Sensitive Area Determination Checklist

Williams Production RMT Company			
Person(s) Conducting Field Inspection	Ashlee Lane *Biologist*		9/17/10
Site Information			
Location:	RWF 22-14		Time: 1500
Type of Facility:	Existing Well Pad		
Environmental Conditions	Clear and calm.		
Temperature (°F)	90°		

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: Two unnamed ephemeral drainages both tributary to the Colorado River.

   If yes, describe location relative to facility: One unnamed ephemeral drainage is located 488 feet to the west and the other ephemeral drainage is located 250 feet to the northeast of the existing 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. If a release were to migrate off the northeastern, southwestern and southeastern edges of the facility, flow would be towards the unnamed ephemeral drainages.

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 both of the unnamed ephemeral drainages lie within 500 feet of the existing facility. By COGCC decision this would place the facility in a sensitive area. However the facility, as it is currently constructed, would not impact the drainage to the southwest due to the fact the southwestern edge of the facility is the cut slope portion of the location. The greatest potential for surface water impacts would be to the unnamed ephemeral drainage northeast of the facility. If a release were to migrate off the facility on the northeastern and southeastern edges of the facility, it would run down the hillside to the southeast towards the unnamed ephemeral drainage east of the facility. Flow would be impeded to some degree by the vegetative cover and to a greater degree by the moderate to high infiltration rates of the underlying soil. It is recommended, when the pad is expanded, that Best Management Practices (BMPs) be installed around the southeastern and northeastern edges of the facility boundaries in the form of a perimeter containment berm and diversion ditch. It would also be recommended that some separation between the hillside and the southwestern edge of the facility be left during facility expansion to ensure that a release could not migrate off the southwestern edge of the facility and impact the ephemeral drainage to the southwest. With construction of the above mentioned BMPs, the relatively thick vegetative cover, and the moderate to high infiltration rates of the underlying soil, the potential to impact the drainage to the northeast and east of the facility would be deemed low.

The State Engineers office and USGS records were reviewed and no records were revealed that would provide additional information pertaining to the depth to groundwater. The vegetative cover in the immediate vicinity of the facility, sage brush and pinion juniper woodland does not suggest the presence of shallow groundwater. In addition, the topographical setting of the facility (flat top mesa) would not suggest the presence of shallow groundwater as well.

Based on the information collected during the site investigation and desktop review, the potential to impact both surface water and groundwater would be low. Based on these conditions the facility should be designated as being in a non-sensitive area.

Inspector Signature(s): _____ Date: 9/21/2010

Mark E. Mumby, *Project Manager/RPG*
HRL Compliance Solutions, Inc.

_____ Date: 9/20/2010

Ashlee Lane, *Biologist*
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