

Waste Management Plan

Red Rocks Oil and Gas Development Plan Amendment 2

This Waste Management Plan has been prepared by Desert Eagle Operating, LLC (DEO) for Red Rocks Oil and Gas Development Plan (OGDP) – Amendment 2 in Las Animas County, Colorado. Amendment 2 consists of five proposed conventional vertical helium gas wells. The Plan addresses the Colorado Energy & Carbon Management Commission (ECMC) requirement at Rule 304.c.(11) to prepare a Waste Management Plan, ECMC's Waste Management Plan Guidance (September 15, 2021), and the waste management criteria in Rule 905.a.(4). The five proposed locations are listed in Table 1.

Table 1. Locations

Location	Qtr Qtr	Section/Township/Range	Lat/Lon
Red Rocks 1-09	SE $\frac{1}{4}$ NE $\frac{1}{4}$	Section 1, T30S R55W	37.460372, -103.517227
Red Rocks 1-15	NW $\frac{1}{4}$ NE $\frac{1}{4}$	Section 1, T30S R55W	37.465009, -103.522500
Red Rocks 35-01	SE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 35, T29S R55W	37.467959, -103.537764
Red Rocks 35-08A	NE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 35, T29S R55W	37.473477, -103.536136
Red Rocks 35-10	SW $\frac{1}{4}$ NE $\frac{1}{4}$	Section 35, T29S R55W	37.475925, -103.541431

The wells will be drilled with air using a water well-sized drill rig. There will be no drilling mud, hydraulic fracturing, stimulation, or flowback. The wells are not expected to produce hydrocarbons or water, based on results from wells already drilled by DEO.

1.0 Waste Streams

DEO will develop one shallow, conventional vertical well at each location. Wells will be approximately 1,900 feet deep. The wells will be drilled with air. Freshwater will be used for cementing and dust suppression. Drilling mud will not be used.

Waste streams are listed in Attachment A by operational phase: Drilling, Completion, Pre-production. During Production, there will be no wastes or fluids on location. For each waste stream, Attachment A lists phase, waste type, duration, containment, estimated volume, disposal, and waste classification.

Construction and Interim Reclamation are captured under Pre-production in Attachment A. Construction and Interim Reclamation will generate only general trash, such as food wrappers and seed and mulch packaging. Packaging will be disposed of as domestic waste.

Each location is expected to require 2 days for construction, 5 days for drilling, 5 days for completion, and 10 days for interim reclamation.

Fueling and equipment maintenance will not occur on the locations during production.

2.0 Haul Route, Waste Handling, and Waste Characterization

Haul Routes

The following haul routes will be used to the La Junta and Trinidad, Colorado areas:

La Junta

South on CR 177.9
South on CR 179
East on US 160
North on CO 109 to La Junta

Trinidad

South on CR 177.9
South on CR 179
West on US 160 to Trinidad

Drill Cuttings

Drill cuttings will not be left on location. During well drilling, a steel tank will be placed at grade to receive drill cuttings. It will be located near the drill rig blooey line. Drill cuttings will be moved from the steel tank to a dump truck using a conveyor. The dump truck will transport the drill cuttings for off-site disposal at a facility authorized to accept them.

Fluids

Wells will be drilled with air using air drilling equipment and a compressor. A synthetic liner will be placed under the drill rig to capture incidental leaks or drips.

Approximately 250 bbl of freshwater will be used per well for cementing and dust suppression. Previous wells drilled in this area have not evidenced produced water from the formation.

Cement

Cement will be circulated to the surface for all casing runs. Cement is prepared on site using pallets of bulk bagged cement, freshwater, and a pump truck. An estimated 25 bbl of cement is needed per well. The pumper stops the cement in the casing when it nears the surface to avoid generating excess or waste. There will be no cement returns or excess cement requiring disposal. Unused bagged cement will be removed from the location for use at another site.

Other Wastes

Incidental trash and packaging will be bagged and containerized for offsite disposal as domestic trash. The containers will prevent blowing waste before transport to the disposal facility. The operator will install and use bear-proof dumpsters and trash receptacles for food-related trash at all facilities that generate trash, in accordance with Rule 1202.a.(1) for black bear habitat.

Waste Characterization and Recordkeeping

Wastes generated at this location will be federal E&P exempt. Waste will be characterized using a waste profile, process knowledge, and laboratory analysis as required by the commercial disposal facility. The E&P wastes transported off site will be manifested and signed by the generator and transporter. Records will be maintained at the DEO office in Dallas, Texas. Records will be provided upon request for a minimum of 5 years. Transported waste will include the information listed below.

- The date of the transport
- The identity of the waste generator
- The identity of the waste transporter
- The location of the waste pickup site
- The type and volume of waste
- The name and location of the treatment or disposal site

3.0 Spill Response and Remediation

Previous wells drilled in the area have not produced water or hydrocarbons. The location does not require tanks for produced water or hydrocarbons.

A contingency is in place for a spill involving freshwater. DEO will berm the affected area to prevent runoff from the location.

A contingency is in place for incidental spills of equipment oil, lubricants, hydraulic fluid, or fuel. The well driller will be equipped with a spill kit consisting of absorbents (e.g., socks and bagged absorbent). Spilled material, including potentially contaminated soil, will be loaded into one or more drums for transport off site. Final disposition will be in

accordance with Rule 905.b.(2) and the waste characterization and profile requirements for the licensed third-party disposal facility that will accept the waste. The facility is anticipated to be Twin Enviro Services in Trinidad, Colorado. Depending on waste type, Twin Enviro uses process knowledge or results of RCRA 8 metals and TENORM constituents prior to accepting the waste. Were a spill to occur on site that exceeds the driller's capacity to contain and control contamination, a third-party provider would be engaged for spill response and any necessary reporting under Rule 912 would be provided to COGCC.

4.0 Waste Minimization, Reuse and Recycling

Wells will be drilled with air, which minimizes drilling waste. There will be no hydrocarbon-based waste to reuse or recycle. Salvaged topsoil will be reused on site. It will support interim and final reclamation of the location. Waste streams will not be commingled such that they no longer qualify as solid waste or E&P exempt waste. Unused material will be removed for reuse at another drilling site and will not be stored on the location.

5.0 Best Management Practices

Table 2. Best Management Practices

Best Management Practices	
•	Trash will be kept bagged or covered and will be removed from the location for disposal as domestic solid waste at an approved waste disposal facility.
•	The operator will install and utilize bear-proof dumpsters and trash receptacles for food-related trash at all facilities that generate trash, in accordance with Rule 1202.a.(1) for black bear habitat.
•	Containers will be labeled according to requirements of Rule 605.h.
•	Waste streams will not be commingled such that they no longer qualify as solid waste or E&P exempt waste.
•	Wastes will be stored in containers or on lined containment that are chosen for compatibility and checked for leaks or integrity problems. Examples of containment include but are not limited to lined berms, lined containment, plastic totes, drums, etc.
•	Good housekeeping measures will be implemented in the operating area to ensure safety and environmental health.
•	Unused material will be removed for reuse at another drilling site or returned to the vendor as a product and will not be stored on the location.

Attachment

Attachment A – Table 1. Wastestreams per Well

Attachment A
Table 1. Waste Streams per Well

Phase	Waste Type	Duration	Containment	Estimated Volume	Disposal	Waste Classification
Drilling	Drill cuttings	5 days	Steel tank	48 CY	Trinidad Landfill as non-hydrocarbon drill cuttings	Federal E&P exempt as hazardous waste
Completion	Cement	5 days	Bagged	0 bbl	Unused bagged cement will be removed and reused at another well site. No cement returns or excess cement anticipated.	Federal E&P exempt as hazardous waste
Pre-production	Temporary toilet	Up to 30 days	Rented trailer-mounted portable toilet. Delivered to site by DEO and leveled on location for use.	1 portable toilet	Trailer back to the rental company for cleanout	Domestic sanitary waste
Pre-production	General trash, packaging, non-hazardous wastes	10-year life	Container to avoid blowing trash and bear access	Equivalent to 1 drum/week	Municipal solid waste landfill	Non-hazardous solid waste