



November 30, 2009

L-MT-09-110
10 CFR Part 50.73

U.S. Nuclear Regulatory Commission
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Washington, DC 20555

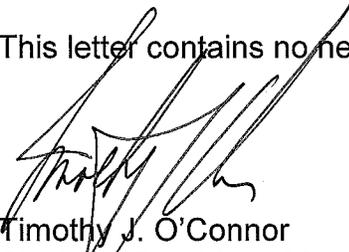
Monticello Nuclear Generating Plant
Docket No.: 50-263
Renewed License No.: DPR-22

LER 2008-002 Rev 1, "Inoperability of Channel "B" Spent Fuel Pool Radiation Monitor due to Incorrect Calibration"

A revision to the Licensee Event Report (LER) for this occurrence is attached. The revision was required to correct an error in the original LER in which the Safety System Functional Failure (SSFF) was not marked on page 1 in the reporting requirements section. The SSFF was properly reported in the quarterly NRC performance indicator data and therefore will not impact any NRC reporting data.

Summary of Commitments:

This letter contains no new commitments and no revisions to existing commitments.



Timothy J. O'Connor
Site Vice President, Monticello Nuclear Generating Plant
Nuclear Management Company, LLC

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)
Monticello Nuclear Generating Plant

DOCKET NUMBER (2)
05000263

PAGE (3)
1 of 4

TITLE (4) Inoperability of Channel "B" Spent Fuel Pool Radiation Monitor due to Incorrect Calibration

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
02	19	2008	2008	- 002	- 01	11	30	2009	FACILITY NAME	DOCKET NUMBER
										05000
										05000

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

TELEPHONE NUMBER (Include Area Code)
763-295-1357

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT

On February 19, 2008 Monticello was performing an investigation into a potential calibration methodology error on the Channel "B" Spent Fuel Pool Radiation Monitor. As part of the past operability evaluation, it was determined that the error had the potential to cause the "B" radiation monitor to be inoperable from the time period of November 20, 2007 to February 19, 2008. The cause for the potential inoperable condition of the radiation monitor was a combination of three adverse conditions; a faulty meter, a procedure deficiency, infrequent verification of the source strength of the calibrator. Corrective actions taken or planned are: the monitor trip setpoint was verified, the meter was replaced, and the source strength of the calibrator was verified. The station will revise affected procedures. The station will perform verifications of the source strength of the calibrator on an annual basis.

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		2008	- 002	- 01	

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

Event Description

During the 2/19/08 performance of Surveillance procedure 0068, the I&C technician noticed that although the Fuel Pool [VG] Channel B Radiation Monitor upscale trip occurred at the correct signal voltage, the local trip/indicator meter [MTR] was reading 90 mR/hr. Because the sensor/converter source calibration used only this meter reading, this meant that it would have taken a 90 mR/hr radiation dose rate in order for the signal from the sensor/converter to give the designed 50 mR/hr trip signal. A station action request was initiated and the faulty meter was replaced. On 2/19/08 the faulty meter was replaced, a calibration of the channel was performed and the trip setpoint for RM-17-453B was brought back to the designed 50 mR/hr, checked against the trip/indicator meter, and the unit was returned to service.

Past Operability was evaluated during the period when the trip signal was found to occur at 90 mR/hr. The station review determined that the calibrated trip setpoint was an additional 11-21% less than the indicated 90mR/hr. The expected source dose rates were discovered to be inaccurate due to infrequent verification of the source strength of the calibrator. This results in it taking an actual dose rate of between 99 mR/hr and 109 mR/hr to cause a trip. According to Monticello Technical Specifications, this presents a potential inoperable condition from the time when the sensor/converter was calibrated to the faulty trip/indicator meter until the time when the condition was corrected on 2/19/08. In reviewing past performances of the surveillance, it is believed the trip/indicator meter most likely failed between 9/17/07 and 11/20/07. The monitors entered the potential inoperable condition on 11/20/07 when the instrument was calibrated using the inaccurate installed meter and exited that condition upon correction on 2/19/08.

Event Analysis

Due to past operability concerns, the event is reportable under 50.73(a)(2)(i)(B) "Operation or Condition Prohibited by Technical Specifications," and a Licensee Event report is required for this event. 10 CFR 50.72 does not require a notification for this type of event.

The event is considered a safety system functional failure since investigation of the period of Channel "B" inoperability found two instances when the Channel "A" monitor was also inoperable (for less than six hours each) and therefore could not have fulfilled the safety function during this time.

Safety Significance

The Probabilistic Risk Assessment (PRA) group performed an evaluation addressing the risk of core damage and large early release attributable to the failure to correctly calibrate Spent Fuel Pool Channel B Radiation Monitor [MON]. The channel "B" radiation monitor was

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estimated to be out of calibration for a period of approximately three months at which time the redundant channel "A" radiation monitor was fully operable with the exception of two periods (less than six hours each). Since the trip logic, which is designed to isolate the Reactor Building [NG] and activate the Standby Gas Treatment System (SBGT) [VA] in the event of a refueling accident, utilizes a one-out-of-two trip logic scheme, the Spent Fuel Pool Radiation Monitoring system remained functional. Additionally, the channel B trip remained capable of automatic Reactor Building isolation and SBGT initiation, but at a radiation level near to, and possibly slightly in excess of, the 100 mR/hr setpoint specified for operability. These radiation monitors are intended to provide automatic actuation at a nominal 50 mR/hr radiation level.

The impact on Core Damage Frequency (CDF) resulting from the calibration error of the Spent Fuel Pool Channel B Radiation Monitor is considered to be negligible since the Spent Fuel Pool Process Radiation Monitor function is intended to address refueling accidents and does not provide or support any of the critical safety functions capable of reducing the probability of a core damage accident. Since both channels of the Spent Fuel Pool Radiation Monitor system were capable of providing automatic Reactor Building isolation and SBGT initiation, even considering that one channel was excessively out of calibration, it is reasonable to conclude that the impact on Large Early Release Frequency (LERF) from this calibration error is also negligible.

Cause

The cause for the potential inoperable condition of the radiation monitor was a combination of three adverse conditions; a faulty meter, a procedure deficiency, and infrequent verification of the source strength of the calibrator. There is currently no check of the accuracy of the meter on the trip indicator unit which could lead to a mis-calibration of the sensor converter if the trip indicator unit meter is out of tolerance. A contributing factor was there was no required verification of the source strength of the calibrator.

Corrective Action

The monitor trip setpoint was verified correct. The failed meter was replaced. The calibrator source strength was verified at all possible calibration positions. The station has quarantined the affected procedures and will revise them. The station will perform verifications of the source strength of the calibrator on an annual basis.

Failed Component Identification

None

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Previous Similar Events

None