Sensitive Area Determination Checklist

TEP Rocky Mountain, LLC			
Person(s) Conducting Field Inspection	None Conducted		
Site Information			
Location:	GV 33-22 Frac Pad	Time:	
Type of Facility:	Existing Well pad w/ 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: One (1) unnamed USGS identified intermittent drainage.

   If yes, describe location relative to facility: The USGS identified intermittent drainage as noted on USGS topo maps is located 302 feet to the northeast 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. Refer to the write up in the additional comments section of the SAD checklist.

3. Is the potential to impact surface water from a facility release high or low?
   ☒ Moderate to actual surface water features ☒ Low to actual flowing surface water

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):

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 ≤ $1.0x10^{-7}$ 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

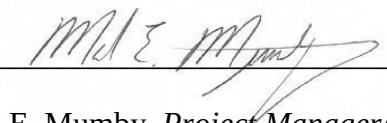
Additional Comments:

As stated in the surface water portion of this sensitive area determination, there is one (1) unnamed USGS identified intermittent drainage located within a ¼ mile of the existing facility. The facility, as it is currently proposed to be expanded, will limit the direction of a potential release to the southeastern side. If a potential release were to migrate off the facility on this side, flow would be to the southeast into a low lying area adjacent to the edge of the location. During facility expansion, Best Management Practices (BMP's) should be installed in the form of an earthen perimeter berm on all fill slope sides. With the immediate area around the facility being relatively flat, a diversion ditch should be constructed along the fill slope sides as well to ensure total site containment in the event of a potential release. All BMPs should be monitored and maintained to ensure containment of a potential release on site.

The State Engineers Office and USGS records were reviewed and there are no permitted water wells in the immediate vicinity of the proposed facility. The closest permitted water well is located 2,172 feet to the south and does provide limited information relating to the depth to groundwater. Based on aerial photography review, the vegetation in the immediate vicinity of the proposed facility is dominated by sage, juniper, and bunch grasses and does not suggest the presence of any shallow groundwater. There was also no visual evidence of any springs or seeps. Based on the topographic setting of the existing facility, it is at slightly higher elevation than the nearest permitted water well and in a similar topographic setting. Therefore, it could be assumed that the depth to groundwater, if present, would be in excess of 80 feet.

Based on the information collected during this desktop review, the potential to impact groundwater has been deemed as low. As noted on the topographic maps the unnamed intermittent drainage at one time flowed through what is now the existing facility. Due to the man-made modifications to the land surface, this drainage feature no longer exists. It has been redirected in a new channel feature which is located 306 feet to the southwest of the existing facility. As noted above; if a potential release were to migrate off the southeastern side it would most likely be contained in the low lying area adjacent to the location. If a release was large enough to breach the low lying area, flow would be to the southwest where it could enter the unnamed intermittent drainage. If the drainage were impacted flow would be to the southeast under the interstate and out into a flat lying area where it would infiltrate into the underlying soils.

Although the potential to impact actual surface water features would be deemed to be moderate; the potential to impact any flowing surface water would be deemed to be low due to the flat topography south of the interstate. With the low potential for impacts to actual flowing surface water the proposed facility can be designated as being in a non-sensitive area.

Inspector Signature(s):  Date: 2/16/2018

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