

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

<p>1. LICENSEE/LOCATION INSPECTED:</p> <p>The Doe Run Company 1382 Sweetwater Mine Road Ellington, Missouri</p> <p>REPORT NUMBER(S) 2018001</p>	<p>2. NRC/REGIONAL OFFICE</p> <p>Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352</p>	
<p>3. DOCKET NUMBER(S)</p> <p>030-29604</p>	<p>4. LICENSE NUMBER(S)</p> <p>24-24815-01</p>	<p>5. DATE(S) OF INSPECTION</p> <p>7/25, with in-office review through 8/1/18</p>

**LICENSEE:**

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.

Non-cited violation(s) were discussed involving the following requirement(s):

- 4. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations and Corrective Actions)

(1) Condition 15 of License Amendment No. 12 states, in part, that the licensee shall conduct a physical inventory every 6 months to account for all sealed sources and/or devices received and possessed under the license. Contrary to the above, the licensee's radiation safety officer (RSO) self-identified that he did not conduct the required physical inventory for four of its gauges between March 7, 2017, and February 19, 2018, a period greater than 6 months. A similar violation was identified by the licensee during its 2011 radiation protection program audit, and the licensee's corrective action to prevent a similar violation was to establish automated reminders to remind the licensee to conduct the physical inventories timely, and the violation was documented as a non-cited violation in the NRC's Inspection Report No. 2013-001 dated July 26, 2013.

**Statement of Corrective Actions**

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE'S REPRESENTATIVE	William L. VanHorn	<i>William L. VanHorn</i>	8/20/18
NRC INSPECTOR	Robert G. Gattone, Jr.	<i>Robert G. Gattone, Jr.</i>	8/8/18
BRANCH CHIEF	Aaron T. McCraw	<i>ATM - for ATM</i>	8/8/18

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The Doe Run Company  
1382 Sweetwater Mine Road  
Ellington, Missouri

REPORT NUMBER(S) 2018001

2. NRC/REGIONAL OFFICE

Region III  
U. S. Nuclear Regulatory Commission  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

3. DOCKET NUMBER(S)

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(Continued)

The RSO could not determine why the physical inventory was missed between March 7, 2017, and February 19, 2018. The inspector determined that the likely root cause of the violation was either the RSO did not get the reminder, or got the reminder and forgot to do the physical inventory.

As corrective action for the latest physical inventory violation, the RSO committed to add an additional reminder one month from the initial reminder to prevent a similar violation.

(2) Condition 16 of License Amendment No. 12 states, in part, that the licensee shall test the proper operation of each gauge shutter at intervals not to exceed 6 months. Contrary to the above, the RSO self-identified that he did not test the proper operation of each gauge shutter between March 7, 2017, and February 19, 2018, a period greater than 6 months. A similar violation was identified by the licensee during its 2011 audit of its radiation protection program, and the licensee's corrective action to prevent a similar violation was to establish automated reminders to remind the licensee to conduct the shutter tests timely. The RSO could not determine why the shutter test was missed between March 7, 2017, and February 19, 2018. The inspector determined that the likely root cause of the violation was either the RSO did not get the reminder, or got the reminder and forgot to do the shutter test.

As corrective action for the latest shutter test violation, the RSO committed to add an additional reminder one month from the initial reminder to prevent a similar violation.

**Docket File Information**

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6. INSPECTION PROCEDURES USED  87124	7. INSPECTION FOCUS AREAS  02.01, 02.02, 02.03, 02.04, 02.05, and 02.07
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**SUPPLEMENTAL INSPECTION INFORMATION**

1. PROGRAM CODE(S)  03120	2. PRIORITY  5	3. LICENSEE CONTACT  William Van Horn, RSO	4. TELEPHONE NUMBER  (573) 626-4855
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Main Office Inspection                      Next Inspection Date:                      07/25/2023

Field Office Inspection    1382 Sweetwater Mine Rd., Ellington, Missouri

Temporary Job Site Inspection \_\_\_\_\_

**PROGRAM SCOPE**

This was an unannounced, routine inspection. The licensee had a total of 5 fixed gauges. The licensee had 3 fixed gauges at the Sweetwater Mine location. Those gauges were: (1) an Ohmart Model HM-8 gauge, Serial No. B1191; (2) a Texas Nuclear Model 5203 gauge, Serial No. B962; and (3) a Nuclear Chicago Model 5176 gauge, Serial No. 678(3). The licensee had an Ohmart Model HM-8 gauge, Serial No. 44765 at the Brushy Creek Mill location. The licensee had a Ohmart Model ED-6, Serial No. 65803 at the Fletcher Mill location. The gauges were used to conduct density measurements.

**Performance Observations**

The inspector: (1) noted that the licensee's RSO stated that there were no overexposures, theft, loss, radiation safety incidents, high radiation levels, or stuck shutters since the last inspection; (2) used an NRC-owned, calibrated survey instrument to conduct independent ambient exposure dose rate surveys of selected surfaces of sampled gauges and the highest measurement was 5.5 milliRoentgens per hour, and that gauge was in a very low occupancy area, and the area was posted, "Caution, Radioactive Material"; (3) reviewed the licensee's radiation protection program audit records for 2015 through 2017; and (4) reviewed dosimeter badge readings for 2013 through 2017, and the highest dose was 82 millirem.

Two violations of NRC regulatory requirements were identified by the licensee.