

Sensitive Area Determination Checklist

Williams Production RMT Company – Highlands		
Person(s) conducting field inspection	Ashlee Lane	8/16/10
	<i>Biologist</i>	
Site Information		
Location:	RGU 31-24-198	Time: 1300
Type of Facility:	Existing Well Pad	
Environmental Conditions	Cloudy with scattered thunderstorms	
Temperature (°F)	85°	

Has the proposed, new or existing location been designated 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), i.e. rivers, creeks, streams, seeps, springs, wetlands: Two unnamed ephemeral drainages.

If yes, describe location relative to facility: One ephemeral drainage is located approximately 582 feet north of the facility and the other is located 485 feet southwest of the existing facility.

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. Any releases if they were to migrate off the southern side of the facility would have the greatest potential to impact the surface water features to the southwest of the facility. There is a slight potential that if a release were to migrate off the northeastern corner of the facility near the entrance to the facility.

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): Drilling pit.

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.
 - (ii) Gather information from surrounding well data in order to determine a depth to groundwater, i.e. State Engineers Office.

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

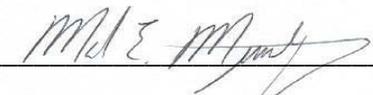
Additional Comments:

As stated in the surface water section of this sensitive area determination, the potential to impact surface waters is high. There are two surface water features relatively close to the existing facility. Based on observations from the site visit greatest potential for impacts to surface water would be if a release were to migrate into the unnamed ephemeral drainages to the north and southwest of the existing facility. Both drainages exhibit Ordinary High Water Marks (OHWM) and signs of recent flow due to recent monsoonal precipitation events. In addition the unnamed ephemeral drainage to the south is within 500 feet of the facility. By COGCC decision this would place the facility in a sensitive area. Both the unnamed drainages flow into another unnamed ephemeral drainage which is a tributary to Yellow Creek which eventually flows and empties into the white River approximately 16 miles north of the existing facility. It is highly unlikely that a potential release would ever reach the White River or even Yellow Creek. However since Yellow Creek is a direct tributary to the White River we do have the potential to impact waters of the state and possibly the US.

Best Management Practices (BMPs) are currently installed along the entire perimeter of the well pad in the form of a containment berm and diversion ditch. These BMPs are in excellent condition and will greatly aid in site containment in the event of a potential release. These BMP's should be monitored and maintained during the drilling and completions process to further ensure site containment.

In regards to groundwater; the vegetation in the area consists of Piñon/Juniper woodland along with sage brush. The surface soils in the area are rocky. There were no field indicators which indicated that presence of shallow ground water. The nearest permitted water well with accurate data from the state Engineer's office is located approximately 1 mile to the northwest of the existing facility in a similar topographic setting. The depth to groundwater in the well is noted at 245 feet. Therefore it is unlikely groundwater would be impacted by a potential released from the facility.

With the data collected from the site investigation and the information presented within this sensitive area determination checklist, this location should be considered sensitive due to the COGCC decision of a surface water feature within 500 feet of an existing or proposed facility and potential issues with waters of the state if a release were to impact one or more of the drainages in the immediate vicinity of the facility.

Inspector Signature(s):  Date: 8/17/2010

Mark E. Mumby, *Project Manager/RPG*
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 Date: 8/16/20

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