



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

MAR 26 1986

*File*  
*50-346*

The Honorable Mary Rose Oakar  
United States House of Representatives  
Washington, DC 20515

Dear Congresswoman Oakar:

Your letter of January 28, 1986, to Chairman Palladino has been referred to me by Judge Plaine. I will address the NRC's actions with regard to your public health and safety concerns regarding the proposal to bury potentially radioactively contaminated wastes at the Davis-Besse Nuclear Power Plant site. Judge Plaine, in his February 25, 1986 letter, explained that the Commission had ordered an informal public hearing on this issue which addresses one of your concerns. The purpose of this letter is to address the other issues raised in your letter.

The material proposed for disposal consists of approximately 34,000 cubic feet every five years of very low level radioactive sludge. The material would be deposited in shallow trenches and covered with topsoil. There are several pathways for exposure to the material that can be postulated. These include standing over the disposal area, eating food grown on the disposal area, inhalation of wind borne dried sludge, and drinking ground water. Because the disposal site is on land owned by Toledo Edison Company, the first two paths are unlikely and the method of disposal virtually eliminates the third path. The total body dose from the remaining path, drinking ground water, is estimated to be less than 0.1 millirem per year. The U.S. EPA has issued standards for the exposure of individuals to radioactivity from the nuclear fuel cycle. These standards specify that no member of the public receive an annual dose in excess of 25 millirem from planned discharges from nuclear fuel cycle operations. This dose would be only 0.4% of that exposure. When compared to the U.S. EPA drinking water standards applicable to community water supplies, the dose is 2.5% of the 4 millirem standard. This low level of exposure does not represent a threat to public health and safety nor will it damage aquatic and wildlife in the vicinity.

With regard to disposal of this material under the recently enacted Midwest Interstate Low Level Radioactive Waste Compact, it is important to note that the compact only establishes the framework under which the member states will work. No site has yet been identified or agreed to and neither has the host state. Although the Low Level Radioactive Waste Policy Amendments Act of 1985 mandates an operating site by 1993, there is no assurance that such a site will be available by then. Indeed, the Compact, itself, allows for member states to withdraw from the Compact. Furthermore, it is not likely that an approved site could be available much before 1993 even if agreement on the site, engineering, construction, and licensing proceeded expeditiously. If this deadline is not met, the Act provides that the State of Ohio would be obligated to take possession of the waste and it would be liable for direct and indirect damages if the State failed to take possession of the waste.

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It should be noted that approved space suitable for the disposal of low level radioactive waste is a limited and valuable national resource. As such, it should not be needlessly consumed by burial of wastes which are only slightly contaminated and which can be safely disposed of at other locations. On October 16, 1981, in its Policy Statement on Low-Level Waste Volume Reduction published in the Federal Register, the NRC recognized the need to minimize the quantity of waste generated and shipped to waste disposal sites.

With only one exception, existing regulations provide no minimum level of radioactivity in waste from a licensee's facility that may be disposed of in a manner other than as radioactive waste. The Commission has recognized the need for similar provisions for other wastes that would be exempt and of no regulatory concern. The need for this is recognized by the Low Level Radioactive Waste Policy Amendment Act. Section 10 of the Act requires the Commission to establish standards and procedures and the technical capability to act upon petitions to exempt specific radioactive wastes from regulation by the Commission due to the presence of sufficiently low quantity of radiation to be of no regulatory concern.

There are presently few alternatives to burying these wastes on the plant site. The wastes could be processed as low level wastes, packaged in appropriate containers, and shipped to a licensed low level radioactive waste disposal site. There are only three such sites --Barnwell, SC, Richland, WA and Beaty, NV,-- which are now accepting such wastes. Each shipper, however, is under a volume allotment because of the limited availability of burial space at these sites. Utilizing the limited capacity of these sites for very low level waste would needlessly consume a valuable national resource. The wastes could be left in the settling ponds at Davis-Besse and new ponds could be made. This is not a practical solution because it delays the problem instead of solving it and the cost and time required to construct new ponds would be prohibitive even if a suitable location for such ponds could be found onsite.

The NRC's action with respect to the Davis-Besse proposal is consistent with the Commission policy as stated on October 19, 1981 and is not inimical to the health and safety of the public.

To understand why this material is acceptable for on-site burial, it is useful to understand its source. The waste material consists of water purification resin sludge which has been accumulating in two on-site settling ponds since facility operation was authorized in 1977. The resin is used in the plant in two separate but similar applications. One application, the one that produces the most waste, is to purify raw water before it is used in the plant. This application does not result in any radioactively contaminated waste. The other application is to purify secondary system water before it is returned to the steam generators to produce steam for use in the power conversion cycle. Possible leaks through the steam generator tubes from the primary water cooling the reactor will carry some radioactive material into the steam system which can be removed by the water purification resins located in the secondary system. Radioactive contamination of these resins is normally very low since Davis-Besse has had an excellent record with respect to steam generator tube leakage. The longest half-life associated with the contamination does not exceed 30 years and about 65% of the contamination has a half-life of 5 years or less.

When the power conversion secondary system resins are no longer effective in performing the purification function, they are transferred to a holding tank for monitoring and are replaced with fresh resin. Samples are taken to measure the amount of radiation present on the used resin. If significant radioactivity is present, the resins are transferred within the plant to be further processed and prepared for shipment to licensed radioactive waste disposal sites. If no significant radioactivity is measured, the resins are discharged to the settling ponds. This process provides assurances that only very low level wastes are transferred into the settling ponds.

The resins which are discharged to the settling ponds settle to the bottom of the ponds where they accumulate along with resins discharged from the raw water purification process. The water which is used to flush the resins to the settling ponds is discharged to Lake Erie. Periodically, the accumulated resins must be removed from the ponds by dredging and disposed of.

We trust that this letter has been fully responsive to the issues raised in your letter. Please contact us if we can be of further assistance.

Sincerely,

Original signed by  
Victor Stello

Victor Stello, Jr.  
Acting Executive Director  
for Operations

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OCA

*SKL*  
*3/26/86*

*Revised in EDO 3/21/86*

\*See previous white for concurrences.

OELD  
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3/11/86

EDO *us*  
VStello  
3/25/86

PBD-6	PBD-6	PBD-6	<del>EDO</del>	NMSS	DD-NRR	D:NRD
ADe Agazio;cf*	CMcCracken*	JStolz*	FMiraglia	RBrowning**	EDenton	HDenton
3/10/86	3/10/86	3/10/86	3/10/86	3/12/86	3/14/86	3/14/86

\*\*Telephone conc. by L. Higginbotham for R. Browning.

*as made*

The Honorable Mary Rose Oakar  
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Washington, DC 20515

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The material proposed for disposal consists of approximately 34,000 cubic feet every five years of very low level radioactive sludge. Using an estimate of the maximum radioactivity in the sludge at the time of dredging, the NRC estimated the maximum radiation exposure to individuals from possible exposure paths including external exposure from standing over the disposal area, eating food grown over the disposal area (not a likely possibility), drinking ground water from the nearest well, and inhalation of windborne dried sludge (not a likely possibility). By this conservative estimate, the total body dose from all these routes, when combined for a single individual are less than 4 millirem per year. The average dose from naturally occurring radioactivity in Ohio is about 100 millirem per year. These estimates were reported in the NRC's notice in the Federal Register on October 9, 1985.

With regard to disposal of this material under the recently enacted Midwest Interstate Low Level Radioactive Waste Compact, it is important to note that the compact only establishes the framework under which the member states will work. No site has yet been identified or agreed to and neither has the host state. Although the Low Level Radioactive Waste Policy Amendments Act of 1985 mandates an operating site by 1993, there is no assurance that such a site will be available by then. Indeed, the Compact, itself, allows for member states to withdraw from the Compact. Furthermore, it is not likely that an approved site could be available much before 1993 even if agreement on the site, engineering, construction, and licensing proceeded expeditiously. If this deadline is not met, the Act provides that the State of Ohio would be obligated to take possession of the waste and it would be liable for direct and indirect damages if the State failed to take possession of the waste.

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Acting Executive Director  
for Operations

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

*Rec'd*  
*2/23*

EDO PRINCIPAL CORRESPONDENCE CONTROL  
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FROM:

*14*  
DUE: 03/07/86

EDO CONTROL: 001451  
DOC DT: 01/28/86  
FINAL REPLY:

REP. MARY ROSE OAKAR  
(REFERRED BY MEMO MAL SCH. OGC  
TO REHM, 2/21/86

TO:

CHAIRMAN PALLADINO

FOR SIGNATURE OF:

\*\* PRIORITY \*\*

SFCY NO:

EXECUTIVE DIRECTOR

DESC:

ROUTING:

BURIAL OF LOW-LEVEL WASTE NEAR DAVIS-BESSE

DATE: 02/21/86

ASSIGNED TO: NRR

*[Signature]*  
CONTACT: DENTON

STELLO  
ROE  
RFHM  
SNIEZEK  
DAVIS  
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TAYLOR

*Kepler*

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COORDINATE REPLY WITH NMSS & ELD.

NRR RECEIVED: 2/25/86

ACTION: DPL-B: MIRAGLIA

*[Signature]*

NRR ROUTING: DENTON/EISENHUT  
PPAS  
MOSSBURG