



Nebraska Public Power District

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21.21(d)(3)(ii)

NLS2024019
March 27, 2024

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

Subject: 10CFR Part 21 Report Regarding Service Water Booster Pump Bearing Housing Covers
Cooper Nuclear Station, Docket No. 50-298, Renewed License No. DPR-46

Dear Sir or Madam:

The purpose of this letter is to provide the required written notification of a defect of a basic component in accordance with 10 CFR 21.21(d)(3)(ii). The attached notification pertains to the failure of a Flowserve pump bearing housing cover used in a safety-related application at Cooper Nuclear Station.

This letter contains no regulatory commitments.

If you have any questions or require additional information, please contact Linda Dewhirst, Regulatory Affairs and Compliance Manager, at (402) 825-5416.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 3/27/24
Date

Sincerely,

Khalil Dia
Site Vice President

/bs

Attachment: Part 21 Notification of Flowserve Pump Bearing Housing Covers

cc: Regional Administrator w/attachment
USNRC - Region IV

Cooper Project Manager w/attachment
USNRC - NRR Plant Licensing Branch IV

Senior Resident Inspector w/attachment
USNRC - CNS

NPG Distribution w/attachment

CNS Records w/attachment

ATTACHMENT

PART 21 NOTIFICATION OF FLOWSERVE PUMP BEARING HOUSING COVERS

1. Name and address of the individual or individuals informing the Commission.

Khalil Dia
Nebraska Public Power District
Site Vice President, Cooper Nuclear Station
P.O. Box 98
Brownville, NE 68321

2. Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Cooper Nuclear Station (CNS)
Renewed Facility Operating License DPR-46
Docket No. 50-298

Basic Component: Bearing Housing Covers; Flowserve part numbers 7011988 and 10365675

3. Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Flowserve Corporation
2300 E. Vernon Avenue
Vernon, CA 90058

4. Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

The labyrinth seal oil drain paths of these bearing housing covers were manufactured by Flowserve to fabrication drawings which were in error. The as-machined configuration did not allow the outer groove to drain and the outer land of the seal was cut at a slight angle, when it should not have been cut at an angle. This defect can cause some oil leakage.

The bearing housing covers were only approved for use with the Service Water Booster Pumps. Since operation of the pumps for the required mission time could have been impacted by the oil leakage because of the defect, the condition is considered a Significant Safety Hazard.

5. The date on which the information of such defect or failure to comply was obtained.

September 14th, 2022.

The delay of this notification was due to the original part 21 review was found to be in error. That condition has been entered into Cooper's corrective action process.

6. In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

The fabrication drawing errors were introduced in 2012 just prior to the manufacture of the pumps procured under Contract 11-040 "Service Water Booster Pumps" for CNS. Per Flowserve, the parts in question are unique to the four pumps procured by CNS.

7. The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

Service Water Booster Pumps A, B, and D have been refurbished and the affected covers have been replaced or repaired. Service Water Booster Pump C is scheduled to have the affected covers replaced or repaired in 2024. Also, the approved spare bearing housing covers at CNS are verified to not have this defect.

Flowserve will rework the affected bearing housing covers. CNS will validate the bearing housing covers are machined correctly prior to installation per the applicable maintenance procedure.

8. Any advice related to the defect or failure to comply about the facility, activity or basic component that has been, is being, or will be given to purchasers or licensees.

None

9. In the case of an early site permit, the entities to whom an early site permit was transferred.

Not Applicable