SEP 0 1 1981

Docket Nos. 50-440
and 50-441

Mr. Dalwyn R. Davidson
Vice President - Engineering
Cleveland Electric Illuminating Company
P. O. Box 5000
Cleveland, Ohio 44101

Dear Mr. Davidson:

Subject: Request for Additional Information - Auxiliary Systems

In the performance of the Perry licensing review, the staff has identified concerns in regard to auxiliary systems. The information that we require is identified in the enclosure.

We request that you provide the information not later than October 16, 1981. If you require any clarification of this request, please contact me at (301) 492-8593.

Sincerely,

M. D. Houston, Project Manager
Licensing Branch No. 2, DL
Division of Licensing

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

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ENCLOSURE

Request for Additional Information
Perry Nuclear Power Plant, Units 1 and 2
Auxiliary Systems Branch

410.5 (3.4.1) Section 3.6.2.3.5 of the FSAR indicates that analyses of flooding resulting from high or moderate line failures have been performed. For areas containing high or moderate pipes, present the results of these analyses on a room by room basis to demonstrate that the plant will be able to achieve safe shutdown considering the height to which the water would rise assuming the failure of one of the pertinent sump pumps.

410.6 (3.6.1) Section 3.6.2.3.4 of the FSAR stated that compartment pressurization analyses have been made for all compartments containing high-energy lines. Present the results of these analyses including the peak pressures and temperatures and blowdown duration, and state how the blowdown is terminated, for compartments outside containment. Verify that essential equipment located within the compartments are capable of operating in the environment resulting from high-energy line failures.

410.7 (4.6) Describe the means provided in the scram discharge system design to meet the criteria enumerated in Section 4 of the Generic Safety Evaluation Report BWR Scram Discharge System, dated December 1, 1980, and transmitted to you by NRC letter dated December 22, 1980.

410.8 (4.6) Describe the effects on the safety and operability of the control rod drive hydraulic system assuming the drive/cooling water pressure control valve fails either closed or open.

410.9 (4.6) Describe the means provided in the control rod drive system design to meet the criteria enumerated in Sections 4 and 8 of NUREG-0619, BWR Feedwater Nozzle and Control Rod Driven Return Line Nozzle Cracking and verify that this design is in full compliance with those sections of the document.

410.10 (9.1.1) With regard to the new fuel storage, section 9.1.1.3.1 of the FSAR indicated that the new fuel storage arrangement will not exceed a k_{eff} of 0.95 assuming the new fuel storage area was dry or flooded with unborated water. Verify that a k_{eff} equal to or less than 0.98 will be maintained with new fuel of the highest anticipated reactivity assuming optimum moderation, for example, foam, spray, small droplets or mist.

410.11 (9.1.2) Regarding the seismic design of the spent fuel storage areas in containment and the intermediate building,

(1) The FSAR does not indicate that the spent fuel pool liner plate was designed to seismic Category I requirements. Discuss why a failure of the liner plate resulting from an SSE will not result in radioactive release from one of the following: mechanical damage to the spent fuel, significant loss of water from the pool which could uncover the fuel, loss of ability to cool the fuel due to flow blockage caused by portions of the liner plate falling on top of the spent fuel, and damage to safety-related equipment as a result of the pool leakage.

(2) The FSAR does not discuss whether the gates used to separate the cask pit, the spent fuel storage pool, the fuel transfer pool, and the fuel storage and preparation pool and the gates used to separate the steam dryer storage pool, the fuel storage pool, and the fuel transfer pool were designed to seismic Category I requirements. The

seismic category of the gates should be documented. If the design does not meet seismic Category I requirements, discuss how a failure of the gates as a result of an SSE will not result in similar conditions as stated for the pool liner in part (1) of this question.

410.12 (9.1.2) Section 9.1.2.3.1 of the FSAR indicates that the geometric configuration of the fuel stored in the GE racks assures that k_{eff} does not exceed 0.95 under all normal and abnormal storage conditions; however, the list of conditions analyzed does not include a dropped assembly lying across the top of the rack array. Verify that k_{eff} does not exceed 0.95 for the condition of a dropped assembly lying across the top of the rack array.

410.13 (9.1.4) With regard to the generic concern relating to the handling of heavy loads near spent fuel, Enclosure 2 to the December 22, 1980 generic letter identified interim measures. We will requires a commitment to implement these interim measures prior to the final implementation of NUREG-0612 guidelines and prior to the receipt of an operating license.

410.14 (9.1.4) In regard to the handling of loads over spent fuel in containment and the intermediate building, provide verification that the maximum potential kinetic energy capable of being developed by all objects handled above the spent fuel racks, if dropped from the height at which it is normally handled above the storage rack, does not exceed the kinetic energy of one fuel assembly and its associated handling tool.

410.15 (9.2.4) Provide process and instrumentation diagrams for the potable and sanitary water system which demonstrate that there are no connections to systems having a potential for containing radioactive material.

410.16 (9.3.1) Regarding the service and instrument air supply, provide the service air distribution drawings (D-302-242 and D-352-242) and the instrument air distribution drawings (D-302-243 and D-352-243) which are referenced in figure 9.3-1.

410.17 (9.3.1) In order to assure continuous reliable functioning of compressed air operated valves, provide a technical specification or procedure to require testing of the instrument air quality. Describe the procedures to be followed to detect and correct degradation of the instrument air quality and the limits on degradation from the ANSI standard MC-11-1 which will be imposed on the air quality.

410.18 (9.3.5) Regarding the Standby Liquid Control (SLC) System,

(1) Your FSAR states that Figure 9.3-19 is a P&ID for the SLC system. From our review, we conclude that figure 9.3-19 is not for the SLC system. Provide a complete P&ID for the SLC system.

(2) Your discussion of the time that a redundant component of the SLC system may be out of operation, indicates that considerable time is available for restoring the SLC system. Verify that your proposed technical specification for the SLC system comply with the standard GE-BWR technical specification which requires operability of the redundant train with 7 days.