Nebraska Public Power District
Nebraska's Energy Leader

NLS990076
July 29, 1999

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

Gentlemen:

Subject: Special Report Pursuant to Offsite Dose Assessment Manual Specification DLCO 3.2.4.B.1, Offgas Treatment System
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

The subject Special Report is forwarded as an attachment to this letter. This Special Report is required per Cooper Nuclear Station (CNS) Offsite Dose Assessment Manual Specification DLCO 3.2.4.B.1, when the Offgas Treatment System is required to be in service, and gaseous releases are not discharged through at least one train of the Offgas Treatment System charcoal absorbers for greater than 7 days.

Sincerely,

SBMalone for MF Peckham

M. F. Peckham
Plant Manager

/rlb

Attachment

cc: Regional Administrator w/attachment
USNRC - Region IV

Senior Project Manager w/attachment
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/attachment
USNRC

NPG Distribution w/o attachment

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SPECIAL REPORT PURSUANT TO OFFSITE DOSE ASSESSMENT MANUAL SPECIFICATION DLCO 3.2.4.B.1

1.0 INTRODUCTION

Cooper Nuclear Station (CNS) Offsite Dose Assessment Manual (ODAM) Specification D 3.2.4.B.1 requires submittal of a Special Report within 31 days following the end of the quarter in which the Offgas Treatment System is required to be in service, and gaseous releases are not discharged through at least one train of the Offgas Treatment System charcoal absorbers for greater than 7 days. This report identifies the basis for the charcoal absorbers being out of service and describes the corrective actions taken to restore the charcoal absorbers back in to service.

2.0 DISCUSSION

On April 6, 1999, at approximately 0300, the Offgas Treatment System and associated charcoal absorbers were removed from service, and ODAM DLCO 3.2.4.A entered, to support scheduled maintenance on the High Pressure Coolant Injection System (HPCI). DLCO 3.2.4.A requires that the Offgas Treatment System charcoal absorbers be returned to service within 7 days for gaseous releases requiring treatment by the Offgas Treatment System.

Following removal of the Offgas Treatment System charcoal beds from service it was determined, through an unrelated work activity, that four of eight Reactor Protection System (RPS) relays were not being response time tested per CNS Technical Specification requirements (CNS LER 1999-002-00). Immediate actions to test the RPS relays and restoration of the HPCI system to an operable status were considered high priority activities which caused a delay in returning the Offgas Treatment System to service. Additionally, on the morning of April 8, 1999, CNS was notified by the National Weather Service that a tornado watch was in effect for southeast Nebraska until 1700. The CNS procedure for operation during a tornado watch was entered during this period.

Startup of the Offgas Treatment System began at about 1711 on April 8, 1999, and the charcoal absorbers were returned to service at approximately 1955 on April 8, 1999. The Control Room staff could have exited DLCO 3.2.4.A at this point, but decided to remain in DLCO 3.2.4.A in order to support the scheduled transfer of the 'B' RPS bus to its normal power supply. Transfer of the 'B' RPS bus to its normal power supply requires the Offgas Treatment System to be removed from service. The Offgas Treatment System and charcoal absorbers were removed from service at about 0100, April 9, 1999. It was later determined that delays encountered during this shutdown of the Offgas Treatment System resulted in excess moisture accumulation in several Offgas Treatment System components.

Following transfer of the 'B' RPS bus to its normal power supply startup of the Offgas Treatment System commenced. During startup it was noted that the Offgas Treatment System Hydrogen Analyzers were reading upscale, indicative of saturated Offgas Treatment System dryer beds. A 48 hour purge of the dryer beds was conducted beginning at approximately 0930, April 9, 1999. The dryer bed heaters

were not energized during this purge as required by procedure, and the dryer beds accumulated moisture during the purge, rather than drying out during the purge.

Offgas Treatment System startup resumed upon completion of the 48 hour purge of the offgas dryer beds. The operations staff encountered difficulties in establishing proper offgas flow through the dryer beds and at about 1320 on April 11, 1999, an "Offgas Rupture Disc Steam Rupture Disc, Preheater Disc Burst" alarm was received. Upon confirmation of the alarm, the Control Room staff secured the Offgas Treatment System per CNS Alarm Procedure requirements. It was determined that moisture accumulation in the improperly purged dryer beds resulted in a pressure perturbation upstream of the dryer beds, causing the Offgas Treatment System preheater rupture disc to fail. The rupture disc was replaced, the dryer beds properly purged using the dryer bed heaters, and startup of the Offgas Treatment System recommenced.

At approximately 2323 on April 11, 1999, the Offgas Treatment System Hydrogen Analyzers were reading upscale and could not be calibrated. The Offgas Treatment System startup was placed on hold while the cause of the upscale readings was evaluated. It was determined that moisture accumulation from the events discussed earlier in this report resulted in an excessive moisture buildup in the Hydrogen Analyzer sample elements, causing the upscale readings. Once the cause of the upscale readings was determined the Hydrogen Analyzer 'A' sample element was repaired and Offgas Treatment System startup resumed. Hydrogen Analyzer 'A' was calibrated and declared operable at 1554 on April 15, 1999. The Offgas Treatment System charcoal absorbers were placed in service and DLCO 3.2.4.A exited at 1704, April 15, 1999. The documented completion time required to formally exit DLCO 3.2.4.A was slightly greater than 9 days, 14 hours.

3.0 CAUSE

DLCO 3.2.4.A could have been formally exited upon restoration of the Offgas Treatment System charcoal absorbers to service at approximately 1955, April 8, 1999, well within the specified completion time of DLCO 3.2.4.A. The CNS Control Room staff chose to administratively remain in the DLCO upon determining that work scheduled for the following day would require the Offgas Treatment System to be removed from service and reentry into DLCO 3.2.4.A. The Control Room staff did not, and could not have, anticipated all of the equipment problems associated with the Offgas Treatment System that were encountered in the subsequent days. Thus, the decision to defer exiting from DLCO 3.2.4.A, even though the Required Action of DLCO 3.2.4.A had been met for at least 5 hours, ultimately led to the Required Action and associated Completion Time of DLCO 3.2.4.A not being met.

4.0 CORRECTIVE ACTION

An evaluation of the offsite effluent release dose effects was performed to ensure that CNS remained in compliance with the effluent release dose limits established in the CNS Offsite Dose Assessment Manual.

The Offgas Treatment System charcoal absorbers were placed in service on April 15, 1999.

5.0 CONCLUSION

Based on the work schedule information available to the Control Room staff a decision was made not to exit DLCO 3.2.4.A, even though the Required Action of this specification had been met. Had the Control Room staff exited DLCO 3.2.4.A for the 5 hour period in which the charcoal absorbers were in service a special report would not have been required. Thus, no further corrective action, other than those actions listed in the previous section is planned.

Correspondence No: NLS990076

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
None	N/A