



Portland General Electric Company
Trojan Nuclear Plant
P.O. Box 439
Rainier, Oregon 97048
(503) 556-3713

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October 11, 1982
CPY-785-82

REGION V

Mr. R. H. Engelken
Regional Administrator
US Nuclear Regulatory Commission
Region V
1450 Maria Lane - Suite 210
Walnut Creek, California 94596-5368

Dear Sir:

In accordance with the Trojan Plant Operating License, Appendix A, USNRC Technical Specification 6.9.1.9.b, Licensee Event Report No. 82-17 concerning a situation where the inventory of boric acid in the boric acid storage tanks decreased below the minimum amount permitted by Technical Specification 3.1.2.8 for a period of 8 hours, 35 minutes is attached.

Sincerely,



C. P. Yundt, General Manager



R. L. Steele, Manager
Nuclear Projects Engineering

non
CPY/GGB/WON:ga

Attachments

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REPORTABLE OCCURRENCE

1. Report No: 82-17
2. Report Date: October 11, 1982
3. Occurrence Date: September 16, 1982
4. Facility: Trojan Nuclear Plant, PO Box 439, Rainier, Oregon 97048

5. Identification of Occurrence:

The boron concentration in the north boric acid storage tank (BAST) was found at 0405 hours on September 16, 1982 to be below the minimum value permitted by Technical Specifications. The remaining volume of boric acid in the south BAST was insufficient to meet the boric acid storage inventory required by Technical Specifications. The required tank level was reestablished in the south BAST at 1240 hours on September 16, 1982.

6. Conditions Prior to Occurrence:

The plant was operating in Mode 1 at 100% power prior to the occurrence.

7. Description of Occurrence:

Technical Specification 3.1.2.8 requires an inventory of 14,418 gallons (equivalent to 47% level between two tanks) in the boric acid storage system with a boron concentration between 7,000 and 7,700 ppm. Prior to this occurrence the south BAST was on service to the boric acid blender. The boric acid evaporators were on line transferring boric acid to the north BAST. Reactor power changes required boric acid addition to the reactor coolant system reducing the south BAST level to 45%. The north BAST was sampled for boron concentration prior to placing it in service to the blender and was found to have a concentration of 6870 ppm. Therefore the entire north BAST inventory was out of specification while the south BAST contained inadequate level to meet Technical Specification 3.1.2.8.

8. Designation of Apparent Cause of Occurrence:

The apparent cause of this event was the dilution of the north BAST due to two valves leaking by in the boric acid evaporator system. The concentrates pump discharge valves on both the east and west boric acid evaporators, BEF 33A and 33B, were found to be leaking by. These leaks allowed relatively diluted boric acid to be transferred from the boric acid evaporators to the north BAST during the evaporator recirculation mode.

In addition, a contributing cause of the occurrence was that the north boric acid transfer pump was inoperable for five days prior to the event for a seal replacement making it impossible to recirculate or sample the north BAST during that time. It is also suspected this lack of adequate mixing caused boron stratification in this tank resulting in a boron sample concentration lower than the actual average concentration.

9. Significance of Occurrence:

This event had no effect on either plant or public safety. The refueling water storage tank was operable and available to provide greater than 428,000 gallons of borated water if required.

10. Corrective Action:

Immediate corrective action was to raise the south BAST level above 47% to meet the minimum Technical Specification limit for boric acid inventory. Subsequent action was taken to replace the diaphragms in the concentrates pump discharge valves of both the east and west boric acid evaporators. In addition operations personnel have been instructed to verify alternate BAST operability prior to reducing the other BAST parameters below Technical Specification limits.