



Nebraska Public Power District

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NLS2013007
January 4, 2013

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Subject: Licensee Event Report No. 2012-006-00
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Dear Sir or Madam:

The purpose of this correspondence is to forward Licensee Event Report 2012-006-00.

There are no new commitments contained in this letter.

Sincerely,

Brian J. O'Grady
Vice President Nuclear-
Chief Nuclear Officer

/jo

Attachment: Licensee Event Report 2012-006-00

cc: Regional Administrator w/attachment USNRC - Region IV	NPG Distribution w/attachment
Cooper Project Manager w/attachment USNRC - NRR Project Directorate IV-1	INPO Records Center w/attachment via ICES entry
Senior Resident Inspector w/attachment USNRC - CNS	SORC Chairman w/attachment
SRAB Administrator w/attachment	CNS Records w/attachment

JE22
NRK

LICENSEE EVENT REPORT (LER)(See reverse for required number of
digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 80 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Service Branch (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 NEQB-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

Cooper Nuclear Station

2. DOCKET NUMBER

05000298

3. PAGE

1 of 4

4. TITLE

Missing Vent Plug Results in Technical Specifications Prohibited Condition

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																																				
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9. OPERATING MODE			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check all that apply)																																											
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10. POWER LEVEL																																														
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12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME

David W. Van Der Kamp, Licensing Manager

TELEPHONE NUMBER (Include Area Code)

(402) 825-2904

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
				YES					

14. SUPPLEMENTAL REPORT EXPECTED☐ YES (If yes, complete EXPECTED SUBMISSION DATE) ☒ NO**15. EXPECTED SUBMISSION DATE**

MONTH DAY YEAR

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

On November 7, 2012, Cooper Nuclear Station (CNS) personnel discovered that a plug was missing from the top of the Z sump vent connection. The control room and maintenance personnel were notified and the plug was re-installed. Investigation revealed that the plug was removed to obtain an air sample. The work orders and procedure directing work did not state how to obtain the air sample. There was no written documentation indicating that the plug had been removed. At the end of the work activity, the hose was pulled out of an opening in the Foreign Material Exclusion boundary tent, the pipe that the hose was placed in was not visible, and the plug did not get re-installed.

The root cause was written instructions requiring the vent cap be replaced to ensure secondary containment integrity when the air sampling was complete and the Z sump was returned to service, did not exist.

To prevent recurrence of this event, CNS will modify the procedure and preventive maintenance work items associated with the Z sump so that both note that if the pipe plug is removed for sampling air quality in the Z sump or for some other activity, that the plug must be securely replaced each time the task is complete to preserve secondary containment integrity.

(10-2010)

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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Cooper Nuclear Station	05000298	YEAR	SEQUENTIAL NUMBER	REV NO.	2 of 4
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17. NARRATIVE**PLANT STATUS**

Cooper Nuclear Station (CNS) was in Mode 5, Refueling, 0 percent power, at the time of the event.

BACKGROUND

Secondary containment serves as a barrier to confine and monitor potential releases during fuel handling operations and is a system that limits the release of radioactive materials to the environment and consists of four subsystems. Two of these subsystems are the Standby Gas Treatment (SGT) [EIS:BH] System and the Elevated Release Point (ERP).

The function of the SGT System is to ensure that radioactive materials that leak from the primary containment [EIS:NH] into the secondary containment following a Design Basis Accident and secondary containment isolation are filtered and adsorbed prior to exhausting to the environment.

Upon auto-initiation, the SGT System draws air from the Reactor Building [EIS:NG], processes the air, and discharges it to the ERP. As this air flows through various piping, the moisture contained with the air condenses. This condensed water is drained to the Z sump, which ensures that in-flows from condensation and other sources will not impede the SGT System flow to the ERP. The Z sump directly communicates to the ERP. A breach of airspace to the Z sump represents a bypass to the ERP.

EVENT DESCRIPTION

On October 27, 2012, work commenced to replace the Z sump pump and motor assembly. The Z sump boundary is considered a confined space and requires an air sample be taken. When workers arrived at the work site, they found that the manway cover was still in place and an air sample had not been taken. Neither the work orders nor procedure directing the work states how air in the Z sump boundary is to be sampled. The air can be sampled and checked by removing the manway cover, or the air can be sampled and checked by removing the plug from the Z sump boundary elbow. By taking the air sample from the pipe, the manway cover can remain in place while obtaining the air sample. As such, the plug from the Z sump boundary elbow was removed and a chemistry technician placed the tubing down the pipe to obtain the air sample. The manway cover was then removed, per the work order, and work began to replace the pump and motor assembly.

This sump area is also considered a Foreign Material Exclusion (FME) zone. As such, a tent had been erected to support the work activity. The air sample hose was installed through the wall of the FME boundary tent.

Work activities continued on the pump and motor assembly on both day shift and night shift, concluding on November 1, 2012. During this time, multiple individuals worked on the Z sump; however the individual that removed the plug to obtain the air sample only worked on the project initially.

(10-2010)

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17. NARRATIVE

At the completion of the activity, workers pulled the air monitor hose from an opening in the FME boundary tent. The pipe that the hose was inserted in was not visible due to the FME boundary tent. The work orders governing this activity contained information that the Z sump boundary impacts secondary containment and included steps to ensure that the manway cover was replaced and would not leak; however the plug is not specifically stated as being part of secondary containment nor was a statement stating such included as a compensatory action. The focus of the instruction was on the manway cover. Because of vague guidance in the work instructions on air sampling, and no annotations of the pipe being used for air sampling, the individuals performing the work were not aware that the plug had been removed.

On November 7, 2012, during a walk down of the work area, a system engineer discovered that the 2-inch plug was missing from the top of the Z sump vent connection. The "B" train off-gas dilution fan was running at the time and air was coming out of the vent connection. The control room was notified of the condition and verified when Operations with a Potential to Drain the Reactor Vessel (OPDRVs) were performed during the work activity up to the time that the plug was discovered missing. A total time of 76 hours and 47 minutes was identified. Maintenance re-installed the plug in the Z sump vent. A leak check was performed to insure that the vent was plugged air tight. No leaks were identified.

BASIS FOR REPORT

This event is being reported as an operation or condition prohibited by Technical Specifications per 10 CFR 50.73(a)(2)(i)(B), because secondary containment was required to be operable during OPDRVs.

SAFETY SIGNIFICANCE

The safety significance of this condition was low due to maintaining defense in depth against the release of fission product inventory during OPDRV activities (e.g., water inventory was maintained high with the reactor cavity flooded and fuel pool gates removed, and at least one safety related pump was capable of receiving power from an operable Emergency Diesel Generator and was available to provide makeup). Thus, there was no significant potential impact with respect to industrial or nuclear safety, and the potential impact with respect to radiological safety significance is low.

CAUSE

CNS determined that the written instructions requiring that the vent cap was replaced to ensure secondary containment integrity when the air sampling was complete and the Z sump was returned to service, did not exist.

(10-2010)

**LICENSEE EVENT REPORT (LER)
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17. NARRATIVE**CORRECTIVE ACTION**

To prevent recurrence of this event, CNS will modify the system leakage procedure so that with respect to the Z sump, the procedure notes that if the plug is removed for sampling air quality in the Z sump or for some other activity, that the plug must be securely replaced each time the task is completed to preserve secondary containment integrity. Additionally, all Z sump preventive maintenance work items that involve air sampling or removal of the vent plug will be modified to contain a step that ensures that the Z sump vent plug is replaced as part of re-establishing secondary containment integrity.

PREVIOUS EVENTS

There have been no events reported in the last 3 years related to the Z sump.

NLS2013007
January 4, 2013

U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555-0001

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There are no new commitments contained in this letter.

Sincerely,

Brian J. O'Grady
Vice President Nuclear-
Chief Nuclear Officer

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