## Mike Gardner

**To:** COGCC Field Inspectors
**Subject:** COGCC Rule 1002.f: Stabilize/Protect Cut Slopes

In compliance with 1002.d, this drill pad was located and constructed at the most level location obtainable for its intended / permitted use. COGCC reviewed, approved and permitted this well pad (and design) to be constructed at this specific location. COGCC Rule 1002.d acknowledges that steep / vertical cut slopes and long fill slopes are not always avoidable: "*If not avoidable, deep vertical cuts and long fill slopes shall be constructed to the least percent slope practical*." Such is the case with this location. Due to the location and topographic conditions of this pad, the steep / vertical cut slopes and/or long fill slopes were not avoidable. As can be expected, loose sediment, rocks, and debris may occasionally wash onto the pad surface from the exposed face of the cut slope - especially during intense, localized storm events. However, the amount of sediment, rock, or debris is usually negligible and is confined to the base of the cut slope. If excessive amounts of sediment, rock, or debris are deposited on the pad, TEP will remove these materials to ensure safe and efficient access to facilities, and to maintain continued operations. It is unrealistic to expect that steep or vertical cut slopes will not occasionally shed loose material to the pad surface below. Any materials deposited on the pad surface that interfere with site operations or access will be removed and re-used as needed. Minor rills and erosional features on the cut slope (or fill slope) are inconsequential as long as the materials deposited do not interfere with or threaten site operations, and the minor amounts of sediment transported by these features remain within the permitted boundary of disturbance (i.e., no off-site discharge). Minor erosional rills are not an indication that the pad is "unstable." The Oxford Dictionary defines "unstable" as: "Prone to change, fail, or giving way. Not stable." TEP maintains that the minor erosional rills / features observed on almost any cut slope are not an indicator that the slope or pad is in eminent danger of "failure or giving way." Usually, such rills are minor, surficial features produced from the forces of gravity and running water. Nothing more. TEP has a vested interest to ensure that our locations are sufficiently stable and protected to safeguard our operations and investment at that location. TEP is diligent in the inspection and maintenance of our locations, and we are fully prepared to mitigate any natural hazards that may impede or jeopardize our ability to conduct operations at our locations.

In compliance with Rule 1002.f.(2), TEP has implemented BMPs at this location " … to control stormwater runoff in a manner that minimizes erosion, the transport of sediment off-site, and site degradation." Rule 1002.f.(2) is very clear in its language that requires the operator to *control* storm water runoff and to *minimize* erosion – ***not eliminate it***. TEP has implemented BMPs that are controlling and managing the flow of storm water runoff at this location and erosion is being minimized. TEP believes that the cut-slope at this location is stable, and the BMPs implemented at this location comply with Rule 1002.f.(2) and are designed to minimize (not eliminate) erosion, the transport of sediment offsite, and site degradation.

Sites with steep cut and/or fill slopes are dynamic, changing landscapes and the associated BMPs will constantly need to be maintained. TEP recognizes the importance of maintaining BMPs, and performs this duty by conducting routine storm water inspections which generate work orders for deficient conditions. The required maintenance work as identified by the orders are then performed as needed in an on-going, continuous process of inspection and maintenance. BMPs shall be maintained at this location until site operations are completed, the related equipment and facilities are properly abandoned, and final reclamation of the site is achieved pursuant to Rule 1004.

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