

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

May 5, 1979

TELEPHONE: AREA 704  
373-4083

Mr. James P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

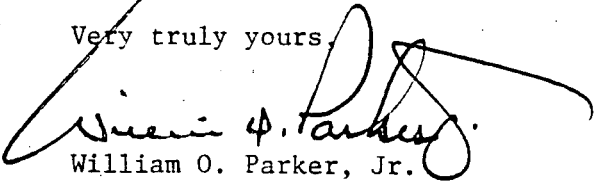
Re: RII:JPO  
50-269  
50-270  
50-287

Dear Mr. O'Reilly:

With regard to your letter of April 21, 1979 which transmitted IE Bulletin 79-05B, please find attached responses to items 1, 2, 4 and 6.

My letter of April 21, 1979 provided a response to item 3 concerning resetting of the setpoints for opening of the power operated relief valve and reactor trip on high reactor coolant system pressure. On or before May 21, 1979, responses to items 5 and 7 will be provided.

Very truly yours,

  
William O. Parker, Jr.

RLG:scs  
Attachment

cc: NRC, Office of Inspection and Enforcement  
Division of Reactor Operation Inspection  
Washington, D. C. 20555

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DUKE POWER COMPANY  
OCONEE NUCLEAR STATION

Response To IE Bulletin 79-05B  
Items 1, 2, 4 and 6

ITEM 1

Develop procedures and train operation personnel on methods of establishing and maintaining natural circulation. The procedures and training must include means of monitoring heat removal efficiency by available plant instrumentation. The procedures must also contain a method of assuring that the primary coolant system is subcooled by at least 50°F before natural circulation is initiated.

In the event that these instructions incorporate anticipatory filling of the OTSG prior to securing the reactor coolant pumps, a detailed analysis should be done to provide guidance as to the expected system response. The instructions should include the following precautions:

- a. maintain pressurizer level sufficient to prevent loss of level indication in the pressurizer;
- b. assure availability of adequate capacity of pressurizer heaters, for pressure control and maintain primary system pressure to satisfy the sub-cooling criterion for natural circulation;
- c. maintain pressure - temperature envelope within Appendix G limits for vessel integrity.

Procedures and training shall also be provided to maintain core cooling in the event both main feedwater and auxiliary feedwater are lost while in the natural circulation core cooling mode.

RESPONSE:

Emergency Procedure EP/O/A/1800/6 (Loss of Reactor Coolant Flow) has been revised to give operators additional guidelines to use in assuring that natural circulation has been established and is being maintained. Heat removal efficiency is monitored by reactor coolant system (RCS) and steam system instrumentation (e.g. RCS pressure, differential hot leg/cold leg temperature, RCS average temperature, incore thermocouple, temperature steam generator level, steam pressure, steam generator feedwater flow). The procedure has also been revised to assure that the RCS is subcooled at least 50°F before initiating natural circulation.

A new procedure, OP/O/A/1102/16 (Planned Initiation of Natural Circulation) has been issued and approved to establish natural circulation in a pre-planned mode that incorporates anticipatory fill of the secondary side of the steam generators prior to securing the reactor coolant pumps. This procedure incorporates precautions a through c above.

RESPONSE (Continued):

A procedure, EP/O/A/1800/28 (Loss of Feedwater During Natural Circulation) has also been issued and approved to maintain core cooling in the event both main feedwater and auxiliary feedwater are lost while in the natural circulation core cooling mode.

The above changes and new procedures have been discussed and reviewed by all licensed personnel. All licensed shift personnel have completed Babcock and Wilcox simulator training that includes training on methods of establishing and maintaining natural circulation under various conditions.

## ITEM 2

Modify the actions required in Items 4a and 4b of IE Bulletin 79-05A to take into account vessel integrity considerations.

- "4. Review the action directed by the operating procedures and training instructions to ensure that:
- a. Operators do not override automatic actions of engineered safety features, unless continued operation of engineered safety features will result in unsafe plant conditions. For example, if continued operation of engineered safety features would threaten reactor vessel integrity then the HPI should be secured (as noted in b(2) below).
  - b. Operating procedures currently, or are revised to, specify that if the high pressure injection (HPI) system has been automatically actuated because of low pressure condition, it must remain in operation until either:
    - (1) Both low pressure injection (LPI) pumps are in operation and flowing at a rate in excess of 1000 gpm each and the situation has been stable for 20 minutes, or
    - (2) The HPI system has been in operation for 20 minutes, and all hot and cold leg temperatures are at least 50 degrees below the saturation temperature for the existing RCS pressure. If 50 degrees subcooling cannot be maintained after HPI cutoff, the HPI shall be reactivated. The degree of subcooling beyond 50 degrees F and the length of time HPI is in operation shall be limited by the pressure/temperature considerations for the vessel integrity."

## RESPONSE:

The actions addressed in Items 4a and 4b of IE Bulletin 79-05A have been modified to take into account vessel integrity considerations by revising the following to include the actions required by 4a and 4b of IE Bulletin 79-05B above:

EP/O/A/1800/4	Loss of Reactor Coolant
EP/O/A/1800/8	Steam Supply System Repture
EP/O/A/1800/15	Uncontrollable Flooding of Turbine Building
EP/O/A/1800/20	Loss of Normal HPI Makeup or Letdown

#### ITEM 4

Provide procedures and training to operating personnel for a prompt manual trip of the reactor for transients that result in a pressure increase in the reactor coolant system. These transients include:

- a. Loss of main feedwater
- b. Turbine trip
- c. Main Steam Isolation Valve closure
- d. Loss of offsite power
- e. Low OTSG level
- f. Low pressurizer level

#### RESPONSE:

Station Directive 3.1.30, "Required Manual Trips of the Reactor," has been approved and distributed which requires the Control Room operator to manually trip the reactor promptly when transients that result in a pressure increase in the Reactor Coolant System occur. These specific transients are:

1. Turbine Trip (At reactor power levels greater than 20% FP)
2. Main Steam Stop Valve Closure (Two valves on same OTSG or all four valves)
3. Loss of Offsite Power
4. Low OTSG Level

Station Directive 3.1.21, Loss of Main Feedwater, previously required a manual trip of the reactor upon loss of both main feedwater pumps or upon loss of feedwater flow to the steam generators. This Directive remains in effect.

The required manual trip of the reactor on low pressurizer level is considered inconsistent with the general concern expressed in this item of pressure increases in the reactor coolant system. Low pressurizer level is associated with under-pressurization resulting from overcooling rather than overpressurization. A reactor trip on low pressurizer level would compound the transient as the primary heat source is removed. Therefore, rather than adding a mandatory manual reactor trip, station procedures have been revised to require a prompt increase in reactor coolant make-up flow on decreasing pressurizer level in order to restore normal level.

The above have been discussed and reviewed by all licensed personnel.

ITEM 6

The actions required in Item 12 of IE Bulletin 79-05A are modified as follows:

Review your prompt reporting procedures for NRC notification to assure that the NRC is notified within one hour of the time the reactor is not in a controlled or expected condition of operation. Further at that time an open continuous communication channel shall be established and maintained with the NRC.

RESPONSE:

The Oconee Nuclear Station Emergency Plan (Station Directive 3.8.5) includes prompt reporting procedures for NRC notification of serious events. The section of the Emergency Plan pertaining to reports and notifications has been revised to include the following statement under those events requiring immediate notification of the Nuclear Regulatory Commission, Office of Inspection and Enforcement, Region II:

"Any situation whereby the reactor is not in a controlled or expected condition of operation. A situation such as this could be defined as any unscheduled event involving the reactor which cannot be controlled or stabilized by use of normal operating procedures.

Note: In a situation whereby the reactor is not in a controlled or expected condition, the NRC shall be notified no later than one (1) hour following determination of the uncontrolled or unexpected condition. Upon notification, an open, continuous communications channel shall be established and maintained from the station to the NRC."

To provide additional assurance that the NRC is promptly notified, Station Directive 3.1.5 (Notification of Station Management) has been revised to include the following event which will require prompt notification of the Station Manager:

Unscheduled event involving the reactor which cannot be controlled or stabilized by use of normal operating procedures.