



MICHELLE LUJAN GRISHAM
GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

CERTIFIED MAIL-RETURN RECEIPT REQUESTED
NOTICE OF VIOLATION

April 26, 2023

Patrick Padilla, Director, Regulatory & Government Affairs
EOG Resources Inc.
P.O. Box 2267
Midland, TX 79702

Greetings Director Padilla,

Thank you for providing NORM surveys and lab analysis for facilities EOG Resources Inc. (EOG) operates in New Mexico. The submittal of information by EOG, culminating on February 16, 2023, documents the survey and analysis for facilities it operates in New Mexico, as required by 20.3.14 NMAC.

Section 20.3.14 NMAC applies to any person who engages in the extraction, transfer, transport, storage, or disposal of NORM, or the enhancement of NORM, in the oil and gas industry (see 20.3.14.2.A NMAC). Section 20.3.14.1403 NMAC requires surveys and lab analysis to determine if the NORM generated is exempt or regulated. Regulated NORM means NORM contained in any oil-field soils, equipment, sludges, scales, or any other material related to oil-field operations or processes exceeding the radiation levels specified in 20.3.14.1403 NMAC (see 20.3.14.7.N NMAC).

The survey and lab analysis submitted by EOG show Regulated NORM, in the form of sludge, in the separator located at the facility identified in the documents submitted by EOG as Lotus Alt Battery, UTM Coordinates 32.349470, -103.694607. The facility was additionally identified as Lotus ALT #9, Lotus ALT Battery (separator), ALT Separator, and ALT Battery. The Lotus, LLC survey shows NORM levels are greater than 50 μ R/hr, and the ²²⁶Radium lab analysis exceeds the 30 pCi/gm levels for sludge (i.e., ²²⁶Radium in sludge 435 \pm 41.2 pCi/gm, completed by Eurofins Lab Midland, Texas).

Based on the documents provided by EOG, the following deficiencies are identified:

1. **Failure to obtain a license sufficient to authorize the export of radioactive material:** Under **Section 20.3.3.2 Scope:** "A. No person shall manufacture, produce, receive, possess, use, own, transfer or acquire radioactive material except as authorized in a specific or general license." "C. The regulations of this Subpart also address Regulated NORM management, transfer, storage, and disposal."

In addition, under **Sec. 20.3.3.305 General Licenses – Radioactive Material Other than Source Material:**
“I. A general license is hereby issued to receive title to and own radioactive material without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this subsection is not authorized to acquire, deliver, manufacture, produce, transfer, receive, possess, use, import or export radioactive material, except as authorized in a specific license.”

EOG represented, as indicated in the January 30, 2023, application letter to the Rocky Mountain Low-Level Radioactive Waste Board that it was licensed as a general licensee under NMED regulations with authority to export radioactive material. This was a false statement, as EOG had not applied for a General License Registration from the Radiation Control Bureau, nor is a general license sufficient to transfer and/or export radioactive materials – a specific license is required.

2. Failure to apply for a specific license: Under Section 20.3.14.1403 Exemptions:

“C. NORM not otherwise exempted and equipment from oil, gas, and water production containing NORM are exempt from the requirements of this Subpart if the maximum radiation exposure reading at any accessible point does not exceed 50 microroentgens per hour (mR/hr) (0.5 mSv/hr), including background radiation levels. Sludges and scales contained in oil, gas, and water production equipment are exempt from the requirements of this Subpart if the maximum radiation exposure reading within 1 cm of the surface of the sludge or scale does not exceed 50 microroentgens per hour (50 mR/hr) (0.5 mSv/hr), including background radiation levels. If the radiation readings exceed 50 mR/hr (0.5 mSv/hr), removable sludges and scales are exempt from the requirements of these regulations if the concentration of Radium 226, in a representative sample, does not exceed 30 picocuries per gram.”

EOG’s principal activities, as defined in 20.3.3.7B, as a generator of regulated NORM in sludge at its facility (i.e., UTM coordinates 32.349470, -103.694607), exceed the threshold in 20.3.14.1403.C NMAC of 50 micro roentgen /hr and the ²²⁶Radium concentration of 30 pCi/gm (i.e., ²²⁶Radium concentration of 435 pCi/gm), and therefore, EOG was required to apply for a specific license. EOG failed to apply for that license for regulated NORM as specified in 20.3.14 NMAC.

3. Failure to obtain a specific license prior to transfer or disposal: Under Section 20.3.14.1411. Specific Licenses:

“C. Persons conducting the following activities involving equipment or facilities containing Regulated NORM must be specifically licensed to:

- (1) dispose of or treat the resulting Regulated NORM unless exempted under this Subpart [Part];
- (2) transfer Regulated NORM for long-term storage, treatment and/or disposal;”

EOG failed to obtain a specific license before the transfer and disposal of regulated NORM.

4. Failure to dispose of Regulated NORM in accordance with Subparts [Parts] 4 and 10: Under Section 20.3.14.1407 Disposal and Transfer of Regulated NORM for Disposal:

“D. Regulated NORM shall only be disposed by the methods enumerated below, except that the Department will consider and approve alternative methods of disposal if the applicant demonstrates that such alternative method(s) will protect the environment, public health and fresh waters, and

otherwise is consistent with this Subpart [Part], with other provisions of this Part and with applicable Division rules and regulations.”

“(5) Other Disposal Methods: Each person subject to general or specific license requirements shall manage and dispose of Regulated NORM: (a) in accordance with the applicable requirements of Subparts [Parts] 4 and 10.”

Under Part 4, **Section 20.3.4.438 Transfer for Disposal and Manifests**, any licensee and any person involved in the transfer for disposal of NORM shall comply with the requirements of **Section 20.3.4.466**. Furthermore, any shipment of NORM intended for disposal must be accompanied by a shipment manifest, which contains all the information on the NRC’s uniform low-level radioactive waste manifest, including a certification by the waste generator.

EOG failed to comply with the disposal and transport requirements under Section 20.3.4.1407 and subparts 4 and 10 (20.3.4 & 20.3.10 NMAC) for the transfer and disposal of regulated NORM.

Additional Information:

- The survey document dated 1/18/23 for Alt Battery indicates 64 micro-roentgen per hour before decontamination of the separator.
- Box Tracking Report provided with Survey document dated 1/18/23 indicates the removal of 34 barrels of sludge with a reading of 52 micro-roentgen per hour.
- Shipping Manifest, dated 1/18/23 for Alt Battery, indicates the transfer of 34 barrels of sludge with a reading of 52 micro-roentgen per hour to Andrews, Texas, for disposal.
- The lab analysis document dated 1/27/23 for Alt Separator indicates that the sludge sample contains 435 pCi per gram of Radium-226.
- Export application, dated 1/30/23, from Lotus, LLC to Rocky Mountain Low-Level Radioactive Waste Board, stating that EOG Resources has a general license sufficient to export NORM waste from New Mexico.
- Email from EOG dated 2/16/23 states, “Lotus ALT Battery (tank 2), Lotus ALT Battery (separator), Kiwi AKX, and Dragon 36 State 9H-10H/Dragon 36 9 H sites. Onsite surveying and remedial activities at these five sites were handled by Lotus, LLC.”
- Show Cause Order, dated 4/03/23, by Rocky Mountain Low-Level Radioactive Waste Board to Lotus, LLC stating that the board has reason to believe that the Lotus permit was issued based on false information in the generator certification provided in the permit application.

Please provide a written response to the listed violations within 15 days of receipt of this letter. A response can include information regarding the violation circumstances and means by which EOG is now in compliance with the regulations. Failure to respond may result in escalated enforcement and the issuance of an administrative compliance order, which can include civil penalties of up to \$15,000 per day of non-compliance.

Within 15 days of receipt of this letter, please send the required documentation to:

Michael Ortiz, Program Manager
NMED-Radiation Control Bureau

Joseph Montoya Building
1100 St. Francis Drive, Suite 2022
P.O. Box 5469
Santa Fe, NM 87502-5469
Michael.Ortiz1@env.nm.gov
505-699-0060

Thank you for the assistance and courtesy extended to staff during the review of the NORM surveys and laboratory analysis submitted. Should you have any questions, please contact the Bureau at (505) 476-8600.

Respectfully,

A handwritten signature in blue ink that reads "Santiago M. Rodriguez". The signature is written in a cursive style.

Santiago M. Rodriguez, Bureau Chief
Radiation Control Bureau
New Mexico Environment Department
cc: file