

Sensitive Area Determination Checklist

Williams Production RMT Company		
Person(s) Conducting Field Inspection	Ashlee Lane	10/27/10
	Biologist	
Site Information		
Location:	GV 15-36	Time: 1315
Type of Facility:	Existing Well Pad	
Environmental Conditions	Weather is partly cloudy; snow flurries the day before; ground is saturated from melting snow.	
Temperature (°F)	50°s	

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 three USGS identified unnamed intermittent drainages.

If yes, describe location relative to facility: The first unnamed intermittent drainage is located approximately 2,135 feet to the southwest, the second unnamed intermittent drainage is located approximately 830 feet to the east, and the third unnamed intermittent drainage is located 401 feet to the northeast 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. If a release were to migrate off the northeast corner of the facility

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

☐ Moderate to one of the 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 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 three USGS identified unnamed intermittent drainages. The facility as it is currently constructed, limits flow direction of a potential release primarily to the north. It is not anticipated that the unnamed intermittent drainage to the west would be impacted by a potential release due to the fact the southern portion of the facility is cut into the hillside thus eliminating the potential for a surface release to impact this drainage feature. It is not anticipated that the unnamed intermittent drainage located 954 feet east-northeast of the facility would be impacted by a potential release as well. This is due to the fact that, any potential flow off the facility would tend to flow to the north which would be parallel to the drainage. The greatest potential for impacts would be to the unnamed USGS identified drainage located 304 feet to the north 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 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 3,700 feet 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. A diversion ditch is installed along the entire western edge of the facility to re-direct run on storm water away from the facility. These BMP's should be monitored and maintained to ensure site containment and keep storm water from flowing onto the facility.

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 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 moderate 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): Mark E. Mumby Date: 3/1/2011

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

Ashlee Lane Date: 01/04/11

Ashlee Lane, *Biologist*
HRL Compliance Solutions, Inc.