

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-I-84-78

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 the Region I staff on this date.

Facility: Vermont Yankee Nuclear Power Corp.	Licensee Emergency Classification:
Vermont Yankee Nuclear N.P.S.	<input type="checkbox"/> Notification of Unusual Event
Vernon, Vermont	<input type="checkbox"/> Alert
Docket No. 50-271	<input type="checkbox"/> Site Area Emergency
	<input type="checkbox"/> General Emergency
	<input checked="" type="checkbox"/> Not Applicable

Subject: UNPLANNED SHUTDOWN FOR POWER/FLOW ANOMALY

The licensee began a controlled plant shutdown from 95% full power (FP) at 2:00 a.m. on September 18, 1984. The plant was at 10% FP as of 8:00 a.m. and will be taken to refueling shutdown conditions to investigate an anomaly in the core power/flow relationship recently observed at high power and high flow conditions. This action is being taken to investigate apparent leakage of coolant from the core exit region inside the shroud to the vessel annulus region outside the shroud including inspection of the attachment of the in-vessel steam separator/shroud head assembly to the core shroud. The shutdown action was initiated at that time subsequent to questions raised by NRC staff during telecons on September 17.

The apparent leakage was first noted on 9/11/84 when the core power/flow relationship departed from expected values (reference NRC Region I Daily Report for 9/14/84) at core flows in excess of about 42 million lbs/hr (mpph), or 87.5% of rated flow. The apparent leakage alters the expected power/flow relationship by raising the annulus water temperature and thereby decreases the core inlet subcooling. The licensee concluded that leakage out of the shroud area was the most probable cause for the core power/flow anomaly after reviewing the core response during a power decrease to 80% FP for routine testing on 9/16/84. The core power/flow relationship returned to expected values as core flow decreased below 42 mpph.

The anomaly was first observed during the approach to full power following a recent refueling outage. The plant outage will last about 10 days.

This information is current as of 8:00 a.m. on September 18, 1984.

The State of Vermont has been informed. Notification was made by the licensee at about 5:00 p.m. on 9/17/84.

The licensee has informed the news media.

NRC Region I received notification of this occurrence from the NRC Duty Officer, based on a 50.72 notification made by the licensee at 11:30 a.m. on 9/16/84 to report possible operation in an unanalyzed condition.

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PNO-I-84-078 PDR

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