

# XOMOX

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Xomox Corporation 4444 Cooper Rd. Cincinnati, Ohio 45242 Phone 513 745-6000 Telex 21-4133 Fax 513-745-6972

May 3, 1993

Mr. Thomas Murley  
Director  
Office of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Murley:

Xomox is a manufacturer and supplier of valves and related equipment for a large number of varied industrial customers, including nuclear power facilities. New Hampshire Yankee - Seabrook Station notified Xomox in July of 1992 that three Tuflin plug valves were discovered with fractured bolts. We assisted with the investigation and quickly determined that the bolt material was in compliance with the original design specification for these valves. New Hampshire Yankee continued with their investigation and in November 1992 a report was prepared for them which identified the cause of bolt failure as intergranular stress corrosion cracking.

Dave Brewer from your office contacted Xomox in April 1993 and requested that we prepare a notification for distribution to other users of these products. New Hampshire Yankee was contacted and provided Xomox with a copy of their report. The report was reviewed and the attached notice prepared for distribution to our customers. New Hampshire Yankee communicated the incident on February 10, 1993 through the INPO Nuclear Network System operating experience report CE 5817.

Xomox itself is not in a position to evaluate the specific application conditions and circumstances of each of these valves and is, therefore, unable to determine whether or not any of these particular valves could create a "substantial safety hazard" 10CFR 21.3(d), (g) and (k).

Although the Commission has already been informed of this problem, Xomox nevertheless wishes again to inform the Commission of this potential for failure. We are also in the process of notifying our nuclear customers with similar products. For the convenience of the Commission, Xomox has utilized, substantially, the format set forth at 10 CFR 21.21.

1. Name and address of the individual informing the Commission:

Thomas F. Spock  
Director R & D/ Product Safety Officer  
Xomox Corporation  
4444 Cooper Road  
Cincinnati, Ohio 45242

9305130247 930503  
PDR ADOCK 05000443  
S PDR

Tuflin  
Plug Valves

Pliaxseal  
Butterfly Valves

Guide  
Control Valves

FIVE  
Ball Valves

Matryx  
Actuators

Tufswitch  
Limit Switches

JE19  
1/1  
Rec'd  
3/0/93  
5/1/93

2. Identification of the items supplied:

Xomox Tuflin sleeved plug valve models 066, 067, 0366, 0367, 036, 037, 0336, 0337, 046, 047, 056, 057, 166, 1366, 136, 1336, 027, 0327, 126, 1326, 1626 with SA/A 193 Grade B6 cover bolts.

3. Identification of the firm supplying the item:

Xomox Corporation  
4444 Cooper Road  
Cincinnati, Ohio 45242

4. Nature of the failure and potential safety hazard:

The failure mode is intergranular stress corrosion cracking of valve cover bolts. The potential safety hazard is that this condition could lead to fracture of the bolts and possible ejection of valve internals and leakage.

5. The action recommended being taken, the name of the individual or organization responsible for that action and the length of time that will be taken to complete that action:

Xomox plans no further action except to notify customers using the attached notice. Customers need to make their own evaluation to determine the appropriate action for their facility.

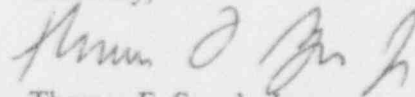
Mr. Thomas Spock is responsible for notifying customers of record. It is estimated that this notification will be completed within 2 weeks from the date of this letter.

6. Any advice related to the potential failure of the item:

Attached hereto is a copy of the notice that has been provided to the purchasers of the valves.

If any additional information is required or if Xomox can be of any further assistance to the Commission, please do not hesitate to contact me.

Sincerely,



Thomas F. Spock Jr.

Director of R&D/Product Safety Officer

cc: Dave Brewer, USNRC, Washington DC, 20555-0001  
Jamie Davidson, Xomox  
David J. Hunter-President, Xomox



Xomox Corporation 4444 Cooper Rd. Cincinnati, Ohio 45242 Phone 513 745-6000 Telex 21-4133 Fax 513-745-6972

April 28, 1993

**IMPORTANT SAFETY NOTICE**  
**PLEASE READ CAREFULLY**

**To:** Xomox customers of record for Tufline plug valves with SA/A 193 Grade B6 cover bolts in ASME Nuclear Class and Non-Nuclear Safety related ANSI B31.1 services.

**Subject:** Cover bolt fracture on Xomox Tufline Plug Valves at New Hampshire Yankee Seabrook Station. Xomox Tufline sleeved plug valve models 066, 067, 0366, 0367, 036, 037, 0336, 0337, 046, 047, 056, 057, 166, 1366, 136, 1336, 027, 0327, 126, 1326, 1626 with SA/A 193 Grade B6 cover bolts are the subject of this notice.

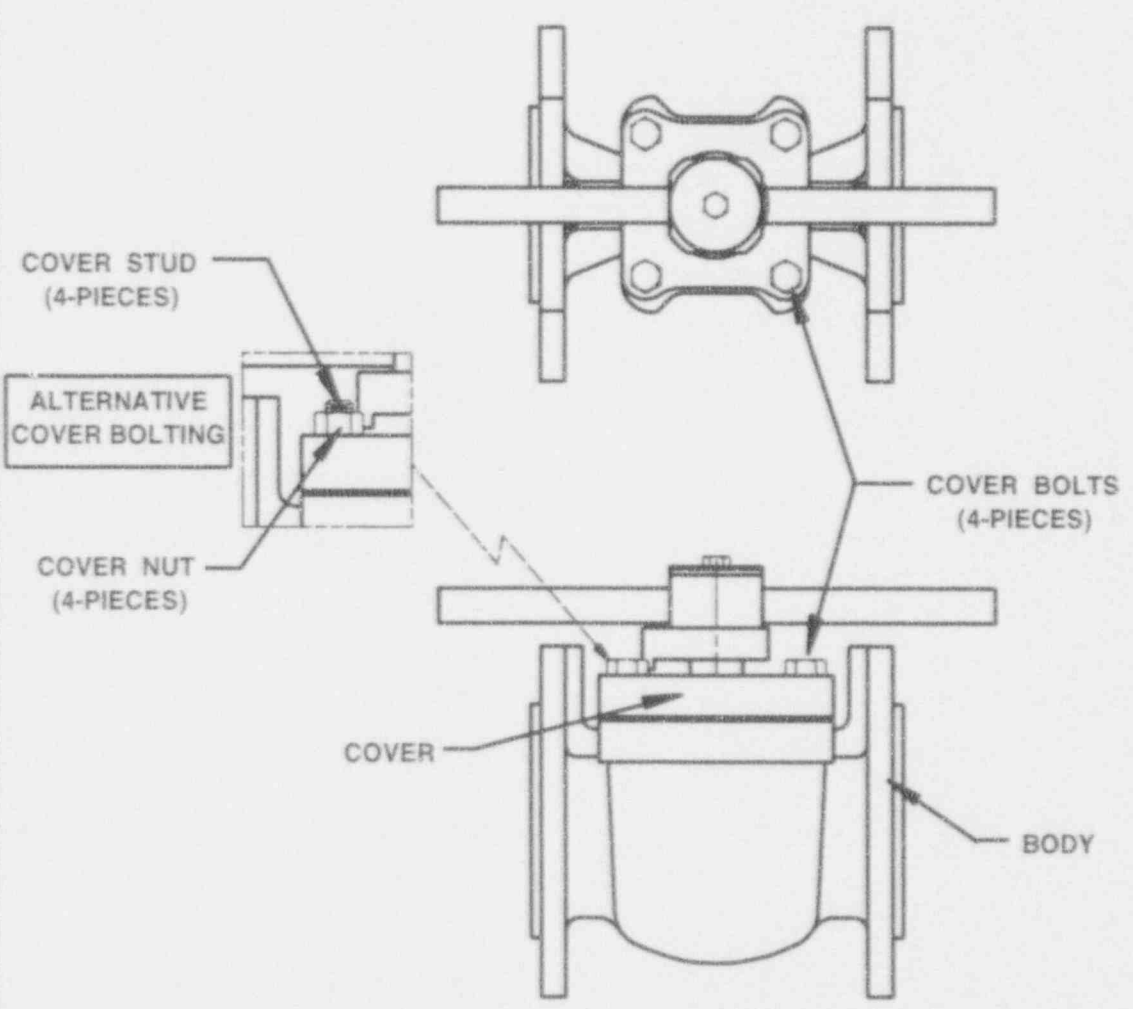
**Purpose:** Xomox is issuing this information notice to alert addressees to problems with SA/A 193 Grade B6 cover bolts on Xomox Tufline plug valves experienced at New Hampshire Yankee-Seabrook Station. It is expected that recipients will review this information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. *See attached diagram of valve for bolt location.*

**Problem:** In July of 1992 a Xomox Tufline plug valve, supplied in 1981 to New Hampshire Yankee-Seabrook Station, was discovered with 3 of the required 4 cover bolts fractured. Further inspection revealed 2 additional valves, also supplied in 1981, with 2 of the 4 bolts fractured. The cover bolt material, SA/A 193 Grade B6, was supplied in accordance with the design specification for these valves. The SA/A 193 material specification for Grade B6 does not call out maximum hardness and the bolts which fractured had hardness levels averaging 37 Rc. New Hampshire Yankee determined the cause of the fracture to be Intergranular Stress Corrosion Cracking (SCC). New Hampshire Yankee previously communicated this incident through the INPO Nuclear Network System operating experience report OE 5817.

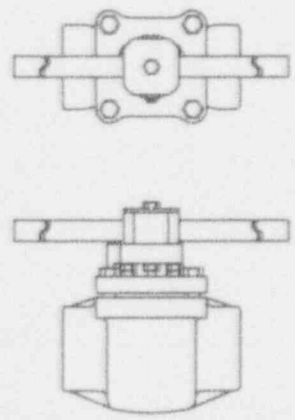
**Action:** New Hampshire Yankee-Seabrook replaced certain installed SA/A 193 Grade B6 cover bolts with SA 564 Type 630 condition H1150 material. Recipients of this notice should conduct their own study and reach their own conclusion regarding appropriate actions to avoid similar problems.

Inquiries or questions should be sent to the attention of Jamie Davidson - Xomox Nuclear Products Manager at the address above or phone (513) 745-6017 or Fax (513) 745-6093.

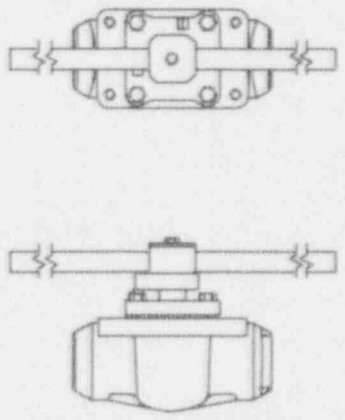
# TYPICAL XOMOX TUFLINE SLEEVE PLUG VALVE SHOWING LOCATION OF COVER BOLTS



## SCREWED END



## BUTT WELD END



## SOCKET WELD END

