

State of Colorado Oil and Gas Conservation Commission

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Report taken by:

CARLOS LUJAN

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: CPX PICEANCE HOLDINGS LLC	Operator No: 10639	Phone Numbers
Address: 34 S WYNDEN DR STE 240		Phone: (303) 912-8292
City: HOUSTON State: TX Zip: 77056		Mobile: (303) 912-8292
Contact Person: Mary Griggs	Email: griggs.mary@comcast.net	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10737

Initial Form 27 Document #: 401448130

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 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 checked="" 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: LAND APPLICATION SITE	Facility ID: 452466	API #: _____	County Name: GARFIELD
Facility Name: TPR 25A Land Application	Latitude: 39.404773	Longitude: -107.832457	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWSE	Sec: 25	Twp: 7S	Range: 94W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications GP

Most Sensitive Adjacent Land Use Surface Water
(Beaver Creek)
1,110 feet
southeast

Is domestic water well within 1/4 mile? No

Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

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	Soil pile	Soil pile was sampled

INITIAL ACTION SUMMARY

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

The second lift of soil is currently landspread, and did not pass lab analysis for PAHs. The remaining soil pile is on location. Stormwater BMPs are in effect for the soil pile and any landspreading (see attached diagram).

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):

The soil pile consisting of cuttings/mud mixed with sawdust is being addressed. The pile will be spread on location in a "horseshoe" shape at a depth between 2 and 2.5 feet deep. Efforts will be made not to mix the pile. The pile will be divided into 10 cells consisting of approximately 300 cubic yards of material for each cell. A composite soil sample with 5 discrete points will be collected from each cell. Each discrete point will be measured by a hand held GPS. The 10 composite samples will be laboratory analysed for TPH-DRO and PAHs at an accredited laboratory, upon land-spreading (approximately June 1, 2018).

The current landspread soil will be re-sampled for TPH-DRO and PAHs at the same time.

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 _____ 0

Number of soil samples exceeding 910-1 _____

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

Approximate areal extent (square feet) _____

NA / ND

_____ Highest concentration of TPH (mg/kg) _____

_____ Highest concentration of SAR _____

_____ BTEX > 910-1 _____

_____ Vertical Extent > 910-1 (in feet) _____

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?

☐ 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.

Initial soil samples will be collected from the spread soil pile approximately June 1, 2018 and the current land spread will be re-sampled. Laboratory analytical results will be reviewed for the 12 composite soil samples. Cells where PAH concentrations are below Table 910-1 levels will be stockpiled for re-use. Cells where PAH concentrations are up to 2X Table 910-1 levels will be segregated for remediation. Cells where PAH concentrations are over 2X Table 910-1 levels will be removed to an approved landfill. See the second part of the "remediation summary" for further details.

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.

The subject material consists of drill cuttings and mud mixed with sawdust (called "soil") and contained in a pile near the northeast part of Pad 25A. Landspreading commenced in January 2014 with the first lift of soil. A site diagram of the location of the landspreading is attached. The first lift of soil was stirred and turned over on the following dates: 6/12/14, 7/25/14, 8/27/14, 6/4/15, 8/13/15. The first lift of soil was sampled on 9/17/15, lab report D75359. There were two soil samples submitted, each a composite of five locations. The COGCC approved stockpiling of the first lift of soil on 12/2/15, Doc# 400938376. COGCC approved spreading the second lift of soil 6/7/16, Doc#401055743. The first lift of soil was removed from Pad 25A and stockpiled on location, and the second lift of soil was landspread June 15, 2016. The second lift of soil was stirred and turned on 7/28/16, 9/6/16, 10/12/16, 6/22/17. The second lift of soil was sampled on 7/11/17, lab report D95794. The locations of the samples were similar to the earlier sampling, and again two soil samples were submitted, each sample a composite of five locations. The Operator received the lab report on 8/31/17 and reviewed the report on 9/1/17. On 9/8/17, the COGCC was notified of the lab results, which included exceedences of five PAH analyses. A detailed write-up is attached.

Second part of proposed remediation summary - Soil cells exhibiting PAH concentrations exceeding Table 910-1 up to 2X Table 910-1 will be land treated (June 2018 sampling). The soil will be thin spread (1 foot to 18 inch) and turned every two weeks through the Fall. Soil samples will be collected in October 2018 and analyzed for TPH-GRO and PAHs. The number and placement of the soil samples will be determined and approved by the COGCC. Areas where the soil samples exceed PAHs will be taken to an approved landfill. Soil cells that exceed 2X the Table 910-1 level for PAHs (June 2018 sampling) will be taken to an approved landfill.

Soil Remediation Summary

<input type="checkbox"/> In Situ	<input checked="" type="checkbox"/> Ex Situ
_____ Bioremediation (or enhanced bioremediation)	Yes _____ Excavate and offsite disposal
_____ Chemical oxidation	_____ If Yes: Estimated Volume (Cubic Yards) _____ 0
_____ Air sparge / Soil vapor extraction	_____ Name of Licensed Disposal Facility or COGCC Facility ID # _____
_____ Natural Attenuation	Yes _____ Excavate and onsite remediation
_____ Other _____	Yes _____ Land Treatment
	Yes _____ Bioremediation (or enhanced bioremediation)
	No _____ Chemical oxidation
	No _____ 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 Monthly starting June 2018

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? Yes

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

Material is slated to use as fill for Pad 25 pad reclamation.

Volume of E&P Waste (solid) in cubic yards 2970

E&P waste (solid) description Drill cuttings and mud, mixed with sawduct

COGCC Disposal Facility ID #, if applicable: 0

Non-COGCC Disposal Facility: Greenleaf and Garfield County have approved the waste.

Volume of E&P Waste (liquid) in barrels 0

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? No

Do all soils meet Table 910-1 standards? _____

Does the previous reply indicate consideration of background concentrations? _____

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? _____

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.

Interim reclamation has not yet started. The location is graded and has a gravel surface. The area is covered by a stormwater management program. A Rule 502b variance is in progress for Rule 1003b.

Is the described reclamation complete? No

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). _____ 09/01/2017

Date of commencement of Site Investigation. _____ 11/02/2017

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Minor changes were made to "Proposed Soil Sampling," and "Periodic Reporting" sections.
 Field work is limited due to climatic conditions affected by the site elevation at 9131 feet. There may be periods of inaccessibility to Pad 25A during the road and pipeline construction planned in 2Q & 3Q 2018, which may slightly modify the soil remediation schedule.

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

Signed: Mary Griggs

Title: Regulatory Consultant

Submit Date: 02/09/2018

Email: griggs.mary@comcast.net

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: CARLOS LUJAN

Date: 02/14/2018

Remediation Project Number: 10737

COA Type**Description**

	Contact the CDPHE regarding Certification to Discharge under the CDPS General Permit COR-030000 (Storm water Discharges Associated with Construction).
	COGCC understands that road and pipeline construction may require changes/delays to the 25A pad land farm schedule. Changes/delays to the schedule (sampling, tilling, disposal, etc.) must be requested at the time of the change/delay.
	All compliant material shall be beneficially reused within 30-days of meeting Table 910-1.

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**

401539090	FORM 27-SUPPLEMENTAL-SUBMITTED
401539128	OTHER

Total Attach: 2 Files

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

Environmental	COGCC appreciate that CPX shares the CDPHE Certification to Discharge under the CDPS General Permit COR-030000 (Storm water Discharges Associated with Construction), with the following comment: COGCC does not regulate Storm Water Management during Construction. It appears that this plan maybe out of date. CPX should contact the CDPHE regarding revised and updated plan.	02/14/2018
Environmental	From the Remedial Action Plan Tab: "Initial soil samples will be collected from the spread soil pile approximately June 1, 2018 and the current land spread will be re-sampled. Laboratory analytical results will be reviewed for the 12 composite soil samples. Cells where PAH concentrations are below Table 910-1 levels will be stockpiled for re-use. Cells where PAH concentrations are up to 2X Table 910-1 levels will be segregated for remediation. Cells where PAH concentrations are over 2X Table 910-1 levels will be removed to an approved landfill. See the second part of the "remediation summary" for further details." The COGCC agrees with the Remedial Action Plan above, with the following Correction/Clarification: Cells that comply with Table 910-1 standards may be stock piled for beneficial re-use. All Table 910-1 parameters in a particular cell must be in compliance if soil in that cell is to be stock piled for re-use.	02/12/2018

Total: 2 comment(s)