

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555 APR 2 7 1982

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Docket Nos.: 50-440/441

MEMORANDUM FOR: Robert L. Tedesco, Assistant Director

for Licensing

Division of Engineering

FROM:

William V. Johnston, Assistant Director Materials & Qualifications Engineering

Division of Engineering

SUBJECT:

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, PERRY NUCLEAR POWER PLANT UNIT NOS. 1 AND 2, SAFETY EVALUATION REPORT

INPUT

Plant Name: Perry Nuclear Power Plant Unit Nos. 1 and 2

Suppliers: General Electric; Gilbert Associates

Licensing Stage: OL Docket Nos.: 50-440/441

Responsible Branch & Project Manager: LB #2; John Stefano

Reviewer: J. O. Schiffgens

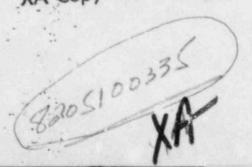
Description of Task: Safety Evaluation Report Input

Paview Status: Incomplete

The applicant has supplied us with the information we requested. The turbine is unfavorably oriented with respect to the station reactor buildings. Futhermore, some aspects of the applicants analysis, for example, the procedure for calculating the probability of barrier perforation, are unacceptable to the staff. Evaluation of the information supplied would require considerable interaction with the applicant and a detailed independent analysis by the staff, which would be very time consuming.

As an alternative, we are in the process of preparing simplified Turbine Generator System requirements for transmittal to the Committee to Review Generic Requirements (GRGR). These requirements are intended to replace Regulatory Guide 1.115 and Standard Review Plans 3.5.1.3, 10.2, and 10.2.3, reducing considerably the burden placed on licensees, improving the regulation of turbine generator system reliability, and conserving NRC resources, while at the same time maintaining the level of protection of public health and safety.

XA Copy Has Been Sent to PDR



- Robert L. Tedesco - 2 -APR 27 1982 As soon as these new requirements are accepted by CRGR, we will transmit. . to you a Supplementary Safety Evaluation Report contribution which implements the new requirements (criteria and guidelines). Our current input to the Safety Evaluation Report is included in Attachment 1. William V Johnston William V. Johnston, Assistant Director Materials & Qualifications Engineering Division of Engineering

Enclusure: As stated

cc: R. Vollmer

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ATTACHMENT 1

DOCKET NUMBER 50-440/441

SAFETY EVALUATION REPORT

MATERIALS ENGINEERING BRANCH

COMPONENT INTEGRITY SECTION

3.5.1.3 Turbine Missles

According to General Design Criterion 4, of Appendix A to 10 CFR Part 50, nuclear power plant structures, systems, and components important to safety shall be appropriately protected against dynamic effects including the effects of turbine missiles. Of those systems important to safety, this section is primarily concerned with safety related systems; i.e., those structures, systems, or components necessary to perform required safety functions and to ensure:

- The integrity of the reactor coolant pressure boundary,
- The capability to shut down the feactor and maintain it in a cold shut down condition, or
- 3. The capability to prevent accidents that could result in potential offsite exposures that are a significant fraction of the guideline exposures of 10 CFR Part 100, "Reactor Site Criteria."

The Perry turbine-generators were manufactured by the General Electric Corporation and the placement and orientation of each is unfavorable with respect to the station reactor buildings; that is, there are safety-related targets inside the low trajectory missile (LTM) strike zone. Additional information that was requested from the applicant has been received by the staff and is currently under review. Until the staff completes the review this will remain an open item.