

Exelon Generation Company, LLC
Byron Station
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Byron, IL 61010-9794

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September 15, 2006

LTR: BYRON 2006-0107
File: 1.10.0101

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Supplemental Report to Licensee Event Report (LER) 454-2005-003-00,
"Technical Specification (TS) 3.9.4 Violation Due to Imprecise Original Wording
TS And TS Bases Wording"

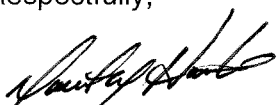
Reference: Letter from Robert Kuntz (NRC) to C. M. Crane (Exelon Generation Company,
LLC), Byron Station Units 1 and 2 and Braidwood Station Units 1 and 2,
Issuance of Amendment Re: Alternate Source Term

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Enclosed is supplement 1 to the LER involving the inadvertent non-compliance with Technical Specification 3.9.4 "Containment Penetrations." The LER has been revised to remove the corrective action involving a revision to the Technical Specification's (TS) Bases. This TS Bases revision is no longer necessary since a license amendment has been obtained (referenced document) that obviates the need for the TS Bases change.

Should you have any questions concerning this matter, please contact Mr. William Grundmann, Regulatory Assurance Manager, at (815) 234-5441, extension 2800.

Respectfully,



David M. Hoots
Site Vice President
Byron Nuclear Generating Station

DMH/JEL/rah

Attachment LER 454-2005-003-01

NRC FORM 366 (6-2004)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0104	EXPIRES: 06/30/2007
<h2 style="margin: 0;">LICENSEE EVENT REPORT (LER)</h2> <p style="margin: 0;">(See reverse for required number of digits/characters for each block)</p>		Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 Byron Station, Unit 1		2. DOCKET NUMBER 05000454	3. PAGE 1 of 3

4. TITLE Technical Specification (TS) 3.9.4 Violation Due to Imprecise Original TS and TS Bases Wording																																															
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED																																						
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9. OPERATING MODE <div style="text-align: center; font-size: 1.2em;">6</div>			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: <i>(Check all that apply)</i> <table style="width:100%; font-size: 0.8em;"> <tr> <td><input type="checkbox"/> 20.2201(b)</td> <td><input type="checkbox"/> 20.2203(a)(3)(i)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)(C)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(vii)</td> </tr> <tr> <td><input type="checkbox"/> 20.2201(d)</td> <td><input type="checkbox"/> 20.2203(a)(3)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(A)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(1)</td> <td><input type="checkbox"/> 20.2203(a)(4)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)(B)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(B)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(i)</td> <td><input type="checkbox"/> 50.36(c)(1)(i)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(iii)</td> <td><input type="checkbox"/> 50.73(a)(2)(ix)(A)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(ii)</td> <td><input type="checkbox"/> 50.36(c)(1)(ii)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(iv)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(x)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iii)</td> <td><input type="checkbox"/> 50.36(c)(2)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(A)</td> <td><input type="checkbox"/> 73.71(a)(4)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iv)</td> <td><input type="checkbox"/> 50.46(a)(3)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(B)</td> <td><input type="checkbox"/> 73.71(a)(5)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(v)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(C)</td> <td><input type="checkbox"/> OTHER</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(vi)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(D)</td> <td></td> </tr> </table> <div style="text-align: right; font-size: 0.7em;">Specify in Abstract below or in NRC Form 366A</div>									<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input checked="" type="checkbox"/> 50.73(a)(2)(vii)	<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)	
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10. POWER LEVEL <div style="text-align: center; font-size: 1.2em;">N/A</div>																																															
12. LICENSEE CONTACT FOR THIS LER																																															
NAME William Grundmann, Regulatory Assurance Manager									TELEPHONE NUMBER (Include Area Code) (815) 406-2800																																						
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT																																															
CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX																																						
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14. SUPPLEMENTAL REPORT EXPECTED									15. EXPECTED SUBMISSION DATE																																						
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)									<input checked="" type="checkbox"/> NO																																						
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)																																															
<p>An NRC inspector raised an issue with Technical Specification (TS) 3.9.4, "Containment Penetrations," as to whether Byron Station was violating item "c" of the Limiting Condition for Operations by causing direct access from containment atmosphere to the outside atmosphere during the performance of local leak rate test (LLRT) on containment isolation valves while core alterations or movement of irradiated fuel within containment were in progress. The NRC's position is contrary to how Byron Station has historically applied this TS. Byron Station has always viewed this wording to mean those penetrations that have a direct air path from within containment to the outside atmosphere (i.e., not through an intermediate area or building such as the auxiliary building). Byron Station decided to not further contest the issue and adopted the NRC's position on the intent of this TS. The most probable cause is the authors and reviewers of the original TS and TS Bases wording inadvertently used imprecise language. The outage schedule was reconfigured to not allow the performance of LLRTs that provide direct access from containment to the auxiliary building during core alterations or movement of irradiated fuel within containment. An engineering evaluation concluded that there are no adverse safety consequences. This is an event or condition prohibited by the Technical Specifications and consequently, reportable to the NRC in accordance with 10 CFR 50.73 (a) (2) (i) (b).</p>																																															

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
Byron Station, Unit 1	05000454	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2005	- 003	- 001	

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

A. Plant Condition Prior to Event:

These events occurred during refuel outage conditions for both Units 1 and 2 within 3 years of April 6, 2005. The units were in Mode 6, Refuel Operations. The specific timeframes within each refuel outage are:

Unit 2 tenth refuel outage - September 20, 2002 to September 23, 2002
Unit 1 twelfth refuel outage – September 26, 2003 to October 2, 2003
Unit 2 eleventh refuel outage – March 27, 2004 to April 2, 2004

B. Description of Event:

During the Byron Station Unit 1 refueling outage in March of 2005, an NRC inspector raised an issue with Technical Specification (TS) 3.9.4, "Containment Penetrations," as to whether we were violating item "c" of the Limiting Condition for Operations (LCO) by causing direct access from containment atmosphere to the outside atmosphere during the performance of local leak rate tests (LLRT) on containment isolation valves while core alterations or movement of irradiated fuel within containment were in progress. Item "c" of the LCO requires that, during core alterations or movement of irradiated fuel within containment, each penetration providing direct access from containment atmosphere to the outside atmosphere be closed by a manual or automatic isolation valve, blind flange or equivalent. During a typical LLRT setup, the penetration piping is drained and a direct air path exists for a short period of time from within containment to the auxiliary building through the open small diameter vent and drain valves. The NRC believed an air path from containment to the auxiliary building was considered direct access to the outside atmosphere.

The NRC's position is contrary to how Byron Station has historically applied this TS. Byron Station has always viewed this wording to mean those penetrations that have a direct air path from within containment to the outside atmosphere (i.e., not through an intermediate area or building such as the auxiliary building). Byron Station's application has been consistent since initial startup of the units and this interpretation has been institutionalized within Operations procedures and training material.

Byron Station's original TS wording for TS 3.9.4 had identical wording as the now current Improved TS (ITS). The original bases wording was silent on defining what "direct access from the containment atmosphere to the outside atmosphere" meant. Transition to the ITS in the 1999 timeframe indicated the new TS 3.9.4 was an equivalent change. The current ITS bases wording also does not explicitly define "direct access from the containment atmosphere to the outside atmosphere." It does contain more details but nothing that contradicted our application of the TS.

A conference call occurred with the NRC containment experts on April 6, 2005 to discuss and clarify each other's respective position on this TS. As a result of this conference call, Byron Station concluded that, based on the TS and TS Bases wording, both positions are valid applications of the TS. However, with consideration that other utilities have considered themselves in violation of TS 3.9.4 for having a direct path from containment to the auxiliary building, Byron Station decided to not further contest the issue and has adopted the NRC's position on the intent of this TS.

LICENSEE EVENT REPORT (LER)

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Byron Station, Unit 1	05000454	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		2005	- 003	- 001	

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

(B. Description cont.)

Byron Station's test records for the LLRTs do not have specific times that the direct path from within containment to the auxiliary building existed during each test in order to correlate it with the core alterations or movement of irradiated fuel logs. However, since several of these LLRTs were started and finished within the core offload or reload schedule windows and with the absence of specific controls or coordination with fuel moves specified within the LLRT procedures, it is likely that at least once Byron Station had a direct path from within containment to the auxiliary building during core alterations or the movement of irradiated fuel within containment. Based on this likelihood Byron Station believes it is prudent to consider this an event or condition prohibited by the Technical Specifications and consequently, reportable to the NRC in accordance with 10 CFR 50.73 (a)(2)(i)(b).

C. Cause of Event:

In retrospect, the original TS wording for TS 3.9.4 was issued and approved with the ambiguous wording "direct access to outside atmosphere" and was inadequately explained in its Bases section.

The cause of this ambiguous wording is unknown. The most probable cause is the authors and reviewers of the original TS and TS Bases wording inadvertently used imprecise language and failed to realize that the proposed wording and lack of detailed explanation could lead to a plausible alternate implementation of the TS 3.9.4.

D. Safety Analysis

An engineering evaluation was conducted to analyze the safety consequences of having a direct air path from within containment to the auxiliary building during a design basis fuel handling accident within containment. This evaluation concluded that there are no adverse safety consequences. This is based on available radiation monitoring and alarms to the operators and sufficient time for operator intervention to realign the auxiliary building ventilation to the charcoal filtration path to prevent exceeding 10CFR100 offsite dose limits.

E. Corrective Actions

The outage schedule was rearranged to not allow the performance of LLRTs that provide direct access from containment to the auxiliary building during core alterations or movement of irradiated fuel within containment. Future outages will have the same restriction unless TS relief has been obtained via a license amendment request.

F. Previous Occurrences

There have been no previous occurrences of this nature.