NRC FORM 366 **U.S. NUCLEAR REGULATORY COMMISSION** (7 77) . LICENSEE EVENT REPORT (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION) CONTROL BLOCK: $\Box(\mathbf{i})$ 0 0 3 3 0 0 0 0 0 0 -KR AY 0 CON'T 9 0 2 1 9 68 69 EVENT DATE 7 9 8 0 74 75 3 0 5 REPORT DATE L G 0 5 0 0 0 0 0 1 SOURCE 60 EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10) [During normal operation, the fire pump running alarm was received in the 0 2 Control Room. A leak was discovered and isolated which isolated the flog 0 3 w path to one yard hydrant subject to T.S. 3.7.10.1.b. This is the first 0 4 reportable event of this nature at this facility. Equipment was arrange 0 5 Id to provide fire suppression coverage to the areas of the plant normally 0 6 ly protected by the isolated hydrant. No adverse effects to the health or 0 isafety of the public and plant personnel resulted from this event. 80 COMP SYSTEM CODE CAUSE CAUSE VALVE COMPONENT CODE SUBCODE PIE X X 1(14) C (15 AB (11 B (13) Z (16) PITI E (12) OCCURRENCE REPORT REVISION SEQUENTIAL REPORT NO. CODE TYPE NO EVENT YEAR LER RO Τ 9 0 REPORT 91 9 0 0 6 NUMBER NPRD-4 PRIME COMP. COMPONENT ATTACHMENT SUBMITTED EFFECT ON PLANT SHUTDOWN METHOD ACTION FUTURE TAKEN ACTION HOURS FORMSUB SUPPLIER MANUFACTURER A (25 Y 1412 Z (21) 0 010 CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27) The root cause of this event seems to have been an uneven external force 10 applied on the pipe by the trench fill. The resultant crack extended ar ound approximately 2/3 of its circumference. The affected pipe is 8" cas t iron, normally pressurized to 125 psig and was isolable. The crack wa s sealed using a compression patch, pressure tested and backfilled. 4 80 METHOD OF D'SCOVERY FACILITY OTHER STATUS (30) DISCOVERY DESCRIPTION (32) S POWER 0 N/A A (31) Fire Pump Running Panalarm 101 80 9 10 ACTIVITY CONTENT AMOUNT OF ACTIVITY 35 LOCATION OF RELEASE (36) RELEASED OF RELEASE N/A 2 (33) 2 (34) 80 PERSONNEL EXPOSURES DESCRIPTION (39) NUMBER TYPE N/A (37) Z (38) 00 80 PERSONNEL INJURIES DESCRIPTION (41) NUMBER 0 0 40 N/A 80 LOSS OF OR DAMAGE TO FACILITY (43) DESCRIPTION N/A (42) 80 PUBLICITY NRC USE ONLY DESCRIPTION (45) ISSUED 7903080 312 N/A 69 80 68 (413) 625-6140 Edwin L. May PHONE: -NAME OF PREPARER ..

Yankee Atomic Electric Company LER 50-29/79-06/99T

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES

During normal operation, at 1215 hours on February 19, 1979, the Fire Pump Running Alarm was received in the Control Room. Inspections were conducted throughout the plant to evaluate the authenticity of the alarm. It was determined that a fire condition did not exist and the auto start was the result of a leak in the fire suppression water system. A leak isolation process was conducted which revealed that the leak was in the 8 inch line between valves FS-V-641, FS-V-642 and FS-V-647. These valves were closed which isolated yard hydrant No. 15 and one of the two redundant lines which supply the turbine building fire suppresson water. Equipment was arranged to provide fire suppression coverage to the areas of the plant normally protected by the isolated hydrant. Hoses and fittings were also available to supply water to hydrant No. 15 from another yard hydrant in order to use the isolated hydrant as a manifold.

The fire suppression system status was continually monitored during the leak. The pressure of the system never went below 100 psig nor did the second fire pump ever auto start. When the leak was isolated the remainder of the fire main and associated equipment was returned to normal. In the event of an actual fire condition the fire suppression system and equipment would have been capable of performing its intended functions. Based on the above discussion no adverse effects to the health and safety of the public or plant personnel resulted from this event.

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

The root cause of this event is suspected to have been an uneven external force applied to the pipe by the trench fill. It appears that some large stones used to backfill the trench worked their way down through the fine aggregate covering the pipe. As the ground froze deeper because of extended subzero temperatures the pressure buildup on the stones exerted a concentrated downward force on the top of the pipe causing it to crack. The fire main is constructed of 8 inch cast iron The fire loop is normally under 125 psig pressure and the pipe. affected section was isolable as previously described. The hairline crack extended around approximately 2/3 of the pipe circumference. A compression patch was installed around the crack and a pressure test conducted on the repair. The system was returned to normal at 1500 hours on February 27, 1979. With no further indications of leaks in the area the trench was backfilled on February 28, 1979. The large stones found in the trench were not used in the backfill. No further corrective actions are deemed as necessary at this date.