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Mr. Jeff Feehrer
41 Crestview Village
Middletown, Pennsylvania 17057

Dear Mr. Feehrer:

Your letters to President Carter and to the Commission regarding the disposal of radioactive water and gas from the Three Mile Island nuclear station were referred to me for response. I regret that this answer has been delayed for so long.

All discharges of water to the Susquehanna have been carefully monitored since the accident occurred. Your letters refer to the release 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 Unit 1 waste evaporator condensate test tank. Prior to initiating a release, the 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 is 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.

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

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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 purging 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.

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 this 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.

The Pennsylvania Public Utility Commission (PUC), in a decision and order of June 15, 1979, ruled that costs of damages caused by the accident at Three Mile Island would not be included in the present rate base for customers of Metropolitan Edison and the Pennsylvania Electric Company. These customers will, however, be responsible for costs associated with purchasing power to replace power that the TMI facility would have provided. The Pennsylvania PUC reaffirmed this decision in an order of May 23, 1980.

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In the same order, it also ruled that Three Mile Island Unit 1 be removed from the Metropolitan Edison and Pennsylvania Electric Company rate bases. As a result, their customers will be free of all maintenance, interest, and capital cost expenses associated with Unit 1. Should Unit 1 be returned to service, costs associated with its operation would, of course, become part of the rate structure.

While we are, of course, concerned about financial impacts on consumers, the NRC's primary responsibility is the assurance of public health and safety. State public utility commissions and the Federal Energy Regulatory Commission have primary responsibility regarding the rates that consumers pay for electricity. They should be able to provide information for your use.

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, not only at Three Mile Island, but also at all nuclear power plants.

Sincerely,

/s/

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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