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JUL 29 1980

Mr. & Mrs. Royce E. Rehm
RD #2, Box 2795
Old Trail
Etters, Pennsylvania 17319

Dear Mr. & Mrs. Rehm:

Your letter to President Carter regarding releases of radioactivity from the Three Mile Island reactor has been referred to me for response. I regret that this answer has been delayed for so long. The accident and its consequences have created a substantial increase in the agency's workload, which has prevented me from responding to you as promptly as I would have liked.

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, 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 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.

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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, the Commission discussed rationale for its decision. Actual venting operations began on June 28, 1980. Copies of both Commission issuances are also enclosed.

All discharges of water into the Susquehanna River have been carefully monitored since the accident occurred. Your letter refers to the release to the river of 4,000 gallons of water containing strontium-90, a radioactive element that emits beta radiation. The entire event started as a normal routine release of waste water from the waste evaporator condensate test tank. Prior to initiating a release, licensee is required by plant technical specifications to sample the contents of the tank and analyze the sample for the principal gamma emitters. In addition, the licensee is required by the technical specifications to take a portion of that sample and add it to the composite sample of all previous batches of liquid releases made during the month. At the end of the month the composite sample is analyzed for strontium-89 and -90. The licensee completed both of these actions. It should be noted that the NRC does not require that the analysis for strontium be performed on every batch prior to release because the concentration of strontium is normally well below the detection limits of the analytical method and orders of magnitude lower than the principal gamma emitters, such as iodine and cesium.

On July 26, 1979, the release from Unit 1 was initiated; during the release an NRC inspector questioned the licensee as to whether or not a gross beta analysis had been performed. At that point, Metropolitan Edison management suspended the release and performed a number of analyses. The analysis for concentrations of strontium-89 and -90 indicated that prior to discharge to the river, the effluent concentrations for these isotopes were within both federal and state government standards for radioactivity. In the future, nevertheless, Metropolitan Edison will monitor all water discharges for beta radiation.

Except for releases to the Susquehanna River of liquids containing only low or nondetectable levels of radioactivity, the release of contaminated water is not currently permitted. Before such releases take place, NRC will evaluate the impact and the evaluation will be made available to the public. By this course of action, we will assure that a thorough assessment is completed prior to release of the contaminated liquids and that the health and safety of the offsite population will be protected.

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.

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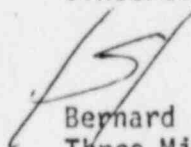
Mr. & Mrs. Royce E. Rehm

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These levels have been confirmed by independent measurements made by the NRC, the Environmental Protection Agency, and the Commonwealth of Pennsylvania.

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,



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

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