

NRC-03-015

10 CFR 50.46

February 27, 2003

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

KEWAUNEE NUCLEAR POWER PLANT  
DOCKET 50-305  
LICENSE No. DPR-43  
2002 ANNUAL OPERATING REPORT

Enclosed is the 2002 Kewaunee Nuclear Power Plant (KNPP) Annual Operating Report. This report is being submitted in accordance with Section 6.9.a.2 of the KNPP Technical Specifications.

This submittal of the 2002 KNPP Annual Operating Report also satisfies the reporting requirements of 10 CFR 50.46(a)(3)(ii) (Emergency Core Cooling System evaluation model changes), and KNPP Technical Specification 4.2.b.7.b (steam generator inspection). Also, in accordance with the commitment made by KNPP upon NRC issuance of the turbine valve test frequency Technical Specification amendment, any turbine stop and control valve failures are described.



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DAK

Attachment

cc US NRC - Region III  
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## **INTRODUCTION**

This annual operating report is being submitted to fulfill several reporting requirements contained either in the Kewaunee Nuclear Power Plant (KNPP) Technical Specifications (TS) or in other commitments made by KNPP to the Nuclear Regulatory Commission (NRC).

In response to NUREG-0737, Item II.K.3.3, and in accordance with KNPP Technical Specification (TS) 6.9.a.2.C, Section 1.0 reports challenges to and failures of pressurizer safety and relief valves, if applicable.

Section 2.0 provides a summary of the steam generator eddy current examination in accordance with KNPP TS 4.2.b.7.b.

Personnel exposure and monitoring data is provided in Section 3.0 per Regulatory Guide 1.16, Section C.1.b.(3), and KNPP TS 6.9.a.2.B.

The provisions of 10 CFR 50.46 require the reporting of corrections or changes to the Emergency Core Cooling System (ECCS) evaluation models that are approved for use in performing the loss-of-coolant accident (LOCA) safety analysis. This information, if applicable, is provided in Section 4.0.

Section 5.0 reports failures of turbine stop and control valves, if applicable, in accordance with a commitment made to the NRC upon approval of KNPP TS Amendment 84.

Section 6.0, in accordance with KNPP TS 6.9.a.2.D, contains documentation of the results of specific analysis in which the reactor coolant exceeded the limits of KNPP TS 3.1.c.1.A, if applicable.

## **1.0 CHALLENGES TO AND FAILURES OF PRESSURIZER SAFETY AND RELIEF VALVES**

In response to NUREG-0737, item II.K.3.3, and in accordance with KNPP Technical Specification 6.9.a.2.C, WPSC is committed to reporting challenges to and failures of pressurizer safety and pressurizer power-operated relief valves.

There were no challenges to, or failures of, pressurizer safety or pressurizer power-operated relief valves during 2002.

## **2.0 SUMMARY OF 2002 STEAM GENERATOR EDDY CURRENT EXAMINATIONS**

Kewaunee Nuclear Power Plant did not have a refueling outage in 2002. As a result, no steam generator in-service examinations were performed.

The next planned refueling outage will occur in May 2003. The steam generators are scheduled for inspection during that time.

### 3.0 PERSONNEL EXPOSURE AND MONITORING REPORT

Table 3.1 presents a tabulation of the total number of individuals for whom monitoring was provided, along with information on total station dose for the year.

Table 3.2 presents a tabulation of the number of station, utility, and other personnel (including contractors) receiving exposures greater than 100 mrem/yr (1.0 mSv/yr) and their associated person-rem exposure according to work and job functions. This table is provided per Regulatory Guide 1.16, Section C.1.b.(3), and Kewaunee Technical Specification 6.9.a.2.B.

**Table 3.1**  
**Total Statistics**  
**1/1/02 To 12/31/02**

<b>Deep Dose Exposure Range</b>	<b>Number of Individuals in Range</b>
None - Detected	652
Less than .100 rem	84
0.100 rem to 0.249 rem	18
0.250 rem to 0.499 rem	0
0.500 rem to 0.749 rem	0
0.750 rem to 0.999 rem	0
1.000 rem to 1.999 rem	0
Greater than 2.000 rem	0
 Total Monitored Individuals	 754
 Total Site Deep Dose (NDE + DDE) =	 4.449 rem

**TABLE 3.2**  
**U.S.N.R.C. REGULATORY GUIDE 1.16 REPORT**  
**KEWAUNEE NUCLEAR POWER PLANT**  
**FROM 1/1/02 TO 12/31/02**

Work and Job Function	** Number of Persons > .100 Rem			Total Man-Rem		
	Station	Utility	Contract	Station	Utility	Contract
<b>Inservice Inspection</b>						
Maintenance Person.	0	0	0	0.000	0.000	0.000
Operating Personnel	0	0	0	0.000	0.000	0.000
Health Physics Per.	4	0	0	0.006	0.000	0.000
Supervisory Person.	0	0	0	0.000	0.000	0.000
Engineering Person.	0	0	0	0.000	0.000	0.000
<b>Routine Maintenance</b>						
Maintenance Person.	1	0	0	0.013	0.000	0.000
Operating Personnel	1	0	0	0.064	0.000	0.000
Health Physics Per.	10	0	0	0.559	0.000	0.000
Supervisory Person.	0	0	0	0.000	0.000	0.000
Engineering Person.	0	0	0	0.000	0.000	0.000
<b>Reactor Operations &amp; Surv</b>						
Maintenance Person.	0	0	0	0.000	0.000	0.000
Operating Personnel	1	0	0	0.028	0.000	0.000
Health Physics Per.	1	0	0	0.006	0.000	0.000
Supervisory Person.	0	0	0	0.000	0.000	0.000
Engineering Person.	0	0	0	0.000	0.000	0.000
<b>Refueling</b>						
Maintenance Person.	0	0	0	0.000	0.000	0.000
Operating Personnel	0	0	0	0.000	0.000	0.000
Health Physics Per.	0	0	0	0.000	0.000	0.000
Supervisory Person.	0	0	0	0.000	0.000	0.000
Engineering Person.	0	0	0	0.000	0.000	0.000
<b>Special Maintenance</b>						
Maintenance Person.	5	0	0	0.685	0.000	0.000
Operating Personnel	0	0	0	0.000	0.000	0.000
Health Physics Per.	11	0	0	0.439	0.000	0.000
Supervisory Person.	0	0	0	0.000	0.000	0.000
Engineering Person.	0	0	0	0.000	0.000	0.000
<b>Waste Processing</b>						
Maintenance Person.	1	0	0	0.008	0.000	0.000
Operating Personnel	1	0	0	0.016	0.000	0.000
Health Physics Per.	10	0	0	0.483	0.000	0.000
Supervisory Person.	0	0	0	0.000	0.000	0.000
Engineering Person.	0	0	0	0.000	0.000	0.000
<b>Sub Totals</b>						
Maintenance Person.	7	0	0	0.706	0.000	0.000
Operating Personnel	3	0	0	0.108	0.000	0.000
Health Physics Per.	36	0	0	1.493	0.000	0.000
Supervisory Person.	0	0	0	0.000	0.000	0.000
Engineering Person.	0	0	0	0.000	0.000	0.000
<b>Grand Totals</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>2.307</b>	<b>0.000</b>	<b>0.000</b>

Total Site Deep Dose (NDE + DDE) for Ind. with >.100 rem = 2.566 rem

\*\*Individuals may be listed under more than one job function.



#### 4.0 CHANGES IN THE EMERGENCY CORE COOLING SYSTEM MODEL

In accordance with the provisions of 10 CFR 50.46, this section provides corrections or changes to the emergency core cooling system (ECCS) models.

##### Large Break LOCA Analysis

Changes in the assumed oxidation thickness increased peak clad temperature by 14°F. This change in peak clad temperature increased Kewaunee's final peak clad temperature from 2038°F to 2052°F.

##### Small Break LOCA Analysis

There were no reported changes to the small break analysis. Therefore, the peak clad temperature remained at 843°F.

## **5.0 FAILURES OF TURBINE STOP AND CONTROL VALVES**

There were no failures of the turbine stop and control valves to close during 2002.

## 6.0 MAXIMUM COOLANT ACTIVITY

KNPP TS 6.9.a.2.D requires the documentation of the results of specific activity analysis in which the reactor coolant exceeded the limits of TS 3.1.c.1.A during the past year.

The reactor coolant did not exceed the limits of TS 3.1.c.1.A during 2002.