50-245
336
423

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 21, 1996

Ms. Lynn Rebilowski
267 Roxbury Road
Niantic, CT 06257

Dear Ms. Rebilowski:

Thank you for your letter of October 12, 1996, to Chairman Jackson of the U.S. Nuclear Regulatory Commission (NRC). It is always a pleasure to hear from people who formerly were associated with the NRC. We appreciate that you attended the public meeting held August 6, 1996, in Waterford, Connecticut, at which Dr. Jackson discussed NRC activities related to Millstone Units 1, 2, and 3.

In your letter, you asked about the feasibility of vitrification of the radioactive waste water at Millstone. Except for the spent fuel elements, the potentially contaminated waste material at a nuclear plant is normally classified as low-level radioactive waste. "Low-level waste" is a general term for a variety of contaminated wastes generated by nuclear power plants, hospitals, medical and educational research institutions, private and Government laboratories, and other governmental or commercial activities that use radioactive materials as part of their normal operations. Compared to the high-level waste involving spent fuel, the low-level waste from a nuclear plant has a very low level of radioactivity with a relatively shorter half-life. In most nuclear plants, the radioactive waste water that you mentioned is processed through ion exchange resins that remove the soluble and insoluble radioactivity, as well as any chemical contaminants, so that the water can be reused in the plant. The specially designed ion exchange resins function similar to the ion exchange resins in a household water softener. The solid resin beads are dewatered and shipped as a solid material in high-integrity containers to one of the two approved low-level waste disposal facilities at Barnwell, South Carolina, or Hanford, Washington.

The vitrification process that is described in the two articles you sent primarily is being evaluated by the Department of Energy for processing the highly radioactive wastes from the solvent-extraction process used to separate plutonium and uranium for the nuclear weapons program. As the one article stated, the process has "one catch--the cost" and notes that "it costs about $800 a pound to process high-level nuclear waste." The ion exchange process used in most nuclear plants to remove the radioactive material from waste water creates a solid material acceptable for disposal at a fraction of the cost. Thus, vitrification has not been considered for this application.

In your letter, you also raised a question about the utilities considering natural gas as the fuel source for future power generating facilities. Any decision by a utility as to whether they build their own generating facilities

or purchase power from an independent producer or other utility is based, to a large extent, on economic considerations. The NRC is not involved in these economic decisions.

I trust this information is responsive to your comments.

Sincerely,

Original signed by
Frank J. Miraglia

Frank J. Miraglia, Jr., Acting Director
Office of Nuclear Reactor Regulation

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I trust this information is responsive to your comments.

Sincerely,

Frank J. Miraglia, Jr., Acting Director
Office of Nuclear Reactor Regulation

ACTION

EDO Principal Correspondence Control

FROM: Lynn Rebilowski

DUE: 11/01/96

EDO CONTROL: GT96797
DOC DT: 10/12/96
FINAL REPLY:

TO:

Chairman Jackson

FOR SIGNATURE OF :

Miraglia

** PRI **

CRC NO: 96-1085

DESC:

MILLSTONE ISSUES

ROUTING:

Taylor
Milhoan
Thompson
Blaha
HMiller, RI

DATE: 10/22/96

ASSIGNED TO: NRR

CONTACT: Miraglia

SPECIAL INSTRUCTIONS OR REMARKS:

Put EDO and Chairman on for concurrence.
Chairman's Office to review response prior
to dispatch.

NRR RECEIVED: OCTOBER 22, 1996
NRR ACTION: DRPE:VARGA

NRR ROUTING:
MIRAGLIA
THADANI
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SHERON
MARTIN
BOHRER

ACTION

DUE TO NRR DIRECTOR'S OFFICE

BY Oct. 29, 1996

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

PAPER NUMBER: CRC-96-1085 LOGGING DATE: Oct 22 96

ACTION OFFICE: EDO

AUTHOR: LYNN REBELOWITHE w.ltr
AFFILIATION: CONNECTICUT

ADDRESSEE: CHAIRMAN JACKSON

LETTER DATE: Oct 12 96 FILE CODE: IDR-5 MILLSTONE

SUBJECT: EXPRESS CONCERN ABOUT THE NUCLEAR INDUSTRY AND REF CHAIRMAN'S VISIT TO WATERFORD, CONN---MILLSTONE ISSUES

ACTION: Direct Reply

DISTRIBUTION: CHAIRMAN, COMRS

SPECIAL HANDLING: SECY TO ACK

CONSTITUENT:

NOTES: OCM #5634--CHAIRMAN SHOULD REVIEW RESPONSE PRIOR TO DISPATCH C

DATE DUE: Nov 4 96

SIGNATURE: DATE SIGNED:
AFFILIATION:

EDO -- GT96797