

September 20, 1982

SBN-327  
T.F. Q 2.2.2

United States Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director  
Division of Resident and Project Inspection

References: (a) Construction Permit CPPR-135 and CPPR-136, Docket  
Nos. 50-443 and 50-444  
(b) Telecon of August 20, 1982, J. DeVincentis (YAEC) to  
Walter Baunack (NRC Region I)

Subject: Final 10CFR50.55(e) Report; Robertshaw Controls Thermostatic  
Valves

Dear Sir:

On August 20, 1982, a reportable 10CFR50.55(e) item was reported [Reference (b)] regarding a potential failure mode for certain Robertshaw Controls thermostatic valves which could result in overcooling of the diesel generator engine jacket cooling water system and subsequent engine damage. This item was reported to the NRC by Colt Industries on May 25, 1982, and June 28, 1982, pursuant to 10CFR21.

The following information is provided per 10CFR50.55(e)(3) and is considered to be the final report on this item.

DESCRIPTION OF DEFICIENCY

Diesel generator sets manufactured by Colt utilize a Robertshaw Controls thermostatic valve in the Jacket Water Cooling System. These valves incorporate an overrun assembly which absorbs excessive movement of the thermal assembly. The overrun length is set by an axial bolt and nut. If the nut is not secured in place, and is able to backoff the bolt, the overrun assembly allows an increase in valve stroke. This additional valve stroke makes the thermal assembly control at a lower temperature.

8209270086 820920  
PDR ADOCK 05000443  
S PDR

IE27

ANALYSIS OF SAFETY IMPLICATIONS

Improper torquing of subject bolting may result in excessive and undesirable vibration of the generator shaft. Also, operating vibrations and load cycling may result in further loosening of improperly tightened bolts. These conditions, if undetected and/or corrected, could render the D-G set inoperable.

CORRECTIVE ACTIONS

BPS has established a test plan for shop equipment to determine if an equipment or procedure problem exists. BPS has also provided notification to end users of D-G sets in question via Mailgram dated 4/22/82 (VU-28221). This notification included a preliminary corrective procedure to preclude any problems.

BPS has submitted a formal Colt procedure (11876749; FP 23204) by letter of 6/30/82 (VU-29801) which has been issued for record distribution and field action by UE&C letter of 7/29/82 (SBU-59276; FM 21532). Per this procedure, the final torque value has been increased to 5000 ft. lbs. The completion and results of this corrective procedure are to be reported back to Colt/BPS for confirmation and record of new torque values.

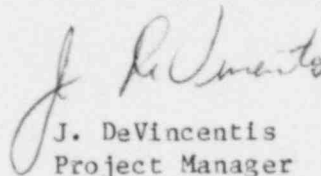
ANALYSIS AND EVALUATION

The corrective procedure provided by BPS/Colt will preclude potential problems resulting from possible misapplication of torquing equipment in the shop. The higher final torque values to be used will further reduce the potential of loosening the bolts under operating vibration and load cycling.

All of the Seabrook D-G sets were shop tested prior to shipment, with no indication of the problems noted above. Further testing is to be done on site per established pre-operational startup, and inservice operations. Even if the corrective procedure provided by BPS is not followed, it is expected that, if this deficiency existed, it would be detected long before a possible D-G failure could occur. However, application of the corrective procedure will fully eliminate this potential problem.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

  
J. DeVincentis  
Project Manager

ALL/dd