



24-May-2011

Kris Rowe  
HRL Compliance Solutions  
744 Horizon Ct. Suite 140  
Grand Junction, CO 81506

Re: **Black Hills Wagon Tracks 12-8 11-175 5/16/11**

Work Order: **1105413**

Dear Kris,

ALS Environmental received 4 samples on 17-May-2011 10:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 30.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: IL100452

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Environmental The ALS logo, a small blue triangle with a yellow flame.

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**Client:** HRL Compliance Solutions  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11  
**Work Order:** 1105413

**Work Order Sample Summary**

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<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>
1105413-01	Pit Bottom	Soil		5/16/2011 13:00	5/17/2011 10:00	<input type="checkbox"/>
1105413-02	BKGD 1	Soil		5/16/2011 13:10	5/17/2011 10:00	<input type="checkbox"/>
1105413-03	BKGD 2	Soil		5/16/2011 13:20	5/17/2011 10:00	<input type="checkbox"/>
1105413-04	BKGD 3	Soil		5/16/2011 13:30	5/17/2011 10:00	<input type="checkbox"/>

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**Client:** HRL Compliance Solutions  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11  
**Work Order:** 1105413

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**Case Narrative**

Batch 33372 sample BKGD 1 MSD recoveries for Barium were below control limits, but the amount of Barium in the parent sample was greater than 4 times the amount spiked. The MSD recovery for Copper and Zinc were below control limits. Both the MS recoveries and RPDs met quality control criteria.

Batch 33399 MS/MSD data for Arsenic is not related to this project's samples.

Batch 33363 MS/MSD data for PAHs is not related to this project's samples.

**Client:** HRL Compliance Solutions  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11  
**WorkOrder:** 1105413

## **QUALIFIERS, ACRONYMS, UNITS**

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

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

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

# ALS Group USA, Corp

Date: 24-May-11

Client: HRL Compliance Solutions

Project: Black Hills Wagon Tracks 12-8 11-175 5/16/11

Work Order: 1105413

Sample ID: Pit Bottom

Lab ID: 1105413-01

Collection Date: 5/16/2011 01:00 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>11</b>		<b>SW8015M</b>		Prep Date: <b>5/18/2011</b>	Analyst: <b>RM</b>
			<b>5.1</b>	<b>mg/Kg-dry</b>	1	5/19/2011 12:07 PM
Surr: 4-Terphenyl-d14	101		39-115	%REC	1	5/19/2011 12:07 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>			Analyst: <b>RM</b>
			<b>6.1</b>	<b>mg/Kg-dry</b>	100	5/19/2011 02:01 AM
Surr: Toluene-d8	91.5		50-150	%REC	100	5/19/2011 02:01 AM
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep Date: <b>5/18/2011</b>	Analyst: <b>CES</b>
			<b>0.021</b>	<b>mg/Kg-dry</b>	1	5/18/2011 03:58 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>ND</b>		<b>SW6020A</b>		Prep Date: <b>5/18/2011</b>	Analyst: <b>CES</b>
			<b>0.89</b>	<b>mg/Kg-dry</b>	2	5/18/2011 10:49 PM
<b>Barium</b>	<b>120</b>		<b>0.89</b>	<b>mg/Kg-dry</b>	2	5/18/2011 10:49 PM
Cadmium	ND		0.36	mg/Kg-dry	2	5/18/2011 10:49 PM
<b>Chromium</b>	<b>2.1</b>		<b>0.89</b>	<b>mg/Kg-dry</b>	2	5/18/2011 10:49 PM
<b>Copper</b>	<b>5.3</b>		<b>0.89</b>	<b>mg/Kg-dry</b>	2	5/18/2011 10:49 PM
<b>Lead</b>	<b>2.5</b>		<b>0.89</b>	<b>mg/Kg-dry</b>	2	5/18/2011 10:49 PM
<b>Nickel</b>	<b>4.7</b>		<b>0.89</b>	<b>mg/Kg-dry</b>	2	5/18/2011 10:49 PM
Selenium	ND		0.89	mg/Kg-dry	2	5/18/2011 10:49 PM
Silver	ND		0.89	mg/Kg-dry	2	5/18/2011 10:49 PM
<b>Zinc</b>	<b>27</b>		<b>3.6</b>	<b>mg/Kg-dry</b>	2	5/18/2011 10:49 PM
<b>SUBCONTRACTED ANALYSES</b>						
<b>Subcontracted Analyses</b>	<b>Rcvd 5/20/11</b>		<b>SUBCONTRACT</b>			Analyst: <b>A&amp;LGL</b>
			<b>attached</b>		1	5/20/2011
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>5/18/2011</b>	Analyst: <b>HL</b>
			<b>36</b>	<b>µg/Kg-dry</b>	1	5/19/2011 05:22 PM
Anthracene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Benzo(a)anthracene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Benzo(a)pyrene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Benzo(b)fluoranthene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
<b>Benzo(g,h,i)perylene</b>	<b>44</b>		<b>36</b>	<b>µg/Kg-dry</b>	1	5/19/2011 05:22 PM
Benzo(k)fluoranthene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Chrysene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Dibenzo(a,h)anthracene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Fluoranthene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Fluorene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Indeno(1,2,3-cd)pyrene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Naphthalene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Pyrene	ND		36	µg/Kg-dry	1	5/19/2011 05:22 PM
Surr: 2,4,6-Tribromophenol	60.6		34-140	%REC	1	5/19/2011 05:22 PM

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

# ALS Group USA, Corp

Date: 24-May-11

**Client:** HRL Compliance Solutions

**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

**Work Order:** 1105413

**Sample ID:** Pit Bottom

**Lab ID:** 1105413-01

**Collection Date:** 5/16/2011 01:00 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: 2-Fluorobiphenyl</i>	43.4		12-100	%REC	1	5/19/2011 05:22 PM
<i>Surr: 2-Fluorophenol</i>	54.8		33-117	%REC	1	5/19/2011 05:22 PM
<i>Surr: 4-Terphenyl-d14</i>	74.7		25-137	%REC	1	5/19/2011 05:22 PM
<i>Surr: Nitrobenzene-d5</i>	53.2		37-107	%REC	1	5/19/2011 05:22 PM
<i>Surr: Phenol-d6</i>	51.5		40-106	%REC	1	5/19/2011 05:22 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>			Analyst: <b>MK</b>
Benzene	ND		120	µg/Kg-dry	100	5/21/2011 05:20 AM
Ethylbenzene	ND		120	µg/Kg-dry	100	5/21/2011 05:20 AM
m,p-Xylene	ND		120	µg/Kg-dry	100	5/21/2011 05:20 AM
o-Xylene	ND		120	µg/Kg-dry	100	5/21/2011 05:20 AM
Toluene	ND		120	µg/Kg-dry	100	5/21/2011 05:20 AM
Xylenes, Total	ND		120	µg/Kg-dry	100	5/21/2011 05:20 AM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>MB</b>
Chromium, Trivalent	2.1			mg/L-dry	1	5/19/2011 04:13 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: <b>5/18/2011</b>	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	5/19/2011 03:00 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>JJG</b>
Moisture	18		0.050	% of sample	1	5/17/2011 02:12 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>EE</b>
pH	9.45			s.u.	1	5/17/2011 12:40 PM

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

**ALS Group USA, Corp****Date:** 24-May-11**Client:** HRL Compliance Solutions**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11**Work Order:** 1105413**Sample ID:** BKGD 1**Lab ID:** 1105413-02**Collection Date:** 5/16/2011 01:10 PM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>						
Arsenic	0.97		SW6020A 0.76	mg/Kg-dry	Prep Date: 5/18/2011 2	Analyst: CES 5/18/2011 03:37 PM
<b>SUBCONTRACTED ANALYSES</b>						
Subcontracted Analyses	Rcvd 5/20/11		SUBCONTRACT attached		1	Analyst: A&LGL 5/20/2011
<b>MOISTURE</b>						
Moisture	3.4		A2540 G 0.050	% of sample	1	Analyst: JJG 5/17/2011 02:12 PM
<b>PH</b>						
pH	8.02		SW9045D	s.u.	1	Analyst: EE 5/17/2011 12:40 PM

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

Report Number: F11139-0141

Account Number: 91000

# A & L GREAT LAKES LABORATORIES, INC.

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**QUALITY ANALYSES FOR INFORMED DECISIONS**

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

RE: 1105413

DATE RECEIVED: 05/19/2011

DATE REPORTED: 05/20/2011

PAGE: 1

P.O. NUMBER: 20-122010129

ATTN: ANN PRESTON

## REPORT OF ANALYSIS

LAB NO.	SAMPLE ID	ANALYSIS	RESULT	UNIT	METHOD
45105	01C	Sat'd Paste Extraction with DIW	1		USDA Handbook 60
		Conductivity (ECe)	2.34	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	10	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	3	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	2119	ppm	USDA Handbook 60
		Sodium Adsorption Ratio	150.5	-	USDA Handbook 60
45106	02B	Sat'd Paste Extraction with DIW	1		USDA Handbook 60
		Conductivity (ECe)	0.24	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	34	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	7	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	19	ppm	USDA Handbook 60
		Sodium Adsorption Ratio	0.8	-	USDA Handbook 60



## ALS Group USA, Corp

Date: 24-May-11

**Client:** HRL Compliance Solutions

**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

**Work Order:** 1105413

**Sample ID:** BKGD 2

**Lab ID:** 1105413-03

**Collection Date:** 5/16/2011 01:20 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>5/18/2011</b>	Analyst: <b>CES</b>
Arsenic	0.97		0.82	mg/Kg-dry	2	5/18/2011 10:55 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>JJG</b>
Moisture	1.5		0.050	% of sample	1	5/17/2011 02:12 PM

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

## ALS Group USA, Corp

Date: 24-May-11

**Client:** HRL Compliance Solutions

**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

**Work Order:** 1105413

**Sample ID:** BKGD 3

**Lab ID:** 1105413-04

**Collection Date:** 5/16/2011 01:30 PM

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep Date: <b>5/20/2011</b>	Analyst: <b>CES</b>
Arsenic	1.0		0.82	mg/Kg-dry	2	5/23/2011 01:05 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>JJG</b>
Moisture	3.0		0.050	% of sample	1	5/17/2011 02:12 PM

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

# ALS Group USA, Corp

Date: 24-May-11

**Client:** HRL Compliance Solutions

## QC BATCH REPORT

**Work Order:** 1105413

**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

Batch ID: **33364** Instrument ID **GC8** Method: **SW8015M**

<b>MBLK</b>	Sample ID: <b>DBLKS1-33364-33364</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 10:29 AM</b>			
Client ID:	Run ID: <b>GC8_110519A</b>				SeqNo: <b>1630075</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
<i>Surr: 4-Terphenyl-d14</i>	<i>0.956</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>57.4</i>	<i>39-115</i>	<i>0</i>			

<b>LCS</b>	Sample ID: <b>DLCSS1-33364-33364</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 09:16 AM</b>			
Client ID:	Run ID: <b>GC8_110519A</b>				SeqNo: <b>1630073</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	142.1	4.2	166.7	0	85.3	60-130	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>1.115</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>66.9</i>	<i>39-115</i>	<i>0</i>			

<b>LCSD</b>	Sample ID: <b>DLCSDS1-33364-33364</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 09:16 AM</b>			
Client ID:	Run ID: <b>GC8_110519A</b>				SeqNo: <b>1630080</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	129.7	4.2	166.7	0	77.8	60-130	142.1	9.17	30	
<i>Surr: 4-Terphenyl-d14</i>	<i>1.192</i>	<i>0</i>	<i>1.667</i>	<i>0</i>	<i>71.5</i>	<i>39-115</i>	<i>1.115</i>	<i>6.62</i>	<i>30</i>	

<b>MS</b>	Sample ID: <b>1105430-04B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 09:40 AM</b>			
Client ID:	Run ID: <b>GC8_110519A</b>				SeqNo: <b>1630074</b>		Prep Date: <b>5/18/2011</b>		DF: <b>10</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	267.6	81	323.2	0	82.8	60-130	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>1.907</i>	<i>0</i>	<i>3.232</i>	<i>0</i>	<i>59</i>	<i>39-115</i>	<i>0</i>			

<b>MSD</b>	Sample ID: <b>1105430-04B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 09:40 AM</b>			
Client ID:	Run ID: <b>GC8_110519A</b>				SeqNo: <b>1630081</b>		Prep Date: <b>5/18/2011</b>		DF: <b>10</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	259.4	82	328.5	0	79	60-130	267.6	3.13	30	
<i>Surr: 4-Terphenyl-d14</i>	<i>2.142</i>	<i>0</i>	<i>3.285</i>	<i>0</i>	<i>65.2</i>	<i>39-115</i>	<i>1.907</i>	<i>11.6</i>	<i>30</i>	

The following samples were analyzed in this batch:

1105413-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

# QC BATCH REPORT

Batch ID: **R90227**      Instrument ID **GC9**      Method: **SW8015**

<b>MBLK</b>	Sample ID: <b>MBLK-R90227-R90227</b>					Units: <b>µg/L</b>		Analysis Date: <b>5/18/2011 05:53 PM</b>		
Client ID:	Run ID: <b>GC9_110518A</b>					SeqNo: <b>1629747</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	<i>89.13</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>89.1</i>	<i>70-130</i>	<i>0</i>			

<b>LCS</b>	Sample ID: <b>LCS-R90227-R90227</b>					Units: <b>µg/L</b>		Analysis Date: <b>5/18/2011 04:15 PM</b>		
Client ID:	Run ID: <b>GC9_110518A</b>					SeqNo: <b>1629745</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	23680	200	25000	0	94.7	70-130	0			
<i>Surr: Toluene-d8</i>	<i>95.27</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>95.3</i>	<i>70-130</i>	<i>0</i>			

<b>LCSD</b>	Sample ID: <b>LCSD-R90227-R90227</b>					Units: <b>µg/L</b>		Analysis Date: <b>5/18/2011 04:56 PM</b>		
Client ID:	Run ID: <b>GC9_110518A</b>					SeqNo: <b>1629746</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	23920	200	25000	0	95.7	70-130	23680	1.02	30	
<i>Surr: Toluene-d8</i>	<i>97.99</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>98</i>	<i>70-130</i>	<i>95.27</i>	<i>2.81</i>	<i>30</i>	

<b>MS</b>	Sample ID: <b>1105391-02A MS</b>					Units: <b>µg/L</b>		Analysis Date: <b>5/19/2011 08:07 AM</b>		
Client ID:	Run ID: <b>GC9_110518A</b>					SeqNo: <b>1629748</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	20980	200	25000	0	83.9	70-130	0			
<i>Surr: Toluene-d8</i>	<i>90.59</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>90.6</i>	<i>70-130</i>	<i>0</i>			

<b>MS</b>	Sample ID: <b>1105430-04A MS</b>					Units: <b>µg/Kg</b>		Analysis Date: <b>5/19/2011 08:32 AM</b>		
Client ID:	Run ID: <b>GC9_110518A</b>					SeqNo: <b>1629769</b>		Prep Date:		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	2508000	5,000	2500000	0	100	70-130	0			
<i>Surr: Toluene-d8</i>	<i>8949</i>	<i>0</i>	<i>10000</i>	<i>0</i>	<i>89.5</i>	<i>50-150</i>	<i>0</i>			

<b>MSD</b>	Sample ID: <b>1105391-02A MSD</b>					Units: <b>µg/L</b>		Analysis Date: <b>5/19/2011 08:57 AM</b>		
Client ID:	Run ID: <b>GC9_110518A</b>					SeqNo: <b>1629749</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	19420	200	25000	0	77.7	70-130	20980	7.72	30	
<i>Surr: Toluene-d8</i>	<i>90.32</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>90.3</i>	<i>70-130</i>	<i>90.59</i>	<i>0.298</i>	<i>30</i>	

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **R90227** Instrument ID **GC9** Method: **SW8015**

<b>MSD</b>	Sample ID: <b>1105430-04A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/19/2011 09:22 AM</b>			
Client ID:	Run ID: <b>GC9_110518A</b>				SeqNo: <b>1629770</b>		Prep Date:		DF: <b>100</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	2409000	5,000	2500000	0	96.3	70-130	2508000	4.04	30	
<i>Surr: Toluene-d8</i>	<i>9475</i>	<i>0</i>	<i>10000</i>	<i>0</i>	<i>94.8</i>	<i>50-150</i>	<i>8949</i>	<i>5.71</i>	<i>30</i>	

The following samples were analyzed in this batch:

1105413-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33373**      Instrument ID **HG1**      Method: **SW7471**

<b>MBLK</b>	Sample ID: <b>MBLK-33373-33373</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 03:02 PM</b>			
Client ID:	Run ID: <b>HG1_110518A</b>				SeqNo: <b>1628824</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

<b>LCS</b>	Sample ID: <b>LCS-33373-33373</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 03:04 PM</b>			
Client ID:	Run ID: <b>HG1_110518A</b>				SeqNo: <b>1628825</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1699	0.020	0.1665		0	102	80-120	0		

<b>LCSD</b>	Sample ID: <b>LCSD-33373-33373</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 03:07 PM</b>			
Client ID:	Run ID: <b>HG1_110518A</b>				SeqNo: <b>1628826</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1802	0.020	0.1665		0	108	80-120	0.1699	5.86	20

<b>MS</b>	Sample ID: <b>1105325-13AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 03:18 PM</b>			
Client ID:	Run ID: <b>HG1_110518A</b>				SeqNo: <b>1628834</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1745	0.019	0.1561	0.002489	110	75-125		0		

<b>MSD</b>	Sample ID: <b>1105325-13AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 03:20 PM</b>			
Client ID:	Run ID: <b>HG1_110518A</b>				SeqNo: <b>1628835</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1671	0.018	0.1535	0.002489	107	75-125	0.1745	4.33	35	

The following samples were analyzed in this batch:

1105413-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33372**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>	Sample ID: <b>MBLK-33372-33372</b>			Units: <b>mg/Kg</b>			Analysis Date: <b>5/18/2011 02:57 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110518A</b>			SeqNo: <b>1628872</b>			Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
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	0.00458	0.25								J
Copper	0.02112	0.25								J
Lead	0.003628	0.25								J
Nickel	0.03782	0.25								J
Selenium	ND	0.25								
Silver	ND	0.25								

<b>MBLK</b>	Sample ID: <b>MBLK-33372-33372</b>			Units: <b>mg/Kg</b>			Analysis Date: <b>5/18/2011 05:54 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110518A</b>			SeqNo: <b>1629171</b>			Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Zinc	0.631	0.50								

<b>LCS</b>	Sample ID: <b>LCS-33372-33372</b>			Units: <b>mg/Kg</b>			Analysis Date: <b>5/18/2011 03:03 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110518A</b>			SeqNo: <b>1628873</b>			Prep Date: <b>5/18/2011</b>		DF: <b>2</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.681	0.50	5	0	93.6	80-120	0			
Barium	4.677	0.50	5	0	93.5	80-120	0			
Cadmium	4.592	0.20	5	0	91.8	80-120	0			
Chromium	4.73	0.50	5	0	94.6	80-120	0			
Copper	4.702	0.50	5	0	94	80-120	0			
Lead	4.813	0.50	5	0	96.3	80-120	0			
Nickel	4.763	0.50	5	0	95.3	80-120	0			
Selenium	4.365	0.50	5	0	87.3	80-120	0			
Silver	4.526	0.50	5	0	90.5	80-120	0			

<b>LCS</b>	Sample ID: <b>LCS-33372-33372</b>			Units: <b>mg/Kg</b>			Analysis Date: <b>5/18/2011 05:59 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110518A</b>			SeqNo: <b>1629172</b>			Prep Date: <b>5/18/2011</b>		DF: <b>2</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Zinc	5.569	1.0	5	0	111	80-120	0			B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33372**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>LCSD</b>		Sample ID: <b>LCSD-33372-33372</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 03:08 PM</b>		
Client ID:		Run ID: <b>ICPMS1_110518A</b>				SeqNo: <b>1628874</b>		Prep Date: <b>5/18/2011</b>		DF: <b>2</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.648	0.50	5	0	93	80-120	4.681	0.707	20	
Barium	4.662	0.50	5	0	93.2	80-120	4.677	0.321	20	
Cadmium	4.577	0.20	5	0	91.5	80-120	4.592	0.327	20	
Chromium	4.684	0.50	5	0	93.7	80-120	4.73	0.977	20	
Copper	4.623	0.50	5	0	92.5	80-120	4.702	1.69	20	
Lead	4.829	0.50	5	0	96.6	80-120	4.813	0.332	20	
Nickel	4.637	0.50	5	0	92.7	80-120	4.763	2.68	20	
Selenium	4.437	0.50	5	0	88.7	80-120	4.365	1.64	20	
Silver	4.529	0.50	5	0	90.6	80-120	4.526	0.0663	20	

<b>LCSD</b>		Sample ID: <b>LCSD-33372-33372</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 06:05 PM</b>		
Client ID:		Run ID: <b>ICPMS1_110518A</b>				SeqNo: <b>1629173</b>		Prep Date: <b>5/18/2011</b>		DF: <b>2</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Zinc	4.729	1.0	5	0	94.6	80-120	5.569	16.3	20	B

<b>MS</b>		Sample ID: <b>1105413-02AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 06:41 PM</b>		
Client ID: <b>BKGD 1</b>		Run ID: <b>ICPMS1_110518A</b>				SeqNo: <b>1629175</b>		Prep Date: <b>5/18/2011</b>		DF: <b>2</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.455	0.74	7.407	0.8271	89.5	80-120	0			
Barium	57.02	0.74	7.407	48.24	119	80-120	0			O
Cadmium	6.603	0.30	7.407	0.06968	88.2	80-120	0			
Chromium	9.79	0.74	7.407	2.884	93.2	80-120	0			
Copper	12.5	0.74	7.407	6.042	87.2	80-120	0			
Lead	13.4	0.74	7.407	6.732	90	80-120	0			
Nickel	11.08	0.74	7.407	4.001	95.5	80-120	0			
Selenium	6.582	0.74	7.407	0.3211	84.5	80-120	0			
Silver	6.399	0.74	7.407	0.01613	86.2	80-120	0			
Zinc	24.83	1.5	7.407	17.34	101	80-120	0			B

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33372**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MSD</b>		Sample ID: <b>1105413-02AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/18/2011 06:47 PM</b>		
Client ID: <b>BKGD 1</b>		Run ID: <b>ICPMS1_110518A</b>				SeqNo: <b>1629176</b>		Prep Date: <b>5/18/2011</b>		DF: <b>2</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.517	0.74	7.429	0.8271	90	80-120	7.455	0.832	25	
Barium	53	0.74	7.429	48.24	64	80-120	57.02	7.31	25	SO
Cadmium	6.709	0.30	7.429	0.06968	89.4	80-120	6.603	1.59	25	
Chromium	9.533	0.74	7.429	2.884	89.5	80-120	9.79	2.65	25	
Copper	11.97	0.74	7.429	6.042	79.7	80-120	12.5	4.36	25	S
Lead	13.38	0.74	7.429	6.732	89.5	80-120	13.4	0.135	25	
Nickel	10.32	0.74	7.429	4.001	85	80-120	11.08	7.1	25	
Selenium	6.397	0.74	7.429	0.3211	81.8	80-120	6.582	2.86	25	
Silver	6.426	0.74	7.429	0.01613	86.3	80-120	6.399	0.436	25	
Zinc	22.76	1.5	7.429	17.34	73.1	80-120	24.83	8.68	25	BS

The following samples were analyzed in this batch:      1105413-01B      1105413-02A      1105413-03A     

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33399**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>	Sample ID: <b>MBLK-33399-33399</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/23/2011 12:47 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110523A</b>				SeqNo: <b>1632165</b>		Prep Date: <b>5/20/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

<b>LCS</b>	Sample ID: <b>LCS-33399-33399</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/23/2011 12:53 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110523A</b>				SeqNo: <b>1632166</b>		Prep Date: <b>5/20/2011</b>		DF: <b>2</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.131	0.50	5	0	103	80-120	0			

<b>LCSD</b>	Sample ID: <b>LCSD-33399-33399</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/23/2011 12:59 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110523A</b>				SeqNo: <b>1632167</b>		Prep Date: <b>5/20/2011</b>		DF: <b>2</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.123	0.50	5	0	102	80-120	5.131	0.156	20	

<b>MS</b>	Sample ID: <b>1105430-04BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/23/2011 01:35 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110523A</b>				SeqNo: <b>1632173</b>		Prep Date: <b>5/20/2011</b>		DF: <b>4</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.94	1.5	7.386	9.165	64.6	80-120	0			S

<b>MSD</b>	Sample ID: <b>1105430-04BMDS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/23/2011 01:40 PM</b>			
Client ID:	Run ID: <b>ICPMS1_110523A</b>				SeqNo: <b>1632174</b>		Prep Date: <b>5/20/2011</b>		DF: <b>4</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.96	1.5	7.576	9.165	63.3	80-120	13.94	0.184	25	S

The following samples were analyzed in this batch:

1105413-04A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33363**      Instrument ID **SVMS6**      Method: **SW8270**

**MBLK**      Sample ID: **SBLKS1-33363-33363**      Units: **µg/Kg**      Analysis Date: **5/19/2011 10:35 AM**

Client ID:      Run ID: **SVMS6\_110519A**      SeqNo: **1629807**      Prep Date: **5/18/2011**      DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
<i>Surr: 2,4,6-Tribromophenol</i>	765.3	0	1667	0	45.9	34-140		0		
<i>Surr: 2-Fluorobiphenyl</i>	789.3	0	1667	0	47.4	12-100		0		
<i>Surr: 2-Fluorophenol</i>	908.7	0	1667	0	54.5	33-117		0		
<i>Surr: 4-Terphenyl-d14</i>	1484	0	1667	0	89.1	25-137		0		
<i>Surr: Nitrobenzene-d5</i>	863.7	0	1667	0	51.8	37-107		0		
<i>Surr: Phenol-d6</i>	858	0	1667	0	51.5	40-106		0		

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33363**      Instrument ID **SVMS6**      Method: **SW8270**

LCS		Sample ID: <b>SLCSS1-33363-33363</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/19/2011 09:42 AM</b>		
Client ID:		Run ID: <b>SVMS6_110519A</b>				SeqNo: <b>1629803</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1072	30	1333	0	80.4	45-110	0			
Anthracene	1101	30	1333	0	82.6	55-105	0			
Benzo(a)anthracene	1016	30	1333	0	76.2	50-110	0			
Benzo(a)pyrene	1147	30	1333	0	86.1	50-110	0			
Benzo(b)fluoranthene	1173	30	1333	0	88	45-115	0			
Benzo(g,h,i)perylene	1288	30	1333	0	96.6	40-125	0			
Benzo(k)fluoranthene	1164	30	1333	0	87.3	45-115	0			
Chrysene	1024	30	1333	0	76.8	55-110	0			
Dibenzo(a,h)anthracene	1383	30	1333	0	104	40-125	0			
Fluoranthene	1099	30	1333	0	82.4	55-115	0			
Fluorene	1312	30	1333	0	98.4	50-110	0			
Indeno(1,2,3-cd)pyrene	1392	30	1333	0	104	40-120	0			
Naphthalene	1062	30	1333	0	79.6	40-105	0			
Pyrene	973.3	30	1333	0	73	45-125	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1321</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>79.3</i>	<i>34-140</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>1281</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>76.8</i>	<i>12-100</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>1372</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>82.3</i>	<i>33-117</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>1418</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>85.1</i>	<i>25-137</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>1454</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>87.2</i>	<i>37-107</i>	<i>0</i>			
<i>Surr: Phenol-d6</i>	<i>1275</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>76.5</i>	<i>40-106</i>	<i>0</i>			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33363**      Instrument ID **SVMS6**      Method: **SW8270**

LCSD		Sample ID: <b>SLCSDS1-33363-33363</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/19/2011 10:09 AM</b>		
Client ID:		Run ID: <b>SVMS6_110519A</b>				SeqNo: <b>1629804</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1007	30	1333	0	75.6	45-110	1072	6.25	25	
Anthracene	1113	30	1333	0	83.5	55-105	1101	1.14	25	
Benzo(a)anthracene	1049	30	1333	0	78.7	50-110	1016	3.13	25	
Benzo(a)pyrene	1176	30	1333	0	88.2	50-110	1147	2.44	25	
Benzo(b)fluoranthene	1090	30	1333	0	81.8	45-115	1173	7.31	25	
Benzo(g,h,i)perylene	1343	30	1333	0	101	40-125	1288	4.18	25	
Benzo(k)fluoranthene	1416	30	1333	0	106	45-115	1164	19.5	25	
Chrysene	1025	30	1333	0	76.9	55-110	1024	0.13	25	
Dibenzo(a,h)anthracene	1432	30	1333	0	107	40-125	1383	3.48	25	
Fluoranthene	1128	30	1333	0	84.6	55-115	1099	2.61	25	
Fluorene	1251	30	1333	0	93.9	50-110	1312	4.76	25	
Indeno(1,2,3-cd)pyrene	1451	30	1333	0	109	40-120	1392	4.15	25	
Naphthalene	991	30	1333	0	74.3	40-105	1062	6.89	25	
Pyrene	959.7	30	1333	0	72	45-125	973.3	1.41	25	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1321</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>79.3</i>	<i>34-140</i>	<i>1321</i>	<i>0</i>	<i>40</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>1144</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>68.6</i>	<i>12-100</i>	<i>1281</i>	<i>11.3</i>	<i>40</i>	
<i>Surr: 2-Fluorophenol</i>	<i>1247</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>74.8</i>	<i>33-117</i>	<i>1372</i>	<i>9.57</i>	<i>40</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>1395</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>83.7</i>	<i>25-137</i>	<i>1418</i>	<i>1.59</i>	<i>40</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1324</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>79.4</i>	<i>37-107</i>	<i>1454</i>	<i>9.38</i>	<i>40</i>	
<i>Surr: Phenol-d6</i>	<i>1175</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>70.5</i>	<i>40-106</i>	<i>1275</i>	<i>8.13</i>	<i>40</i>	

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33363**      Instrument ID **SVMS6**      Method: **SW8270**

MS		Sample ID: <b>1105430-04B MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/20/2011 12:49 PM</b>		
Client ID:		Run ID: <b>SVMS5_110519A</b>				SeqNo: <b>1630399</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1813	56	2508	0	72.3	45-110	0			
Anthracene	2242	56	2508	0	89.4	55-105	0			
Benzo(a)anthracene	2159	56	2508	22.43	85.2	50-110	0			
Benzo(a)pyrene	2279	56	2508	16.49	90.2	50-110	0			
Benzo(b)fluoranthene	2480	56	2508	16.82	98.2	45-115	0			
Benzo(g,h,i)perylene	1552	56	2508	0	61.9	40-125	0			
Benzo(k)fluoranthene	2655	56	2508	22.76	105	45-115	0			
Chrysene	2040	56	2508	16.49	80.7	55-110	0			
Dibenzo(a,h)anthracene	1698	56	2508	0	67.7	40-125	0			
Fluoranthene	2685	56	2508	34.96	106	55-115	0			
Fluorene	1963	56	2508	0	78.3	50-110	0			
Indeno(1,2,3-cd)pyrene	1689	56	2508	0	67.4	40-120	0			
Naphthalene	1860	56	2508	0	74.2	40-105	0			
Pyrene	2054	56	2508	31.66	80.6	45-125	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1518</i>	<i>0</i>	<i>3135</i>	<i>0</i>	<i>48.4</i>	<i>34-140</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>2231</i>	<i>0</i>	<i>3135</i>	<i>0</i>	<i>71.2</i>	<i>12-100</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>2233</i>	<i>0</i>	<i>3135</i>	<i>0</i>	<i>71.2</i>	<i>33-117</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>2824</i>	<i>0</i>	<i>3135</i>	<i>0</i>	<i>90.1</i>	<i>25-137</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>2453</i>	<i>0</i>	<i>3135</i>	<i>0</i>	<i>78.3</i>	<i>37-107</i>	<i>0</i>			
<i>Surr: Phenol-d6</i>	<i>2141</i>	<i>0</i>	<i>3135</i>	<i>0</i>	<i>68.3</i>	<i>40-106</i>	<i>0</i>			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33363**      Instrument ID **SVMS6**      Method: **SW8270**

MSD				Sample ID: <b>1105430-04B MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/20/2011 01:23 AM</b>	
Client ID:				Run ID: <b>SVMS5_110519A</b>			SeqNo: <b>1630396</b>		Prep Date: <b>5/18/2011</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1902	59	2623	0	72.5	45-110	1813	4.78	30	
Anthracene	2301	59	2623	0	87.7	55-105	2242	2.58	30	
Benzo(a)anthracene	2219	59	2623	22.43	83.7	50-110	2159	2.74	30	
Benzo(a)pyrene	2460	59	2623	16.49	93.1	50-110	2279	7.67	30	
Benzo(b)fluoranthene	3111	59	2623	16.82	118	45-115	2480	22.6	30	S
Benzo(g,h,i)perylene	1034	59	2623	0	39.4	40-125	1552	40	30	SR
Benzo(k)fluoranthene	2946	59	2623	22.76	111	45-115	2655	10.4	30	
Chrysene	2072	59	2623	16.49	78.3	55-110	2040	1.54	30	
Dibenzo(a,h)anthracene	1242	59	2623	0	47.4	40-125	1698	31	30	R
Fluoranthene	2423	59	2623	34.96	91	55-115	2685	10.3	30	
Fluorene	2030	59	2623	0	77.4	50-110	1963	3.38	30	
Indeno(1,2,3-cd)pyrene	1228	59	2623	0	46.8	40-120	1689	31.6	30	R
Naphthalene	1892	59	2623	0	72.1	40-105	1860	1.73	30	
Pyrene	2014	59	2623	31.66	75.5	45-125	2054	1.99	30	
Surr: 2,4,6-Tribromophenol	1760	0	3279	0	53.7	34-140	1518	14.8	40	
Surr: 2-Fluorobiphenyl	2339	0	3279	0	71.3	12-100	2231	4.73	40	
Surr: 2-Fluorophenol	2299	0	3279	0	70.1	33-117	2233	2.89	40	
Surr: 4-Terphenyl-d14	2797	0	3279	0	85.3	25-137	2824	0.951	40	
Surr: Nitrobenzene-d5	2479	0	3279	0	75.6	37-107	2453	1.02	40	
Surr: Phenol-d6	2179	0	3279	0	66.4	40-106	2141	1.77	40	

The following samples were analyzed in this batch: | 1105413-01B |

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **R90302A**      Instrument ID **VMS6**      Method: **SW8260**

<b>MBLK</b>	Sample ID: <b>VBLKW2-110520-R90302A</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/21/2011 12:46 PM</b>			
Client ID:	Run ID: <b>VMS6_110520B</b>				SeqNo: <b>1631151</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	2.0								

<b>LCS</b>	Sample ID: <b>VLCSW2-110520-R90302A</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/20/2011 11:31 PM</b>			
Client ID:	Run ID: <b>VMS6_110520B</b>				SeqNo: <b>1631149</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.67	1.0	20	0	98.4	80-120	0			
Ethylbenzene	18.59	1.0	20	0	93	75-125	0			
m,p-Xylene	36.98	2.0	40	0	92.4	75-130	0			
o-Xylene	18.37	1.0	20	0	91.8	80-120	0			
Toluene	19.18	1.0	20	0	95.9	75-120	0			
Xylenes, Total	55.35	2.0	60	0	92.2	75-130	0			

<b>LCSD</b>	Sample ID: <b>VLCSDW2-110520-R90302A</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/20/2011 11:56 PM</b>			
Client ID:	Run ID: <b>VMS6_110520B</b>				SeqNo: <b>1631150</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.03	1.0	20	0	95.2	80-120	19.67	3.31	30	
Ethylbenzene	18.41	1.0	20	0	92	75-125	18.59	0.973	30	
m,p-Xylene	36.42	2.0	40	0	91	75-130	36.98	1.53	30	
o-Xylene	18.21	1.0	20	0	91	80-120	18.37	0.875	30	
Toluene	18.94	1.0	20	0	94.7	75-120	19.18	1.26	30	
Xylenes, Total	54.63	2.0	60	0	91	75-130	55.35	1.31	30	

<b>MS</b>	Sample ID: <b>1105483-14A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/21/2011 09:05 AM</b>			
Client ID:	Run ID: <b>VMS6_110520B</b>				SeqNo: <b>1631247</b>		Prep Date:		DF: <b>100</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1887	100	2000	0	94.4	75-125	0			
Ethylbenzene	1782	200	2000	0	89.1	75-125	0			
m,p-Xylene	3553	200	4000	0	88.8	80-125	0			
o-Xylene	1776	100	2000	0	88.8	75-125	0			
Toluene	1834	150	2000	0	91.7	70-125	0			
Xylenes, Total	5329	300	6000	0	88.8	75-125	0			

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **R90302A** Instrument ID **VMS6** Method: **SW8260**

**MSD** Sample ID: **1105483-14A MSD** Units: **µg/Kg** Analysis Date: **5/21/2011 09:30 AM**

Client ID: Run ID: **VMS6\_110520B** SeqNo: **1631248** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1812	100	2000	0	90.6	75-125	1887	4.06	30	
Ethylbenzene	1707	200	2000	0	85.4	75-125	1782	4.3	30	
m,p-Xylene	3402	200	4000	0	85	80-125	3553	4.34	30	
o-Xylene	1703	100	2000	0	85.2	75-125	1776	4.2	30	
Toluene	1762	150	2000	0	88.1	70-125	1834	4	30	
Xylenes, Total	5105	300	6000	0	85.1	75-125	5329	4.29	30	

The following samples were analyzed in this batch: 1105413-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **33390**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>	Sample ID: <b>MBLK-33390-33390</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 03:00 PM</b>			
Client ID:	Run ID: <b>WETCHEM_110519E</b>				SeqNo: <b>1629980</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.49								

<b>LCS</b>	Sample ID: <b>LCS-33390-33390</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 03:00 PM</b>			
Client ID:	Run ID: <b>WETCHEM_110519E</b>				SeqNo: <b>1629978</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.754	0.50	1.984	0	88.4	75-110	0			

<b>LCSD</b>	Sample ID: <b>LCSD-33390-33390</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 03:00 PM</b>			
Client ID:	Run ID: <b>WETCHEM_110519E</b>				SeqNo: <b>1629979</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.791	0.49	1.969	0	91	75-110	1.754	2.11	20	

<b>MS</b>	Sample ID: <b>1105413-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 03:00 PM</b>			
Client ID: <b>Pit Bottom</b>	Run ID: <b>WETCHEM_110519E</b>				SeqNo: <b>1629976</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.572	0.49	1.946	0	80.8	60-130	0			

<b>MSD</b>	Sample ID: <b>1105413-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/19/2011 03:00 PM</b>			
Client ID: <b>Pit Bottom</b>	Run ID: <b>WETCHEM_110519E</b>				SeqNo: <b>1629977</b>		Prep Date: <b>5/18/2011</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.661	0.50	1.992	0	83.4	60-130	1.572	5.53	30	

The following samples were analyzed in this batch:

1105413-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **R90150** Instrument ID **WETCHEM** Method: **SW9045D**

<b>DUP</b>		Sample ID: <b>1105413-01B DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>5/17/2011 12:40 PM</b>		
Client ID: <b>Pit Bottom</b>		Run ID: <b>WETCHEM_110517F</b>				SeqNo: <b>1627711</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	9.45	0	0	0	0	0-0	9.45	0	20	

<b>DUP</b>		Sample ID: <b>1105413-02A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>5/17/2011 12:40 PM</b>		
Client ID: <b>BKGD 1</b>		Run ID: <b>WETCHEM_110517F</b>				SeqNo: <b>1627712</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.02	0	0	0	0	0-0	8.02	0	20	

The following samples were analyzed in this batch:

1105413-01B	1105413-02A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1105413  
**Project:** Black Hills Wagon Tracks 12-8 11-175 5/16/11

## QC BATCH REPORT

Batch ID: **R90189**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>	Sample ID: <b>WBLKS1-R90189</b>				Units: <b>% of sample</b>			Analysis Date: <b>5/17/2011 02:12 PM</b>		
Client ID:	Run ID: <b>MOIST_110517C</b>				SeqNo: <b>1628602</b>			Prep Date:      DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.050								

<b>LCS</b>	Sample ID: <b>LCS-R90189</b>				Units: <b>% of sample</b>			Analysis Date: <b>5/17/2011 02:12 PM</b>		
Client ID:	Run ID: <b>MOIST_110517C</b>				SeqNo: <b>1628598</b>			Prep Date:      DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.050	100	0	100	99.5-100.5	0			

<b>DUP</b>	Sample ID: <b>1105412-01B DUP</b>				Units: <b>% of sample</b>			Analysis Date: <b>5/17/2011 02:12 PM</b>		
Client ID:	Run ID: <b>MOIST_110517C</b>				SeqNo: <b>1628588</b>			Prep Date:      DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	17.09	0.050	0	0	0	0-0	17.05	0.234	20	

<b>DUP</b>	Sample ID: <b>1105413-04A DUP</b>				Units: <b>% of sample</b>			Analysis Date: <b>5/17/2011 02:12 PM</b>		
Client ID: <b>BKGD 3</b>	Run ID: <b>MOIST_110517C</b>				SeqNo: <b>1628596</b>			Prep Date:      DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	3.16	0.050	0	0	0	0-0	3.04	3.87	20	

The following samples were analyzed in this batch:

1105413-01B	1105413-02A	1105413-03A
1105413-04A		

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



Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **17-May-11 10:00**

Work Order: **1105413**

Received by: **DS**

Checklist completed by *Diane Shaw* 17-May-11  
eSignature Date

Reviewed by: *Ann Preston* 18-May-11  
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>5.2 c</u>		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			
Login Notes:			

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Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: