

## Sensitive Area Determination Checklist

Williams Production RMT Company – Valley		
<b>Person(s) conducting inspection</b>	Ashlee Lane	11/11/2009
<b>Site Information</b>		
Location:	PA 21-7	Time: 11:30
Type of Facility:	Proposed new well pad	
<b>Environmental Conditions</b>		
Temperature (°F)		

### SURFACE WATER

1. Are there any surface water features or SWSAs adjacent to or within ¼ mile of the proposed/new or existing facility?

X Yes                      ☐ No

If yes, list type of surface water feature(s), i.e. rivers, creeks, streams, seeps, springs, wetlands:

Battlement Mesa/Parachute SWSA along the Colorado River.

Hays Gulch

If yes, describe location relative to facility:

The Colorado River is east, southeast of the proposed location, approximately 550 feet from the proposed edge of disturbance.

Hays Gulch is located approximately 300 feet to the north of the proposed edge of disturbance.

2. Could a potential release from the facility reach surface water features?

X 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.

Depending on how the pad is finally constructed; in order for a release to impact any surface water features the release would need to migrate off the pad on the eastern and southern edges of the facility. A release would have to flow across the relatively flat floodplain and then into the river. For further explanation of how surface water features may be potentially impacted refer to the additional comments section of this checklist

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

X High                      ☐ Low

**GROUNDWATER**

1. Will the proposed/new or existing facility have any pits which may contain hydrocarbons and chlorides or other E&P wastes?  
☒ Yes      ☐ No  
If yes, List the pit type(s): Drilling pit if a closed loop system is not utilized. Possibly an emergency flare 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 5(a) of this section.*)  
☒ No (*If no, follow instructions provided in 5(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.
    - (iii) Drill a soil boring to determine depth to groundwater or
    - (iv) Model hydro geologic conditions to determine if the potential to impact groundwater is high or low.
7. Is the potential to impact ground water from the facility in the event of a release high or low?  
☒ High      ☐ Low

**Additional Comments:**

The above mentioned proposed facility lies within the Parachute/Battlement Mesa SWSA. The water intakes for the town of Parachute are less than ¼ mile from the proposed facility. In addition portions of the proposed facility lie within or are adjacent to the 100 year flood plain of the Colorado River both of which would designate the facility (pad) as being in a sensitive area.

If a potential release were to migrate off the facility; groundwater would most likely be directly affected by the release and any impacts to surface water features (e.g. the Colorado River) would be the result of groundwater discharge into the river. Based on the topography of the area groundwater is most likely shallow (< 20 feet) and conductivities of the soils along the river and in the 100 year floodplain are very high which would allow for fairly fast migration of any impacted groundwater to reach the Colorado River. Care should be taken when constructing the pad to ensure adequate Best Management Practices (BMPs) are in place along the edges of the proposed facility to prevent any migration of fluids of the location in the event of a release. Any pits that are constructed should probably be lined as well.

Inspector(s) Signature(s):

M.E. Murphy

Date: 11/25/2009

Ashlee Kane

Date: 11/11/2009