



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

MAR 08 2001

10 CFR 50.4

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

Gentlemen:

In the Matter of  
Tennessee Valley Authority

)  
)

Docket No. 50-390

WATTS BAR NUCLEAR PLANT (WBN) - 2000 ANNUAL OCCUPATIONAL  
RADIATION EXPOSURE REPORT

Enclosed is the 2000 Annual Occupational Radiation Exposure Report. This report contains a summary of occupational exposure data for the period of January 1, 2000, to December 31, 2000. Submittal of this report fulfills the requirements of Technical Specification 5.9.1.

If you should have any questions, please contact me at (423) 365-1824.

Sincerely,

A handwritten signature in black ink, appearing to read "P. L. Pace", written over a horizontal line.

P. L. Pace  
Manager, Licensing and Industry Affairs

Enclosure  
cc: See page 2

IE50

U.S. Nuclear Regulatory Commission

Page 2  
MAR 08 2001

cc (Enclosure):

NRC Resident Inspector  
Watts Bar Nuclear Plant  
1260 Nuclear Plant Road  
Spring City, Tennessee 37381

Mr. Robert E. Martin, Senior Project Manager  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, Maryland 20852

U.S. Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, Georgia 30303

REIRS Project Manager  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

ENCLOSURE

TENNESSEE VALLEY AUTHORITY  
WATTS BAR NUCLEAR PLANT UNIT 1

2000 ANNUAL OCCUPATIONAL RADIATION EXPOSURE REPORT

JANUARY 1, 2000 TO DECEMBER 31, 2000

UNIT 1  
DOCKET NUMBER 50-390  
LICENSE NUMBER NPF-90

## WATTS BAR NUCLEAR PLANT (WBN)

### 2000 ANNUAL OCCUPATIONAL RADIATION EXPOSURE REPORT

#### Occupational Exposure Data:

Enclosed is the exposure data for personnel at WBN that received greater than 100 millirem between January 1, 2000 and December 31, 2000. The major special maintenance tasks for which exposure data is provided includes:

- The Unit 1 Cycle 3 refueling outage began on September 10, 2000, and concluded on October 7, 2000.
- An upgrade to the Fuel Transfer system.
- Replacement and upgrade of components in the Hydrogen Mitigation system.
- Replacement of piping in the Steam Generator Blowdown system.
- Replacement of level transmitters on the Spent Resin Storage Tank.
- Modification of the Radiation Monitoring system and the deletion of certain monitors.
- Replacement of the shaft on the 1B-B Centrifugal Charging Pump.

WATTS BAR NUCLEAR PLANT

Date: 25-JAN-2001 06:35

PO BOX 2000  
 SPRING CITY, TN, 37381  
 LICENSE: NPF-90, SNM-1873

Regulatory Guide 1.16 Information  
 End of Year Report 2000

Work and Job Function	Number of Personnel > 100 mrem			Total man-rem *		
	Station	Utility	Contractor	Station	Utility	Contractor
ROUTINE OPERATIONS AND SURVEILLANCE						
MAINTENANCE PERSONNEL	2.486	0.120	4.377	0.696	0.021	1.050
OPERATIONS PERSONNEL	8.530	0.000	0.000	1.208	0.000	0.000
HEALTH PHYSICS PERSONNEL	4.875	0.081	11.776	1.345	0.013	2.814
SUPERVISORY PERSONNEL	1.517	0.011	0.000	0.213	0.002	0.000
ENGINEERING PERSONNEL	1.353	0.000	0.661	0.324	0.000	0.119
ROUTINE PLANT MAINTENANCE						
MAINTENANCE PERSONNEL	11.290	7.682	31.672	2.738	1.394	6.095
OPERATIONS PERSONNEL	0.203	0.000	0.000	0.050	0.000	0.000
HEALTH PHYSICS PERSONNEL	0.070	0.002	0.519	0.019	0.002	0.124
SUPERVISORY PERSONNEL	0.720	0.022	0.014	0.115	0.004	0.003
ENGINEERING PERSONNEL	0.065	0.001	0.000	0.011	0.001	0.000
INSERVICE INSPECTION						
MAINTENANCE PERSONNEL	2.410	0.248	17.896	0.825	0.045	3.779
OPERATIONS PERSONNEL	0.038	0.000	0.061	0.009	0.000	0.018
HEALTH PHYSICS PERSONNEL	1.064	0.870	7.984	0.420	0.179	1.803
SUPERVISORY PERSONNEL	1.367	0.000	0.000	0.357	0.000	0.000
ENGINEERING PERSONNEL	0.876	2.000	3.711	0.156	0.224	0.761
SPECIAL PLANT MAINTENANCE						
MAINTENANCE PERSONNEL	0.208	0.014	9.746	0.052	0.002	2.562
OPERATIONS PERSONNEL	0.093	0.000	0.000	0.026	0.000	0.000
HEALTH PHYSICS PERSONNEL	3.211	0.115	1.318	0.730	0.020	0.260
SUPERVISORY PERSONNEL	0.125	0.022	0.102	0.020	0.004	0.013
ENGINEERING PERSONNEL	0.592	0.000	0.000	0.111	0.000	0.000
WASTE PROCESSING						
MAINTENANCE PERSONNEL	0.953	0.004	0.255	0.218	0.001	0.037
OPERATIONS PERSONNEL	0.151	0.000	0.000	0.032	0.000	0.000
HEALTH PHYSICS PERSONNEL	2.603	0.017	0.703	0.483	0.004	0.091
SUPERVISORY PERSONNEL	0.032	0.000	0.000	0.007	0.000	0.000
ENGINEERING PERSONNEL	0.000	0.000	0.000	0.000	0.000	0.000

Regulatory Guide 1.16 Information  
End of Year Report 2000

Work and Job Function	Number of Personnel > 100 mrem			Total man-rem *		
	Station	Utility	Contractor	Station	Utility	Contractor
REFUELING						
MAINTENANCE PERSONNEL	6.652	7.932	163.055	1.799	1.362	47.525
OPERATIONS PERSONNEL	6.986	0.000	0.939	2.263	0.000	0.277
HEALTH PHYSICS PERSONNEL	7.529	2.918	20.349	1.928	0.485	4.647
SUPERVISORY PERSONNEL	10.238	1.944	2.883	5.010	0.776	0.638
ENGINEERING PERSONNEL	7.113	0.995	0.629	2.341	0.872	0.202
Totals						
MAINTENANCE PERSONNEL	24.000	16.000	227.000	6.328	2.825	61.048
OPERATIONS PERSONNEL	16.000	0.000	1.000	3.588	0.000	0.295
HEALTH PHYSICS PERSONNEL	19.351	4.003	42.649	4.925	0.703	9.739
SUPERVISORY PERSONNEL	14.000	2.000	3.000	5.722	0.786	0.654
ENGINEERING PERSONNEL	10.000	2.997	5.000	2.943	1.097	1.082
Grand Totals	83.351	25.000	278.649	23.506	5.411	72.818

\* The man-rem totals include dose only from individuals receiving more than 100 mrem throughout the year at the site.