

Docket Nos.: 50-440  
and 50-441

JUL 31 1985

Mr. Murray R. Edelman, Vice President  
Nuclear Operations Group  
The Cleveland Electric Illuminating Company  
P. O. Box 5000  
Cleveland, Ohio 44101

Dear Mr. Edelman:

Subject: Resolution of SER Confirmatory Issue (56), Containment  
Purge, for the Perry Nuclear Power Plant, Units 1 and 2

Your letters dated February 19, 1985 and March 26, 1985, provided the descriptive information required by the staff in Section 6.2.4 of SER Supplement No. 4, with respect to the Perry containment purge programs, identified in that SER supplement as Confirmatory Issue (56). The staff has reviewed the information provided and its evaluation findings are enclosed. We propose to incorporate the enclosed evaluation in the next SER supplement.

The staff has concluded that the plan addressing the purge programs discussed in your letters would provide an adequate data base to justify the purge criteria to be used for the remainder of the plant life. As such, you may consider SER Confirmatory Issue (56) resolved.

Sincerely,

ORIGINAL SIGNED BY:

B. J. Youngblood, Chief  
Licensing Branch No. 1  
Division of Licensing

Enclosure: As stated

cc: See next page

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JUL 31 1985

Mr. Murray R. Edelman  
The Cleveland Electric  
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Perry Nuclear Power Plant  
Units 1 and 2

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CONTAINMENT SYSTEMS BRANCH

SUPPLEMENT TO THE SAFETY EVALUATION REPORT  
PERRY NUCLEAR PLANT, UNIT 1  
DOCKET NO. 50-440

6.2.4 Containment Purge Systems

As reported in Supplement 4 to the SER, the applicant has committed to implement a three-point program to assess the need of the containment purge system and to investigate methods to minimize its use consistent with ALARA considerations. In addition, the staff has required that the applicant provide a description of each of these programs identified as: (1) Containment Purge Operation Data-Gathering Program; (2) Containment Access Management Program; and (3) Interim Guidelines for Perry Containment Purge Operation.

By letters dated February 19 and March 26, 1985, the applicant provided the required program description. The following highlights describe each program:

(1) Containment Purge Operation Data Gathering Program

The purpose of this program is to determine the benefits of containment purge and the operating time required to obtain those benefits. The Mark III containment design has a significant amount of vital equipment inside containment. This equipment will require routine inspection, maintenance, and surveillance. Therefore, containment access by plant personnel is necessary during normal plant operating conditions. To ensure that personnel exposure to

airborne radioactivity is within the maximum permissible concentrations of 10 CFR 20, containment purging is necessary.

In order to provide a quantification of the actual environmental conditions that plant personnel will experience, a data collection program will be implemented during the first fuel cycle. The data to be collected is categorized by six basic sets of information: (1) containment access requirements; (2) containment mode of purge operation; (3) radioactivity concentrations and radiation levels inside containment; (4) containment general air quality; (5) special plant events/parameters; and (6) plant general status information. The data will be gathered from instrumentation and various documents such as; plant sample logs, containment access logs, radiation work permits, operation's and surveillance logs. Thus, information related to radioactivity source terms and the capabilities of the containment purge system to control containment environment will be obtained.

(2) Containment Access Management Program

The purpose of this program is to evaluate and control containment occupancy based on operating experience. This program will consist of the following three phases: (1) provide plant procedures to control containment access - by establishing access criteria, identifying types of activities and enhancements to scheduling; (2) collect containment access data - which includes, when entries are

made, the purpose and duration; (3) evaluate data and provide recommendations - if containment access can be reduced, which includes consolidating plant activities.

(3) Interim Guidelines for Perry Containment

Purge Operation

For the first fuel cycle, the containment purge operational limit is 3000 hours per year, during operating modes 1 through 3. Grab samples will be taken prior to containment occupancy. Purge will be initiated when containment air samples indicate an iodine concentration at or above 0.25 MPC (maximum permissible concentration per 10 CFR 20). Purging will continue as long as occupied areas benefit from reduced airborne activity (approximately 4 hours), or in the event reoccupation or reactor water cleanup is planned soon enough to warrant leaving the purge system in operation. However, during periods when the containment is not occupied, the purge valves will be closed.

CEI will submit a report to the NRC based on the first cycle operating results. The report will summarize, from the above stated programs e.g., data gathering, apparent trends and operating procedures. Otherwise, the containment purge operational limit will be set to a 1000 hours per year for the following fuel cycle. This provision has been incorporated in the Perry Technical Specifications regarding the containment purge system.

In conclusion, the staff finds the program plan, as discussed above, would provide an adequate data base to justify the purge criteria to be used for the remainder of the plant life. Based on our review, we find the containment purge issue, Confirmatory Issue (56), is resolved.