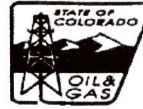


State of Colorado
Oil and Gas Conservation Commission

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



FOR OGCC USE ONLY

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): NFA

OGCC Employee:

☒ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No: 1984933

GENERAL INFORMATION

OGCC Operator Number: <u>47120</u> Name of Operator: <u>Kerr-McGee Oil & 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>Paul Schneider</u> No: <u>720-929-6000</u> Fax: <u>720-929-7726</u>	
API/Facility No: <u>05-123-26799</u> Facility Name: <u>Everist</u> Well Name: <u>Everist</u>		County: <u>Weld</u> Facility Number: <u>11-10</u> Well Number: <u>11-10</u>	
Location (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWSW 10-T2N-R68W</u> Latitude: _____ Longitude: _____			

TECHNICAL CONDITIONS

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

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☒ Y ☐ N If yes, attach evaluation. Groundwater < 20 ft.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Sand/Gravel Quarry

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

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Water wells are located approximately 300' to the north and 600' to the west.

Quarry pond located approximately 100' to the east and creek located approximately 700' to the north.

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>30' N-S x 15' E-W x 6" bgs</u>	<u>Soil samples for field screening and laboratory analysis</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	<u>Not encountered</u>	_____
<input type="checkbox"/> Surface water	_____	_____

REMEDIATION WORKPLAN

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

A corrosion hole in the bottom of a frac tank caused approximately 0.5 bbl of condensate, 0.5 bbl of produced water and 8 bbls of completion fluid to be released onto the ground. A vacuum truck was used to recover approximately 0.25 bbl of condensate, 0.25 bbl of produced water and 7.5 bbls of completion fluid from the ground surface.

Describe how source is to be removed:

Visually impacted soil was excavated to an approximate depth of 6" below ground surface (bgs) from the spill area. Two confirmation soil samples (B01@6" and B02@6") were collected from the base of the excavation for TPH, EC, and pH analysis. Soil sample laboratory results indicate that TPH, pH and EC concentrations are within COGCC allowable levels at the extent of the excavation. Approximately 10 cubic yards of impacted soil were removed from the excavation.

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 Kerr-McGee's land treatment facility in Weld County, Colorado for treatment.

State of Colorado
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Tracking Number:	_____
Name of Operator:	Kerr-McGee Oil & Gas Onshore LP
OGCC Operator No:	47120
Received Date:	_____
Well Name & No:	Everist 11-10
Facility Name & No.:	Everist 11-10

REMEDIATION WORKPLAN (CONT.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
Groundwater was not encountered in the excavation.

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? ☐ Y ☒ N If yes, describe:
No further investigation is required at this site. Groundwater was not encountered in the excavation and soil sample laboratory results indicate that TPH, pH and EC concentrations are within COGCC allowable levels at the extent of the excavation.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
The impacted soil was transported to Kerr-McGee's land treatment facility in Weld County, Colorado for treatment.

IMPLEMENTATION SCHEDULE

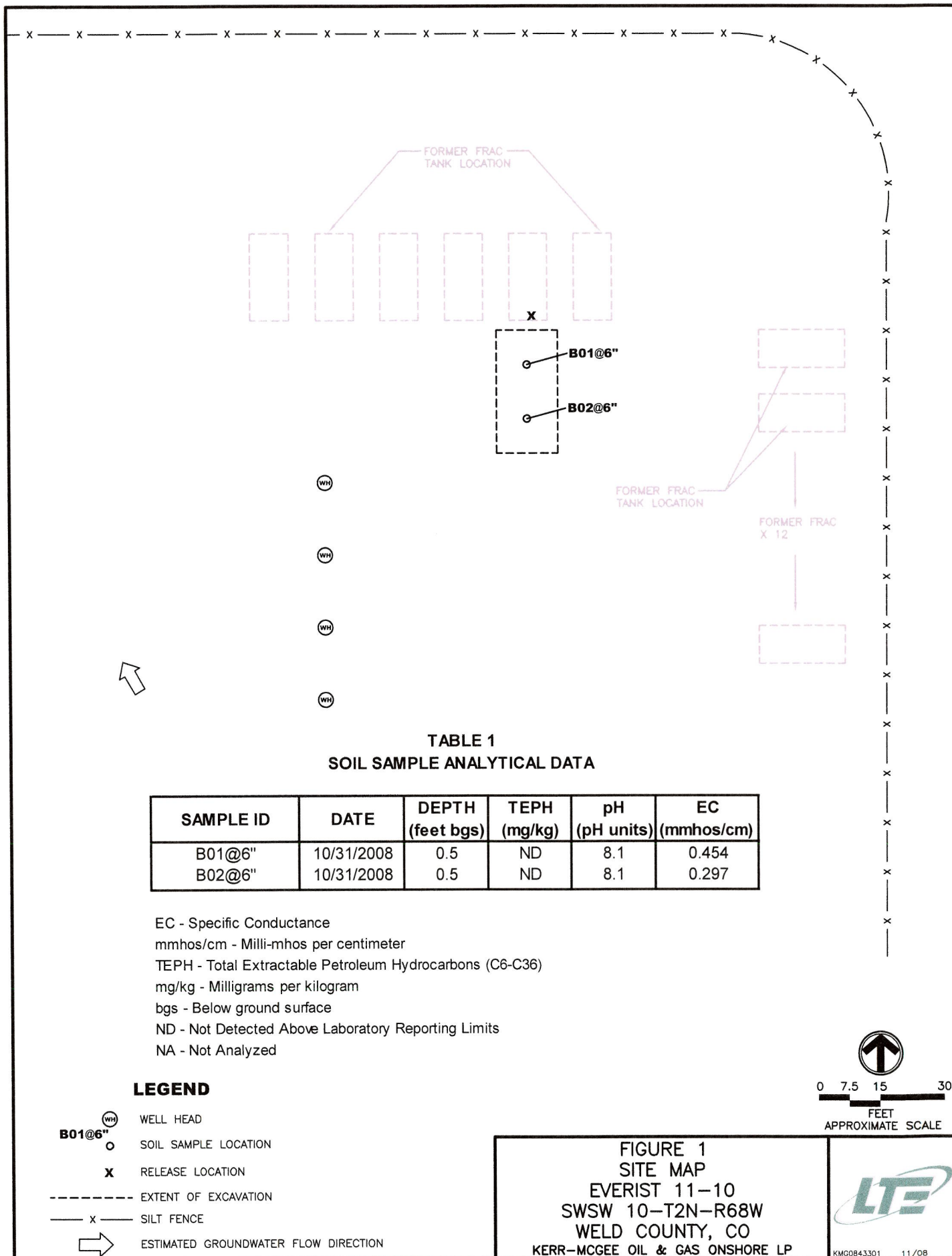
Date Site Investigation Began:	10/15/08	Date Site Investigation Completed:	10/31/08	Remediation Plan Submitted:	1-30-09
Remediation Start Date:	10/15/08	Anticipated Completion Date:	1/31/09	Actual Completion Date:	10-31-08

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

Print Name: **Paul D. Schneider**

Signed: _____ Title: **Staff Environmental & Regulatory Analyst** Date: **1-30-09**

OGCC Approved: _____ Title: **EPS** Date: **1/12/10**



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.374.5933 - fax

November 03, 2008

John Cocroft
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: KMG - Everist 11-10

Enclosed are the results of analyses for samples received by Summit Scientific on 10/31/08 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to be 'BS' or 'Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury
Vice President / Laboratory Director



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

Project: KMG - Everist 11-10

Project Number: KMG 08433
Project Manager: John Cocroft

Reported:
11/03/08 08:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@6"	R810170-01	Soil	10/31/08 11:30	10/31/08 17:00
B02@6"	R810170-02	Soil	10/31/08 11:32	10/31/08 17:00

Summit Scientific

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

Project: KMG - Everist 11-10
Project Number: KMG 08433
Project Manager: John Cocroft

Reported:
11/03/08 08:19

B01@6"
R810170-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/31/08 11:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8103103	10/31/08	11/01/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	
C6-C36 Total TEPH	ND	50	"	"	"	"	"	"	

Date Sampled: 10/31/08 11:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		107 %	77.7-123		"	"	"	"	
Surrogate: Trifluorotoluene		115 %	73.9-116		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/31/08 11:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	454	1.00	umhos/cm	1	8103105	10/31/08	10/31/08	SM 2510b/mod	

Date Sampled: 10/31/08 11:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.1		pH Units	"	8103106	10/31/08	"	EPA 9045B	

Summit Scientific

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

Project: KMG - Everist 11-10

Project Number: KMG 08433
Project Manager: John Cocroft

Reported:
11/03/08 08:19

B02@6"
R810170-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/31/08 11:32

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C6-C10 (TEPH-GRO)	ND	50		mg/kg	1	8103103	10/31/08	11/01/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50		"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50		"	"	"	"	"	"	
C6-C36 Total TEPH	ND	50		"	"	"	"	"	"	

Date Sampled: 10/31/08 11:32

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		106 %		77.7-123		"	"	"	"	
Surrogate: Trifluorotoluene		115 %		73.9-116		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/31/08 11:32

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	297	1.00		umhos/cm	1	8103105	10/31/08	10/31/08	SM 2510b/mod	

Date Sampled: 10/31/08 11:32

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.1			pH Units	"	8103106	10/31/08	"	EPA 9045B	

Summit Scientific

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

Project: KMG - Everist 11-10
Project Number: KMG 08433
Project Manager: John Cocroft

Reported:
11/03/08 08:19

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 8103103 - EPA 3550A

Blank (8103103-BLK1)

Prepared: 10/31/08 Analyzed: 11/01/08

C6-C10 (TEPH-GRO)	ND	50	mg/kg
C10-C28 (TEPH-DRO)	ND	50	"
C28-C36 (TEPH-ORO)	ND	50	"
C6-C36 Total TEPH	ND	50	"

LCS (8103103-BS1)

Prepared: 10/31/08 Analyzed: 11/01/08

C10-C28 (TEPH-DRO)	549	50	mg/kg	500	110	83.3-127
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LCS Dup (8103103-BSD1)

Prepared: 10/31/08 Analyzed: 11/01/08

C10-C28 (TEPH-DRO)	529	50	mg/kg	500	106	83.3-127	3.71	15
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Matrix Spike (8103103-MS1)

Source: R810170-01

Prepared: 10/31/08 Analyzed: 11/01/08

C10-C28 (TEPH-DRO)	360	50	mg/kg	500	ND	72.0	75.8-126			QM-05
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Matrix Spike Dup (8103103-MSD1)

Source: R810170-01

Prepared: 10/31/08 Analyzed: 11/01/08

C10-C28 (TEPH-DRO)	425	50	mg/kg	500	ND	85.0	75.8-126	16.6	13.6	RPD-1
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Summit Scientific

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

Project: KMG - Everist 11-10
Project Number: KMG 08433
Project Manager: John Cocroft

Reported:
11/03/08 08:19

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch 8103105 - General Preparation

Duplicate (8103105-DUP1) **Source: R810170-01** Prepared & Analyzed: 10/31/08

Specific Conductance (EC)	464	1.00	umhos/cm	454	2.18	20
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Batch 8103106 - General Preparation

Duplicate (8103106-DUP1) **Source: R810170-01** Prepared & Analyzed: 10/31/08

pH	8.1		pH Units	8.1	0.00	20
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Summit Scientific

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

Project: KMG - Everist 11-10
Project Number: KMG 08433
Project Manager: John Cocroft

Reported:
11/03/08 08:19

Notes and Definitions

RPD-1 The RPD failure for the sample duplicate analysis is most likely due to a non-homogeneous sample matrix.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Summit Scientific

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