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Christopher J. Schwarz
Site Vice President
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10CFR 50.73

1CAN041202

April 12, 2012

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

Subject: Licensee Event Report 50-313/2012-001-00
Condition Prohibited by Technical Specifications Due to Emergency
Switchgear Room Chillers Taken Out of Service
Arkansas Nuclear One – Unit 1
Docket No. 50-313
License No. DPR-51

Dear Sir or Madam:

Pursuant to the requirements of 10CFR 50.73(a)(2)(i)(B), attached is the subject Licensee Event Report concerning a condition prohibited by Technical Specifications due to the failure to enter the appropriate Technical Specifications and complete the associated required actions prior to the required completion time when emergency switchgear room chillers were taken out of service.

There are no new commitments contained in this submittal. Should you have any questions concerning this issue, please contact Stephenie Pyle, Licensing Manager, at 479-858-4704.

Sincerely,

Original signed by Christopher J. Schwarz

CJS/slc

Attachment: Licensee Event Report 50-313/2012-001-00

cc: Mr. Elmo Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
1600 East Lamar Boulevard
Arlington, TX 76011-4511

NRC Senior Resident Inspector
Arkansas Nuclear One
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NRC FORM 366 (10-2010)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2013 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.					
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)										
1. FACILITY NAME Arkansas Nuclear One – Unit 1					2. DOCKET NUMBER 05000313		3. PAGE 1 of 4			
4. TITLE Violation of Technical Specification Due to the Failure to Enter the Appropriate Technical Specifications or Complete the Associated Required Actions Due to Misapplication of Technical Specification Bases										
5. EVENT DATE MONTH DAY YEAR 02 15 2012			6. LER NUMBER YEAR SEQUENTIAL NUMBER REV NO. 2012 - 001 - 00			7. REPORT DATE MONTH DAY YEAR 04 12 2012			8. OTHER FACILITIES INVOLVED FACILITY NAME DOCKET NUMBER _____ _____ FACILITY NAME DOCKET NUMBER _____ _____	
9. OPERATING MODE <div style="text-align: center; font-size: 24px;">1</div>			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: <i>(Check all that apply)</i>							
10. POWER LEVEL <div style="text-align: center; font-size: 24px;">100</div>			<div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"><input type="checkbox"/> 20.2201(b)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(3)(i)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(i)(C)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(vii)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2201(d)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(3)(ii)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(ii)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(viii)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(1)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(4)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(ii)(B)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(viii)(B)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(2)(i)</div> <div style="width: 50%;"><input type="checkbox"/> 50.36(c)(1)(i)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(iii)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(ix)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(2)(ii)</div> <div style="width: 50%;"><input type="checkbox"/> 50.36(c)(1)(ii)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(iv)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(x)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(2)(iii)</div> <div style="width: 50%;"><input type="checkbox"/> 50.36(c)(2)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(v)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 73.71(a)(4)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(2)(iv)</div> <div style="width: 50%;"><input type="checkbox"/> 50.46(a)(3)(ii)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(v)(B)</div> <div style="width: 50%;"><input type="checkbox"/> 73.71(a)(5)</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(2)(v)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(i)(A)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(v)(C)</div> <div style="width: 50%;"><input type="checkbox"/> OTHER</div> <div style="width: 50%;"><input type="checkbox"/> 20.2203(a)(2)(vi)</div> <div style="width: 50%;"><input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)</div> <div style="width: 50%;"><input type="checkbox"/> 50.73(a)(2)(v)(D)</div> <div style="width: 50%;"></div> </div> <div style="text-align: right; font-size: 10px;">Specify in Abstract below or in NRC Form 366A</div>							
12. LICENSEE CONTACT FOR THIS LER										
FACILITY NAME Stephenie L. Pyle, Licensing Manager						TELEPHONE NUMBER <i>(Include Area Code)</i> 479-858-4704				
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	
N/A					N/A					
14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES <i>(If yes, complete 15. EXPECTED SUBMISSION DATE)</i> <input checked="" type="checkbox"/> NO						15. EXPECTED SUBMISSION DATE MONTH DAY YEAR N/A N/A N/A				
ABSTRACT <i>(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)</i> <p>On February 15, 2012, Arkansas Nuclear One Unit-1 (ANO-1) received the NRC 4th quarter Integrated Inspection Report identifying a noncited violation of Unit 1 Technical Specification (TS) 3.8.4, "DC Sources-Operating," TS 3.8.7, "Inverters-Operating," and TS 3.8.9, "Distribution Systems-Operating," due to the licensee's failure to complete the associated required actions prior to the specified completion times while the associated emergency switchgear room chillers were out of service for planned maintenance. Specifically, on December 7, 2011, VCH-4A Switchgear Room Chiller was removed from service to perform maintenance for 27.3 hours, and on December 19, 2011, VCH-4B Switchgear Room Chiller was removed from service to perform maintenance for 15.5 hours. During both maintenance periods, ANO-1 did not enter the subject specifications above, but entered the following: (1) TS 3.7.7 Condition "A" for one loop of Service Water System (SWS) being inoperable with an associated completion time of 72 hours, (2) TS 3.8.1 Condition "B" for one Emergency Diesel Generator inoperable with a 7 day completion time, and (3) TS 3.0.6, to support the emergency switchgear room chiller being out of service for planned maintenance. The SWS specification was applied as allowed by the ANO-1 TS Bases, considering that the switchgear room chillers were supplied by the SWS, which is the ultimate cooling medium for rooms which contain the electrical equipment. In light of the aforementioned non-cited violation, ANO-1 currently complies with all applicable switchgear TS actions (the most limiting being 8 hours) when either switchgear room chiller is out of service.</p>										

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NARRATIVE**A. Plant Status**

During the time of the subject conditions prohibited by Technical Specifications (TS) in December 2011, ANO-1 was at approximately 100% power.

B. Event Description

On February 15, 2012, ANO-1 received the NRC 4th quarter Integrated Inspection Report identifying a noncited violation of ANO-1 TS 3.8.4, "DC Sources-Operating," TS 3.8.7, "Inverters-Operating," and TS 3.8.9, "Distribution Systems-Operating," due to the licensee's failure to complete the associated required actions prior to the specified completion times while the associated emergency switchgear room chillers were out of service for planned maintenance. Specifically, on December 7, 2011, VCH-4A [KM][CHU] Switchgear Room Chiller was removed from service to perform maintenance for 27.3 hours, and on December 19, 2011, VCH-4B [KM][CHU] Switchgear Room Chiller was removed from service to perform maintenance for 15.5 hours. During both maintenance periods, ANO-1 did not enter the subject specifications above, but entered the following: (1) TS 3.7.7 Condition A for one loop of Service Water System (SWS) [BI] being inoperable with an associated completion time of 72 hours, (2) TS 3.8.1 Condition B for one emergency diesel generator inoperable with a 7 day completion time, and (3) TS 3.0.6, to support the emergency switchgear room chiller being out of service for planned maintenance. The SWS specification was applied as allowed by the ANO-1 TS Bases, considering that the switchgear room chillers were supplied by the SWS, which is the ultimate cooling medium for the rooms which contain the electrical equipment.

Basis for changing the ANO-1 TS Bases to utilize the SWS specification

In May of 2011, using the Process Applicability / 50.59 Process, Revision 41 was issued for the ANO-1 TS Bases which incorporated the allowance to enter the SWS 72-hour specification and invoke TS 3.0.6 when removing the ANO-1 switchgear room chillers from service. This was based in part on the fact that the SWS is the ultimate cooling medium for the electrical equipment (i.e., if SWS is inoperable, the associated chiller would also be inoperable) and because the SWS TS clearly defines actions to be taken, it was deemed appropriate to follow the requirements of the SWS TS 3.7.7 and the requirements LCO 3.0.6, which states:

"When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, an evaluation shall be performed in accordance with specification 5.5.15, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered. When a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2."

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B. Event Description - *continued*

Basis for changing the ANO-1 TS Bases to utilize the SWS specification – *continued*

TS Required Actions associated with electrical sources and equipment (with the exception of the Emergency Diesel Generator) are not entered when a SWS loop is inoperable as directed by LCO 3.0.6. The SWS provides a cooling medium, in conjunction with ventilation systems, to ensure electrical equipment room temperatures remain below acceptable limits following a design basis accident (DBA). GOTHIC software models indicated that the temperature rise in these rooms, given only the compensatory measures of opening specified doors, would not immediately challenge post-accident temperature limits. Because the electrical equipment is not immediately affected by a loss of the SWS loop, challenges to equipment operability will not occur until sometime after the onset of an event, and, because the 72-hour TS 3.7.7 Completion Time considers the redundant capabilities afforded by the operable SWS loop and the low probability of a DBA occurring during this period, ANO-1 concluded that compliance with the SWS TS was appropriate with regard to the effects on associated electrical equipment.

C. Event Cause

The ANO-1 TS Bases allowed the use of the 72-hour Service Water specification and TS 3.0.6 as acceptable specifications to apply when removing the non-TS switchgear room chillers from service. The NRC determined that not entering all applicable TSs for the switchgear located in the rooms supported by the switchgear room chillers was a violation of the TS requirements.

D. Corrective Actions

In light of the aforementioned non-cited violation, ANO-1 currently enters all applicable switchgear TSs, with the most limiting being 8 hours, when removing the switchgear chillers from service.

E. Safety Significance Evaluation

A probabilistic risk analysis has shown that the increase in risk of ANO-1 operation with one emergency switchgear room chiller out of service beyond the most limiting TS 8-hour completion time and within the window of any maintenance or failures of Emergency Switchgear Chillers is insignificant and considered acceptable. Additionally, considering the fact that compensatory measures were implemented during the time that the subject TS action statements were exceeded, the significance of this event is considered to be minimal.

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F. Basis For Reportability

This event is reported as a condition prohibited by TS pursuant to 10 CFR 50.73(a)(2)(i)(B).

G. Additional Information

10CFR 50.73(b)(5) states that this report shall contain reference to “any previous similar events at the same plant that are known to the licensee.” NUREG-1022 reporting guidance states that term "previous occurrences" should include previous events or conditions that involved the same underlying concern or reason as this event, such as the same root cause, failure, or sequence of events.

A review of the ANO corrective action program and Licensee Event Reports for the previous three years revealed one event where the underlying cause could be considered similar to this subject event. In April 2011, Licensee Event Report 50-313/2011-001-00 for ANO-1 was submitted to report a Condition Prohibited by TS pursuant to 10 CFR 50.73(a)(2)(i)(B). Specifically, the cause of the event was a misapplication of industry guidance that resulted in the use of non-safety related room coolers and additional compensatory measures as an acceptable alternative to satisfy TS requirements during switchgear room chiller maintenance or failure.

Energy Industry Identification System (EIS) codes and component codes are identified in the text of this report as [XX].