

Sensitive Area Determination Checklist

TEP Rocky Mountain, LLC		
Person(s) Conducting Field Inspection	None Conducted	
Site Information		
Location:	RG 41-18-297 Drill Pad	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: One (1) USGS identified intermittent drainage and two unnamed ephemeral drainages.

If yes, describe location relative to facility: The one (1) USGS identified intermittent drainage is located 554 feet to the west northwest, both ephemeral drainages are located approximately 460 feet to the southeast and northeast 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. If a potential release were to migrate off the existing facility on the northwestern side flow would be to the west northwest down the hillside towards the unnamed intermittent drainage.

- 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 northeastern corner of the existing 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 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 portion of this sensitive area determination, there is one (1) unnamed USGS identified intermittent drainage and two (2) unnamed ephemeral drainages located within 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 northwestern side. If a potential release were to migrate off the facility on the northwestern side, flow would be to the northwest out onto the adjacent hillside. The two (2) unnamed ephemeral drainages to the east would not be affected by a potential release as they are separated from the facility by a natural topographic high to the east. During facility expansion, Best Management Practices (BMP's) are currently planned to be installed. These BMP's will include an earthen perimeter berm along the graded edge of the entire facility as well as diversion ditches and sediment traps along the toe of all fill slope sides. Installation of these BMP's will greatly aid in mitigating any fluid migration off the facility. All installed BMP's 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 which would provide any additional information pertaining to the depth to groundwater within a ¼ mile of the proposed facility. The closest permitted water well (permit #68235-F) is located 5,220 feet to the northeast and does provide limited information as to the depth to groundwater in the immediate vicinity of the existing facility. Even though the well to the north is some distance away it is permitted in a similar topographic/geologic setting and has targeted groundwater at depths of greater than 500 feet. Therefore, it could be assumed that groundwater, if present, in the immediate vicinity of the existing facility would be in excess of 500 feet. The vegetative cover in the immediate vicinity of the existing facility is dominated by sage, juniper, and bunch grasses typical of the upland xeric environment. No seeps or springs were identified during the desk top review which would suggest the presence of shallow groundwater. In addition, the existing facility is located on top of a ridgeline and is constructed in bedrock which is most likely devoid of any groundwater.

Based on the information collected during the desktop review, the greatest potential for impacts would be to the unnamed intermittent drainage located to the northwest of the existing facility. As noted above; if a potential release were large enough to breach the constructed BMP's, flow would be to the northwest towards the unnamed intermittent drainage. If flow from a potential release were to reach the unnamed intermittent drainage it is not anticipated that it would migrate any great distance. This would be because the unnamed intermittent drainage contains a fair amount of woody debris and vegetation in the channel bottom which would tend to hinder flow. In addition, the high infiltration rates of the channel bottom soils would prevent a potential release from migrating over a large distance as well. The drainage feature also becomes very poorly defined and non-existent in areas to the north of the existing facility. Therefore, the potential for impacts to actual flowing surface water would be deemed to be very low. With the

potential for impacts to groundwater, surface water features, and actual flowing surface water being deemed as low, the existing facility can be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 3/20/2020

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