

SUMMARY OF FINDINGS

**Fort Calhoun Nuclear Station
NRC Inspection Report 50-285/99-17**

The report covers a 6-week period of resident inspection. The report also includes a 2-day announced inspection performed in response to an emergency preparedness performance indicator that had decreased below the white threshold. The regional emergency preparedness inspector verified performance indicators in the emergency preparedness cornerstone and evaluated the effectiveness of the licensee's problem identification and resolution process.

The body of the report is organized under the broad categories of reactor safety and other activities as listed in the summary below.

Cornerstone: Emergency Preparedness

No color. The licensee reported an incorrect value for the Drill and Exercise Performance indicator because the screening criteria for evaluating protective action recommendation opportunities were not defined and subject to interpretation. The inspector found that, in two instances, the licensee incorrectly reported successful protective action recommendation opportunities. In both cases, emergency response organization staff provided dose projections to the emergency director but did not transmit them to the offsite agencies. The licensee subsequently modified the screening criteria to count only those opportunities that resulted in recommended offsite protective actions. The modified criteria decreased the percent value of the performance indicator value but did not change the color determined earlier (white). The licensee initiated Condition Report 199901961 to develop a guideline for performance indicator determination (Section 4OA2).

measures of success of these corrective actions will be captured by the Drill and Exercise Performance indicator, which has remained green. The inspectors concluded that the level of degradation of this performance indicator was not substantial enough to pose a risk to public health and safety.

4. OTHER ACTIVITIES (OA)

4OA2 Performance Indicator Verification (71151)

.1 Emergency Preparedness

a. Inspection Scope

The regional emergency preparedness inspector reviewed the supporting data for the three emergency preparedness cornerstone performance indicators: (1) Alert and Notification System Reliability, (2) Emergency Response Organization Readiness, and (3) Emergency Response Organization Drill/Exercise Performance. The inspector reviewed the licensee's methodology to interpret and report the data. The inspector reviewed the following documents:

- Siren testing records for two calendar quarters selected from the last 2 calendar years;
- The current emergency response organization roster and drill attendance sheets for 24 key responders for the current reporting quarter and historical data for one other quarter, and;
- Scenario and critique documentation for drills, exercises, and simulator training sessions performed in the last 2 calendar quarters.

b. Observations and Findings

Drill and Exercise Performance

One finding was identified and evaluated. The finding was determined to have no color significance.

The licensee's screening criteria for evaluating protective action recommendations for the drill and exercise performance indicator were not formally documented and, therefore, subject to interpretation and judgement calls. This led to too many instances being counted as valid opportunities for making protective action recommendations, including recommendations to the emergency director based on dose projections which were not approved or communicated to offsite agencies.

The licensee self-identified this screening process as being too inclusive and corrected its screening criteria to limit the definition of a protective action recommendation opportunity to those which were approved and transmitted to the offsite agencies. The

licensee identified this problem during the evaluation of a drill in May 1999. A large number of incorrect protective action recommendations caused the drill and exercise performance indicator, for that monthly reporting period, to cross the threshold from green to white. The screening criteria were revised and were more stringent, but they were not documented to prevent future inconsistencies.

The inspector verified the drill and exercise performance indicator data using the licensee's most recent screening criteria. The results showed the licensee had included two successfully completed opportunities that were invalid by the revised criteria. The application of the revised screening criteria decreased the percent value of the performance indicator from the reported value, but it did not cause it to change color. The licensee initiated Condition Report 199901961 to capture the need to develop a guideline for the performance indicator determination.

Emergency Response Organization Readiness

No findings were identified in the verification of this performance indicator.

Alert and Notification System Reliability

No findings were identified in the verification of this performance indicator.

.2 Reactor Safety

a. Inspection Scope

The inspectors verified the accuracy and completeness of data used to calculate and report:

- The transients per 7000 critical hours,
- Safety system unavailability,
- Safety system functional failures, and
- The containment leakage performance indicators.

b. Observations and Findings

No findings were identified in the verification of these performance indicators. The performance indicators all remained in the licensee response band (Green).

4OA3 Event Followup

a. Inspection Followup

The inspectors reviewed the licensee's corrective actions following an October 26, 1999, loss of power to both Vital Buses 1A3 and 1A4.

b. Observations and Findings

The inspectors performed a review of the licensee's root cause analysis, "Loss of 4.1-kV Bus 1A3 and 1A4 Power During Station Lighting Transfer." Based on the inspector's review of the licensee's corrective actions, no additional NRC involvement is required.

40A4 Other

.1 Review of Licensee Response to NRC Generic Letter 98-02, "Loss of Reactor Coolant Inventory and Associated Potential For Loss of Emergency Mitigation Functions While in a Shutdown Condition"

a. Inspection Scope

The inspectors reviewed Engineering Evaluation DEN-98-0279 dated November 24, 1998, written by the licensee in response to Generic Letter 98-02.

b. Observations and Findings

The evaluation concluded that the emergency core cooling system at FCS is not susceptible to common-mode failure similar to events described in the generic letter. As a result of the evaluation, the licensee did add an additional step to Procedure OI-SC-1, "Shutdown Cooling Initiation," to independently verify that LPSI Pump Suction Valves HCV-2937 and HCV-2947 closed prior to initiating shutdown cooling. These valves isolate the low pressure safety injection pumps from the safety injection and refueling water tank suction header during shutdown cooling operations.

The inspectors reviewed the licensee's engineering evaluation using Temporary Instruction 2515/142, "Draindown During Shutdown and Common-Mode Failure (NRC Generic Letter 98-02)." The review addressed design features, such as a common pump suction header, which could render the emergency core cooling systems susceptible to common-cause failures. The inspectors determined that the licensee's engineering evaluation properly addressed the concerns of GL 98-02 and that FCS is not susceptible to the common-cause failure event similar to that detailed in the generic letter. No further inspection is required under Temporary Instruction 2515/142.

40A5 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on November 15, 1999. The licensee acknowledged the findings presented. The licensee did not consider any material examined during the inspection proprietary.

JAN 19

- E-Mail report to D. Lange (DJL)
- E-Mail report to NRR Event Tracking System (IPAS)
- E-Mail report to Document Control Desk (DOCDESK)
- E-Mail report to J. D. Wilcox (JDW)
- E-Mail report to Frank Talbot (FXT)

- E-Mail all documents to Jim Isom for Pilot Plant Program (JAI)
- E-Mail all documents to Sampath Malur for Pilot Plant Program (SKM)

E-Mail notification of report issuance to the FCS SRI and Site Secretary (WCW, NJC).

E-Mail notification of issuance of all documents to Nancy Holbrook (NBH).

bcc to DCD (IE01)

bcc distrib. by RIV:

- Regional Administrator
- DRP Director
- DRS Director
- Branch Chief (DRP/C)
- Project Engineer (DRP/C)

- RIV File
- RITS Coordinator
- Resident Inspector
- Branch Chief (DRP/TSS)

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