

Sensitive Area Determination Checklist

TEP Rocky Mountain, LLC		
Person(s) Conducting Field Inspection	None conducted	
Site Information		
Location:	GM 41-8 Drilling Pit	Time:
Type of Facility:	Existing Well Pad with Proposed Expansion	
Environmental Conditions	N/A	
Temperature (°F)	N/A	

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: Riley Gulch, a USGS intermittent drainage.

If yes, describe location relative to facility: Riley Gulch is located 445 feet to the north northwest of the proposed facility expansion.

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 potential release were to migrate off the northern or northwestern sides flow would be to the north towards Riley Gulch.

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 on the southeastern side of the facility

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/otologic 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 portion of this sensitive area determination; there is one (1) USGS identified intermittent drainage (Riley Gulch) located within a ¼ mile of the existing facility. The facility, as it is currently proposed to be expanded, limits the direction of a potential release to the northern and northeastern sides. If a potential release were to migrate off the facility on these sides, flow would be to the north down a fairly steep hillside. During facility expansion, Best Management Practices (BMP's) should be installed in the form of an earthen perimeter berm on all the fill slope sides. If feasible, a diversion ditch should be constructed along the toe of any fill slope sides as well. A raised pad entrance should also be considered to prevent any fluid migration down the access road on the eastern side. All existing and newly constructed BMPs should be monitored and maintained to ensure total site containment in the event of a potential release.

The State Engineer's Office and USGS records were reviewed and no records were revealed which would provide additional information pertaining to the depth to groundwater. The closest permitted water well is located 9,602 feet (1.8 miles) to the northeast and would not provide accurate information on the depth to groundwater. Based on aerial photography review, the vegetative cover in the immediate vicinity of the existing facility consists of primarily bunch grasses, sage, and Juniper which does not indicate the presence of shallow groundwater. There was no visual evidence of any springs or seeps. In addition, the existing facility is constructed on fairly steep hillside where the depth to bedrock (Wasatch Formation) is very shallow. Therefore, based on the topographic setting of the existing facility it could be assumed that the depth to groundwater, if present, would be in excess of 100 feet if not greater.

Based on the information collected during this desk top review, the potential to impact groundwater would be deemed as low. The greatest potential for impacts would be to Riley Gulch located to the north of the existing facility, As noted above; if a potential release were to migrate off the facility flow would be to the north towards Riley Gulch. However, a potential release would have to be fairly large in order to reach Riley Gulch as the existing topography, vegetative cover, and existing access road to the north of the facility would tend to mitigate flow and prevent fluids from reaching it. In addition Riley Gulch, in the immediate vicinity of the existing facility, exhibits more ephemeral characteristics such as a poorly defined channel and vegetated bottom indicating this section does not flow a majority of the time. Therefore, if a potential release were large enough to reach and impact Riley Gulch, it is not anticipated it would migrate any great distance due to the vegetative cover which again would tend to mitigate flow and allow any fluids to infiltrate into the relatively porous channel bottom soils.

With the low potential for impacts to groundwater, surface water features (Riley Gulch), and actual flowing surface (Parachute Creek) being deemed as low, the facility can be designated as being in a non-sensitive area.



Inspector Signature(s):  Date: 6/12/2018

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