

From: [Shaffer, Christopher](#)
To: [Hoc, HOO X](#)
Cc: [Sawyer, Kyle](#)
Subject: [External_Sender] Interim Report Notification - Limitorque SMB-00 Torque Switch Assemblies
Date: Thursday, January 2, 2025 1:08:05 PM
Attachments: [image001.png](#)
[Interim Notification - Limitorque SMB-00 Torque Switch Assemblies.pdf](#)

Please see attached interim report. I will follow up with a phone call shortly.

Chris Shaffer

Global Quality Manager – ACV

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January 02, 2025

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Interim Report Notification Pursuant to 10 CFR 21.21(a)2 Regarding
Limitorque SMB-00 Torque Switch Assemblies

Flowserve hereby submits the enclosed written notification of the identification of a defect in accordance with the requirements of 10CFR 21.21(d)(3)(ii). This interim report pertains to SMB-00 torque switch assemblies supplied for use in safety related applications. The affected switches were supplied as replacement parts under Limitorque part # 11501-010.

The extent of condition investigation of the issue is ongoing and will not be completed within the 60-day period. The expected date of completion is on or before 02/28/2025.

Should you have any questions regarding this submittal, please contact Chris Shaffer, Global Quality Manager at (434) 258-5074.

Regards,

A handwritten signature in black ink, appearing to be "Chris Shaffer", written over a horizontal line.

Chris Shaffer, Global Quality Assurance Manager – ACV for
Arie van Eyk, Director, Plant Manager
Flowserve US Inc.

Enclosures:

- 1) Interim Report Notification Information

Enclosure 1
Interim Report Notification Information

1. Reporting Individual

Chris Shaffer, Global Quality Manager – ACV for
Arie van Eyk, Director, Plant Manager
Flowserve US Inc.
5114 Woodall Road
Lynchburg VA 24502

2. Identification of Basic Components that Contains a Defect

The basic components that contain a defect are torque switch assemblies identified by Limitorque part # 11501-010 used exclusively in Limitorque actuator model number and size SMB/SB/SBD-00

3. Identification of the Supplier

The torque switch assemblies are manufactured and supplied by Flowserve US Inc.

4. Nature of Defect

Description of the Defect

During installation of a replacement torque switch into a SMB-00 actuator at Beaver Valley NPS, technicians reported that the roller subassembly which connects the torque switch to the actuator drive train was loose and was easily removed from the torque switch. The condition was identified on a quantity of two torque switches at Beaver Valley NPS.

Investigations by Flowserve indicate that the torque switch assemblies contain a manufacturing error resulting in the torque switch roller pin to be improperly secured in the tripper arm. This condition can potentially result in the roller subassembly becoming detached from the torque switch rendering the torque switch assembly non-functional. To date, there have been no occurrences of a loss of torque switch function reported to Flowserve on in-service SMB/SB/SBD-00 actuators attributable to this issue.

Safety Hazard Created by the Defect

The Limitorque SMB torque switch assembly is certified as a safety related component which is typically wired into the electrical control circuit of the actuator. For valve applications that are torque seated, the primary function of the torque switch is to interrupt control power to the motor control center at the end of valve travel when seating the valve. If the torque switch becomes non-functional, electric power to the motor may be maintained resulting in a motor stall event.

5. Date the Information was Obtained

Flowserve was informed of the issue found at Beaver Valley NPS on 11/12/2024. The affected torque switches were received for inspection on 12/13/2024.

6. Number and Location of the Basic Component Supplied

The investigation to date has identified a quantity of two nuclear certified torque switches supplied to Beaver Valley NPP. The components were originally supplied to Framatome Nuclear Parts Center on Flowserve order number 198483.006 which shipped 04/02/2023. The subject torque switches have been returned to Flowserve for evaluation.

7. Corrective Action Plan

Flowserve is continuing to investigate the extent of condition of this issue.

8. Advice Given to Purchasers or Licensees

No additional guidance to purchasers is being provided at this time.

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

Not applicable.