

**DUKE POWER COMPANY**

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U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Subject: Oconee Nuclear Station  
Docket Nos. 50-269, -270, -287  
Inspection Report 50-269, -270, -287/89-36

Gentlemen:

By a NRC letter dated January 8, 1990 a notice of violation and Inspection Report 50-269, -270, and 287/89-36 was transmitted to me. As required by 10 CFR 2.201, I am submitting a written response to the violation identified in the inspection report.

In the Inspection Report, violation 89-36-02 listed four examples of the station failing to operate in accordance with approved procedures. An additional example of this violation was cited in Inspection Report 89-40. As agreed to with the Resident Inspector please find the additional example in our response to violation 89-36-02. You will find responses to five examples of violation 89-36-02.

Very truly yours,

*Hal B. Tucker*

Hal B. Tucker

RRE104/td

Attachment

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VIOLATION 50-269, 270, 287/89-36-01  
(Example 1: 3BS-1 Incident)

RESPONSE

1. Admission or denial of the alleged violation:

Duke Power admits the violation. However, Duke Power perceives this violation to be Management Deficiency rather than a procedural problem for the reasons stated in (2) below.

2. Reason for violation:

The apparent root cause for this incident was a lack of knowledge of Operations personnel with respect to motor operated throttle valves. This "lack of knowledge" was a result of insufficient communication between the Oconee Operations and Maintenance Groups. Operations personnel were not knowledgeable of accepted work practices used by Maintenance in setting up the position indication limit switches for throttle valves. Because of this lack of communication between the Operations and Maintenance Groups, there were no training or programmatic controls available to the Operators that, if available, would have prevented this incident.

3. Corrective steps taken and results achieved:

The immediate corrective actions to stop the loss of RCS inventory were:

- a) The Operators closed 3LP-2 and 3LP-3 to stop the loss of RCS inventory as indicated by the decreasing level of the LDST.
- b) The Operators then closed 3BS-3 which provided another isolation valve in the leak pathway.

The above actions were successful in stopping the leakage.

4. Corrective steps which will be taken to avoid further violations:

- a) Operations has revised the controlling procedure for Unit Shutdown to ensure that the Building

Spray System is isolated from the LPI system prior to placing the LPI system in service for decay heat removal.

- b) Station Management will establish a program to control the torque switch by-pass times on safety - related electric motor operated valves. The program will provide for:

- \* Establishing a maximum time limit
- \* Setting up valves to meet the limit
- \* Notification of Operations of any change to this limit

- c) Operation's Management will ensure that all Operators are aware of the special precautions necessary when operating motor operated throttle valves. This will be accomplished by:

- \* Revising Operations Management Procedure 1-2 to provide guidance for operating motor operated throttle valves
- \* Issuing Training Package 89-30 which will train all Operators on the revision to OMP 1-2

- d) Production Support Department has incorporated the Operator training program instructions and training on the time requirements necessary to fully close safety related throttle valves.

5. Date of full compliance:

From (4) above;

- \* Item (a) - Complete
- \* Item (b) April 15, 1990
- \* Item (c) - Complete
- \* Item (d) - Complete

VIOLATION #50-269, 270, 287/89-36-01  
(Example 2: Unit 3 Loss of Power Incident)

RESPONSE

1. Admission or denial of the alleged violation:

The allegation of inadequate procedure is denied. However, failure to properly follow procedures is admitted. The reason for this admission is described in (2) below.

2. Reason for violation

The loss of power event on Unit 3 was due to inadvertent isolation of the 525 KV yellow bus. The steps in PT/O/A/0610/05B resulted in the opening of PCB-56 which was the only source of power to the yellow bus (and the U-3 Main Transformer). However, the Operators believed that there was still a source of power to the yellow bus through PCB-61. This was not the case.

A modification on (future) PCB-62 yellow bus disconnect had been completed approximately 11-23-89. The procedure used to restore the 525 KV switchyard to service (TN/O/B/2616/00/BL1/02) intended to have the Operations personnel return the yard to its normal alignment. However, the Operators misinterpreted the step which would have closed the (future) PCB-62 yellow bus disconnect. Therefore the disconnect was left open and the yellow bus could not receive power through PCB-61.

A contributing factor to this incident is the lack of indication for (future) PCB-62 yellow bus disconnect on the 230/525 switchyard mimic board. The Operators use the mimic board indications to help determine the status of switchyard components. Many components are actually operated from this mimic board.

3. The corrective steps which have been taken and the results achieved:

Power was lost momentarily to Unit 3's Main Feeder

Buses. Power was regained automatically as designed from one of the two available sources.

4. Corrective steps which will be taken to avoid further violations:

- \*a) The Operations personnel involved will be counseled on proper adherence to procedures
- \*b) A Station Problem Report will be generated to have the 230/525 switchyard mimic board upgraded to show the (future) PCB-62 yellow bus disconnect
- \*c) PT/O/A/610/05B will be reviewed to determine if precautionary steps can be added to help prevent any future incidents of this nature.

5. Date of full compliance

\*Item (a) - February 16, 1990

\*Item (b) - May 1, 1990

\*Item (c) - June 1, 1990

Response to Violation (#50-269, 270, 287/89-36-02)  
Severity Level (IV)

1. Admission or denial of the alleged violation:  
Duke Power Company admits the violation occurred.
2. Reason for Violation:
  - a. On November 10, 1989 Unit 3 was performing crud burst operations per OP/3/A/1102/10, Controlling Procedure for Unit Shutdown. The procedure requires temperature to be maintained at greater than 160 degrees F when two reactor coolant pumps are operating. due to lack of proper attention to the crud burst procedure minimum allowable temperature, the RCS temperature was allowed to drift down to 155 degrees F.
  - b. During the cooldown of Unit 2 on November 11, 1989 per 2/A/1102/10, Controlling Procedure for Unit Shutdown, the sequence of the procedure steps was changed when 2HP-120 failed closed. A dedicated operator was assigned during this time to take the required steps to mitigate a low temperature overpressure condition in the event of failure of the overpressure protection system. Due to lack of an effective policy for informing operators of a new requirement to deactivate both trains of HPI below 325°F, Operations failed to realize that the selected alternate make-up path could not be utilized due to the potential for it to cause RCS overpressurization. It should be noted that the LTOP operator's actions when using the alternate alignment would have been very nearly the same as the written instructions in the procedure provided. The operator was fully aware of the required actions.
  - c. On November 14, 1989, operators failed to follow OP/3/A/1107/04, Operation of the Vital bus, Computer, ICS and Auxiliary Inverters, resulting in a loss of power to inverter 3KVIA. The results were an Engineered Safeguards actuation signal and an unrecognized loss of fire protection to the Reactor Building for approximately 6 hours. The reason for this event was personnel error on the part of the operators not following the procedure. The control room operators failed to recognize that closure of 3LPSW-6 had isolated fire protection to the Reactor Building.

- d. On November 17, 1989, after Performance Test/3/A/0150/06, Mechanical Penetration Leak Rate Test was completed, the system was to be returned to a normal valve alignment. Another job was in progress to drain a Low Pressure Injection header. The problem that resulted in the spill was that when the paperwork for these two jobs was given to the non-licensed operator to perform, it was not adequately explained to him the importance of finishing one alignment before starting the other. This was not a result of doing a job out of sequence, but of incomplete communication while performing two separate jobs concurrently.
  - e. On December 19, 1989, 3LP-1 breaker was found in the closed position. OP/3/A/1104/04, LPI procedure, required this breaker to be open with the valve closed per the LPI ES line up. Operating with 3LP-1 breaker open is a response to an Appendix R concern that a "smart fire" could possibly open this valve, creating a leak from the Reactor Coolant System. It is unusual for a valve breaker to be open during normal operations and through a lack of understanding of the requirement, the Unit Supervisor had the breaker closed in after PM work on the valve.
3. The corrective steps which have been taken and the results achieved:
- a. The Unit 3 Operations engineering staff was made aware of the lower than expected RCS temperature during crud burst operations. They verified that a safety analysis supports operating temperatures of 150 degrees F with two reactor coolant pumps operating in this condition; however, temperature was returned to greater than 160 degrees to provide a safety margin.
  - b. As outlined in LER 270/89-08 the following corrective actions were taken:
    - 1. A Technical Specification (TS) Interpretation was prepared for TS 3.1.2.9.
    - 2. An Operator Training Package, 89-28, was prepared on Low Temperature Overpressure Protection.
    - 3. An engineering analysis was performed on November 30, 1989 and determined the time available for operator action if a spurious actuation of the HPI system had occurred on Unit 2 with plant conditions present when HP-26 was open with the RCS temperature below 325 degrees F. This analysis showed that approximately three minutes would be available for corrective actions between the emergency start of the HPI system injection and the time the RCS pressure exceeded the Unit 2 LTOP pressure limits. This would have been sufficient time for the dedicated LTOP operator to mitigate any low temperature overpressurization event.
    - 4. A Technical Specification amendment request was submitted to the NRC on November 15, 1989 for needed changes relating to LTOP.

- c. Appropriate Operations personnel have received corrective disciplinary actions for their inappropriate actions. A location has been established and marked to maintain a minimum of four fire extinguishers outside each units Reactor Building Personnel Hatch dedicated for fire brigade use to meet T.S. 3.17.5.3.
  - d. This event has been discussed with the personnel involved and in Shift Supervisor and Crew meetings. Proper coordination of work and adequate communications were stressed in these discussions.
  - e. This event has been discussed with the supervisor involved. It has also been discussed in Shift Supervisor meetings and Crew meetings. More conspicuous labels have been placed on the breakers and on the control boards. An engineering review of the requirement to operate with LP-1 breaker open has been performed and it was found that the Appendix R concern is not valid. Procedures have been changed to reflect the correct status of the breaker.
4. Corrective steps which will be taken to avoid further violations:
- These violations will be discussed in Shift Supervisor meetings and Operator Crew meetings. Emphasis will be placed on procedural adherence and the necessity to make appropriate changes when procedures can not be performed as written.
5. Date of full compliance:
- Duke Power Company feels that it is currently complying with the regulations; however, these specific crew meetings will be completed by May 30, 1990.



Violation (#50-287/89-36-04)  
Severity Level (IV)

Technical Specifications (TS) 3.12.1 states that the reactor building polar crane shall not be operated over the fuel transfer canal when any fuel assembly is being moved. TS 3.12.4 states that when the reactor vessel head is removed and the polar crane is being operated in areas away from the fuel transfer canal, the flagman shall be located to top of the secondary shield wall when the polar crane hook is above the elevation of the fuel transfer canal.

Contrary to the above, on November 27, 1989, at approximately 3:00 p.m., the polar crane was in operation over the fuel transfer canal during the period that a fuel assembly was being moved. In addition the polar crane was being operated in areas away from the fuel transfer canal with the flagman not located on the secondary shield wall and the polar crane hook was above the elevation of the fuel transfer canal.

Response:

1. Admission of denial of the alleged violation:

The allegations are correct

2. Reason for violation:

The personnel involved believed the boundaries of the refueling canal were defined by the surface of the water in the refueling canal. It was also not understood the load included the polar crane hook that was not involved in the lift.

The flagman was located as he was because he felt that with the load as close as it was to the edge of the refueling canal, his best position to see the load was on the third floor next to the load.

3. The corrective steps which have been taken and the results achieved:

Maintenance Engineering wrote a training package, defining the boundaries of the "Refueling Canal", what was included in the "load", and what actions constituted "Fuel Movement". This training was given to the crane operators, flagmen, and the crew involved.

A "caution" statement was also added to the standing work request for secondary shield wall tendon surveillance to warn against operating the polar crane over the refueling canal during fuel movement.

4. Corrective steps which will be taken to avoid further violations:

- 1) Maintenance procedure MP/0/A/1710/22, "Crane Polar or CRD-Operation over the Fuel Transfer Canal with open Reactor Vessel" will be revised to better define the requirements of Technical Specification 3.12.
- 2) Maintenance Engineering will work with Compliance to write an "Interpretation" of Technical Specification 3.12 to clarify "the boundaries of the Refueling Canal", and the terms "load" and "fuel movement".

5. Date of full compliance:

- 1) Maintenance procedure MP/0/A/1710/22 will be revised by 4/1/90.
- 2) The interpretation of the Technical Specification will be complete by 12/31/90.