

INSPECTION RECORD

Region: III

Inspection Report No. 2018001

License No. 13-32359-01

Docket No. 030-35880

Licensee: ArcelorMittal USA, LLC
3210 Watling Street
East Chicago, IN 46312

Locations Inspected: 3210 Watling Street, East Chicago, IN
3001 Dickey Road, East Chicago, IN

Licensee Contact: Jasmine Forbes, Radiation Safety Officer Telephone No. 219-399-7587

Program Code: 03120 Priority: 5

Type of Inspection: () Initial (X) Routine () Announced
() Special (X) Unannounced

Last Inspection Date: 08/12/2013 Date of This Inspection: 08/27/2018

Next Inspection Date: 08/27/2023 (X) Normal () Reduced

Summary of Findings and Actions:

- () No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or regional letter issued
- () Non-cited violations (NCVs)
- () Violation(s), Form 591 issued
- (X) Violation(s), regional letter issued
- () Follow-up on previous violations

Inspectors: Ryan Craffey, Health Physicist

/RA/
Signature

Date 10/19/2018

Jason Draper, Health Physicist

/RA Aaron McCraw for/
Signature

Date 10/23/2018

Approved: Aaron T. McCraw, Chief, MIB

/RA/
Signature

Date 10/23/2018

PART I – LICENSE, INSPECTION, INCIDENT/EVENT AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES SINCE LAST INSPECTION:

<u>AMENDMENT #</u>	<u>DATE</u>	<u>SUBJECT</u>
9	05/25/17	New RSO
8	07/21/14	New RSO
7	01/23/14	New RSO

2. INSPECTION AND ENFORCEMENT HISTORY:

<u>IR #</u>	<u>DATE</u>	<u>TYPE</u>	<u>FINDINGS</u>
13-02	08/12/13	Follow-up	Clear, closed previous violation of 10 CFR 20.1801 from IR 03004353/2012001(DNMS)
13-01	08/12/13	Routine	NCV (LC 15 + LC 16.A)
09-01	02/18/09	Routine/IC	Clear

3. INCIDENT/EVENT HISTORY:

No open items or events since the last routine inspection.

PART II – INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

ArcelorMittal USA, LLC is an integrated steel mill authorized to use sealed sources of radioactive material for measuring the physical properties of materials at various facilities in East Chicago, Indiana. The licensee possesses over a hundred specifically licensed gauges and eleven generally licensed devices, but does not possess any aggregated quantities of material that would trigger the additional security requirements of 10 CFR Part 37. The RSO oversees the conduct of semiannual physical inventories, leak tests and shutter checks performed by department staff. Although authorized for non-routine maintenance, the licensee continues to use authorized service providers for these activities as well as for in-house radiation safety training and annual program audits.

2. SCOPE OF INSPECTION:

Inspection Procedure(s) Used: 87124

Focus Areas Evaluated: All

The inspectors toured several of the licensee's production facilities and gauge storage locations, and observed the condition, labeling, and posting of 41 devices. The inspectors interviewed the licensee's staff to discuss the use, maintenance, and oversight of licensed material, and found that the staff was knowledgeable of radiation protection principles and licensee procedures. The inspectors also reviewed a selection of records, including documentation of inventories, leak tests, and shutter checks, gauge transfer documentation, training records, and program audits.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

Using a Canberra UltraRadiac energy-compensated GM detector calibrated on April 24, 2018 and a ThermoFisher RadEyeG energy-compensated GM detector calibrated on April 23, 2018, the inspectors conducted independent surveys within each area inspected. The inspectors found no readings in excess of regulatory limits to members of the public. Furthermore, these readings were consistent with radiation profiles in the applicable SDR safety evaluations, and additional confirmatory surveys in select areas demonstrated the adequacy of the licensee's survey instruments.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

During a review of the licensee's March 2018 program audit, the inspectors noted that the licensee's health physics consultant identified two violations of the Conditions of NRC Materials License No. 13-32359-01. The violations concerned the failure, during semiannual physical inventories in May 2017 and October 2017, to account for all sources and/or devices possessed under the license as required by Condition 15, and to test each in-use gauge for the proper operation of its shutter at six month intervals, as required by Condition 16.A.

During the May 2017 inventory, the licensee did not account for devices used or stored at 80" Hot Strip (two devices in storage). During the October 2017 inventory, the licensee did not account for devices possessed at this department and at two others: No. 3 and 4 Blast Furnace (four devices) and West Finishing (one device in storage). The licensee did not check the operation of the on-off mechanism (shutter) of each of the four Thermo Fisher Model 7200A devices located at No. 3 and 4 Blast Furnace in October 2017, either.

Condition 15 of NRC Materials License No. 13-32359-01 states, in part, that the licensee shall conduct a physical inventory every six months to account for all sealed sources and devices received and possessed under the license.

The licensee's failure to conduct a physical inventory every six months to account for all sealed sources and/or devices received and possessed under the license between October 2016 and April 2018, is a Severity Level IV violation of this License Condition.

Condition 16.A of the same license states, in part, that each gauge shall be tested for proper operation of the on-off mechanism (shutter) and indicator, if any, at intervals not to exceed 6 months. Notwithstanding the periodic on-off mechanism (shutter) and indicator test, the requirement does not apply to gauges that are stored, not being used, and have the shutter lock mechanism in the closed position.

The licensee's failure to test the shutter of all gauges not in storage between April 2017 and April 2018 is a Severity Level IV violation of this License Condition.

The inspectors determined that the root cause of both violations was an oversight during the transition of responsibility for the program from one RSO to another in 2017. Because the violations were closely related and shared a common root cause, the NRC considered them to be two elements of a Severity Level IV problem.

As corrective action, the licensee consolidated its physical inventory / leak test / shutter check documentation into a single spreadsheet, thereby incorporating all departments

into one file. Using this file during the April 2018 inventory, the licensee successfully accounted for and tested the shutters (when present) of all devices in all departments.

Although the licensee identified these violations and took corrective action to restore compliance prior to the inspection, the NRC declined to characterize them as Non-Cited Violations (NCV), because both violations were repetitive. The same issues, occurring under similar circumstances, were noted during the last routine inspection of the radiation safety program in August 2013.

Since the repetitive nature of these violations challenges the adequacy of previous long-term corrective actions, the NRC is requiring that the licensee submit a written response to the Notice of Violation, with emphasis on the need for additional corrective actions to address the potential for recurrence of a similar violation if oversight of the radiation safety program were to transition again from one individual to another.

5. PRINCIPAL PERSONNEL CONTACTED:

William Emery – Manager, Health & Safety

#^ Jasmine Forbes – Radiation Safety Officer

Attended exit meeting on September 25, 2018.

^ Attended supplemental exit meeting on October 9, 2018.

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