D Landau

FILE

IOWA ELECTRIC LIGHT AND POWER COMPANY

DUANE ARNOLD ENERGY CENTER
P. O. Box 351
Cedar Rapids, Iowa 52406
July 21, 1978
DAEC - 78 - 352

Mr. James G. Keppler, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission-Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Subject: Licensee Event Report No. 77-95 UPDATE REPORT
(14 day) PREVIOUS REPORT DATE 123077

File: A-118a

Dear Mr. Keppler:

In accordance with Appendix A to Operating License DPR-49, Technical Specifications and Bases for Duane Arnold Energy Center and Regulatory Guide 10.1, please find attached a copy of the subject Licensee Event Report. (Total of 3 copies transmitted)

Very truly yours,

Ellery L. Hammond

Ellery L. Hammond
Chief Engineer
Duane Arnold Energy Center

Docket 50-331

attachment

ELH/JVS/nf

cc: Director, Office of Inspection and Enforcement (40)
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Director, Management Information and Program Control (3)
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

JUL 24 1978

80 4
A002
S11 GD

UPDATED REPORT - PREVIOUS REPORT DATE 123077

NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: ① (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 — LICENSEE CODE: I A D A C 1 ② LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 ③ LICENSE TYPE: 4 1 1 1 1 ④ CAT ⑤

CON'T 01 — REPORT SOURCE: L ⑥ DOCKET NUMBER: 0 5 0 0 0 3 3 1 ⑦ EVENT DATE: 1 2 2 0 7 7 ⑧ REPORT DATE: 0 7 2 1 7 8 ⑨

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

02 During surveillance testing the HPCI system discharge flow rate did not
03 reach the required flow of 3000 GPM in the 25 seconds allowed by the s
04 urveillance test. Two additional restarts of the system were required t
05 o reach design flow rates and time. Flow rate requirement listed in Tec
06 h Spec 4.5.D.1. Repetitive occurrence (see RO 77-77). Redundant emerg
07 ency core cooling systems operable.
08

09 — SYSTEM CODE: S F ⑪ CAUSE CODE: X ⑫ CAUSE SUBCODE: Z ⑬ COMPONENT CODE: T U R B I N ⑭ COMP. SUBCODE: Z ⑮ VALVE SUBCODE: Z ⑯

⑰ LER/RO REPORT NUMBER — EVENT YEAR: 7 7; — ; SEQUENTIAL REPORT NO.: 0 9 5; / ; OCCURRENCE CODE: 0 1; REPORT TYPE: T; — ; REVISION NO.: 1

ACTION TAKEN: E ⑱ FUTURE ACTION: L ⑲ EFFECT ON PLANT: Z ⑳ SHUTDOWN METHOD: Z ㉑ HOURS ㉒: 0 0 0 0 ATTACHMENT SUBMITTED: Y ㉓ NPRD-4 FORM SUB.: N ㉔ PRIME COMP. SUPPLIER: N ㉕ COMPONENT MANUFACTURER: T 1 4 7 ㉖

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ㉗

10 Improper adjustment of two throttle screws on the stop valve bonnet caus
11 ed the balancing chamber pressure to exceed manufacturer's recommendatio
12 n. Higher balancing chamber pressure made hydraulic cylinder pressure in
13 adequate for positioning valve disc. Throttle screws were adjusted to br
14 ing balancing chamber pressure within manufacturer's recommendation.

15 — FACILITY STATUS: E ㉘ % POWER: 0 9 9 ㉙ OTHER STATUS ㉚: NA METHOD OF DISCOVERY: B ㉛ DISCOVERY DESCRIPTION ㉜: Surveillance Test

16 — ACTIVITY RELEASED: Z ㉝ CONTENT OF RELEASE: Z ㉞ AMOUNT OF ACTIVITY ㉟: NA LOCATION OF RELEASE ㊱: NA

PERSONNEL EXPOSURES

17 — NUMBER: 0 0 0 ㊲ TYPE: Z ㊳ DESCRIPTION ㊴: NA

PERSONNEL INJURIES

18 — NUMBER: 0 0 0 ㊵ DESCRIPTION ㊶: NA

LOSS OF OR DAMAGE TO FACILITY ㊸

19 — TYPE: Z ㊷ DESCRIPTION: NA

PUBLICITY

20 — ISSUED: N ㊹ DESCRIPTION ㊺: NA

NRC USE ONLY

NAME OF PREPARER J. Van Sickel PHONE: 319-851-5611

GPO 917-926

UPDATED REPORT ● PREVIOUS REPORT DATE 123078

DUANE ARNOLD ENERGY CENTER

Iowa Electric Light and Power Company

LICENSEE EVENT REPORT-Supplemental Data

Docket Number 050-0331

Licensee Event Report Date: 072178

Reportable Occurrence No: 77-095

Event Description:

During surveillance testing of the HPCI system, the HPCI pump did not reach the required discharge flow rate (3000 gpm) due to failure of the turbine to reach full rated speed. The HPCI system was declared inoperable and redundant emergency core cooling systems were demonstrated to be operable. This occurrence was repetitive (see RO 77-96, 78-25).

Cause of Occurrence:

The occurrence was caused by improper adjustment of two throttle screws on the turbine stop valve which caused the balancing chamber pressure to exceed the manufacturer's recommendation. The turbine stop valve, which is a Schutte and Koerting inverted oil type, is designed to utilize steam pressure in a balancing chamber for assisting in closing and tightly seating the valve disc. For opening, the valve is equipped with an internal pilot valve which opens in the first ¼" of valve stem travel to exhaust steam from the balancing chamber through the valve disc to the outlet side of the valve. By controlling steam flow into the balancing chamber and through the pilot unit, a controlled pressure differential is established across the valve disc enabling it to be opened easily by the hydraulic cylinder. Two throttle screws in the valve bonnet control the steam flow into the balancing chamber thereby establishing the pressure differential across the valve disc. Improper throttle screw adjustment had the balancing chamber pressure making the hydraulic system pressure inadequate for fully opening the valve.

Corrective Action:

The throttle screws were adjusted so that the balancing chamber pressure equalled manufacturer's recommended pressure (10% of inlet steam pressure). The HPCI turbine was then successfully tested and returned to service.