



Minnesota Department of Public Safety

2020 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.731⁵, 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 state's ability 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 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 2020 MEOP update was completed in July 2020.

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 sufficient personnel are available for all types of radiological responses, including HLRW accidents and incidents, 10 MDH staff members attended a Nuclear Regulatory Commission Federal RASCAL training about the computer code for making dose projections for atmospheric releases during a radiological emergency.

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 over 80 members throughout the state. Trainings and exercises for these volunteers are coordinated through MDH in conjunction with the Department of Human Services.

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

MnDOT OFCVO currently has one hazardous materials (HM) specialist who completed the United States Department of Transportation (USDOT) Transportation Safety Institute (TSI) Specialized Radioactive Materials Course.

The USDOT's Federal Motor Carrier Safety Regulations (FMCSR) require that a Commercial Vehicle Safety Alliance (CVSA) Level VI pre-trip inspection be completed on each vehicle carrying highway route-controlled quantities (HRCQ) of radioactive

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materials. In 2018, one of the current MnDOT HM specialists completed the biennial recertification training needed to remain certified as a CVSA Level VI inspector. In addition, MnDOT HM staff have completed the required update training for Hazardous Waste Operations Emergency Response. Together, these courses certify the HM specialist to conduct mandatory Level VI inspections on vehicles transporting HRCQ radioactive materials. In 2020, there were no shipments of HRCQ radioactive materials identified as originating in Minnesota. Thus, no Level VI inspections meeting the criteria for HRCQ radioactive materials were needed.

OFCVO currently has HM specialists on call 24/7, through the Minnesota duty officer, for any incident where HM, including radioactive materials, is being transported. MnDOT HM specialists review HLRW pre-shipment notices, submitted to DPS-HSEM pursuant to Minnesota Statutes, section 116C.731, for compliance with HM transportation regulations. If MnDOT HM specialists discover discrepancies, they can contact the shipper or transporter to ensure each shipment is properly documented before it enters Minnesota. There were no transportation incidents involving high-level radioactive materials reported during the 2020 calendar year.

Carriers transporting HRCQ of radioactive materials must possess a hazardous materials safety permit from the USDOT. To maintain the safety permit, carriers must maintain a satisfactory safety rating with the USDOT. Carriers with less-than-satisfactory ratings, or high out-of-service inspection or crash rates, are not issued safety permits or will have existing permits suspended. MnDOT HM specialists can check for valid safety permits during all Level VI inspections. This is an additional safety measure intended to ensure only carriers with good safety management practices in place are used to transport HRCQ of radioactive materials on the roadways.

Minnesota Department of Public Safety Minnesota State Patrol

The Minnesota State Patrol has one commercial vehicle inspector in Minnesota trained to conduct Level VI radioactive transportation inspections. The inspector is located in the Detroit Lakes area. The inspector performs 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.

Minnesota Department of Public Safety State Fire Marshal Division

DPS-SFMD 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.

Minnesota Statutes, section 116C.731, subdivision 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. No fees were collected in Minnesota last year because no radioactive material shipments contained spent nuclear fuel.

The statute also mandates 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 incurring expenses 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 necessary to adequately prepare for the shipments. Nor will federal funding be available to purchase additional radiation detection and protection equipment, should Minnesota determine 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.

2020 Radioactive Material Shipments

Minnesota saw a significant decrease in the number of shipments of radioactive materials (cobalt 60 special form) in the last year. In 2020, the number of shipments was three, down nine from 12 the previous year. No HRCQ shipments transited Minnesota in 2020.

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.