

Docket File Information

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED: The Dow Chemical Company H&ES, Industrial Hygiene Laboratory 1803 Building, Midland, MI 48674 REPORT NUMBER(S) 2016001	2. NRC/REGIONAL OFFICE Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352
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3. DOCKET NUMBER(S) 030-04783	4. LICENSE NUMBER(S) 21-00265-06	5. DATE(S) OF INSPECTION July 13-14, 2016
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6. INSPECTION PROCEDURES USED 87126	7. INSPECTION FOCUS AREAS All
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SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S) 03610	2. PRIORITY 3	3. LICENSEE CONTACT James Weldy, CHP - RSO	4. TELEPHONE NUMBER (989) 636-1440
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Main Office Inspection Next Inspection Date: 07/13/2019

Field Office Inspection _____

Temporary Job Site Inspection _____

PROGRAM SCOPE

This was an unannounced routine inspection of a multinational chemical corporation authorized to use byproduct material for research and development and in industrial gauges and analytical devices at the company's Michigan Division in Midland, Michigan (the entrance to which is on Washington St, South of Lyon Rd). At the time of the inspection, the licensee had approximately 20 active research labs, where 50-60 authorized personnel used small quantities of unsealed H-3 and C-14 for toxicology studies. The licensee also possessed numerous specific and generally licensed analytical instruments and miscellaneous sealed sources at various other labs. In addition, the licensee used numerous fixed level and density gauges throughout its production facilities, and maintained a number of fixed and portable gauges in secure storage. The licensee routinely used only one of its portable gauges, a backscatter level detector, for occasional validation of fixed level gauge readings on-site. Although authorized to use this and certain other portable gauges at temporary job sites in NRC jurisdiction, the licensee has not done so since before the previous inspection. Licensee oversight of the program included quarterly RSC meetings, a health physics technician who performed routine and non-routine maintenance on the gauges as authorized by Condition 25 of the license, and a laboratory manager who oversaw the receipt, storage, and distribution of stock solutions to other labs.

PERFORMANCE OBSERVATIONS: The inspector toured numerous areas of the company's Michigan Division in Midland to evaluate the licensee's measures for materials security, hazard communication and exposure control. The inspector toured several production units to evaluate the condition of approximately ten percent of in-use gauges. The inspector conducted independent surveys in the vicinity of these gauges, and discussed the implementation of licensee procedures for leak tests, shutter checks, gauge lock-out and non-routine maintenance with licensee personnel. The inspector toured the gauge storage facility, where personnel demonstrated the collection of leak tests and the use of the backscatter level detector. The inspector also toured the incinerator facility and reviewed the incineration process for radioactive waste. The inspector then toured several research laboratories, conducted independent surveys, and observed the licensee conduct area surveys following an experiment. The licensee's staff also demonstrated implementation of licensee procedures for unsealed material receipt, accountability and use (including the use of a newly-acquired Ra-226 calibration standard), safe handling procedures, waste handling, and spill response. The inspector reviewed a selection sealed source leak test and inventories, gauge shutter checks and surveys, personnel dosimetry, RSC meeting minutes, internal and external program audits, and authorized user training documentation.

Bb. for ATm