MINNESOTA DEPARTMENT OF PUBLIC SAFETY

2016 Annual Report to the Legislature:

High-level radioactive waste transportation emergency response plan status and the state's accident response capability

In compliance with Minnesota Statutes, section 116C.731, subdivision 4

COMPILED BY:

MINNESOTA DEPARTMENT OF PUBLIC SAFETY
DIVISION OF HOMELAND SECURITY AND EMERGENCY MANAGEMENT

IN COOPERATION WITH:

MINNESOTA DEPARTMENT OF PUBLIC SAFETY
MINNESOTA STATE PATROL

MINNESOTA DEPARTMENT OF HEALTH

MINNESOTA DEPARTMENT OF TRANSPORTATION
OFFICE OF FREIGHT AND COMMERCIAL VEHICLE OPERATIONS

Legislative Requirement

Minnesota Statutes, section 116C.731, requires the commissioner of the Department of Public Safety (DPS) to report annually to the Legislature on the status of the plan for emergency response to a high-level radioactive waste transportation accident and the ability of the state to respond adequately to an accident.

The DPS Division of Homeland Security and Emergency Management (DPS-HSEM) updates the Minnesota Emergency Operations Plan (MEOP) annually. DPS-HSEM coordinates this task with all of the state agencies represented on the Minnesota Emergency Preparedness and Response Committee. The MEOP addresses response to all hazards, including high-level radioactive waste (HLRW). The 2016 MEOP update was completed in November 2016.

DPS-HSEM annually contacts the Minnesota State Patrol, the Minnesota Department of Health (MDH) and the Minnesota Department of Transportation (MnDOT) to solicit specific comments regarding the status of HLRW transportation aspects of the MEOP. The Minnesota Pollution Control Agency no longer has any accident assessment responsibilities with respect to radioactive materials.

This year, several agencies forwarded changes pertaining to the content of the MEOP. Those changes were incorporated into the plan. The evacuation routes surrounding Minnesota's nuclear generating power plants have been updated to allow for easier egress from the affected areas. Having the routes pre-identified allows for better training of responders during drills, exercises and actual incidents.

Minnesota Department of Health

To ensure that sufficient personnel are available for all types of radiological responses, including HLRW accidents and incidents, one MDH staff member attended Federal Emergency Management Agency (FEMA) Radiological Emergency Response Operations training, one MDH staff member attended FEMA Advanced Radiological Incident Operations training and one MDH staff member attended FEMA Radiological Accident Assessment Concepts training in 2016.

Additionally, MDH continues to partner with Minnesota Responds Medical Reserve Corps in maintaining and expanding a registry of radiation professionals willing to assist during a radiological event. Minnesota Radiation Emergency Volunteers (MREV) currently has nearly 70 members throughout the state. Trainings and exercises for these volunteers are coordinated through MDH in conjunction with Department of Human Services.

Minnesota Department of Transportation, Office of Freight and Commercial Vehicle Operations (OFCVO)

MnDOT OFCVO hazardous materials specialists have completed the Specialized Radioactive Materials Transportation Training Program sponsored by the U.S. Department of Transportation (USDOT), Transportation Safety Institute.

USDOT Federal Motor Carrier Safety Regulations require a Commercial Vehicle Safety Alliance (CVSA) Level VI pre-trip inspection of each vehicle carrying highway-route controlled quantities (HRCQ) of radioactive materials. Hazardous materials specialists from the MnDOT OFCVO are certified to conduct CVSA Level VI inspections. To maintain CVSA Level VI certification, inspectors attend biennial recertification training; a MnDOT hazmat specialist is a certified CVSA Level VI recertification training instructor. All MnDOT hazmat specialists have completed Hazardous Waste Operations Emergency Response training and the required annual update training.

MnDOT hazardous materials specialists and Level VI certified State Patrol commercial vehicle inspectors carry radiation detection survey meters. A MnDOT hazardous materials specialist is on-call and available for dispatch by the Minnesota duty officer for any hazardous materials transportation incident (including radioactive materials), 24 hours a day, seven days a week. MnDOT hazmat specialists review HLRW pre-shipment notices, submitted to DPS-HSEM pursuant to Minn. Stat. §116C.731, for compliance with hazardous materials transportation regulations. Hazmat specialists contact the shipper or transporter if discrepancies are discovered to ensure that the shipment is properly documented before it enters Minnesota.

All highway carriers of HRCQ of radioactive materials must possess a hazardous materials safety permit from the USDOT. To maintain the safety permit, these carriers must maintain a satisfactory safety rating with the USDOT. Carriers with less-than-satisfactory ratings, or high crash or out-of-service inspection rates, are not issued safety permits or will have existing permits suspended. MnDOT hazmat specialists check for valid safety permits during all Level VI inspections.

The MnDOT hazardous materials transportation incident database shows no high-level radioactive materials transportation incidents for 2016.

Minnesota Department of Public Safety
Minnesota State Patrol

The Minnesota State Patrol has two commercial vehicle inspectors in Minnesota who are trained to conduct Level VI radioactive transportation inspections. One inspector is located in the Detroit Lakes area and the other in the Metro area. They perform specialized inspections on HRCQ of radioactive materials entering Minnesota from another country and HLRW shipped through Minnesota. At this time no shipments requiring Level VI inspections have come into Minnesota from Canada. State Patrol receives notification from DPS-HSEM on all shipments of HRCQ of radioactive materials and HLRW.

Minnesota Department of Public Safety
Division of Homeland Security and Emergency Management

DPS-HSEM coordinated the collection and dissemination of information to state and federal agencies on the shipments of high-level radioactive materials in Minnesota. DPS-HSEM maintains a core staff trained to coordinate response and recovery issues associated with high-level radioactive materials incidents. Four DPS-HSEM staff members attended three advanced-level radioactive materials response trainings in 2016,

and taught one advanced-level radioactive materials training with 14 students. DPS-HSEM also maintains an on-call hazardous materials response person 24 hours a day, seven days a week.

Long-Term Spent Fuel Storage Update

The Department of Energy is charged with taking all actions necessary to permit the future shipment of HLRW and spent nuclear fuel to a federal repository. A new location for a repository remains under review. Construction at Yucca Mountain has been stopped and the funding for transportation planning has been reduced. In November of 2013 the courts ordered NRC to restart the licensing process for Yucca Mountain and continue the licensing review until their funding runs out.

A federal blue ribbon commission was established to re-evaluate interim and long-term storage for spent nuclear fuel in the United States. The commission released a final report confirming the need for both interim and long-term storage facilities and recommended a new process for selecting interim and long-term storage sites. DPS-HSEM will continue to monitor the progress of the commission.

The Nuclear Regulatory Commission is reviewing the licensing for onsite dry-cask storage and is expected to extend these licenses until interim or long-term storage facilities are available. The Monticello and Prairie Island Nuclear Generating Plants continue to add capacity to their onsite dry cask storage facilities and will need to continue expanding capacity until a federal repository is established and spent fuel can be shipped.

Note: Substantial planning, training and exercising will be needed in Minnesota in advance of any spent nuclear fuel shipment campaigns.

Transportation Fees

An ongoing concern is the availability of funding for state agency HLRW transportation accident and incident preparedness, security escorts, and response activities.

Minn. Stat., §116C.731, subd. 3, requires shippers to pay a $1,000 fee for each vehicle carrying HLRW through the state of Minnesota. This fee applies only to spent nuclear fuel shipments, and does not offset the true cost of inspection and escort. Fees charged by other states include HRCQ of radioactive materials and radioactive material in quantities of concern (RAMQC), and vary from $2,500 per truck to $3,100 per cask, with some trucks carrying as many as six casks in a single shipment.

The Minnesota statute does not require fees for HRCQ of radioactive materials or RAMQC, although HRCQ shipments require higher level inspections and may require security escorts in the future. There were no fees collected in Minnesota last year because no radioactive material shipments contained spent nuclear fuel.

The statute also mandates that the fees be deposited in the state's general fund, not a dedicated revenue fund for transportation security, preparedness and response, making them inaccessible to the state agencies that incur expense to prepare for, escort and respond to HLRW shipment emergencies. This seems to be in conflict with the federal

law, which requires the fees to be used exclusively for the costs associated with safe radioactive material transportation or response to a radiological incident.

Because the two Minnesota nuclear generating plants are owned by a private company, future spent nuclear fuel shipments to a repository from the plants may not be subject to the provisions of section 180(c) of the U.S. Nuclear Waste Policy Act. As a result, the state of Minnesota may not be eligible to receive Department of Energy funding to cover the cost of the planning, training and exercising that will be necessary to adequately prepare for the shipments. Nor will federal funding be available to purchase additional radiation detection and protection equipment, should Minnesota determine that such equipment would be beneficial. Because the starting date and number of the potential Xcel Energy shipments to a repository each year can only be estimated at this time, planning for them is extremely difficult.

2016 Radioactive Material Shipments

Minnesota and Wisconsin raised concerns to the U.S. DOT that some routes used for shipments are not the shortest and most direct, resulting in longer transportation times with greater vulnerability during transit. Minnesota currently does not provide training along shipment routes and does not provide security escorts for these types of shipments like some of the corridor states, primarily because historically there have been only occasional shipments with final destinations in Minnesota.

The company that sent the majority of the shipments through Minnesota was MDS Nordion in Canada. Nordion indicated that they had changed some of their routing of shipments due to the fees imposed by the shipping corridor states and are more frequently using a Wisconsin, Minnesota and South Dakota routing for shipments because of the economic impact of the fees from other states. The State of Wisconsin started escorting shipments this year and implemented fees on shipments.

Minnesota saw a slight decrease in the number of shipments of higher level radioactive materials (cobalt 60 special form) in the last year. In 2016, the number of shipments was 14, up from seven the previous year.

In the coming year, DPS-HSEM will review and comment on the federal rulemaking on the transportation of radioactive material and will continue to track HLRW issues that may impact the state.