



**Occidental Petroleum Corporation/Anadarko E&P Company, LP/  
Kerr-McGee Oil & Gas Onshore LP**

**Waste Management Plan  
Drilling Fluids & Associated Drill Cuttings**

This document outlines the operational requirements to be used when applying water-based bentonitic drilling fluids and associated drill cuttings to company-owned spread fields. These materials are being applied as a beneficial soil amendment.

Only water-based bentonitic drilling fluids and associated drill cuttings generated by Kerr-McGee Oil & Gas Onshore LP/Anadarko E&P Company, LP and, Occidental Petroleum Corporation (Kerr-McGee/Anadarko/Oxy) will be applied at these sites. No other E&P waste shall be deposited at these sites.

**Spread Fields (Company Owned)**

1. Each spread field will be divided into approximately equal sized pods. A 3-inch maximum lift of water-based bentonitic drilling fluids and associated drill cuttings will be applied.
2. Daily tracking tickets will be used and will include the following information:
  - \* name of well where material was generated
  - \* date of transfer of the material from the well to the spread field
  - \* volume of material taken to the spread field
  - \* name of transporter
  - \* pod where drilling fluid was applied
3. The volume of material transported to the spread field will be tracked using a spreadsheet to help ensure the 3-inch maximum lift per pod is not exceeded.
4. Conditions permitting Kerr-McGee/Anadarko/Oxy personnel will ensure the material will be incorporated into the soil within 10 days.



5. Soil sampling will be conducted following incorporation.
  - \* A 4-point composite soil sample will be collected from an interval of 0-8 inches below ground surface (bgs), from every pod where material was applied.
  - \* At a minimum, soil samples will be analyzed for total petroleum hydrocarbons (TPH – C6-C36), benzene, toluene, ethylbenzene, xylenes (BTEX), electrical conductivity (EC), sodium adsorption ratio (SAR), pH, arsenic, and barium to ensure compliance with COGCC Table 910-1 or applicable background levels of native soils.
6. In the event of any Table 910-1 exceedance, a COGCC Form 4 Sundry Notice will be prepared and submitted (along with supporting documentation) to explain the exceedance and outline appropriate remediation measures.
7. Kerr-McGee/Anadarko/Oxy is currently utilizing the facilities below for land application of water-based bentonitic drilling fluids and associated drill cuttings.
  - \* Drilling Fluid Management Facility 1 (Facility ID 149021)
  - \* Drilling Fluid Management Facility 2 (Facility ID 437129)
  - \* Drilling Fluid Management Facility 3 (Facility ID 439305)

**Waste Management Plan  
Oil-Based Drilling Fluids & Associated Drill Cuttings**

**Oil-Based Drilling Fluids and the Associated Cuttings**

1. All oil-based drilling fluids and the associated cuttings be solidified and disposed at one of the licensed commercial disposal facilities noted below.
  - \* Buffalo Ridge, Keenesburg
  - \* North Weld Landfill, Ault
  - \* Waste Connections, Erie