

LICENSEE EVENT REPORT

CONTROL BLOCK: (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 M E Y P 1 2 0 0 - 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5

01 REPORT SOURCE L 6 0 5 0 0 0 3 0 9 7 0 9 0 1 7 9 3 0 9 2 5 7 9 9

02 During routine shutdown operations in preparation for a scheduled maintenance outage,
03 the reactor coolant Dose Equivalent Iodine exceeded the Technical Specification limit
04 of 1.0 uc/gram. As required by Tech. Spec. 3.2.4 the attached report is submitted.

09 C J 11 X 12 Z 13 Z Z Z Z Z Z 14 Z 15 Z 16
17 7 9 0 1 7 9 9 X 0
18 Z 19 Z 20 Z 21 0 0 0 0 22 Y 23 N 24 Z 25 Z 9 9 9 9 26

10 The increase in iodine levels was expected during the load reduction due to the known
11 existence of minor fuel cladding degradation. A monitoring program was established
12 prior to shutdown to follow the iodine trends. Fuel sipping is anticipated for
13 next refueling.

15 D 28 0 0 0 0 29 NA 30 C 31 Special chemistry evaluations

16 Z 33 Z 34 NA 35 NA 36

17 0 0 0 37 Z 38 NA 39

18 0 0 0 40 NA 41

19 Z 42 NA 43

20 N 44 NA 45

POOR ORIGINAL

1071 002 NRC USE ONLY

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57910020 404

9787-1-8 GPO

Summary Report of Conditions Relative to
Exceeding 1.0 Uci/gram Dose Equivalent
Iodine in the Reactor Coolant

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(Requirement of Technical Specification 3.2.4)

According to Maine Yankee Technical Specifications 3.2, the specific activity of the primary coolant is limited to:

- a. \leq 1.0 Uci/gram Dose Equivalent - Iodine - 131
- b. $<$ $100/\bar{E}$ Uci/gram

According to Technical Specification 4.2, Table 4.2-1, Minimum Frequencies for Sampling Tests of Reactor Coolant Samples, the Frequency of Analysis for Dose Equivalent Iodine - 131 is; once per 14 days while within specification, or: one sample between 2 and 6 hours following a Thermal Power change exceeding 15% of the Rated Thermal Power within a one-hour period or; once per 4 hours when the primary coolant activity exceeds the limit, until restored within the limits.

Between 1000 hours on 31 August and 1500 hours on 1 September, 1979 Maine Yankee brought the plant from steady state 97% power to 0% for a scheduled one month maintenance shutdown.

At 0821 hours on 1 September 1979 the Maine Yankee Chemistry Department initiated a surveillance program to analyze the primary coolant system Iodine activity in the anticipation that Dose Equivalent Iodine - 131 levels would exceed 1.0 Uci/gram. The sampling frequency was approximately once every 4 hours.

On three occasions the plant exceeded the 1.0 Uci/grams Dose Equivalent Iodine limit: The first case, occurred @ 1655 hours on 1 September; second case, occurred @ 0515 hours on 3 September; and third case, occurred @ 2300 hours on 3 September 1979.

The following is a log of all samples processed between 0821 hours on 1 September and 1252 hours on 3 September 1979:

1071 003

Reactor Coolant Dose Equivalent I-131

September 1979 Shutdown Activity Study

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DATE - TIME	Dose Equivalent I-131
	* Indicates 1.0 Uci/g limit exceeded.
Sept. 01, 1979 - 0821	3.31E-1
1254	2.72E-1
1633	2.52E0 *
2100	2.32E0 *
Sept. 02, 1979 - 0105	1.35E0 *
0505	9.89E-1
0850	6.52E-1
1254	9.58E-1
1700	6.90E-1
2105	4.56E-1
Sept. 03, 1979 - 0118	2.90E-1
0515	1.17E0 *
0741	7.67E-1
0846	6.51E-1
1250	2.67E-1
1700	7.80E-1
2300	1.09E0 *
Sept. 04, 1979 - 0100	9.37E-1
0501	8.38E-1
0845	9.10E-1
1250	7.93E-1
1700	7.68E-1
2100	7.30E-1
Sept. 05, 1979 - 0118	6.16E-1
0501	3.68E-1
0838	5.80E-1
1248	5.58E-1
1700	6.58E-1
2140	6.24E-1
Sept. 06, 1979 - 0108	5.18E-1
0512	4.95E-1
0840	5.45E-1
1305	5.86E-1
1700	5.82E-1
2115	5.72E-1
Sept. 07, 1979 - 0112	4.53E-1
0500	4.42E-1
0841	4.77E-1
1257	4.64E-1
1700	4.44E-1
2330	4.88E-1
Sept. 08, 1979 - 0120	4.29E-1
0519	4.00E-1
0835	3.79E-1
1252	3.78E-1

The following summaries provide the information required by Technical Specification 3.2-4a-e.

1071 004

Item A:

Reactor Power History starting 48 hours prior to the 1st sample in which the limit was exceeded.

Licensed Maximum Power Load - 2630 MWth (Power limited to approximately 97% due to steam flow limitations through the Low Pressure Turbines).

August 30 @ 1500 hours to August 31 @ 1100 hours range 2559 - MWth - 2567 MWth.

Plant Shutdown commenced between 1100 hours and 1200 hours on August 31, 1979.

Shutdown History

<u>Date</u>	<u>Time</u>	<u>MWth</u>	<u>Change in % of Rated Thermal Power</u>
8/31/79	1100	= 2560	--
8/31/79	1200	= 2520	-1.521%
8/31/79	1300	= 2400	-4.563%
8/31/79	1400	= 2297	-3.916%
8/31/79	1500	= 2173	-4.715%
8/31/79	1600	= 2056	-4.449%
8/31/79	1700	= 1990	-2.510%
8/31/79	1800	= 1973	-0.086%
8/31/79	1900	= 1973	.000%
8/31/79	2000	= 1973	.000%
8/31/79	2100	= 1975	+0.076%
8/31/79	2200	= 1977	+0.076%
8/31/79	2300	= 1977	0.000%
8/31/79	2400	= 1976	-0.038%
9/01/79	0100	= 1907	-2.624%
9/01/79	0200	= 1760	-5.589%
9/01/79	0300	= 1614	-5.551%
9/01/79	0400	= 1517	-3.688%
9/01/79	0500	= 1376	-5.361%
9/01/79	0600	= 1250	-4.791%
9/01/79	0700	= 1080	-6.464%
9/01/79	0800	= 988	-5.498%
9/01/79	0900	= 965	-0.875%
9/01/79	1000	= 915	-1.901%
9/01/79	1100	= 728	-7.110%
9/01/79	1200	= 521	-7.871%
9/01/79	1300	= 394	-4.829%
9/01/79	1400	= 215	-6.306%
9/01/79	1500	= 0	-8.175%

Item B: Fuel Burnup by Core Region

Date 8/29/79

<u>Region Burnup Data</u>	<u>Total *</u>
E16	27092.28
F 0	30581.04
G 0	19907.95
G41	21468.61
G42	21118.20
H 0	17806.64
I 0	6495.71
I 4	9368.20
<hr/>	<hr/>
Core	18098.54

*Total Burnup for this Fuel Type to date - Units are MWD/MT (Megawatt Days/Metric Ton).

Item C: Clean-up Flow History Starting 48 Hours Prior to 1st Sample in Which Limit was Exceeded.

Letdown Flow (gpm)

<u>Date</u>	<u>Time Span</u>	<u>Ave. Flow</u>	<u>Total for 24 hrs.</u>
August 30, 1979	1655-2400	108.7 gpm	51633 gal.
August 31, 1979	0000-2400	109.0 gpm	156960 gal.
September 1, 1979	0000-1655	107.8 gpm	109417 gal.
September 1, 1979	1655-2400	107.3 gpm	50968 gal.
September 2, 1979	0000-2400	102.5 gpm	147600 gal.
September 3, 1979	0000-2400	53.8 gpm	77472 gal.
September 4, 1979	0000-0100	0.0 gpm	0 gal.

Total letdown 48 hours prior to exceeding (August 30 @ 1655 to September 1 @ 1655 hrs.) limit = 318010 gallons.

Total letdown from point of exceeding limit until 1st sample under limit (September 1 @ 1655 to September 4 @ 0100 hrs) = 276040 gallons*.

* Letdown was secured at 1400 hrs. on September 3, 1979.

1071 006

Item D: History of De-Gassing Operations, if any, starting 48 hours prior to the 1st sample in which the limit was exceeded.

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Prior to Exceeding Limit:

8/30/79	1655 to 2400			
		1655 - 2400	Total	
	Degasifier A	5190250 5190250		0
	Degasifier B	5858000 5858000		0
		Total		0 gal.
8/31/79	0000 to 2400			
		0000 - 2400	Total	
	Degasifier A	5190250 5190250		0
	Degasifier B	5858000 5859920		1920
		Total		1920 gal.
9/01/79	0000 to 1655			
		0000 - 1655	Total	
	Degasifier A	5190250 5190250		0
	Degasifier B	5859920 5862927		3007
		Total		3007 gal.

Total gallons degassed prior to exceeding limit = 4927 gal.

After Exceeding Limit to First Sample Under Limit:

9/01/79	1655 to 2400			
		1655 - 2400	Total	
	Degasifier A	5190250 5190250		0
	Degasifier B	5862927 5867850		4923
		Total		4923 gal.
9/02/79	0000 to 2400			
		0000 - 2400	Total	
	Degasifier A	5190250 5190250		0
	Degasifier B	5867850 5869790		1940
		Total		1940 gal.
9/03/79	0000 to 2400			
		0000 - 2400	Total	
	Degasifier A	5190250 5190250		0
	Degasifier B	5869790 5873580		3790
		Total		3790 gal.
9/04/79	0000 to 1000			
		0000 - 0100	Total	
	Degasifier A	5190250 5190250		0
	Degasifier B	5873580 5873580		0
		Total		0 gal.

Total gallons degassed after exceeding limit = 10653 gallons

1071 007

POOR ORIGINAL

Item E: The Time Duration when the Specific Activity of the Primary Coolant Exceeded 1.0 Uci/gram Dose Equivalent Iodine - 131.

The 1 September 1979 - 1655 Sample had a Dose Equivalent Iodine - 131 value of 2.50 Uci/gram. The first sample that had a value of less than 1.00 Uci/gram occurred @ 0505 hours on 2 September, 1979. Duration of Case #1 = 8.17 hrs.

The 3 September 1979 - 0515 sample had a Dose Equivalent Iodine - 131 value of 1.17 Uci/gram. The next sample, 0741 hours on 3 September, 1979 had a value less than 1.00 Uci/gram. Duration of Case #2 = 2.43 hours.

The 3 September 1979 - 2300 sample had a Dose Equivalent Iodine - 131 value of 1.09 Uci/gram. The next sample, 0100 hours on 4 September 1979 had a value less than 1.00 Uci/gram. Duration of Case #3 = 2.00 hours.

1071 008