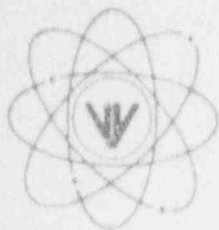


VERMONT YANKEE NUCLEAR POWER CORPORATION



Ferry Road, Brattleboro, VT 05301-7002

REPLY TO:
ENGINEERING OFFICE
580 MAIN STREET
BOLTON, MA 01740
(508) 779-6711

February 18, 1994
BVY 94 - 22

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

References: a. License No. DPR-28 (Docket No. 50-271)

Subject: 1993 Personnel Exposure Report

Enclosed please find one copy of the Vermont Yankee "Reg. Guide 1.16 Man-Rem Final End of the Year Report for 1993", an annual report required by Section 6.7.A.2 of our Technical Specifications. This report covers the period beginning January 1, 1993 and ending December 31, 1993.

We trust this report is acceptable; however, should you have any questions, please contact this office.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Leonard A. Tremblay, Jr., P.E.
Senior Licensing Engineer

cc: USNRC Region I Administrator
USNRC Resident Inspector - VYNPS
USNRC Project Manager - VYNPS

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Vermont Yankee Nuclear Power Corp.
 REG. GUIDE 1.16 MAN-REM FINAL END OF THE YEAR REPORT FOR 1993

	NUMBER OF PERSONNEL OVER 100 MREM			TOTAL MAN-REM		
	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS AND OTHERS	STATION EMPLOYEES	UTILITY EMPLOYEES	CONTRACT WORKERS AND OTHERS
REACTOR OPERATIONS & SURVEILLANCE						
MAINTENANCE	13	0	31	3.692	0.000	14.349
OPERATIONS	31	0	1	8.742	0.000	0.330
HEALTH PHYSICS	15	0	13	4.714	0.000	5.076
SUPERVISORY	1	0	0	0.179	0.000	0.110
ENGINEERING	0	0	0	0.300	0.015	0.066
OTHER	2	0	0	0.388	0.000	0.053
SECURITY	0	0	0	0.425	0.000	0.449
ROUTINE MAINTENANCE						
MAINTENANCE	33	0	190	12.017	0.000	66.779
OPERATIONS	21	0	1	5.290	0.000	0.338
HEALTH PHYSICS	8	0	26	3.141	0.000	12.144
SUPERVISORY	1	0	0	0.403	0.000	0.123
ENGINEERING	2	0	1	0.425	0.002	0.196
OTHER	3	0	0	1.478	0.000	0.185
SECURITY	0	0	0	0.177	0.000	0.104
INSERVICE INSPECTION						
MAINTENANCE	0	0	39	0.018	0.000	12.639
OPERATIONS	4	0	0	1.222	0.000	0.000
HEALTH PHYSICS	0	0	0	0.000	0.000	0.027
SUPERVISORY	0	0	0	0.000	0.000	0.032
ENGINEERING	0	0	0	0.041	0.000	0.000
OTHER	0	0	1	0.000	0.000	0.248
SECURITY	0	0	0	0.000	0.000	0.000
SPECIAL MAINTENANCE						
MAINTENANCE	9	0	138	3.206	0.000	40.419
OPERATIONS	0	0	0	0.277	0.000	0.000
HEALTH PHYSICS	3	0	7	0.594	0.000	1.692
SUPERVISORY	0	0	0	0.004	0.000	0.004
ENGINEERING	0	0	0	0.026	0.034	0.002
OTHER	0	0	0	0.111	0.000	0.005
SECURITY	0	0	0	0.000	0.000	0.000
WASTE PROCESSING						
MAINTENANCE	0	0	0	0.000	0.000	0.000
OPERATIONS	0	0	0	0.000	0.000	0.000
HEALTH PHYSICS	1	0	1	0.130	0.000	0.121
SUPERVISORY	0	0	0	0.000	0.000	0.000
ENGINEERING	0	0	0	0.000	0.000	0.000
OTHER	0	0	0	0.000	0.000	0.000
SECURITY	0	0	0	0.000	0.000	0.000
REFUELING						
MAINTENANCE	0	0	0	0.132	0.000	0.971
OPERATIONS	0	0	0	0.612	0.000	0.031
HEALTH PHYSICS	0	0	0	0.018	0.000	0.040
SUPERVISORY	0	0	0	0.000	0.000	0.000
ENGINEERING	0	0	0	0.105	0.000	0.000
OTHER	0	0	0	0.012	0.000	0.000
SECURITY	0	0	0	0.000	0.000	0.000

TOTALS

MAINTENANCE	55	0	398	19.066	0.000	135.157
OPERATIONS	56	0	2	16.143	0.000	0.699
HEALTH PHYSICS	27	0	47	8.596	0.000	19.100
SUPERVISORY	2	0	0	0.586	0.000	0.269
ENGINEERING	2	0	1	0.898	0.051	0.265
OTHER	5	0	1	1.988	0.000	0.491
SECURITY	0	0	0	0.602	0.000	0.553
GRAND TOTAL	147	0	449	47.878	0.051	156.534

Approved by :  6-30-94
 Radiation Protection Manager Date

The following is a list of the special maintenance that was performed in 1993 at Vermont Yankee

Reference Leg Back fill

The NRC directed that all BWRs implement hardware modifications to satisfy a regulatory concern pertaining to the accumulation of non-condensable gases in the reactor vessel reference legs which could result in erroneous level indications. This work was completed during out 1993 re-fueling outage.

LYN-831 Fuel Bundle Recovery

During removal of fuel assembly LYN-831, it was dropped into the reactor core. It was estimated the bundle fell 8 feet and stopped when it came into contact with the Fuel Support Casting in its original location 21-14. This event occurred during the 1993 re-fueling outage. The work entailed numerous inspections to ensure no damage had occurred to the reactor vessel internals.

Replace RHRSW valves V-10-89 A&B

These valves are the RHR heat exchanger flow control valves. Excess vibration caused damaged to the valves. The valves were determined to be oversized and were replaced during the 1993 re-fueling outage.

RHR Hx Inspection

This work entailed eddy current testing of the two RHR A&B heat exchangers. As a result of the inspections some tubes were required to be plugged. In addition, damage to the impingement plates was evident and they were repaired. This work was completed during the 1993 re-fueling outage.

Crossaroung Pipe Replacement

This replacement was performed during the 1993 re-fueling outage. The piping was replaced because the interior surfaces sustained steam erosion damage.

SJAE Nozzle Replacement

As a result of the bursting of a rupture disc located on the AOG 100 line it was decided that one of the possible contributing factors for the disc ruptures was the erosion of the SJAE nozzles. The nozzles were replaced during the 1993 re-fueling outage.

IST Modifications

The purpose of this modification was to replace exiting valves and gauges with improved models. This work was completed during the 1993 re-fueling outage.

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FEB 10 1994

OPS. SUPPORT