

Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385



SEP 4 2001

Docket No. 50-423
B18476

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Power Station, Unit No. 3
Licensee Event Report 2001-003-00
Failure Of Containment Air Lock Results In Entry Into Tech Spec 3.0.3

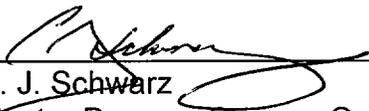
This letter forwards Licensee Event Report (LER) 2001-003-00, documenting an event that was discovered at Millstone Power Station, Unit No. 3 on July 10, 2001. This LER is being submitted as a voluntary LER.

There are no regulatory commitments contained within this letter.

Should you have any questions regarding this submittal, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.



C. J. Schwarz
Master Process Owner - Operate the Asset

Attachment (1): LER 2001-003-00

cc: H. J. Miller, Region I Administrator
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
NRC Senior Resident Inspector, Millstone Unit No. 3

IE22

Docket No. 50-423
B18476

Attachment 1

Millstone Power Station, Unit No. 3

LER 2001-003-00

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1) Millstone Power Station - Unit 3	DOCKET NUMBER (2) 05000423	PAGE (3) 1 OF 4
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TITLE (4)
Failure Of Containment Air Lock Results In Entry Into Tech Spec 3.0.3

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	10	2001	2001	- 003 -	00	09	04	2001	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)			
POWER LEVEL (10)	100	20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
		20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
		20.2203(a)(1)	50.36(c)(1)(i)(A)	50.73(a)(2)(iv)(A)	73.71(a)(4)
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
		20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	x OTHER
		20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)	
		20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
		20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)	
		20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)	

LICENSEE CONTACT FOR THIS LER (12)

NAME David W. Dodson, Team Lead - Compliance	TELEPHONE NUMBER (Include Area Code) 860-447-1791
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
									N

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)(16)

At 1550 on July 10, 2001, with the reactor power at 100 percent, Technical Specification 3.0.3 and 3.6.1.3 action statement a.3 were entered due to both containment personnel air lock doors being considered inoperable. A shutdown was initiated because the overall restoration and retest activity for the air lock was expected to take approximately 3 hours. A 4-hour notification was made to the NRC in accordance with the requirement of 10CFR50.72(b)(2)(i), initiation of a shutdown required by Technical Specifications.

The cause of this event is the application of excessive grease to the outer air lock door o-rings and the incomplete implementation of Technical Specification changes in License Amendment 186.

Based on the fact that the inner air lock door had been functionally operable during the entry into Technical Specification 3.0.3, there was no loss of safety function. During the brief period of time when the possibility existed that both doors might have been inoperable, i.e., approximately half an hour, the inner door could have been reclosed in less than a minute. Therefore, this event is of low safety significance.

The immediate corrective actions taken were to restore operability of the air lock outer door by performing the appropriate repairs and satisfying a full volume leak rate test. Corrective actions to prevent recurrence include revising the maintenance procedure to provide a caution on the use of too much grease on the o-rings and providing a technical briefing sheet to Operations identifying the changes in Appendix J testing methods and frequencies implemented by License Amendment 186.

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Millstone Power Station - Unit 3	05000423	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

I. Event Description

At 1550 on July 10, 2001, with the reactor power at 100 percent, Technical Specification 3.0.3 and 3.6.1.3 action statement a.3 were entered due to both containment [NH] personnel air lock doors [AL] being considered inoperable. A shutdown was initiated because the overall restoration and retest activity for the air lock was expected to take approximately 3 hours. A 4-hour notification was made to the NRC in accordance with the requirement of 10CFR50.72(b)(2)(i), initiation of a shutdown required by Technical Specifications.

Millstone Unit No. 3 personnel air lock had failed a full volume leak rate test per 10CFR50 Appendix J on June 21, 2001, after a containment entry. Because of audible air leakage, the outer air lock door was determined to be inoperable. Repairs to the outer air lock door were completed and the door checked for leakage on a subsequent full volume leak rate test of the air lock on June 22, 2001. A "soap" check determined that the outer air lock door was not leaking. Because the full volume leak rate test again failed to meet acceptance criteria, an Operability Determination was approved and the outer air lock door was declared operable and the inner air lock door inoperable.

A repair of the Unit 3 inner air lock door seal was subsequently performed on July 10, 2001. Following the repair a successful between the seals test was performed on both the inner and outer air lock doors. A full volume leak rate test on the air lock was then performed. The outer door leaked excessively, causing the full volume leak rate test to fail. Since, both air lock doors were considered to be inoperable at that time, TS 3.6.1.3 action statement a.3 and TS 3.0.3 were entered. Within approximately three hours, the outer air lock door was repaired and a successful full volume leak rate test on the air lock was performed. Both doors were declared operable and TS 3.0.3 and 3.6.1.3 action statement a.3 were exited at 1858. The down power was terminated at 38 percent power.

TS 3.0.3 and TS 3.6.1.a.3 were entered because it was believed that both doors were inoperable due to the failed full volume leak rate test. However, prior to the full volume leak rate test, both doors had the between-the-seals test performed and both these tests were successful. According to the Millstone Appendix J program, a full volume leak rate test is not necessary to declare either of the air lock doors operable subsequent to containment entry when containment integrity is required. A full volume leak rate test is required once per 30 months whereas a between-the-seals test on the air lock doors should be performed within seven days after each containment access. However, once the option to perform a full volume leak rate test had been exercised and it failed, a successful full volume leak rate test was subsequently required for full operability of the air lock.

A TS 3.0.3 declaration implies a loss of all functional capability for an affected SSC or an indeterminate safety basis to support continued operation. In this event there was no loss of safety function based on the fact that the second full volume leak rate test on July 10, 2001, was completed satisfactorily without further maintenance to the inner door. It can be concluded that the inner door was capable of performing its intended function following the repairs performed on it and that a valid safety basis for continued operation did exist. However, the declaration of OPERABILITY for the inner door was not administratively completed until after the successful full volume leak rate test was completed, subsequent to the TS 3.0.3 declaration and associated down power. Therefore, the event is important in that the plant experienced a down power as a result of degraded performance associated with the second largest penetration in the containment. For these reasons this event is being reported on a voluntary basis.

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

II. Cause of Event

A root cause investigation was performed on this event. The following causes led to the event in this LER:

1. Document/Drawing Inaccurate (Omission of relevant information)
Excessive grease was applied to the outer door o-rings. Excessive lubricant has been found to cause the o-rings to "set" in the joint (dovetail). The procedure did not mention the effect of applying excessive grease nor did it specify any quantifiable limit on the amount of grease to apply.
2. Change Management (Change related training/retraining not performed or not adequate)
Technical Specification changes approved in License Amendment 186 were not fully implemented. The testing frequency requirements associated with this change were not clearly explained to the Operations department. Additionally, the Technical Requirements Manual (TRM) had not been changed to reflect the changes resulting from License Amendment 186. The guidance in the TRM led Operations to interpret that a full volume leak rate test should be performed after each containment entry.

III. Analysis of Event

The accident analysis of FSAR Chapter 15 requires primary containment integrity to ensure that the release of radioactive materials from containment will be restricted to those leakage paths and associated leak rates assumed in the safety analysis. However, there are no accidents identified which pressurize the containment air lock door and depressurize containment. During the full volume leak rate test, the inner door is pressurized in a direction opposite to accident conditions. Also, the air lock design at Millstone Unit No. 3 does not include a strongback which would compensate for the forces generated on the inner air lock door during the full volume leak rate test. Because the inner door demonstrated operability based on the between-the-seals test, it could have been declared operable, since it had demonstrated that it could perform its safety function. Based on the Technical Specification definition, "A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s)...". Because the air lock inner door is a passive component when it is in a closed position, the operators decision to call the inner air lock door inoperable would have made no difference in an accident requiring containment integrity. The containment integrity would have been maintained. In this event there was no loss of safety function based on the fact that the full volume leak rate test was completed satisfactorily without further maintenance on the inner door.

While the repairs were being performed on the inner air lock door on July 10, 2001, there could have been a period of time when both air lock doors were inoperable based on the fact that it is not exactly known when the outer air lock door became inoperable. Based on engineering judgement it most likely became inoperable when the inner air lock door was opened to replace the o-rings. At this point the outer door experienced negative pressure within the containment and, as a result, caused the o-rings in the outer air lock door to "set" in the joint. Therefore, both air lock doors could have been inoperable for approximately a half an hour. With the personnel hatch inoperable for half an hour, the probability of an event releasing a significant amount of radionuclides during that time frame is 2E-09 based on a core damage frequency of 3.6E-05/yr. However, if at any time during the repair on the inner air lock door a postulated accident were to occur, the door could have been reclosed in less than a minute. Only one o-ring was replaced at a time during the repair on the inner door. Since accident conditions within the containment are postulated to lead to a positive pressure on the inner air lock door, it would seal with only one o-ring and maintain containment integrity under accident conditions. Therefore, this event is of low safety significance.

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

IV. Corrective Action

The immediate corrective actions taken were to restore operability of the air lock outer door by performing the appropriate repairs and satisfying a full volume leak rate test. The TRM was changed and implemented to reflect the Technical Specification changes in License Amendment 186.

An investigation was conducted and appropriate corrective actions are being addressed in accordance with the Millstone Corrective Action Program. The following actions are being taken to prevent recurrence:

Maintenance Procedure MP 3791AA, "Containment Personnel Air Lock PMs and Inspections", will be revised to provide a caution on the use of too much grease, incorporate the vendor wording on appropriate amount of grease, add steps on how to reposition o-rings in order to reduce compressive set, and specify dedicated personnel to perform seal preparation work during containment entries.

Engineering will develop a technical briefing sheet identifying the changes in Appendix J testing methods and frequencies implemented by License Amendment 186. This briefing shall be provided to all applicable Operations personnel.

V. Additional Information

Similar Events

No previous similar events/conditions were identified.

Energy Industry Identification System (EIIIS) codes are identified in the text as [NH][AL].