

Sensitive Area Determination Checklist

Williams Production RMT Company		
Person(s) Conducting Field Inspection	Ashlee Lane	01/21/11
	<i>Biologist</i>	
Site Information	Limited field investigation conducted due to prohibited site access	
Location:	SG 23-23	Time: 1300
Type of Facility:	Existing Well Pad	
Environmental Conditions	Clear and calm; melting conditions.	
Temperature (°F)	40°	

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 are two unnamed USGS indentified intermittent drainages and the 100 year Colorado River flood plain.

If yes, describe location relative to facility: The first unnamed intermittent drainage is located 571 feet northwest, the second unnamed intermittent drainage is located 1,107 feet northeast, and the 100 year Colorado River flood plain is located 750 feet to the southeast 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.

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 unnamed intermittent drainages 571 feet southwest and 1,107 feet northeast of the facility both exhibit more ephemeral characteristics in the immediate vicinity of the facility such as poorly defined channels and what appears to be a vegetated bottoms, based on aerial photography review. The facility, as it is currently constructed, limits flow directions of a potential overland release to primarily the southeastern side of the site. If a potential release were to migrate of the southwestern or southeastern edges of the facility, it would tend to flow to the southeast following the natural contours of the area. Therefore, the potential to impact the unnamed intermittent drainages would be deemed very low due to the fact any flow from the facility would be nearly perpendicular to the drainage southwest of the facility and parallel to the unnamed drainage located to the northeast of the facility. In addition, the distance a potential release would have to migrate to impact the unnamed drainage northeast of the facility would be greater than 1,000 feet, further reducing any potential to impact it. It is not anticipated that a release from the facility would impact the 100 year floodplain of the Colorado River. A release off the facility would tend to congregate on the pipeline right-of way northwest of the frontage road and directly southeast of the facility. The frontage road is also at a higher elevation than the pipe line right-of-way which further prevents a release from impacting the 100 year floodplain. There were no culverts observed along the frontage road within a quarter-mile of the facility, which would allow a release to migrate onto the 100 year floodplain. It is recommended that Best Management Practices (BMPs) be installed in the form of a perimeter berm on the southeastern, southwestern, and northeastern edges of the facility and a diversion ditch along the fill slopes on the same sides as well. These BMPs should be monitored and maintained to ensure site containment in the event of a release.

The State Engineers Office and USGS records were reviewed and no records were revealed that would provide additional information pertaining to the depth of groundwater. The vegetative cover in the immediate vicinity of the facility does not suggest the presence of shallow groundwater. Therefore it is not anticipated that groundwater would be impacted by a potential release from the facility. Note: there is one permitted water well identified on the hydrology map located 2,603 feet northeast of the facility and across the Colorado River. It should be noted that this well is located in a different flow regime and would not be impacted by any potential release from the facility.

Based on the limited information collected during the site visit and the desktop review phase of this determination, the potential to impact both surface water and groundwater has been evaluated as being low. Therefore the facility should be designated as being in a non-sensitive area.

Inspector Signature(s): Mark E. Mumby Date: 1/25/2011

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Ashlee Lane Date: 01/24/2011

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