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

AUGUST 15 1980

Ms. Francine M. Maultz
916 Hummingbird Lane
West Chester, Pennsylvania 19380

Dear Ms. Maultz:

Your letter to President Carter regarding the disposal of radioactive material from the Three Mile Island nuclear station was referred to me for response. I regret that this answer has been delayed for so long.

With regard to your concern about the purging of the radioactive krypton gas from the reactor building of TMI Unit 2, Metropolitan Edison Company submitted to NRC a "Safety Analysis and Environmental Report" (November 13, 1979) in which it evaluated alternative methods for the disposal of the krypton gases, such as purging and cryogenic processing, and selective absorption. NRC also evaluated alternative methods for disposal of the krypton gas to determine what effect decontamination would have on workers, on the public health and safety, and on the environment. Based on its evaluation, NRC issued an environmental assessment (NUREG-0662 and two addenda) for public comment on March 26, 1980, and received approximately 800 comments. These comments were considered in the staff's preparation of the "Final Environmental Assessment for Decontamination of the Three Mile Island Unit 2 Reactor Building Atmosphere" (NUREG-0662), vols. 1 and 2, copies of which are enclosed for your information.

From this process have emerged the following NRC staff conclusions:

- The potential physical health impact on the public of using any of the proposed strategies for removing the krypton-85 is negligible.

- The potential psychological impact is likely to grow the longer it takes to reach a decision, get started, and complete the process.

- The purging method is the quickest and the safest for the workers on Three Mile Island to accomplish.

- Overall, no significant environmental impact would result from use of any of the alternatives discussed in the assessment.

On June 12, 1980, the Commission issued an Order for Temporary Modification of License, authorizing controlled purging of the krypton-85 from the reactor building atmosphere. In a separate Memorandum and Order, also issued on June 12, 1980, the Commission discussed rationale for its decision. Actual venting operations began on June 28, 1980, and were completed on July 11, 1980. The doses resulting from the purge were well within those predicted in section 7.1 of volume 1 of NRC's final environmental assessment. Copies of both Commission issuances are also enclosed.

With regard to your concern about the release of contaminated water, except for releases to the Susquehanna River of liquids containing only low or nondetectable levels of radioactivity, such releases are not currently permitted. The Commission has authorized use of the EPICOR-II water treatment system for processing the waste water stored in tanks in the auxiliary building. We do not currently permit the discharge of water processed by the EPICOR-II system. The disposal of the water processed by EPICOR-II and the disposition of the reactor building sump water is addressed in the programmatic environmental impact statement (PEIS) on the decontamination and disposal of radioactive wastes at Three Mile Island. Copies of the PEIS are being made available for public comment.

As a result of releases containing only low or nondetectable levels of radioactivity, the levels of radioactivity in the Susquehanna are indistinguishable from existing background levels at public water supply intakes from the river. These levels have been confirmed by independent measurements made by the NRC, the Environmental Protection Agency, and the Commonwealth of Pennsylvania.

The small dose of radiation that people in the area received came from radioactive gases that escaped from the auxiliary building. The average dose of radioactivity the population within 50 miles of TMI received was approximately 4 millirems. The maximum exposure to any individual was less than 100 millirems, which is less than the yearly dose each person receives as a result of natural background radiation. Doses at these levels result in less than one health effect over the lifetime of all people in the area. Natural background radiation people in the Harrisburg area receive is approximately 125 millirems per year. To put these doses into perspective, note that a traveler flying round trip by jet from New York to Los Angeles receives 5 millirems of cosmic radiation.

I appreciate your concerns and assure you that every effort is being made to ensure the continued protection of the health and safety of the public.

Sincerely,

Richard A. Weller for

Bernard J. Snyder, Program Director
Three Mile Island Program Office
Office of Nuclear Reactor Regulation

Enclosures:
1. NUREG-0662, vols. 1 & 2
2. Order for Temporary Modification of License of June 12, 1980
3. Memorandum and Order of June 12, 1980