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FROM: Met. Edison Company Reading, Pa. 19603 ~~R.C. Arnold~~	DATE OF DOC 11-8-74	DATE REC'D 11-13-74	LTR X	TWX	RPT	OTHER
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CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXX			1	50-289

DESCRIPTION: Ltr adv of abnormal occurrence on 10-30-74 involving loss of fluid in hydraulic shock suppressor on a seismic Class I system.... Abnormal Occurrence (AO-50-289/74-20).....

ENCLOSURES:

Do Not Remove

ACKNOWLEDGED

PLANT NAME: Three Mile Island Unit I

FOR ACTION/INFORMATION

DHL 11-15-74

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Regulatory File Cy.

November 8, 1974
GQL 0462

Director
Directorate of Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Dear Sir:

Docket No. 50-289
Operating License DPR-50

In accordance with the Technical Specifications for our Three Mile Island Nuclear Station, Unit 1, we are reporting the following abnormal occurrence:

(1) Report Number: AO 50-289/74-20

(2a) Report Date: November 8, 1974

(2b) Occurrence Date: October 30, 1974

(3) Facility: Three Mile Island Nuclear Station, Unit 1

(4) Identification of Occurrence:

Title: Loss of Fluid in a Hydraulic Shock Suppressor on a Seismic Class I System

Type: An abnormal occurrence as defined by the Technical Specifications, paragraph 1.8d, in that the loss of fluid from a hydraulic shock suppressor threatened to cause an Engineered Safeguard feature or system to be incapable of performing its intended function.

(5) Conditions Prior to Occurrence: The reactor was at steady state power with major plant parameters as follows:

Power: Core: 20%
Elec.: 100 MW (Gross)

RC Flow: 190 x 10^6 lbs/hr

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11600

RC Pressure: 2250 psig

RC Temp.: 579°F

PRZR Level: 200 in

PRZR Temp.: 550°F

(6) Description of Occurrence:

While performing a check of the Pressurizer Relief Valve discharge lines, the engineer in charge noticed a puddle of hydraulic fluid on the floor. Further investigation showed that a shock suppressor (snubber) on the Pressurizer Electromatic Relief Valve discharge line had rotated out of position and was lying on an adjacent pipe, and that a connector in the line connecting the attached hydraulic fluid reservoir to the shock suppressor had broken when the reservoir struck an adjacent pipe. This, in turn, allowed the hydraulic fluid to drain from the reservoir.

(7) Designation of Apparent Cause of Occurrence:

It is believed that the loss of hydraulic fluid from the snubber was caused by improper installation of the snubber. Normal operational vibration, in the present case, is thought to have freed the lock nut joining the snubber to the structural steel which supports it. Had Loctite, or a similar substance, been used on the lock nut during installation of the snubber, the snubber would not have come free and would not have rotated out of position.

(8) Analysis of Occurrence:

The snubbers on the electromatic relief piping are installed for dynamic loading and the worst consequence of a failure involving such loading would be deformation of the piping. A careful examination of the discharge line from the Electromatic Relief Valve has shown the pipe to be dished-in at a point where it is in contact with a rigid support. The dished-in area has been examined both visually and with dye penetrant and the results were negative. It has been concluded from this that the loss of hydraulic fluid from the snubber in no way constituted a threat to either the health or safety of the public.

(9) Corrective Action:

Immediate actions were taken to replace the broken fitting, refill the reservoir with hydraulic fluid, reorient the snubber, tighten the lock nut, and it was ensured that Loctite is on order. In addition, the Architect Engineer has been directed to perform an evaluation of the deformation to further verify the integrity of the affected pipe; and no report will be submitted on the results of this investigation unless the results indicate possible adverse safety implications.

At a meeting held after the incident was reported, the Plant Operations Review Committee reviewed and gave its approval of these actions. As a long-term action they recommended to the Station Superintendent that the snubber seal replacement program be revised to include the use of Loctite on all snubber lock nuts. The Station Superintendent concurred with this recommendation and has taken appropriate steps to ensure its implementation.

(10) Failure Data:

a. Previous Failures:

See Abnormal Occurrence Report AO 50-289/74-14, dated August 28, 1974

b. Equipment Identification:

Brand: Grinnell

Cylinder Type: Miller

Valve Type: Grinnell

Size: 2.5 in

Stroke: 5 in

Sincerely,

R C Arnold

R. C. Arnold
Vice President

RCA/cas
File: 20.1.1/7.7.3.5.1
cc: J. P. O'Reilly

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