Hanna Cylinders
8901 102nd St.
Pleasant Prairie, WI 53158

COVER LETTER FOR 10 CFR PART 21 NOTIFICATION

21.21(d)(3)(ii)
Event# 57959

9/29/2025

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

Subject: Notification of Potential Part 21 Regarding Solenoid Valve Assemblies
Hanna Cylinders P/N: N606-00200-000

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 incorrectly assembled Solenoid Valve Assemblies (Hanna Part #N606-00200-000, TFT Part #27791650C003) supplied to Trillium Flow Technologies for nuclear applications. The defect involves the "bottom insert seal" not being fully seated into the "plunger" during assembly.

This letter contains no regulatory commitments.

If you have any questions or require additional information, please contact me at:
(847) 287-5954 or mkhan@hannacylinders.com.

Sincerely,

Mujtaba Khan,
Quality Manager
Hanna Cylinders

Attachment: Notification of Potential Part 21 Solenoid Valve Assemblies Defect

cc:

- Regional Administrator, *w/ attachment (USNRC - Region III)*
- Trillium Flow Technologies, *w/ attachment*
- Hanna Cylinders Quality Administrator, *w/ attachment (records)*

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NOTIFICATION OF POTENTIAL PART 21 SOLENOID VALVE ASSEMBLIES DEFECT

1. Name and Address of Individual Informing the Commission

Mujtaba Khan,
Quality Manager
Hanna Cylinders
8901 102nd St.
Pleasant Prairie, WI 53158, United States

2. Identification of Basic Components Which Contain a Defect

Component: Solenoid Valve Assembly
Hanna Cylinders Part Number: N606-00200-000
TFT Part Number: 27791650C003
Quantity: 40 units
Application: Components for nuclear actuators (supplied to Trillium Flow Technologies)

3. Identification of Firm Supplying the Basic Component

Manufacturer: Hanna Cylinders
Address: 8901 102nd St., Pleasant Prairie, WI 53158
Contact: Mujtaba Khan, Quality Manager

4. Nature of the Defect and Safety Hazard

Defect Description: The solenoid valve assemblies were incorrectly assembled. Specifically, the "bottom insert seal" was not fully seated into the "plunger" during the assembly process. This assembly error could potentially result in improper functioning of the solenoid valve.

Potential Safety Hazard: The defective solenoid valve could fail to perform its intended safety function in nuclear applications. This could potentially impact systems where these valves are installed, possibly affecting the capability to maintain safe shutdown conditions or mitigate accident conditions. The exact safety impact would depend on the specific application of each valve in the nuclear facility where it may be installed.

5. Date Information of Defect Was Obtained

The defect was identified on 9/19/2025 when Trillium Flow Technologies informed Hanna Cylinders that one of their customers was experiencing functionality issues with the solenoid valves during installation. Hanna Cylinders immediately initiated an investigation and confirmed the assembly defect.

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6. Number and Location of Affected Components

Total Quantity: 40 solenoid valve assemblies
Purchase Order: TFT PO# 2052752
Recipient: Trillium Flow Technologies (TFT)
29 Old Right Road
Ipswich, MA 01938, United States

Current Status:

- Hanna Cylinders has contacted TFT to recall all 40 solenoid valves Hanna delivered under PO# 2052752
- Hanna has requested that TFT immediately recall any valves they may have already delivered to their customers
- The exact location and installation status of individual components is currently being determined through the recall process

7. Corrective Actions Taken or Planned

- **Immediate Actions:**

1. Issued Corrective Action Report CAR# 2025-16 to address the issue
2. Conducted a meeting with all relevant Hanna employees to determine the root cause and develop an action plan
3. Issued a Quality Alert to relevant Hanna employees and posted a copy in the QC department on the shop floor
4. Initiated recall of all affected solenoid valves from TFT and their customers

- **Root Cause Determination:**

  The root cause was determined to be inadequate training and lack of detailed work instructions for the assembly of the solenoid valves.

- **Long-Term Corrective Actions:**

1. Developed a comprehensive work instruction for the assembly of solenoid valves (W.I. #N606-00200-000 Rev. 1, Dated 9/22/2025) which specifically addresses the assembly error and includes a checkbox/sign-off requirement
2. Trained all relevant Hanna personnel on the new work instruction
3. Implemented additional verification steps in the assembly process
4. Enhance quality control procedures for similar components

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8. Advice Given to Purchasers or Licensees

Hanna Cylinders has:

1. Notified Trillium Flow Technologies of the defect and its potential safety implications
2. Requested immediate recall of all affected solenoid valves
3. Advised TFT to notify their customers of the potential safety issue
4. Offered to provide replacement solenoid valves that have been properly assembled and inspected according to the new work instruction

9. Evaluation of Defect

Hanna Cylinders has evaluated this defect and determined that it meets the criteria for a reportable defect under 10 CFR Part 21. The defect could potentially create a safety hazard if the solenoid valve fails to perform its intended function in a nuclear application.

10. Additional Information

This report is submitted in accordance with 10 CFR Part 21.21(d)(3)(ii). Hanna Cylinders will maintain all records related to this defect for a minimum of five years as required by 10 CFR Part 21.51.

Hanna Cylinders is committed to nuclear safety and has taken immediate action to address this issue. We will cooperate fully with the NRC and provide any additional information requested.

Responsible Officer Certification:

I hereby certify that this report has been prepared to the best of my knowledge and belief and that the information contained herein is true and accurate.

Mujtaba Khan,
Quality Manager
Hanna Cylinders
Date: 9/29/2025