

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

January 28, 1991

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 91-032
NAPS/JHL
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

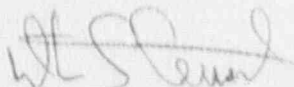
Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT NOS. 1 AND 2
ANNUAL WHOLE BODY EXPOSURE REPORT

Pursuant to 10 CFR 20.407 and Technical Specification 6.9.1.4 and 6.9.1.5, the Annual Whole Body Exposure Report for North Anna Power Station Unit Nos. 1 and 2 is enclosed.

If you have any questions or require additional information, please contact us.

Very truly yours,



W. L. Stewart
Senior Vice President - Nuclear

Attachment

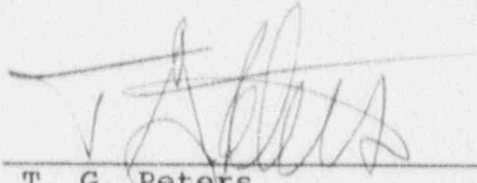
cc: U. S. Nuclear Regulatory Commission
Region II
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Atlanta, Georgia 30323

Mr. M. S. Lesser
NRC Senior Resident Inspector
North Anna Power Station

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RECORDED ANNUAL WHOLE BODY EXPOSURE REPORT
FOR THE
NORTH ANNA POWER STATION
FOR THE PERIOD
JANUARY 1, 1990 - DECEMBER 31, 1990

Prepared By: 

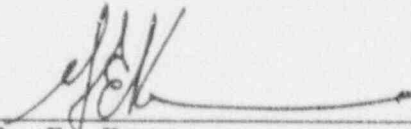
T. G. Peters
Supervisor Health Physics
(Exposure Control)

Reviewed By: 

E. W. Dreyer
Supervisor Health Physics
(Technical Services)

Reviewed By: 

A. H. Stafford
Superintendent
Radiological Protection

Approved By: 

G. E. Kane
Station Manager

FORWARD

THIS REPORT IS SUBMITTED AS REQUIRED BY TECHNICAL SPECIFICATIONS 6.9.1.4 AND 6.9.1.5 FOR NORTH ANNA POWER STATION UNITS 1 AND 2, AND 10 CFR PART 20 SEC. 20.407 (a) (2).

VIRGINIA POWER
NORTH ANNA POWER STATION
LICENSE NOS. NPF-04 AND NPF-07
RECORDED ANNUAL WHOLE BODY EXPOSURES
CALENDAR YEAR 1990

<u>Dose Range</u> <u>(mRem)</u>	<u>Number of</u> <u>Individuals</u>
No measurable exposure	<u>1,172</u>
1 - 99	<u>1,304</u>
100 - 249	<u>267</u>
250 - 499	<u>195</u>
500 - 749	<u>131</u>
750 - 999	<u>96</u>
1000 - 1999	<u>117</u>
2000 - 2999	<u>46</u>
3000 - 3999	<u>5</u>
4000 - 4999	<u> </u>
5000 - 5999	<u> </u>
6000 - 6999	<u> </u>
7000 - 7999	<u> </u>
8000 - 8999	<u> </u>
9000 - 9999	<u> </u>
10000 - 10999	<u> </u>
11000 - 11999	<u> </u>
12000	<u> </u>
Total number of individuals reported	<u>3,333</u>
Total Station Man-Rem a. determined by TLD	<u>590.473</u>

The above information is submitted for the total number of individuals for whom individual monitoring was provided during the calendar year.

VIRGINIA POWER
 NORTH ANNA POWER STATION - LICENSE NOS. NPF-04 AND NPF-07
 MAN-REM EXPOSURE - WORK JOB FUNCTION
 JANUARY - DECEMBER

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM		
	Station Employees	Utility Employees	Contract Employees	Station Employees	Utility Employees	Contract Employees
Reactor Operation and Surveillance	233	14	69	11.727	.003	.692
Maintenance Personnel	46	0	29	.419	.000	.495
Operating Personnel	115	4	2	10.379	.001	.000
Health Physics Personnel	26	0	26	.298	.000	.176
Supervisory Personnel	33	9	9	.586	.001	.000
Engineering Personnel	13	1	3	.045	.001	.021
Routine Maintenance	861	122	1180	125.630	.596	216.687
Maintenance Personnel	276	6	786	79.910	.004	140.664
Operating Personnel	247	7	40	19.400	.040	.138
Health Physics Personnel	108	16	243	20.043	.089	71.629
Supervisory Personnel	105	19	7	2.157	.025	.001
Engineering Personnel	125	74	104	4.112	.438	4.255
Inservice Inspection	89	0	262	8.321	.000	71.128
Maintenance Personnel	35	0	166	4.952	.000	49.761
Operating Personnel	20	0	0	1.293	.000	.000
Health Physics Personnel	10	0	78	.482	.000	7.145
Supervisory Personnel	3	0	0	.012	.000	.000
Engineering Personnel	21	0	18	1.582	.000	14.222
Special Maintenance	150	0	532	2.013	.000	123.527
Maintenance Personnel	87	0	421	1.252	.000	118.679
Operating Personnel	17	0	0	.280	.000	.000
Health Physics Personnel	21	0	96	.253	.000	4.767
Supervisory Personnel	6	0	1	.028	.000	.000
Engineering Personnel	19	0	14	.200	.000	.081
Waste Processing	178	1	93	7.315	.000	.954
Maintenance Personnel	78	0	53	2.627	.000	.067
Operating Personnel	45	0	2	1.003	.000	.012
Health Physics Personnel	44	0	37	3.063	.000	.875
Supervisory Personnel	9	1	0	.622	.000	.000
Engineering Personnel	2	0	1	.000	.000	.000
Refueling	111	11	220	5.801	.410	34.493
Maintenance Personnel	17	0	86	.982	.000	26.899
Operating Personnel	54	3	0	3.570	.059	.000
Health Physics Personnel	25	1	129	.367	.018	7.515
Supervisory Personnel	11	1	0	.485	.112	.000
Engineering Personnel	4	6	5	.397	.221	.079

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RECORD ANNUAL WHOLE BODY EXPOSURES
(BASED ON THERMOLUMINESCENT DOSIMETRY)
NORTH ANNA POWER STATION
LICENSE NO. NPF-4
LICENSE NO. NPF-7
CALENDAR YEAR 1990

POW-24-10-03

DOSE RANGE (MRM)	NUMBER OF INDIVIDUALS
NO MEASURABLE EXPOSURE	1,172
1 - 99	1,304
100 - 249	267
250 - 499	195
500 - 749	131
750 - 999	96
1,000 - 1,999	117
2,000 - 2,999	46
3,000 - 3,999	5
4,000 - 4,999	
5,000 - 5,999	
6,000 - 6,999	
7,000 - 7,999	
8,000 - 8,999	
9,000 - 9,999	
10,000 - 10,999	
11,000 - 11,999	
12,000 - PLUS	
TOTAL NO. OF INDIVIDUALS REPORTED	3,333

(BASED ON SELF-READING DOSIMETRY)

NORTH ANNA POWER STATION - LICENSE NO. NPF-4 NPF-7
CALENDAR YEAR 1990

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM			TOTALS
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	
REACTOR OPERATIONS AND SURVEILLANCE							
TOTAL	233	14	69	11.727	.003	.612	12.422
MAINTENANCE PERSONNEL	45	0	29	.419	.000	.495	.914
OPERATING PERSONNEL	115	4	2	10.379	.001	.000	10.380
HEALTH PHYSICS PERSL	26	0	26	.290	.000	.176	.474
SUPERVISORY PERSONNEL	33	9	9	.586	.001	.000	.587
ENGINEERING PERSONNEL	13	1	3	.045	.001	.021	.067
OTHER	0	0	0	.000	.000	.000	.000

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM			TOTALS
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	
INSERVICE INSPECTION							
TOTAL	89	0	260	8.321	.000	71.128	79.449
MAINTENANCE PERSONNEL	35	0	164	4.952	.000	49.576	54.528
OPERATING PERSONNEL	20	0	0	1.293	.000	.000	1.293
HEALTH PHYSICS PERSL	10	0	78	.482	.000	7.145	7.627
SUPERVISORY PERSONNEL	3	0	0	.012	.000	.000	.012
ENGINEERING PERSONNEL	21	0	18	1.582	.000	14.222	15.804
OTHER	0	0	2	.000	.000	.185	.185

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM			TOTALS
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	
ROUTINE MAINTENANCE							
TOTAL	861	122	1,180	125.630	.596	216.687	342.913
MAINTENANCE PERSONNEL	273	3	774	79.876	.002	140.601	220.479
OPERATING PERSONNEL	247	7	40	19.409	.040	.138	19.586
HEALTH PHYSICS PERSL	100	16	243	20.043	.089	71.629	91.761
SUPERVISORY PERSONNEL	105	19	7	2.157	.025	.001	2.183
ENGINEERING PERSONNEL	125	74	104	4.112	.438	4.255	8.805
OTHER	3	3	12	.034	.002	.043	.099

NORTH ANNA POWER STATION - LICENSE NO. NPF 4 NPF-7
CALENDAR YEAR 1990

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM			TOTALS
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	
WASTE PROCESSING							
TOTAL	178	1	93	7.315	.000	.954	8.269
MAINTENANCE PERSONNEL	78	0	53	2.627	.000	.067	2.694
OPERATING PERSONNEL	45	0	2	1.003	.000	.012	1.015
HEALTH PHYSICS PERSL	44	0	37	3.063	.000	.875	3.938
SUPERVISORY PERSONNEL	9	1	0	.622	.000	.000	.622
ENGINEERING PERSONNEL	1	0	1	.000	.000	.000	.000
OTHER	0	0	0	.000	.000	.000	.000

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM			TOTALS
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	
REFUELING							
TOTAL	111	11	220	5.801	.410	34.493	40.704
MAINTENANCE PERSONNEL	17	0	86	.982	.000	26.899	27.881
OPERATING PERSONNEL	54	3	0	3.571	.059	.000	3.629
HEALTH PHYSICS PERSL	25	1	129	.367	.018	7.515	7.900
SUPERVISORY PERSONNEL	11	1	0	.185	.012	.000	.597
ENGINEERING PERSONNEL	4	6	5	.077	.221	.079	.697
OTHER	0	0	0	.000	.000	.000	.000

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM			TOTALS
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	
SPECIAL MAINTENANCE							
TOTAL	150	0	532	2.013	.000	123.527	125.540
MAINTENANCE PERSONNEL	87	0	420	1.212	.000	119.665	119.917
OPERATING PERSONNEL	17	0	0	.210	.000	.000	.280
HEALTH PHYSICS PERSL	21	0	96	.257	.000	4.767	5.020
SUPERVISORY PERSONNEL	6	0	1	.028	.000	.000	.028
ENGINEERING PERSONNEL	19	0	14	.200	.000	.081	.281
OTHER	0	0	1	.000	.000	.014	.014

* NORTH ANNA POWER STATION - LICENSE NO. NPF-4 NPF-7
CALENDAR YEAR 1990

WORK AND JOB FUNCTION	NUMBER OF PERSONNEL			TOTAL MAN-REM			TOTALS
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	
ALL WORK FUNCTIONS							
TOTAL	1,622	148	2,356	160,807	1,009	447,481	609,297
MAINTENANCE PERSONNEL	536	3	1,526	90,108	.002	336,303	426,413
OPERATING PERSONNEL	498	14	44	35,933	.100	.150	36,183
HEALTH PHYSICS PERSL	234	17	609	24,506	.107	92,107	116,720
SUPERVISORY PERSONNEL	167	30	17	3,890	.138	.001	4,029
ENGINEERING PERSONNEL	184	91	145	6,336	.660	18,658	25,654
OTHER	3	3	15	.034	.002	.152	.298

SOME INDIVIDUALS RECEIVED SIGNIFICANT DOSE IN MORE THAN 1 JOB FUNCTION

	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS	TOTAL
GRAND TOTAL INDIV	888	133	1,277	2,298
GRAND TOTAL EXP	160,807	1,009	447,481	609,297