

Sensitive Area Determination Checklist

WPX Energy Rocky Mountain, LLC (WPX)		
Person(s) Conducting Field Inspection	Finn Whiting Geologist	08/12/2013
Site Information		
Location:	RMV 205-20	Time: 10:30
Type of Facility:	Existing Well Pad Expansion	
Environmental Conditions	Sunny, Dry Ground Conditions	
Temperature (°F)	71°	

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: One (1) unnamed USGS identified intermittent drainage.

If yes, describe location relative to facility: The USGS identified intermittent drainage is located 354 feet to the northeast 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.

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: cuttings will be managed on the surface
 If yes, List the pit type(s):

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.

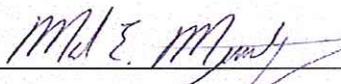
7. Is the potential to impact ground water from the facility in the event of a release high or low?
 High Low

Additional Comments:

As stated in the surface water section of this sensitive area determination, there is one (1) unnamed USGS identified intermittent drainage located 354 feet to the northeast of the proposed facility expansion. The facility, as it proposed to be expanded, limits the direction of a potential release to the southern side. A potential release, if it were to migrate off the facility, would tend to flow to the southeast towards the existing Rulison Evap Facility. Based on the topographical setting of the existing/proposed facility expansion it is not anticipated a potential release would impact the USGS identified drainage located 354 to the northeast as the cut slope side of the pad would prevent a potential release from reaching this drainage feature. In addition, any flow off the pad would be to the southeast parallel to the drainage. During facility expansion, it is recommended that Best Management Practices (BMPs) be installed in the form of an earthen perimeter berm along the graded edge of the southern and a small portion of the eastern and western fill slope sides. In addition, a diversion ditch should be constructed along the toe of the above mentioned fill slope sides. All BMPs should be monitored and maintained to ensure site containment in the vent of a potential release.

The State Engineer's Office and USGS records were reviewed and it was revealed that there is one permitted monitoring well within the ¼ mile buffer zone. The well is located 985 feet south of the proposed facility expansion. The permitted well indicates a depth to water of 57 feet. The vegetative cover in the immediate vicinity of the proposed facility expansion, typical of salt desert scrub dominated by bunch grasses, juniper, and sage, does not suggest the presence of groundwater at a depth less than that noted above. Therefore, It could be assumed that the depth to groundwater in the immediate vicinity of the proposed facility expansion would be at a depth of approximately 55 feet or greater.

Based on the information collected in the site investigation and desk top review, the potential to impact surface water features, actual flowing surface water, and groundwater has been deemed low based on the topographical setting of the existing facility. With the low potential for impacts to both surface and groundwater the facility can be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 10/26/2013

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

 Date: 8/12/2013

Finn Whiting, *Geologist*
HRL Compliance Solutions, Inc.