

Sensitive Area Determination Checklist

Williams Production RMT Company		
Person(s) Conducting Field Inspection	Ashlee Lane	03/18/11
	Biologist	
Site Information		
Location:	GV 84-1	Time: 1030
Type of Facility:	Existing Well Pad	
Environmental Conditions	Partly cloudy, foggy, cold	
Temperature (°F)	40°	

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 USGS identified intermittent drainages one of which is tributary to Cottonwood Creek

If yes, describe location relative to facility: The first USGS identified drainage is located 426 feet northeast and the second USGS identified intermittent drainage, tributary to Cottonwood Creek, is located 764 feet south-southwest 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.

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, there are two USGS identified drainages within one quarter mile of the existing facility. The first unnamed drainage is located 426 feet northeast of the well facility. By COGCC decision this would classify the facility as being in a sensitive area. However, the site visit revealed evidence that indicates this drainage is no longer active in the immediate vicinity of the facility. The former land surface is now utilized as in pasture land and there is no physical evidence of the former channel due to modifications of the land surface. There are some former remnants of the channel at the edge of the mesa where it flowed down the hillside prior to the land surface being altered. The remnant channel indicates that no water has flowed in it for some time. The channel is no longer defined and it has a heavily vegetated bottom including several woody species. It is not anticipated that the second unnamed intermittent drainage southwest of the facility would be impacted by a potential release. The facility, as it is currently constructed, is separated from this drainage by a slight rise in the topography just to the southwest. This would tend to direct flow from a potential release to the northwest away from the drainage. Best Management Practices (BMPs) are currently installed in the form of an earthen perimeter berm on the southwestern, northwestern and northeastern edges of the facility as well as a diversion ditch along the fill slopes of the facility on the northwestern and northeastern sides. These BMPs should be monitored and maintained to ensure site containment in the event of a release.

The State Engineer's Office and USGS records were reviewed and no records were revealed that would provide additional information pertaining to the depth to groundwater in the immediate vicinity of the existing facility. The vegetative cover (sage brush flats and Piñon-juniper woodland) does not indicate the presence of shallow groundwater. The nearest permitted water well is 2,024 feet southwest of the location at an elevation approximately 321 feet lower than that of the existing facility. It has a depth to groundwater of 155 feet.

Based on the information collected during the site investigation and desk top review, the potential to impact both surface water features and groundwater has been deemed to be low. Therefore the facility should be designated as being in a non-sensitive area.

Inspector Signature(s): Mark E. Mumby Date: 04/18/2011

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

Ashlee Lane Date: 03/22/2011

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