



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO NRC BULLETIN 90-01, SUPPLEMENT 1
LOSS OF FILL-OIL IN TRANSMITTERS MANUFACTURED BY ROSEMOUNT
NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-282 AND 50-306

1.0 INTRODUCTION

NRC Bulletin 90-01 Supplement 1, was issued by the NRC on December 22, 1992, to inform addressees of activities taken by the NRC staff and the industry in evaluating Rosemount Transmitters and to request licensees to take actions to resolve this issue. The supplement requested utilities to review the information for applicability to their facilities, perform testing on the transmitter commensurate with its importance to safety and demonstrated failure rate, and modify as appropriate, their actions and enhanced surveillance programs. The supplement also requested that each licensee provide a response that included a statement as to whether or not the licensee will take the actions requested, and a list of specific actions that the licensee would complete, and the schedule for completing the actions.

Additionally, when the specific actions committed to in the licensee's response were completed, the licensee was required to provide a statement confirming said completion. If the licensee did not plan to comply with all of the Requested Actions as delineated in the Supplement, a statement was required identifying those Requested Actions not taken, as well as an evaluation which provided the bases for Requested Actions not taken.

2.0 DISCUSSION AND EVALUATION

The licensee for the Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2, Northern States Power Company responded to NRC Bulletin 90-01, Supplement 1, in submittals dated March 1, 1993, January 31, 1994, and May 13, 1994. The Requested Actions delineated in Supplement 1 asked that licensees review plant records and identify any Rosemount Model 1153 Series B, Model 1153 Series D, and Model 1154 transmitters manufactured before July 11, 1989, that are used or may be used in the future in either safety-related systems or systems installed in accordance with 10 CFR 50.62 (the ATWS rule).

Additionally, the licensee was to commit to a specified enhanced surveillance monitoring frequency. Furthermore, the licensee was requested to evaluate their enhanced surveillance monitoring program.

The submittal dated May 13, 1994, indicated that the three transmitters which the licensee committed to refurbishing were returned to the manufacturer in 1993.

Supplement 1 to NRC Bulletin 90-01, in discussing the minimal requirements for enhanced surveillance monitoring programs, indicates that licensees can determine the trending of zero drift and span drift from the calibration data. The licensee's response indicated that they trend cumulative zero and span drift. Additionally, the licensee indicated that process noise was used as an additional indicator, but never as the sole means of identifying possible fill-oil loss. Rosemount Technical Bulletin #4 indicates that if trip points are near the normal operating point of the transmitter, noise analysis can indicate that a transmitter is failing and perhaps even provide some advance knowledge of an incipient failure. However, it was also indicated that noise data is difficult to analyze and interpret. The licensee indicated that the trending of the calibration data is the method relied upon to determine fill oil-loss, and this is acceptable.

A detailed evaluation of the licensee's response is documented in the enclosed contractor's report.

3.0 CONCLUSION

We have reviewed the licensee's response to NRC Bulletin 90-01, Supplement 1, and conclude that the licensee conforms to the Requested Actions of NRC Bulletin 90-01 Supplement 1, and have completed the reporting requirements. Compliance and applicable Commission requirements may be the subject of NRC audits or inspections in the future.

Attachment:
Technical Evaluation Report

Principal Contributor: D. Spaulding

Date: July 20, 1994