

COLORADO OIL & GAS CONSERVATION COMMISSION

POLICY ON DRILL CUTTINGS MANAGEMENT

September 15, 2014

Background

This policy was developed to define the appropriate management options for drill cuttings treatment, disposal or land application as a beneficial soil amendment. Current Colorado Oil & Gas Conservation Commission (COGCC) rules only address drill cuttings management in the 1000 Series Reclamation Regulations under drilling pit closure requirements. Specifically, Rule 1003.d.(1) & (2) address disposal of cuttings as follows:

d. Drilling pit closure. *As part of interim reclamation, drilling pits shall be closed in the following manner:*

(1) Drilling pit closure on crop land and within 100-year floodplain. *On crop land or within the 100-year floodplain, water-based bentonitic drilling fluids, except de minimis amounts, shall be removed from the drilling pit and disposed of in accordance with the 900 Series rules. Operators shall ensure that soils meet the concentration levels of Table 910-1, above. Drilling pit reclamation, including the disposal of drilling fluids and cuttings, shall be performed in a manner so as to not result in the formation of an impermeable barrier. Any cuttings removed from the pit for drying shall be returned to the pit prior to backfilling, and no more than de minimis amounts may be incorporated into the surface materials. After the drilling pit is sufficiently dry, the pit shall be backfilled. The backfilling of the drilling pit shall be done to return the soils to their original relative positions. Closing and reclamation of drilling pits shall occur no later than three (3) months after drilling and completion activities conclude.*

(2) Drilling pit closure on non-crop land. *All drilling fluids shall be disposed of in accordance with the 900 Series rules. Operators shall ensure that soils meet the concentration levels of Table 910-1, above. After the drilling pit is sufficiently dry, the pit shall be backfilled. Materials removed from the pit for drying shall be returned to the pit prior to the backfilling. No more than de minimis amounts may be incorporated into the surface materials. The backfilling of the drilling pit will be done to return the soils to their original relative positions so that the muds and associated solids will be confined to the pit and not squeezed out and incorporated in the surface materials. Closure and reclamation of drilling pits shall occur no later than six (6) months after drilling and completion activities conclude, weather permitting.*

With the advent of closed loop drilling, the use of drilling pits greatly diminished and cuttings were not as commonly disposed in the drilling pit under the interim reclamation drilling pit closure rule. Because COGCC Rule 907.d.(3)B provides for the land application of water based bentonitic drilling fluids as a beneficial soil amendment to native soils without prior Director approval, many operators began land applying drill cuttings with their bentonitic fluids. Because Rule 907.d.(3)B. was specific to water based bentonitic drilling fluids and did not include cuttings by reference or inference, COGCC established an informal procedure whereby operators were asked to develop a

specific waste management plan under Rule 907.a.(3) for the beneficial reuse of cuttings as a soil amendment if they chose to land apply cuttings as a disposal method. This informal procedure was generally accepted by industry and resulted in the submittal of numerous waste management plans. COGCC reviewed these plans and tracked the land application locations by developing Land Application Facilities. The facilities remained in active status until such time as the operator provided adequate closure documentation. Although voluntary compliance with the informal procedure was good, the widespread activity of land application of drill cuttings was difficult to regulate consistently with operators who were unaware of the informal procedure. As a result, COGCC, in cooperation with stakeholders, developed this policy to formalize the existing procedure and to provide specific management options for drill cuttings.

Policy

This policy is applicable to cuttings generated from drilling with water based bentonitic drilling fluids only.

Drill cuttings may be treated, disposed or applied to land as a beneficial soil amendment as follows:

1. Drying and burial in pits on location in accordance with Rule 1003.d. Concentrations of contaminants of concern shall not exceed the levels in Table 910-1; or
2. Disposal at a commercial solid waste disposal facility; or
3. Land treatment or land application at a centralized E&P waste management facility permitted in accordance with Rule 908; or
4. Private land application as a beneficial soil amendment to native soil subject to the following requirements:
 - a. Waste Management Plan. Director approval of a waste management plan submitted via Sundry Notice Form 4 is required prior to private land application for beneficial soil amendment. The waste management plan shall be prepared using the guidance provided in the COGCC's Land Application Plan Checklist (attached).
 - b. Private Land Application Requirements:
 - i. Operators shall obtain written authorization from the surface owner prior to private land application of drill cuttings.
 - ii. The average thickness of cuttings shall be no more than three (3) inches prior to each incorporation. If cuttings are being applied

with water based bentonitic drilling fluids, the combined thickness prior to each incorporation shall be no more than three (3) inches. The waste shall be applied to prevent erosion and shall be incorporated as a beneficial amendment into native soils within ten (10) days of application.

- iii. Concentrations of contaminants of concern shall not exceed the levels in Table 910-1 after incorporation into native soil.
 - iv. Private land application sites shall receive cuttings and/or drilling fluids for a period of no more than three (3) consecutive years from the date of approval of the waste management plan, or from the date of first land application as reported to COGCC via Sundry Notice eForm 4.
- c. Record Keeping. Operators shall maintain a record of the source, the volume, and the location where the land application of the cuttings occurred. Upon the Director's written request, this information shall be provided within five (5) business days, in a format readily reviewable by the Director.
 - d. Facility Operator. The Operator of record on COGCC Form 10 is responsible for private land application operations, and shall diligently cooperate with the Director in responding to complaints regarding land application of cuttings.
 - e. Closure. At the time of closure, operator shall submit a request for closure for Director approval via a Form 4 Sundry Notice. The closure request shall include documentation of sampling confirming compliance with Table 910-1 and a summary of the volumes and sources of cuttings disposed on the private land application site.
5. An alternative method proposed in a waste management plan for beneficial reuse or recycling in accordance with rule 907.a.(3) and approved by the Director prior to implementation.