

State of Colorado
Oil and Gas Conservation Commission



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

FOR OGCC USE ONLY

OGCC Employee: _____

Spill Complaint

Inspection NOAV

Tracking No: _____

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

- Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

GENERAL INFORMATION

OGCC Operator Number: <u>47120</u> Name of Operator: <u>Kerr-McGee Oil and Gas Onshore LP</u> Address: <u>1099 18th Street, Suite 1800</u> City: <u>Denver</u> State: <u>CO</u> Zip: <u>80202</u>		Contact Name and Telephone Name: <u>Phillip Hamlin</u> No: <u>970-336-3500</u> Fax: <u>970-336-3656</u>	
API/Facility No: <u>329106</u> Facility Name: <u>HSR-Rainin 13-29</u> Well Name: <u>HSR-Rainin 13-29</u> Location (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWSW 29-T3N-R65W</u>		County: <u>Weld</u> Facility Number: _____ Well Number: _____ Latitude: <u>40.192707</u> Longitude: <u>-104.692232</u>	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Condensate and Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation. *Depth to groundwater unknown.*

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Gravelly Sands

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Buildings approximately 2,000' S, water well approximately 1,610' S, Livestock approximately 1,900' S, and depth to groundwater is unknown.

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Unknown</u>	<u>A subsurface assessment will be conducted to determine impact</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	<u>Unknown</u>	<u>A subsurface assessment will be conducted to determine impact</u>
<input type="checkbox"/> Surface water	_____	_____

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Oil and produced water was identified surfacing on the ground surface above a dumpline located north of the tank battery associated with the HSR-Rainin 13-29 well. The volume of the release is unknown. The petroleum hydrocarbon impacted soil was excavated to a depth which could be accomplished safely. A topographic Site Location Map showing the general location of the release is attached as Figure 1.

Describe how source is to be removed:

Soil samples were collected from the excavation sidewalls and base for laboratory analysis. Laboratory results for the sidewall confirmation soil samples indicated that total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations were less than the COGCC Table 910-1 allowable levels at the areal extent of the excavation. However, base sample B03@22' exceeded the COGCC allowable levels for benzene, toluene, and total xylenes at concentrations of 67.6 milligrams per kilograms (mg/kg), 343 mg/kg, and 333 mg/kg, respectively, and TPH at a concentration of 16,100 mg/kg. A subsurface assessment is being conducted at the site to determine the extent of impacted soil left in-place and to determine if shallow groundwater has been impacted. Approximately 300 cubic yards of impacted soil were removed from the excavation and transported to the Buffalo Ridge Landfill in Keenesburg, Colorado for disposal. The general site layout, excavation dimensions, and soil sample locations are shown on the attached Figure 2. The soil sample analytical results are summarized in Table 1.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

The impacted soil was transported to the Buffalo Ridge Landfill in Keenesburg, Colorado.

State of Colorado Oil and Gas Conservation Commission

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



Tracking Number: Name of Operator: Kerr-McGee Oil and Gas Onshore LP OGCC Operator No: 47120 Received Date: Well Name & No: HSR-Rainin 13-29 Facility Name & No.: HSR-Rainin 13-29

REMEDIATION WORKPLAN (CONT.)

OGCC Employee:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.): A subsurface assessment is being conducted at the site to determine the vertical extent of impacted soil left in-place, and to determine if shallow groundwater has been impacted. If groundwater is encountered, groundwater monitoring wells will be installed at the site to fully define the extent and magnitude of the release. The monitoring wells will be surveyed so that the groundwater flow direction can be accurately determined. Groundwater monitoring activities will be conducted on a quarterly basis and all groundwater samples will be submitted for laboratory analysis of BTEX.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required. The site was restored to its pre-release grade.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing. Is further site investigation required? [X] Y [] N If yes, describe: A subsurface soil assessment is being conducted the site to define the extent of petroleum hydrocarbon impacts. If groundwater is encountered while conducting the site assessment, groundwater monitoring wells will be installed at the site and point of compliance will be established. Groundwater monitoring will continue on a quarterly basis. Upon completion of the subsurface assessment activities, a Form 27 Update Report will be provided.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.): The impacted soil was transported to the Buffalo Ridge Landfill in Keenesburg, Colorado.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 3/5/15 Date Site Investigation Completed: Active Remediation Plan Submitted: Remediation Start Date: 3/6/15 Anticipated Completion Date: TBD Actual Completion Date:

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

Print Name: Phillip Hamlin

Signed: [Signature] Title: Senior HSE Representative Date: 6/22/2015

OGCC Approved: Title: Date:

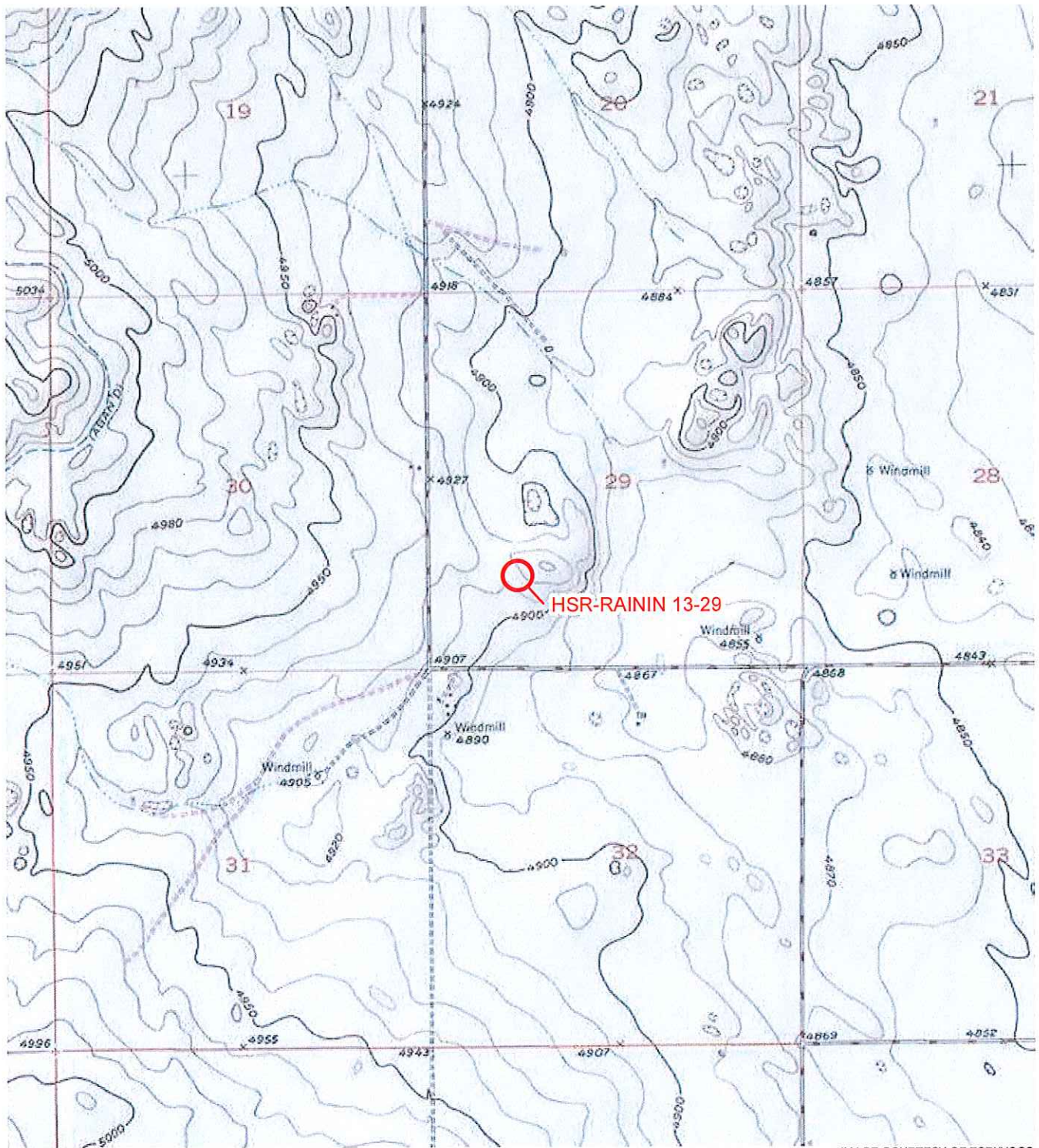


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION

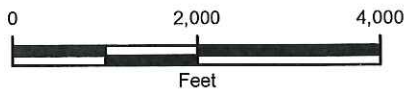


FIGURE 1
SITE LOCATION MAP
HSR-RAININ 13-29
SWSW SEC 29-3N-R65W
WELD COUNTY, COLORADO
KERR-MCGEE OIL & GAS ONSHORE LP



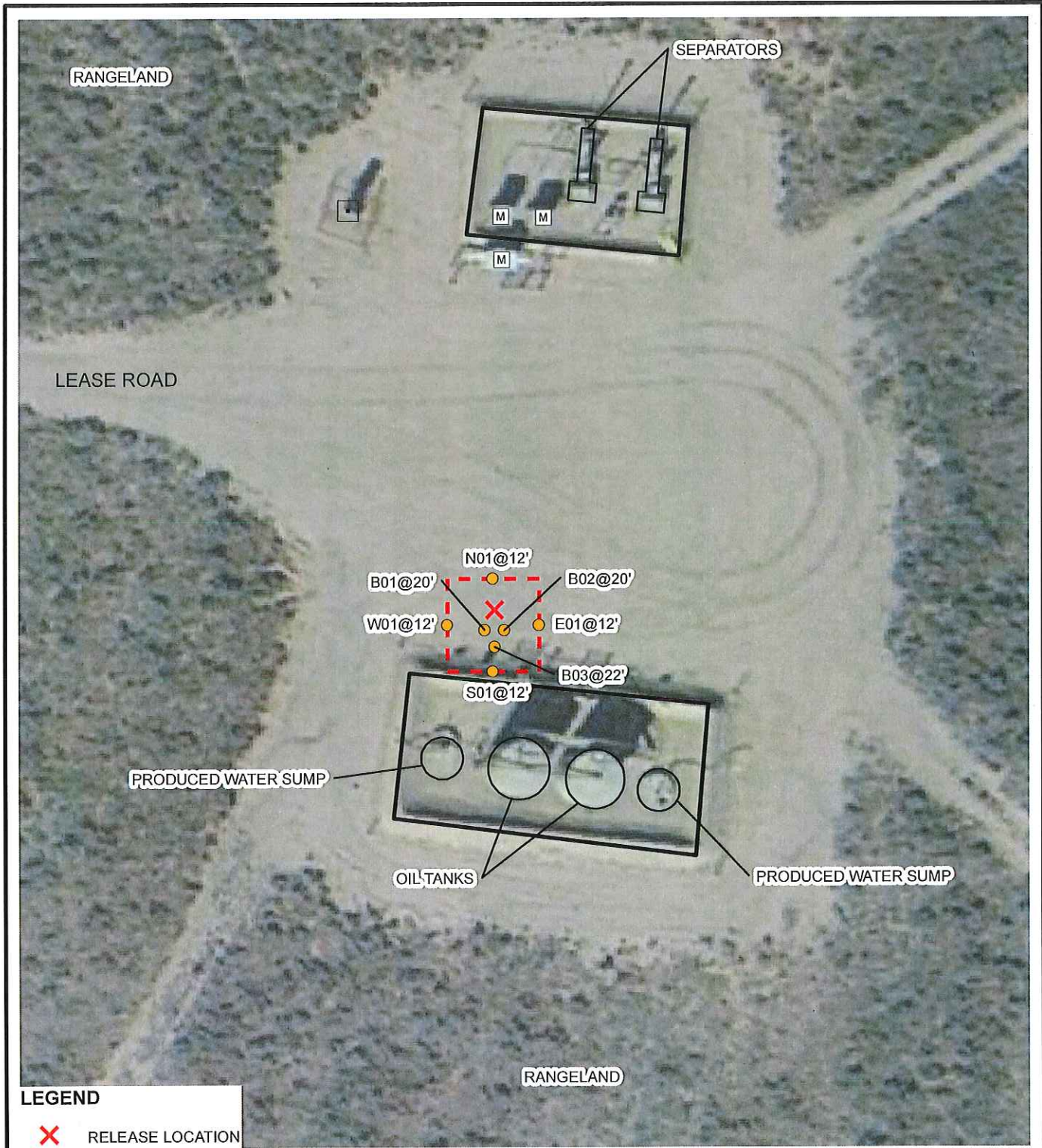


IMAGE COURTESY OF GOOGLE EARTH 2014

LEGEND

- X RELEASE LOCATION
- SOIL SAMPLE
- WELLHEAD
- M METER HOUSE
- EXCAVATION EXTENT
- BERM

*AS01 WAS SET FARTHER INTO THE EXCAVATION DUE TO A COLLAPSED SIDEWALL.

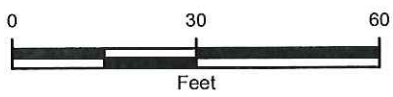


FIGURE 2
 EXCAVATION SITE MAP
 HSR-RAININ 13-29
 SWSW SEC 29-3N-R65W
 WELD COUNTY, COLORADO
 KERR-MCGEE OIL & GAS ONSHORE LP



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
RAININ 13-29
WELD COUNTY, COLORADO
KERR-MCGEE OIL & GAS ONSHORE LP

Soil Sample ID	Depth (bgs)	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	DRO (mg/kg)	GRO (mg/kg)	ORO (mg/kg)	pH (su)	Specific Conductance (mmhos/cm)
B01 @ 20'	20'	03/06/2015	<0.050	1.33	0.370	5.82	320	230	<200	7.75	0.00590
E01 @ 12'	12'	03/06/2015	<0.002	<0.002	<0.002	<0.002	<50	<50	<200	8.03	0.00670
N01 @ 12'	12'	03/06/2015	<0.002	<0.002	<0.002	<0.002	<50	<50	<200	8.46	0.0538
S01 @ 12'	12'	03/06/2015	<0.002	<0.002	<0.002	<0.002	<50	<50	<200	8.37	0.0363
W01 @ 12'	12'	03/06/2015	<0.002	<0.002	<0.002	<0.002	<50	<50	<200	8.47	0.00700
B02 @ 20'	20'	03/09/2015	1.26	15.5	1.81	26.4	640	710	<100	8.71	0.0987
B03 @ 22'	22'	03/09/2015	67.6	343	28.1	333	5600	9400	1100	7.99	0.247
COGCC Standards			0.17	85	100	175	500*	500*	500*	6-9	4

Notes: bgs - below ground surface
mg/kg - milligrams per kilogram
DRO - Diesel Range Organics
GRO - Gasoline Range Organics
ORO - Oil Range Organics
su - standard units

mmhos/cm - millimhos per centimeter
< - less than laboratory reporting limit
Bold numbers indicate result equalled or exceeded standard.
NA - Not Analyzed/Not Available
COGCC - Colorado Oil and Gas Conservation Commission
* - Standard applies to combined DRO-GRO-ORO





March 09, 2015

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Rainin 13-29

Project Number - [none]

Attached are your analytical results for KMG - Rainin 13-29 received by Origins Laboratory, Inc. March 06, 2015. This project is associated with Origins project number X503056-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: [none]
Project: KMG - Rainin 13-29

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01 @ 20'	X503056-01	Soil	March 6, 2015 10:50	03/06/2015 17:23
N01 @ 12'	X503056-02	Soil	March 6, 2015 10:55	03/06/2015 17:23
E01 @ 12'	X503056-03	Soil	March 6, 2015 11:00	03/06/2015 17:23
S01 @ 12'	X503056-04	Soil	March 6, 2015 11:05	03/06/2015 17:23
W01 @ 12'	X503056-05	Soil	March 6, 2015 11:10	03/06/2015 17:23

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

www.originslaboratory.com

X50306

page 1 of 1

ORIGINS
 LABORATORY, INC

Client: JTE
 Address: 4600 W60th AVE
 Telephone Number: 303-433-9788
 Email Address: Jcocroft@ltenv.com

Project Manager: John Cocroft
 Project Name: Rainin 13-29
 Project Number: [blank]
 Samples Collected By: KZ

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analyst	Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Sample #			Other	
B01 @ 20'	3/6/15	1050	2	✓					✓				1	
N01 @ 12'		1055	2	✓					✓				2	
E01 @ 12'		1100	2	✓					✓				3	
S01 @ 12'		1105	2	✓					✓				4	
W01 @ 12'		1110	2	✓					✓				5	
B901 @ 6"		1130	2	✓					✓				6	Hold
													7	
													8	
													9	
													10	
Relinquished By: <u>[Signature]</u>	Date: <u>3/6/15</u>	Time: <u>1600</u>	Received By: <u>[Signature]</u>	Date: <u>3/6/15</u>	Time: <u>1700</u>	Turnaround Time: <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr								
Relinquished By: <u>[Signature]</u>	Date: <u>3/6/15</u>	Time: <u>1725</u>	Received By: <u>[Signature]</u>	Date: <u>3/6/15</u>	Time: <u>1733</u>	Standard: <input type="checkbox"/> S <input type="checkbox"/> 0								

Date Results Needed: Monday, 3/9/15 9:00

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: XS03056

Client: LTE
 Client Project ID: RS191A 13-29

Checklist Completed by: Jeff Smith
 Date/time completed: 3/6/13

Shipped Via: H/D Courier
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: NA

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____

Cooler Number/Temperature: 1 / 5.0 °C 1 / _____ °C 1 / _____ °C (Describe) _____ °C

Thermometer ID: TC053

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾⁽²⁾ ?	X			
Is there ice present (document if blue ice is used)?	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾⁽²⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾⁽²⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾⁽²⁾ ?	X			PH
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾⁽²⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾⁽²⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾⁽²⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾⁽²⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked ⁽¹⁾⁽²⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / pH < 2 for samples preserved with HNO3, HCL, H2SO4 / (pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
Additional Comments (if any):				

⁽¹⁾⁽²⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Jeff Smith
 Reviewed by (Project Manager)

3/6/13
 Date/Time Reviewed

Origins Laboratory, Inc.

Jeff Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

B01 @ 20'
3/6/2015 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X503056-01 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.050	mg/kg	25	5C06014	03/06/2015	03/07/2015	
Toluene	1.33	0.050	"	"	"	"	"	
Ethylbenzene	0.370	0.050	"	"	"	"	"	
Xylenes, total	5.82	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	92.6 %	70-130			"	"	"	
Surrogate: Toluene-d8	107 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	7.75		pH Units	1	5C06015	03/06/2015	03/06/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.00590		mmhos/cm	"	5C06016	"	03/06/2015	
---------------------------	---------	--	----------	---	---------	---	------------	--

TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	230	50	mg/kg	1	5C06013	03/06/2015	03/07/2015	
Diesel (C10-C28)	320	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	97.6 %	65-146			"	"	"	
------------------------	--------	--------	--	--	---	---	---	--

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

N01 @ 12'
 3/6/2015 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
 X503056-02 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5C06014	03/06/2015	03/07/2015	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.9 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.46		pH Units	1	5C06015	03/06/2015	03/06/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0538		mmhos/cm	"	5C06016	"	03/06/2015	
---------------------------	--------	--	----------	---	---------	---	------------	--

TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C06013	03/06/2015	03/07/2015	
Diesel (C10-C28)	ND	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	100 %	65-146			"	"	"	
------------------------	-------	--------	--	--	---	---	---	--

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

E01 @ 12'
3/6/2015 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X503056-03 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5C06014	03/06/2015	03/07/2015	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	
Surrogate: Toluene-d8	95.0 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.9 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.03		pH Units	1	5C06015	03/06/2015	03/06/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.00670		mmhos/cm	"	5C06016	"	03/06/2015	
---------------------------	---------	--	----------	---	---------	---	------------	--

TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C06013	03/06/2015	03/07/2015	
Diesel (C10-C28)	ND	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	90.8 %	65-146			"	"	"	
------------------------	--------	--------	--	--	---	---	---	--

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

S01 @ 12'
3/6/2015 11:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X503056-04 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5C06014	03/06/2015	03/07/2015	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	99.8 %	70-130			"	"	"	
Surrogate: Toluene-d8	111 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.1 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.37		pH Units	1	5C06015	03/06/2015	03/06/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0363		mmhos/cm	"	5C06016	"	03/06/2015	
---------------------------	--------	--	----------	---	---------	---	------------	--

TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C06013	03/06/2015	03/07/2015	
Diesel (C10-C28)	ND	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	93.1 %	65-146			"	"	"	
------------------------	--------	--------	--	--	---	---	---	--

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

W01 @ 12'
 3/6/2015 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
 X503056-05 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5C06014	03/06/2015	03/07/2015	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.8 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.47		pH Units	1	5C06015	03/06/2015	03/06/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.00700		mmhos/cm	"	5C06016	"	03/06/2015	
---------------------------	---------	--	----------	---	---------	---	------------	--

TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C06013	03/06/2015	03/07/2015	
Diesel (C10-C28)	ND	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	
Surrogate: o-Terphenyl	92.1 %	65-146			"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C06014 - EPA 5030 (soil)

Blank (5C06014-BLK1)

Prepared: 03/06/2015 Analyzed: 03/07/2015

Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	58		ug/kg	62.5	92.3		70-130			
Surrogate: Toluene-d8	63		"	62.5	101		70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5	96.0		70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C06014 - EPA 5030 (soil)

LCS (5C06014-BS1)

Prepared: 03/06/2015 Analyzed: 03/07/2015

Benzene	0.104	0.002	mg/kg	0.100		104	77.1-124			
Toluene	0.106	0.002	"	0.100		106	74.5-128			
Ethylbenzene	0.103	0.002	"	0.100		103	66.4-127			
m,p-Xylene	0.199	0.004	"	0.200		99.6	76.6-124			
o-Xylene	0.098	0.002	"	0.100		98.1	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		93.8	70-130			
Surrogate: Toluene-d8	69		"	62.5		110	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C06014 - EPA 5030 (soil)

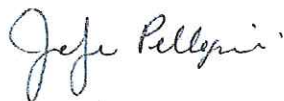
Matrix Spike (5C06014-MS1)

Source: X503056-02

Prepared: 03/06/2015 Analyzed: 03/07/2015

Benzene	0.097	0.002	mg/kg	0.100	ND	97.1	71.8-126			
Toluene	0.093	0.002	"	0.100	ND	92.6	65.1-130			
Ethylbenzene	0.084	0.002	"	0.100	ND	84.5	62.2-130			
m,p-Xylene	0.176	0.004	"	0.200	ND	87.8	46.5-137			
o-Xylene	0.089	0.002	"	0.100	ND	89.2	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.1	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C06014 - EPA 5030 (soil)

Matrix Spike Dup (5C06014-MSD1)	Source: X503056-02			Prepared: 03/06/2015 Analyzed: 03/07/2015						
Benzene	0.091	0.002	mg/kg	0.100	ND	90.5	71.8-126	7.03	11.3	
Toluene	0.094	0.002	"	0.100	ND	94.0	65.1-130	1.50	15.4	
Ethylbenzene	0.085	0.002	"	0.100	ND	85.5	62.2-130	1.13	19.6	
m,p-Xylene	0.174	0.004	"	0.200	ND	86.8	46.5-137	1.14	19.2	
o-Xylene	0.084	0.002	"	0.100	ND	83.7	54.2-134	6.32	17.9	
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		93.9	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C06013 - EPA 3580

Blank (5C06013-BLK1)

Prepared: 03/06/2015 Analyzed: 03/07/2015

Gasoline (C6-C10)	ND	50	mg/kg							
Diesel (C10-C28)	ND	50	"							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	50.0		"	50.0		100	65-146			

LCS (5C06013-BS1)

Prepared: 03/06/2015 Analyzed: 03/07/2015

Gasoline (C6-C10)	1000	50	mg/kg	1000		102	66.7-119			
Diesel (C10-C28)	960	50	"	1000		95.7	70.1-127			
Residual Range Organics (C28-C36)	1000	200	"	1000		102	54.5-139			
Surrogate: o-Terphenyl	49.2		"	50.0		98.4	65-146			

Matrix Spike (5C06013-MS1)

Source: X503056-02

Prepared: 03/06/2015 Analyzed: 03/07/2015

Gasoline (C6-C10)	1000	50	mg/kg	1000	ND	104	56.4-132			
Diesel (C10-C28)	950	50	"	1000	29	92.2	57.4-138			
Residual Range Organics (C28-C36)	1000	200	"	1000	23	99.1	47.7-129			
Surrogate: o-Terphenyl	47.9		"	50.0		95.8	65-146			

Matrix Spike Dup (5C06013-MSD1)

Source: X503056-02

Prepared: 03/06/2015 Analyzed: 03/07/2015

Gasoline (C6-C10)	1000	50	mg/kg	1000	ND	104	56.4-132	0.249	22	
Diesel (C10-C28)	1100	50	"	1000	29	105	57.4-138	12.3	18.3	
Residual Range Organics (C28-C36)	710	200	"	1000	23	68.4	47.7-129	35.7	30.1	QR-02
Surrogate: o-Terphenyl	47.7		"	50.0		95.5	65-146			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

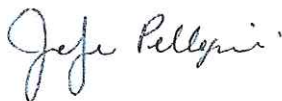
LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5C06015 - NO PREP										
Duplicate (5C06015-DUP1)			Source: X503054-01			Prepared: 03/06/2015 Analyzed: 03/06/2015				
pH	8.37		pH Units		8.45			0.951	25	
Batch 5C06016 - NO PREP										
Blank (5C06016-BLK1)			Prepared: 03/06/2015 Analyzed: 03/06/2015							
Specific Conductance (EC)	0.00210		mmhos/cm							
Duplicate (5C06016-DUP1)			Source: X503054-01			Prepared: 03/06/2015 Analyzed: 03/06/2015				
Specific Conductance (EC)	0.0836		mmhos/cm		0.0859			2.71	25	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: [none]
Project: KMG - Rainin 13-29

Notes and Definitions

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



March 10, 2015

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Rainin 13-29

Project Number - [none]

Attached are your analytical results for KMG - Rainin 13-29 received by Origins Laboratory, Inc. March 09, 2015. This project is associated with Origins project number X503073-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: [none]
Project: KMG - Rainin 13-29

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B03 @ 22'	X503073-01	Soil	March 9, 2015 14:00	03/09/2015 16:34
B02 @ 20'	X503073-02	Soil	March 9, 2015 13:25	03/09/2015 16:34

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: x503073

Client: LT

Client Project ID: Rainin

Checklist Completed by: J. Pellegrini

Shipped Via: _____
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 03-08-15

Airbill #: _____

Matrix(s) Received: (Check all that apply): Soil/Solid _____ Water _____ Other: _____
 (Describe)

Cooler Number/Temperature: _____ / 11.9 °C _____ / _____ °C _____ / _____ °C _____ / _____ °C

Thermometer ID: T303

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ± 5°C ⁽¹⁾ ?		X		Sampled today
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	X	X		PH
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH > 10 for samples preserved with Na ₂ O ₂ +NaOH, ZnAc+NaOH)			X	Soil
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by: J. Pellegrini (Project Manager)

3/9/15
 Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

B03 @ 22'
3/9/2015 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X503073-01 (Soil)

BTEX by EPA 8260C

Benzene	67.6	1.99	mg/kg	1000	5C09006	03/09/2015	03/10/2015	
Toluene	343	1.99	"	"	"	"	"	
Ethylbenzene	28.1	1.99	"	"	"	"	"	
Xylenes, total	333	1.99	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	123 %	70-130			"	"	"	
Surrogate: Toluene-d8	146 %	70-130			"	"	"	S-04
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	7.99		pH Units	1	5C09008	03/09/2015	03/09/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.247		mmhos/cm	"	5C09009	03/09/2015	03/09/2015	
---------------------------	-------	--	----------	---	---------	------------	------------	--

TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	9400	250	mg/kg	10	5C09007	03/09/2015	03/10/2015	
Diesel (C10-C28)	5600	250	"	"	"	"	"	
Residual Range Organics (C28-C36)	1100	100	"	1	"	"	03/09/2015	
Surrogate: o-Terphenyl	105 %	65-146			"	"	03/10/2015	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

B02 @ 20'
3/9/2015 1:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X503073-02 (Soil)

BTEX by EPA 8260C

Benzene	1.26	0.498	mg/kg	250	5C09006	03/09/2015	03/09/2015	
Toluene	15.5	0.498	"	"	"	"	"	
Ethylbenzene	1.81	0.498	"	"	"	"	"	
Xylenes, total	26.4	0.498	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	98.3 %	70-130			"	"	"	
Surrogate: Toluene-d8	120 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.71		pH Units	1	5C09008	03/09/2015	03/09/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0987		mmhos/cm	"	5C09009	03/09/2015	03/09/2015	
---------------------------	--------	--	----------	---	---------	------------	------------	--

TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	710	25	mg/kg	1	5C09007	03/09/2015	03/09/2015	
Diesel (C10-C28)	640	25	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl	98.5 %	65-146			"	"	"	
------------------------	--------	--------	--	--	---	---	---	--

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C09006 - EPA 5030 (soil)

Blank (5C09006-BLK1)

Prepared: 03/09/2015 Analyzed: 03/09/2015

Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5	98.0		70-130			
Surrogate: Toluene-d8	71		"	62.5	113		70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5	97.0		70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C09006 - EPA 5030 (soil)

LCS (5C09006-BS1)				Prepared: 03/09/2015 Analyzed: 03/09/2015						
Benzene	0.096	0.002	mg/kg	0.100		95.5	77.1-124			
Toluene	0.095	0.002	"	0.100		95.1	74.5-128			
Ethylbenzene	0.086	0.002	"	0.100		85.7	66.4-127			
m,p-Xylene	0.174	0.004	"	0.200		86.9	76.6-124			
o-Xylene	0.091	0.002	"	0.100		90.7	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5C09006 - EPA 5030 (soil)										
Matrix Spike (5C09006-MS1)		Source: X503055-01			Prepared: 03/09/2015 Analyzed: 03/09/2015					
Benzene	0.093	0.002	mg/kg	0.100	ND	93.3	71.8-126			
Toluene	0.097	0.002	"	0.100	ND	96.9	65.1-130			
Ethylbenzene	0.080	0.002	"	0.100	ND	79.7	62.2-130			
m,p-Xylene	0.162	0.004	"	0.200	ND	81.1	46.5-137			
o-Xylene	0.085	0.002	"	0.100	0.0004	84.4	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	68		"	62.5		109	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C09006 - EPA 5030 (soil)

Matrix Spike Dup (5C09006-MSD1)	Source: X503055-01			Prepared: 03/09/2015 Analyzed: 03/09/2015						
Benzene	0.099	0.002	mg/kg	0.100	ND	99.1	71.8-126	6.01	11.3	
Toluene	0.101	0.002	"	0.100	ND	101	65.1-130	3.65	15.4	
Ethylbenzene	0.073	0.002	"	0.100	ND	73.1	62.2-130	8.74	19.6	
m,p-Xylene	0.155	0.004	"	0.200	ND	77.3	46.5-137	4.79	19.2	
o-Xylene	0.082	0.002	"	0.100	0.0004	81.5	54.2-134	3.41	17.9	
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	72		"	62.5		114	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5C09007 - EPA 3580

Blank (5C09007-BLK1)

Prepared: 03/09/2015 Analyzed: 03/09/2015

Gasoline (C6-C10)	ND	50	mg/kg							
Diesel (C10-C28)	ND	50	"							
Residual Range Organics (C28-C36)	ND	200	"							

Surrogate: o-Terphenyl 41.2 " 50.0 82.3 65-146

LCS (5C09007-BS1)

Prepared: 03/09/2015 Analyzed: 03/09/2015

Gasoline (C6-C10)	810	50	mg/kg	1000		80.7	66.7-119			
Diesel (C10-C28)	860	50	"				70.1-127			
Residual Range Organics (C28-C36)	710	200	"	1000		70.7	54.5-139			

Surrogate: o-Terphenyl 40.5 " 50.0 80.9 65-146

Matrix Spike (5C09007-MS1)

Source: X503055-01

Prepared: 03/09/2015 Analyzed: 03/09/2015

Gasoline (C6-C10)	830	50	mg/kg	1000	ND	82.5	56.4-132			
Diesel (C10-C28)	940	50	"		160		57.4-138			
Residual Range Organics (C28-C36)	740	200	"	1000	40	69.8	47.7-129			

Surrogate: o-Terphenyl 36.3 " 50.0 72.7 65-146

Matrix Spike Dup (5C09007-MSD1)

Source: X503055-01

Prepared: 03/09/2015 Analyzed: 03/09/2015

Gasoline (C6-C10)	810	50	mg/kg	1000	ND	80.9	56.4-132	1.93	22	
Diesel (C10-C28)	920	50	"		160		57.4-138	1.56	18.3	
Residual Range Organics (C28-C36)	720	200	"	1000	40	67.7	47.7-129	2.92	30.1	

Surrogate: o-Terphenyl 35.0 " 50.0 69.9 65-146

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

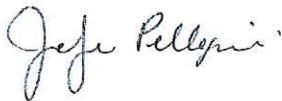
LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Rainin 13-29

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5C09008 - NO PREP										
Duplicate (5C09008-DUP1)		Source: X503055-01			Prepared: 03/09/2015 Analyzed: 03/09/2015					
pH	8.22		pH Units		8.27			0.606	25	
Batch 5C09009 - NO PREP										
Blank (5C09009-BLK1)		Prepared: 03/09/2015 Analyzed: 03/09/2015								
Specific Conductance (EC)	0.00240		mmhos/cm							
Duplicate (5C09009-DUP1)		Source: X503055-01			Prepared: 03/09/2015 Analyzed: 03/09/2015					
Specific Conductance (EC)	0.0924		mmhos/cm		0.0898			2.85	25	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: [none]
Project: KMG - Rainin 13-29

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.