

Sensitive Area Determination Checklist

Williams Production RMT Company		
Person(s) Conducting Field Inspection	N/A	12/08/10
	<i>Desk top review completed due to snow pack.</i>	
Site Information		
Location:	CMU 22-7	Time: N/A
Type of Facility:	Proposed Well Pad	
Environmental Conditions	1+ feet of snow covering the ground.	
Temperature (°F)	N/A	

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: Baldy Creek, a USGS identified perennial stream. One USGS identified unnamed intermittent drainage tributary to Baldy Creek.

If yes, describe location relative to facility: Baldy Creek is located 382 feet southwest of the proposed facility. The unnamed intermittent drainage is located beneath and adjacent to 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. A potential release if it were to migrate off the proposed facility would tend to flow to the southwest following the natural topographical contours of the area.

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, Baldy Creek, a USGS identified perennial stream tributary to Garfield Creek, is located 382 feet west from the center of the proposed facility. The unnamed intermittent drainage beneath and adjacent to the proposed facility does not appear to have a well defined channel suggesting that there is flow during certain times of the year, most likely during the spring runoff period. The facility as it is currently proposed limits flow directions of a potential release to portions of the northwestern and southeastern, and the entire southwestern edge of the proposed facility. If a potential release were to migrate off the facility on the northwestern or southwestern edges flow would be to the southwest towards Baldy Creek. If a potential release were to migrate of the southeastern edge of the proposed facility flow could intersect the unnamed intermittent drainage which flows directly into Baldy Creek. Therefore the potential to impact Baldy Creek and the unnamed intermittent drainage in the event of a release would be high due to the close proximity of the two drainages and the relatively steep hillside on which the proposed facility will be located. In addition, both drainages are within 500 feet of the proposed facility which by COGCC unwritten decision would classify the proposed facility as being in a sensitive area. Adequate BMPs in the form of a perimeter berm and diversion ditch along with temporary BMPs (i.e. straw bale barrier) should be installed around the fill slope portions of the proposed facility further ensure site containment. In addition, during construction of the facility, BMP's should be installed to protect the integrity of the unnamed intermittent drainage east of 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. Based on the topographical setting of the facility, it is not anticipated that an overland release would impact groundwater. However, if bedrock is not present where the proposed drilling pit is located, the pit should be lined based on the soil type in the area to further ensure groundwater, if present, will not be impacted in the event of a longer term release such as a leaking pit.

Based on the information collected during desktop review, due to high snow pack in the area, the greatest potential for impacts from a release would be to surface water features identified and discussed above. With this high potential to impact surface water, the facility should be designated as being in a sensitive area.



Inspector Signature(s): ME Mumby Date: 12/9/2010

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

Ashlee Lane Date: 12/8/2010

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