

AUG 19 1987

Mr. John Hammond, Manager, Technical Services and Development
Loctite Corporation
705 North Mountain Road
Newington, Connecticut 06111

Gentlemen:

The Nuclear Regulatory Commission is in the process of preparing an information notice entitled "Information Concerning the Use of Anaerobic Adhesive/ Sealants."

A copy of the latest draft of this information notice is enclosed for your review and comment.

Comments, particularly those dealing with the facts presented in the information notice, received by September 4, 1987 will be considered in the final version.

Sincerely,

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Carl H. Berlinger, Chief
Generic Communications Branch
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Enclosure: Draft NRC Information
Notice No. 87-XX

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555

August XX, 1987

NRC INFORMATION NOTICE NO. 87-XX: INFORMATION CONCERNING THE USE OF
ANAEROBIC ADHESIVE/SEALANTS

Addressees:

All nuclear power reactor facilities holding an operating license (OL) or a construction permit (CP).

Purpose:

This information notice is provided to alert recipients to a potentially significant safety problem pertaining to the use of anaerobic adhesives and sealants. It is expected that recipients will review the information for applicability to their facilities and consider actions, if appropriate, to preclude a similar problem. However, suggestions contained in this notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

On July 1, 1987, Carolina Power and Light Company (CP&L) reported that following a reactor trip/turbine trip at Brunswick Steam Electric Plant, Unit 1, (Brunswick) one safety relief valve (SRV) failed to open when manually actuated for pressure control. The SRV is part of the automatic depressurization system (ADS) at that plant. Subsequent testing on July 3rd of other ADS valves resulted in a second valve failing to open on manual actuation. During post failure examination it was determined, that during maintenance, Loctite was used to help seat a locknut in the solenoid assembly and this material migrated to the solenoid clearance around the plunger prior to setting. In this instance, the material was Loctite RC 620. The valves at Brunswick were recently rebuilt by Target Rock Corporation at Wyle Laboratory. At Brunswick, the failures were discovered shortly after the valves were installed and after containment was inerted.

Discussion:

This event is similar to that described in Information Notice 84-53, "Information Concerning the Use of Loctite 242 and Other Anaerobic Adhesive/Sealants." In that event, Loctite 242 Threadlocking Adhesive/Sealant was used in the assembly of scram pilot solenoid valves. An investigation into the failure of several scram solenoid valves revealed the cause to be the failure of maintenance technicians to wipe excess Loctite from the assembly which resulted in the bonding of the solenoid core plunger to the base assembly.

The Brunswick SRVs also failed because excess Loctite was not cleaned by the contractor technician from the plunger assembly. In this latter case, Loctite RC 620 was used. This substance is anaerobic (cures in the absence of air). Thus, the plunger did not become seized until after the valves with excess Loctite were placed in the inerted atmosphere which exists in the reactor containment when the reactor is brought to power conditions.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact the Regional Administrator of the appropriate regional office or this office.

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical Contact: Ray Scholl, NRR
(301) 492-8213

Attachment: List of Recently Issued Information Notices