

ENCLOSURE 1

NOTICE OF VIOLATION

Wolf Creek Nuclear Operating Corporation

Docket No.: 50-482

Wolf Creek Generating Station

License No.: NPF-42

EA 98-274

During an NRC inspection conducted on March 23 through June 26, 1998, three violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

- A. 10 CFR 50.59(a)(1) states, in part, that a holder of a license authorizing operation of a production or utilization facility may make changes in the facility as described in the safety analysis report without prior Commission approval unless the proposed change involves an unreviewed safety question.

10 CFR 50.59(a)(2) states, in part, that changes shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously analyzed in the safety analysis report may be increased; (ii) if the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced.

10 CFR 50.59(b)(1) states, in part, that the licensee shall maintain records of changes in the facility made pursuant to this section, and that these records must include a written safety evaluation that provides the bases for the determination that the change does not involve an unreviewed safety question.

Contrary to the above, on several occasions without prior Commission approval and without performing written safety evaluations, the licensee made changes to the facility as described in the Updated Safety Analysis Report, that involved an unreviewed safety question. Specifically, on April 22, 1992, November 11, 1993, and December 1, 1995, the licensee added operator actions to Emergency Management Guideline ES-12, "Transfer to Cold Leg Recirculation," a procedure described in the Updated Safety Analysis Report, without performing written safety evaluations that provided the bases for the determination that the changes did not involve an unreviewed safety question. These changes constituted an unreviewed safety question in that they increased the probability that operators would not be able to complete the switchover of emergency core cooling system pump suction from the refueling water storage tank to the containment sump before depletion of the refueling water storage tank. This increased the probability of a malfunction of the emergency core cooling system pumps (equipment important to safety).

This is a Severity Level IV violation (Supplement I) (50-482/9812-01).

- B. 10 CFR Part 50, Appendix B, Criterion V states, in part, that activities affecting quality shall be prescribed by procedures appropriate to the circumstances and shall be accomplished in accordance with these procedures. Procedures shall be accompanied by appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished.

Procedure AP 05-001, "Change Package Planning and Implementation," Revision 2, Section 6.2.3, required that all programs requiring revision, such as calculations, be identified.

Contrary to the above, the following examples of a failure to follow procedures and an example of inadequate procedures were identified:

1. In March 1998, activities were not accomplished in accordance with Procedure AP 05-001. Revisions to Calculation NK-E-003, "Class 1E 125 V DC Battery Short Circuit Study," Revision 0, to reflect the new fault contribution from the equipment being installed were not identified by Design Change Package 05846, "Battery Replacement," Revisions 0 through 11, and Design Change Package 05248, "NK System Swing Battery Charger Installation," Revisions 0 through 9.
2. On January 9, 1998, the inspectors determined that the acceptance criteria for station battery Surveillance Test Procedures STS-MT-021, "Service Test for 125vdc Class 1E Batteries," Revision 11, STS-MT-022, "Service Test for 125vdc Discharge Battery Test," Revision 10, were not appropriate for determining that activities were accomplished in that the procedure acceptance criteria did not assure that battery discharge current was consistent with the load profile, that the battery final terminal voltage was greater than the minimum allowable design value, and that a constant discharge rate was maintained during testing.

This is a Severity Level IV violation (Supplement I) (50-482/9812-02).

- C. 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established to assure that applicable design bases are correctly translated into specifications, drawings, procedures, or instructions. It also requires that design control measures shall provide for verifying or checking the adequacy of the design, such as, by the performance of design reviews.

Contrary to the above, applicable design bases were not correctly translated into documents or were not properly verified or checked for design adequacy in the following examples:

1. During 1990, Plant Modification Request 02149 did not translate the design service water flow to the component cooling water heat exchanger in that the supporting calculation for this modification, Calculation EG-06-W, "Determine Flow and Heat Load Requirement," Revision W3, dated July 6, 1990, described the service water flow rate to the component cooling water heat exchangers as 8800 gpm. However, Westinghouse Analysis FSDA-C-365, Revision 1, which determined the cooldown rate and time, used a service water flow rate of 13500

gpm to the component cooling water heat exchangers. The design control measures did not properly verify or check the adequacy of Calculation EG-06-W. The assumed service water flow rates to the component cooling water heat exchangers were lower than those stated in the Westinghouse analysis.

2. On January 9, 1998, design control measures did not assure that applicable design bases were correctly translated into specifications for residual heat removal pump operation in the minimum recirculation mode in that the maximum initial water temperature of 104 degrees F as specified in the Updated Safety Analysis Report was not incorporated into Calculation EJ-M-018, "RHR Pump Recirc. Operation vs. Time of Initiation of CCW Flow to RHR Heat Exchanger." While Calculation EJ-M-018 justified the residual heat removal pump operation on minimum recirculation flow for 2.5 hours, it incorrectly assumed an initial water temperature of 90 degrees F in the residual heat removal system instead of a maximum design basis temperature of 104 degrees F.
3. On January 9, 1998, design control measures did not assure that applicable design bases were correctly translated into specifications in that the refueling water storage tank level instrumentation uncertainty Calculation SA-90-056, "Reactor Protection System ESFAS Channel Error Allowances," which calculated the switchover and alarm set points for the refueling water storage tank, did not correctly translate errors from density variation due to temperature and boron concentration for use in determining the refueling water storage tank level instrument uncertainty. As a result, the Low-Low Level 1 switchover set point could reduce the available tank volume by 3.24 percent, the low alarm set point could be reduced 2.51 percent and the tank empty alarm could drift down 14 inches to within 3 inches of the refueling water storage tank suction line. The reduced set points for the low level alarm and the tank empty alarm reduced the margin available for operator response. In addition, uncertainty calculations did not exist for the instrument inaccuracies of 1 percent for bistables and 3 percent for total loop error, which were assumed in Calculation BN-20, "Refueling Water Storage Tank Set points," Revision 1.
4. On January 9, 1998, design control measures did not assure that applicable design bases were correctly translated into specifications, drawings, procedures, or instructions in that the design for Component Cooling Water Motor-Operated Valves EG-HV-062 and EG-HV-132 did not utilize the correct differential pressure across these valves. Calculation E-025-00007(Q)-W10, "MOV Design Configuration Document," Revision 9W, incorrectly identified that the differential pressure that these valves must close against was 1120 psid, whereas, the actual differential pressure was 2228 psid.
5. On June 26, 1998, design control measures did not assure that applicable design bases were correctly translated into specifications, drawings, procedures, or instructions in that changes made in accordance with Design Change PMR 4380, "Component Cooling Water Temperature Change," Revision 2, which reduced the allowable component cooling water temperature from 60 to 32 degrees F, did not consider the effect of the colder water on the spent fuel pool reactivity.

This is a Severity Level IV violation (Supplement I) (50-482/9812-05).

Pursuant to the provisions of 10 CFR 2.201, Wolf Creek Nuclear Operating Corporation is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Regarding Violation Examples B.2, C.1, C.2, C.3, C.4 and C.5, above, the NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance will be achieved is already adequately addressed on the docket in NRC Inspection Report 50-482/98-12. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region IV, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Arlington, Texas  
this day of September 1998