

Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

RECEIVED
NRC

REGION V INR

February 15, 1983
G01-83-0063

Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

Attention: Mr. D. M. Sternberg
Chief, Reactor Construction
Projects Branch No. 1

Subject: NUCLEAR PROJECTS 1 AND 4
DOCKET NOS. 50-460 and 50-513
POTENTIALLY REPORTABLE CONDITION 10CFR50.55(e)
GENERIC PROBLEMS WITH ASCO VALVES

References: 1) Telecon T. J. Houtchins, Supply System to J. O.
Elin Region V, Nuclear Regulatory Commission,
dated January 20, 1983.
2) IE Notice 80-11, Generic Problems with ASCO
Valves in Nuclear Applications.

In reference 1) the Supply System informed your office of a potentially reportable condition under 10CFR50.55(e). In reference 2) the IE Notice 80-11 identified failures in ASCO NP-1 Solenoid Valves when contaminated with oil, and also described potential failures in certain non-nuclear valves with improperly processed teflon cores.

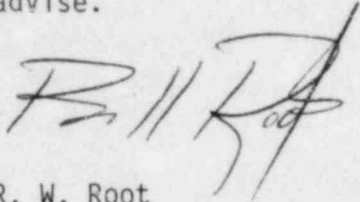
Attachment A to this letter is an interim report with a statement of the problem and the status of the Supply System corrective actions.

1827

Nuclear Regulatory Commission
Generic Problems with Asco Valves
Page 2
February 15, 1983
G01-83-0063

This letter is our formal notification of this deficiency as a potentially reportable condition under 10CFR50.55(e). We will provide your office with a status report on the progress of the subject condition prior to restarting construction.

If you have any questions or desire further information, please advise.

A handwritten signature in dark ink, appearing to read 'R. W. Root', is written over the typed name.

R. W. Root
Program Director

RWR:TED:cmo

Attachment

cc: JP Laspa, Bechtel, 860
V. Mani, UE&C 897
V. Stello, Director of Inspection, NRC
A. Toth, NRC
FDCC 899
ORM 847

ATTACHMENT A

WNP-1/4

Docket No. 50.460 And 50.513

Reportable Condition 10CFR50.55(e)

Generic Problems with ASCO NP-1 Valves

In Nuclear Applications Including Fire Protection Systems

1.0 BACKGROUND

The IE Information Notice No. 80-11 provided information about a potential safety concern related to ASCO Solenoid Valves. As a result of re-review of our IE Notice files, the Supply System sent a letter to United Engineers & Constructors Inc., (UE&C) requesting an evaluation of the IE Notice and determination if any contractors or vendors have supplied or will supply the ASCO NP-1 Solenoid Valves with ethylene-propylene elastomers internals for safety related applications.

2.0 DESCRIPTION OF DEFICIENCY

The ASCO NP-1 Solenoid Pilot Pneumatic Actuated Valve utilizes an ethylene propylene elastomer which expands or swells when brought in contact with oils, and may possibly cause valve failure. ASCO specifies these valves for use in "oil-free" instrument air systems. Although instrument air systems are "oil-free" by design, an oil base thread lubricant may be used during installation thus the potential exists for oil contamination of the elastomers in the solenoid valves. Degraded elastomers can cause valves to fail by sticking, swelling, closed flow paths, or rupture causing leakage across the seat or to the atmosphere.

3.0 SAFETY IMPLICATIONS

The potential degradation of the ethylene propylene elastomer described in the IE Notice 80-11 can cause the solenoid valve to fail, as explained above (para. 2.0). Failure of the solenoid to function properly on an active valve could prevent a system from performing its required safety function. However, the Supply System has not experienced any ASCO NP-1 solenoid valve failures nor has the Supply System conducted an in-depth failure analysis for the systems using ASCO NP-1 Solenoid Valves.

4.0 STATUS OF CORRECTIVE ACTION

The Supply System requested UE&C to evaluate IE Notice 80-11 for applicability to WNP-1/4, and make recommendations for corrective actions.

A reply from UE&C has been received with their recommendation and a partial list of contractors and suppliers which have responded to UE&C's enquiry. At present the Supply System Engineering is in the process of establishing a position for the recommended fix as it applies to the various affected contracts.

The following are the affected contracts for which responses have been received:

- Contract 9779-42A Package No. 1 Valves, ITT, HAMMEL, DAHL/CONOFLOW reports supplying 6 ASCO NP-1 valves for WNP-1 and 6 ASCO NP-1 valves for WNP-4. Supply System Engineering has not yet finalized the corrective action plan.
- Contract 9779-216 Heating Ventilation Air Conditioning (HVAC) Contractor, University Nuclear Systems Inc. planned to supply 148 NP-1 valves. Engineering has not performed an indepth analysis as to what Quality Class I systems would be affected by valve failures. Ethylene propylene elastomers in all ASCO NP-1 Solenoid Valves for this contract will not be used. All the valves will be supplied with the manufacturer's recommended Viton Kits. An in-depth analysis of the potential safety implications resulting from use of the ethylene propylene elastomers will not be performed.
- Contract 9779-217 Fire Protection Contractor, COSCO is not supplying any such valves.

As responses are received from suppliers and contractors, Supply System Engineering will establish corrective action plans. An update status of corrective actions will be provided prior to re-start of construction.