



1058 county road 215
Parachute, CO 81635
Phone: 970-285-9377
Fax: 970-285-9573

January 12, 2010

Mr. Alex Fischer
Environmental Supervisor – Western Colorado
Colorado Oil and Gas Conservation Commission
1120 Lincoln St.
Denver, CO 80203

**Re: Form 27, Pit Closure
RMV 8-16
Completion Fluids Facility**

Dear Mr. Fischer:

Williams Production RMT Company (Williams) is submitting this Form 27 for a Pit Closure Process on the Williams RMV 8-16 well pad. The pit on this location was permitted in June 2008 as a "Completion Fluids Facility". HRL Compliance Solutions, Inc. has compiled the information contained in the Form 27 and is working in direct consultation with Williams.

During the permit process in June 2008, the location was classified as a "Sensitive Area". In light of the COGCC rules revisions, the location was re-evaluated in accordance with recently implemented rules and regulations (April 2009). In accordance with COGCC Rule 901(e)(d)(f), the RMV 8-16 location has been reclassified as a "Non Sensitive Area".

Should you have any questions or concerns in regards to the Form 27, please do not hesitate to contact me (970) 263-2704.

Best Regards,

A handwritten signature in blue ink that reads "Karolina Blaney". The script is cursive and fluid.

Karolina Blaney
Environmental Specialist
Piceance - Valley Asset Team
(970) 683-2295 (Office)
(970) 589-0743 (Mobile)
Karolina.Blaney@williams.com

Attachments (4)
Form 27
Attachment A – Remediation Workplan
Sensitive Area Determination
Pit Location Map

cc: K.Rider H. Lucero
Env. File: Waste Management

State of Colorado
Oil and Gas Conservation Commission

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

OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No: _____

| | | | |
|--|------------------------------------|---|--|
| OGCC Operator Number: <u>96850</u> | | Contact Name and Telephone: _____ | |
| Name of Operator: <u>Williams Production RMT Company</u> | | Karolina Blaney | |
| Address: <u>1058 County Road 215</u> | | No: <u>970-683-2295</u> | |
| City: <u>Parachute</u> | State: <u>CO</u> Zip: <u>81635</u> | Fax: <u>970-285-9573</u> | |
| API Number: <u>05-045-06903</u> | | County: <u>Garfield</u> | |
| Facility Name: <u>NA</u> | | Facility Number: <u>NA</u> | |
| Well Name: <u>Clough</u> | | Well Number: <u>RMV 8-16</u> | |
| Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>NENW S16 T6S R94W 6th PM</u> | | Latitude: <u>N39.532036</u> Longitude: <u>W107.897358</u> | |

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced Water if any

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

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

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Nihill Channery, Soil complex/series No. 47

Potential receptors (water wells within 1/4 mi, surface waters, etc.): surface water ~100', water wells ~3607', ground water ~50'

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>Will be determined when the liner is removed</u> | <u>visual inspection, field screening</u> |
| <input type="checkbox"/> Vegetation | _____ | _____ |
| <input type="checkbox"/> Groundwater | _____ | _____ |
| <input type="checkbox"/> Surface Water | _____ | _____ |

REMEDIALTION WORKPLAN

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

All remaining liquids and pit bottoms/sludge will be removed and the liner will be visually inspected for holes, rips, or tears.

Describe how source is to be removed:

- 1: All free liquids in the pit will be pumped and transported to the nearest Centralized E&P Waste Management Facility for treatment
- 2: Pit bottoms/sludge will be pumped from the bottom of the pit utilizing a sludge pump
- 3: The pit bottoms/sludge will be passed through de-watering equipment, and placed into roll off containers located on the well pad pending disposal in an approved facility.

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.:

See Attachment A



REMEDIAL WORKPLAN (Cont.)

Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Based on the location of the pit, previous subsurface investigations, and soil information gathered from the NRCS, it is not anticipated that groundwater has been impacted.

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 pit will be reclaimed in accordance with COGCC 1000 series rules.

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:

To be determined upon pit liner removal, visual inspection, and analytical results from soil samples collected from the lowest point in the pit in accordance with COGCC 905(b)(4). If contaminant levels exceed Table 910-1 guidelines, additional soil samples will be collected from the bottom of the pit to determine the lateral and vertical extent of contamination. Once this is determined the impacted areas will be remediated to a depth to where COGCC Table 910-1 criteria is not exceeded.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Hydrocarbon impacted soil (if any) will be managed in accordance with COGCC 907(e)(1)

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: _____ Date Site Investigation Completed: _____ Date Remediation Plan Submitted: 1/12/2010
Remediation Start Date: _____ Anticipated Completion Date: _____ 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: Karolina Blaney

Signed: _____

Title: Environmental Specialist

Date: 1/12/2010

OGCC Approved: _____ Title: _____ Date: _____

January 12, 2010

Remediation Workplan

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, in-situ bioremediation, burning of oily vegetation etc.

- The dewatered pit bottoms will be placed in roll off containers and will be sampled for constituents listed in Table 910-1.
- Pending analytical results; the pit bottoms will either be placed back into the pit during reclamation if the analytical results show contaminant levels below Table 910-1 allowable standards, or disposed of at an approved disposal facility.
- The pit liner will then be removed and disposed of at a properly permitted facility.
- When the removal of the liner is completed; soils below it will be inspected for evidence of leakage, staining, and hydrocarbon vapors/odors prior to collecting samples for compliance with Table 910-1 standards.
- If contaminant levels exceed Table 910-1 guidelines the soil will be remediated to a depth at which Table 910-1 criteria is not exceeded.
- Any impacted soils removed from the bottom of the pit will either be treated onsite in accordance with COGCC 907(e)(2) to levels below Table 910-1 and placed back into the pit or disposed of at an approved disposal facility.
- A background sample consisting of undisturbed topsoil will be collected from the location. The sample point(s) will have GPS point(s) taken on site, and will be sent to an approved analytical laboratory for analysis's including, but not limited to: arsenic, electric conductivity, sodium adsorption ratio and pH. Verifying the naturally occurring chemical components of the native soils' will allow for an accurate comparison to the media possibly impacted by the pit.

Sensitive Area Determination Checklist

| Williams Production RMT Company – Valley | | |
|--|---|------------|
| Person(s) conducting inspection | Ashlee Lane | 12/16/09 |
| Site Information | Existing | |
| Location: | RMV 8-16 | Time: 1545 |
| Type of Facility: | Completion Fluids Facility (CFF) | |
| Environmental Conditions | Ground covered with snow. Site visit not conducive for inspecting surface features, i.e. vegetation and surface water features. | |
| Temperature (°F) | N/A | |

Has the proposed, new or existing location been identified as a sensitive area?

☐ Yes ☒ No

SURFACE WATER

1. Are there any surface water features or SWSAs adjacent to or within ¼ mile of the proposed/new or existing facility?

☒ Yes ☐ No

If yes, list type of surface water feature(s), e.g. rivers, creeks, streams, seeps, springs, wetlands:

Unnamed ephemeral drainage. (The USGS recognizes this as an unnamed intermittent drainage but previous sensitive area determinations identified this drainage as ephemeral.)

If yes, describe location relative to facility:

It is located approximately 100 feet east of the CFF.

2. Could a potential release from the facility reach surface water features?

☒ Yes ☐ No

If yes, describe the pathway a release from the facility would likely follow to determine if the potential to impact surface water is high or low.

Based on the location of the facility a potential release could flow off the southeast edge of the facility and into the unnamed ephemeral drainage.

3. Is the potential to impact surface water from a facility release high or low?

☐ High ☒ Low

GROUNDWATER

1. Will the proposed/new or existing facility have any pits which will contain hydrocarbons and chlorides or other E&P wastes?
☐ Yes ☒ No
If yes, List the pit type(s): The existing pit is proposed to be closed, see attached COGCC Form 27.
2. Is the site of the proposed facility underlain by an unconfined aquifer or recharge zone?
☐ Yes ☒ No
3. Is the hydraulic conductivity of the underlying soil or geologic material $\leq 1.0 \times 10^{-7}$ cm/sec?
☐ Yes ☒ No
4. Is the proposed facility located within 1/8 mile of a domestic water well or 1/4 mile of a public water supply well which would use the same aquifer?
☐ Yes ☒ No
5. Is the proposed facility located within a 100 year floodplain?
☐ Yes (*Sensitive Area*) ☒ No (*If no, proceed to question #6.*)
6. Is the depth to groundwater known?
☐ Yes (*If yes, follow instructions provided in 5(a) of this section.*)
☒ No (*If no, follow instructions provided in 5(b) of this section.*)
 - (a) If yes, could a potential release from the proposed facility reach groundwater?
☐ Yes ☐ No
If yes, explain:
 - (b) If no:
 - (i) Evaluate surrounding soils, topography, and vegetation which may suggest the presence of shallow groundwater. The soil within the immediate vicinity of the location is Nihill channery loam. The surrounding soil type is badland.
 - (ii) Gather information from surrounding well data in order to determine a depth to groundwater, i.e. State Engineers Office. No data was available from the State Engineers Office determining the known depth to ground water within the immediate 1/8-1/4 vicinity of the facility. A water well approximately 3,607 feet to the southwest and another 4,075 feet to the southwest have a known ground water depth of 50 feet. This data was obtained from the State Engineers website.

- (iii) Drill a soil boring to determine depth to groundwater or
- (iv) Model hydro geologic conditions to determine if the potential to impact groundwater is high or low.

7. Is the potential to impact ground water from the facility in the event of a release high or low?

☐ High

☒ Low

Additional Comments:

The CFF lies adjacent to an unnamed ephemeral drainage located 100 feet to the southeast of the location. Based on the location of the CFF, a potential release to flowing surface waters from this location would be low. Appropriate Best Management Practices can be installed to ensure containment onsite.

There is no groundwater data available for the area in close proximity to the CFF. A water well approximately 3,607 feet to the southwest and another 4,075 feet to the southwest have a known ground water depth of 50 feet. Again, these wells are not within 1/8-1/4 mile of the facility.

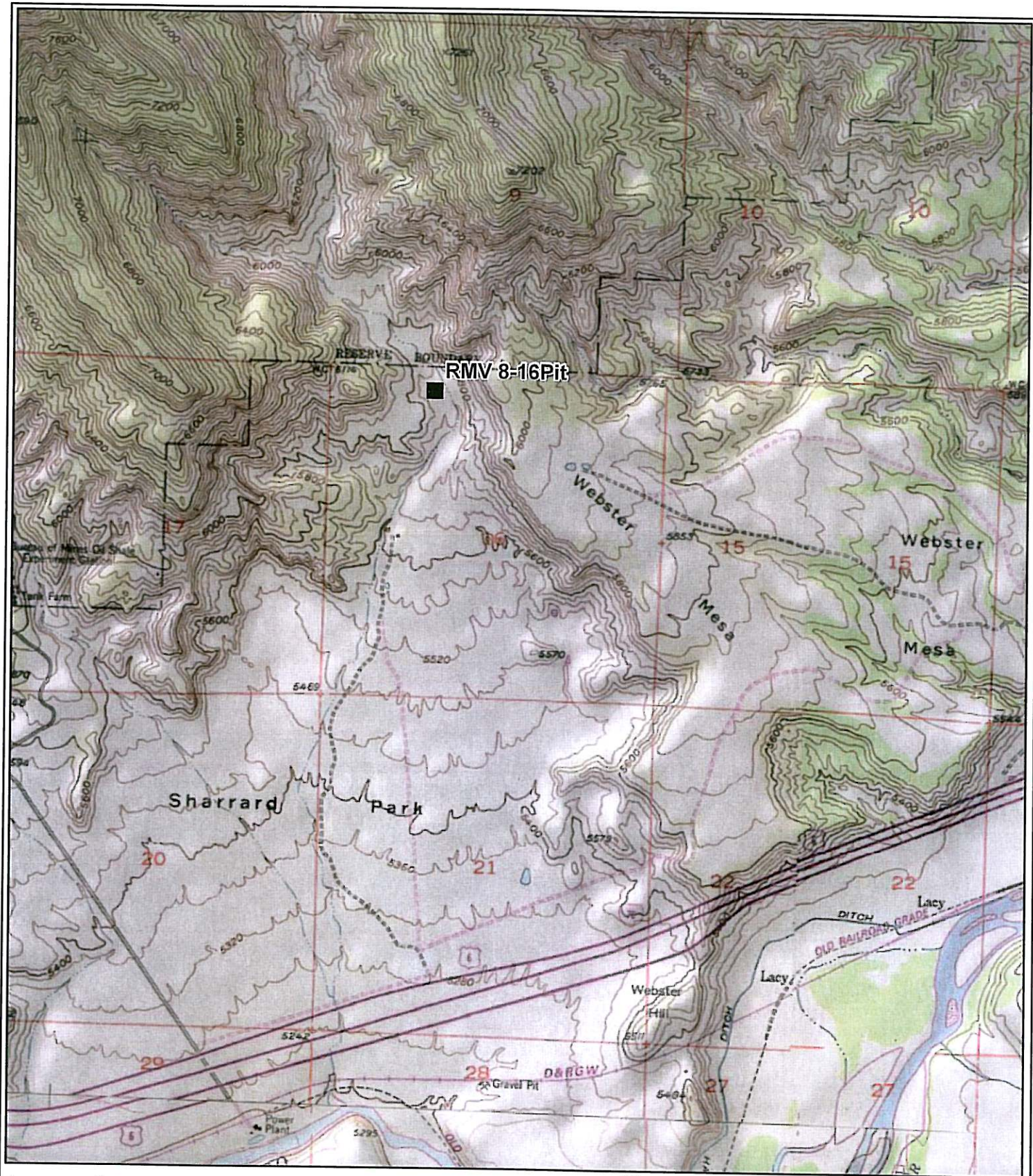
A field visit was not conducted to evaluate this sensitive area determination due to site conditions and the recent snow storms. Surface water features and vegetation are covered with snow. All data collected for this sensitive area determination were based on the COGCC data base, State Engineers Office website, and the NRCS Web Soil Survey website via desktop review. The desktop review indicates that this location is in non-sensitive area.

Inspector(s) Signature(s):

Adrian Kane
Heaven Jones

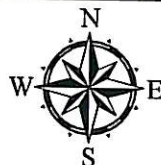
Date: 12/16/09

Date: 12/16/09



Legend

■ Pit Location



Williams's

0 1,000 2,000 4,000 Feet