



Protecting, maintaining and improving the health of all Minnesotans

May 25, 2005

Paul H. Lohaus, Director
Office of State and Tribal Programs
US Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike, 3rd Floor
Rockville, Maryland 20852

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Dear Mr. Lohaus:

This letter is in response to actions assigned to the Minnesota Department of Health (MDH) during a conference call with US Nuclear Regulatory Commission (NRC) staff assigned to review the MDH Agreement State Application. The conference call was held on May 25. I have been asked to provide a written response to the following two issues.

1. The NRC changes to 10 CFR Part 35, which deals with training and experience for authorized users became effective in April of 2004. Current MDH rules do not reflect those changes. Agreement States have three years to implement a change. However, because Minnesota is not an Agreement State, there must be a method to ensure the perpetuation of consistent rules thereby avoiding a regulation being temporarily relaxed.

To resolve this issue, MDH will commit to referencing the training and experience regulations in 10 CFR 35 as a license condition. That license condition will become legally binding on licensees. In addition, MDH will incorporate the changes into the appropriate guidance documents after the NRC guidance is published.

2. *Minnesota Statutes*, Chapter 116C.71 has five definitions that are inconsistent with Chapter 4731 and the NRC. As indicated in the Chapter 116C.71, Subdivision 1, "For the purposes of sections 116C.71 to 116C.74, the terms defined in this section have the meaning given them." A portion of the subdivisions pertains to the ability of Minnesota Homeland Security and Emergency Management's (HSEM's) enabling legislation for the collection of fees for high level waste being shipped across Minnesota. However, the majority of Subdivision 116C.71 through 116C.74 pertain to the Minnesota Environmental Quality Board (EQB), the Minnesota Pollution Control Agency (PCA), and Midwest High Level Waste Compact.

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I have excerpted and attached the pertinent subdivisions for your reference. The five definitions of concern are indicated in italics. By design, the definitions differ from those in Chapter 4731. A prime example is in the definition of "radiation," which states:

Subd. 4. Radiation. "Radiation" means any or all of the following: alpha rays, beta rays, gamma rays, high energy neutrons or protons or electrons, and other atomic particles; but not X-rays and electromagnetic radiations of wavelengths greater than 2,000 Angstrom units and sound waves.

That definition was crafted to include non-ionizing radiation, which must be considered to protect the health and safety of Minnesotans. For example, the electromagnetic force (EMF) has caused significant concern and debate during recent hearings for new power transmission lines.

MDH confirms that the definitions do not apply to the Minnesota Department of Health *Radioactive Materials Rules*, Chapter 4731, and that no conflict exists. Furthermore, because your staff insisted, MDH will commit to informing the various state agencies of the inconsistencies with NRC definitions.

If you have any other questions concerning the Minnesota's Final Agreement State Application, please contact George F. Johns, Jr. at (651) 642-0492 or me at (651) 215-0945.

Sincerely,



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Attachment: *Minnesota Statutes*, Chapter 116C, Subdivisions 116C.71 through 116C.71

Attachment

116C.71 Definitions.

Subdivision 1. Applicability. For the purposes of sections 116C.71 to 116C.74, the terms defined in this section have the meaning given them.

Subd. 1a. Area characterization plan. "Area characterization plan" means the official plan prepared by the Department of Energy for a specific geographic area outlining the proposed laboratory or field activities to be undertaken to establish the geologic, environmental, social, and economic characteristics of the area.

Subd. 1b. Area recommendation report. "Area recommendation report" means the official report prepared by the Department of Energy identifying specific geographic areas within a state for further evaluation as a repository for radioactive waste.

Subd. 1c. Board. "Board" means the Minnesota Environmental Quality Board.

Subd. 2. By-product nuclear material. "By-product nuclear material" means any material, except special nuclear material, yielded in or made radioactive by:

(a) Exposure to the radiation incident to the process of producing or utilizing special nuclear material; or

(b) Exposure to radiation produced or accelerated in an atomic or subatomic particle accelerating machine.

Subd. 2a. Chair. "Chair" means the chair of the board.

Subd. 2b. Consultation and cooperation agreement.

"Consultation and cooperation agreement" means the formal agreement, as defined in the Nuclear Waste Policy Act, United States Code, title 42, section 10137(c), between a state and the federal government setting forth procedures for information exchanges, state consultation, and other matters related to repository siting and construction.

Subd. 2c. Council. "Council" means the governor's Nuclear Waste Council.

Subd. 2d. Department of Energy. "Department of Energy" means the United States Department of Energy.

Subd. 2e. Dispose, disposal. "Dispose" or "disposal" means the permanent or temporary placement of high level radioactive waste at a site within the state other than a point of generation.

Subd. 2f. High level radioactive waste. "High level radioactive waste" means:

- (1) irradiated reactor fuel;*
- (2) liquid wastes resulting from reprocessing irradiated reactor fuel;*
- (3) solids into which the liquid wastes have been converted;*
- (4) transuranic wastes, meaning any radioactive waste containing alpha emitting transuranic elements that is not acceptable for near-surface disposal as defined in the Code of Federal Regulations, title 10, section 61.55;*
- (5) any other highly radioactive materials that the Nuclear Regulatory Commission or Department of Energy determines by law to require permanent isolation; or*
- (6) any by-product material as defined in section 11e (2) of the Atomic Energy Act of 1954, United States Code, title 42, section 2014, as amended.*

Subd. 3. Person. "Person" means any individual, corporation, partnership or other unincorporated association or governmental agency.

Subd. 3a. Potentially impacted area. "Potentially impacted area" means the area designated or described in a draft or final area recommendation report or area characterization plan for study or consideration.

Subd. 4. Radiation. "Radiation" means any or all of the following: alpha rays, beta rays, gamma rays, high energy neutrons or protons or electrons, and other atomic particles; but not X-rays and electromagnetic radiations of wavelengths greater than 2,000 Angstrom units and sound waves.

Subd. 5. Radioactive material. "Radioactive material" means any matter which emits radiation. Radioactive material includes special nuclear material, source nuclear material, and by-product nuclear material.

Subd. 6. Radioactive waste. "Radioactive waste" means:

- (a) Useless or unwanted capturable radioactive residues produced incidental to the use of radioactive material; or*
- (b) Useless or unwanted radioactive material; or*
- (c) Otherwise nonradioactive material made radioactive by contamination with radioactive material.*

Radioactive waste does not include discharges of radioactive effluents to air or surface water when subject to applicable federal or state regulations or excreta from persons undergoing medical diagnosis or therapy with radioactive material or naturally occurring radioactive isotopes.

Subd. 7. Radioactive waste management facility.

"Radioactive waste management facility" means a geographic site, including buildings, structures, and equipment in or upon which radioactive waste is retrievably or irretrievably disposed by burial in soil or permanently stored. An independent spent-fuel storage installation located on the site of a Minnesota nuclear generation facility for dry cask storage of spent nuclear fuel generated solely by that facility is not a radioactive waste management facility.

Subd. 8. Source nuclear material. "Source nuclear material" means:

(a) Uranium or thorium or any combination thereof, in any physical or chemical form;
or

(b) Ores which contain by weight 1/20 of one percent or more of uranium, thorium, or any combination thereof. Source nuclear material does not include special nuclear material.

Subd. 9. Special nuclear material. "Special nuclear material" means:

(a) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Nuclear Regulatory Commission, pursuant to the Atomic Energy Act of 1954 as amended, determines to be special nuclear material; or

(b) Any material artificially enriched by any of the materials described in clause (a). Special nuclear material does not include source nuclear material.

Subd. 10. Renumbered subd 1a

Subd. 11. Renumbered subd 1b

Subd. 12. Renumbered subd 1c

Subd. 13. Renumbered subd 2a

Subd. 14. Renumbered subd 2b

Subd. 14a. Renumbered subd 2c

Subd. 15. Renumbered subd 2d

Subd. 16. Renumbered subd 2e

Subd. 17. Renumbered subd 2f

Subd. 18. Renumbered subd 3a

HIST: 1977 c 416 s 1; 1984 c 453 s 2-10; 1Sp1985 c 13 s 241; 1986 c 444; 1Sp2003 c 11 art 1 s 1

116C.711 Nuclear waste council.

Subdivision 1. Establishment. The governor's Nuclear Waste Council is established.

Subd. 2. Membership. The council shall have at least nine members, consisting of:

- (1) the commissioners of health, transportation, and natural resources, and the commissioner of the Pollution Control Agency;
- (2) four citizen members appointed by the governor;
- (3) the director of the Minnesota Geological Survey;
- (4) one additional citizen from each potentially impacted area may be appointed by the governor if potentially impacted areas are designated in Minnesota; and
- (5) one Indian who is an enrolled member of a federally recognized Minnesota Indian tribe or band may be appointed by the governor if potentially impacted areas are designated in Minnesota and if those areas include Indian country as defined in United States Code, title 18, section 11.54.

At least two members of the council must have expertise in the earth sciences.

Subd. 3. Chair. A chair shall be appointed by the governor from the members of the council.

Subd. 4. Advisory task force. The council may create advisory task forces under section 15.014, as are necessary to carry out its responsibilities under this chapter.

Subd. 5. Membership regulation. Section 15.059 governs terms, compensation, removal, and filling of vacancies of members appointed by the governor. Section 15.059, subdivision 5, does not govern the expiration date of the council.

HIST: 1Sp1985 c 13 s 242; 1986 c 444; 1987 c 186 s 15

116C.712 Powers and duties.

Subdivision 1. Duty. The council's duty is to monitor the federal high-level radioactive waste disposal program under the Nuclear Waste Policy Act, Public Law 97-

425 and advise the governor and the legislature on all policy issues relating to the federal high-level radioactive waste disposal program.

Subd. 2. Expiration date. The council terminates when the Department of Energy eliminates Minnesota from further siting consideration for disposal of high-level radioactive waste.

Subd. 3. Council staff. Staff support for council activities must be provided by the Office of Strategic and Long-Range Planning. State departments and agencies must cooperate with the council in the performance of its duties. Upon the request of the chair of the council, the governor may, by order, require a state department or agency to furnish assistance necessary to carry out the council's functions under this chapter.

Subd. 4. Federal and other funds. The chair of the council may apply for, receive, and expend money made available from federal sources or other sources for the purpose of carrying out the council's responsibilities under this chapter.

Subd. 5. Assessment. (a) A person, firm, corporation, or association in the business of owning or operating a nuclear fission electrical generating plant in this state shall pay an assessment to cover the cost of:

(1) monitoring the federal high-level radioactive waste program under the Nuclear Waste Policy Act, United States Code, title 42, sections 10101 to 10226;

(2) advising the governor and the legislature on policy issues relating to the federal high-level radioactive waste disposal program;

(3) surveying existing literature and activity relating to radioactive waste management, including storage, transportation, and disposal, in the state;

(4) an advisory task force on low-level radioactive waste deregulation, created by a law enacted in 1990 until July 1, 1996; and

(5) other general studies necessary to carry out the purposes of this subdivision.

The assessment must not be more than the appropriation to the Office of Strategic and Long-Range Planning for these purposes.

(b) The office shall bill the owner or operator of the plant for the assessment at least 30 days before the start of each quarter. The assessment for the second quarter of each fiscal year must be adjusted to compensate for the amount by which actual expenditures by the office for the preceding year were more or less than the estimated expenditures previously assessed. The billing may be made as an addition to the assessments made under section 116C.69. The owner or operator of the plant must pay the assessment within 30 days after receipt of the bill. The assessment must be deposited in the state treasury and credited to the special revenue fund.

(c) The authority for this assessment terminates when the Department of Energy eliminates Minnesota from further siting consideration for high-level radioactive waste by starting construction of a high-level radioactive waste disposal site in another state. The assessment required for any quarter must be reduced by the amount of federal grant money received by the Office of Strategic and Long-Range Planning for the purposes listed in this section.

(d) The director of the Office of Strategic and Long-Range Planning must report annually by July 1 to the environment and natural resources committees of the senate and house of representatives, the Finance Division of the senate Committee on Environment and Natural Resources, and the house of representatives Committee on Environment and Natural Resources Finance on activities assessed under paragraph (a).

HIST: 1Sp1985 c 13 s 243; 1986 c 444; 1987 c 404 s 147; 1988 c 686 art 1 s 62; 1990 c 600 s 3; 1991 c 345 art 2 s 23,24; 1996 c 470 s 27

116C.72 Radioactive waste management facility.

Notwithstanding any provision of sections 216C.05 to 216C.381 to the contrary, no person shall construct or operate a radioactive waste management facility within Minnesota unless expressly authorized by the Minnesota legislature.

HIST: 1977 c 416 s 2; 1984 c 655 art 1 s 19; 1987 c 312 art 1 s 10

116C.721 Public participation.

Subdivision 1. Information meetings. The board shall conduct public information meetings within an area designated in a draft area recommendation report, final area recommendation report, draft area characterization plan, or final area characterization plan. Information meetings shall be held within 30 days after the board receives each of the reports.

Subd. 2. Notice. The board shall notify the public of information meetings and the availability of the area recommendation reports and the area characterization plans. Copies of the reports shall be made available for public review and distribution at the board office, the Minnesota Geological Survey office, regional development commission offices in regions that include a part of the potentially impacted areas, county courthouses in counties that include a part of a potentially impacted area, and other appropriate places determined by the board to provide public accessibility.

Subd. 3. Transmittal of public concerns. The board shall transmit public concerns expressed at public information meetings to the department of energy.

HIST: 1984 c 453 s 11

116C.722 Legal and technical assistance to Indian tribes.

If an Indian tribal council that has jurisdiction over part of a potentially impacted area within the state requests legal or technical assistance, the board shall provide assistance.

HIST: 1984 c 453 s 12

116C.723 Consultation and cooperation agreement.

Subdivision 1. Requirement. Upon notice from the Department of Energy that Minnesota contains a potentially impacted area, the chair of the council shall negotiate a consultation and cooperation agreement with the federal government.

Subd. 2. Disposal studies. Unless the state has executed a consultation and cooperation agreement, a person may not make a study or test of a specific area or site related to disposal including an exploratory drilling, a land survey, an aerial mapping, a field mapping, a waste suitability study, or other surface or subsurface geologic, hydrologic, or environmental testing or mapping.

HIST: 1984 c 453 s 13; 1Sp1985 c 13 s 244; 1986 c 444

116C.724 Field investigations, tests, and studies.

Subdivision 1. Repealed, 1Sp1985 c 13 s 245

Subd. 2. Drilling. A permit shall be obtained from the Environmental Quality Board, in accordance with chapter 14, for any geologic and hydrologic drilling related to disposal. Conditions of obtaining and retaining the permit must be specified by rule and must include:

- (1) compliance with state drilling and drill hole restoration rules as an exploratory boring under chapter 103I;
- (2) proof that access to the test site has been obtained by a negotiated agreement or other legal process;
- (3) payment by the permittee of a fee covering the costs of processing and monitoring drilling activities;
- (4) unrestricted access by the commissioner of health, the commissioner of natural resources, the commissioner of the Pollution Control Agency, the director of the

Minnesota Geological Survey, the agent of a board of health as authorized under section 145A.04, and their employees and agents to the drilling sites to inspect and monitor the drill holes, drilling operations, and abandoned sites, and to sample air and water that may be affected by drilling;

(5) submission of splits or portions of a core sample, requested by the commissioner of natural resources or director of the Minnesota Geological Survey, except that the commissioner or director may accept certified data on the sample in lieu of a sample if certain samples are required in their entirety by the permittee; and

(6) that a sample submitted may become property of the state.

Subd. 3. Other requirements. (a) A person who conducts geologic, hydrologic, or geophysical testing or studies shall provide unrestricted access to both raw and interpretive data to the chair and the director of the Minnesota Geological Survey or their designated representatives. The raw and interpretive data includes core samples, well logs, water samples and chemical analyses, survey charts and graphs, and predecisional reports. Studies and data shall be made available within 30 days of a formal request by the chair.

(b) A person proposing to investigate shall hold at least one public meeting before a required permit is issued, and during the investigation at least once every three months, during the investigation within the potentially impacted area. The meetings shall provide the public with current information on the progress of the investigation. The person investigating shall respond in writing to the Environmental Quality Board about concerns and issues raised at the public meetings.

(c) Before a person engages in negotiations regarding property interests in land or water, or permitting activities, the person shall notify the chair in writing. Copies of terms and agreements shall also be provided to the chair.

HIST: 1984 c 453 s 14; 1Sp1985 c 13 s 245; 1985 c 248 s 70; 1986 c 444; 1987 c 186 s 15; 1987 c 309 s 24; 1995 c 186 s 32

116C.73 Transportation of radioactive wastes into state.

Notwithstanding any provision of sections 216C.05 to 216C.381 to the contrary, no person shall transport radioactive wastes into the state of Minnesota for the purpose of disposal by burial in soil or permanent storage within Minnesota unless expressly authorized by the Minnesota legislature, except that radioactive wastes may be transported into the state for temporary storage in accordance with applicable federal and state law for up to 12 months pending transportation out of the state.

HIST: 1977 c 416 s 3; 1984 c 655 art 1 s 19; 1987 c 312 art 1 s 10

116C.731 Transportation of high level radioactive waste.

Subdivision 1. Notification. Before a shipment of high level radioactive waste is transported in the state, the shipper shall notify the commissioner of public safety. The notice shall include the route, date, and time of the shipment in addition to information required under Code of Federal Regulations, title 10, sections 71.5a and 73.37(f).

Subd. 2. Highway route determination. Pursuant to Code of Federal Regulations, title 49, part 177, the commissioner may require preferred routes, dates, or times for transporting high level radioactive waste if the commissioner determines, in accordance with United States Department of Transportation "Guidelines for Selecting Preferred Highway Routes for Large Quantity Shipments of Radioactive Materials," that alternatives are safer than those proposed. On an annual basis the commissioner shall review federally approved highway routes for transporting high level radioactive waste in the state and select new state-designated routes in accordance with Code of Federal Regulations, title 49, part 177, if safety considerations indicate the alternate routes would be preferable. The state does not incur any liability by requiring the alternate routes, dates, or times to be used.

Subd. 3. Transportation fee. A person who intends to transport high level radioactive waste shall submit a transportation fee to the commissioner of public safety in the amount of \$1,000 for each vehicle carrying high level radioactive waste in each shipment with the information required in subdivision 1. The fees shall be deposited by the commissioner into the general fund.

Subd. 4. Emergency response plan. The commissioner of public safety shall consult with the commissioners of health and transportation, the commissioner of the Pollution Control Agency, and representatives of the federal Nuclear Regulatory Commission, the federal Emergency Management Agency, and the United States Department of Transportation and before December 1, 1984, shall prepare a plan for emergency response to a high level radioactive waste transportation accident, including plans for evacuation and cleanup. The commissioner of public safety shall report by January 1 of each year to the legislature on the status of the plan and the ability of the state to respond adequately to an accident.

Subd. 5. Applicability. This section does not apply to radioactive materials shipped by or for the United States government for military, national security, or national defense purposes. This section does not require disclosure of defense information or restricted data as defined in the Atomic Energy Act of 1954, United States Code, title 42, section 2014, as amended.

HIST: 1984 c 453 s 15; 1987 c 186 s 15

116C.74 Penalties.

Subdivision 1. Penalties. Any person who violates section 116C.72 or who causes radioactive wastes to be shipped in violation of section 116C.73 shall be guilty of a gross misdemeanor and subject to a fine of not more than \$20,000 or a sentence of imprisonment of not more than one year, or both.

Subd. 2. Violations; penalties. (a) A person who violates section 116C.723, 116C.724, or 116C.731 is:

(1) guilty of a misdemeanor and is subject to a fine of not more than \$20,000; and

(2) subject to a civil penalty of not more than \$10,000 for each day of violation, payable to the state, and may be ordered by the court to pay to the state an additional sum as compensation for cleanup and for pollution, destruction, or impairment of the environment, including but not limited to contamination of water supplies or water aquifers.

(b) A violation of section 116C.723, 116C.724, or 116C.731 may be enjoined as provided by law in an action in the name of the state brought by the attorney general.

(c) This subdivision does not limit other remedies otherwise available to either the state or private parties for violations of section 116C.723, 116C.724, or 116C.731.

HIST: 1977 c 416 s 4; 1984 c 453 s 16; 1984 c 628 art 3 s 11; 1987 c 384 art 2 s 1