



## Materials Inspection Record

1. Licensee Name: AK Steel Corporation - Dearborn Works		2. Docket Number(s): 030-31548		3. License Number(s) 21-26151-01	
4. Report Number(s): 2022-001			5. Date(s) of Inspection: 10/14/22; in-office review through 11/17/22; exit 12/08/22		
6. Inspector(s): Ryan Craffey		7. Program Code(s): 03120		8. Priority: 5	9. Inspection Guidance Used: IP 87124
10. Licensee Contact Name(s): Jason Green - HS&S Manager Wayne Langdon - Safety Eng.		11. Licensee E-mail Address: jason.green@clevelandcliffs.com wayne.langdon@clevelandcliffs.com		12. Licensee Telephone Number(s): 313-317-8802 313-317-0948	
13. Inspection Type: <input checked="" type="checkbox"/> Routine <input checked="" type="checkbox"/> Announced <input type="checkbox"/> Non-Routine <input type="checkbox"/> Unannounced		14. Locations Inspected: <input checked="" type="checkbox"/> Main Office <input type="checkbox"/> Field Office <input type="checkbox"/> Temporary Job Site <input type="checkbox"/> Remote		15. Next Inspection Date (MM/DD/YYYY): 10/14/2027 <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Extended <input type="checkbox"/> Reduced <input type="checkbox"/> No change	
16. Location(s) Inspected List:  4001 Miller Road, Dearborn, MI  Note - Visitors can access the facility via the Gate 2 Office Building (GPS coordinates 42.302287, -83.152074) Parking is available just south of this building, on the opposite side of Miller Road.					
17. Scope and Observations: AK Steel Dearborn is an integrated flat-rolled steel mill in Dearborn, Michigan, authorized to possess fixed gauges for metallurgical coke moisture and steel thickness measurements. The mill covers 350 acres and employs 1,300 personnel. At the time of the inspection, the licensee had three Thermo Fisher 7200A moisture gauges containing Am-241:Be and three Thermo Fisher Rm200EM thickness gauges (with Eberline M100 source holders) containing Am-241. Since the RSO departed in June 2022 (see below), the licensee has retained the services of its leak test service provider, a health physics consultancy, to assist in maintaining routine oversight of program. The licensee continues to retain the services of device manufacturers for non-routine maintenance.  Following reports from MLB that the licensee was unresponsive to requests for additional information regarding the renewal application it had submitted on May 26, 2022, an inspector and the assigned license reviewer performed an unannounced routine inspection of the facility. Upon meeting with facility management, the NRC staff learned that the approved RSO left the company on June 3, 2022. The licensee then contacted its leak test service provider for assistance. The provider's RSO visited the mill on June 20, 2022, audited the program, and performed all required maintenance of licensed devices including leak tests and shutter checks. The licensee discussed its need for a new RSO with the service provider and scheduled three individuals to take the RSO training offered by the service provider at regular intervals. All three individuals completed this training on September 22, 2022. However, the licensee did not contact the NRC to request approval for a new RSO. Therefore, at the time of the inspection, the license still identified the former RSO as the approved individual. This was noted as a SLIV violation of LC 12.  As corrective action, the licensee's management reviewed the requirements with NRC staff during the on-site inspection. On October 18, 2022, the licensee resubmitted its renewal application, which included a request to name as RSO one of the three personnel who had completed the training in September. As corrective action to address the potential for recurrence, the licensee intended to name the other two personnel as backup RSOs. However, considering the repetitive nature of the issue (the licensee was also cited in 2018 for the lack of an approved RSO), a written response to the NOV will be required.					

## Materials Inspection Record (Continued)

Following the discussion with facility management, the inspector toured the facility in Dearborn to examine all six licensed devices. All areas were adequately posted, and all licensed material adequately secured. Independent surveys in accessible areas around each device were below regulatory limits to members of the public, and all devices were in good condition and adequately labeled. The inspector interviewed electrical, maintenance, and safety personnel to discuss the safe use of licensed material; all were knowledgeable of radiation protection principles and device operation, including abnormal conditions and emergencies. The inspector also reviewed a selection of records related to the radiation protection program, including lock-out/tag-out procedures, source transfer documentation, training materials, and service provider audits, which included documentation of sealed source leak tests, physical inventories, and shutter checks.

The inspector also reviewed additional information regarding a safety equipment failure (a shutter stuck in the open position) reported on June 18, 2021 and previously reviewed and closed by the NRC (EN 55318, NMED 210262). The inspector noted that in October 2021, the shutter of the device in question failed again, but this time in the closed position. Since the shutter continued to perform its safety function, the licensee concluded and the inspector agreed that this subsequent failure was not reportable. The licensee kept the shutter closed until early May 2022, when manufacturer field service personnel returned to troubleshoot it. The manufacturer found that the shutter was making excessive contact with the source holder, and realigned the shutter. However, the shutter then started closing more slowly than expected. The manufacturer found that the electromagnet holding the shutter open was now making contact with the shutter itself, creating residual magnetism that resisted closure. The field service personnel repositioned the coil and confirmed that the shutter opened and closed as expected. No issues with this shutter have been reported by the licensee since, and this event remains closed.

Signature and Date - Branch Chief