

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

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



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402027033

Receive Date:

05/15/2019

Report taken by:

Jim Hughes

## Site Investigation and Remediation Workplan (Supplemental Form)

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. However, this shall not preclude the Operator from taking immediate action to protect public health or safety, the environment, wildlife, or livestock.

This Form 27 describes site conditions as currently understood by the Operator; approval of this Form 27 by COGCC is based on the site conditions accurately described herein; any changes in site conditions identified during or subsequent to the performance of the approved workplan may necessitate additional investigation or remediation which shall be described on a supplemental Form 27. This Form 27 is intended to provide basic information regarding the proposed site investigation and remediation actions, but the workplan may be more fully described in attached documentation.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

### OPERATOR INFORMATION

Name of Operator: <u>LOGOS OPERATING LLC</u>		Operator No: <u>10679</u>	<b>Phone Numbers</b>	
Address: <u>2010 AFTON PLACE</u>		Phone: <u>(505) 419-1100</u>		
City: <u>FARMINGTON</u>	State: <u>NM</u>	Zip: <u>87415</u>		Mobile: <u>( )</u>
Contact Person: <u>Larissa Farrell</u>		Email: <u>lfarrell@logosresourcesllc.com</u>		

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 7297Initial Form 27 Document #: 2230472

#### PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water                   |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure                  | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation                            | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project                                  |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste                      | <input type="checkbox"/> Rule 906.c.: Director request   |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____   |

#### SITE INFORMATION

N Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: <u>PIT</u>	Facility ID: <u>105402</u>	API #: _____	County Name: <u>LA PLATA</u>
Facility Name: <u>IGNACIO 33-8 2</u>		Latitude: <u>37.129317</u>	Longitude: <u>-107.671254</u>
		** correct Lat/Long if needed: Latitude: <u>37.129354</u>	Longitude: <u>-107.671240</u>
QtrQtr: <u>NESW</u>	Sec: <u>1</u>	Twp: <u>33N</u>	Range: <u>8W</u> Meridian: <u>N</u> Sensitive Area? <u>Yes</u>

#### SITE CONDITIONS

General soil type - USCS Classifications GCMost Sensitive Adjacent Land Use RANGELANDIs domestic water well within 1/4 mile? YesIs surface water within 1/4 mile? NoIs groundwater less than 20 feet below ground surface? No

#### Other Potential Receptors within 1/4 mile

2 WATER WELLS ~250 FT SOUTH.

## SITE INVESTIGATION PLAN

### TYPE OF WASTE:

☐ E&P Waste

☒ Other E&P Waste

☐ Non-E&P Waste

☐ Produced Water

☐ Workover Fluids

☐ Oil

☐ Tank Bottoms

☐ Condensate

☐ Pigging Waste

☐ Drilling Fluids

☐ Rig Wash

☐ Drill Cuttings

☐ Spent Filters

☒ Pit Bottoms

☐ Other (as described by EPA) \_\_\_\_\_

### DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	See attached analysi	Soil sample

### INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

ASSESSMENT OF FORMER PIT ASSOCIATED WITH COGCC. CURRENTLY BURIED VESSEL IN PROXIMITY OF FORMER PIT. SOIL SAMPLING TO BE DONE AROUND PERIMETER OF TANK USING HAND AUGER OR SIMILAR SAMPLING METHOD TO +/-8 FEET BELOW GROUND SURFACE.

### PROPOSED SAMPLING PLAN

#### Proposed Soil Sampling

☒ Will soil samples be collected as part of this investigation? ( Number, type (grab/composite), analyses, and locations of samples ):

One composite sample was taken (SS1) on 11/1/2018. Analyses is attached. The sample location and remediation area diagram is attached.

#### Proposed Groundwater Sampling

☐ Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

#### Proposed Surface Water Sampling

☐ Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

#### Additional Investigative Actions

☐ Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 1

Number of soil samples exceeding 910-1 1

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 144

### NA / ND

--          Highest concentration of TPH (mg/kg) 3340

ND          Highest concentration of SAR         

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 6

### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet)         

Number of groundwater monitoring wells installed         

Number of groundwater samples exceeding 910-1         

         Highest concentration of Benzene (µg/l)         

         Highest concentration of Toluene (µg/l)         

         Highest concentration of Ethylbenzene (µg/l)         

         Highest concentration of Xylene (µg/l)         

         Highest concentration of Methane (mg/l)         

### Surface Water

0 Number of surface water samples collected

         Number of surface water samples exceeding 910-1

If surface water is impacted, other agency notification may be required.

## OTHER INVESTIGATION INFORMATION

☐ Were impacts to adjacent property or offsite impacts identified?

☒ Were background samples collected as part of this site investigation?

Background sample showed 80.1 DRO (See attached)

☐ Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards)         

Volume of liquid waste (barrels)         

☐ Is further site investigation required?

# REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? No \_\_\_\_\_

## **SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

LOGOS Operating will be excavating the area of the pit (#105402) which is approximately a 12' x 12' x 6' area. Confirmation sampling will be performed before backfill will occur. Excavation will begin the week of January 7, 2019. Contaminated Soil will be delivered to a certified disposal facility.

## **REMEDIATION SUMMARY**

Describe how remediation of existing impacts to soil and groundwater is to be accomplished (i.e. summarize remedial action plan). Provide a brief narrative description including: technical justification, schedule for implementation, estimated time to attain NFA status, plus plans and specifications for the selected remedial action technology.

LOGOS Operating will be excavating the area of the pit (#105402) which is approximately a 12' x 12' x 6' area. Confirmation sampling will be performed before backfill will occur. Excavation will begin the week of January 7, 2019. Contaminated Soil will be delivered to a certified disposal facility.

## **Soil Remediation Summary**

### ☐ In Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

### ☐ Ex Situ

Yes \_\_\_\_\_ Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 32  
Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_  
\_\_\_\_\_ Excavate and onsite remediation  
\_\_\_\_\_ Land Treatment  
\_\_\_\_\_ Bioremediation (or enhanced bioremediation)  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Other \_\_\_\_\_

## **Groundwater Remediation Summary**

☐ \_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
☐ \_\_\_\_\_ Chemical oxidation  
☐ \_\_\_\_\_ Air sparge / Soil vapor extraction  
☐ \_\_\_\_\_ Natural Attenuation  
☐ \_\_\_\_\_ Other \_\_\_\_\_

## **GROUNDWATER MONITORING**

If groundwater has been impacted, describe proposed monitoring plan, including # of wells or sample points, monitoring schedule, analytical methods, points of compliance. Attach a groundwater monitoring location diagram.

## REMEDATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other \_\_\_\_\_

**Report Type:** ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report  
☐ Other \_\_\_\_\_

### WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? \_\_\_\_\_

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_

E&P waste (solid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

E&P waste (liquid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

## REMEDATION COMPLETION REPORT

### REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes \_\_\_\_\_

Do all soils meet Table 910-1 standards? Yes \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? No \_\_\_\_\_

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? \_\_\_\_\_

Does Groundwater meet Table 910-1 standards? Yes \_\_\_\_\_

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

## RECLAMATION PLAN

### RECLAMATION PLANNING

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.

TBD. NO SEEDING OR SURFACE RESTORATION PLANNED UNTIL SITE ABANDONMENT.

Is the described reclamation complete? \_\_\_\_\_

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

☐ Interim? ☐ Final?

Did the Surface Owner approve the seed mix? \_\_\_\_\_

If NO, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

### **PRIOR DATES**

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, if known. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 10/19/2018

Date of commencement of Site Investigation. 10/19/2018

Date of completion of Site Investigation. 10/19/2018

### **REMEDIAL ACTION DATES**

Date of commencement of Remediation. 04/01/2019

Date of completion of Remediation. 04/23/2019

### **SITE RECLAMATION DATES**

Date of commencement of Reclamation. 04/26/2019

Date of completion of Reclamation. 04/26/2019

**OPERATOR COMMENT**

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

Signed: ` Larissa Farrell

Title: Env/Reg Technician

Submit Date: ` 05/15/2019

Email: lfarrell@logosresourcesllc.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: Jim Hughes

Date: 05/15/2019

Remediation Project Number: 7297

**COA Type****Description**

	The status of Pit Facility ID #105402 shall be changed to closed in the COGIS database. If subsidence occurs over the closed pit location, additional topsoil shall be added to the depression and the land shall be re-leveled.
	Based on review of information presented, it appears that no further action is necessary at this time, and COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be significantly impacted, then further investigation and/or remediation activities may be required at the site.

**Attachment Check List**

Upon approval, the approved Form 27 and all listed attachments will be indexed to the Remediation Project file. Only the approved Form 27 will also be indexed to the related Facilities.

**Att Doc Num****Name**

402027033	FORM 27-SUPPLEMENTAL-SUBMITTED
402027074	DISPOSAL MANIFESTS
402027104	PHOTOS
402044433	ANALYTICAL RESULTS

Total Attach: 4 Files

**General Comments****User Group****Comment****Comment Date**

Environmental	The two water wells reported on this document are production wells with DWR permits. The nearest water well is approximately 1640' to the north.	05/01/2019
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Total: 1 comment(s)