

# **WASTE MANAGEMENT PLAN FOR WELL HA-4**

**COGCC LOCATION # 428391**

**KINDER MORGAN CO2**

**McELMO DOME FIELD**

**SOUTHWEST COLORADO**

**2/27/2013**

## **1. GENERAL**

The waste generated from a drill site typically consists of 1) formation drill cuttings, 2) drill fluids, 3) waste cement, 4) general refuse and 5) waste material generated from containment / cleanup of small non-reportable spills. Drill cuttings generated from drilling of the CO2 well HA-4 in McElmo Dome are managed on site while drilling within a permitted lined reserve pit. The system is designed to drop the cuttings out of the drilling fluids. Well site HA-4 was permitted for the use of lined pits. The use of a lined reserve pit meets the COGCC Management of E&P Waste Rule 907 standard for the prevention of environmental impact to air, water, soil or biological resources to the extent necessary to ensure compliance with Table 910-1 standards. Closure of the reserve pits requires the removal of cuttings and the liner plus backfilling of the area. The drill cutting removal process is accomplished with a closed loop centrifuge system.

## **2. Temporary Waste Storage On Site**

Drill cuttings are stored on site during drilling in a lined reserve pit.

Drilling fluids are contained in above ground steel pits and a lined earthen pit.

Waste cement generated from well bore construction is stored in the lined earthen pit awaiting disposal with the drill cuttings. Processing of cuttings is done upon completion of the well and reclamation of the drill site.

General refuse generated during drilling operation is stored in a general waste storage trailer on site.

Waste generated can consist of:

- 1) Drilling fluid
- 2) Dry drilling fluid components and additives
- 3) Cementing excess generated from well bore construction

These materials will be collected and stored with the drill cuttings for disposal upon completion of the well.

### **3. Disposal of Wastes**

The drill cuttings will be processed on site by a centrifuge closed loop unit. They will be loaded on trucks and shipped to the Montezuma County Solid Waste Landfill in accordance with the State of Colorado solid / petroleum waste disposal regulations. Cuttings will be sampled and tested as listed in COGCC Table 910-1 standards. Analytical results will be provided to the Montezuma County Waste Landfill with a request for approval to disposal in the landfill. Upon approval/ acceptance of waste the cuttings will be manifested and shipped to the landfill during normal operating hours. The cuttings will be temporarily stored in steel containers on the drilling well site during none operating hours of the landfill.

Remaining drilling fluids will be removed and transported for use on another KM drill site or disposed of in a permitted Kinder Morgan disposal well.

Waste cement generated from well bore construction will be disposed of with the drill cuttings in the municipal landfill.

General refuse will be disposed of in the municipal landfill by transporting of the refuse trailer directly to the landfill.

Waste material will be remediated in accordance with the COGCC standards.

### **ADDENDUM 1: WASTE MANAGEMENT PLAN FOR WELL YA-6**

The following Addendum is for the Waste Management Plan for Well YA-6 for the purpose of addressing COGCC issues specified in the NOAV #2369024, COGCC Location #428391, HA-4. Specifically the following was identified as conditions to be rectified in conjunction with the Waste Management Plan:

- Soil staining adjacent to a flow back tank and an embankment located in the northeast corner of the location.

KM will conduct analytical testing on a 20' foot by 20 foot grid of all soil surfaces that came in contact with drill cuttings and liquids, as well as, the cut face of the earthen embankment located on the Northeast corner of the disturbance area of the location. KM will submit a report as requested by the COGCC by April 9, 2013.