

Sensitive Area Determination Checklist

Williams Production RMT Company – Highlands		
Person(s) conducting field inspection	Ashlee Lane <i>Biologist</i>	8/16/2010
Site Information		
Location:	RGU 32-25-198	Time: 1500
Type of Facility:	Proposed Well Pad	
Environmental Conditions	Thunderstorm occurring; ground saturated.	
Temperature (°F)	65°	

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 unnamed ephemeral drainage is located approximately 828 feet south of the proposed facility and the other is located approximately 665 feet to the northwest of the proposed 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. Flow would be to the northeast and southeast following the topographical contour in the immediate vicinity of the proposed 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 6(a) of this section.*)

☒ No (*If no, follow instructions provided in 6(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?

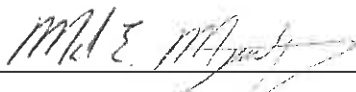
☐ High ☒ Low

Additional Comments:


As stated in the surface water section of this sensitive area determination, the potential to impact surface water has been identified as being low. Both ephemeral drainages noted did not appear to have an ordinary high water mark (OHWM) or signs of recent surface water flow during the site investigation. In addition the sandy nature of the thin layer of colluvium would tend to absorb a majority of a potential release if it were to migrate offsite and therefore prevent it from reaching either of the ephemeral drainages to the south and northeast of the proposed facility. During drilling, completion, and eventually production operations, it is recommended that adequate Best Management Practices (BMPs) be installed and maintained. A containment berm around the perimeter of the facility as well as a diversion ditch should be installed around the eastern, southern, and western boundaries of the well pad to ensure site containment.

The vegetation in the area consists of Piñon/Juniper woodland along with sage brush. There were no field indicators which indicated the presence of shallow ground water. No accurate water well data was obtainable for this location from the State Engineer's office. However based on the topographical setting of the proposed facility and the impermeability of the underlying bedrock it is not anticipated that a potential release from the facility would impact groundwater.

Based on the data collected from the site investigation and the desktop review, this proposed facility can be designated as being in a non-sensitive area.

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

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HRL Compliance Solutions, Inc.

 Date: 8/16/2010

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