

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED: Lundin Mining Company - Humboldt Mill 4547 County Road 601 Champion, MI 49814 REPORT NUMBER(S) 2019002		2. NRC/REGIONAL OFFICE Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352	
3. DOCKET NUMBER(S) 999-90003		4. LICENSE NUMBER(S) GL per 10 CFR 31.5	5. DATE(S) OF INSPECTION January 31, 2019

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)

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			
NRC INSPECTOR	Ryan Craffey	<i>Ryan Craffey</i>	2/14/2019
BRANCH CHIEF	Aaron McCraw	<i>AJM - for ATM</i>	2/21/19

Docket File Information

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:

Lundin Mining Company - Humboldt Mill
4547 County Road 601
Champion, MI 49814

REPORT NUMBER(S) 2019002

2. NRC/REGIONAL OFFICE

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

3. DOCKET NUMBER(S)

999-90003

4. LICENSE NUMBER(S)

GL per 10 CFR 31.5

5. DATE(S) OF INSPECTION

January 31, 2019

6. INSPECTION PROCEDURES USED

87124

7. INSPECTION FOCUS AREAS

FE 1-3, 6-7

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S)

90003

2. PRIORITY

0

3. LICENSEE CONTACT

Brooke Routhier

4. TELEPHONE NUMBER

(906) 339-7193

☒ Main Office Inspection

Next Inspection Date:

TBD

☐ Field Office Inspection

☐ Temporary Job Site Inspection

PROGRAM SCOPE

This was an unannounced special inspection of a copper and nickel mining operation authorized to use radioactive material under the terms of the general license in 10 CFR 31.5 at its processing facility in Champion, Michigan. At the time of the inspection, the licensee used numerous generally-licensed Ronan RLL-1 source holders, each containing up to 0.9 mCi of Cs-137, for density measurements on various process lines. The licensee's water services superintendent, based at the Humboldt Mill, served as responsible individual. The purpose of this inspection was to evaluate the operating environment, condition and routine maintenance of source holders in use at the mill, following observations of work performed there under reciprocity by a Ronan field engineer, who was preparing one such device for return to the manufacturer's facility in Kentucky for refurbishment due to corrosion (see IR 15000016/2019001(DNMS)).

PERFORMANCE OBSERVATIONS

The inspector toured the facility in Champion to evaluate the mill's measures for materials security, hazard communication, equipment maintenance and exposure control. The inspector examined a selection of installed devices, including some in mildly corrosive environments whose carbon steel source holders had already been replaced with stainless steel holders. These devices appeared to be in good condition and free of any significant corrosion at the time of the inspection. The inspector also examined several devices with carbon steel holders in non-corrosive environments; they too appeared to be in good condition and free of any significant corrosion. The inspector conducted independent and confirmatory surveys in the vicinity of select devices; readings were below regulatory limits and were consistent with the radiation profiles provided in the applicable SSDR Safety Evaluation (KY-576-D-113-B).

The inspector interviewed staff at the mill to discuss the conduct of semiannual inventories, which consisted of labeling, posting, and condition checks of each device, as well as the conduct of gauge installation and removal from service. The inspector also reviewed the licensee's latest semiannual inventory, completed in September 2018, and confirmed that these devices did not require leak testing per conditions of use in the SSDR.

No violations of NRC requirements were identified as a result of this inspection.

Craffey, Ryan

From: Craffey, Ryan
Sent: Friday, February 22, 2019 1:25 PM
To: 'Routhier, Brooke'
Cc: 'Brewer, Bryan'; Berglund, John
Subject: NRC Inspection Report
Attachments: NRC Inspection Report - Lundin Mining Company.pdf

Good afternoon Brooke,

Attached is a copy of the report for my inspection of your generally-licensed fixed nuclear gauges last month. Since no violations were identified, no additional action on your part is required, but please feel free to contact me if you have any questions about my inspection.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390 of the NRC's "Rules of Practice," a copy of this report will be available electronically for public inspection in the NRC's Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>.

Ryan Craffey

Health Physicist
US Nuclear Regulatory Commission
Materials Inspection Branch, Region III
(630) 829-9655