Sensitive Area Determination Checklist

Williams Production RMT Company – Valley		
Person(s) conducting inspection	Ashlee Lane	7/30/10
Site Information		
Location:	MV 23-27	Time: 1400
Type of Facility:	Existing Well Pad	
Environmental Conditions	Clear and calm; humid	
Temperature (°F)	95°	

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: Wheeler Gulch, a perennial stream, and an unnamed ephemeral drainage.

   If yes, describe location relative to facility: Wheeler Gulch has been identified 154 feet to the east of the facility and the unnamed ephemeral drainage is located approximately 20 feet from the western edge of the 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 east side towards Wheeler gulch. There would also be a potential for a release to migrate south down the access road and slope to the southwest and enter Wheeler Gulch, and if a potential release were to migrate of the southwestern edge of the facility toward 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 (Cuttings Trench)

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 $\leq 1.0x10^{-7}$ 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.

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 identified during the site investigation, Wheeler Gulch is approximately 154 feet east of the existing facility. The facility currently is has two levels. The level consists only of the well heads. There are not Best Management Practices (BMPs) installed on this top pad to contain a potential release, and it is recommended that BMPs be installed before construction and/or drilling commence. The lower level contains all of the production and storage equipment and is closer proximity to Wheeler Gulch than the top level. A release from the lower pad, if not contained, could migrate to the east down the fill slope and enter Wheeler Gulch. Due to the close proximity of Wheeler Gulch to the existing well pad, the potential to impact surface water has been deemed high. Adequate BMPs should be installed in the form of containment berms and straw bale barriers around the northern, southern and eastern parameters during the life of the well pad to maintain the site containment integrity.

An unnamed ephemeral drainage runs roughly 20 feet west of the well pad. Signs of flow were evident. This drainage should be protected during construction as well for it leads to a culvert which leads directly to Wheeler Gulch. This drainage is located on the uphill side of the well pad but swings below the well pad near the point of intersection between Allen Point road and the MV 23-27 access road. If a release were to migrate off the facility on the southwestern corner this drainage could potentially be impacted and lead directly into Wheeler Gulch.

Due to the close proximity of Wheeler Gulch, a perennial stream, the potential for ground water impacts are high as well if a release were to migrate off the east side of the facility. Cottonwoods, Willows, Cat tails and other riparian flora were identified within 100-150 feet of this well pad to the east. The nearest water well has been identified 6,894 feet to the south west with a known depth of sixteen (16) feet. It is possible that there is a potential to impact ground water; therefore, the site investigation has identified the potential to impact ground water as high. Consideration should be taken into the possibility of lining the pit due to the pads close proximity to wheeler Gulch and the possibility of shallow groundwater.

It should be noted that Wheeler Gulch has a spill prevention system that has been installed to aid in mitigating any potential releases to live water. All personnel working on the proposed facility should know where the spill prevention devises are located and trained in the operation of these devises in the event of a potential release.

Due to the close proximity of Wheeler Gulch, the sensitive area determination site investigation has identified this well pad as being in a sensitive area.

Inspector Signature(s): _____ Date: 08-03-2010

_____ Date: 08/02/2010