Sensitive Area Determination Checklist

TEP Rocky Mountain, LLC			
Person(s) Conducting Field Inspection		Mark Mumby	10-17-2018
Site Information			
Location:	PA 31-26		Time: 15:00 hrs
Type of Facility:	Proposed Well Pad		
Environmental Conditions	Cool, clear, calm winds		
Temperature (°F)	~62		

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 unnamed USGS identified intermittent drainage and two (2) small ephemeral drainages which were identified on the survey plats and verified during the site visit.

   If yes, describe location relative to facility: The unnamed USGS intermittent drainage is located adjacent to the eastern edge of disturbance. One ephemeral drainage feature is located approximately 50 feet from the northern edge of disturbance and the second ephemeral drainage is located under and adjacent to the western and southeastern edges of disturbance.

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 facility, flow would be to the east southeast directly towards and into the unnamed intermittent drainage and the small remaining portion of the second ephemeral drainage.

3. Is the potential to impact surface water from a facility release high or low?
   ☒ High during periods of intermittent flow ☒ Moderate during periods of non-flow.

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 along the northwestern and southwestern sides.

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 $\leq 1.0x10^{-7}$ 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 and two (2) small ephemeral drainages located within a ¼ mile of the proposed facility. The facility, as it is currently proposed, will limit the direction of a potential release to the northeastern and southeastern sides. If a potential release were to migrate off the facility on either of these sides flow would be to the east southeast directly towards and into the unnamed intermittent drainage and a portion of the ephemeral drainage adjacent to the edge of disturbance on the southeastern side. Therefore, during facility construction, Best Management Practices (BMP's) should be installed in the form of an earthen perimeter berm on all fill slope sides (eastern and southeastern sides). If feasible, 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. These should be constructed as noted on the survey plats provided for the proposed facility. All BMPs should be monitored and maintained to ensure containment of a potential release on site.

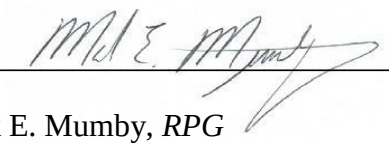
The State Engineers Office and USGS records were reviewed and there are no permitted water wells in the immediate vicinity of the proposed facility. The closest permitted water well is located 3,920 feet to the west and would not provide accurate information on the depth to groundwater. Based on observations made during the site visit and 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 shallow groundwater. There was also no visual evidence of any springs or seeps. In addition, the proposed facility is located on near the bottom of a fairly step hillside where the depth to bedrock (Wasatch Fm.) is most likely quite shallow. Based on the topographic setting of the proposed facility it could be assumed that the depth to groundwater, if present, would be in excess of 50 feet if not greater.

Based on the information collected during the site visit and desktop review, the potential to impact groundwater has been deemed as low. However the potential to impact some of the surface water features noted above would be deemed to be high. It is not anticipated that the small ephemeral drainage to the north of the pad would be impacted by a potential release. Although it will be diverted around the facility on the eastern side, flow could be managed and diverted away from the facility, if needed, at the two sediment basins located on the northeastern side. It is not anticipated that the portion of the small ephemeral drainage which flows towards the proposed facility on the western side would be impacted by a potential release. This remaining portion will be diverted around the facility on the western side and then diverted again south running parallel to the access road.

The greatest potential for impacts would be to the unnamed intermittent drainage and the remaining portion of the small ephemeral drainage feature located adjacent to the northeastern and southeastern edges of disturbance. Although stringent BMP's are slated to be installed; a potential release, if it were to migrate off the facility, could impact these drainage features. If a

potential release were to reach and enter the intermittent drainage during periods of intermittent flow, impacts could potentially reach the Colorado River as the drainage feature has direct hydraulic connection to the river. However, the severity of potential impacts to the Colorado River is not known but could be fairly low due to the distance to the river and the fact the drainage flows into a fairly large catchment basin located to the south just north of I-70. This could potentially contain the release and prevent it from reaching the river in most instances.

With the high potential to impact the unnamed intermittent drainage and potentially the Colorado River during periods of intermittent flow; the proposed facility should be designated as being in a sensitive area.

Inspector Signature(s):  Date: 10/26/2018

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