

LICENSEE EVENT REPORT (LER)

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

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-8 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

WATERFORD STEAM ELECTRIC STATION UNIT 3

DOCKET NUMBER (2)

05000 382

PAGE (3)

1 OF 6

TITLE (4)

NONCOMPLIANCE WITH TS 3.3.3.6 FOR CONTAINMENT ISOLATION VALVE POSITION INDICATION

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
05	29	97	97	019	00	06	27	97	N/A	05000
									N/A	05000

OPERATING MODE (9) 5

POWER LEVEL (10) 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)

20.2201(b)	20.2203(a)(2)(v)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)
20.2203(a)(1)	20.2203(a)(3)(i)		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

TIM GAUDET, LICENSING MANAGER

TELEPHONE NUMBER (Include Area Code)

(504) 739-6666

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

In February, 1991, Waterford 3 submitted a letter to the NRC describing implementation of Regulatory Guide (RG) 1.97 for accident monitoring instrumentation. The report listed all automatic containment isolation valves (CIVs) as having qualified position indication in the control room. The report did not include remotely-operated, non-automatic CIVs as falling within the scope of the RG. Recently, Waterford 3 has determined that these non-automatic CIVs fall within the scope of RG 1.97 and thus fall under the requirements of Technical Specification (TS) 3.3.3.6, "Accident Monitoring Instrumentation." The requirements of this TS have not been implemented for these valves in the past, resulting in a condition prohibited by TS. The root cause of this condition is a misinterpretation of the requirements of RG 1.97. Corrective actions include a revised submittal to the NRC, addition of these instruments to the FSAR and TS implementing procedures, and an assessment of the 1991 Waterford 3 RG 1.97 submittal. This condition did not compromise the health and safety of the public. The subject indicators are considered to be reliable and were tested periodically through stroke testing of the individual valves.

**REQUIRED NUMBER OF DIGITS/CHARACTERS
FOR EACH BLOCK**

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 -- FACILITY NAME 8 TOTAL -- DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

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

REPORTABLE OCCURRENCE

This report involves 39 Containment Isolation Valves (CIVs) which were incorrectly excluded by Waterford 3 from the scope of Regulatory Guide (RG) 1.97. Technical Specification (TS) 3.3.3.6, "Accident Monitoring Instrumentation," is applicable to all RG 1.97 Category 1 CIV position indicators. This TS requires monthly channel checks of the indicators to verify OPERABILITY. The exclusion of these valves from the scope of RG 1.97 resulted in the required TS monthly channel checks not being performed for these valves' position indicators. This is considered to be a condition prohibited by TS and is reportable as such per 10CFR50.73(a)(2)(i)(B).

INITIAL CONDITIONS

At the time this event was identified as reportable, Waterford 3 was operating at zero percent power in Operational Mode 5 (Cold Shutdown) for Refueling Outage 8 (RF08). No procedures were being performed specific to this event nor was any major equipment out of service specific to this event.

EVENT DESCRIPTION

On November 24, 1996, the Waterford 3 Operations Department questioned whether the Main Steam Atmospheric Dump Valves [SB-V], MS-116 A&B, which are Containment Isolation Valves [JM-ISV], meet the requirements of RG 1.97 for position indication. This question was reviewed by the Licensing Department and it was initially determined that these valves did not fall under the scope of RG 1.97 per the Waterford 3 licensing basis. In 1991, Waterford 3 submitted a letter to the NRC describing implementation of RG 1.97, Revision 3. This letter included a table listing the applicable instruments by component number, which included containment isolation valve position indications [IP-ISV-ZI]. Attachment 2 to the submittal provided a table to compare the submittal to the previous RG 1.97, Revision 2 submittal in 1983. For CIV position indication, Attachment 2 stated, "This variable provides information about all automatic containment isolation valves." ANSI N271-1976, "Containment Isolation

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Provisions for Fluid Systems," defines automatic isolation valve as a valve whose closure is initiated by automatic means without any action by a plant operator upon receipt of an isolation signal from a protection system. Containment Isolation Valves which do not receive an automatic closure signal (i.e. those with a primary safety function to open), including MS-116 A&B, were not included in the submittal. This initial reportability determination was documented on December 9, 1996.

Although the initial reportability determination concluded Waterford 3 was in compliance with the licensing basis, it questioned if the licensing basis was correct. Further investigation into this question revealed that RG 1.97 does not provide exemption for CIVs which are not considered "automatic"; it only excludes check valves. ANSI/ANS-4.5-1980, which is endorsed by RG 1.97, states that position indication should be provided for remotely-operated primary reactor containment isolation valve positions. Although the CIVs were listed by component number in the 1991 submittal, the submittal did not specifically identify the exclusion of the "non-automatic" valves. A review of the NRC's Safety Evaluation provided for this submittal does not specifically address CIV position indication. Thus, it is unclear if the NRC reviewed and approved this exclusion. A discussion was also held with the NRC during a containment isolation issue meeting at Waterford 3 on April 23, 1997. At this meeting the NRC indicated that RG 1.97 position is required for all remotely-operated CIVs.

A determination was made, based upon the above reviews and discussion with the NRC, that the remotely-operated, non-automatic CIVs excluded from the 1991 submittal should be added to the scope of RG 1.97. A supplemental RG 1.97 submittal was prepared and submitted to the NRC on May 23, 1997. This submittal added the remotely-operated, non-automatic CIVs to the scope of RG 1.97, and requested deviation for three valves which did not have qualified indication, based on non-qualified indication and alternate means of monitoring. This supplemental response and requested deviations were approved by the NRC in a Safety Evaluation dated June 5, 1997.

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On May 29, 1997, a revised reportability determination was documented by Licensing which concluded that the inappropriate exclusion (or lack of NRC approval for exclusion) of the above discussed valves from the scope of RG 1.97 resulted in a noncompliance with TS 3.3.3.6, "Accident Monitoring Instrumentation." This TS requires position indication for all RG 1.97 Category 1 CIVs. This determination also noted that NUREG-1432, "CE Revised Standard TS (RSTS)," Bases for TS 3.3.11 states, "The LCO requires one channel of valve position indication in the control room to be OPERABLE for each 'active' PCIV in a containment penetration flowpath." The RSTS Bases for TS 3.6.3 states, "Check valves, or other automatic valves designed to close without operator action following an accident, are considered active devices." This indicates that the RSTS for accident monitoring instrumentation only applies to "automatic" CIVs. However, it has been determined that because RG 1.97 does not allow for the exclusion of non-automatic valves and because Waterford 3's past and current TS Bases do not specifically make this exclusion, noncompliance with the TS existed.

CAUSAL FACTORS

The root cause of this event was a lack of understanding, or misinterpretation, of the requirements of RG 1.97 with regard to CIV position indication during preparation of the 1991 submittal. A conscious decision was made to exclude the remotely-operated, non-automatic CIVs from the scope of the submittal. That decision was based on the presumption that the RG only applied to CIVs which close automatically as part of the engineered safety features actuations at the initiation of an accident, and is believed to have been influenced by the following statement in RG 1.97: "At the start of an accident, it may be difficult for the operator to determine immediately what accident has occurred. For this reason, reactor trip and certain other safety actuations (e.g. containment isolation...) have been designed to be performed automatically during the initial stages of an accident." Additionally, the requirement in ANSI N18.2-1973 for CIV position indication falls under subsection 5.5 titled "Engineered Safety Features," implying indication is needed only for automatic CIVs. However, that decision was

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incorrect in that RG 1.97 and ASNI/ANS-4.5-1980 do not specifically or generically provide for exclusion of these valves. Because the exclusion of these valves was not recognized as being contrary to the guidance in RG 1.97, the 1991 submittal did not request NRC approval for this exclusion.

CORRECTIVE MEASURES

On May 23, 1997, Waterford 3 submitted a supplemental RG 1.97 submittal to the NRC to add the 39 non-automatic, remotely-operated CIVs to the scope of RG 1.97, and to request approval for deviation from the RG requirements for several valves. The NRC reviewed and approved this submittal as documented in a Safety Evaluation dated June 5, 1997.

Upon approval of the above submittal by the NRC, the 39 valves were added to FSAR Table 7.5-3 to update the Waterford 3 licensing basis.

The valves are being added to the surveillance test procedures for TS 4.3.3.6 to ensure compliance with this TS following startup from RF08.

An assessment of Waterford 3's 1991 RG 1.97 submittal will be performed to ensure appropriate instruments have been identified and qualifications are met.

SAFETY SIGNIFICANCE

The exclusion of the 39 CIV position indications from the scope of RG 1.97 and TS 3.3.3.6 had no impact on the health and safety of the public. First, the ability of the subject containment isolation valves to perform their safety function is not affected by the operation of the respective position indications. Second, a review of the work history for the limit switches which supply the position indication for these valves was performed. This review showed that these switches have been very reliable and have

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not been out of service often. Also, discussions with Operations personnel have revealed that position indication light failures in general have not been common and are corrected shortly after identification. Third, the operability of the position indications for nearly all of these valves has essentially been verified on a quarterly basis through stroke testing of these valves for inservice testing requirements. Several of the valves are stroked on a cold shutdown or 18-month frequency.

SIMILAR EVENTS

LER 95-004 was submitted in October, 1995, due to a number of CIVs listed in the FSAR as RG 1.97 Category 1 not being included in surveillance procedures for TS 3.3.3.6, resulting in noncompliance with this TS. This LER included a corrective action for Engineering to perform a re-verification of the Waterford 3 RG 1.97, Revision 3 submittal for the selection of Category 1 containment isolation valves to ensure its correctness. This action was completed in October, 1995, but did not identify the valves discussed in this LER due to the continued assumption that RG 1.97 only applied to "automatic" CIVs.

LER 97-001 was submitted in January, 1997, for Emergency Feedwater Flow Control Valves being credited for containment isolation without having RG 1.97 qualified position indication, which resulted in noncompliance with TS 3.3.3.6.

ADDITIONAL INFORMATION

Energy Industry Identification System (EIIIS) codes are identified in the text within brackets [].