NRC-PDR

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 27 1979

MEMORANDUM FOR: R. Reid, Chief, Operating Reactors Branch #4, DOR

FROM: G. Lainas, Chief, Plant Systems Branch, DOR

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - CONTAINMENT PURGE SYSTEM - CRYSTAL RIVER NUCLEAR GENERATING PLANT, UNIT 3 (TAC 10211)

REFERENCES: (1) Letter to R. Reid, from W. Steward, "Containment Purging During Normal Operation," dated January 10, 1979.

(2) Final Safety Analysis Report, Crystal River Nuclear Generating Plant, Unit 3

Plant Name: Crystal River Nuclear Generating Plant, Unit 3
Docket No.: 50-302
Project Manager: C. Nelson
Review Status: Awaiting Information

With regard to the containment purge and vent system at the Crystal River Nuclear Generating Plant, Unit 3, the licensee has attempted to justify unlimited purging (Reference 1). Section B of Plant Systems Branch, after having reviewed the documents (References 1 and 2) filed by the licensee, has prepared the enclosed request for additional information. Section A might provide questions regarding the electrical override aspects of containment purging at a later date.

R Ferguson for
G. Lainas, Chief
Plant Systems Branch
Division of Operating Reactors

Enclosure:
As stated

Contact:
J. Kerrigan/D. Shum
X-27110

968 088

cc w/enclosure:
See page 2

7909190 385

cc w/enclosure:
D. Eisenhut
B. Grimes
W. Gammill
L. Nichols
G. Lainas
C. Nelson
E. Adensam
G. Knighton
E. Reeves
D. Tondi
D. Shum
J. Kerrigan
J. T. Beard
V. Noonan
P. Check

REQUEST FOR ADDITIONAL
INFORMATION FOR CONTAINMENT
PURGE AND VENT SYSTEM
FOR CRYSTAL RIVER NUCLEAR
GENERATING PLANT, UNIT 3
DOCKET NO. 50-302

1. With regard to the containment purge and vent system, provide the following information:

   a. Discuss the provisions made to ensure that isolation valve closure will not be prevented by debris which could potentially become entrained in the escaping air and steam.

   b. Discuss the provisions made for testing the availability of the isolation function and the leakage rate of the isolation valves, individually during reactor operation.

   c. Specify the amount of containment atmosphere released through the purge and vent isolation valves, for a spectrum of break sizes, during the maximum time specified for them to close in your technical specifications.

   d. Provide an analysis to demonstrate the acceptability of the provisions made to protect structures and safety-related equipment, e.g., fans, filters, and ductwork, located beyond the purge system isolation valves against loss of function from the environment created by the escaping air and steam.

   e. Provide an analysis of the reduction in the containment pressure resulting from the partial loss of containment atmosphere during the accident for ECCS backpressure determination.

   f. Specify the allowable leak rates of the purge and vent isolation valves for the spectrum of design basis pressures and flows against which the valves must close.

2. As indicated in the FSAR, currently, the containment purge isolation valves are automatically closed by either a high containment pressure signal or high radiation signal. Section 6.2.5 of the Standard Review Plan requires diversity in the parameters sensed for the initiation of containment isolation. In order to provide diversity for a spectrum of break sizes, the parameters sensed should include containment pressure, safety injection actuation, and containment radiation. The instrumentation and control systems provided to isolate the purge system lines should meet the standards appropriate to engineered safety features, i.e., quality, redundancy, testability, and other appropriate criteria.