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LOW-LEVEL RADIOACTIVE WASTE

Senate Bills 65 and 297 (Substitute H-2)
Senate Bill 66 as introduced
First Analysis (11-17-87)

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Sponsor: Sen. John Cherry
Senate Committee: Natural Resources & Environmental Affairs
House Committee: Conservation & Environment

THE APPARENT PROBLEM:

In 1980, the United States Congress passed the Low Level Radioactive Waste Policy Act. The legislation required that each state be responsible for the safe and adequate disposal of low-level radioactive waste generated within its borders. Currently, such radioactive waste is stored only at federally licensed disposal sites in the states of Nevada, Washington, and South Carolina. Under the federal act, states can use a regional approach to waste disposal by joining a regional compact or they may chose to "go it alone." By passing Public Act 460 of 1982, Michigan agreed to participate in the Midwest Low-Level Radioactive Waste Compact. Other states in the compact are Indiana, Iowa, Minnesota, Missouri, Ohio, and Wisconsin.

In 1985, Congress passed the Low Level Radioactive Waste Policy Amendments Act which permits Nevada, Washington, and South Carolina to continue accepting waste until January 1, 1993, when all states will be required to have made provisions for disposal of state-generated waste. In addition, the legislation imposes strict deadlines for individual states or regional compacts to establish disposal facilities for waste, with penalties to be enacted for failure to meet one of the milestones. By January 1, 1988, each region will have to have selected a state within its membership to host a disposal facility, and that host state will be required to have a plan for establishing the location of a facility. Recently, Michigan was chosen by the Midwest Compact to be the host state for the region's disposal facility. Thus, Michigan is faced with the challenge of meeting the federal deadline of January 1, 1988, for having a plan developed for taking responsibility for low-level waste generated within its borders and in those states with whom Michigan has entered into the compact.

THE CONTENT OF THE BILLS:

Senate Bill 65 would amend the Public Health Code to provide that the Department of Public Health (DPH) would have regulatory responsibility in all matters relating to the generation, storage, processing, handling, transporting, possession, or disposal of low-level radioactive waste in the state. The department would have to coordinate all regulatory activities of state agencies and departments that acted within the scope of their responsibilities related to waste. The DPH would have to review all laws and rules pertaining to the Low-Level Radioactive Waste Authority (as proposed in Senate Bill 297), the disposal site, generators, carriers and processors. By April 1, 1988, the DPH would have to recommend to the governor whether additional or more stringent regulations would be required to protect the public health, safety, and welfare, and the environment. In addition, the department and the attorney general would have to recommend to the legislature whether the state should include naturally occurring or accelerator produced radioactive materials (known as NARM waste) in the definition of waste that could be disposed of in the disposal site.

The bill would prohibit a person from possessing, generating, collecting, processing, packaging, storing, or disposing of low-level radioactive waste without complying with the requirements of the bill. The DPH would have to assure that waste generated in a state that was not a member of the compact would not be accepted for the disposal site except upon the affirmative vote of the Low-Level Radioactive Waste Commission as required in the compact.

The bill would establish the application process for a construction and operation license for a low-level radioactive waste facility. No later than September 1, 1988, the director of the DPH, after consulting with the Department of Natural Resources (DNR), would have to establish minimum criteria in regards to disposal sites and waste disposal technology for the design, construction, and operation of the disposal site. The criteria would have to reflect and be updated to include state of the art technology. Criteria developed would have to comply with criteria adopted under the Atomic Energy Act and regulations pertaining to federal licensing requirements for land disposal of waste. Criteria also would have to include provisions for monitoring at the disposal site and within the disposal unit, and for the recoverability of waste that had been disposed of in the site. Michigan licensing requirements for disposal site design, construction, and operation would have to be at least as stringent as all applicable federal requirements and the director of the DPH, upon consultation with the DNR, would have to establish licensing requirements that would reflect practices necessary to the public health, safety, and welfare and the environment. A disposal site could not be constructed or operated in the state without a license issued by the director of the DPH; further, the director could consider only an application for a license submitted by the Low-Level Radioactive Waste Authority (the authority). The authority would be responsible to supplement and update applicant information required under the bill and provide the DPH with such information for persons with whom the authority entered into contracts following the original application for a construction and operating license. The department would be required to permit the authority to receive waste only from a generator, carrier, processor, or collector whose name was on a master list and who held a valid permit issued in the state or a valid permit issued by a compact member state that had equivalent privileges because that state had established and maintained to the satisfaction of the department a permitting and regulatory system that equaled or exceeded the laws and rules of the state.

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The authority, as part of the application for a construction and operating license, would be required to file surety bonds or other suitable instruments or mechanisms, or secured trust funds, that would have to be approved by the department and cover the cost of site closure and stabilization, and postclosure observation and maintenance and institutional control. Applicants would also have to demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden and accidental radioactive releases from the disposal site.

The director of the DPH could enter the disposal site or other location where waste was located or reasonably believed to be located at any time for the purpose of monitoring, surveillance, and inspection. The director could enter at all reasonable times upon any public or private property, building, premises, place, or vehicle for the purpose of determining compliance with the bill, or a permit, registration, or license condition, rule, or order. If the director found a violation of the bill he or she could request the attorney general to bring an action in the name of the people of Michigan to restrain, enjoin, prevent, or correct a violation of the bill, rule, or a permit or license.

The site would be prohibited from accepting wastes after December 31, 2013.

Senate Bill 66 would amend Public Act 113 of 1978 (which regulates the deposit and storage of radioactive waste) to create a new exemption to the state's ban on depositing or storing radioactive waste. The exemption would apply to low-level radioactive waste that was disposed of in accordance with both Public Act 460 of 1982 (the act providing for Michigan's participation in the Midwest Interstate Low-Level Radioactive Waste Compact) and Senate Bill 65.

Senate Bill 297 would create the Low-Level Radioactive Waste Authority as an autonomous entity within the Department of Management and Budget. The authority would select a host site for the disposal of low-level radioactive wastes and submit an application to the DPH for a construction and operating license for the disposal site that would meet the requirements of Senate Bill 65. It would also be responsible for establishing and maintaining waste disposal fees and surcharges, a disposal shipment registration system, and a study and investigation of the disposal site in order to ascertain and provide remedies for any defects. The authority would develop and monitor the disposal site and postclosure observation and maintenance procedures. The authority would also have to prepare and submit a monthly report to the DPH concerning waste shipments and the character, volume, class and curie count of waste received by the authority.

The authority would have to submit an application to the DPH no later than January 1, 1990 for a construction and operating license. Since the state joined the compact, the authority would also be required to apply to the Nuclear Regulatory Commission for a construction and operating license by that date. Within 60 days of the effective date of the bill, the authority would have to establish a process by which a municipality could volunteer to be the host site. Within 30 days of the effective date of the bill the authority would organize the establishment of a siting advisory committee. The committee would have to be formulated as an independent entity within the Department of Management and Budget. The committee would consist of five members who could each be employed by a university or college in the state and be knowledgeable in a technical specialty related to the siting of a low-level radioactive waste site. The authority would be required to establish final siting criteria no later than March 15, 1988. Final siting criteria established by the authority would exclude candidate sites that, among other stipulations, were located one mile or less from a fault where tectonic movement (structural deformation of the earth's crust) had occurred within the 10,000 years preceding the effective date of the bill, were not large enough to assure that an isolation distance of 3,000 feet or more was available to adjacent property lines, had wetlands within the boundaries of the site, were in an environmental area or a high risk area, were located in a 500 year flood plain or over a sole source aquifer, or were located within ten miles of Lake Michigan, Superior, Huron, Erie or their connecting waterways. The authority could waive one or more of the criteria that it was required to give preference to if it obtained written approval from the DPH. The authority would have to designate three qualified candidate sites by June 1, 1988.

No more than 90 days after the designation of the candidate sites, but not later than September 1, 1988, a review board would have to be established to provide recommendations to mitigate concerns of the municipality in which each candidate site was located. The review board could recommend one of the three candidate sites as host site. Within 30 days of the designation by the authority of the candidate sites, the governing body of those municipalities would have to establish a local monitoring committee to represent the interests of their citizens and to assure the protection of the public health, safety, and welfare and the protection of their local environment.

The authority would be required to designate the host site by September 1, 1989. The authority would have to assure that the disposal site was completed and operational by January 1, 1993, and in accordance with the criteria established in Senate Bill 65.

The bill would allow the local monitoring committee for the host site to negotiate with the authority regarding monetary and nonmonetary forms of compensation and other matters pertaining to the disposal site. Negotiations could commence no later than 30 days after the host site designation and would have to conclude no later than February 1, 1990. If the local monitoring committee and the authority could not resolve an issue during negotiation, each side would have to prepare a final summary of each issue on which there was disagreement. The summary would have to include a statement from each party that explained and documented its final best offer on each issue in disagreement.

The local monitoring committee or the authority could require the appointment of an arbitration committee, if required, prior to February 1, 1990. All issues that were resolved during arbitration would have to be incorporated in a written final agreement. If one or more issues were not resolved within 45 days of the commencement of arbitration, but not later than April 1, 1990, arbitration would have to cease and each unresolved issue would have to be decided by the chairperson of the arbitration committee. The chairperson's decision would be final and binding.

No later than October 1, 1988, the authority would be required to organize the establishment of an international Low-Level Radioactive Waste Research Education Institute. The institute would conduct research on waste issues, train personnel necessary for the management of the disposal site to assure the protection of the public health, safety,

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welfare, and environment, develop and operate a technical resource program to provide information and assistance to persons involved with public policy issues surrounding the management of the disposal of waste, and to develop and implement public education programs that would assist the public in understanding issues surrounding waste disposal. The institute would have an annual budget of not more than $1 million, with funding to be paid from the Low-Level Radioactive Waste Management Fund.

The authority would be required to establish "just and reasonable" waste disposal fees and surcharges, and to assure that sufficient funds would be available in the Low-Level Radioactive Waste Fund for the acquisition of the disposal site, the Midwest Interstate Low-Level Radioactive Waste Commission, the authority, the DPH budget as it pertained to the departments regulatory responsibility outlined in Senate Bill 65, the institute, and other agencies and actions associated with the disposal site. Specifically, $500,000 of the fund would annually go to the state for unrestricted purposes and $800,000 would annually go to the host site community for unrestricted purposes. Waste disposal fees and surcharges would be based on volume, total radioactivity and the half-life of waste measured in curies. A fee and surcharge schedule would not be dependent on revenues received for disposal of class "C" waste but would be based on a realistic model of the projected cost of the disposal of each classification of waste. Further, the imposition of a 20 percent surcharge would be added to the negotiated fees. The surcharge would have to be distributed by the authority as follows: 35 percent or $400,000 (whichever was greater) to the host site; 15 percent or $300,000 (whichever was greater) to the county in which the site was located and each county that shared a boundary with the disposal site; 15 percent or $400,000 (whichever was greater) to the Environmental Response Fund; and 15 percent or $200,000 (whichever was more) to the Clean Michigan Fund. All revenues in the fee system resulting from disposal of class "C" waste would be deposited in the Clean Michigan Fund.

The bill would create the Low-Level Radioactive Waste Management Fund in the state treasury. The fund would be administered by the authority. The legislature would make appropriations from the fund as provided in Senate Bill 65 and as would be necessary for the authority to implement fully its powers and responsibilities. The remedial action fund, the long-term liability fund, the long-term care fund, and the tax contingency fund would be created as separate funds in the department of treasury. Ten million dollars would be deposited in the remedial action fund during the period the disposal site accepted waste to pay for remedial action taken by the authority in the event of a radioactive release. Each year $500,000 would be deposited in the long-term liability fund to pay judgments or judicially approved settlements of claims resulting from the disposal of low-level radioactive waste at the disposal site. This fund would only be used after the funds in the surety bond, secured trust fund, or other secured instrument and liability coverage used to cover costs of site closure and stabilization were expended. Each year $600,000 would be deposited in the long-term care fund which would be available only to pay for the expenses of site closure and stabilization and institutional control. And, an annual deposit of $100,000 would go to the tax contingency fund which would be available for reasonable payments in lieu of property taxes, but for ownership of the disposal site by the authority, and would be payable with respect to the disposal site for as long as the disposal site was not subject to pay property taxes.

For the purposes of financing project costs the authority could borrow money and issue its revenue bonds payable solely from the disposal site revenues. Bonds would be sold at a discount rate but could not be sold at a price that would make the interest cost on the money borrowed (after deducting any premium or adding any discount) exceed 10 percent per annum or the maximum rate permitted by the municipal finance act. The authority could authorize any transaction to provide security to assure timely payment of the bond.

No later than April 1, 1988, the authority would have to submit a report to the governor and the legislature that included recommendations regarding the relationship of the state to the Midwest Interstate Low-Level Radioactive Waste Compact to assure: the continuity in compact membership and the institutional and financial stability of the compact; the institutional and financial stability of the authority and all aspects of the disposal site; and equal sharing by all compact members of all liabilities and costs associated with the disposal site. The report would also have to include recommendations regarding any amendments that could be required to the bill, Senate Bill 65, or any other rule or law and whether the state should include naturally occurring or accelerator produced radioactive materials (known as NARM waste) in the definition of waste that could be disposed of in the disposal site. In addition, the report would have to state whether it was feasible and desirable from the standpoint of the public's perception to locate the disposal site adjacent to or in the vicinity of a generating facility. The authority would make this recommendation without regard to whether federal or state law or rules in effect when the report was submitted might prevent locating the disposal site adjacent to or in the vicinity of a generating facility. The report would also have to state whether the option of participating in the compact was the safest and most effective option for disposing of waste for the state in view of the totality of the circumstances, including the identification and costs of policy options available to the state if it were to withdraw from the compact. The report would include a detailed comparative study on other states that had chosen to dispose of waste through institutions other than interstate compacts, the reasons for the decisions made by those states and the means by which those states were in the process of considering the disposal of waste generated within their borders.

The failure of the authority to comply with a requirements of the bill that pertained to specific dates would not invalidate an action taken by the authority after the specified date, if the action were in compliance with the bill. The authority would have to make an annual report to the governor and to the legislature that gave a full account of the activities of the authority. Upon request of the authority, any department or agency of the state would have to assist the authority in fulfilling its responsibilities under the bill and would have to be reimbursed for costs associated with the assistance.

The legislature would annually appropriate to the authority sufficient funding from the Low-Level Radioactive Waste Management Fund to ensure the effective implementation of the bill.

Senate Bills 65, 66 and 297 are tie-barred.

HOUSE COMMITTEE ACTION:

The House Conservation and Environment Committee made several changes to the bills designed to strengthen protection measures. The committee also passed House

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Resolution 470 requesting the Michigan Radioactive Waste Control Committee to prepare a report on the handling of naturally-occurring and accelerator-produced radioactive material, and House Resolution 314 requesting the United States Congress to review the Low-Level Radioactive Waste Policy Act of 1980.

FISCAL IMPLICATIONS:

According to the House Fiscal Agency, most of the costs of the bills to the state are indeterminate because the bills assume that all activities would be paid for through restricted funding (the Low-Level Radioactive Waste Management Fund) and it is not apparent that this will definitely occur, or what would happen if the fund could not cover all costs generated by the bill. However, the agency estimates that it would cost at least $1.5 million to implement Senate Bill 65 and at least $15.3 million to implement Senate Bill 297. Costs for Senate Bill 297 are as follows: $1.5 million to DPH for regulatory duties; $800,000 to the authority for staff; $1 million to the institute; and $12 million over four years for preoperational costs of the disposal site (this would not include actual development of the site). The House Fiscal Agency notes that none of the money required to implement either of the bills would be taken from the general fund. Senate Bill 66 would have no fiscal implications to the state. (11-16-87)

ARGUMENTS:

For:

In addition to requiring each regional compact to designate a host state for the region's low-level radioactive waste, the 1985 Low Level Radioactive Waste Policy Amendments Act also requires that a siting plan for the regional facility be in place prior to January 1, 1988. Senate Bills 65, 66, and 297 would fulfill federal mandates for the disposal of low-level radioactive waste, and prevent federal punitive measures from being taken against the state. Federal measures could include the imposition of a significant surcharge increase on waste which was presently sent to Washington, South Carolina, and Nevada; loss of federal funds for site construction and analysis; and the potential for Michigan hospitals, universities, research facilities, industry and utilities to lose access to existing disposal facilities.

For:

Currently, Michigan law prohibits the permanent disposal of low-level radioactive waste in the state. Senate Bill 66 would amend the Public Health Code to permit disposal of low-level radioactive waste, therefore allowing the process of siting and regulating a disposal site (as outlined in Senate Bills 65 and 297) to proceed legally.

For:

The use of radioactive materials provides benefit to society in education, medicine, industry, research, and energy production. Low-level radioactive waste, which is a necessary by-product of these activities, can be disposed of safely and in an environmentally acceptable manner. Senate Bills 65, 66, and 297 would allow Michigan to progress toward a functioning low-level radioactive waste disposal site in 1993, as federal law requires.

Against:

Unlike the disposal of household trash, radioactive wastes may not be shipped to a solid waste landfill. These wastes have unique characteristics that require special isolation systems to prevent the contamination of surrounding areas. The degree of isolation necessary is generally determined by classifying waste into two categories: high level and low-level radioactive waste. While high-level waste is defined as having higher concentration of radioactive isotopes and remains a federal responsibility, Michigan is being asked to accept low-level waste for disposal. "Low-level waste" is an imprecise category covering a broad spectrum of radioactive materials. Although low-level waste is often associated with slightly contaminated booties, test tubes, and other refuse, it also includes highly radioactive materials from nuclear reactors. While some low-level waste may remain radioactive for only hours, other types stay hazardous virtually forever. For example, ion exchange resins and irradiated reactor components from the decommissioning of reactors are considered low-level, yet have hazardous lives in excess of 100,000 years. The state should not be forced to accept what should remain national responsibility: the disposal of all nuclear waste. The states are not adequately equipped to deal with the problem, and, rather than going along with ill-conceived federal legislation, should refuse to set in motion the framework proposed by Senate Bills 65, 66, and 297, and should challenge the U.S. Congress to rethink and amend its laws that require states to assume disposal responsibility.

Further, the National Environmental Policy Act requires impact statements to be made for proposals of legislation affecting the environment. There should have been a statement made by the National Regulatory Commission or a responsible federal official prior to amendments triggering the language in Senate Bills 65, 66 and 297 and putting the responsibility for waste disposal on the states. All of the states should insist that the federal government comply with the policy act. If the federal government did comply with the policy act detailed environmental information would probably be generated in regard to feasible alternatives to regional waste disposal. As the federal act is currently written it assumes that all states are suitable for a disposal site, which is a preposterous assumption. If the impact statement is done it is quite likely that it would be determined that no matter how much waste certain states generate, some states may not be suitable for wastes under any circumstances. Michigan would probably be included in this finding as one of the unique states because of its Great Lakes.

Response: Some people have assumed that refusing to comply with federal deadlines regarding the establishment of a waste facility will simply cause the problem to go away. Low-level radioactive waste exists. There is little chance that the federal law will be changed soon. Therefore, Michigan has to manage low-level waste in the safest possible way for the people and the environment. The state currently generates a substantial volume of waste and this volume will increase substantially when Fermi II is fully operational. Whether or not Michigan remains a member of the Midwest compact, Michigan is responsible for managing its waste. Through the many safeguards found in Senate Bills 65, 66, and 297, Michigan would not construct a waste facility until it was certain that the state could protect the health of its citizens and the quality of the environment.

Rebuttal: Although Michigan generates the greatest volume of low-level radioactive wastes of all of the members of the compact, it is debatable whether the radioactivity of the wastes that Michigan produces is greater than that of other states within the compact. The criteria used to select the host state ignored this fact completely, although it would seem to be an important factor in the selection of a host state. Thus, at the very

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least, the compact should reevaluate its selection process and develop a more equitable method of choosing a host state.

Against:

The bills propose that Michigan be responsible for accepting radioactive waste for 20 years. Then, the state would be followed by Ohio who would collect the region's waste for the next 20 years. It is of concern that there exist no adequate safeguards to prevent a state from dropping out of the compact prior to assuming its turn to receive the region's waste for disposal. In addition, the U.S. Congress will review the system of disposal every five years and could disband the whole regional arrangement. This would leave Michigan responsible for accepting radioactive waste for 20 years and safeguarding it for more than 400 years while the radioactivity dissipates. The plan for funding the disposal site is also a concern. The sites would be funded by corporations or governmental agencies using the site, but such revenues might not be forthcoming. Liability is another question that is not adequately addressed by the bills or the compact. In case of radioactive leakage or another accident, Michigan would be responsible. The regional compact does not require the other states to share liability. No plans should be made to allow waste from other compact states to be disposed in Michigan unless those states commit themselves to staying in the compact indefinitely, guarantee to pay the fees necessary to safeguard the public health and environment, and share legal liability.

Against:

The federal plan for as many as 13 low-level disposal sites in the country requires three or four times as many as are needed. Since federal law requiring such sites was passed, the nation has not been producing the quantity of waste that was projected. With many fewer national sites needed, it would seem foolish to plan for a state like Michigan, which is surrounded by 20 percent of the earth's fresh water, to be a disposal site. Further, it is ridiculous to assume that states will be able to develop disposal sites which would last long enough to contain the wastes which they held. It would be better to have the wastes held in one or two specific areas rather then having the wastes scattered all over the country and rotated every twenty years. If waste must be stored in the state, and since nearly all of the low-level waste is generated at nuclear power plants, it would make better sense for Michigan to store such waste at the site of generation, rather than transport and dispose of it at considerably greater risk to the public health and environment.

POSITIONS:

The Department of Public Health supports the package as long as it receives the resources to implement it. (11-9-87)

The Michigan United Conservation Clubs opposes the concept of the package. (11-9-87)

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