

Sensitive Area Determination Checklist

Williams Production RMT Company		
Person(s) Conducting Field Inspection	Ashlee Lane	3/24/11
	Biologist	
Site Information		
Location:	RWF 33-36	Time: 1030
Type of Facility:	Existing Well Pad	
Environmental Conditions	Cloudy and calm, soils are moist from recent precipitation events.	
Temperature (°F)	38□	

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: There is one unnamed USGS identified intermittent stream and Beaver Creek, a USGS identified perennial stream tributary to the Colorado River.

If yes, describe location relative to facility: The unnamed intermittent drainage is located 299 feet west of the location. Beaver Creek is located 896 feet east of the location.

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. If a release were to migrate off the western or northwestern corner, flow would tend to be to the northwest towards the above mentioned unnamed intermittent drainage.

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

☒ High to surface water features ☒ Low to actual live 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 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, there are two USGS identified drainages in the vicinity of the location: one is an unnamed intermittent drainage to the west of the facility; and the other is Beaver Creek, a perennial drainage east of the location which is ultimately tributary to the Colorado River. The facility as it is currently constructed, limits flow direction of a potential release primarily to the western side and northwestern corner. Therefore, it is not anticipated that Beaver Creek, to the east, would be impacted by a potential release due to the fact the eastern portion of the facility is cut into the hillside thus eliminating the potential for a surface release to impact this drainage feature. In addition, there is a ridgeline which separates the facility from Beaver Creek thus any flow from a potential release would tend to flow to the northwest following the natural contours of the area which would be parallel to Beaver Creek. The greatest potential for impacts would be to the unnamed USGS identified drainage located 299 feet to the west of the facility. By the COGCC 500 foot rule this would classify the facility as being in a sensitive area. However, the site investigation revealed that the unnamed intermittent drainage does not have a defined channel. It can be better defined as a low lying depression that has a fairly thick vegetated bottom (including several woody species) and does not show signs of flow during any time of the year. In addition, it is not hydraulically connected to any drainage features which would be tributary to any perennial streams or the Colorado River. It terminates in an open field approximately 1.2 miles northwest the facility. Best Management Practices (BMPs) are currently installed on in the form of a perimeter berm on the fill slope edges of the facility. Temporary BMPs in the form of straw bales are installed along the edges of the fill slopes on the western and northern sides of the facility. These BMPs should be monitored and maintained to ensure site containment in the event of a release.

The State Engineer's Office and USGS records were reviewed 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 steppe does not suggest the presence of shallow groundwater.

Based on the information collected during the site visit and desk top review, the potential to impact any flowing surface water has been deemed low. The potential to impact actual surface water features has been deemed high due to the close proximity of one surface water feature. However as stated above, the surface water feature most likely to be impacted by a potential release is not hydraulically connected to any surface water features which would be tributary to the Colorado River. The potential to impact groundwater has been deemed low as well. Therefore the facility should be classified as being in a non-sensitive area.

Inspector Signature(s):  Date: 4/18/2011

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 Date: 4/14/2011

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