

## Sensitive Area Determination Checklist

<b>Williams Production RMT Company</b>		
<b>Person(s) Conducting Field Inspection</b>	Ashlee Lane	02/24/11
	Biologist	
<b>Site Information</b>		
<b>Location:</b>	KP 11-16	<b>Time:</b> 1300
<b>Type of Facility:</b>	Existing Well Pad	
<b>Environmental Conditions</b>	Clear and breezy; roads melting; 6-12" of snow in the area.	
<b>Temperature (°F)</b>	30°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 is one USGS identified unnamed intermittent drainage.

If yes, describe location relative to facility: The USGS identified unnamed ephemeral drainage is located 541 feet north, northwest of the well pad.

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. Flow off of the well pad would likely be to the north; however, the access road separates the facility from the unnamed ephemeral drainage.

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?

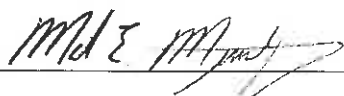
☐ High      ☒ Low

# **Additional Comments:**

As stated in the surface water section of this sensitive area determination, there is one USGS identified unnamed intermittent drainage located 541 feet north, northwest of the well pad. The facility, as it is currently constructed, limits flow direction of potential release to the northern and western sides of the facility. During the site investigation, no culvert was observed which would allow fluids to drain under the access road and potentially reach the unnamed intermittent drainage. The access road is situated at an elevation higher than the undisturbed ground surface. This would divert the flow of a potential release to the west away from the above noted drainage. Therefore, it is not anticipated that an overland release would reach this drainage. The drainage itself has a fairly well defined channel on the steeper portion of the hillside however it becomes less defined at the bottom and exhibits more ephemeral characteristics indicating it does not flow a majority of the time. To ensure there is no culvert under the access road, the north side of the access road should be re-visited when snow melt is complete to verify this. Best Management Practices (BMPs) are currently installed in the form of a perimeter berm on the northern and western edges of the facility. A diversion ditch has also been installed along the bottom of the fill slopes along northern and western sides to further 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 facility resides in a grass field on top of Jolly Mesa. There were no indicators during the site investigation which suggested the presence of shallow ground water. However, when the facility is re-drilled; consideration should be given in regards to lining the pit. Although the soil is predominantly clay loam there is a slight possibility, that if the pit leaked, fluids could migrate towards the unnamed intermittent drainage and seep out of the hillside potentially impacting the drainage feature.

Based on the information collected during the site visit and desktop review, the potential to impact surface water features, actual flowing surface water, and groundwater has been deemed low. With consideration given to lining the pit to prevent any potential subsurface migration of fluids, the facility should be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 3/9/2011

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HRL Compliance Solutions, Inc.

 Date: 03/04/2011

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