Kerr-McGee Oil & Gas Onshore LP

Exploration & Production Waste Management Plan

COGCC Rule 907

This document outlines Kerr-McGee's management of the waste generated during drilling and production operations. Kerr-McGee strives to minimize, reuse or recycle the waste generated as a result of our operations. When disposal is the only option, Kerr-McGee will follow all appropriate rules and regulations to ensure proper management of our waste.

Drilling Mud/Cuttings

Kerr-McGee generally uses closed–loop, fresh water-based bentonitic drilling systems that do not require the use of reserve pits. When using a closed-loop system, the drilling mud is recycled into tanks on location, and when completed, the mud is transferred to the next drilling location for reuse. The drill cuttings are stored in an above–ground, open top tank on location. Periodically during the drilling of the well, the cuttings are transported via 3rd party to either Kerr-McGee's permitted Drilling Fluid Management Facility, a Kerr-McGee owned spreadfield or to a private landowner spreadfield, where the cuttings are spread and incorporated as a beneficial soil amendment . A typical well generates approximately 245-525 cubic yards of drill cuttings over a 4-5 day period. All mud and cuttings transported offsite are properly tracked. The cuttings are incorporated within 10 days, and the appropriate COGCC Table 910-1 sampling is completed to ensure compliance with COGCC rules. In the event the drilling mud/cuttings were to become contaminated (hydrocarbons and/or salt water), the mud and cuttings will be transported to an approved commercial disposal facility. The commercial disposal facilities currently used are:

- Waste Management – Buffalo Ridge Landfill (Keenesburg)
- Waste Management – North Weld County Landfill (Ault)
- Waste Management - CSI Landfill (Bennett)– liquids only
- Denver Regional Landfill

In some cases Kerr-McGee employs the use of a spud rig to drill the surface hole for the well and set surface casing. During the time the spud rig is on location, two small, lined reserve pits are used to contain the drilling mud/cuttings and any excess cement used to set the casing. Once the spud rig has completed drilling, the drilling mud and cement are removed and transported to a commercial disposal facility, and the cuttings are taken to a spread field for incorporation. Soil samples are collected from the base of the small reserve pits prior to liner installation, and again after the liner is removed, to document compliance with Table 910-1 requirements. Once the sampling is complete, the pits are reclaimed and the location made ready for the closed-loop drilling rig.

Produced Water

Produced water generated from a producing well is piped and stored in an above ground or partially-buried tank located at the tank battery. Once the tank is full the produced water is transported via truck to either a Kerr-McGee water injection disposal facility or to a commercial injection disposal facility. The transporters used to haul the produced water in most cases are:

- Kerr-McGee Services
- Northern Plains Trucking
- Heat Wave Oilfield Services

    Injection Facilities used:

- Kerr-McGee owned and operated injection wells
- Conquest Services (commercial disposal)

Frequency of the transportation of the produced water to a disposal facility is entirely dependent on the amount of water each well produces.

Kerr-McGee recycles some of its produced water for fracing operations. Produced Water Solutions (PWS) and Auxol are the two companies used to filter our water for reuse. Approximately 1600 bbls of produced water per/day are recycled.

Tank Bottoms

During the normal course of business, periodic cleaning of our oil storage tanks is necessary. The tank bottoms generated during cleaning operations are transported to a commercial disposal facility. The facilities we currently use are:

- Waste Management – Buffalo Ridge (Keenesburg)
- Waste Management – North Weld County Landfill (Ault)
- Waste Management – CSI – (Bennett) - liquid waste
- Denver Regional Landfill