

**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 11391  
Order No. R-10609**

**APPLICATION OF OIL CONSERVATION  
COMMISSION FOR AN ORDER ADOPTING  
A NEW RULE FOR THE DISPOSAL OF  
NATURALLY OCCURRING RADIOACTIVE  
MATERIALS (NORM) ASSOCIATED WITH  
THE OIL AND GAS INDUSTRY.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on April 11, 1996, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 20th day of June, 1996, the Commission, a quorum being present, having considered the record and being fully advised in the premises,

**FINDS THAT:**

- (1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) On September 28, 1995, the Oil Conservation Commission ("Commission") commenced a public hearing to adopt a new rule for the disposal of naturally occurring radioactive material ("NORM") associated with the oil and gas industry.
- (3) On October 23, 1995, the Chairman of the Commission appointed a NORM Disposal Task Force ("Task Force") to produce a draft rule for distribution to interested parties and for a markup document for Commission deliberations.

(4) On March 14, 1996, the Final Report of the Task Force's proposed NORM disposal rule along with a background discussion of the proposed rule was submitted to the Chairman of the Commission. Topics covered were the New Mexico Environmental Improvement Board ("EIB") NORM regulations, the Task Force process in developing the rule, the jurisdiction of the Oil Conservation Division ("OCD" or "Division") over NORM disposal and the rationale for the major provisions of the rule.

(5) On April 11, 1996, the Commission held a public hearing to consider adoption of NORM disposal rules at which time evidence and arguments were presented by members of the Task Force and by agency and trade association representatives.

(6) In August 1995, after more than four years of effort by representatives of the OCD, the New Mexico Environment Department ("NMED"), the oil and gas industry and environmental groups, NORM regulations were adopted by the Environmental Improvement Board ("EIB"). Only "Regulated NORM" is subject to the EIB NORM regulations. "Regulated NORM" is defined as NORM at a concentration of greater than 30 picocuries per gram of radium 226 above background, or NORM with a maximum radiation exposure reading at any accessible point that is greater than 50 microroentgens per hour, including background levels.

(7) The EIB NORM regulations apply to any person who engages in the extraction, transfer, transport, storage or disposal of NORM.

(8) The regulations also apply to sludges and scale deposits in tubulars and equipment and to NORM deposits in soil, water and the environment.

(9) Section 1407 of these EIB regulations, "Disposal and Transfer of Regulated NORM for Disposal," provides the regulatory framework for the NORM disposal rule. Several of the NORM disposal options discussed in that section require that disposal be pursuant to "applicable Division (OCD) rules and regulations." The Task Force examined each NORM disposal option in § 1407 requiring OCD approval and presented testimony which addressed each disposal option being:

1. Disposal of Regulated NORM on or Near the Surface of the Ground
2. Blending or Discing Regulated NORM Contaminated Soils in Place
3. Disposal in Nonretrieved Flowlines and Pipelines
4. Disposal at Commercial or Centralized Facilities
5. Disposal in Plugged and Abandoned Wells
6. Disposal by Injection
7. Alternative Disposal Methods

(10) NORM is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act (“RCRA”). 42 U.S.C. § 6901, *et. seq.* This conclusion is based upon legal analysis by the Task Force and confirmed by conversations with representatives of the U.S. Environmental Protection Agency.

(11) NORM, as oilfield waste, is excluded from the definition of solid waste in the New Mexico Solid Waste Act, NMSA 1978, § 74-9-1, *et. seq.*, which is administered by NMED. Further, OCD has been granted jurisdiction by the New Mexico Oil and Gas Act at NMSA 1978. § 70-2-12.B(21) and (22), to regulate the disposition of wastes from a variety of oilfield processes and the Commission concludes that the OCD has regulatory jurisdiction over these wastes, notwithstanding the presence of low-level radiation in these wastes.

(12) Abandoning buried flowlines and pipelines (“pipelines”) in place is an occasional practice in the oil and gas industry. It tends to be more protective of the environment than removal, because removal involves substantial surface disturbance and increases the risk of spills or releases to the environment. Exhibit “A” allows abandonment of buried pipelines to minimize disturbance of the soil surface and to better control the release of potentially contaminated pipe. Abandonment of buried pipelines is not a method for disposing of any Regulated NORM other than that present in the pipeline at the time of proposed abandonment.

(13) Commercial or centralized surface waste management facilities should not become operational for the disposal of Regulated NORM without, at least, (1) an order from the Division, (2) a Division Rule 711 permit, (3) appropriate licenses issued by the NMED, and (4) any other approvals required by law.

(14) Existing Division rules on plugging and abandonment (Rule 701, *et. seq.*) provide the protection needed for disposal of NORM in wells to be plugged and abandoned except for the additional requirements listed in Exhibit “A”.

(15) Disposal of Regulated NORM by injection is especially appropriate since injection is an established and regulated form of disposal of oilfield waste designed to be protective of the environment, public health, and fresh waters. Exhibit “A” imposes a number of requirements after the injection takes place including provisions for adequate notice and hearing to protect the environment, public health and fresh waters.

(16) All testimony presented was in support of the Commission adopting proposed rules as presented by the Task Force and there was no opposition to any of the proposed rules (Exhibit “A”).

(17) Exhibit "A" provides for cost effective procedures for disposal of oilfield related NORM while protecting fresh water supplies, human health and the environment and therefore should be adopted.

**IT IS THEREFORE ORDERED THAT:**

- (1) Division Rule 714 shall be adopted to read as shown on Exhibit A, attached hereto and made part of this order.
- (2) Division Rule 714 shall be effective as of July 15, 1996.
- (3) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinafter designated.

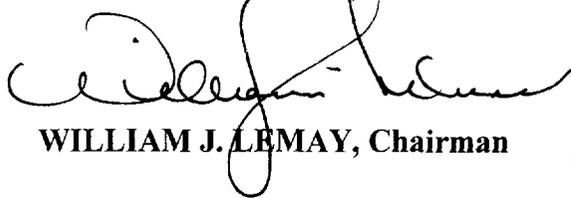
**STATE OF NEW MEXICO**  
**OIL CONSERVATION COMMISSION**



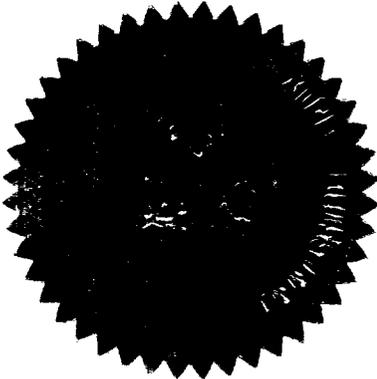
**JAMI BAILEY, Member**



**WILLIAM W. WEISS, Member**



**WILLIAM J. LEMAY, Chairman**



**S E A L**

## EXHIBIT "A"

### DISPOSAL OF REGULATED NATURALLY OCCURRING RADIOACTIVE MATERIAL (NORM)

#### TO BE ADDED TO 19 NMAC 15.A.7

REGULATED NATURALLY OCCURRING RADIOACTIVE MATERIAL (REGULATED NORM) shall mean naturally occurring radioactive material (NORM) contained in any oil-field soils, equipment, sludges or any other materials related to oil-field operations or processes exceeding the radiation levels specified in 20 NMAC 3. 1, Section 1403. [7-1-96]

#### NEW RULE 19 NMAC 15.I.714

#### 714 DISPOSAL OF REGULATED NATURALLY OCCURRING RADIOACTIVE MATERIAL (REGULATED NORM)

##### A. Purpose

This rule establishes procedures for the disposal of regulated naturally occurring radioactive material (Regulated NORM) associated with the oil and gas industry. Any person disposing of Regulated NORM, as defined at 19 NMAC 15.A.7, is subject to this rule and to the New Mexico Environmental Improvement Board regulations at 20 NMAC 3.1, Subpart 14. [7-1-96]

##### B. Nonretrieved Flowlines and Pipelines

(1) The Division will consider a proposal for leaving flowlines and pipelines (hereinafter "pipeline") that contain Regulated NORM in the ground provided such abandonment procedures are performed in a manner to protect the environment, public health, and fresh waters. Division approval is contingent on the applicant meeting the following requirements as a minimum: [7-1-96]

(2) An application submitted to the Division must contain the following as a minimum: [7-1-96]

(a) The pipeline layout over its entire length on an OCD Form C-102 (Well Location and Acreage Dedication Plat) including the legal description of the location of both ends and all surface ownership along the pipeline. [7-1-96]

(b) Results of a radiation survey conducted at all accessible points and a surface radiation survey along the complete pipeline route in a form approved by the Division. All surveys are to be conducted consistent with procedures approved by the Division. [7-1-96]

(c) The type of material for which the pipeline had been used. [7-1-96]

(d) The procedure to be used for flushing hydrocarbons and/or produced water from the pipeline. [7-1-96]

(e) An explanation as to why it is more beneficial to leave the pipeline in the ground than to retrieve it. [7-1-96]

(f) Proof of notice of the proposed abandonment to all surface owners where the pipeline is located. Additional notification may be required as described in Paragraph F. [7-1-96]

(3) Procedure

(a) Upon approval of the application by the Division, the operator must notify the OCD District office at least 24 hours prior to beginning any work on the pipeline abandonment. [7-1-96]

(b) As a condition of completion of the pipeline abandonment, all accessible points must be permanently capped. [7-1-96]

(4) General

(a) No additional Regulated NORM may be placed in any pipeline to be abandoned under this section other than that which accumulated in the pipeline under normal operation of the pipeline. [7-1-96]

(b) Any pipeline that does not exhibit Regulated NORM pursuant to required surveys may be abandoned without application under this section in accordance with the operator's applicable lease agreements. [7-1-96]

(c) If an appurtenance of a pipeline contains Regulated NORM, but upon removal of the appurtenance, no accessible point or surface above the pipeline exhibits the presence of Regulated NORM, then the applicant must submit to the Division the information regarding the Regulated NORM in the appurtenance and a statement concerning management of that Regulated NORM. With respect to the pipeline left in the ground, the applicant will be subject to the requirements under Paragraph B with the exception of B(2)(f). [7-1-96]

C. Commercial or Centralized Surface Waste Management Facilities

(1) The Division will consider proposals for the disposal of Regulated NORM in commercial or centralized surface waste management facilities, provided such disposal is performed in a manner to protect the environment, public health, and fresh waters. Division approval is contingent on the applicant obtaining a Rule 711 permit for the facility and complying with additional requirements specifically related to Regulated NORM disposal as described below. [7-1-96]

(2) Application

All requests for authority to receive and dispose of Regulated NORM in commercial or centralized surface waste management facilities must be set for hearing by the Division in order for the operator of the facility to obtain or modify a Rule 711 permit. A request to dispose of Regulated NORM at a facility previously permitted under Rule 711 will be considered a major modification to that facility. The hearing request must be submitted to the Division and must contain the following at a minimum: [7-1-96]

(a) Complete plans for the facility, including the sources of Regulated NORM, radiation survey readings, quantities of Regulated NORM to be disposed, and monitoring proposals; [7-1-96]

(b) A copy of the Rule 711 permit for the facility, if one has been issued by the Division; [7-1-96]

(c) Proof of public notice of the application as required by Rule 711; and [7-1-96]

(d) Evidence of issuance of a specific license pursuant to 20 NMAC 3.1, Subpart 14, a license pursuant to 20 NMAC 3.1, Subpart 13, and any other authorizations required by law. [7-1-96]

(3) Procedures

(a) Operating procedures that are protective of the environment, public health, and fresh waters will be established in the Division's order. [7-1-96]

(b) Any person desiring to dispose of Regulated NORM in an approved commercial or centralized surface waste management facility must furnish Regulated NORM information to the facility operator sufficient for the operator to submit Form C-138 (Request for Approval to Accept Solid Waste) for approval to the Division. The facility operator must receive Division approval prior to receiving the Regulated NORM at the disposal facility. [7-1-96]

D. Downhole Disposal in Wells to be Plugged and Abandoned

(1) The Division will consider proposals for downhole disposal of Regulated NORM in wells that are to be plugged and abandoned, provided such plugging and abandonment procedures are performed in a manner to protect the environment, public health and fresh waters and in accordance with Division Rules pertaining to well plugging and abandonment. [7-1-96]

(2) Application

(a) A plugging and abandonment (P&A) Form C-103 must be completed by the applicant and submitted to the Division for approval. [7-1-96]

(b) In addition to all other information required for P&A submittal, the form must specifically state that Regulated NORM will be placed in the wellbore. The abandonment procedure contained in the application must identify depths at which the Regulated NORM will be placed, radiation survey results conducted on the Regulated NORM to be disposed, the procedure to be used to place the Regulated NORM in the wellbore, and the specific form of Regulated NORM being placed in the wellbore (e.g. scale, pipe, dirt, etc). [7-1-96]

(c) Notice of the submittal of an application to dispose of Regulated NORM in a P&A well must be sent to the surface owner and the mineral lessor. Additional notification may be required as described in Paragraph F. [7-1-96]

(3) Procedures

(a) All P&A procedures routinely required by the Division must be followed unless specifically superseded at the instruction of the Division to facilitate the Regulated NORM disposal. [7-1-96]

(b) No work will be commenced until the application for Regulated NORM disposal in a P&A well has been approved by the Division. [7-1-96]

(c) The cement plug located directly above the Regulated NORM and the surface plug must be color-dyed with red iron oxide. [7-1-96]

(4) General

(a) Regulated NORM must be disposed at a depth of at least 100 feet below the lower most known Underground Source of Drinking Water (USDW) zone. There must be evidence that there is cement across the known USDW zones. [7-1-96]

(b) Abnormally pressured zone(s) in the wellbore that might result in migration of the Regulated NORM after it has been placed in the P&A well must be addressed in the application. [7-1-96]

E. Injection

(1) The Division will consider proposals for injecting Regulated NORM into injection wells provided such injection is performed in a manner to protect the environment, public health, and fresh waters and such injection is in compliance with Division Rules pertaining to injection. Division approval is contingent on the applicant meeting the following requirements at a minimum: [7-1-96]

(2) Disposal wells

(a) An application submitted to the Division must contain the following information at a minimum: [7-1-96]

(i) For both existing and newly permitted disposal wells, a completed Form C-108 (Application for Authorization to Inject) with proof of required notification and a statement that Regulated NORM will be injected; [7-1-96]

(ii) Description of Regulated NORM to be disposed including its source, radiation levels, and quantity; and [7-1-96]

(iii) Description of any process used on the material to improve injectivity. [7-1-96]

(b) Procedures

(i) Regulated NORM to be injected may only be from the applicant's operations. [7-1-96]

(ii) Each time Regulated NORM is injected, a Form C-103 (Subsequent Report Form) must be submitted to the Division and District offices. This form must be submitted within five (5) working days following the injection and must contain the following information: [7-1-96]

- a. source of Regulated NORM;
- b. NORM radiation level;
- c. quantity of material injected;
- d. description of any process used on the material to improve injectivity;
- e. the injection pressure while injecting; and
- f. date(s) of injection

(iii) Failures and repairs

- a. All mechanical failures must be reported to the appropriate District office within 24 hours of the occurrence. A description of the failure and immediate measures taken in response to the failure must be submitted no later than 15 days following the occurrence. [7-1-96]
- b. The operator must notify the District office of proposed repair plans. Approval of repair plans must be received prior to any work commencing, and notice of commencement must be given to the District office such that the repairs may be witnessed and/or inspected. All well repairs must be monitored by the operator to ensure Regulated NORM does not escape the wellbore or is completely contained in the repair operations. [7-1-96]

(iv) At the time of abandonment of the disposal well, the injection interval that was used for Regulated NORM injection must be squeezed with cement or a cement plug must be located directly above the injection interval. Cement in either case must contain red iron oxide. [7-1-96]

(v) The injection zone must be at a depth of at least 100 feet below the lower most known USDW zone. [7-1-96]

(3) Injection in Enhanced Oil Recovery (EOR) Injection Wells

The Division will consider issuing a permit for the disposal of Regulated NORM into injection wells within an approved Enhanced Oil Recovery (EOR) Project only after notice and hearing and upon a minimum demonstration that:

(a) such injection will not reduce the efficiency of the project or otherwise cause a reduction in the ultimate recovery of hydrocarbons from the project; [7-1-96]

(b) such injection will not cause an increase in the radiation level of Regulated NORM produced from the EOR interval in any producing well located either within or offsetting the project area; and [7-1-96]

(c) the operations will be in conformance with provisions of Paragraph E(2) above. [7-1-96]

(4) Injection Above Fracture Pressure

(a) The Division will consider issuing a permit for the disposal of Regulated NORM in a disposal well above fracture pressure only after notice and hearing and upon receiving the following minimum information from the applicant: [7-1-96]

(i) A completed Form C-108 clearly stating that disposal of Regulated NORM at or above fracture pressure is proposed. [7-1-96]

(ii) Information required under Paragraph E(2) above. [7-1-96]

(iii) Model results predicting the fracture propagation including the expected height, extension, direction, and any other evidence sufficient to demonstrate that the fracture will not extend beyond the injection interval or into the confining zones. The application must include the procedure, the anticipated pressures and the type and pressure rating of equipment that will be used. The current or potential utilization of zones immediately above and below the zone of interest may be considered by the Division in the acceptance or rejection of model predictions. [7-1-96]

(iv) A contingency plan of the procedures, including containment plans, that will be employed if a mechanical failure occurs. [7-1-96]

(b) Procedures

(i) 24 hour notice that injection will commence must be given to the District office. [7-1-96]

(ii) Upon completion of the injection, the disposal interval must be squeezed with cement or a cement plug must be located directly above the injection interval (cement in either case must contain red iron oxide), and a Form C-103 (Subsequent Report Form) must be submitted to the Division and the District office within five working days of the injection. If the operator desires to return the well to injection below fracture pressure, such plans must be contained in the application. [7-1-96]

(5) Injection in Commercial Disposal Facilities

The Division will consider issuing a permit for the commercial disposal of Regulated NORM by injection only after notice and hearing, and provided a specific license has been obtained pursuant to 20 NMAC 3.1, Subpart 14 and a license has been obtained pursuant to 20 NMAC 3.1, Subpart 13. In addition to obtaining these licenses the operator must also comply with Paragraph E(2) above (except E(2)(b)(i)). [7-1-96]

F. Additional Notification

(1) The Director may, at his discretion, require additional notice for any application under this rule. [7-1-96]

(2) Any notified party seeking to comment or request a public hearing on such an application must file comments or a hearing request with the Division within 20 days of notice. A request for a hearing must be in writing and must set forth the reasons why a hearing should be held. [7-1-96]

(3) A public hearing will be held as required by this rule or if the Director determines there is sufficient cause. [7-1-96]