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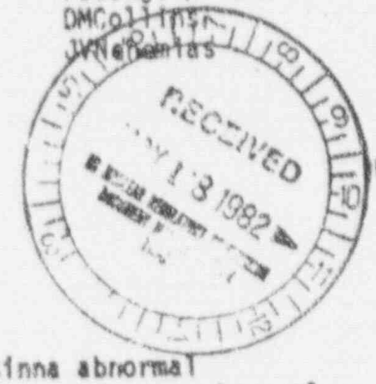

MEMORANDUM FOR: Gary M. Holahan, Leader
Systems Section
Operating Reactors Assessment Branch, DL

FROM: Jack V. Nehemias
Radiation Protection Section
Radiological Assessment Branch, DSI

SUBJECT: PROPOSED GINNA ABNORMAL OCCURRENCE

The Chapter 5 "Sub-Task Force" has reviewed the "proposed Ginna abnormal occurrence". My first reaction is that NRC staff should not propose an abnormal occurrence. I marked-up suggestions on the beginning of the Commission paper. Further, I cannot believe that the fact of there being a Task Force could in any way render the incident "more severe". I have made other mark-ups for clarity and precision.

Further comments are:

1. p. 3, line 14: The sentence, "All safety systems operated as required", should be modified to indicate the time period for which this is true.

2. p. 6, line 6: What does "secured" mean?

3. p. 9, line 1: Who estimated the releases?

4. p. 9, line 14: Change "significantly less" to read "insignificant fractions of"

5. p. 9, last full para.: Replace this paragraph with the following paragraph.

   The risk to the maximally exposed individuals onsite and offsite from exposure to radioactive materials released at Ginna is much less than the risk from exposure to any of the major sources of radiation (e.g., medical exposure and natural background radiation) and within the same range as the risks from exposure to many of the other common sources of enhanced radiation exposure (e.g., from airline travel, natural gas heat, and television viewing).

6. p. 10, line 5: Change the last sentence to read:

   "About 25 curies of tritium may have been released with trace amounts being released from the air ejector, but mostly from the safety valve openings.

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[redacted] 5pp

ORIGINAL SIGNED
Jack V. Nehemias
Radiation Protection Section
Radiological Assessment Branch
Division of Systems Integration

D17

Enclosure:
Marked-up Commission paper

OFFICE			DSI:RAB	DSI:RAB	DSI:RAB		
SURNAME			JNehemias:lm	DMCollins	FJCongel		
DATE			5/10/82	5/11/82	5/ /82		

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-

DRAFT

For: The Commissioners

From: William J. Dircks
Executive Director for Operations

Subject: ABNORMAL OCCURRENCE RECOMMENDATION - STEAM GENERATOR TUBE RUPTURE (R. E. GINNA NUCLEAR POWER PLANT)

Purpose: Approval of an abnormal occurrence determination.

Discussion: Enclosed is a draft Federal Register notice describing ~~as an abnormal occurrence~~ the steam generator tube rupture event at the R. E. Ginna nuclear power plant on January 25, 1982, as an abnormal occurrence. ~~The event is proposed for~~ We propose the Ginna event as an abnormal occurrence, since reporting, as it satisfies the criteria for a major reduction in the degree of protection of the public health and safety. Example II.A.2 ("For Commercial Nuclear Plants") of Appendix A of the Policy Statement on Abnormal Occurrence Reports (FRN Vol. 42, No. 37, 10950-52) notes that major degradation of the primary coolant pressure boundary can be considered an abnormal occurrence.

The event involved the largest steam generator tube leak rate experienced to date. While the licensee's response was timely

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and appropriately mitigated the consequences of the event such that only minor radiological effects occurred, the event was complex and involved items of safety concern such as the secondary safety valve openings which provided an non-isolatable pathway from the primary coolant system to the environment via the ruptured tube.

Recommendation: That the Commission:

1. Approve the subject ~~proposed~~ abnormal occurrence recommendation, together with its associated Federal Register Notice and

2. Note that following approval, the Office of Congressional Affairs will notify the appropriate Congressional Committees of the intent to publish the Federal Register Notice.

Scheduling: While no specific circumstances require Commission Action by a particular date, it is desirable to disseminate regarding this abnormal occurrence information to the public as soon as possible. ~~It is~~ We expect that Commission action within two weeks of receipt of this draft proposal would permit publication in the Federal Register about ten days later.

William J. Dircks
Executive Director for Operations

Enclosure:
Draft Federal Register
Notice

NUCLEAR REGULATORY COMMISSION

ABNORMAL OCCURRENCE

STEAM GENERATOR TUBE RUPTURE (R. E. GINNA NUCLEAR POWER PLANT)

Section 208 of the Energy Reorganization Act of 1974, as amended, requires the NRC to disseminate information on abnormal occurrences (i.e., unscheduled incidents or events which the Commission determines are significant from the standpoint of public health and safety). The ~~following~~ subject incident was determined to be an abnormal occurrence using the criteria published in the Federal Register on February 24, 1977 (42 FR 10950). Example II.A.2 ("For Commercial Nuclear Power Plants") in Appendix A notes that major degradation of the primary coolant pressure boundary can be considered an abnormal occurrence. The following description of the incident also contains information on the remedial actions planned and taken.

Date and Place - The operating staff at the R. E. Ginna nuclear power plant notified the NRC Headquarters Operations Center at 9:33 a.m. on January 25, 1982 (via the Emergency Notification System phone) that the unit experienced a reactor trip from 100% power as a result of a steam generator tube rupture. The R. E. Ginna unit is a Westinghouse-designed pressurized water reactor (PWR) owned by Rochester Gas and Electric Corporation (the licensee); it is located in Wayne County, New York.

Nature and Probable Consequences - Steam generator tubes in a pressurized water reactor are an integral part of the reactor coolant pressure boundary, keeping the primary reactor coolant contained in a closed system and isolated from the environment. The loss of integrity of steam generator tubes results in a breach of the primary-to-secondary system boundary.

Safety margins include conservative design and administrative controls during operation such that if a steam generator tube leaks, the leakage can be detected rapidly and the reactor can be safely shut down. Periodic inspections are also required to assure that degraded steam generator tubes are removed from service. When a tube is found to be degraded or leaking, integrity of the steam generator is restored by either plugging the tube at both ends or by a sleeving process. The repair reduces the likelihood of rapid leaks developing or of degraded tubes failing which could result in adverse safety consequences should they fail in conjunction with certain postulated accidents. In spite of these design and administrative controls, the complete rupture of a steam generator tube can happen and did occur at Ginna. This is one of the design basis accidents considered in the NRC safety review of nuclear power plants.

Nuclear power plants are to have operational plans (procedures, trained operation and support personnel, and other capabilities) to cope with a complete rupture of a steam generator tube and mitigate any radiological consequences. The R. E. Ginna operating and support staff mitigated the consequences of the January 25 event such that the radiological consequences were insignificant in terms of risk from any resultant on-site or off-site exposures.

Sequence of Events

A summary of the sequence of events [1/] for the steam generator tube rupture and the associated response actions follows:

1/ This summary was extracted from NUREG-0909, "NRC Report on the January 25, 1982 Steam Generator Tube Rupture at R. E. Ginna Nuclear Power Plant," April 1982.