

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9010010241 DOC.DATE: 90/09/21 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva 05000387
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylva 05000388

AUTH.NAME AUTHOR AFFILIATION
 KEISER, H.W. Pennsylvania Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION
 MARTIN, T.T. Region 1 (Post 820201)

SUBJECT: Provides updated status on activities to establish clear design requirements for room leak detection, per ref ltrs.

DISTRIBUTION CODE: IE01D COPIES RECEIVED: LTR 1 ENCL 0 SIZE: 3
 TITLE: General (50 Dkt)-Insp Rept/Notice of Violation Response

NOTES: LPDR 1 cy Transcripts. 05000387
 LPDR 1 cy Transcripts. 05000388

RECIPIENT ID CODE/NAME	COPIES LTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTR ENCL
PD1-2 PD	1 1	THADANI, M	1 1
INTERNAL: ACRS	2 2	AEOD	1 1
AEOD/DEIIB	1 1	AEOD/TPAD	1 1
DEDRO	1 1	NRR MORISSEAU, D	1 1
NRR SHANKMAN, S	1 1	NRR/DLPQ/LPEB10	1 1
NRR/DOEA DIR 11	1 1	NRR/DREP/PEPB9D	1 1
NRR/DRIS/DIR	1 1	NRR/DST/DIR 8E2	1 1
NRR/PMAS/ILRB12	1 1	NUDOCS-ABSTRACT	1 1
OE DIR	1 1	OGC/HDS2	1 1
REG FILE 02	1 1	RGN1 FILE 01	1 1
EXTERNAL: NRC PDR	1 1	NSIC	1 1
NOTES:	2 2		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 25 ENCL 250

m/A-4 cert

R
I
D
S
/
A
D
D
S



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215/770-5151

Harold W. Keiser
Senior Vice President-Nuclear
215/770-4194

SEP 21 1990

Mr. Thomas T. Martin
Regional Administrator
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION
SUPPLEMENT TO 50.9 REPORT ON
STEAM LEAK DETECTION
PLA-3443 FILES R41-1C, R41-2

50.9 REPORT

Docket Nos. 50-387
and 50-388

Dear Mr. Martin:

REFERENCE: PLA-3214, H.W. Keiser to W.F. Kane, Status/Revision
to Main Steam Tunnel Delta-T Actions, dated July
24, 1989.

PLA-3315, H.W. Keiser to W.F. Kane, Status/Update
on Delta-T Actions, dated January 16, 1990

The purpose of this letter is to provide an updated status on our activities to establish clear design requirements for room leak detection and to document our telephone conversation on August 7, 1990, with Mr. P.D. Swetland of your staff. PP&L's prior actions are documented in the referenced letters. The following three items were discussed with Mr. Swetland on August 7:

- the temperature isolation function in the RHR room,
- the main steam tunnel thermal calculations, and
- the setpoint verification activities.

RHR Room Temperature Isolation Function

Currently a high ambient or differential temperature signal in the RHR room will isolate primary containment valves HV-151F008/9 in Unit 1 (Unit 2 is similar) which results in the isolation of the shutdown cooling mode (SDC) of RHR. The existing isolation setpoints are based on leakage from RHR steam condensing piping. PP&L eliminated the steam condensing mode of RHR on Unit 1 in 1987

9010010241 900921
PDR ADOCK 05000387
Q PDC

TEO1
110

and on Unit 2 in 1989, thereby eliminating the apparent basis for the temperature setpoints. The RHR steam condensing mode is unrelated to the system function of the RHR shutdown cooling mode.

Attempting to establish temperature initiated isolation setpoints based on leakage from shutdown cooling would result in inadequate margin above the design maximum temperature and increase the risk of inadvertent system isolation. Our current calculations and design analysis conclude that temperature is not a viable parameter for detecting and automatically isolating the RHR shutdown cooling subsystem.

We have initially contacted NRR to review the SDC temperature based isolation function. Upon resolution of this issue with NRR, we intend to request the deletion of the ambient and differential temperature isolation signals for RHR shutdown cooling from the technical specifications. This submittal is expected by December 5, 1990.

Main Steam Tunnel Thermal Calculations

Our current thermal analysis model (COTTAP) predicts lower maximum temperature resulting from a 25 gpm leak than did our original calculations. Preliminary thermal calculations for the main steam tunnel, using COTTAP, indicate that the existing setpoints may be adequate or may need to be lowered only slightly. We are currently reviewing the COTTAP model parameters to assure they accurately reflect plant conditions. In conjunction with this review we are having the input parameters independently verified. Thermal calculations are currently being prepared for the turbine building main steam tunnel. Following resolution of these model reviews, and verification of the preliminary calculations, PP&L will determine the need for revision of the existing setpoints. Final thermal calculations and PP&L's resolution of the issue will be completed by October 1, 1990 for the reactor building tunnel, and October 31, 1990 for the turbine building tunnel.

Temperature Setpoint Verification Activities

Temperature setpoint verifications in the HPCI room, RCIC room, RWCU rooms and HPCI/RCIC piping area have been completed. Thermal calculations supporting the setpoint verifications have been completed; however, the thermal calculations used for the RWCU rooms needs formal management approval. The verifications indicate that:

- setpoints in the HPCI/RCIC piping area are adequate;

- a minor revision to the differential temperature "allowable value" setpoint for the RWCU pump rooms and RWCU heat exchanger rooms may be necessary and is being evaluated, and
- revisions to steam leak detection setpoints in the RWCU penetration room, and the HPCI and RCIC room cooler inlet may be necessary to preclude inadvertent isolation of these systems.

In verifying the existing temperature setpoints for the above noted rooms PP&L used 25 gpm as the design leakage rate. Our rationale for increasing this leakage rate from 5 gpm to 25 gpm will be submitted for NRC review. We anticipate providing this submittal and the technical specification change submittals for the deletion of the temperature based automatic isolation of shutdown cooling from the RHR room and revisions to temperature setpoints in the HPCI, RCIC and RWCU rooms by December 5, 1990.

With completion of the RHR room (SDC mode) isolation issue, resolution of the main steam tunnel thermal calculations concerns and submittal of technical specifications changes associated with the setpoint verification effort, actions pertaining to the leak detection design basis review will be completed.

Please contact C. T. Coddington (215-770-7915) if you have any questions concerning this letter.

Very truly yours,



H. W. Keiser

cc: ~~NRC Document Control Desk~~ (Original)
Mr. G. S. Barber, NRC Resident Inspector
Mr. M. C. Thadani, NRC Project Manager