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Braidwood Station
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10 CFR 50.73

January 11, 2011
BW110001

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Subject: Licensee Event Report 2010-005-00 – Incorrect Methodology Used in Calculations in 1999
Resulted in Non-Conservative Control Room Outside Air Intake Monitor Alarm Setpoints

The enclosed Licensee Event Report (LER) is being submitted in accordance with 10 CFR 50.73, "Licensee event report system," paragraph (a)(2)(i)(B), any operation or condition which was prohibited by the plant's Technical Specifications. On November 12, 2010, an error was identified in the methodology used in a historic calculation (1999) of the setpoints for the control room outside air intake noble gas channels, making the setpoints non-conservative. 10 CFR 50.73(a) requires an LER to be submitted within 60 days following discovery of the event. Therefore, this report is being submitted by January 11, 2011.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this submittal, please contact Mr. Ronald Gaston, Regulatory Assurance Manager, at (815) 417-2800.

Respectfully,



Amir Shahkarami
Site Vice President
Braidwood Station

Enclosure: LER 2010-005-00
cc: NRR Project Manager – Braidwood Station
Illinois Emergency Management Agency – Division of Nuclear Safety
US NRC Regional Administrator, Region III
US NRC Senior Resident Inspector (Braidwood Station)
Illinois Emergency Management Agency - Braidwood Rep

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@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 an 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.

1. FACILITY NAME Braidwood Station, Unit 1	2. DOCKET NUMBER 05000456	3. PAGE 1 of 3
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4. TITLE
Incorrect Methodology Used in Calculations in 1999 Resulted in Non-Conservative Control Room Outside Air Intake Monitor Alarm Setpoints

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV. NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	12	2010	2010	005	00	01	11	2011	Braidwood Station Unit 2	05000457
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)									
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
10. POWER LEVEL 099	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER							
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A							

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME Ronald Gaston, Regulatory Assurance Manager	TELEPHONE NUMBER (Include Area Code) (815) 417-2800
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE		
	MONTH	DAY	YEAR
	N/A	N/A	N/A

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

On November 12, 2010, during a review of setpoint calculations for process monitors, an error was identified in the methodology used in a historic calculation of the setpoints for the control room outside air intake noble gas channels, making the setpoints non-conservative. On November 12, 2010, at 0818, the four channels were declared inoperable, and the appropriate Technical Specification (TS) Limiting Condition for Operation (LCO) Conditions A and B were entered. The setpoints were revised for the gas channels, and at 1725 Technical Specification LCO 3.3.7 Conditions A and B were exited.

The apparent cause for this event was that the procedure for determining the alarm setpoints did not have details of the methodology for the calculation.

The corrective actions include revising the setpoint calculations and correcting the setpoints for the affected gas channels, verifying that all required TS radiation monitors are set in compliance with TS requirements, and revising the procedures that perform setpoint calculations for the process radiation monitors to address details on the method used for setpoint calculations, and include instructions for the basis for the review criteria.

There were no actual safety consequences impacting plant or public safety as a result of the event. This event is being reported pursuant to 10 CFR 50.73(a)(2)(i)(B), any operation or condition which was prohibited by Technical Specifications.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Braidwood Station, Unit 1	05000456	YEAR	SEQUENTIAL NUMBER	REV NO.	3 OF 3
		2010	-	005	

NARRATIVE

D. Safety Consequences:

There were no safety consequences impacting plant or public safety as a result of this event.

There are two trains of VC. Detectors 0PR31B and 0PR32B are interlocked with the A train, and detectors 0PR33B and 0PR34B are interlocked with the B train. On a high radiation signal for the detectors of the respective train, the train-specific ventilation systems realign to the Emergency mode to support control room habitability.

The applicable design basis accidents are main steam line break, reactor coolant pump shaft seizure, rod cluster control assembly ejection, steam generator tube rupture, loss of coolant accident, and postulated fuel handling accident. For control room habitability analysis, activity released during the initial 30 minutes of the accident is assumed not filtered to compensate for time to manually realign the VC system to the Emergency mode of operation.

The TS required monitor is the noble gas detector in the control room outside air intakes. The High alarm was set at 2.9 mrem/hr versus required 2.0 mrem/hr (noble gas exposure) for the automatic ventilation swap to Emergency mode. This yields a net 0.9 mrem/hr above the expected dose rate. Since the accident analysis calculations assume manual swap of ventilation within 30 minutes, the excess dose rate for the alarm would only affect the control room for a maximum of 30 minutes. This yields 0.9 mrem/hr x 0.5 hr = 0.45 mrem (noble gas exposure). The radiation exposure consequence to control room personnel from the 45% higher trip alarm is approximately an additional 0.5 mrem for noble gas exposure.

Since the design basis accidents do not credit automatic actuation of the VC system into the Emergency mode from a high radiation signal, this event did not result in a safety system functional failure.

E. Corrective Actions:

The corrective actions include:

- An extent of condition review was performed and verified that required TS radiation monitor setpoints are set in compliance with TS requirements.
- The setpoint calculations were revised and the setpoints for 0PR31B, 0PR32B, 0PR33B and 0PR34B were reset to the correct values.
- Review the applicable radiation monitor procedures that perform setpoint calculations for the process radiation monitors, and revise them to address details on the method used for setpoint calculations, and include instructions for the basis of the review criteria.

F. Previous Occurrences:

There have been no previous, similar Licensee Event Reports identified at the Braidwood Station.

G. Component Failure Data:

Manufacturer
N/A

Nomenclature
N/A

Model
N/A

Mfg. Part Number
N/A