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 (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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)

Containment Radiation Monitor CMS*22 Setpoints Non-Conservative With Respect To Conforming With Commitments Made to Regulatory Guide 1.45 Within the Final Safety Analysis Report

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
02	06	98	98	--	009	--	00	03	07	98	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	000	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)	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)
David A. Smith, Manager, Unit 3 Regulatory Compliance	(860)437-5840

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

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

On February 6, 1998, with the Unit in Mode 5, it was identified that the Containment Atmosphere Monitoring (CAM) System Radiation Monitor (3CMS*RE22) particulate and gaseous, alert and alarm setpoints were set too high to meet the commitment to Regulatory Guide (RG) 1.45, "Reactor Coolant Pressure Boundary [RCPB] Leakage Detection Systems," contained within Table 1.8-1 of the Final Safety Analysis Report. Table 1.8-1 provides clarification as to the degree of conformance to RG 1.45. This condition was outside the design bases of the CAM System and is also reportable pursuant to 10 CFR 50.73(a)(2)(ii)(B) and 10CFR50.73(a)(2)(i)(B), as any operation or conditions prohibited by the Unit's Technical Specifications.

This condition was historical. The cause is considered to be a lack of organizational authority for program implementation, evidenced by failure to implement the required setpoint as stated in the Radiation Monitor Manual.

The event is of low safety significance because other reactor coolant pressure boundary (RCPB) leakage detection systems were usually available to detect a one gallon per minute RCPB leak.

The setpoints for radiation monitor 3CMS*22 were revised to conform with our RG 1.45 commitment. A review of other radiation monitor setpoints were performed. A procedure will be developed to identify and document the basis for each radiation monitor setpoint.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					PAGE (3)
		YEAR	SEQUENTIAL NUMBER			REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	05000423	98	--	009	--	00	2 of 4

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

I. Description of Event

On February 6, 1998, with the Unit in Mode 5, it was identified that the Containment Atmosphere Monitoring System Radiation Monitor (3CMS*RE22) particulate and gaseous, alert and alarm setpoints were set too high to meet the commitment to Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary [RCPB] Leakage Detection Systems," in Table 1.8-1 of the Final Safety Analysis Report (FSAR). Table 1.8-1, indicates that Unit 3 complies "with the following interpretation given to Regulatory Position C.5: The sensitivity and response time of each leakage detection system employed to collect unidentified leakage [for the] Containment Atmosphere Radioactivity Monitor [is] "1 gpm in less than 1 hour, provided that the equilibrium activity of the reactor coolant is sufficiently high and the equilibrium activity level of the containment is below a level that would mask the change in activity corresponding to this leak rate."

The Containment Atmosphere Monitoring System 3CMS*RE22A (particulate) / B (gaseous) consists of a particulate and gaseous radiation activity monitor that detects and measures the gross Beta activity level of isotopes present in gaseous and particulate form in the sampled atmosphere. Technical Specification (TS) 3.3.3.1, Table 4.3-3, Radiation Monitoring Instrumentation for Plant Operations Surveillance Requirements, Functional Unit 1.b., "Containment - RCS Leakage Detection, Item 1) Particulate Radioactivity and Item 2) Gaseous Radioactivity," require this monitor to be OPERABLE in Modes 1 through 4.

RG 1.45 states that "In analyzing the sensitivity of leak detection systems using airborne particulate or gaseous radioactivity, a realistic assumption should be used. The expected values used in the plant environmental report would be acceptable." A recent calculation was performed using the Unit 3 Environmental Report primary coolant activity levels as recommended by Regulatory Guide 1.45 and this was how the problem was identified.

It should be noted that the historical normal background activity levels within the containment atmosphere during operation are high due to radon outgassing from the concrete in the structure. The normal reactor coolant activity levels are considerably less than those assumed in the Environmental Report. This makes it unlikely that the containment atmosphere radiation monitor would be able to detect a 1 gpm RCPB leak in 1 hour when the alarm setpoint was specified under the conditions stated within FSAR Table 1.8-1 as to the degree of conformance to RG 1.45. TS 3.4.6.2, "Reactor Coolant System - Operational Leakage," Surveillance Requirement (SR) 4.4.6.2.1a. requires "Monitoring the containment atmosphere (gaseous or particulate) radioactivity monitor at least once per 12 hours." The Unit 3 commitment to RG 1.45 indicates that under the conditions stated within FSAR Table 1.8-1 the containment atmosphere radiation monitor should have been able to discern a 1 gpm leak within 1 hour. Therefore, the detection system must include the alarm function to notify the operator so action can be taken within one hour because the TS only requires the containment atmosphere to be monitored once every 12 hours. Therefore, this condition is outside the design bases of the Containment Atmosphere Monitoring System and is reportable pursuant to 10 CFR 50.73(a)(2)(ii)(B).

The monitor is considered to have been inoperable from at least 1986 because the setpoint was not as committed to in FSAR Table 1.8-1. TS 3.3.3.1, Table 4.3-3, Radiation Monitoring Instrumentation for Plant Operations Surveillance Requirements, Functional Unit 1.b., "Containment - RCS Leakage Detection, Item 1) Particulate Radioactivity and Item 2) Gaseous Radioactivity," require this monitor to be OPERABLE in Modes 1 through 4. TS 3.4.6.1, "Reactor Coolant System - Leakage Detection Systems," requires that "The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE [in Modes 1 through 4]: a. Either the Containment Atmosphere Gaseous or Particulate Radioactivity Monitoring System, and b. The Containment Drain Sump Level or Pumped Capacity Monitoring System."

Therefore, during those periods when the Containment Atmosphere Gaseous and Particulate Radioactivity Monitoring System was inoperable TS 3.4.6.1 could not be met. These conditions resulted in historical transitions through operational modes without the applicable SRs being met. This is reportable pursuant to 10CFR50.73(a)(2)(i)(B), as any operation or conditions prohibited by the Unit's TS. The conditions were dispositioned in accordance with the Millstone Corrective Action Program.

II. Cause of Event

This condition was historical. The cause is considered to be a lack of organizational authority for program implementation. This is evidenced by the failure to implement the required setpoints as stated in the Radiation Monitor Manual. A contributing factor was the failure of the Radiation Monitor Manual to identify the correct basis for 3CMS*22 setpoints.

III. Analysis of Event

This event is a failure to comply with the licensing basis with respect to Regulatory Guide 1.45 as committed to within FSAR Table 1.8-1. Technical Specification 3.4.6.1 Item a. requires that either the Containment Atmosphere Gaseous or Particulate Radioactivity Monitoring System be OPERABLE in Modes 1 through 4. TS 3.4.6.1 Item b. requires that the Containment Drain Sump Level or Pumped Capacity Monitoring System be OPERABLE in Modes 1 through 4.." Except for those time periods when the Containment Drain Sump Level or Pumped Capacity Monitoring System was inoperable there was a reactor coolant system leakage detection system OPERABLE to provide a means of detecting RCPB leakage in Modes 1 through 4 as required by the TS. Additionally, a Reactor Coolant System water inventory balance is required to be performed at least once per 72 hours by SR 4.4.6.2.1.d. Therefore, this event is of low safety significance because alternate means were available to detect a RCPB leak.

IV. Corrective Action

The following corrective actions have been completed:

1. Setpoints were calculated for radiation monitor 3CMS*22 that comply with FSAR Table 1.8-1 and Regulatory Guide 1.45 guidance. Revised setpoints for radiation monitor 3CMS*22 were implemented.

2. A preliminary review of radiation monitor setpoints was performed for those that were based on normal values to determine if compliance with Regulatory Guide 1.45 or other radiological licensing bases was in question. No other radiation monitor setpoints were identified as being in non-compliance.

The following corrective actions will be performed:

1. Radiation monitor responsibilities will be defined and documented between the Radiological Assessment Branch, Health Physics, and Chemistry for trending, adjustment of setpoints, and implementation of setpoints in the Radiation Monitor Manual prior to entry into Mode 2.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					PAGE (3)
		YEAR	SEQUENTIAL NUMBER			REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	05000423	98	--	009	--	00	4 of 4

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

2. Develop and implement a procedure to identify and document the basis for each Unit 3 radiation monitor setpoint by June 1, 1998.

V. Additional Information

None

Similar Events

Listed below are several conditions involving deficiencies in performing calculations and determining setpoints. These are historical conditions that were recently discovered.

LER 96-020-00 Main Steam Motor Driven Atmospheric Relief Valves Inoperable Due to Personnel Error During Preparation and Review of Setpoint Calculation
LER 96-034-02 RHR Pump Suction Relief Valve Setpoint Not in Accordance With Technical Specifications
LER 97-010-00 Electrical Calculation Discrepancies in Minimum Voltage Analysis for Class 1E Electrical Systems
LER 97-019-00 Violation of Technical Specifications as a Result of Failure to Account for Instrument Uncertainty in DWST Level
LER 97-024-00 Engineered Safeguard Building Monitor Noble Gas Activity Monitor Sensitivity Not Meeting TS Requirements
LER 97-031-00 RHR Valve Low Pressure Open Permissive Bistable Setting Set Nonconservatively

Manufacturer Data

EIIS System Code

Radiation Monitoring System.....IL

EIIS Component Code

Detector.....DET