



Exelon Generation.

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February 28, 2014  
TMI-14-028

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

Three Mile Island Nuclear Station, Unit 1  
Renewed Facility Operating License No. DPR-50  
NRC Docket No. 50-289

SUBJECT: 2013 ANNUAL REPORT

Attached is the 2013 Annual Report for TMI-1. This report is being submitted in accordance with TMI-1 Technical Specifications Sections 6.9.1.B.2 through 6.9.1.B.5 and 6.17. The attachments to this letter contain the following information:

- Attachment 1 - Aircraft movement data from the Harrisburg International Airport (per TMI-1 T.S. section 6.9.1.B.2).
- Attachment 2 - Leak reduction program test information (per TMI-1 T.S. 6.9.1.B.3).
- Attachment 3 - Pressurizer power operated relief valve and pressurizer safety valve challenges (per TMI-1 T.S. section 6.9.1.B.4).
- Attachment 4 - Results of specific activity analysis - primary coolant system (per TMI-1 T.S. section 6.9.1.B.5).
- Attachment 5 - Major changes to radioactive waste treatment systems (per TMI-1 T.S. section 6.17)

Sincerely,

Mark Newcomer  
Plant Manager, Three Mile Island Unit 1

MN/mdf

Attachments

cc: TMI, Unit 1 Senior Resident Inspector  
Administrator, Region I  
TMI, Unit 1 Project Manager

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ATTACHMENT 1

AIRCRAFT MOVEMENTS AT  
THE HARRISBURG INTERNATIONAL AIRPORT (HIA)

JANUARY 1, 2013 THROUGH DECEMBER 31, 2013

1. Total Aircraft Movements – 53,951
2. Estimated total number of movements of aircraft larger than 200,000 pounds – 2510.

This estimate is composed of two parts, 2260 movements of civilian aircraft, and 250 movements of U.S. Government and military aircraft.

TECHNICAL SPECIFICATION 6.9.1.B.3  
PERIODIC LEAK REDUCTION PROGRAM TEST RESULTS

The results of the TMI-1 2013 periodic Leak Reduction Program Tests, which included visual inspections, are summarized in Table 1. These tests were performed in accordance with the surveillance procedures listed.

TABLE 1  
2013 LEAK REDUCTION PROGRAM TEST RESULTS FOR TMI-1

SURVEILLANCE PROCEDURES	PROCEDURE TITLE / DESCRIPTION	DATE OF PERFORMANCE	LEAKING COMPONENT I.D.	MEASURED LEAK RATE		RESULTING MAINTENANCE UNDERTAKEN
				AS-FOUND	AS-LEFT	
1303-11.29	Waste Gas Disposal System Leak Check	04/04/2013	None	0	Not required	
1303-11.30	Reactor Coolant Sampling Leak Check	09/01/2013	None	0	Not required	
OP-TM-211-251	Leak Exam of MU system inside RB	11/24/2013	None	0	Not required	
OP-TM-211-261	MU Pump Suction Leak Check	11/21/2013	None	0	Not required	
OP-TM-211-262	HPI Lines	11/24/2013	None	0	Not required	
OP-TM-212-215	DH Train A/B VT-2 Exam	11/23/2013	None	0	Not required	
OP-TM-212-217	DH-V-6A to RB Sump Leak Check	11/13/2013	None	0	Not required	
OP-TM-212-218	DH-V-6B to RB Sump Leak Check	11/14/2013	None	0	Not required	
OP-TM-212-251	DH/LPI Train A leakage exam	02/08/2013	None	0	Not required	
	DH suction piping & BWST leak exam	04/17/2013	None	0	Not required	
OP-TM-214-253	BS Leakage Exam Train A	08/08/2013	None	0	Not required	
OP-TM-214-254	BS Leakage Exam Train B	07/20/2013	None	0	Not required	
<b>The following are Local Leak Rate Tests with units of standard cubic centimeters per minute (sccm)</b>						
1303-11.17A	Local Leak Rate Testing – Reactor Building Personnel Hatch Airlock	05/23/2013	Personnel Hatch Airlock	738	Not required	
MA-TM-244-204A	Penetration 328 LLRT of CA-V-2, CA-V-13, and CA-V-446	11/08/2013	CA-V-2 CA-V-13/446	20 20	20 20	
MA-TM-244-204C	Penetration 210 LLRT of CA-V-4B, CA-V-5B, and CA-V-449B	11/15/2013	CA-V-449B	Not required	20	CA-V-449B relief valve replacement
MA-TM-244-206A	Penetration 108 LLRT of CM-V-1 and	11/11/2013	CM-V-1	167	106	CM-V-1 AOV actuator PM

TECHNICAL SPECIFICATION 6.9.1.B.3  
PERIODIC LEAK REDUCTION PROGRAM TEST RESULTS

SURVEILLANCE PROCEDURES	PROCEDURE TITLE / DESCRIPTION	DATE OF PERFORMANCE	LEAKING COMPONENT I.D.	MEASURED LEAK RATE		RESULTING MAINTENANCE UNDERTAKEN
				AS-FOUND	AS-LEFT	
	CM-V-2		CM-V-2	20	20	
MA-TM-244-206B	Penetration 108 LLRT of CM-V-3 and CM-V-4	11/11/2013	CM-V-3 CM-V-4	270 257	270 64	CM-V-4 AOV actuator PM
MA-TM-244-207	Penetration 320 LLRT of DH-V-64 and DH-V-69	11/10/2013	DH-V-64 DH-V-69	30 20	30 20	
MA-TM-244-208	Penetration 216 LLRT of FS-V-401 and Blank Flange	11/23/2013	FS-V-401 & Blind Flange	Not required	2100	
MA-TM-244-209	Penetration 212 & 232 LLRT of East and West Fuel Transfer Tubes (FTT)	11/20/2013	East Flange Canopy Seal West Flange Canopy Seal	20 20 20 20	20 20 20 20	
MA-TM-244-210A	Penetration 420S/101S LLRT of HM-V-1A & 1B and HM-V-2A & 2B	11/07/2013	HM-V-1A HM-V-1B HM-V-2A HM-V-2B	20 20 20 20	20 20 20 20	
MA-TM-244-210B	Penetration 420S/101S LLRT of HM-V-3A & 3B and HM-V-4A & 4B	11/05/2013	HM-V-3A HM-V-3B HM-V-4A HM-V-4B	20 20 20 20	20 20 20 20	
MA-TM-244-211	Penetration 240 LLRT of HP-V-1 and HP-V-6	11/17/2013	HP-V-1 HP-V-6	148 82	148 82	
MA-TM-244-212	Penetration 109 LLRT of IA-V-6 and IA-V-20	11/20/2013	IA-V-6/20 (combined test)	40	40	
MA-TM-244-213A	Penetration 302 LLRT of IC-V-2, IC-V-3, and IC-V-102	11/04/2013	IC-V-2 IC-V-3/102	20 172	20 269	IC-V-102 relief valve replacement
MA-TM-244-213B	Penetration 333 LLRT of IC-V-4 and IC-V-18	11/17/2013	IC-V-4 IC-V-18	304 51	97 51	IC-V-4 AOV actuator PM
MA-TM-244-213C	Penetration 334 LLRT of IC-V-6 and IC-V-16	11/12/2013	IC-V-6 IC-V-16	210 46	210 46	IC-V-6 AOV actuator PM
MA-TM-244-214A	Penetration 415 LLRT of HR-V-2A/B, HR-V-22A/B, and Flanges	11/22/2013	HR-V-2A/B HR-V-22A/B	85 105	85 105	
MA-TM-244-214B	Penetration 416 LLRT of HR-V-4A/B, HR-V-23A/B, and Flanges	11/11/2013	HR-V-23A HR-V-23B HR-V-4A/B	20 20 40	20 20 40	
MA-TM-244-215A	Penetration 309 LLRT of MU-V-2A, MU-V-2B, MU-V-3, and MU-V-238	11/16/2013	MU-V-2B	30	20	MU-V-2B MOV actuator PM
MA-TM-244-215D	Penetration 337 LLRT of MU-V-20 and MU-V-116	11/08/2013	MU-V-20 MU-V-116	192 20	192 20	MU-V-116 check valve inspection

TECHNICAL SPECIFICATION 6.9.1.B.3  
PERIODIC LEAK REDUCTION PROGRAM TEST RESULTS

SURVEILLANCE PROCEDURES	PROCEDURE TITLE / DESCRIPTION	DATE OF PERFORMANCE	LEAKING COMPONENT I.D.	MEASURED LEAK RATE		RESULTING MAINTENANCE UNDERTAKEN
				AS-FOUND	AS-LEFT	
MA-TM-244-216	Penetration 307 LLRT of NI-V-26 and NI-V-27	11/07/2013	NI-V-26 NI-V-27	20 20	20 20	
MA-TM-244-217B	Penetration 347 LLRT of NS-V-4, NS-V-35, and NS-V-211	11/02/2013	NS-V-211	Not required	20	NS-V-211 relief valve replacement
MA-TM-244-218A	LLRT of Flanged Penetrations 104, 105, 106	11/22/2013 11/22/2013 11/07/2013	P-104 P-105 P-106	Not required	20 20 20	
MA-TM-244-218B	LLRT of Flanged Penetrations 221, 222, 240/241, and 414	11/08/2013 11/22/2013 11/20/2013 11/22/2013	P-221 P-222 P-240/241 P-414	Not required	20 20 90 20	
MA-TM-244-221	Penetration 201E LLRT	10/31/2013	P-201E	85	85	
MA-TM-244-222	Penetration 421 & 422 LLRT of RB-V-2A and RB-V-7	11/13/2013	RB-V-2A RB-V-7	20 20	20 20	
MA-TM-244-223	Penetration 304 LLRT of SF-V-22 and SF-V-23	11/12/2013	SF-V-22 SF-V-23	20 20	20 20	
MA-TM-244-224	Penetration 104 LLRT of SA-V-2 and SA-V-3	11/21/2013	SA-V-2/3 (combined test)	20	20	
MA-TM-244-225	Penetration 330 LLRT of WDG-V-3 and WDG-V-4	11/09/2013	WDG-V-3 WDG-V-4	200 20	200 20	
MA-TM-244-226A	Penetration 331 LLRT of WDL-V-303, WDL-V-304, and WDL-V-727	11/13/2013	WDL-V-303 WDL-V-304/727	20 130	20 20	WDL-V-304 AOV actuator PM
MA-TM-244-226B	Penetration 353 LLRT of WDL-V-534 and WDL-V-535	11/05/2013	WDL-V-534/535 (combined test)	20	20	
MA-TM-244-227	Penetration 418 LLRT of Equipment Hatch Flange O-rings	10/28/2013 11/21/2013	Flange O-rings Flange O-rings	79	20	Removed & later re-installed Equipment hatch
OP-TM-823-251	LLRT of Purge Exhaust Penetration Valves	11/23/2013	AH-V-1A/B (combined test)	Not required	2643	Removed, then later reset 30° stops
OP-TM-823-252	LLRT of Purge Supply Penetration Valves	11/23/2013	AH-V-1C/D (combined test)	Not required	1593	Removed, then later reset 30° stops; and AH-V-1C motor replacement

- Notes: 1. Local Leak Rate Testing is performed under the Option B provisions of 10CFR50 Appendix J, and the minimum LLRT leakage value used is 20 sccm based on the low end of the calibration range of the flow instrumentation.
2. 'As-Left' testing is not required if the 'As-found' leakage was acceptable and no maintenance was performed.
3. 'As-Found' testing is not required for LLRT components not on extended test intervals nor for containment penetration flanges that are simply reinstalled at the end of an outage.

ATTACHMENT 3

PRESSURIZER POWER OPERATED RELIEF VALVE AND PRESSURIZER  
SAFETY VALVE CHALLENGES IN 2013

There were no challenges to the pressurizer power operated relief valve (PORV) or either of the two pressurizer (PZR) safety valves during the entire calendar year of 2013.

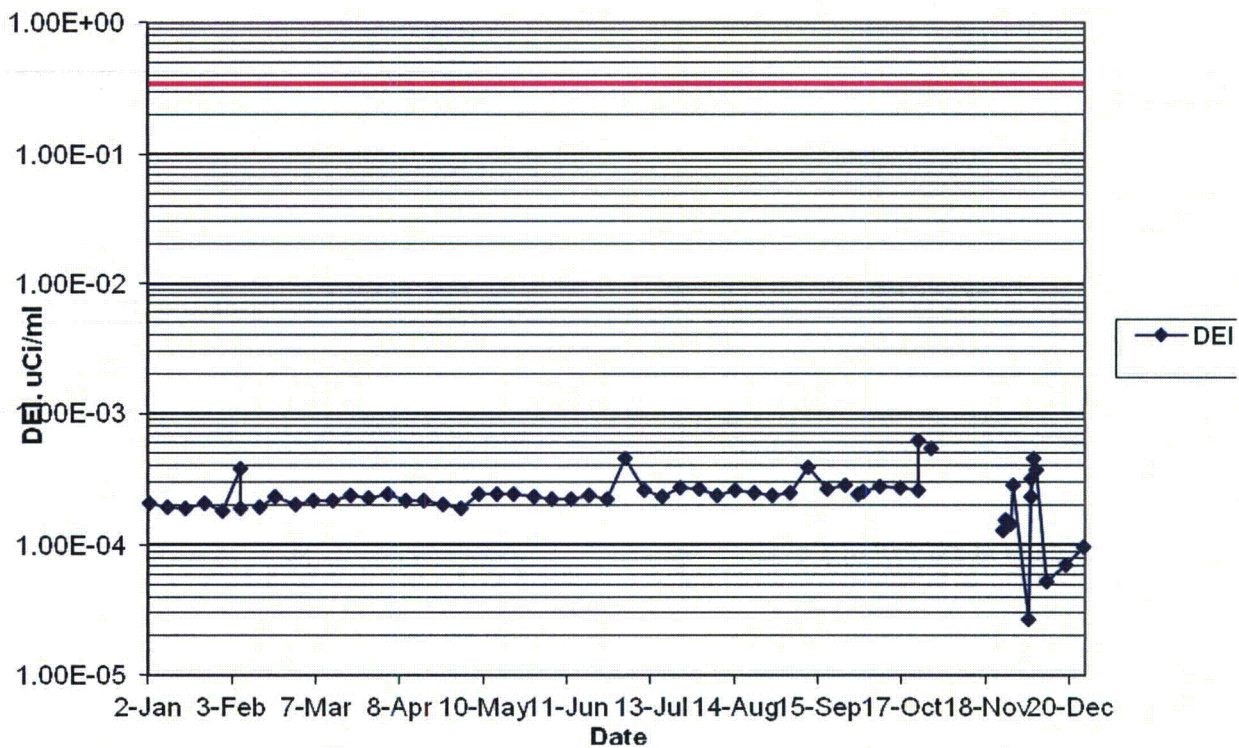
A review of the Reactor Coolant System (RCS) pressure indication trend data concluded that the RCS pressure operated well below the PORV set point of 2450 psig, and both PZR safety valve set points of 2500 psig throughout the calendar year of 2013. Therefore no challenges to the PORV or PZR safety valves occurred during 2013.

ATTACHMENT 4

RESULTS OF SPECIFIC ACTIVITY ANALYSIS-  
PRIMARY COOLANT SYSTEM

Technical Specification 6.9.1.B.5 requires annual reporting of certain information regarding the results of specific activity analyses in which the primary coolant exceeded the limits of Technical Specification (TS) 3.1.4.1. The limits of TS 3.1.4.1 were not exceeded at TMI-1 at any time during the year 2013. The figure of RCS activity for 2013 shows that the limit of 0.35 microcurie/gram dose equivalent I-131 (DEI) was not exceeded in 2013.

TMI-1 Dose Equivalent Iodine (DEI) in 2013



ATTACHMENT 5

MAJOR CHANGES TO RAD WASTE TREATMENT SYSTEMS

Technical Specification Section 6.17 requires reporting of Major changes to Radioactive Waste Treatment Systems. Major changes are interpreted to mean changes that would alter how the system functions or changes that would affect operational exposures, offsite dose rates or integrated doses. There were no major changes to the liquid, gaseous, or solid radioactive waste treatment systems at TMI-1 during the year of 2013.