

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)										DOCKET NUMBER (2)										PAGE 31	
Nine Mile Point Unit 1										0 5 0 0 0 2 2 0										1 OF 016	
TITLE (4)																					
Failure To Hydrostatically Test A Portion Of The ASME Class 1 Pressure Boundary Due To Procedural Error																					
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)											
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER(S)									
0 6	1 8	8 8	8 8	0 1 2	0 0	0 5	1 8	8 8				0 5 0 0 0									
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 81 (Check one or more of the following) (11)																			
N		20.402(b)				20.406(e)				50.73(e)(2)(iv)				73.71(b)							
POWER LEVEL (10)		20.406(e)(1)(i)				50.36(e)(1)				50.73(e)(2)(v)				73.71(e)							
0 0 0		20.406(e)(1)(ii)				X 50.36(e)(2)				50.73(e)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 368A)							
		20.406(e)(1)(iii)				X 50.73(e)(2)(i)				50.73(e)(2)(vii)(A)											
		20.406(e)(1)(iv)				50.73(e)(2)(ii)				50.73(e)(2)(vii)(B)											
		20.406(e)(1)(v)				50.73(e)(2)(iii)				50.73(e)(2)(viii)											
		20.406(e)(1)(vi)								50.73(e)(2)(ix)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME								TELEPHONE NUMBER													
Peter A. Mazzaferro, Assistant Supervisor, Technical Support								AREA CODE 3 1 5 3 4 9 - 2 1 9 0													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUF. TUNER	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUF. TUNER	REPORTABLE TO NPROS											
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR							
X YES (If yes, complete EXPECTED SUBMISSION DATE)										NO		0 9	3 1	8 8							
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																					
<u>ABSTRACT</u>																					
<p>On April 18, 1988, while Nine Mile Point Unit 1 (NMP1) was in cold shutdown for refueling, it was discovered that a portion of the ASME Class 1 Pressure Boundary was not hydrostatically tested in 1986. ASME Section XI requires a hydrostatic test of the pressure boundary for Class 1 piping, pumps and valves, at or near the end of each Inservice Inspection (ISI) interval. The first ten year ISI interval was to be completed in 1986. Failure to complete testing in accordance with ASME Section XI constitutes a violation of plant Technical Specifications.</p> <p>The root cause of this event was personnel error as a result of an error in the hydrostatic test procedure. Contributing factors were miscommunication and lack of attention to detail.</p> <p>Initial corrective action was to document the event via an Occurrence Report (OR). The missed portion of the system will be hydrostatically tested prior to startup. Long term corrective action includes initiating a Lessons Learned Transmittal to address the personnel error and contributing factors, and a review of 1986 ISI related Hydrostatic Test Procedures.</p>																					
8805260390 880518 PDR ADOCK 03000220 S PDR																					

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TEXT IF more space is required, use additional NRC Form 366A's (17)

DESCRIPTION OF THE EVENT

On April 18, 1988, during the development of a procedure for ASME Class 1 System Leakage Testing, it was noted that a portion of the ASME Class 1 boundary was not incorporated into the hydrostatic test performed for the first ten year Inservice Inspection (ISI) interval. Nine Mile Point Unit 1 (NMP1) was in a cold shutdown condition for a refueling outage with the core off-loaded during the discovery of this event.

ASME Section XI paragraph IWB-5210 requires a hydrostatic test of the pressure retaining boundary for all Class 1 piping, pumps and valves at or near the end of each ISI interval. NMP1 was to complete the first ten year ISI interval in 1986. Failure to perform hydrostatic testing in accordance with ASME Section XI constitutes a violation of plant Technical Specification (Tech. Spec.) section 3.2.6.

Hydrostatic Test Procedure No. N1-ISI-HYD-01, Revision 0, was utilized to perform hydrostatic testing in accordance with ASME section XI paragraph IWB-5210. The intent of this procedure was to incorporate all ASME Class 1 systems within the test boundary. However, the valve line-up described within the procedure required that the manual blocking valves upstream of the Electromatic Relief Valves (EMRV's) be closed. This resulted in excluding from the test boundary, a portion of piping, one weld, corresponding manual blocking valves and associated pressure retaining components for each of the EMRV's.

There are six EMRV's located on the two main steam lines (three on each line) within the primary containment. The EMRV's bolt to flanges which are welded to the manual blocking valves located upstream. The manual blocking valves are connected to the main steam lines via welded attachments. Figure A (page 6 of 6) illustrates the typical configuration for the EMRV's and manual blocking valves.

This event was discovered by Nuclear Energy Services Inc. (NES) on April 18, 1988. NES was contracted by Niagara Mohawk to support implementation of both the first ten year interval ISI program and the current interval ISI program. Procedure N1-ISI-HYD-01, Revision 0, was written in May of 1986 during the refueling outage by E.N. Consulting Inc. who was subcontracted by NES. The procedure was based upon the Reactor Pressure Vessel Hydrostatic Test Procedure written by Stone & Webster Engineering Corporation in January 1968, which also required the manual blocking valves to be closed. Procedure N1-ISI-HYD-01, Revision 0, was reviewed and approved on May 25, 1986 in accordance with Site Administrative Procedures, and performed on June 3 and 4, 1986.

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TEXT (If more space is required, use additional NRC Form 364A's) (17)

CAUSE OF THE EVENT

The root cause of this event was personnel error as a result of an error in procedure N1-ISI-HYD-01, Revision 0, used for the hydrostatic test. The procedural error was in the omission of the portion of main steam system from the manual blocking valves up to and including the EMRV's during the conduct of the ASME Class 1 hydrostatic test. Several factors which contributed to the procedural error are:

- Miscommunication between the author of the procedure and station contacts. This was likely to have resulted from not transmitting pertinent information or lack of having understood the information which was transmitted. It was felt that the EMRV's should not be tested because the test medium could introduce foreign material into the seating surface and result in leakage. Therefore, the basis exists for not subjecting the EMRV's to the test medium which was used during the test. However, the fact that no relief had been granted to exclude the EMRV's from hydrostatic testing was not conveyed.
- Lack of attention to detail. Procedural reviews failed to recognize the impact of the procedural omission. Although the procedure received the level of review prescribed by site Administrative Procedures, the reviewers had not been entirely cognizant of all the factors involved in procedurally excluding the EMRV's from the test boundary, nor the ramifications of doing so.

ANALYSIS OF THE EVENT

An Occurrence Report (OR) No. 88-368 was initiated on April 22, 1988. The OR was preliminarily determined to be not reportable. During second level review by the Station Technical Staff, the determination of reportability was questioned. After further review by Technical Staff, Operations, Engineering and Maintenance, the event was determined to be reportable on April 29, 1988. A notification to the Nuclear Regulatory Commission Operations Center was made via the Emergency Notification System at 1215 hours on April 29, 1988, in accordance with 10 CFR 50.36(c)(2). This event was also considered reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) "Any operation or condition prohibited by the plant's Technical Specifications."

There were no adverse safety consequences associated with this event. The failure to perform the hydrostatic test, in and by itself, did not result in any failure of the piping and, therefore, did not affect the health and safety of plant personnel or the general public.

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TEXT (If more space is required, use additional NRC Form 305A's) (17)

ANALYSIS OF THE EVENT (Cont'd)

There were also no potential adverse safety consequences associated with this event. The hydrostatic test provides information on the integrity of the piping and valve to contain design pressure. The failure to perform this test increased the uncertainty in our knowledge as to the condition of this piping and valve. In the worst case, the failure to perform the hydrostatic test resulted in not knowing of an impending failure and then have this failure occur. Assuming a double-ended break, of this piping, NMP1 would have experienced a non-isolatable break inside containment. This accident, however, is bounded by the primary containment design basis accident (double-ended rupture of a recirculation discharge piping) with respect to offsite releases. Therefore, assuming the worst case scenario, the public health and safety would not have been compromised.

Procedure No. N1-ISI-HYD-66, entitled "Main Steam Solenoid Actuated Relief Valves Discharge," was performed on June 20, 1986. The purpose of this procedure was to functionally test the flow path through the EMRV's to the torus. The test consisted of opening each EMRV to demonstrate an open flow path and performance of a visual examination of all accessible portions of the pressure boundary for leaks, cracks or ruptures. The boundary illustrated in this procedure extended beyond the EMRV's upstream to the manual blocking valves. The test was conducted at a reactor pressure of approximately 930 psig and the subsequent visual examination identified no leaks, cracks or ruptures of the pressure boundary.

CORRECTIVE ACTION

Initial corrective action involved generating Occurrence Report No. 88-368 to document the event. The portion of the main steam system which was excluded from the ASME Class 1 hydrostatic testing in 1986 will be tested prior to start up during the current refueling outage. A special hydrostatic test procedure has been generated (N1-ISI-HYD-402) which will test the portion of the system from the manual blocking valves to the flanged connection at the EMRV's. The EMRV's will be removed for this test and the flanges will be blanked off. The EMRV's will be tested separately using a higher quality test medium to avoid the potential for foreign material to accumulate on the seating surfaces. Testing in this manner will fulfill the requirements of ASME Section XI paragraph IWB-5210.

As a result of the root cause evaluation performed for this event, there is reasonable assurance that this is an isolated event. However, in order to provide complete assurance, a review will be conducted of previous hydrostatic tests that were performed to meet the requirements of ASME Section XI. This review will be completed prior to startup from the current refueling outage. The results of this review will be addressed in a supplement to this LER, which is currently scheduled to be submitted by September 30, 1988.

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TEXT (If more space is required, use additional NRC Form 302A's) (17)

CORRECTIVE ACTION (Cont'd)

A Lessons Learned Transmittal will be issued to Departments involved in the production and review of ISI related Hydrostatic Test Procedures. It will address the importance of maintaining accurate communication regarding the technical requirements of performing hydrostatic testing in accordance with ASME Section XI. It will also address the importance of selecting or appointing test procedure reviewers with technical expertise commensurate with the type of testing being performed with adequate time for review.

ADDITIONAL INFORMATION

This Licensee Event Report (LER) is similar to the events described in LER 87-27, LER 88-01 and LER 88-01-S1, Docket No. 50-220, in that it pertains to the first ten year ISI interval. However, the root cause for this LER is more isolated than that for the previous LER's. There were no failed components as a result of this event.

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88	012	000

Nine Mile Point Unit 1

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TEXT (If more space is required, use additional NRC Form 306A's) (17)

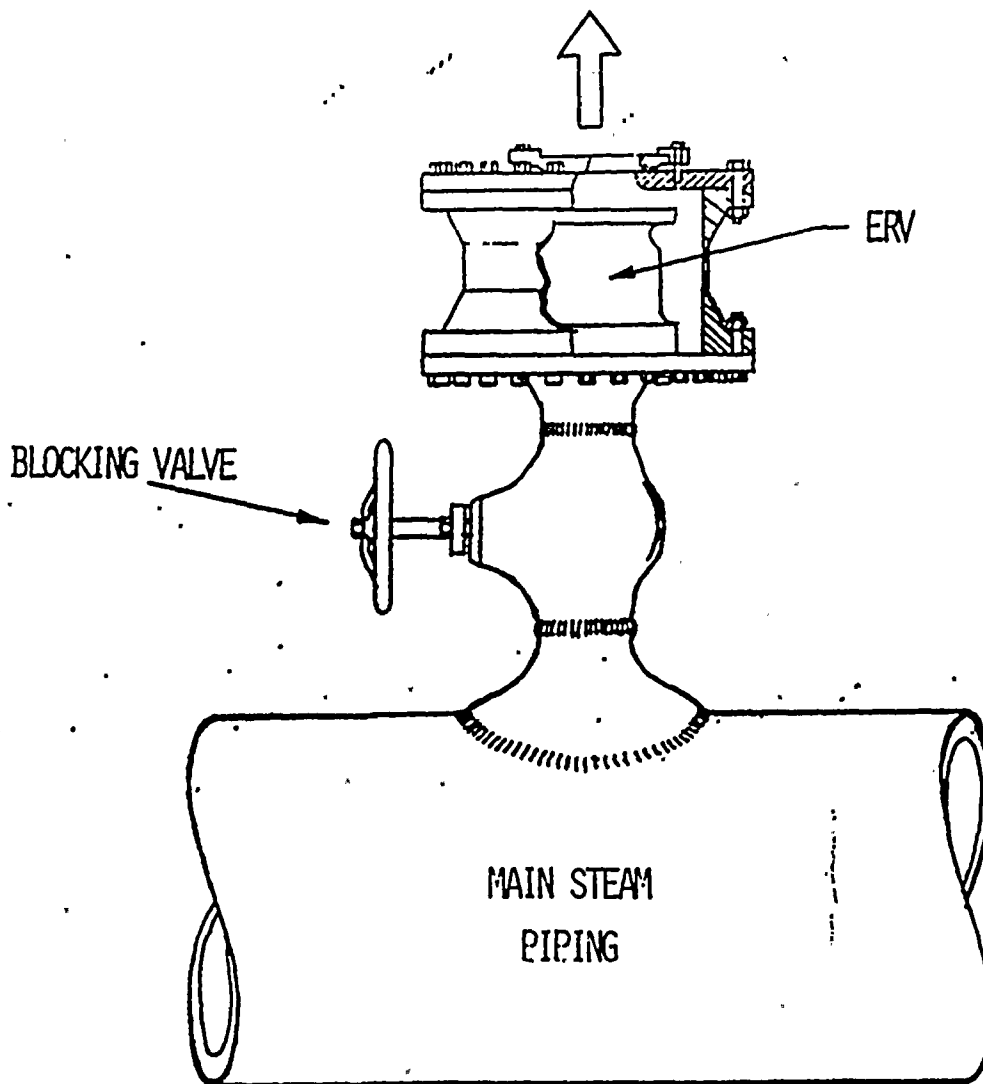


FIGURE A

May 18, 1988

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

RE: Docket No. 50-220
LER 88-12

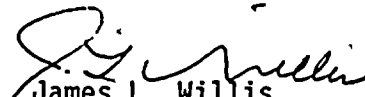
Gentlemen:

In accordance with 10 CFR 50.73, we hereby submit the following
Licensee Event Report:

LER 88-12 Which is being submitted in accordance with
10 CFR 50.73 (a)(2)(i)(B), "Any operation or
condition prohibited by the plant's Technical
Specifications;"

This report was completed in the format designated in NUREG-1022,
Supplement No. 2, dated September 1985.

Very truly yours,


James L. Willis
General Superintendent
Nuclear Generation

JLW/meh

Attachment

cc: William T. Russell
Regional Administrator

IE22
1/1

