

G. Lamas
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PRELIMINARY NOTIFICATION

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-79-185

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

FACILITY: Virginia Electric and Power Company
North Anna and Surry Power Stations
Docket Nos. 50-338, 50-339, 50-280 and 50-281
Mineral and Surry, Virginia

SUBJECT: NONCONSERVATIVE ANALYSIS RESULTS OF HIGH ENERGY LINE BREAK INSIDE CONTAINMENT

Westinghouse informed their customers and provided a verbal Part 21 report to I&E of a nonconservative analysis results of high energy pipe break accidents inside containment specifically concerning errors generated in the steam generator level indication sensors. Westinghouse informed Virginia Electric and Power Company of these results on June 21, 1979. In the case of a feedwater pipe break, where containment temperatures could reach 280 degrees F, the higher temperature would affect the steam generator level reference leg causing a +10 percent level error. This error would delay initiation of a steam generator low-low level indication and, therefore, delay initiation of auxiliary feedwater. The analysis for a main steam line break in containment generates a 400 degree F containment temperature and a +21 percent error in steam generator level. The licensee is evaluating this information and intends to generate supplemental orders to their customers.

Media interest is not expected. Neither the licensee nor the NRC plan a news release. The Commonwealth of Virginia has been informed. North Anna Unit 1 is operating, Surry Units 1 and 2 are shutdown for long term maintenance.

Region II (Atlanta) received notification of this occurrence by telephone from the Surry resident inspector at 9:00 a.m. on June 22.

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POWER AUTHORITY OF THE STATE OF NEW YORK

INDIAN POINT NO. 3 NUCLEAR POWER PLANT

P. O. BOX 215 BUCHANAN, N. Y. 10511

TELEPHONE: 914-739-8200



June 22, 1979
IP-NAP-5146

Docket No. 50-286
License No. DPR-64

Boyce H. Grier, Director
Office of Inspection and Enforcement
Region 1
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Grier:

In accordance with the Technical Specifications of Facility Operating License No. DPR-64, the following describes Reportable Occurrence (LER) 79-006/01T-0. This event is the type defined in Technical Specification 6.9.1.7 (h).

On June 21, 1979, the Power Authority was notified by our Nuclear Steam Supplier, the Westinghouse Electric Corporation, of an error in the less conservative direction in their analysis of high energy line breaks inside containment. Breaks of this type can result in heatup of the steam generator level measurement reference leg resulting in a decrease of the water column density with a consequent apparent increase in the indicated steam generator water level (i.e., apparent level exceeding actual level). This potential level bias could result in delayed protection signals (reactor trip and auxiliary feedwater initiation) which are based on low-low steam generator water level. In the case of a feedline rupture, this adverse environment could be present and could delay or prevent the primary signal arising from declining steam generator water level (low-low steam generator level). Containment pressure and safety injection provides a backup signal which initiates a trip before a containment temperature of 280° F. is reached. This trip is conservatively set at 3.0 psig. Westinghouse has calculated that raising the steam generator low-low level setpoint by 10 per cent of span would compensate for the effects of this temperature. Since the Power Authority's calibration procedures already use a value of 15 per cent of span as opposed to the Technical Specification value of 3.0 psig as opposed to the change in setpoint recommended

Further evaluation will be made with adjustments.

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Entire document previously entered into system under:

ANO 7906280110

No. of pages: 7

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