

DCS No: 50271-820424  
Date: April 26, 1982

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNQ-I-82- 33

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by IE staff on this date.

Facility: Vermont Yankee Nuclear Power Corp.  
Vermont Yankee N.P.S (DN 50-271)  
Vernon, Vermont

Licensee Emergency Classification:  
☐ Notification of Unusual Event  
☒ Alert  
☐ Site Area Emergency  
☐ General Emergency  
☐ Not Applicable

SUBJECT: REACTOR SCRAM AND HPCI/RCIC ACTUATION

The licensee reported that plant operators had initiated a plant load decrease at 0050 hours on April 24, 1982 to establish conditions for routine turbine surveillance and a rod pattern exchange. Load decrease was accomplished using recirculation flow control, at a ramp rate of 15% per minute as prescribed by procedure. Coincident with the load decrease, a malfunction in the control system for the B feedwater regulating valve caused it to go full open, causing a vessel level increase. With the plant power at 75%, the operating B and C feedwater pumps tripped on high vessel water level at 0056 hours. The main turbine remained on-line since its trip setpoint, derived from different level sensors, was not reached. The standby A feedwater pump automatically started and plant operators restarted the C feedwater pump.

At 0059 hours, the A and C feedwater pumps tripped on high vessel level. This condition was not noticed by plant operators who took manual control of the feedwater station to reverse the now decreasing vessel level. The reactor scrammed on low vessel water level (+127 inches above the top of the fuel) at 0059 hours. Fourteen seconds later, the high pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) systems initiated on low-low vessel water level (82.5 inches) and injected into the vessel. In addition to HPCI and RCIC, both diesel generators started and a Group I isolation occurred. The low pressure coolant injection and core spray systems did not start since a coincident vessel low pressure condition (nor high drywell pressure) did not exist.

Vessel water level increased above the ECCS actuation level within 30 seconds. The lowest vessel level reached during the entire transient was 80 inches above the top of the fuel. Both HPCI and RCIC tripped on high vessel level (+177 inches) at about 0101 hours. The Group I isolation was reset at about 0101 hours and cooling with the condenser was established. Reactor temperature and pressure were stabilized by 0125 hours. A 10 CFR 50.72 report was made via the ENS at 0121 hours.

Subsequent operator review of control room panels and computer printouts at about 0200 identified the HPCI and RCIC actuations and injections. A second ENS notification was made at 0350 hours. Following consultation with plant management at 0400 hours, a decision was made not to declare an Alert as prescribed by the licensee's emergency plan implementing procedures since plant conditions were then stable.



Region I Form 83  
(Rev. January 5, 1982)

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Resident inspector followup review of the event is in progress. Preliminary reviews indicate that plant equipment response was proper. Problems with the B feedwater regulating valve controller were identified and corrected. Following repairs, the reactor was taken critical at 2006 hours on April 24, 1982.

Media interest is expected due to the sensitivity to nuclear power issues in the area and due to licensee information releases about the shutdown. No press release is planned by the NRC. The State of Vermont has been informed.


NRC Region I (Philadelphia) received initial notification of this event by telephone on April 24, 1982 between the NRC Headquarters and Region I Duty Officers. On April 26, 1982, further information was supplied to Region I by the Senior Resident Inspector.

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