



Consumers
Power

**POWERING
MICHIGAN'S PROGRESS**

Big Rock Point Nuclear Plant, 10269 US-31 North, Charlevoix, MI 49720

Patrick M Donnelly
Plant Manager

February 16, 1994

Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-155 - LICENSE DPR-6 - BIG ROCK POINT PLANT -
1993 ANNUAL REPORT - OCCUPATIONAL EXPOSURE BY JOB

In accordance with Technical Specification 6.9.1.5, find attached the Annual Report documenting Occupational Exposure during 1993 sorted by job function.

Patrick M Donnelly



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Plant Manager

CC: Administrator, Region III, USNRC
NRC Resident Inspector - Big Rock Point

ATTACHMENT

9403020016 931231
PDR ADDCK 05000155
R PDR

A CMS ENERGY COMPANY

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ATTACHMENT

CONSUMERS POWER COMPANY
BIG ROCK POINT PLANT
DOCKET 50-155

1993 OCCUPATIONAL EXPOSURE BY JOB

Submitted February 16, 1994

ANNUAL EXPOSURE REPORT (Reg.Guide 1.16)

REPORTING NUMBER OF PERSONNEL AND MAN-REM BY WORK GROUP AND JOB FUNCTION

JOB FUNCTION & WORK GROUP	NUMBER OF PERSONNEL WITH DOSE > 100 mrem			TOTAL PERSON-REM		
	BRP STAFF (STATION)	CPCo NON-BRP (UTILITY)	NON CPCo (OTHER)	BRP STAFF (STATION)	CPCo NON-BRP (UTILITY)	NON CPCo (OTHER)
REACTOR OPS. & SURV.						
Maintenance	0	2	0	0.482	0.705	0.220
Operations	38	0	0	19.793	0.000	0.000
Health Physics	13	0	4	5.020	0.000	1.239
Supervisory Personnel	1	2	0	0.426	0.325	0.001
Engineering	2	0	0	0.607	0.020	0.002
I&C Personnel	1	0	0	0.190	0.000	0.000
QA/QC Personnel	0	0	0	0.000	0.001	0.001
NDT Personnel	0	0	3	0.000	0.000	0.435
					TOTAL=	29.467
ROUTINE MAINTENANCE						
Maintenance	12	0	0	2.253	0.256	0.118
Operations	1	0	0	0.595	0.000	0.000
Health Physics	3	0	0	1.242	0.000	0.073
Supervisory Personnel	0	0	0	0.001	0.000	0.001
Engineering	0	0	0	0.043	0.000	0.000
I&C Personnel	6	0	0	0.989	0.000	0.012
QA/QC Personnel	0	0	0	0.000	0.000	0.009
NDT Personnel	0	0	0	0.000	0.002	0.001
					TOTAL=	5.596
INSERVICE INSPECTION						
Maintenance	1	4	3	0.829	0.999	0.898
Operations	0	0	0	0.000	0.000	0.000
Health Physics	1	0	3	0.260	0.000	0.841
Supervisory Personnel	0	0	0	0.000	0.000	0.001
Engineering	1	0	0	0.125	0.000	0.000
I&C Personnel	0	0	0	0.000	0.000	0.000
QA/QC Personnel	0	0	0	0.000	0.014	0.000
NDT Personnel	0	1	8	0.000	0.440	5.863
					TOTAL=	10.270
SPECIAL MAINTENANCE						
Maintenance	30	43	43	20.185	29.843	21.303
Operations	8	0	0	2.439	0.000	0.000
Health Physics	19	0	13	6.955	0.000	6.016
Supervisory Personnel	1	1	4	1.239	0.109	1.040
Engineering	3	0	0	1.504	0.018	0.000
I&C Personnel	6	0	1	3.454	0.000	0.278
QA/QC Personnel	0	0	2	0.008	0.026	0.476
NDT Personnel	0	4	0	0.000	0.987	0.065
					TOTAL=	95.945

ANNUAL EXPOSURE REPORT (Reg.Guide 1.16)

REPORTING NUMBER OF PERSONNEL AND MAN-REM BY WORK GROUP AND JOB FUNCTION

JOB FUNCTION & WORK GROUP	NUMBER OF PERSONNEL WITH DOSE > 100 mrem			TOTAL PERSON-REM		
	BRP STAFF (STATION)	CPCo NON-BRP (UTILITY)	NON CPCo (OTHER)	BRP STAFF (STATION)	CPCo NON-BRP (UTILITY)	NON CPCo (OTHER)
WASTE PROCESSING						
Maintenance	0	0	0	0.223	0.081	0.020
Operations	0	0	0	0.895	0.000	0.000
Health Physics	4	0	1	1.663	0.000	0.267
Supervisory Personnel	0	0	0	0.000	0.000	0.000
Engineering	0	0	0	0.000	0.000	0.000
I&C Personnel	0	0	0	0.000	0.000	0.000
QA/QC Personnel	0	0	0	0.000	0.000	0.000
NDT Personnel	0	0	0	0.000	0.000	0.000
					TOTAL=	3.149
REFUELING						
Maintenance	0	0	0	0.117	0.081	0.077
Operations	11	0	0	2.681	0.000	0.000
Health Physics	0	0	1	0.065	0.000	0.428
Supervisory Personnel	0	0	0	0.000	0.000	0.000
Engineering	0	0	0	0.000	0.000	0.000
I&C Personnel	0	0	0	0.018	0.000	0.000
QA/QC Personnel	0	0	0	0.000	0.000	0.000
NDT Personnel	0	0	0	0.000	0.000	0.000
					TOTAL=	3.467
TOTALS						
Maintenance	43	49	46	24.090	31.964	22.635
Operations	58	0	0	26.403	0.000	0.000
Health Physics	40	0	22	15.207	0.000	8.864
Supervisory Personnel	2	3	4	1.666	0.434	1.043
Engineering	6	0	0	2.279	0.038	0.002
I&C Personnel	13	0	1	4.650	0.000	0.290
QA/QC Personnel	0	0	2	0.008	0.041	0.486
NDT Personnel	0	5	11	0.000	1.428	6.364
TOTALS	162	57	86	74.303	33.906	39.684

***** TOTAL RWP EXPOSURE BY WORK GROUPS *****

GRAND TOTAL = 147.893

Health Physics Personnel =>	24.070
Operations Personnel =>	26.403
BRP Maintenance Personnel =>	24.090
CPCo I&C Personnel =>	4.650
FMS Personnel =>	32.399
CPCo Engineering Personnel =>	2.318
BRP Supervisory Personnel =>	1.666
Others (includes 3 groups below) =>	32.298
QA/QC Personnel =>	0.535
NDT Personnel =>	7.793
Contractors =>	23.970