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NLS2012041
May 7, 2012

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

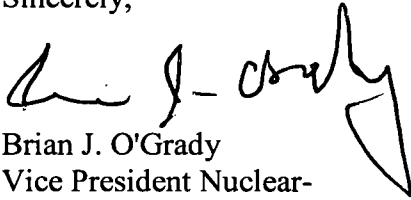
Subject: Licensee Event Report No. 2012-001-00
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Dear Sir or Madam:

The purpose of this correspondence is to forward Licensee Event Report 2012-001-00.

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 2012-001-00

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
Senior Resident Inspector w/attachment USNRC - CNS	SORC Chairman w/attachment
SRAB Administrator w/attachment	CNS Records w/attachment

LE22
NRR

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 NE0B-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 3

4. TITLE

Prohibited Condition Due To Fuse Size of Battery Charger

5. EVENT DATE

MONTH	DAY	YEAR
03	07	2012

6. LER NUMBER

YEAR	SEQUENTIAL NUMBER	REV NO.
2012	- 001	- 00

7. REPORT DATE

MONTH	DAY	YEAR
05	07	2012

8. OTHER FACILITIES INVOLVED

FACILITY NAME

DOCKET NUMBER

05000

FACILITY NAME

DOCKET NUMBER

05000

9. OPERATING MODE

1

10. POWER LEVEL

100

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) |
| <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

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
				N					

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 March 7, 2012, Cooper Nuclear Station discovered that the fuse ratings associated with the "C" battery charger disconnect switches may prevent the "C" battery chargers from fulfilling an Updated Safety Analysis Report and Technical Specification Bases function.

The 125 volt direct current (VDC) and 250 VDC "C" battery chargers can be used as a spare to either "A" battery charger or "B" battery charger. The "A" and "B" battery charger fuses and fuse disconnects are sized at 300 amperes, while the "C" battery charger fuses and fuse disconnects are sized at 200 amperes. Operations declared the "C" battery chargers inoperable.

The root cause was determined to be the design preparation, review, and approval process when the original design documents were prepared for installation of "C" battery chargers was not sufficiently rigorous to detect the fuse sizing error. To prevent recurrence, design evaluations and any necessary design changes to the size of the fuses in the "C" battery chargers will be implemented.

(10-2010)

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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Cooper Nuclear Station	05000298	YEAR	SEQUENTIAL NUMBER	REV NO.	2 of 3
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17. NARRATIVE**PLANT STATUS**

Cooper Nuclear Station (CNS) was in Mode 1, Power Operation, at 100 percent power at the time the condition was discovered on March 7, 2012.

BACKGROUND

The direct current (DC) electrical power system [EIS:EI] provides the alternating current (AC) emergency power system [EIS:EK] with control power. It also provides both motive and control power to selected safety related equipment. There is an additional 125 Volt (V) battery charger [EIS:BYC] and an additional 250 V battery charger which can be used as backups to supply either division if the normal battery charger is lost. The backup chargers can be supplied from either division to maintain proper divisional separation. Each battery [EIS:BTRY] has adequate storage capacity to carry the required load continuously for approximately 4 hours. Each station service battery charger has sufficient capacity to restore the battery from the design minimum charge to its fully charged state within 24 hours while supplying normal steady state loads. The DC electrical power system provides normal and emergency DC electrical power for the Diesel Generators (EIS:DG), emergency auxiliaries, and control and switching.

As stated in the Updated Safety Analysis Report (USAR) for CNS, each battery charger shall have adequate capacity to restore its battery to full charge from a totally discharged condition while carrying the normal station steady state DC load. The 125/250 V batteries shall provide power for maintaining the plant in a safe hot shutdown condition in the event Control Room operation is prevented by fire and the Alternate Shutdown System is used. Once the DG is on-line, it will power battery chargers in order to maintain station batteries in a fully charged state.

Battery charger capability requirements are based on the design capacity of the chargers. The battery charger supply is required to be based on the largest combined demands of the various steady state loads and the charging capacity to restore the battery from the design minimum charged state to the fully charged state, irrespective of the status of the unit during these demand occurrences. The minimum required amperes and duration ensures that these requirements can be satisfied.

EVENT DESCRIPTION

On March 7, 2012, CNS discovered that the fuse ratings associated with the "C" battery charger disconnect switches may prevent the "C" battery chargers from fulfilling the USAR and Technical Specification (TS) Bases function. The fuses and fuse disconnects for "A" and "B" battery chargers are sized at 300 amperes, while the fuses and fuse disconnects for the "C" battery chargers are sized at 200 amperes. Subsequently, Operations declared the "C" battery chargers inoperable on March 8, 2012.

The "C" battery chargers were proposed to be added to the plant in 1987. The purpose of this was to increase the reliability of the DC system for both the 125 and 250 VDC systems. The 125 VDC "C" battery charger was installed in 1988 and was to be used as a spare to either "A" battery charger or "B" battery charger. The 250 VDC "C" battery charger was approved and

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17. NARRATIVE

installed in 1989. A USAR change was submitted and approved to update the 125 VDC and 250 VDC battery and charger specifications. Both design changes for the installation of the "C" battery chargers specified that the fuses be 200 amperes.

After the "C" battery chargers were installed, the "A" and "B" battery chargers had a design modification to change their existing breakers to fuses. The "C" battery chargers already had fuses; as such, the sizing for their fuses was not reviewed at that time.

BASIS FOR REPORT

CNS determined that this condition was reportable on March 26, 2012, as a past operation or a condition prohibited by TS per 10 CFR 50.73(a)(2)(i)(B). Although the "C" battery chargers were not in service at the time of discovery of this condition, they had been within the past 3 years. When in service substituting for an inoperable divisional battery charger, "C" battery chargers are relied on to satisfy TS Limiting Condition of Operation 3.8.4. The 250 VDC "C" battery charger was not in service longer than the TS required actions. However, the 125 VDC "C" battery charger was in service longer than the TS required actions allowed, which was a condition prohibited by TS.

SAFETY SIGNIFICANCE

The safety significance associated with "C" battery chargers' fuse protection non-conformance is low based on the "C" battery chargers remained capable of supplying required DC loads for worst case Anticipated Operational Transients and Accident Loadings; and the time when the "C" battery chargers have been utilized have averaged less than 1.5 percent per year.

CAUSE

CNS has determined the root cause of this condition to be the design preparation, review and approval process when the original design documents were prepared was not sufficiently rigorous to detect the fuse sizing error for the "C" battery chargers. This was a latent design error.

CORRECTIVE ACTION

To prevent recurrence of this condition, design evaluations and any necessary design changes to the size of the fuses in the "C" battery chargers needed to meet USAR and TS requirements will be implemented.

PREVIOUS EVENTS

A condition report was written in 2005 questioning why the "C" battery chargers have smaller fuses than the "A" and "B" battery chargers. The evaluation determined there is adequate margin in the fuse time-current characteristics relative to demand during a design bases Loss of Coolant Accident event. This evaluation did not assess whether the 200 amp fuses met the operational requirements specified in the USAR and the TS Bases.