

## Sensitive Area Determination Checklist

Williams Production RMT Company – Valley		
Person(s) conducting inspection	Ashlee Lane	4/16/2010
Site Information		
Location:	SG 43-27	Time: 12:00
Type of Facility:	Existing Well Pad	
Environmental Conditions	Windy, cloudy with snow flurries, soils are damp	
Temperature (°F)	~35	

Has the proposed, new or existing location been designated as a sensitive area?

X 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?

X Yes      ☐ No

If yes, list type of surface water feature(s), i.e. rivers, creeks, streams, seeps, springs, wetlands: One unnamed ephemeral drainage and the Colorado River

If yes, describe location relative to facility: the Colorado River is located approximately 500 feet to the west of the existing facility. The unnamed ephemeral drainage is located approximately 500 feet to the northeast of the existing facility

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. If a potential release was to migrate off the western edge of the facility. If potential release were to migrate off the pad along the access road then encountering any bar ditches that may be present. Flow along the bar ditches to a point where it connects to an existing road which runs downhill towards the Colorado River.

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 will contain hydrocarbons and chlorides or other E&P wastes?

X Yes            ☐ No

If yes, List the pit type(s): Cuttings Trench, Emergency Flare Pit.

2. Is the site of the proposed facility underlain by an unconfined aquifer or recharge zone?

X Yes            ☐ No

3. Is the hydraulic conductivity of the underlying soil or geologic material  $\leq 1.0 \times 10^{-7}$  cm/sec?

☐ Yes            X 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            X No

5. Is the proposed facility located within a 100 year floodplain?

X Yes (*Sensitive Area*)            ☐ No (*If no, proceed to question #6.*)

6. Is the depth to groundwater known?

X 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?

X Yes            ☐ No

If yes, explain: The greatest potential for impacts to groundwater would be if a potential release were to migrate off the western edge of the pad or down the access road. See further explanation below.

- (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?

X High

☐ Low

**Additional Comments:**

The existing facility lies within 500 feet of flowing surface water (Colorado River) and the unnamed ephemeral drainage. According to the COGCC this would place the facility within a sensitive area. A potential release could impact the Colorado River if it were to migrate of the western edge of the facility or down the access road bar ditches. The unnamed ephemeral drainage would not be impacted by a potential release from the facility based on its topographical locations.

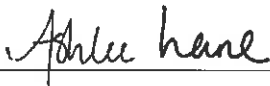
A small portion of the expanded facility will lie in the 100 year floodplain of the Colorado River with the remainder of the facility adjacent to the 100 year floodplain. Groundwater could be assumed to be shallow within the 100 year floodplain (less than 20 feet) therefore groundwater could be impacted if a potential release were to migrate into the 100 year floodplain. Impacts to the Colorado River would most likely occur from groundwater discharge into the river rather than direct flow into the river itself.

Groundwater may also be impacted from any potential leakage of fluids form the cuttings trench as well. The pad is approximately 20 feet above the Colorado River so it could be assumed groundwater would be at this depth as well. Therefore consideration should be taken in regards to lining the pit, especially if groundwater is encountered, even though it will only contain cuttings.

Adequate BMPs should be implemented to prevent any migration of fluids off the pad in the event of a potential release. Special attention should be given to the western edge of the pad as well as the access road.

Due to the close proximity of the Colorado River and 100 year floodplain, and the potential for shallow groundwater the facility should be designated as being in a sensitive area.

Inspector Signature(s):  Date: 4/21/2010

 Date: 4/21/2010