



## NUCLEAR PRODUCTS OPERATIONS Vernon Nuclear Pump Operations, Vernon, CA 90058

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## FORMAL EVALUATION OF DEVIATIONS REPORTED - NOTIFICATION OF DEFECT

To: Document Control Desk, Nuclear Regulatory Commission

From: David P. Gobbi, Quality Assurance Manager, Flowserve Nuclear Products Operations

Date of Discovery by Owner / Customer: 11/19/2018

Date of Notification to Flowserve: 2/27/2019

Internal Reference: Flowserve Internal Corrective Action: 387337

Subject: Notification of Defect

Reference: Pressure Breakdown Sleeve, Part Number 09125139 installed in in Charging Pump Model - 2" RLIJ

Purpose: To provide the Commission with a Notification of a Defect as Pursuant to 10 CFR 21.21

<u>Description of Reported Condition</u>: A failure of the subject Charging Pump was reported by NEK. NEK issued a shut-down and continued to disassemble the unit. NEK observed a piece of the pressure reducing sleeve had broken loose during operation.

<u>Flowserve Actions</u>: This is to advise that a Formal Evaluation of a failed part within a Charging Pump supplied to NEK during 2015 by Flowserve Vernon has been conducted on April 22, 2019. This Formal Evaluation was conducted to formally confirm that the failed part created a safety hazard in accordance with 10CFR21.21. Further the Formal Evaluation reported on the root cause and the extent of condition.

## Results of the Formal Evaluation Confirmed:

- A. That a safety hazard was created due to a part failure during operation;
- B. That the implemented manufacturing process was the root cause of the failed part;
- C. That the Extent of Condition was isolated to the subject part in the subject Charging Pump assembly;
- D. That this is an isolated incident as there were no other parts of the same part number or of similar manufacturing requirements previously supplied or in-process:
- E. That the required preventive action will prevent recurrence on this part and on other parts with similar manufacturing requirements.

I may be reached at 980-722-6770 or by email, at dgobbi@flowserve.com.

Cc: Dan Baehner, Plant Manager / Director, Nuclear Product Operations Kenan Alpan, Director / Plant Manager, Vernon Operations Ed Villalva, Facility Quality Manager, Vernon NPO Mike Eftychiou, Manager, NPO Engineering James Cook, Director, Nuclear Sales

Sincerely.

David P. Gobbi,

Quality Assurance Manager Nuclear Products Operations Flowserve Pump Division