

Sensitive Area Determination Checklist

WPX Energy Rocky Mountain, LLC (WPX)		
Person(s) Conducting Field Inspection	None Conducted	
Site Information		
Location:	SG 31-32	Time:
Type of Facility:	Existing Well Pad w/Proposed Expansion	
Environmental Conditions		
Temperature (°F)		

Has the proposed, new or existing location been designated as a sensitive area?

☒ Yes ☐ No

SURFACE WATER

- 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: Smith Gulch, a USGS identified intermittent drainage; and two (2) USGS identified unnamed intermittent drainages.

If yes, describe location relative to facility: Smith Gulch is located 406 feet to the west, one unnamed intermittent drainage is located approximately 847 feet to the east, and the second unnamed intermittent drainage is located approximately 1,790 to the west of the existing facility

- 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 facility, would flow to the west directly towards Smith Gulch.

- 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): 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 $\leq 1.0 \times 10^{-7}$ 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.

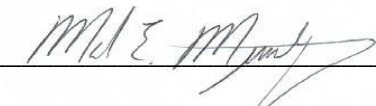
7. Is the potential to impact ground water from the facility in the event of a release high or low?
☐ High ☒ Low

Additional Comments:

As stated in the surface water section of this sensitive area determination, there are three (3) USGS identified intermittent drainages located within a quarter (1/4) mile of the existing facility. The facility as it is currently constructed and proposed to be expanded, limits the direction of a potential release to the fill slope side on the northern half of the western side and the southwestern corner. If a potential release were to migrate off the facility on the western side flow would migrate to the west directly towards Smith Gulch. If a potential release were to migrate off the southwestern corner, flow would migrate down the access road approximately 400 feet to a point where it would then migrate down the hillside to the west directly towards Smith Gulch. It is not anticipated that the unnamed intermittent drainages to the east and west would be impacted by a potential release as they are separated from the existing facility by natural topographic highs (ridgelines). During facility expansion, it is recommended that Best Management Practices (BMPs) be installed along all fill slope sides of the facility. The BMPs should be in the form of an earthen perimeter berm along the graded edge of all fill slope sides. If feasible, a diversion ditch should be constructed along the toe of the fill slope sides as well. In addition, a raised pad entrance would mitigate flow off the southwestern corner. All existing and newly installed BMPs should be monitored and maintained to ensure site containment in the event of a potential 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. The closest permitted water well is located 4,955 feet to the southeast of the existing facility. The depth to groundwater is noted at six (6) feet. It is completed in the fluvial deposits (river gravels) of the Colorado River and would not be representative of the geologic conditions in the immediate vicinity of the existing facility. The facility itself is constructed in bedrock (Wasatch Fm.) and is most likely devoid of groundwater. In addition the vegetative cover in the area consists of Greasewood and Sage Brush and does not suggest the presence of shallow groundwater. Based on the topographic setting of the existing facility it could be assumed that groundwater, if present, would be in excess of 100 feet.

Based on the information collected during this desktop review, the greatest potential for impacts would be to the Smith Gulch located to the west of the existing facility. As noted above; if a potential release were to migrate off the facility on the above mentioned side/corner flow would migrate towards and directly into Smith Gulch. Flow in Smith Gulch is unimpeded to the Colorado River during periods of intermittent flow. Therefore the potential for impacts to the Colorado River would be deemed to be high. In addition, the close proximity of Smith Gulch to the facility is less than 500 feet which by COGCC rule would classify it as being in a sensitive area. With the high potential for impacts to Smith Gulch and the Colorado River during periods of intermittent flow and by COGCC rule, the facility should be classified as being in a sensitive area.

Inspector Signature(s):  Date: 6/25/2014

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