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 Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 971215 ltr re violations noted in insp repts
 50-269/97-15, 50-270/97-15 & 50-287/97-15. Corrective actions:
 Performed review of sufficient number of other I&C related
 TS surveillances to determine if event was isolated case.

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January 15, 1998

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

Subject: Oconee Nuclear Site
Docket Nos. 50-269, -270, -287
Inspection Report 50-269, -270, -287/97-15
Reply to Notices of Violation

Gentlemen:

By letter dated December 15, 1997, the NRC issued three Notices of Violation as described in Inspection Report No. 50-269/97-15, 50-270/97-15, and 50-287/97-15.

Duke Energy Corporation (Duke) accepts these violations. As described in the attachments, Duke is proposing corrective actions to address the root causes of the violations. Duke understands the importance of timely corrective action as it relates to UFSAR discrepancies. As requested in the NRC's letter of December 15, 1997, Duke's response to Violation C addresses the failure to follow through on the February 1997, Problem Identification Process report concerning a fuel enrichment discrepancy.

Pursuant to the provisions of 10 CFR 2.201, the attachments provide written responses to the subject violations as identified in the subject Inspection Report.

Corrective actions in Section 3 of each response are the only regulatory commitments in this submittal.

Very truly yours,

W. R. McCollum, Jr.
Site Vice President
Oconee Nuclear Station

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IED 11

Attachments (3)

9801220159 980115
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G PDR



NRC Document Control Desk
January 15, 1998
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cc: Mr. L. A. Reyes, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II

Mr. D. E. LaBarge, Project Manager
Office of Nuclear Reactor Regulation

Mr. M. A. Scott
Senior Resident Inspector
Oconee Nuclear Site

Attachment 1
Reply to Notice of Violation A (Reply)
Violation 97-15-01

Restatement of violation 97-15-01

Technical Specification Table 4.1-1, Instrument Surveillance Requirements, Item 29 requires the calibration of High and Low Pressure Injection System Flow Channels on a refueling interval. Technical Specification 4.0.2 defines the maximum interval between surveillances as 22 months, 15 days.

Contrary to the above, as of October 30, 1997, the Unit 1 and Unit 3 Low Pressure Injection Flow Channels were not calibrated within the required refueling interval. Specifically, these instruments were last calibrated on January 26, 1995, for Unit 1 and February 1, 1995, for Unit 3, which exceeded the maximum Technical Specification interval.

RESPONSE:

Duke accepts the violation.

1. The reason for the violation:

The Low Pressure Injection (LPI) flow transmitters were not calibrated within the TS required time frame. An investigation to determine the cause of the failure to perform the required calibrations has been completed. Copies of the work orders and procedures associated with the Technical Specifications (TS) required calibrations were reviewed and interviews were conducted with the personnel who were involved with the procedure in 1996. The surveillances in 1995 were performed correctly by a different Instrument and Control (I&C) crew.

The transmitters were scheduled for calibration in June and July 1996 for Unit 1 and 3 respectively. The calibration of the differential pressure indicator was added in the description of the work order in 1996 per an NRC commitment. I&C Technicians that performed the procedure indicated that they understood the work order to be for calibrating the differential pressure indicator only. The I&C supervisor believes the added description was misinterpreted as being the only calibration required at that time. The personnel involved were qualified to perform the task as stated in the work order.

Attachment 1
Reply to Notice of Violation A (Reply)
Violation 97-15-01

An error occurred in only performing the differential pressure instrument calibration. The Unit 2 calibration was performed correctly in July 1997 by the same personnel involved in the Unit 1 and 3 calibration of 1996.

The root cause is Deficient Work Practices; Document Use Practices, Documents not followed correctly.

2. The corrective steps that have been taken and the results achieved:
 - a) The Unit 3 TS surveillance for LPI flow instrument calibration was performed satisfactorily on October 10, 1997.
 - b) The Unit 1 TS surveillance for LPI flow instrument calibration was performed satisfactorily on October 11, 1997.
 - c) Employees involved were counseled and appropriate action taken as directed by company policy.
 - d) The event and its significance was communicated to all of Maintenance in the October 13, 1997, edition of Maintenance Quality Feedback.
 - e) The work order task instructions were rewritten to clarify the requirements for successful completion of the TS surveillance.

Since the errors in 1996, there have been significant communications concerning methods of obtaining event free human performance. One of the communications that continues to be stressed is Qualify, Validate, Verify (QV&V). Another is to Stop When Unsure. These communications stress the questioning attitude that all personnel must have in every task that is performed. This may have contributed to correctly performing the procedure for LPI flow calibration in 1997 and is considered a major barrier that has been implemented at Oconee that will prevent further violations.

Attachment 1
Reply to Notice of Violation A (Reply)
Violation 97-15-01

3. The corrective steps that will be taken to avoid further violations:

Perform a review of a sufficient number of other I&C related TS surveillances which are satisfied by Instrument and Control procedures to determine if this event was an isolated case. This will be completed by April 8, 1998.

4. The date when full compliance will be achieved:

Duke is currently in full compliance.

Attachment 2
Reply to Notice of Violation B (Reply)
Violation 97-15-08

Restatement of violation 97-15-08

Paragraph 3.E of the Oconee Operating License states that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report and as approved in the Safety Evaluation Reports (i.e., NRC's Fire Protection Safety Evaluation Reports).

The licensee's January 6, 1978, fire protection submittal to the NRC stated that in lieu of fire fighting procedures, "general arrangement drawings of all levels within the station and yard areas have been marked showing the location of fire protection equipment and the location of combustibles. These drawings have been located in each control room and in the Safety Supervisor's office. We intend to expand the information on these drawings to indicate additional combustibles, hazards and ventilation systems supplying each location."

NRC's August 11, 1978, Fire Protection Safety Evaluation Report, Section C.6.6 found the licensee's proposed actions to provide "the necessary strategies for fighting fires in safety-related areas and areas presenting a hazard to safety-related equipment" to be acceptable.

Contrary to the above, as of November 7, 1997, the licensee had not provided the necessary strategies for fighting fires in all safety-related areas and areas presenting a fire hazard to safety-related equipment. For example, fire fighting strategies had not been provided for the Unit 3 low pressure injection hatch area on the 771-foot elevation of the Auxiliary Building.

This is a Severity Level IV violation (Supplement I).

RESPONSE:

Duke accepts the violation.

1. The reason for the violation:

The NRC's August 11, 1978, Fire Protection Safety Evaluation Report, found that Duke's proposed actions to provide "the necessary strategies for fighting fires in safety-related areas and areas presenting a hazard to safety-related equipment" were acceptable.

Attachment 2
Reply to Notice of Violation B (Reply)
Violation 97-15-08

In the late 1970's, the proposed areas were determined by the Safety Group, in conjunction with the Operations Group, based on an Oconee directive that identified areas containing major safety-related equipment and areas potentially containing large amounts of combustibles.

The areas that currently have fire pre-plans appear to be based directly on the specific areas mentioned in the response to Branch Technical Position 9.5.1 and the Oconee Fire Protection SER. These areas were based on major pieces of equipment that could be damaged and rendered inoperable by a fire such as motors, engines, and electrical switchgear.

Components such as mechanical and motor operated valves were considered to be manually operable after a fire. Therefore, a set of Pre-Fire plans were developed to serve as an aide to the fire brigade for minimizing the effects on other systems, minimizing fire growth, and assisting in quick extinguishment. Several Standing Operating Procedure Guidance documents were written to aide the fire brigade in overall execution to ensure consistency in fire fighting strategies. A total of 48 Pre-Fire Plans were developed that covered multiple areas of the three Oconee units.

However, the 1978 upgraded pre-fire plans were too narrowly focused in that they did not include all areas containing safety-related equipment. The narrow scope of the Pre-Fire Plans did not meet the intent of the Fire Protection submittal response. It is believed that the cause of the violation is that the references used when the plan was developed in 1978 had an inappropriate scope for this task.

In 1995, it was decided to revise the pre-fire plans to include information gathered during the Individual Plant Examination of External Event (IPEEE) for Severe Accident Vulnerabilities, NUREG-1407. It was also noted that there were many areas of the plant which relied on the Fire Brigade Leader's experience for the determination of appropriate fire strategy.

Significant efforts were made through 1996 to clearly establish the fire fighting and operator information content and format needed to revise the pre-fire plans. Completion of the first draft of the revised pre-fire plans was in December, 1996.

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Reply to Notice of Violation B (Reply)
Violation 97-15-08

2. The corrective steps that have been taken and the results achieved:

Currently, the revised pre-fire plans are 60% complete for those areas within the Protected Area.

3. The corrective steps that will be taken to avoid further violations:

The 1978 pre-fire plans will be replaced by plans that identify over 130 areas within the Protected Area covering non-discriminatorily almost every location a fire is possible.

4. The date when full compliance will be achieved:

The new pre-fire plans for inside the Protected Area will be completed by June 1998.

Attachment 3
Reply to Notice of Violation C (Reply)
Violation 97-15-09

Restatement of violation 97-15-09

10 CFR 50.71(e) requires the Final Safety Analysis Report be revised to include the effects of all changes in the facility.

Contrary to the above, as of August 13, 1997, the Final Safety Analysis Report (FSAR) had not been revised to include the effects of all changes in the facility. Specifically, Section 4.3.3.1.4 of the FSAR indicated that only one enrichment is used per fuel assembly while the fuel loaded in Unit 2 in 1994 and Unit 3 in 1997 contained axial end blankets with different enrichments.

This is a Severity Level IV violation (Supplement I).

RESPONSE:

Duke accepts the violation.

1. The reason for the violation:

Inappropriate Action #1

The 10CFR50.59 analysis performed in 1994 to allow the use of Mk-B10 Axial Blanket Fuel overlooked a UFSAR section related to this fuel design change. This resulted in a technical discrepancy in the UFSAR when compared to the current plant fuel design. The root cause for inappropriate action #1 was a misjudgment in the level of review needed to identify all UFSAR sections affected by a fuel design change.

This error occurred due to a mindset of performing UFSAR reviews with the primary purpose of identifying sections in need of new information and known to be directly affected by fuel design safety analysis results. The individuals did not approach the UFSAR review with the mindset of identifying all potentially affected sections.

Expectations had not been clearly established regarding preferred methods and techniques that would identify all affected UFSAR sections. The UFSAR structure is such that information is repeated in different sections. Because of this structure, it is difficult to ensure that all affected information is located and revised when revisions occur. This discrepancy may have been identified during the original

Attachment 3
Reply to Notice of Violation C (Reply)
Violation 97-15-09

10CFR50.59 if more effective search techniques had been utilized.

Inappropriate Action #2

As a result of a self-initiated UFSAR accuracy review, PIP 0-097-0448 was generated in February, 1997, to address UFSAR revisions which were necessary as a result of fuel design changes. The required UFSAR changes were described in detail in the problem description section of the PIP, which was separate from the corrective actions section. A corrective action was also generated which referenced the problem description information in the PIP. A portion of the identified UFSAR changes were completed, and the corrective action was closed. The basis for deviating from this corrective action in PIP 0-097-0448 was not clearly documented. As a result, another corrective action to complete the remainder of the UFSAR changes was not appropriately originated.

The root cause of inappropriate action #2 was misjudgment in the level of validation and verification needed to assure corrective action commitments were adequately documented and responsibilities appropriately assigned in the corrective action program.

The Nuclear Engineering PIP Coordinator correctly understood the written agreement between Nuclear Engineering and Regulatory Compliance as the authorization needed to close the PIP corrective action to Nuclear Engineering, Nuclear Design section. However, the Nuclear Engineering PIP Coordinator made the wrong assumption that ONS Regulatory Compliance would either generate a new corrective action to ONS Systems Engineering or track ONS Systems Engineering's resolution under the corrective action open to ONS Regulatory Compliance. The expectations regarding corrective action assignments could have been clarified and effectively implemented had this assumption been verified and validated through discussions with ONS Regulatory Compliance.

The ONS UFSAR Editor missed opportunities to identify the breakdown in corrective action resolution of the PIP. The ONS UFSAR editor could have performed either limited investigation to identify corrective action resolution had not occurred or initiated a new corrective action to

Attachment 3
Reply to Notice of Violation C (Reply)
Violation 97-15-09

Nuclear Engineering, Nuclear Design section rather than deferring UFSAR resolution coordination to the next UFSAR Update cycle.

2. The corrective steps that have been taken and the results achieved:

The subject 10CFR50.59 analysis has been revised. There are no unreviewed safety questions, and UFSAR markups have been completed and provided to Oconee Regulatory Compliance.

The following corrective steps have been taken to avoid further violations:

- a) The Millstone event was discussed with employees shortly after occurrence, and the importance of the UFSAR was strongly emphasized.
- b) Specific UFSAR section by section accountability was established by assigning Oconee UFSAR Section Owners in late 1996.
- c) The UFSAR Editor was counseled on the deficiencies identified by this event. Additional time was also allotted for the UFSAR Editor role to facilitate more involvement in UFSAR coordination activities.
- d) Electronic searches have been emphasized as a way to improve thoroughness of UFSAR updates.
- e) Nuclear Engineering Division Workplace Procedure for Documentation of Safety-Related Analyses, NE-103 Revision 5, 8/11/97 added (among other items) a check block that verifies that any UFSAR changes are included with evaluations.
- f) On 9/4/97, the Nuclear Engineering Division manager issued a letter to all Nuclear Engineering Division personnel which reiterated the importance of preventing human errors. Human error prevention information was attached to his letter. He also requested all section managers to discuss the subject of human error prevention with their personnel in their next Section meeting.

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Reply to Notice of Violation C (Reply)
Violation 97-15-09

- g) The Core Mechanical and Thermal Hydraulics section manager has spoken individually to each 10CFR50.59 preparer to reemphasize that all sections of SAR documents must be reviewed and to suggest some redundant means of verifying that all material has been adequately reviewed.
 - h) Additionally, Core Mechanical and Thermal Hydraulics section has held a meeting (on 9/15/97) to reach consensus on the most effective techniques to use in searching the UFSAR (to prevent missed sections) as part of 10CFR50.59 evaluations.
3. The corrective steps that will be taken to avoid further violations:
- All corrective actions have been completed.
4. The date when full compliance will be achieved:
- Duke is currently in full compliance.