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OCT 3 1980

Docket No. 50-320

The Honorable Howard M. Metzenbaum
 United States Senate
 Washington, D. C. 20510

Dear Senator Metzenbaum:

I am writing in response to your note of August 18, 1980, to the Nuclear Regulatory Commission regarding the letter of July 2, 1980, from your constituent, Ms. Frix. Ms. Frix expressed concern about the purging of radioactive krypton gas (krypton 85) from the Three Mile Island Unit 2 reactor building.

Based upon information contained in a newspaper article (attached to her letter) from the San Francisco Examiner, Ms. Frix questions the safety of the purging operations. Additionally, Ms. Frix questions why the purge was not being conducted over a planned time frame of 60 to 90 days which, she assumed the only safe manner for conducting the purge.

With regard to Ms. Frix's concerns about the purging of radioactive krypton gas from the TMI Unit 2 reactor building, the NRC staff evaluated various alternative methods for disposition of the krypton gases, including a slow purge, fast purge, cryogenic processing, selective absorption, charcoal adsorption, and other alternatives. The staff's discussion of alternatives and detailed evaluation and recommendation for dealing with the reactor building atmosphere is contained in NUREG-0662, "Final Environmental Assessment for Decontamination of the Three Mile Island Unit 2 Reactor Building Atmosphere" (Volumes 1 and 2). A copy of this report is inclosed for your information.

From the staff's evaluation process have emerged the following 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.

Concerning the question of the 60 to 90 day period for the purge, Ms. Frix refers to just one, namely the slow purge method, of several purge alternatives considered by the staff in NUREG-0662. In this report, the staff recommended that the TMI-2 reactor building be purged in a controlled manner assuming that the purge would be conducted in accordance with the existing plant effluent release Technical Specifications (the slow purge method). The time frame estimated to complete the purge

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under the limiting noble gas effluent release rate conditions of the Technical Specifications and anticipated meteorological conditions was 60 days. The existing Technical Specifications would not permit higher noble gas release rates (the fast purge method) to take advantage of favorable meteorological conditions (e.g. high winds). Recognizing the desirability of completing the purge in a prompt but safe manner to provide needed access to the reactor building and to minimize the psychological stress associated with this action, the Nuclear Regulatory Commission approved the staff recommendation but in a manner which would minimize the total time required to complete the purge.

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. This order revised the Technical Specifications to express effluent release rate limitations in terms of off-site doses so that the time required to complete the purge would not be unnecessarily delayed. In a separate Memorandum and Order, also issued on June 12, 1980, the Commission discussed rationale for their decision. Copies of both Commission issuances are enclosed. 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.

Ms. Frix also questions the accuracy of measurements (e.g. curie release rate) during the conduct of the purge. The 2000-4000 Curie per day Kr-85 release rate cited in the newspaper article is the range for anticipated releases. Releases are dependent on the variable meteorological conditions and will vary from day to day. Additionally, the 15 minute sampling period for particulate emissions refers to the time period in which particulates are collected on filter paper prior to paper removal from the monitoring system for subsequent analysis. No particulates (e.g. Cs-137) were detected during the conduct of the purge.

We hope that this information will assist in responding to your constituent.

Sincerely,

(Signed) T. A. Rehm

William J. Dircks
Executive Director for Operations

Enclosures:

1. Volumes 1 and 2 of NUREG-0662
2. Temporary Modification of License dated 6/12/80
3. Memorandum and Order dated 6/12/80
4. Incoming correspondence dated 7/2/80

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Dana Frix
c/o 318 Fallis Road
Columbus, Ohio 43214
July 2, 1980

The Honorable Howard Metzenbaum
The United States Senate
Washington, D.C. 20510

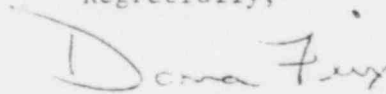
Dear Honorable,

Enclosed is a copy of an article I read in the June 30th edition of the 'San Francisco Examiner.' What in god's name has happened to sanity?

1. The original commission stated that venting could occur safely only if accomplished over a 60-90 day period. Why wasn't this report heeded?
2. Doesn't the lack of accuracy concerning the whole affair, (2000-4000 curies, laboratory tests only every 15 minutes, the incident itself), represent to all of us our inability to adequately control nuclear concerns?

I cannot for the life of me understand our willingness to play with such uncontrollable fire. It is insanity. I hope my concern for our safety is registering with you. I would appreciate a reply.

Regretfully,



Dana Frix

cc: Senator Glenn
Congressman Wylie

Hundreds flee

3-Mile Island gas vented

MIDDLETOWN, Pa. (UPI) — Engineers at Three Mile Island eliminated a bug in the radiation monitoring system and went ahead today with the planned release of radioactive krypton gas from the disabled nuclear plant.

Hundreds of people fled their homes during the weekend, but Gov. Dick Thornburgh toured the plant's control room nerve center yesterday and said area residents had no cause for worry.

"I have advised all residents of the area to do what I intend to do — and that's go about my daily business," Thornburgh said.

Engineers for Metropolitan Edison Co., the plant operators, planned to begin releasing 2,000 to 4,000 curies of radioactive krypton gas daily, starting Saturday. But four minutes into the venting, an alarm was triggered, and the process was halted abruptly.

Harold Denton, chief of reactor operations for the Nuclear Regulatory Commission, called Three Mile Island — site of the worst nuclear accident in U.S. history on March 28, 1979 — "a star-crossed plant."

The plant's radiation monitors, designed to detect abnormal releases of radioactive dust particles like cesium and cobalt, falsely set off the alarm, officials said.

In tests extending from Saturday to midnight yesterday, 1,240 of the 57,000 curies of the gas that became trapped inside the nuclear reactor containment building during the 1979 accident were vented, Met Ed spokesman David Delzinger said.

Engineers hoped they could proceed with their original daily venting rate. The venting is expected to take two weeks.

The NRC gave short-term approval for Met Ed to vent the gas with the use of an improvised system that requires engineers to make laboratory tests every 15 minutes as a means of detecting any particulate emissions.

Radioactive particulates can be more harmful than gas because they are more likely to lodge in tissue and cause damage to human cells.

Denton, describing Three Mile Island as "a learning laboratory," said the NRC may soon require Met Ed to redesign its monitoring system so it can get instant readings on whether radioactive particles are being released into the atmosphere.

George Hickernell, commissioner of nearby Lower Swatara Township, said as many as 10 percent of the people fled his community of 7,000, and commented that the snag had further reduced public confidence in the utility and the government.

"It was really bare here," said Hickernell. "Many people stayed inside or left. What happened only reinforced their thinking that they don't know what the hell they're doing."

Anti-nuclear organizations opposed the venting, partly because a government study showed 20,000 to 40,000 local citizens were so upset about Three Mile Island they had recurring headaches, insomnia and other disorders.

The 57,000 curies of krypton were viewed as a small amount by scientists. During the nuclear accident, 2.4 million to 13 million curies of inert gas such as krypton were released with minimal health consequence, a federal report concluded.

The NRC approved the venting June 12 so that Met Ed could begin the decontamination of the inside of the structure that houses the damaged reactor. There also are about 600,000 gallons of highly radioactive water inside the building.