



50-346

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

APR 8 1986

The Honorable John Glenn  
United States Senate  
Washington, DC 20510

Dear Senator Glenn:

Your letter of February 25, 1986, to the Nuclear Regulatory Commission has been referred to me to address the concerns of the Council of Mayfield Heights and the Council of Lyndhurst regarding the proposal to bury potentially radioactively contaminated wastes at the Davis-Besse Nuclear Power Plant site. However, before I address those concerns, I want to inform you that, in response to a Commission order, a notice was published in the Federal Register on March 14, 1986, which offers an opportunity for interested parties to intervene in an informal hearing to be held on this matter.

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 for 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.

The Resolution of Mayfield Village also expresses concern that the burial of the dredgings on the Davis-Besse site could result in release of radioactivity into Lake Erie as a result of flooding of the burial location. It should be noted that the material presently is in open settling ponds. Removal and burial of the dredgings would reduce the already low likelihood of this material reaching the lake.

To understand why this waste material is acceptable for on-site burial, it is important to understand the source of the wastes. 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

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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 purification 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. Please contact us if we can be of further assistance.

Sincerely,

Original signed by  
Victor Stello

Victor Stello, Jr.  
Executive Director  
for Operations

REVISED IN EDO 4/2/86

\*See previous white for concurrences.

PBD-6	PBD-6	PBD-6	D-PWR-B	DD:NRR	D:NRR
ADe Agazio;cf*	CMcCracken*	JStolz*	FMiraglia	DEisenhut	HDenton
3/21/86	3/21/86	3/21/86	3/21/86	3/ /86	3/31/86

OCA  
4/1/86  
EDO  
Stello  
4/7/86

The Honorable John Glenn  
United States Senate  
Washington, DC 20510

Dear Senator Glenn:

Your letter of February 25, 1986, to the Nuclear Regulatory Commission has been referred to me to address your interest in the NRC's actions with regard to the concerns expressed in correspondence received from your constituents regarding the proposal to bury potentially radioactively contaminated wastes at the Davis-Besse Nuclear Power Plant site. You asked us to refer to the Council of Mayfield Heights and the Council of Lyndhurst in our response. A copy of a Resolution adopted by the Council of Mayfield Heights was included with your letter, so I will address the issues raised in that resolution. However, before I discuss those issues, I want to inform you that, in response to a Commission order, a notice was published in the Federal Register on March 14, 1986, which offers an opportunity for interested parties to intervene in an informal hearing to be held on this matter.

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 amount of radioactivity in the waste at the time of disposal, the NRC estimated the maximum radiation exposure to individuals from possible exposure paths including standing over the disposal area, eating food grown on the disposal area, inhalation of windborne dried sludge, and drinking ground water from the nearest well. The total body dose from all these paths combined for a single individual is less than 4 millirem per year. The average annual dose from naturally occurring radiation in Ohio is about 100 millirem. These estimates were reported in the NRC's notice in the Federal Register on October 9, 1985.

To understand why this waste material is acceptable for on-site burial, it is important to understand the source of the wastes. 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 purification 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.

The Resolution of Mayfield Village expresses concern that the burial of the dredgings on the Davis-Besse site could result in release of radioactivity into Lake Erie as a result of flooding of the burial location or seepage into the ground to contaminate drinking water. With regard to the effects of potential flooding, it should be noted that the material presently is in open settling ponds. Removal and burial of the dredgings would reduce the already low likelihood of this material reaching the lake. With regard to contamination of ground water, this is one of the exposure paths examined by the NRC. The dose from this path is less than 0.1 millirem. The US 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 US EPA drinking water standards applicable to community water supplies, the dose is 2.5% of the 4 millirem standard.

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Sincerely,

Victor Stello  
Acting Executive Director  
for Operations

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Ade Agazio;cf*	CMcCracken*	JStolz*	FMinaglia	DEisenhut	HDenton	VStello
3/21/86	3/21/86	3/21/86	3/2/86	3/ /86	3/31/86	/ /86

*Stello*  
3/25

OCA

4/ /86

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PBD-6 *AGG*  
Ade Agazio;cf  
3/21/86

PBD-6 *CC*  
CMcCracken  
3/21/86

PBD-6 *J*  
JStolz  
3/21/86

D-PWR-B  
FMiraglia  
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DD:NRR  
DEisenhut  
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D:NRR  
HDenton  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

EDO PRINCIPAL CORRESPONDENCE CONTROL  
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FROM:  
SEN. JOHN GLENN

DUE: 03/21/86<sup>28</sup>

EDO CONTROL: 001502  
DOC DT: 02/25/86  
FINAL REPLY:

TO:  
OCA

FOR SIGNATURE OF:  
EXECUTIVE DIRECTOR

\*\* GREEN \*\*

SECY NO: 86-202

DESC:

ROUTING:

ENCLOSES LETTER FROM DONNA HEATH, MAYFIELD VILLAGE  
RE RESOLUTION 86-8 TO NRC OPPOSING APPLICATION OF  
TOLEDO EDISON CO TO BURY RADIOACTIVE SLUDGE AT  
DAVIS-BESSE PLANT

KERR, SP  
DAVIS  
KEPLER  
GCUNNINGHAM

DATE: 03/07/86  
ASSIGNED TO: NRR CONTACT: DENTON

SPECIAL INSTRUCTIONS OR REMARKS:

NRR RECEIVED: 03/07/86  
ACTION: ~~DPLB - MIRAGLIA~~

*McCrahey*  
*J. Stolz / DL Rodriguez*

NRR ROUTING: DENTON/EISENHUT  
PPAS  
MOSSBURG/TOMS

