NRC Form 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES: 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Millstone Nuclear Power Station Unit 3	05000423	1 OF 4

TITLE (4)
Noncompliance with Technical Specification for Containment Integrity While Draining Suction Line

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 NAME	DOCKET NUMBER
04	13	95	95	- 005 -	01	10	26	95		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	1	THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	98	20.2201(b)	20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)	X	50.73(a)(2)(ii)		50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Robert L. McGuinness, Senior Engineer	(203) 447-1791 Ext. 6855

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

	YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On April 13, 1995, it was discovered that the Primary Containment was potentially breached for almost two hours on April 5, 1995, when the plant had been in MODE 1 at 98-percent power. It was determined that two plant operators had drained the containment recirculation suction lines through 3/4-inch drain valves. The opening of a drain valve created a potential flow path from containment to the atmosphere, which was a condition prohibited by Technical Specifications.

The condition was discovered as a result of a questioning attitude by operations personnel during discussions about recent work. The condition had low safety significance. The two operators stationed at the drain valve would have immediately recognized any adverse conditions, and would have immediately closed the drain valve if required. A water seal existed during all draining operations, preventing an open line to containment atmosphere. An accident occurring during the draining operation, would not have resulted in radiological releases exceeding allowable releases.

The contributing causes of the event were personnel error and program weakness. The immediate corrective action was to isolate the drain valves at the time of the event. The actions to prevent recurrence include: personnel counseling and program improvements to label the drain valves with caution tags. Additional actions to prevent recurrence include a new program for labeling all accessable valves outside containment that could affect containment integrity, and a review of the locked valve program will be performed.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	05000423	95	– 005 –	01	02 OF 04

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

I. Description of Event

On April 13, 1995, it was discovered that the Primary Containment was potentially breached for almost two hours on April 5, 1995, when the plant had been in MODE 1 at 98-percent power. It was determined that plant operators had drained containment recirculation suction lines through 3/4-inch drain valves. The opening of a drain valve created a potential flow path from containment to the atmosphere, which was a condition prohibited by Technical Specifications.

The plant operators drained water from the suction piping of the containment Recirculation Spray System (RSS). The water was drained for approximately two hours, first via a 3/4-inch manual drain valve in an A-Train suction line, then via a 3/4-inch manual drain valve in a B-Train suction line. The drain valve in each RSS suction line is outside the containment isolation valve, in the Engineered Safety Features building. The drain valves also have an end cap to provide a second barrier against any possible leakage. The end caps were removed to perform the draining. A tygon hose was connected to the drain valves in sequence and ran for approximately seven feet to a sump. The hose was secured so that the flow coming out of the end of the hose could always be observed.

The operators were draining the RSS suction lines in order to reduce the amount of time that operators would spend in containment pumping down the containment sump. This action was being done in preparation for a Local Leak Rate Test (Type C test) on the RSS suction line penetrations in the upcoming refueling outage. This operation had been done during previous refueling outages as opposed to draining while the plant was running. This difference was not recognized at the time, but was discovered later through discussions about the work. At the time of the event, the operators had an understanding of the containment boundary requirement, and they had taken precautions to not affect containment vacuum while draining. However, they did not consider the potential impact of opening the drain valves, on the Technical Specification requirement for containment integrity. The operators did not clearly communicate their actions to the Shift Supervisor (SS). As a result, the SS did not log into the required Technical Specification Action Statement.

The draining was done with care being taken to not fully drain the RSS suction lines. One operator was stationed at the manual drain valve, and the other operator remained within talking distance and visual contact so that flow could always be observed. The water seal in the lines was considered to be a boundary, so as to not affect the containment vacuum. The draining of the suction lines in sequence lasted for almost two hours, until the operators observed a decrease in flow rate and isolated the drain valves.

The opening of a drain valve created a condition that was prohibited by Technical Specifications. The event should have resulted in an entry into Technical Specification 3.6.1.1, Primary Containment Integrity. This specification requires that: without primary containment integrity, restore primary containment integrity within one (1) hour or be in at least Hot Standby within the next six (6) hours and in Cold Shutdown within the following thirty (30) hours. Although the water seal maintained containment vacuum, it cannot be relied upon for containment integrity.

The condition was discovered as a result of questions raised by operations personnel during discussions about recent work. The questioning attitude and operators reconstructing earlier events, led to a discovery on April 13, 1995, that a noncompliance with Technical Specifications may have occurred on April 5, 1995.

The condition had low safety significance. The two operators stationed at the drain valve would have immediately recognized any adverse conditions and closed the drain valve if required. At no time was the water drained completely from the RSS suction lines, thereby maintaining a water seal to prevent affecting containment vacuum. A water seal existed during all draining operations, preventing an open line to containment atmosphere. An accident occurring during the draining operation, would not have resulted in radiological releases exceeding allowable releases.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	05000423	95	– 005 –	01	03 OF 04

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

II. Cause of Event

The event was caused by a combination of personnel error and program weakness. The two operators were preconditioned by the previous experience of draining the lines during previous refueling outages. This time the planning did not consider that the work had previously been done with the plant shut down, when containment integrity was not required. Also the preconditioning on this task resulted in the work not being effectively communicated with the SS. The specifics of removing the end caps and opening the drain valves while containment integrity was required, should have been recognized as a potential loss of containment integrity.

A program weakness is that the drain valves in this system did not have any caution labels. There was no caution provided, that opening these valves could result in a potential degradation of the containment.

III. Analysis of Event

The condition had low safety significance. The two operators stationed at the manual drain valve would have immediately recognized any adverse conditions and closed the drain valve if required. A water seal existed in the RSS suction lines during all draining operations, preventing an open line to containment atmosphere. An accident occurring during the draining operation, would not have resulted in a radiological release exceeding allowable releases.

The event should have resulted in an entry into Technical Specification 3.6.1.1, Primary Containment Integrity. This specification requires that: without primary containment integrity, restore primary containment integrity within one (1) hour or be in at least Hot Standby within the next six (6) hours and in Cold Shutdown within the following thirty (30) hours. Although the water seal maintained containment vacuum, it cannot be relied upon for containment integrity. The opening of the drain line, although water sealed, created a path to containment, which was a condition prohibited by Technical Specifications.

The 3/4–inch drain valve is located on the 12–inch RSS suction line, which draws suction from the containment sump. There are four RSS suction lines from the containment sump, supplying flow to the four RSS pumps, all having a similar configuration. The drain valve is located outside the containment and downstream of the automatic containment isolation valve. There is no inboard automatic containment isolation valve in these lines. For this system, only one containment isolation valve is required in each of the four RSS suction lines to meet the General Design Criterion. The RSS suction lines are required to be open following a loss of coolant accident, in order to provide a long–term recirculation flow path from the containment sump to the RSS pumps. The closed position of the manual drain valves is checked once per 31 days by procedure, to satisfy Technical Specification surveillance requirements. Each drain valve also has an end cap installed to provide a second barrier against any possible drain valve leakage.

The event was reviewed for a potential loss of safety function, specifically: containment integrity and containment heat removal. Containment integrity was considered and was determined to be unaffected. Had a Loss of Coolant Accident occurred while draining, the operators at the valve would have immediately observed a sudden change in flow in the tygon drain tubing due to containment pressure. The operators were both licensed and were aware that opening the drain valve provided a potential communication path to the containment. The operators would have immediately closed the drain valve if any unusual conditions were observed.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	05000423	95	-- 005 -	01	04 OF 04

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Containment heat removal was considered and was determined to be unaffected. The small size of the drain line, the operators being at the drain valve to quickly close it, and clear indications available to the operators to act if needed, would have prevented any significant diversion of flow from affecting this safety function. The operators were continuously monitoring the drain flow through the small tygon tubing. They were specifically observing for any change in flow. They were in an area where any alarms or announcements of abnormal plant conditions would be heard. Closing a small manual drain valve is a simple action that would have been immediately successful. In summary, the event did not involve a potential loss of safety function. Reasonable operator actions would have assured there was no impact on safety functions.

IV. Corrective Action

Containment integrity was restored and full compliance with Technical Specifications was achieved at the time of the event on April 5, 1995, when the drain valves were shut following the two-hour draining operation.

The actions to prevent recurrence include personnel counseling and program improvements. The operators involved were counseled on the importance of task review and effective communication with the SS prior to task performance.

The generic and programmatic implications of this event have been investigated. As a result, the program improvements include a review of containment isolation valves and a new program to strengthen the positive controls on containment isolation valves. A review was conducted by the Independent Safety Engineering Group, discussions were conducted with other utilities, and the Operations department has decided on additional programmatic improvements. The accessible valves that are located outside the primary containment whose operation could affect containment integrity have been identified. A caution label will be installed on these valves by November 1, 1995. Under this action, the valves located inside containment will not be labeled because they are not normally accessible when containment integrity is required. The caution will indicate that these valves are "Containment Boundary, Contact SS/SCO Prior to Operating." Also by the end of 1995, a locked valve program self-assessment will be completed to identify any formal configuration control improvements that would be prudent in the locked valve program.

V. Additional Information

The containment integrity program for the refueling outage that was conducted in April and May 1995, was considerable strengthened to minimize the potential for outage problems. As a results of this strong program, there were no other containment integrity issues.

A review of Licensee Event Reports indicates there have been no similar LERs over the last three years.

EIIS Codes

System	Component
BE - Containment Spray System	V - Drain Valve