

1993

**REPORT ON THE HIGH-LEVEL
RADIOACTIVE WASTE ACTIVITIES**

CONDUCTED UNDER

MINNESOTA STATUTES 116C.712

June 30, 1993

**MINNESOTA OFFICE OF STRATEGIC
AND LONG RANGE PLANNING
AND THE
MINNESOTA ENVIRONMENTAL QUALITY BOARD**

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1993 Report to the
Legislative Commission on Waste Management

High-Level Radioactive Waste
Activities

Conducted Under Minnesota Statutes 116C.712

BACKGROUND

The High-level Radioactive Waste program was developed to ensure that the state is prepared to respond to high-level nuclear waste storage, transportation, and disposal policy issues in Minnesota.

At the time the legislation was enacted, the U.S. Department of Energy (DOE) was looking at Minnesota as a potential host state for a geologic high-level waste repository, which the state opposed. The statute specified that the State Planning Agency (now Office of Strategic and Long Range Planning) was responsible for this work. The U.S. Congress acted to remove Minnesota from consideration in 1987, when the Nuclear Waste Policy Amendments Act was passed. The Minnesota statutory language was subsequently changed to focus on monitoring of the federal program.

The assessment is for reimbursement of actual state-incurred expenses. As Northern States Power Company is the only nuclear utility in the state, it has been responsible for all payments under this assessment. The assessment terminates when the Department of Energy begins construction of a high-level waste disposal site in another state.

High-level waste includes spent nuclear fuel from commercial power reactors, special fuel from test or research reactors, and wastes generated by the reprocessing of these fuels. Currently, Minnesota generates only waste in the first category. Low-level radioactive waste is any waste which is not high-level by definition. Low-level waste is not monitored by this program.

CURRENT YEAR ACTIVITIES

SUMMARY

1. The status of high-level waste generation and management in Minnesota has been monitored and evaluated. Northern States Power proposals to expand storage at Prairie Island and to relicense and extend the operating life of Monticello have been reviewed. Staff have participated in state and federal regulatory procedures for the proposals.

2. U.S. Department of Energy efforts to locate a central site for a permanent waste repository and several regional Monitored Retrieval System sites, which would receive Minnesota wastes, have been monitored.

3. Federal programs which are developing transportation systems for nuclear wastes have been monitored and reviewed.

4. Communications with government and industry nuclear waste programs have been maintained.

5. Intrastate agency coordination has been maintained.

HIGH-LEVEL WASTE GENERATION AND MANAGEMENT IN MINNESOTA

High-level radioactive waste is only generated in Minnesota by Northern State Power's two operating nuclear generating power plants located at Red Wing (Prairie Island) and Monticello.

Prairie Island

In June, 1992, the Minnesota Public Utilities Commission approved expansion of high-level waste storage at Prairie Island. Northern States Power was permitted to install 17 dry cask storage units at the twin reactor site. The decision allowed Northern States Power Company to continue operating the plant into the early 2000's, when the Department of Energy is expected to begin moving waste fuel to a yet unidentified interim facility.

The Public Utilities Commission's decision was appealed and in May, 1993, the Minnesota Court of Appeals ruled that the proposed dry cask storage facility at Prairie Island must be authorized by the Minnesota Legislature. That decision has been appealed to the Minnesota Supreme Court.

The Environmental Quality Board prepared the Environmental Impact Statement (funded by Northern States Power Company) for the dry cask storage facility and may be required to provide supplemental environmental review during or following review by the Legislature. The waste fuel generated at Prairie Island and its place in the federal acceptance/removal planning process will continue to be monitored by the Environmental Quality Board in coordination with other state agencies.

Monticello

Waste fuel storage at Monticello is adequate through 2005 due to movement of some of the waste to an Illinois facility in the mid-80's. If the Department of Energy is not successful in developing an interim storage facility by about 2000, we can expect a dry cask storage proposal by Northern States Power similar to that at Prairie Island. Assuming the Department of Energy does not develop an interim facility within its projected schedule, Minnesota could face a nuclear waste storage problem at Monticello and again at Prairie Island at about the same time around the turn of the century.

Northern States Power Company had intended to apply for federal relicensing of Monticello in late 92 or early 93, but has delayed this action and are uncertain whether it will proceed with relicensing. Though the current operating license for Monticello extends through 2010, relicensing is being considered at this time because it will be the first nuclear unit relicensing in the country and there is uncertainty about the time required to complete the process. Additionally, Northern States Power had wanted to address the life-extension question earlier as a basis for making interim capital investments in the plant. Life-extension at Monticello, and potentially at Prairie Island, will generate additional high-level waste beyond that currently anticipated under the current license.

The U.S. Nuclear Regulatory Commission is in a rulemaking procedure to establish environmental criteria and a process for the relicensing of existing nuclear generating plants. The Environmental Quality Board has actively participated in this rulemaking, in cooperation with other Minnesota state agencies. Minnesota's interest and activity in this federal process has positioned the state as a primary participant in the Nuclear Regulatory Commission process.

U.S. DEPARTMENT OF ENERGY WASTE STORAGE PROGRAMS

Funded state activity under the Act has primarily focused on continuing efforts by the Department of Energy to develop a central high-level radioactive waste permanent repository and one or more regional interim storage facilities (Monitored Retrieval Storage or MRS).

Permanent Repository

The Department of Energy continues in its efforts to characterize and develop the Yucca Mountain site near Las Vegas, Nevada. The Nevada site remains the Department of Energy priority for central storage. The program continues to be funded by state assessments to the Nuclear Waste Fund.

Interim Monitored Retrieval Storage Facilities

A Monitored Retrieval Storage facility would be separate from a

repository, and would temporarily store spent fuel, repackage it and transport it to the repository.

The Monitored Retrieval Storage facility could utilize dry cask storage technology, as proposed for Prairie Island, or pools, as currently the case at Prairie Island and Monticello, though much larger. Spent fuel from around the country would be shipped to a Monitored Retrieval Storage facility.

Minnesota has been considered in the Department of Energy's siting process for a Monitored Retrieval Storage system. Through efforts of the Federal Negotiator, an independent federal office created to find MRS sites, 20 applications were submitted by governmental units or Indian tribes for \$100,000 grants to make preliminary feasibility studies. The Prairie Island Mdewakanton Sioux made an application and received the grant. The tribe's stated strategy was to focus attention on the Northern States Power dry cask storage proposal at Prairie Island. It is not their intent to host a Monitored Retrieval Storage facility and continue living on the reservation. Subsequent to the Appeal Court's decision, the tribe has not indicated how, or if, they will proceed in the Monitored Retrieval Storage facility planning process. It must be assumed at this juncture that they may proceed and that a Monitored Retrieval Storage facility in Minnesota is a real possibility. The Negotiator has assured states that, though a tribe has sovereign status, no negotiations with a tribe will proceed without consultations with state governments. We will continue to monitor this process and assess how it may impact the state.

FEDERAL WASTE TRANSPORTATION PROGRAMS

Minnesota continues to participate in the Midwestern High-Level Radioactive Waste Transportation Committee, sponsored by the Department of Energy through the Midwestern Office of the Council of State Governments. Through this group, the Department of Energy initiatives are presented and discussed by participating states. Minnesota's representative on this committee is now from the Minnesota Department of Public Safety, which coordinates communications with other state agencies. The work of this group and the Department of Energy will lead to design and development of transportation casks and studies and plans for transport routes and modes. Transportation planning will directly affect Minnesota when in-state waste fuel is moved to federal facilities and when/if other states' fuel is moved through Minnesota in transit to federal facilities.

HIGH-LEVEL WASTE COMMUNICATIONS

There has continued to be significant level of high-level waste related communications by agency staff with federal and state agencies, Northern States Power, the nuclear industry and the public. This has been due, in part, to Minnesota's unique status among states. We are the only state simultaneously

considering dry cask storage at a reactor site, relicensing of a reactor, and the potential for an interim Monitored Retrieval Storage facility site.

Specifically, Environmental Quality Board staff have:

1. Reviewed and commented on Department of Energy Mission Plans, which address the repository, the Monitored Retrieval Storage facility and transportation.
2. Participated in interagency procedural review of generic relicensing rulemaking relative to Monticello.
3. Responded to inquiries from legislators, utilities, nuclear contractors, agency staff, and the general public.
4. Reviewed current events updates through national and state newsletters and informed other agency staff of same.

AGENCY COORDINATION

An informal work group formed for the purposes of improving communications and coordinating review of related documents and initiatives has continued to meet on a periodic basis. Participating with Minnesota Planning/Environmental Quality Board are the Departments of Public Service, Public Safety, Health, Transportation, and Natural Resources, and the Pollution Control Agency and Public Utilities Commission. The importance of continued interagency coordination is emphasized by the increasing complexity of nuclear waste issues at the state and federal level.

ASSESSMENT EXPENDITURES UNDER THE ACT

Past Years	1988	\$103,483
	1989	19,684
	1990	19,682
	1991	7,690
	1992	39,916
Current Year	1993 (to 5/30/93)	30,768

The current appropriation is \$50,000 per year. Northern States Power Company is assessed actual costs only.

Expenditures were greatest in fiscal year 1988, when the Department of Energy was still considering Minnesota as a potential host state for a geologic repository. Since changes in federal law removed Minnesota from immediate consideration, the assessment has been used to finance monitoring and communication activities related to federal programs.

Expenditures were lowest in fiscal year 1991, when Environmental Quality Board staff were preparing the Prairie Island Dry Cask Storage Environmental Impact Statement and billing Northern States Power for costs under a separate assessment.