

Michigan Department of Environmental Quality  
Waste and Hazardous Materials Division

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The Future Direction of Michigan's Regulatory Program for Radioactive Materials

Introduction

The Michigan Department of Environmental Quality (MDEQ), Waste and Hazardous Materials Division (WHMD), is currently reviewing options for updating the state of Michigan's *Ionizing Radiation Rules (IRR)* governing radioactive material (RAM). As part of this review, the WHMD is considering the pros and cons of recommending that Michigan enter into a Section 274 Agreement with the U.S. Nuclear Regulatory Commission (NRC). Under Section 274, Cooperation With States, of the federal Atomic Energy Act of 1954, as amended, states can assume certain portions of the NRC's regulatory authority through an Agreement with the NRC. Michigan is one of 17 states that has not become an "Agreement State" through such a delegation of regulatory authority. The WHMD is seeking stakeholder involvement in evaluating this Agreement State option.

Currently the WHMD's Radiological Protection Program is understaffed and unprepared to take on an Agreement and would need considerable up-front funding to hire and train new staff. Given the current budgetary outlook, Michigan cannot pursue an Agreement program without a source of income. To fund the startup of a program, the WHMD may consider fee collections from RAM users.

Discussion

Part 135, Radiation Control, of the Public Health Code, 1978 PA 368, as amended, and Executive Order 1996-1 designate the MDEQ as the state regulatory agency for RAM. The WHMD, Radiological Protection and Medical Waste Section, Radioactive Material and Medical Waste Unit (RMMWU), is tasked with implementing the *IRR* for the MDEQ. The *IRR* are the administrative rules for the regulation of naturally-occurring and accelerator-produced radioactive material (NARM). The *IRR* took effect in 1975 and have not been substantively changed since then. Changes to national and international radiation protection guidance over the last 29 years make some portions of the *IRR* out of date and potentially not protective of public health. In addition, although the *IRR* allows for licensing of NARM, these provisions have never been implemented.

An option being considered for Michigan's rules revision is to negotiate and sign an Agreement with the NRC to regulate source and byproduct material as defined in the Atomic Energy Act. At the time the *IRR* were written, Michigan was in negotiation with the NRC to become an Agreement State. Consequently, many rules refer to state licensing of source and byproduct material. In 1979 the state of Michigan and the NRC had resolved all differences concerning implementing an Agreement. However, the Agreement was not signed due to the state's budgetary problems at that time.

Michigan's non-Agreement status requires some users of RAM to report to two regulatory agencies. Users of source and byproduct material are subject to licensing, compliance, and enforcement by the NRC, while users of NARM are subject to state rules. Medical and academic facilities often use both categories of RAM.

Before Michigan can be awarded an Agreement, the NRC is required under Section 274 to evaluate the adequacy and consistency of the state's Radiological Protection Program. Michigan's current program does not meet the NRC standards. Michigan rules will require revisions, and technical staff must be hired to perform facility inspections and license reviews. Since the RMMWU relies on the state of Michigan's General Fund, there is little possibility in the current budgetary climate to obtain revenue to start this endeavor. Thus, the RMMWU would need to establish a revenue stream from RAM users to fund initial staffing and training demands related to an Agreement. Other states have developed innovative strategies for funding the startup of Agreement State programs. The experience of other states shows that licensees could expect significant reductions in annual, application, and inspection fees once a Michigan agreement is achieved.

After reviewing the NRC's revenue from Michigan licensees, we estimate that the MDEQ could operate an adequate Radiological Protection Program that would cost licensees approximately 70 percent of what they are currently paying to the NRC in fees. We believe that ten full-time technical staff plus supporting administrative staff can conduct an adequate program. Most of these staff would perform facility inspections.

#### Possible Approaches and/or Solutions

A. Do nothing.

The *IRR* took effect in 1975. In the 29 years that the *IRR* have been in effect, national and international radiation protection standards have changed in significant ways. One rule allows 500 millirems annual dose to a member of the public compared with the current 100 millirems consensus standard limit. Most rules are less specific in their requirements than the consensus standards. A "do nothing" decision retains these program inconsistencies and shortcomings.

B. Revise current rules with no change in the program.

The current *IRR* were originally written to enable Michigan to negotiate an Agreement with the NRC. As such, the *IRR* contain many provisions pertaining to source, byproduct, and special nuclear material. These rules could be omitted if Michigan were not to pursue an Agreement with the NRC. The regulatory program would only be able to adequately deal with high priority issues and would remain dependent on state General Funds. The dual regulatory framework would continue, and licensees would remain under NRC fee structures.

C. Revise the current rules and assess fees for NARM.

The NRC would continue to license source, byproduct, and special nuclear material; the state would license NARM. State-licensed facilities would be charged fees to support the regulatory program. Staffing levels would be increased to conduct an adequate regulatory program with up-to-date rules.

D. Revise the current rules and negotiate an Agreement with the NRC.

Signing an Agreement with the NRC would provide the most complete and effective overhaul of Michigan's Radiological Protection Program. Doing so would consolidate radiological protection regulatory efforts in one agency at the state level. Other agreement states assess lower fees to their licensees than the NRC charges its licensees. Some obstacles to accomplishing this goal include hiring and training an adequate number of staff to implement the program and establishing a viable funding mechanism until an Agreement is signed and the NRC turns over their licensing program to the state. For other states, the process has taken up to five years from beginning negotiations with the NRC to signing an Agreement.

Conclusion

Any changes to the *IRR* will affect current and future RAM users in Michigan. Developing an Agreement with the NRC would be the most comprehensive revision of the program, with the greatest impact on stakeholders. We, therefore, seek input from current stakeholders before we proceed with any changes.