

DEC 15 1972

Docket No. 50-346

The Toledo Edison Company
ATTN: Mr. Glenn J. Sampson
Vice President, Power
300 Edison Plaza
Toledo, Ohio 43652

POOR
ORIGINAL

Gentlemen:

The Regulatory staff's continuing review of reactor power plant safety indicates that the consequences of postulated pipe failures outside of the containment structure, including the rupture of a main steam or feedwater line, need to be adequately documented and analyzed by licensees and applicants, and evaluated by the staff as soon as possible. Criterion No. 4 of the Commission's General Design Criteria, listed in Appendix A of 10 CFR 50 requires that:

"Structures, systems, and components important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing and postulated accidents, including loss-of-coolant accidents. These structures, systems, and components shall be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping, and discharging fluids, that may result from equipment failures and from events and conditions outside the nuclear power unit."

The previous version of the Commission's General Design Criteria also reflects the above requirements.

Thus, a nuclear plant should be designed so that the reactor can be shut-down and maintained in a safe shutdown condition in the event of a postulated rupture, outside containment, of a pipe containing a high energy fluid, including the double ended rupture of the largest pipe in the main steam and feedwater systems. Plant structures, systems, and components important to safety should be designed and located in the facility to accommodate the effects of such a postulated pipe failure to the extent necessary to assure that a safe shutdown condition of the reactor can be accomplished and maintained.

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Based on the information we presently have available on the Davis-Besse plant, we understand that steam lines pass through the upper level of the auxiliary building in the space above the control room. Failure of either overpressure of the closed compartment or pipe whip appears possible. From this it appears that some modification of the facility may be necessary.

We request that you provide us with analyses and other relevant information needed to determine the consequences of such an event, using the guidance provided in the enclosed general information request. The enclosure represents our basic information requirements for plants now being constructed or operating. You should determine the applicability, for the Davis-Besse facility, of the items listed in the enclosure.

If the results of your analyses indicate that changes in the design of structures, systems, or components are necessary to assure safe reactor shutdown in the event this postulated accident situation should occur, please provide information on your plans to revise the design of your facility to accommodate the postulated failures described above. Any design modifications proposed should include appropriate consideration of the guidelines and requests for information in the enclosure.

We will also need, as soon as possible, estimates of the schedule for design, fabrication, and installation of any modifications found to be necessary. Please inform us within 7 days after receipt of this letter when we may expect to receive an amendment with your analysis of this postulated accident situation for the Davis-Besse facility, a description of any proposed modifications, and the schedule estimates described above. Sixty copies of the amendment should be provided.

A copy of the Commission's press announcement on this matter is also enclosed for your information.

Sincerely,

Original Signed by
A. Giambusso

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosures:
As stated

cc: See next page

cc: Mr. Donald H. Hauser, Esq.
 The Cleveland Electric Illuminating Co.
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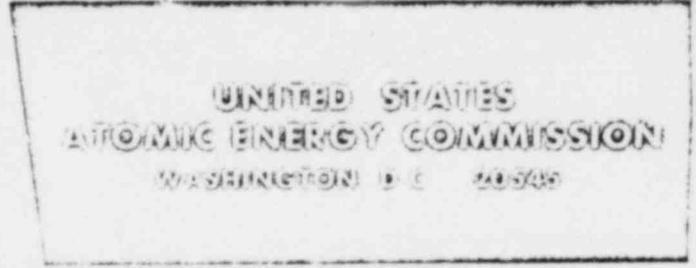
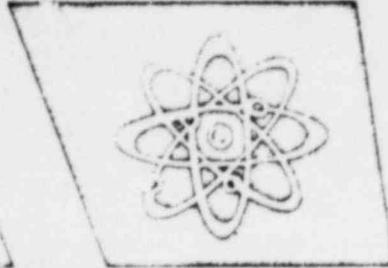
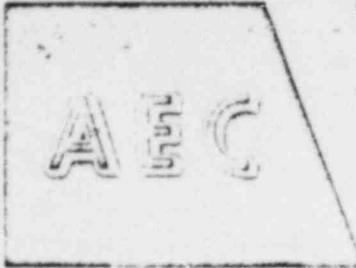
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No. P-429
Contact: Frank Ingram
Tel. 301/973-7771

FOR IMMEDIATE RELEASE
(Wednesday, December 13, 1972)

AEC REGULATORY STAFF REQUESTS DATA ON PIPE BREAKS IN NUCLEAR PLANTS

The Atomic Energy Commission's Regulatory Staff is asking all utilities that operate nuclear power plants or have applied for operating licenses to assess the effects on essential auxiliary systems of a major break of the largest main steam or feedwater line. These lines carry steam from inside the reactor containment building to the main turbine in the turbine building, and hot feedwater back from the turbine condenser. The utility assessments will be evaluated by the AEC's Regulatory Staff.

The probability of a steam-line rupture is low. Nonetheless it will have to be considered in the AEC's safety evaluation.

The review of the pipe break problem has been under way for several weeks. It was started after the Advisory Committee on Reactor Safeguards received a letter raising questions about the location of pipes in the two-unit Prairie Island plant in Minnesota.

The Regulatory Staff has reviewed the Northern States Power Company application to operate Prairie Island, and on the basis of data available it has concluded that design changes will be required at Prairie Island.

Based on the new information--to be submitted by utilities as soon as possible--the Staff will determine what corrective action, if any, is necessary in each case. The changes could include such steps as relocating piping, providing venting of compartments, the addition of piping restraints, and, in some cases, structural strengthening.