

Sensitive Area Determination Checklist

Williams Production RMT Company – Valley		
Person(s) Conducting Field Inspection	Ashlee Lane	10/29/10
	Biologist	
Site Information		
Location:	PA 11-28	Time: 1300
Type of Facility:	Existing Well Pad	
Environmental Conditions	Clear and calm; soil conditions are dry.	
Temperature (°F)	60°	

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 USGS identified unnamed intermittent drainages tributary to Cottonwood Gulch and a small section of Cottonwood Gulch, a perennial/intermittent stream.

If yes, describe location relative to facility: One unnamed intermittent drainage is located 415 feet to the north and the other unnamed intermittent drainage is located 758 feet to the south. Cottonwood Creek is 1,320 feet to the east.

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. A potential release if it were to migrate off the facility would tend to flow to the south or southeast.

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

Moderate to actual surface water features Low to any flowing surface water

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 existing 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 existing 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 existing 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, there are two USGS identified unnamed intermittent drainages and a very small portion of Cottonwood Gulch a perennial/intermittent stream. The facility as it is currently constructed and proposed to be expanded would limit flow off the facility primarily to the south and southeast. The unnamed intermittent drainage to the south of the existing facility could potentially be impacted by a release if it were to migrate off the southern edge of the facility. However the potential is low due to the relatively thick vegetative cover and the distance a release would have to migrate to impact the drainage. In addition; although identified as intermittent on the USGS topographic maps, the unnamed drainage in the immediate vicinity of the facility exhibits ephemeral characteristics indicating it does not flow a majority of the time. Even if a potential release were to reach the unnamed drainage to the south it would have to migrate another 2,500 feet to impact Cottonwood Gulch. The second unnamed intermittent drainage is located 415 feet to the north of the existing facility. According to COGCC decision this would classify the facility as being in a sensitive area. However it is not anticipated that a potential release would impact the unnamed intermittent drainage to the north due to the fact the existing facility has been cut down into the ridgeline and there is a fairly large berm on the northern and eastern sides which would mitigate flow to the north. The potential for a release to impact the small portion of Cottonwood Gulch is non-existent due to topographic setting of the facility and the distance a release would have to migrate in order to directly impact Cottonwood Gulch. As stated above, there are currently fairly adequate Best Management Practices BMP's installed on the northern and eastern edges of the facility. Consideration should be given to installing BMPs on the southern and western edge of the facility in the form of a perimeter berm and a diversion ditch along the fill slopes of the facility on the southern and western edges if feasible. All off the existing and proposed BMP's should be monitored and maintained to further ensure site containment if the event of a release.

The State Engineer's Office and USGS records were reviews and no records were revealed that would provide additional information pertaining to the depth to groundwater. The vegetative cover in the immediate vicinity of the facility, Piñon Juniper woodland and sage brush does not suggest the presence of shallow groundwater.

Based on the information collected during the site investigation and desktop review, the potential to impact actual surface water features has been deemed to be moderate. However the potential to impact any live surface water (Cottonwood Gulch if flowing) is deemed to be low due to the distance a potential release would have to migrate (~2,500 feet) to impact this drainage. Based on the topographical setting of the proposed facility the potential to impact ground water has been deemed low as well. Therefore the facility can be designated as being in a non-sensitive area.

Inspector Signature(s): Mark E. Mumby Date: 11/14/2010

Mark E. Mumby, *Project Manager/RPG*
HRL Compliance Solutions, Inc.

Ashlee Lane Date: 11/11/2010

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