

Sensitive Area Determination Checklist

Williams Production RMT Company – Valley		
Person(s) conducting inspection	Ashlee Lane	05/03/10
Site Information		
Location:	KP 13-17	Time: 1100
Type of Facility:	Proposed Well Pad	
Environmental Conditions	Clear and calm; soils damp from weekend precipitation events.	
Temperature (°F)	50s °F	

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 two unnamed intermittent drainages associated with the Silt Surface Water Supply Area 317B Buffer Zone.

If yes, describe location relative to facility: One of the intermittent drainages is located 551 feet north of the proposed facility. The other unnamed intermittent drainage is located approximately 625 feet to the south of 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. The proposed facility will be constructed on a ridgeline above the both unnamed intermittent drainages. A potential release, if it were to migrate off the facility, would flow down the steep hillsides on the northern and southern edges of the proposed facility.

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 (Cuttings Trench), 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:

As noted in the surface water section, both unnamed intermittent drainages to the north and south of the proposed facility are located within the Town of Silt's Surface Water Supply Area (SWSA). The north portion of the proposed facility lies within the COGCC 317B intermediate buffer zone with the remainder of the facility residing in the external buffer zone.

Due to the steepness of the hillsides on the northern and southern edges of the proposed facility; the potential for a release to impact the unnamed intermittent drainages is high. Therefore it will be imperative that adequate best management practices (BMPs) be installed around the perimeter of the well pad to ensure site containment. In addition consideration should be given to installing a diversion ditch around the entire facility to further ensure site containment if a potential release were to migrate off the facility.

The intermittent drainage to the north had live water flowing during the site visit. There were also hydrophytic plants growing in the drainage as well indicating the presence of water year round or most of the year. The intermittent drainage to the south of the proposed facility exhibits more ephemeral characteristics but eventually connects to the northern intermittent drainage approximately $\frac{3}{4}$ of a mile to the west.

Being that the proposed well pad will be constructed on top of a hill, 551 feet above the drainages, it can be assumed that the depth to groundwater, if present, will be at a sufficient depth where it would not be impacted from a release on the proposed facility. The closest permitted water well is located approximately 4,341 feet to the northwest, is at a lower elevation than the proposed facility and has a depth to water of 61 feet. However, in order to ensure that groundwater is not impacted by the facility consideration should be given to lining the cuttings trench.

The proposed facility, based on its fairly close proximity to two intermittent drainages; both of which are in the town of Silt 317B area, should be considered as being in a sensitive area.

Inspector Signature(s):  Date: 7/27/2010

 Date: 5/05/2010