498-01A MS				Units: mg/Kg		Analysis Date: 12/17/2012 03:30 PM		
Client ID:		Run ID: WETCHEM_121217J		SeqNo: 2171635		Prep Date: 12/17/2012		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.405 0.51 2.024 0 69.4 60-130 0

MSD		Sample ID: 1212498-01A MSD				Units: mg/Kg		Analysis Date: 12/17/2012 03:30 PM		
Client ID:		Run ID: WETCHEM_121217J		SeqNo: 2171636		Prep Date: 12/17/2012		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.476 0.50 1.984 0 74.4 60-130 1.405 4.95 30

The following samples were analyzed in this batch:

1212457-01B	1212457-02B	1212457-03B
1212457-04B		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **R113938** Instrument ID **MOIST** Method: **A2540 G**

MBLK	Sample ID: WBLKS1-R113938					Units: % of sample		Analysis Date: 12/13/2012 11:00 A		
Client ID:			Run ID: MOIST_121213B			SeqNo: 2169654		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-R113938				Units: % of sample				Analysis Date: 12/13/2012 11:00 A									
Client ID:				Run ID: MOIST_121213B				SeqNo: 2169650				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: 1212331-01A DUP				Units: % of sample			Analysis Date: 12/13/2012 11:00 A			
Client ID:				Run ID: MOIST_121213B				SeqNo: 2169632			Prep Date:		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 7.57 0.050 0 0 0 -0 0 7.14 5.85 20

DUP	Sample ID: 1212403-05A DUP					Units: % of sample		Analysis Date: 12/13/2012 11:00 A		
Client ID:			Run ID: MOIST_121213B			SeqNo: 2169640		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 4.61 0.050 0 0 0 -0 0 4.46 3.31 20

The following samples were analyzed in this batch:

1212457-01B	1212457-02B	1212457-03B
1212457-04B		

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

Client: HRL Compliance Solutions
Work Order: 1212457
Project: GW Pad 8 12-271 12/12/12

QC BATCH REPORT

Batch ID: **R113968** Instrument ID **WETCHEM** Method: **A4500-H B**

LCS		Sample ID: WLCSW1-121214-R113968				Units: s.u.		Analysis Date: 12/14/2012 09:45 A		
Client ID:		Run ID: WETCHEM_121214K				SeqNo: 2169896		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 4.21 0 4.4 0 95.7 90-110 0

LCS		Sample ID: WLCSW1-121214-R113968				Units: s.u.		Analysis Date: 12/14/2012 09:45 A		
Client ID:		Run ID: WETCHEM_121214K				SeqNo: 2169904		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 4.21 0 4.4 0 95.7 90-110 0

LCS		Sample ID: WLCSW1-121214-R113968				Units: s.u.		Analysis Date: 12/14/2012 09:45 A		
Client ID:		Run ID: WETCHEM_121214K				SeqNo: 2169907		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 4.21 0 4.4 0 95.7 90-110 0

DUP		Sample ID: 1212495-01A DUP				Units: s.u.		Analysis Date: 12/14/2012 09:45 A		
Client ID:		Run ID: WETCHEM_121214K				SeqNo: 2169900		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 8.98 0 0 0 0 -0 0 8.98 0 20

DUP		Sample ID: 1212461-03B DUP				Units: s.u.		Analysis Date: 12/14/2012 09:45 A		
Client ID:		Run ID: WETCHEM_121214K				SeqNo: 2169906		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 12.39 0 0 0 0 -0 0 12.39 0 20

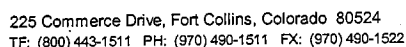
DUP		Sample ID: 1212457-03B DUP				Units: s.u.		Analysis Date: 12/14/2012 09:45 A		
Client ID: Pad 8 West Wall		Run ID: WETCHEM_121214K				SeqNo: 2169911		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 8.02 0 0 0 0 -0 0 8.02 0 20

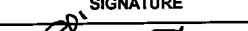

The following samples were analyzed in this batch:

1212457-01B	1212457-02B	1212457-03B
1212457-04B		

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



Form 202r8

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Skip Vest	12/12/2012	16:04
RECEIVED BY		Kenta Wierenga	12/13/12	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

(610) 300
UNIT
P.O.

fedex.com 1800.GoFedEx 1800.463.3339

THU - 13 DE
PRIORITY OVERN

7940 0363

GRDA

CUS

SEAL

ENVIRONMENTAL SAMPLING SUPPLY

9601 San Leandro St. Oakland, CA 800-233-8425

MI - US

12/12/12

Signature:

Date:

9601 San Leandro St. Oakland, CA 800-233-8425

ENVIRONMENTAL SAMPLING SUPPLY

CUSTODY SEAL

Recipient's Copy

Packages up to 150 lbs.
or packages over 150 lbs. use the new
FedEx Express Freight US Airbill.

1 From

Date: 12/12/12

Sender's Name: Ski West

Phone: 970 270 6553

Company: HRE Compliance

Address: 2970 W 29th St #18

Dept./Floor/Suite/Room

City: Greeley

State: CO

ZIP: 80634

2 Your Internal Billing Reference

3 To

Recipient's Name: Sample Receiving

Phone: 616 399 6070

Company: A2S Group Laboratory

Address: 3352 128th Ave

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

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City: Holland

State: MI

ZIP: 49424

HOLD Weekday
FedEx location address
REQUIRED. NOT available for
FedEx First Overnight.

HOLD Saturday
FedEx location address
REQUIRED. Available ONLY for
FedEx Priority Overnight and
FedEx 2Day to select locations.

- ☒ FedEx First Overnight
Next business morning delivery to select
locations. Friday shipments will be delivered on
Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Priority Overnight
Next business morning. Friday shipments will be
delivered on Monday unless SATURDAY Delivery
is selected.
- ☐ FedEx Standard Overnight
Next business afternoon.
Saturday Delivery NOT available.

- ☐ FedEx 2Day A.M.
Second business morning.
Saturday Delivery NOT available.
- ☐ FedEx 2Day
Second business afternoon. Thursday shipments
will be delivered on Monday unless SATURDAY
Delivery is selected.
- ☐ FedEx Express Saver
Third business day.
Saturday Delivery NOT available.

5 Packaging *Declared value limit \$500.

- ☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

- ☐ No Signature Required
Package may be left without
obtaining a signature for delivery.
- ☐ Direct Signature
Someone at recipient's address
may sign for delivery. Fee applies.
- ☐ Indirect Signature
If no one is available at recipient's
address, someone at a neighboring
address may sign for delivery. For
residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

- ☒ No ☐ Yes
Dangerous goods requiring dry ice cannot be placed in FedEx Home Delivery or placed in FedEx Express Drop Box.
- ☐ Dry Ice
Dry Ice, 9 UN 1845 x kg
- ☐ Cargo Aircraft Only

7 Payment Bill to:

- Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐
- ☐ Recipient ☐ Third Party ☐ Credit Card ☒ Cash/Check

Total Packages

48

Total Weight

lbs.

Credit Card Auth.



8016 7940 0363

fedex.com 1800.GoFedEx 1800.463.3339

h Here

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/12/12
Work Order: 1212457

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>
1212457-01	Pad 8 East Wall	Soil		12/12/2012 11:30	12/13/2012 09:30	<input type="checkbox"/>
1212457-02	Pad 8 North Wall	Soil		12/12/2012 12:30	12/13/2012 09:30	<input type="checkbox"/>
1212457-03	Pad 8 West Wall	Soil		12/12/2012 13:15	12/13/2012 09:30	<input type="checkbox"/>
1212457-04	Pad 8 South Wall	Soil		12/12/2012 13:35	12/13/2012 09:30	<input type="checkbox"/>



31-Dec-2012

Skip Vest
HRL Compliance Solutions
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **GW Pad 8 12-271 12/20/12**

Work Order: **1212831**

Dear Skip,

ALS Environmental received 3 samples on 22-Dec-2012 11:30 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 12.

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: MN331938

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 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/20/12
Work Order: 1212831**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>
1212831-01	NNW Background	Soil		12/20/2012 10:15	12/22/2012 11:30	<input type="checkbox"/>
1212831-02	NNE Background	Soil		12/20/2012 10:00	12/22/2012 11:30	<input type="checkbox"/>
1212831-03	S Background	Soil		12/20/2012 10:30	12/22/2012 11:30	<input type="checkbox"/>

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/20/12
WorkOrder: 1212831

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
SQL	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
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group USA, Corp

Date: 31-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/20/12
Sample ID: NNW Background
Collection Date: 12/20/2012 10:15 AM

Work Order: 1212831
Lab ID: 1212831-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep Date: 12/28/2012	Analyst: RH
Arsenic	3.1		0.88	mg/Kg-dry	2	12/31/2012 02:24 PM
MOISTURE			A2540 G			Analyst: LR
Moisture	10		0.050	% of sample	1	12/22/2012 02:00 PM

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

ALS Group USA, Corp**Date:** 31-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/20/12
Sample ID: NNE Background
Collection Date: 12/20/2012 10:00 AM

Work Order: 1212831
Lab ID: 1212831-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
METALS BY ICP-MS			SW6020A		Prep Date: 12/28/2012	Analyst: RH
Arsenic	3.1		0.74	mg/Kg-dry	2	12/31/2012 02:34 PM
MOISTURE			A2540 G			Analyst: LR
Moisture	7.4		0.050	% of sample	1	12/22/2012 02:00 PM

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

ALS Group USA, Corp

Date: 31-Dec-12

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 12/20/12
Sample ID: S Background
Collection Date: 12/20/2012 10:30 AM

Work Order: 1212831
Lab ID: 1212831-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
METALS BY ICP-MS			SW6020A		Prep Date: 12/28/2012	Analyst: RH
Arsenic	2.8		0.75	mg/Kg-dry	2	12/31/2012 02:39 PM
MOISTURE			A2540 G			Analyst: LR
Moisture	5.7		0.050	% of sample	1	12/22/2012 02:00 PM

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

Client: HRL Compliance Solutions
 Work Order: 1212831
 Project: GW Pad 8 12-271 12/20/12

QC BATCH REPORT

Batch ID: 45658 Instrument ID ICPMS2 Method: SW6020A

MBLK		Sample ID: MBLK-45658-45658				Units: mg/Kg		Analysis Date: 12/31/2012 12:25 PM		
Client ID:		Run ID: ICPMS2_121231A				SeqNo: 2183062		Prep Date: 12/28/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

LCS		Sample ID: LCS-45658-45658				Units: mg/Kg		Analysis Date: 12/31/2012 12:30 PM		
Client ID:		Run ID: ICPMS2_121231A				SeqNo: 2183063		Prep Date: 12/28/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.49	0.25	5	0	89.8	80-120	0			

MS		Sample ID: 1212748-03AMS				Units: mg/Kg		Analysis Date: 12/31/2012 12:40 PM		
Client ID:		Run ID: ICPMS2_121231A				SeqNo: 2183065		Prep Date: 12/28/2012		DF: 4
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.6	1.4	6.925	7.819	83.5	75-125	0			

MSD		Sample ID: 1212748-03AMSD				Units: mg/Kg		Analysis Date: 12/31/2012 12:45 PM		
Client ID:		Run ID: ICPMS2_121231A				SeqNo: 2183066		Prep Date: 12/28/2012		DF: 4
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.05	1.4	7.013	7.819	88.9	75-125	13.6	3.25	25	

The following samples were analyzed in this batch:

1212831-01A	1212831-02A	1212831-03A
-------------	-------------	-------------

Client: HRL Compliance Solutions
Work Order: 1212831
Project: GW Pad 8 12-271 12/20/12

QC BATCH REPORT

Batch ID: **R114364** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS1-R114364				Units: % of sample			Analysis Date: 12/22/2012 02:00 PM		
Client ID:		Run ID: MOIST_121222B				SeqNo: 2177999			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-R114364				Units: % of sample			Analysis Date: 12/22/2012 02:00 PM		
Client ID:		Run ID: MOIST_121222B				SeqNo: 2177995			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: 1212775-13B DUP				Units: % of sample			Analysis Date: 12/22/2012 02:00 PM		
Client ID:		Run ID: MOIST_121222B				SeqNo: 2177986			Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 3.77 0.050 0 0 0 0-0 3.7 1.87 20

The following samples were analyzed in this batch:

1212831-01A	1212831-02A	1212831-03A
-------------	-------------	-------------

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



ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER #	1212831
-------------	---------

PROJECT NAME		GW Pad 8		SAMPLER		Skip Vest		DATE		12/20/2012		PAGE		1 of 1	
PROJECT No.		12-271		SITE ID				TURNAROUND		Standard		DISPOSAL		By Lab or Return to Client	
COMPANY NAME		HRL Compliance Solutions		EDD FORMAT				Arsenic							
SEND REPORT TO		Skip Vest, Herman Lucero		PURCHASE ORDER		12-271									
ADDRESS		2970 W 29th st C-18		BILL TO COMPANY		HRL Compliance Solutions									
CITY / STATE / ZIP		Greeley, Co. 80631		INVOICE ATTN TO		Staci Knob									
PHONE		970-270-6553		ADDRESS		2385 F1/2 Rd									
FAX		970-978-4734		CITY / STATE / ZIP		Grand Junction, CO 81505									
E-MAIL		svest@hrlcomp.com, hlucero@hrlcomp.com		PHONE		970-243-3271									
				FAX		970-243-3280									
Lab ID		Field ID		Matrix		Sample Date		Sample Time		# Bottles		Pres.		QC	
1		NNW Background		SO		12/20/2012		10:15am		1		4C		x	
2		NNE Background		SO		12/20/2012		10:00am		1		4C		x	
3		S Background		SO		12/20/2012		10:30am		1		4C		x	

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

For metals or anions, please detail analytes below.

Comments:	 Background samples to establish native Arsenic levels. 5.8C	QC PACKAGE (check below)
		LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Skip Vest	12/20/2012	3:34pm
RECEIVED BY		Diane F Sha	12/22/12	1130
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 22-Dec-12 11:30

Work Order: 1212831

Received by: DS

Checklist completed by Diane Shaw 22-Dec-12
eSignature Date

Reviewed by: Ann Preston 23-Dec-12
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):	<u>5.8 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/22/2012 1:03:55 PM</u>		
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:

CUSTOMER SEAL

DATE

SIGNATURE

QEC

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

CUSTOMER SEAL

DATE

SIGNATURE

QEC

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

333Z 128TH AVE

HOLLAND MI 49424

(616) 399-6070

REF:

PO:

DEPT:

fedex.com 1.800.GoFedEx 1.800.463.3339

1 From

Date 12/20/12

Sender's Name

Skipvest

Phone

Company

HCSI

Address

2970 W 29th St. C-18

City

Greeley

State

CO

ZIP

80631

2 Your Internal Billing Reference

3 To

Recipient's Name

Sample Receiving

Phone

616 399-6070

Company

ALS Group Laboratory

Address

3332 128th Ave

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

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City

Holland

State

MI

ZIP

49424



8016 7941 4164

7941 4164

4 Express Package Service

* To most locations.
NOTE: Service order has changed. Please select carefully.

Next Business Day

☐ FedEx First Overnight
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

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

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

2 or 3 Business Days

☐ FedEx 2Day A.M.
Second business morning.* Saturday Delivery NOT available.

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

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

5 Packaging

* Declared value limit \$500.

☐ FedEx Envelope*

☐ FedEx Pak*

☐ FedEx Box

☐ FedEx Tube

☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

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

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

Does this shipment contain dangerous goods?

One box must be checked.

☒ No

☐ Yes

As per attached Shipper's Declaration.

☐ Yes
Shipper's Declaration not required.

☐ Dry Ice
Dry ice, § UN 1845

☐ Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:

☐ Sender
Acct. No. in Section 1 will be billed.

☒ Recipient

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

☐ Third Party

☐ Credit Card

Obtain recip. Acct. No.

☐ Cash/Check

Total Packages

Total Weight

lbs.

Credit Card Auth.

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

644

ch Here

fedex.com 1.800.GoFedEx 1.800.463.3339



04-Feb-2013

Mark Mumby
HRL Compliance Solutions
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **GW Pad 8 12-271 1/25/13**

Work Order: **1301807**

Dear Mark,

ALS Environmental received 7 samples on 26-Jan-2013 10:30 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 21.

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: MN331938

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 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 1/25/13
Work Order: 1301807

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>
1301807-01	Monitor Well 1	Water		1/25/2013 10:30	1/26/2013 10:30	<input type="checkbox"/>
1301807-02	Monitor Well 2	Water		1/25/2013 10:00	1/26/2013 10:30	<input type="checkbox"/>
1301807-03	Monitor Well 3	Water		1/25/2013 09:20	1/26/2013 10:30	<input type="checkbox"/>
1301807-04	Monitor Well 4	Water		1/25/2013 08:40	1/26/2013 10:30	<input type="checkbox"/>
1301807-05	Monitor Well 5	Water		1/25/2013 11:30	1/26/2013 10:30	<input type="checkbox"/>
1301807-06	Monitor Well 6	Water		1/25/2013 11:55	1/26/2013 10:30	<input type="checkbox"/>
1301807-07	Sample Port	Water		1/25/2013 11:00	1/26/2013 10:30	<input type="checkbox"/>

Client: HRL Compliance Solutions**Project:** GW Pad 8 12-271 1/25/13**Work Order:** 1301807**Case Narrative**

Batch 46102 MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Batch R115580 sample Sample Port MS/MSD recoveries for GRO were above control limits. The corresponding result in the parent sample may be biased high for GRO.

Batch R115580, Method GRO_8015_W, Sample 1301807-07A MSD: Results verified by MS.

Batch R115589A MS/MSD data for Benzene is not related to this project's samples. No data requires qualification.

Client: HRL Compliance Solutions
Project: GW Pad 8 12-271 1/25/13
WorkOrder: 1301807

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>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Group USA, Corp

Date: 04-Feb-13

Client: HRL Compliance Solutions

Project: GW Pad 8 12-271 1/25/13

Sample ID: Monitor Well 1

Collection Date: 1/25/2013 10:30 AM

Work Order: 1301807

Lab ID: 1301807-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK
Benzene	ND		1.0	µg/L	1	1/29/2013 02:58 AM
Ethylbenzene	ND		1.0	µg/L	1	1/29/2013 02:58 AM
m,p-Xylene	ND		2.0	µg/L	1	1/29/2013 02:58 AM
o-Xylene	ND		1.0	µg/L	1	1/29/2013 02:58 AM
Toluene	ND		1.0	µg/L	1	1/29/2013 02:58 AM
Xylenes, Total	ND		3.0	µg/L	1	1/29/2013 02:58 AM
Surr: 1,2-Dichloroethane-d4	108		70-120	%REC	1	1/29/2013 02:58 AM
Surr: 4-Bromofluorobenzene	99.9		75-120	%REC	1	1/29/2013 02:58 AM
Surr: Dibromofluoromethane	93.8		85-115	%REC	1	1/29/2013 02:58 AM
Surr: Toluene-d8	96.2		85-120	%REC	1	1/29/2013 02:58 AM
ANIONS BY ION CHROMATOGRAPHY			SW9056			Analyst: ED
Chloride	34		10	mg/L	10	1/29/2013 11:22 AM
Sulfate	420		40	mg/L	40	1/29/2013 03:14 PM
TOTAL DISSOLVED SOLIDS			A2540 C			Analyst: YM
Total Dissolved Solids	990		10	mg/L	1	1/28/2013 04:30 PM

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

ALS Group USA, Corp

Date: 04-Feb-13

Client: HRL Compliance Solutions

Project: GW Pad 8 12-271 1/25/13

Sample ID: Monitor Well 2

Collection Date: 1/25/2013 10:00 AM

Work Order: 1301807

Lab ID: 1301807-02

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK
Benzene	ND		1.0	µg/L	1	1/29/2013 03:22 AM
Ethylbenzene	ND		1.0	µg/L	1	1/29/2013 03:22 AM
m,p-Xylene	ND		2.0	µg/L	1	1/29/2013 03:22 AM
o-Xylene	ND		1.0	µg/L	1	1/29/2013 03:22 AM
Toluene	ND		1.0	µg/L	1	1/29/2013 03:22 AM
Xylenes, Total	ND		3.0	µg/L	1	1/29/2013 03:22 AM
Surr: 1,2-Dichloroethane-d4	106		70-120	%REC	1	1/29/2013 03:22 AM
Surr: 4-Bromofluorobenzene	102		75-120	%REC	1	1/29/2013 03:22 AM
Surr: Dibromofluoromethane	98.4		85-115	%REC	1	1/29/2013 03:22 AM
Surr: Toluene-d8	97.4		85-120	%REC	1	1/29/2013 03:22 AM
ANIONS BY ION CHROMATOGRAPHY			SW9056			Analyst: ED
Chloride	39		10	mg/L	10	1/29/2013 12:01 PM
Sulfate	530		40	mg/L	40	1/29/2013 03:34 PM
TOTAL DISSOLVED SOLIDS			A2540 C			Analyst: YM
Total Dissolved Solids	1,200		10	mg/L	1	1/28/2013 04:30 PM

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

ALS Group USA, Corp

Date: 04-Feb-13

Client: HRL Compliance Solutions

Project: GW Pad 8 12-271 1/25/13

Work Order: 1301807

Sample ID: Monitor Well 3

Lab ID: 1301807-03

Collection Date: 1/25/2013 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK
Benzene	ND		1.0	µg/L	1	1/29/2013 03:46 AM
Ethylbenzene	ND		1.0	µg/L	1	1/29/2013 03:46 AM
m,p-Xylene	ND		2.0	µg/L	1	1/29/2013 03:46 AM
o-Xylene	ND		1.0	µg/L	1	1/29/2013 03:46 AM
Toluene	ND		1.0	µg/L	1	1/29/2013 03:46 AM
Xylenes, Total	ND		3.0	µg/L	1	1/29/2013 03:46 AM
Surr: 1,2-Dichloroethane-d4	107		70-120	%REC	1	1/29/2013 03:46 AM
Surr: 4-Bromofluorobenzene	101		75-120	%REC	1	1/29/2013 03:46 AM
Surr: Dibromofluoromethane	95.4		85-115	%REC	1	1/29/2013 03:46 AM
Surr: Toluene-d8	98.6		85-120	%REC	1	1/29/2013 03:46 AM
ANIONS BY ION CHROMATOGRAPHY			SW9056			Analyst: ED
Chloride	38		10	mg/L	10	1/29/2013 12:21 PM
Sulfate	520		40	mg/L	40	1/29/2013 04:34 PM
TOTAL DISSOLVED SOLIDS			A2540 C			Analyst: YM
Total Dissolved Solids	1,100		10	mg/L	1	1/28/2013 04:30 PM

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

ALS Group USA, Corp

Date: 04-Feb-13

Client: HRL Compliance Solutions

Project: GW Pad 8 12-271 1/25/13

Sample ID: Monitor Well 4

Collection Date: 1/25/2013 08:40 AM

Work Order: 1301807

Lab ID: 1301807-04

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK
Benzene	ND		1.0	µg/L	1	1/29/2013 04:10 AM
Ethylbenzene	ND		1.0	µg/L	1	1/29/2013 04:10 AM
m,p-Xylene	ND		2.0	µg/L	1	1/29/2013 04:10 AM
o-Xylene	ND		1.0	µg/L	1	1/29/2013 04:10 AM
Toluene	ND		1.0	µg/L	1	1/29/2013 04:10 AM
Xylenes, Total	ND		3.0	µg/L	1	1/29/2013 04:10 AM
Surr: 1,2-Dichloroethane-d4	106		70-120	%REC	1	1/29/2013 04:10 AM
Surr: 4-Bromofluorobenzene	96.6		75-120	%REC	1	1/29/2013 04:10 AM
Surr: Dibromofluoromethane	99.0		85-115	%REC	1	1/29/2013 04:10 AM
Surr: Toluene-d8	97.6		85-120	%REC	1	1/29/2013 04:10 AM
ANIONS BY ION CHROMATOGRAPHY			SW9056			Analyst: ED
Chloride	42		10	mg/L	10	1/29/2013 12:41 PM
Sulfate	520		40	mg/L	40	1/29/2013 04:55 PM
TOTAL DISSOLVED SOLIDS			A2540 C			Analyst: YM
Total Dissolved Solids	1,100		10	mg/L	1	1/28/2013 04:30 PM

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

ALS Group USA, Corp

Date: 04-Feb-13

Client: HRL Compliance Solutions**Project:** GW Pad 8 12-271 1/25/13**Work Order:** 1301807**Sample ID:** Monitor Well 5**Lab ID:** 1301807-05**Collection Date:** 1/25/2013 11:30 AM**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK
Benzene	ND		1.0	µg/L	1	1/29/2013 04:35 AM
Ethylbenzene	ND		1.0	µg/L	1	1/29/2013 04:35 AM
m,p-Xylene	ND		2.0	µg/L	1	1/29/2013 04:35 AM
o-Xylene	ND		1.0	µg/L	1	1/29/2013 04:35 AM
Toluene	ND		1.0	µg/L	1	1/29/2013 04:35 AM
Xylenes, Total	ND		3.0	µg/L	1	1/29/2013 04:35 AM
Surr: 1,2-Dichloroethane-d4	115		70-120	%REC	1	1/29/2013 04:35 AM
Surr: 4-Bromofluorobenzene	102		75-120	%REC	1	1/29/2013 04:35 AM
Surr: Dibromofluoromethane	100		85-115	%REC	1	1/29/2013 04:35 AM
Surr: Toluene-d8	97.0		85-120	%REC	1	1/29/2013 04:35 AM
ANIONS BY ION CHROMATOGRAPHY			SW9056			Analyst: ED
Chloride	55		10	mg/L	10	1/29/2013 01:01 PM
Sulfate	580		40	mg/L	40	1/29/2013 05:15 PM
TOTAL DISSOLVED SOLIDS			A2540 C			Analyst: YM
Total Dissolved Solids	1,200		10	mg/L	1	1/28/2013 04:30 PM

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

ALS Group USA, Corp

Date: 04-Feb-13

Client: HRL Compliance Solutions

Project: GW Pad 8 12-271 1/25/13

Sample ID: Monitor Well 6

Collection Date: 1/25/2013 11:55 AM

Work Order: 1301807

Lab ID: 1301807-06

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK
Benzene	ND		1.0	µg/L	1	1/29/2013 04:58 AM
Ethylbenzene	ND		1.0	µg/L	1	1/29/2013 04:58 AM
m,p-Xylene	ND		2.0	µg/L	1	1/29/2013 04:58 AM
o-Xylene	ND		1.0	µg/L	1	1/29/2013 04:58 AM
Toluene	ND		1.0	µg/L	1	1/29/2013 04:58 AM
Xylenes, Total	ND		3.0	µg/L	1	1/29/2013 04:58 AM
Surr: 1,2-Dichloroethane-d4	103		70-120	%REC	1	1/29/2013 04:58 AM
Surr: 4-Bromofluorobenzene	102		75-120	%REC	1	1/29/2013 04:58 AM
Surr: Dibromofluoromethane	98.0		85-115	%REC	1	1/29/2013 04:58 AM
Surr: Toluene-d8	97.8		85-120	%REC	1	1/29/2013 04:58 AM
ANIONS BY ION CHROMATOGRAPHY			SW9056			Analyst: ED
Chloride	39		10	mg/L	10	1/29/2013 01:22 PM
Sulfate	540		40	mg/L	40	1/29/2013 05:35 PM
TOTAL DISSOLVED SOLIDS			A2540 C			Analyst: YM
Total Dissolved Solids	1,200		10	mg/L	1	1/28/2013 04:30 PM

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

ALS Group USA, Corp

Date: 04-Feb-13

Client: HRL Compliance Solutions

Project: GW Pad 8 12-271 1/25/13

Sample ID: Sample Port

Collection Date: 1/25/2013 11:00 AM

Work Order: 1301807

Lab ID: 1301807-07

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep Date: 1/28/2013	Analyst: CW
DRO (C10-C28)	ND		0.10	mg/L	1	1/29/2013 11:43 PM
Surr: 4-Terphenyl-d14	59.5		21-90	%REC	1	1/29/2013 11:43 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015			Analyst: CW
GRO (C6-C10)	ND		0.20	mg/L	1	1/28/2013 04:10 PM
Surr: Toluene-d8	122		70-130	%REC	1	1/28/2013 04:10 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: AK
Benzene	2.2		1.0	µg/L	1	1/29/2013 05:22 AM
Ethylbenzene	ND		1.0	µg/L	1	1/29/2013 05:22 AM
m,p-Xylene	ND		2.0	µg/L	1	1/29/2013 05:22 AM
o-Xylene	1.6		1.0	µg/L	1	1/29/2013 05:22 AM
Toluene	ND		1.0	µg/L	1	1/29/2013 05:22 AM
Xylenes, Total	ND		3.0	µg/L	1	1/29/2013 05:22 AM
Surr: 1,2-Dichloroethane-d4	111		70-120	%REC	1	1/29/2013 05:22 AM
Surr: 4-Bromofluorobenzene	101		75-120	%REC	1	1/29/2013 05:22 AM
Surr: Dibromofluoromethane	99.2		85-115	%REC	1	1/29/2013 05:22 AM
Surr: Toluene-d8	98.2		85-120	%REC	1	1/29/2013 05:22 AM
ANIONS BY ION CHROMATOGRAPHY						
			SW9056			Analyst: ED
Chloride	33		10	mg/L	10	1/29/2013 02:22 PM
Sulfate	480		40	mg/L	40	1/29/2013 06:36 PM
NITROGEN, NITRITE						
			A4500-NO2 B			Analyst: EE
Nitrogen, Nitrite	ND		0.020	mg/L	1	1/26/2013 11:30 AM
NITROGEN, NITRATE						
			E353.2 R2.0			Analyst: JJG
Nitrogen, Nitrate	ND		0.020	mg/L	1	2/1/2013 10:27 AM
TOTAL DISSOLVED SOLIDS						
			A2540 C			Analyst: YM
Total Dissolved Solids	1,000		10	mg/L	1	1/28/2013 04:30 PM

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

Client: HRL Compliance Solutions
Work Order: 1301807
Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **46102** Instrument ID **GC11** Method: **SW8015M**

MBLK		Sample ID: DBLKW1-46102-46102				Units: mg/L		Analysis Date: 1/29/2013 04:04 PM		
Client ID:		Run ID: GC11_130129A				SeqNo: 2204227		Prep Date: 1/28/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	0.10								
Surr: 4-Terphenyl-d14	0.07111	0	0.1143	0	62.2	21-90	0			

LCS		Sample ID: DLCSW1-46102-46102				Units: mg/L		Analysis Date: 1/29/2013 04:40 PM		
Client ID:		Run ID: GC11_130129A				SeqNo: 2204228		Prep Date: 1/28/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	5.205	0.10	11.43	0	45.5	44-116	0			
Surr: 4-Terphenyl-d14	0.07522	0	0.1143	0	65.8	21-90	0			

MS		Sample ID: 1301757-01A MS				Units: mg/L		Analysis Date: 1/29/2013 09:58 PM		
Client ID:		Run ID: GC11_130129A				SeqNo: 2204236		Prep Date: 1/28/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	53.02	0.35	40	62.99	-24.9	44-116	0			S
Surr: 4-Terphenyl-d14	0.3378	0	0.4	0	84.4	21-90	0			

MSD		Sample ID: 1301757-01A MSD				Units: mg/L		Analysis Date: 1/29/2013 10:33 PM		
Client ID:		Run ID: GC11_130129A				SeqNo: 2204237		Prep Date: 1/28/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	91.67	0.35	40	62.99	71.7	44-116	53.02	53.4	30	R
Surr: 4-Terphenyl-d14	0.3655	0	0.4	0	91.4	21-90	0.3378	7.87	30	S

The following samples were analyzed in this batch: 1301807-07D

Client: HRL Compliance Solutions
Work Order: 1301807
Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **R115580** Instrument ID **GC10** Method: **SW8015**

MBLK		Sample ID: GBLK1-130128-R115580				Units: µg/L		Analysis Date: 1/28/2013 11:12 AM		
Client ID:		Run ID: GC10_130128A				SeqNo: 2202782		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								
<i>Surr: Toluene-d8</i>	116.1	0	100	0	116	70-130	0			

LCS		Sample ID: GLCS1-130128-R115580				Units: µg/L		Analysis Date: 1/28/2013 10:48 AM		
Client ID:		Run ID: GC10_130128A				SeqNo: 2202781		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)	9004	200	10000	0	90	70-130	0			
<i>Surr: Toluene-d8</i>	124.9	0	100	0	125	70-130	0			

MS		Sample ID: 1301807-07A MS				Units: µg/L		Analysis Date: 1/28/2013 05:29 PM		
Client ID: Sample Port		Run ID: GC10_130128A				SeqNo: 2202929		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)	13120	200	10000	55.78	131	70-130	0			S
<i>Surr: Toluene-d8</i>	124	0	100	0	124	70-130	0			

MSD		Sample ID: 1301807-07A MSD				Units: µg/L		Analysis Date: 1/28/2013 05:53 PM		
Client ID: Sample Port		Run ID: GC10_130128A				SeqNo: 2202931		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)	15450	200	10000	55.78	154	70-130	13120	16.3	30	S
<i>Surr: Toluene-d8</i>	122.8	0	100	0	123	70-130	124	0.996	30	

The following samples were analyzed in this batch:

1301807-07A

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

Client: HRL Compliance Solutions
 Work Order: 1301807
 Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **R115589A** Instrument ID **VMS5** Method: **SW8260**

MBLK		Sample ID: VBLKW2-130128-R115589A				Units: µg/L		Analysis Date: 1/28/2013 11:46 PM		
Client ID:		Run ID: VMS5_130128B				SeqNo: 2203460		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	19.94	0	20	0	99.7	70-120	0			
Surr: 4-Bromofluorobenzene	19.6	0	20	0	98	75-120	0			
Surr: Dibromofluoromethane	19.22	0	20	0	96.1	85-115	0			
Surr: Toluene-d8	19.54	0	20	0	97.7	85-120	0			

LCS		Sample ID: VLCSW2-130128-R115589A				Units: µg/L		Analysis Date: 1/28/2013 10:58 PM		
Client ID:		Run ID: VMS5_130128B				SeqNo: 2202897		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.1	1.0	20	0	100	80-120	0			
Ethylbenzene	20.76	1.0	20	0	104	75-125	0			
m,p-Xylene	41	2.0	40	0	102	75-130	0			
o-Xylene	20.45	1.0	20	0	102	80-120	0			
Toluene	19.11	1.0	20	0	95.6	75-120	0			
Xylenes, Total	61.45	3.0	60	0	102	75-130	0			
Surr: 1,2-Dichloroethane-d4	21.91	0	20	0	110	70-120	0			
Surr: 4-Bromofluorobenzene	20.13	0	20	0	101	75-120	0			
Surr: Dibromofluoromethane	19.97	0	20	0	99.8	85-115	0			
Surr: Toluene-d8	19.31	0	20	0	96.6	85-120	0			

MS		Sample ID: 1301765-07A MS				Units: µg/L		Analysis Date: 1/29/2013 07:23 AM		
Client ID:		Run ID: VMS5_130128B				SeqNo: 2203480		Prep Date:		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	844	20	400	459.2	96.2	80-120	0			
Ethylbenzene	469.2	20	400	114	88.8	75-125	0			
m,p-Xylene	806.6	40	800	107.6	87.4	75-130	0			
o-Xylene	385.8	20	400	0	96.4	80-120	0			
Toluene	361.4	20	400	28.2	83.3	75-120	0			
Xylenes, Total	1192	60	1200	107.6	90.4	75-130	0			
Surr: 1,2-Dichloroethane-d4	445	0	400	0	111	70-120	0			
Surr: 4-Bromofluorobenzene	425.6	0	400	0	106	75-120	0			
Surr: Dibromofluoromethane	406.8	0	400	0	102	85-115	0			
Surr: Toluene-d8	389.6	0	400	0	97.4	85-120	0			

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

Client: HRL Compliance Solutions
Work Order: 1301807
Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **R115589A** Instrument ID **VMS5** Method: **SW8260**

MSD		Sample ID: 1301765-07A MSD				Units: µg/L		Analysis Date: 1/29/2013 07:46 AM		
Client ID:		Run ID: VMS5_130128B				SeqNo: 2203481		Prep Date:		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	756.6	20	400	459.2	74.4	80-120	844	10.9	30	S
Ethylbenzene	459.8	20	400	114	86.4	75-125	469.2	2.02	30	
m,p-Xylene	783	40	800	107.6	84.4	75-130	806.6	2.97	30	
o-Xylene	365.4	20	400	0	91.4	80-120	385.8	5.43	30	
Toluene	353.2	20	400	28.2	81.2	75-120	361.4	2.29	30	
Xylenes, Total	1148	60	1200	107.6	86.7	75-130	1192	3.76	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	428	0	400	0	107	70-120	445	3.89	30	
<i>Surr: 4-Bromofluorobenzene</i>	418	0	400	0	104	75-120	425.6	1.8	30	
<i>Surr: Dibromofluoromethane</i>	391	0	400	0	97.8	85-115	406.8	3.96	30	
<i>Surr: Toluene-d8</i>	377.8	0	400	0	94.4	85-120	389.6	3.08	30	

The following samples were analyzed in this batch:

1301807-01A	1301807-02A	1301807-03A
1301807-04A	1301807-05A	1301807-06A
1301807-07A		

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

Client: HRL Compliance Solutions
Work Order: 1301807
Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **R115550** Instrument ID **WETCHEM** Method: **A4500-NO2 B**

MBLK		Sample ID: WBLKW1-012813-R115550				Units: mg/L		Analysis Date: 1/26/2013 11:30 AM		
Client ID:		Run ID: WETCHEM_130126D				SeqNo: 2202228		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite ND 0.020

LCS		Sample ID: WLCSW1-012813-R115550				Units: mg/L		Analysis Date: 1/26/2013 11:30 AM		
Client ID:		Run ID: WETCHEM_130126D				SeqNo: 2202229		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite 0.197 0.020 0.2 0 98.5 80-120 0

MS		Sample ID: 1301807-07B MS				Units: mg/L		Analysis Date: 1/26/2013 11:30 AM		
Client ID: Sample Port		Run ID: WETCHEM_130126D				SeqNo: 2202232		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite 0.1864 0.020 0.2 0 93.2 75-125 0

MSD		Sample ID: 1301807-07B MSD				Units: mg/L		Analysis Date: 1/26/2013 11:30 AM		
Client ID: Sample Port		Run ID: WETCHEM_130126D				SeqNo: 2202233		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite 0.186 0.020 0.2 0 93 75-125 0.1864 0.215 20

The following samples were analyzed in this batch:

1301807-07B

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

Client: HRL Compliance Solutions
Work Order: 1301807
Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **R115608** Instrument ID **TDS** Method: **A2540 C**

MBLK		Sample ID: MBLK-R115608				Units: mg/L		Analysis Date: 1/28/2013 04:30 PM		
Client ID:		Run ID: TDS_130128C				SeqNo: 2203300		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids ND 10

LCS		Sample ID: LCS-R115608				Units: mg/L		Analysis Date: 1/28/2013 04:30 PM		
Client ID:		Run ID: TDS_130128C				SeqNo: 2203298		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids 480 10 495 0 97 80-120 0

DUP		Sample ID: 1301807-05B DUP				Units: mg/L		Analysis Date: 1/28/2013 04:30 PM		
Client ID: Monitor Well 5		Run ID: TDS_130128C				SeqNo: 2203288		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids 1265 10 0 0 0 0-0 1249 1.27 20

The following samples were analyzed in this batch:

1301807-01B	1301807-02B	1301807-03B
1301807-04B	1301807-05B	1301807-06B
1301807-07B		

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

Client: HRL Compliance Solutions
Work Order: 1301807
Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **R115673** Instrument ID **IC3** Method: **SW9056**

MBLK		Sample ID: MBLK-R115673				Units: mg/L		Analysis Date: 1/29/2013 09:55 AM		
Client ID:		Run ID: IC3_130129A				SeqNo: 2204476		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.4431	1.0								J
Sulfate	ND	1.0								

LCS		Sample ID: LCS-R115673				Units: mg/L		Analysis Date: 1/29/2013 09:35 AM		
Client ID:		Run ID: IC3_130129A				SeqNo: 2204475		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.418	1.0	10	0	94.2	88-107	0			
Sulfate	9.637	1.0	10	0	96.4	85-110	0			

MS		Sample ID: 1301807-02B MS				Units: mg/L		Analysis Date: 1/29/2013 03:54 PM		
Client ID: Monitor Well 2		Run ID: IC3_130129A				SeqNo: 2204491		Prep Date:		DF: 40
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	136.7	40	100	48.93	87.8	75-125	0			
Sulfate	634.8	40	100	531.2	104	75-125	0			O

MSD		Sample ID: 1301807-02B MSD				Units: mg/L		Analysis Date: 1/29/2013 04:14 PM		
Client ID: Monitor Well 2		Run ID: IC3_130129A				SeqNo: 2204492		Prep Date:		DF: 40
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	135.9	40	100	48.93	87	75-125	136.7	0.622	20	
Sulfate	628	40	100	531.2	96.8	75-125	634.8	1.08	20	O

The following samples were analyzed in this batch:

1301807-01B	1301807-02B	1301807-03B
1301807-04B	1301807-05B	1301807-06B
1301807-07B		

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

Client: HRL Compliance Solutions
Work Order: 1301807
Project: GW Pad 8 12-271 1/25/13

QC BATCH REPORT

Batch ID: **R115795** Instrument ID **LACHAT** Method: **E353.2 R2.0**

MBLK	Sample ID: WBLKW1-130201-R115795					Units: mg/L		Analysis Date: 2/1/2013 10:27 AM		
Client ID:	Run ID: LACHAT_130201A				SeqNo: 2206686		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrate ND 0.020

LCS	Sample ID: WLCSW1-130201-R115795					Units: mg/L		Analysis Date: 2/1/2013 10:27 AM		
Client ID:	Run ID: LACHAT_130201A				SeqNo: 2206687		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrate 5.098 0.020 5 0 102 80-120 0

MS	Sample ID: 1301821-01B MS					Units: mg/L		Analysis Date: 2/1/2013 10:27 AM		
Client ID:	Run ID: LACHAT_130201A				SeqNo: 2206692		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrate 5.115 0.020 5 0 102 75-125 0

MSD	Sample ID: 1301821-01B MSD					Units: mg/L		Analysis Date: 2/1/2013 10:27 AM		
Client ID:	Run ID: LACHAT_130201A				SeqNo: 2206693		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrate 5.108 0.020 5 0 102 75-125 5.115 0.137 20

The following samples were analyzed in this batch:

1301807-07C

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



ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER
#

1301807

KB 1-25-13
1301244

PROJECT NAME		GW Pad 8 (12-271)		SAMPLER		Dan Pinegar		DATE		1/25/2013		PAGE		1 of 1	
PROJECT No.		12-271		SITE ID				TURNAROUND		Standard		DISPOSAL		By Lab or Return to Client	
				EDD FORMAT											
				PURCHASE ORDER		12-271									
COMPANY NAME		HRL Compliance Solutions, Inc		BILL TO COMPANY		HRL Compliance Solutions									
SEND REPORT TO		Ted Brewster, Mark Mumby, Skip Vest		INVOICE ATTN TO											
ADDRESS		2970 W 29th St.		ADDRESS											
CITY / STATE / ZIP		Greeley, CO 80634		CITY / STATE / ZIP											
PHONE		970-270-6553		PHONE											
FAX				FAX											
E-MAIL		tbrewster@hrlcomp.com, svest@hrlcomp.co		E-MAIL											
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX	Sulfates	TDS	Chlorides	Nitrate	Nitrite	DRO	GRO
①	Monitor Well 1	water	1/25/2013	10:30	6	1.8		x	x	x	x				
②	Monitor Well 2	water	1/25/2013	10:00	6	1.8		x	x	x	x				
③	Monitor Well 3	water	1/25/2013	9:20	6	1.8		x	x	x	x				
④	Monitor Well 4	water	1/25/2013	8:40	6	1.8		x	x	x	x				
⑤	Monitor Well 5	water	1/25/2013	11:30	6	1.8		x	x	x	x				
⑥	Monitor Well 6	water	1/25/2013	11:55	6	1.8		x	x	x	x				
⑦	Sample Port	water	1/25/2013	11:00	11	1.8		x	x	x	x	x	x	x	x
						1.8									

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

For metals or anions, please detail analytes below.

Comments:	4.0°C	QC PACKAGE (check below)	
		<input type="checkbox"/>	LEVEL II (Standard QC)
		<input type="checkbox"/>	LEVEL III (Std QC + forms)
		<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035			

SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY <i>[Signature]</i>	Dan Pinegar	1/25/2013	1257
RECEIVED BY <i>[Signature]</i>	Skip Vest	1-25-13	1300
RELINQUISHED BY <i>[Signature]</i>	Kandi Barrow	1-25-13	1525
RECEIVED BY <i>[Signature]</i>	Kandi Barrow	1-25-13	1600
RELINQUISHED BY <i>[Signature]</i>	PAUL DEWEESE	1/26/13	1030

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 26-Jan-13 10:30

Work Order: 1301807

Received by: DS

Checklist completed by Diane Shaw 28-Jan-13
eSignature Date

Reviewed by: Alex Csaszar 28-Jan-13
eSignature Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>4.0 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>1/28/2013 9:33:05 AM</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input 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:



07-Mar-2013

Maurice Foye
HRL Compliance Solutions
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **GW Pad 8 MW 7 Install Sample 12-271 2/27/13**

Work Order: **1303024**

Dear Maurice,

ALS Environmental received 2 samples on 01-Mar-2013 09:30 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 14.

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: MN331938

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 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions
Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13
Work Order: 1303024

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>
1303024-01	MW-7 Dissolved Phase	Water		2/27/2013 16:45	3/1/2013 09:30	<input type="checkbox"/>
1303024-02	MW 7 Free Phase	Water		2/27/2013 16:55	3/1/2013 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions
Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13
WorkOrder: 1303024

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
SQL	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>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Group USA, Corp

Date: 07-Mar-13

Client: HRL Compliance Solutions

Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

Work Order: 1303024

Sample ID: MW-7 Dissolved Phase

Lab ID: 1303024-01

Collection Date: 2/27/2013 04:45 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep Date: 3/4/2013	Analyst: CW
DRO (C10-C28)	ND		0.10	mg/L	1	3/5/2013 10:52 PM
Surr: 4-Terphenyl-d14	53.7		21-90	%REC	1	3/5/2013 10:52 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015			Analyst: CW
GRO (C6-C10)	ND		0.20	mg/L	1	3/1/2013 06:21 PM
Surr: Toluene-d8	112		70-130	%REC	1	3/1/2013 06:21 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: RS
Benzene	ND		1.0	µg/L	1	3/4/2013 07:48 PM
Ethylbenzene	ND		1.0	µg/L	1	3/4/2013 07:48 PM
m,p-Xylene	2.7		2.0	µg/L	1	3/4/2013 07:48 PM
o-Xylene	ND		1.0	µg/L	1	3/4/2013 07:48 PM
Toluene	ND		1.0	µg/L	1	3/4/2013 07:48 PM
Xylenes, Total	ND		3.0	µg/L	1	3/4/2013 07:48 PM
Surr: 1,2-Dichloroethane-d4	105		70-120	%REC	1	3/4/2013 07:48 PM
Surr: 4-Bromofluorobenzene	89.0		75-120	%REC	1	3/4/2013 07:48 PM
Surr: Dibromofluoromethane	109		85-115	%REC	1	3/4/2013 07:48 PM
Surr: Toluene-d8	93.2		85-120	%REC	1	3/4/2013 07:48 PM
ANIONS BY ION CHROMATOGRAPHY						
			SW9056			Analyst: ED
Chloride	35		10	mg/L	10	3/4/2013 11:09 AM
Sulfate	480		40	mg/L	40	3/4/2013 03:20 PM
TOTAL DISSOLVED SOLIDS						
			A2540 C			Analyst: JJG
Total Dissolved Solids	1,000		10	mg/L	1	3/1/2013 03:46 PM

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

ALS Group USA, Corp

Date: 07-Mar-13

Client: HRL Compliance Solutions

Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

Work Order: 1303024

Sample ID: MW 7 Free Phase

Lab ID: 1303024-02

Collection Date: 2/27/2013 04:55 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015M		Prep Date: 3/4/2013	Analyst: CW
DRO (C10-C28)	ND		0.10	mg/L	1	3/5/2013 11:29 PM
Surr: 4-Terphenyl-d14	52.8		21-90	%REC	1	3/5/2013 11:29 PM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015			Analyst: CW
GRO (C6-C10)	ND		0.20	mg/L	1	3/1/2013 06:45 PM
Surr: Toluene-d8	112		70-130	%REC	1	3/1/2013 06:45 PM
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS
Benzene	ND		1.0	µg/L	1	3/4/2013 08:14 PM
Ethylbenzene	ND		1.0	µg/L	1	3/4/2013 08:14 PM
m,p-Xylene	2.4		2.0	µg/L	1	3/4/2013 08:14 PM
o-Xylene	ND		1.0	µg/L	1	3/4/2013 08:14 PM
Toluene	ND		1.0	µg/L	1	3/4/2013 08:14 PM
Xylenes, Total	ND		3.0	µg/L	1	3/4/2013 08:14 PM
Surr: 1,2-Dichloroethane-d4	102		70-120	%REC	1	3/4/2013 08:14 PM
Surr: 4-Bromofluorobenzene	89.5		75-120	%REC	1	3/4/2013 08:14 PM
Surr: Dibromofluoromethane	114		85-115	%REC	1	3/4/2013 08:14 PM
Surr: Toluene-d8	94.0		85-120	%REC	1	3/4/2013 08:14 PM

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

Client: HRL Compliance Solutions

QC BATCH REPORT

Work Order: 1303024

Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

Batch ID: 46666

Instrument ID GC11

Method: SW8015M

MBLK		Sample ID: DBLKW1-46666-46666				Units: mg/L		Analysis Date: 3/5/2013 12:22 PM		
Client ID:		Run ID: GC11_130305A				SeqNo: 2230877		Prep Date: 3/4/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	0.10								
Surr: 4-Terphenyl-d14	0.06263	0	0.1143	0	54.8	21-90	0			

LCS		Sample ID: DLCSW1-46666-46666				Units: mg/L		Analysis Date: 3/5/2013 12:57 PM		
Client ID:		Run ID: GC11_130305A				SeqNo: 2230878		Prep Date: 3/4/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	5.753	0.10	5.714	0	101	44-116	0			
Surr: 4-Terphenyl-d14	0.06736	0	0.1143	0	58.9	21-90	0			

MS		Sample ID: 1303023-01B MS				Units: mg/L		Analysis Date: 3/5/2013 01:31 PM		
Client ID:		Run ID: GC11_130305A				SeqNo: 2230879		Prep Date: 3/4/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	22.26	0.35	20	0	111	44-116	0			
Surr: 4-Terphenyl-d14	0.2443	0	0.4	0	61.1	21-90	0			

MSD		Sample ID: 1303023-01B MSD				Units: mg/L		Analysis Date: 3/5/2013 02:06 PM		
Client ID:		Run ID: GC11_130305A				SeqNo: 2230880		Prep Date: 3/4/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	20.4	0.35	20	0	102	44-116	22.26	8.69	30	
Surr: 4-Terphenyl-d14	0.2345	0	0.4	0	58.6	21-90	0.2443	4.11	30	

The following samples were analyzed in this batch: | 1303024-01B | 1303024-02B |

Client: HRL Compliance Solutions
Work Order: 1303024
Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

QC BATCH REPORT

Batch ID: **R116991** Instrument ID **GC10** Method: **SW8015**

MBLK	Sample ID: GBLK1-130301-R116991					Units: µg/L		Analysis Date: 3/1/2013 05:31 PM		
Client ID:	Run ID: GC10_130301C				SeqNo: 2229806		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								
<i>Surr: Toluene-d8</i>	<i>114</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>114</i>	<i>70-130</i>	<i>0</i>			

LCS	Sample ID: GLCS1-130301-R116991					Units: µg/L		Analysis Date: 3/1/2013 05:07 PM		
Client ID:	Run ID: GC10_130301C				SeqNo: 2229805		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)	8546	200	10000	0	85.5	70-130	0			
<i>Surr: Toluene-d8</i>	<i>118.2</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>118</i>	<i>70-130</i>	<i>0</i>			

MS	Sample ID: 1303029-02A MS					Units: µg/Kg		Analysis Date: 3/2/2013 12:57 PM		
Client ID:	Run ID: GC10_130301C				SeqNo: 2229878		Prep Date:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	418000	2,500	500000	0	83.6	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5789</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>116</i>	<i>50-150</i>	<i>0</i>			

MSD	Sample ID: 1303029-02A MSD					Units: µg/Kg		Analysis Date: 3/2/2013 01:21 AM		
Client ID:	Run ID: GC10_130301C				SeqNo: 2229877		Prep Date:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	415100	2,500	500000	0	83	70-130	418000	0.693	30	
<i>Surr: Toluene-d8</i>	<i>5888</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>118</i>	<i>50-150</i>	<i>5789</i>	<i>1.7</i>	<i>30</i>	

The following samples were analyzed in this batch:

1303024-01A	1303024-02A
-------------	-------------

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

Client: HRL Compliance Solutions
Work Order: 1303024
Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

QC BATCH REPORT

Batch ID: **R116876** Instrument ID **VMS9** Method: **SW8260**

MBLK		Sample ID: VBLKW1-130304-R116876				Units: µg/L		Analysis Date: 3/4/2013 12:59 PM		
Client ID:		Run ID: VMS9_130304A				SeqNo: 2228325		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	19.39	0	20	0	97	70-120	0			
Surr: 4-Bromofluorobenzene	17.93	0	20	0	89.6	75-120	0			
Surr: Dibromofluoromethane	19.56	0	20	0	97.8	85-115	0			
Surr: Toluene-d8	19.71	0	20	0	98.6	85-120	0			

LCS		Sample ID: VLCSW1-130304-R116876				Units: µg/L		Analysis Date: 3/4/2013 12:07 PM		
Client ID:		Run ID: VMS9_130304A				SeqNo: 2227460		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.59	1.0	20	0	93	80-120	0			
Ethylbenzene	20.68	1.0	20	0	103	75-125	0			
m,p-Xylene	37.64	2.0	40	0	94.1	75-130	0			
o-Xylene	21.13	1.0	20	0	106	80-120	0			
Toluene	20	1.0	20	0	100	75-120	0			
Xylenes, Total	58.77	3.0	60	0	98	75-130	0			
Surr: 1,2-Dichloroethane-d4	18.06	0	20	0	90.3	70-120	0			
Surr: 4-Bromofluorobenzene	20.21	0	20	0	101	75-120	0			
Surr: Dibromofluoromethane	19.94	0	20	0	99.7	85-115	0			
Surr: Toluene-d8	20.13	0	20	0	101	85-120	0			

MS		Sample ID: 1303026-01A MS				Units: µg/L		Analysis Date: 3/4/2013 10:22 PM		
Client ID:		Run ID: VMS9_130304A				SeqNo: 2228343		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.97	1.0	20	0	89.8	80-120	0			
Ethylbenzene	18.98	1.0	20	0	94.9	75-125	0			
m,p-Xylene	35.27	2.0	40	0	88.2	75-130	0			
o-Xylene	19.29	1.0	20	0	96.4	80-120	0			
Toluene	18.94	1.0	20	0	94.7	75-120	0			
Xylenes, Total	54.56	3.0	60	0	90.9	75-130	0			
Surr: 1,2-Dichloroethane-d4	19.27	0	20	0	96.4	70-120	0			
Surr: 4-Bromofluorobenzene	20.37	0	20	0	102	75-120	0			
Surr: Dibromofluoromethane	21.99	0	20	0	110	85-115	0			
Surr: Toluene-d8	19.73	0	20	0	98.6	85-120	0			

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

Client: HRL Compliance Solutions
Work Order: 1303024
Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

QC BATCH REPORT

Batch ID: **R116876** Instrument ID **VMS9** Method: **SW8260**

MSD		Sample ID: 1303026-01A MSD				Units: µg/L		Analysis Date: 3/4/2013 10:48 PM		
Client ID:		Run ID: VMS9_130304A				SeqNo: 2228344		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.69	1.0	20	0	98.4	80-120	17.97	9.13	30	
Ethylbenzene	18.11	1.0	20	0	90.6	75-125	18.98	4.69	30	
m,p-Xylene	33.64	2.0	40	0	84.1	75-130	35.27	4.73	30	
o-Xylene	18.68	1.0	20	0	93.4	80-120	19.29	3.21	30	
Toluene	17.86	1.0	20	0	89.3	75-120	18.94	5.87	30	
Xylenes, Total	52.32	3.0	60	0	87.2	75-130	54.56	4.19	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>21.81</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>109</i>	<i>70-120</i>	<i>19.27</i>	<i>12.4</i>	<i>30</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.66</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>103</i>	<i>75-120</i>	<i>20.37</i>	<i>1.41</i>	<i>30</i>	
<i>Surr: Dibromofluoromethane</i>	<i>21.81</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>109</i>	<i>85-115</i>	<i>21.99</i>	<i>0.822</i>	<i>30</i>	
<i>Surr: Toluene-d8</i>	<i>19.66</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.3</i>	<i>85-120</i>	<i>19.73</i>	<i>0.355</i>	<i>30</i>	

The following samples were analyzed in this batch: 1303024-01A 1303024-02A

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

Client: HRL Compliance Solutions
Work Order: 1303024
Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

QC BATCH REPORT

Batch ID: **R116871** Instrument ID **TDS** Method: **A2540 C**

MBLK		Sample ID: BLANK-R116871				Units: mg/L		Analysis Date: 3/1/2013 03:46 PM		
Client ID:		Run ID: TDS_130301A				SeqNo: 2227279		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids ND 10

LCS		Sample ID: LCS-R116871				Units: mg/L		Analysis Date: 3/1/2013 03:46 PM		
Client ID:		Run ID: TDS_130301A				SeqNo: 2227280		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids 489 10 495 0 98.8 80-120 0

DUP		Sample ID: 1302862-01B DUP				Units: mg/L		Analysis Date: 3/1/2013 03:46 PM		
Client ID:		Run ID: TDS_130301A				SeqNo: 2227263		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids 1761 10 0 0 0 0-0 1752 0.512 20

DUP		Sample ID: 1303039-02A DUP				Units: mg/L		Analysis Date: 3/1/2013 03:46 PM		
Client ID:		Run ID: TDS_130301A				SeqNo: 2227276		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids 530 10 0 0 0 0-0 523 1.33 20

The following samples were analyzed in this batch:

1303024-01C

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

Client: HRL Compliance Solutions
Work Order: 1303024
Project: GW Pad 8 MW 7 Install Sample 12-271 2/27/13

QC BATCH REPORT

Batch ID: **R116921** Instrument ID **IC4** Method: **SW9056**

MBLK		Sample ID: MBLK-R116921				Units: mg/L		Analysis Date: 3/4/2013 10:25 AM		
Client ID:		Run ID: IC4_130304A				SeqNo: 2228468		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3113	1.0								J
Sulfate	ND	1.0								

LCS		Sample ID: LCS-R116921				Units: mg/L		Analysis Date: 3/4/2013 10:05 AM		
Client ID:		Run ID: IC4_130304A				SeqNo: 2228467		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.241	1.0	10	0	92.4	88-107	0			
Sulfate	9.816	1.0	10	0	98.2	85-110	0			

MS		Sample ID: 1303043-05A MS				Units: mg/L		Analysis Date: 3/4/2013 01:39 PM		
Client ID:		Run ID: IC4_130304A				SeqNo: 2228476		Prep Date:		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	137.2	10	50	87.31	99.7	75-125	0			
Sulfate	167.4	10	50	116	103	75-125	0			

MSD		Sample ID: 1303043-05A MSD				Units: mg/L		Analysis Date: 3/4/2013 02:40 PM		
Client ID:		Run ID: IC4_130304A				SeqNo: 2228479		Prep Date:		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	135.9	10	50	87.31	97.1	75-125	137.2	0.959	20	
Sulfate	166.5	10	50	116	101	75-125	167.4	0.526	20	

The following samples were analyzed in this batch:

1303024-01C

WORKORDER
#

1303024

PAGE

1 of 1

DISPOSAL



By Lab or Return to Client

[illegible]

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

For metals or anions, please detail analytes below.

Comments: 	QC PACKAGE (check below)	
	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-NaHSO ₄ 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Dan Pinegar	2/28/2013	5:00 PM
RECEIVED BY		KEITH WHERENU	3/1/13	9:30
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 01-Mar-13 09:30

Work Order: 1303024

Received by: KRW

Checklist completed by Keith Wurenga
eSignature

01-Mar-13
Date

Reviewed by: Ann Preston
eSignature

01-Mar-13
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.4 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>3/1/2013 10:53:14 AM</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:			
Login Notes:			

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

FedEx *US Airbill*
Express

8681 6428 9790

0200

Form
10 No.

FedEx Retrieval Copy

From
Date 2-28-13 Sender's FedEx Account Number _____
Sender's Name DAN WEGER Phone 970 243 3771
Company WISE
Address 2345 F 1/2 Rd
City HERNDON VA State VA ZIP 20151

Your Internal Billing Reference

To
Recipient's Name RECEIVING Phone 613 399 6070
Company ALS GROUP
Recipient's Address _____
Address 3352 12th Ave
City HOLLAND State MI ZIP 49120

4a Express Package Service

- ☒ **FedEx Priority Overnight** Next business morning* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx Standard Overnight** Next business afternoon.* Saturday Delivery NOT available.
☐ **FedEx First Overnight** Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
☐ **FedEx 2Day** Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx Express Saver** Third business day.* Saturday Delivery NOT available.
* To most locations.

4b Express Freight Service

- ☐ **FedEx 1Day Freight*** Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx 2Day Freight** Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☒ **FedEx 3Day Freight** Third business day.* Saturday Delivery NOT available.
* To most locations.

5 Packaging

- ☐ **FedEx Envelope*** ☐ **FedEx Pak*** Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
☐ **FedEx Box** ☐ **FedEx Tube** ☒ **Other** *Declared value limit \$500.

6 Special Handling

- ☐ **SATURDAY Delivery** Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express, or FedEx 3Day Freight.
☒ **HOLD Weekday at FedEx Location** Not available for FedEx First Overnight.
☐ **HOLD Saturday at FedEx Location** Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
Does this shipment contain dangerous goods?
One box must be checked.
☒ **No** ☐ **Yes** As per attached Shipper's Declaration. Shipper's Declaration not required.
☐ **Dry Ice** Dry Ice, 9 UN 1845
☐ **Cargo Aircraft Only**

8 Residential Delivery Signature Options If you require signature, check Direct or Indirect.

- ☐ **No Signature Required** Package may be left without obtaining a signature for delivery.
☐ **Direct Signature** Someone at recipient's address may sign for delivery. Fee applies.
☒ **Indirect Signature** No one is available at recipient's address; someone at a neighboring address may sign for delivery. Fee applies.



8681 6428 9790

Rev. Date 12/06/Part #158221 ©194-2006 FedEx PRINTED IN U.S.A. SRY

FedEx.com 1800.FedEx 1800.463.3339