

TR 32-28-597 Drill Pad

Sensitive Area Determination Checklist



TEP Rocky Mountain, LLC	
Person (s) Conducting Field Inspection	
Name: Dean Goebel	Date: April 19, 2023
Comment: Desktop analysis	
Site Information	
Location Name: TR 32-28-597 Drill Pad	COGCC Location ID: 324040
Type of Facility: Drill Pad	
Environmental Conditions	
Temperature (°F): NA	
Comments	

Sensitive Area: A sensitive area is an area vulnerable to potential significant adverse groundwater impacts, due to factors such as the presence of shallow groundwater or pathways for communication with deeper groundwater; proximity to surface water, including lakes, rivers, perennial or intermittent streams, creeks, irrigation canals, and wetlands. Additionally, areas classified for domestic use by the Water Quality Control Commission, local (water supply) wellhead protection areas, areas within 1/8 mile of a domestic water well, areas within 1/4 mile of a public water supply well, ground water basins designated by the Colorado Ground Water Commission, and surface water supply areas are sensitive areas.

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

Yes No

SURFACE WATER

- Are there any surface water features or Surface Water Supply Areas (SWSAs) adjacent to or within 500 feet of the proposed or existing facility?

Yes No

If yes, list type of surface water feature(s), i.e. rivers, creeks, intermittent or perennial streams, seeps, springs, wetlands:

If yes, describe location relative to 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.

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):.

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) 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:

Potential surface water impacts are deemed low for the sensitive area determination for the proposed drill pad. Surface water bodies (including drainages, wetlands, and springs) are not located within 500 feet of the well pad. The closest unnamed intermittent stream is located 1,106 feet 164°SE and downgradient of the drill pad. Additional intermittent streams identified within the ½-mile site radius are located 1,138 feet 246°SW and 2,137 feet 69°NE from the drill pad. The nearest perennial stream is located 2,491 feet 289°NW from the pad. Getty Springs 14D, 12C and 12B are located 2,285 feet 293°NW, 2,345 feet 54°NE, and 2,640 feet 90°E, respectively from the drill pad. Two potential wetlands within the ½-mile buffer are located 1,993 feet 160°SE and 1,993 feet 230°SW from the drill pad. Surface water pollution

potential for all of these water bodies is limited due to the lack of defined depression-focused flow paths from the pad. The travel distance for overland sheet flow to these water bodies limits the potential for water quality impacts from a potential pad release. Site grading will provide erosion control measures minimizing potential fluid migration off site. Best Management Practices (BMPs) will be installed during site construction which will eliminate preferential pathways for offsite depression flow using earthen berms and diversion ditches. All newly constructed BMPs will be closely monitored and maintained to ensure complete on-site containment of a potential release.

Reviewed State Engineers Office and USGS records indicate there are not any wells located within the ½-mile pad buffer. Depth to shallow groundwater residing in the local flow system is probably greater than 100 feet below the drill pad. Based on NRCS soil properties and qualities for Parachute-Irigul complex and Parachute-Irigul-Rhone association mapped soil units, depth to bedrock is 25 to 60 inches. Saturated hydraulic conductivity (Ksat) for the mapped soil units ranges from less than, to greater than 1.0×10^{-7} cm/sec.

Dominant upland vegetation indicates unsaturated soil conditions without hydric indicators of shallow groundwater conditions. Evidence of springs or seeps, other than the identified springs discussed above, were not detected during site reconnaissance and vegetation assessments conducted for the Biological Survey Report. Vegetation community types include mountain shrublands, sagebrush shrublands, and aspen woodlands. The absence of aquatic vegetation and woody phreatophytes supports the notion that shallow groundwater does not occur in the immediate vicinity of the drill pad. Potential impacts to groundwater resources at the site are deemed to be low based on the site hydrogeology.

Based on the information collected during the desktop review, the potential for impacts to surface water and groundwater is deemed to be low if properly mitigated with control measures implemented when expanding the well pad. It has been determined that this pad location is not within a sensitive area.