

RMV 32-21: Condition of access road and pad surface. Pad is sufficiently stable for routine oil and gas operations. When ruts occur, they are routinely bladed out and rock (gravel) is added to the pad surface and access roads as needed. Driving a vehicle on a soft pad is unavoidable and it will leave minor tracks. However, minor tracking on the pad surface does not mean that the pad was improperly constructed, nor does it mean that the pad is unstable. TEP implements a robust storm water management and BMP repair program. We inspect, repair, and maintain our BMPs according to the schedule and frequency that is required by the rules, or as may be required by weather conditions.



Before



After



RMV 32-21: Pad has a good gravel surface. Note substantial earthen berm surrounds perimeter of the pad which minimizes amount of off-site sediment migration. Perimeter berms are an example of good engineering practices that effectively stabilize and protect the well location. An extensive vegetative buffer also exists beyond the berms which filter, trap, and slow the migration of any sediment from the pad.



After



Pre-existing Berms



RMV 32-21: The pad has a good gravel surface. This pad and access road have been safe and functional for many years despite the claims of the inspector. TEP continuously removes any sediment that is washed onto our pads and roads from off-site areas, and we inspect and repair our BMPs as needed to maintain access to our locations.



Before



After



RMV 32-21: Sediment trap on east end of pad has been maintained / repaired after heavy spring runoff conditions. Rilling has been repaired. Note: BMPs are designed to minimize and control runoff / sediment; they are not intended to prevent and eliminate sediment.



Before



After



RMV 32-21: Rock Check Dams and Rock Outlets Added to Sediment Basin in Southeast Corner of Location.



After



After



RMV 31-17: Good rock armoring of bar ditches along access road. This is an effective BMP that helps to minimize and control storm water runoff and sediment. The bar ditches and rock construction are evidence of good engineering practices and proper road construction techniques.





Low Water Crossing Above the RMV 32-21 Pad: Rills and gully erosion have been repaired. Note that the low water crossing is approximately 7 feet higher in elevation than the RMV 32-21 well pad. The water crossing is located outside the actual well pad boundary. It is critical to our operations to maintain these crossings in a safe and functional condition.



Before



After



Low Water Crossing Above the RMV 32-21 Well Pad: Rill erosion along edges of crossing has been repaired. Rock and sediment transported from upstream by snow melt and storm events have been removed and graded to allow for the safe passage of vehicles. This crossing has been used in this manner without any safety incidents or environmental impacts for at least 25 years. The U.S. Army Corps of Engineers has recently reviewed this specific crossing and has determined that the maintenance activities that periodically occur at this location do not need a permit, and that there is no adverse impact to water quality.



Before



After