

50-331

## NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO: MR G LEAR

FROM: IOWA ELEC LIGHT & POWER CO  
CEDAR RAPIDS, IOWA  
LEE LIU

DATE OF DOCUMENT

10-06-76

DATE RECEIVED

10-12-76

☒ LETTER  
☒ ORIGINAL  
☐ COPY☐ NOTORIZED  
☒ UNCLASSIFIED

PROP

INPUT FORM

NUMBER OF COPIES RECEIVED

3 Sign -37 CC = 40

## DESCRIPTION

LTR REF OUR 9-1-76 LTR.....NOTORIZED  
10-6-76 ....TRANS THE FOLLOWING.....

## ENCLOSURE

DESCRIPTION OF THE DAEC RECIRCULATING PUMP  
TRIP SYSTEM.....

PLANT NAME: DWANE ARNOLD

DO NOT REMOVE

ACKNOWLEDGED

## SAFETY

## FOR ACTION/INFORMATION

ENVIRO 10-13-76 RKR

ASSIGNED AD:

BRANCH CHIEF:

PROJECT MANAGER:

LIC. ASST.:

G. LEAR

R. PARRISH

ASSIGNED AD:

BRANCH CHIEF:

PROJECT MANAGER:

LIC. ASST.:

## INTERNAL DISTRIBUTION

REG FILE

NRC PDR

I &amp; E (2)

OELD

GOSSICK &amp; STAFF

MIPC

CASE

HANAUER

HARLESS

SYSTEMS SAFETY

HEINEMAN

SCHROEDER

ENGINEERING

MACCARRY

KNIGHT

SIHWEIL

PAWLICKI

PLANT SYSTEMS

TEDESCO

BENAROYA

LAINAS

IPPOLITO

KIRKWOOD

OPERATING REACTORS

STELLO

SITE SAFETY &amp;

ENVIRO ANALYSIS

DENTON &amp; MULLER

ENVIRO TECH.

ERNST

BALLARD

SPANGLER

SITE TECH.

GAMMILL

STAPP

HULMAN

SITE ANALYSIS

VOLLMER

BUNCH

J. COLLINS

KREGER

CONTROL NUMBER

## EXTERNAL DISTRIBUTION

LPDR: CEDAR RAPIDS, IA

TIC:

NSIC:

ASLB:

ACRS 16 CYS HOLDING (SENT) TO L.A.

NAT LAB:

REG. VIE.

LA PDR

CONSULTANTS

BROOKHAVEN NAT LAB

ULRIKSON (ORNL)

10237

# IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office  
CEDAR RAPIDS, IOWA

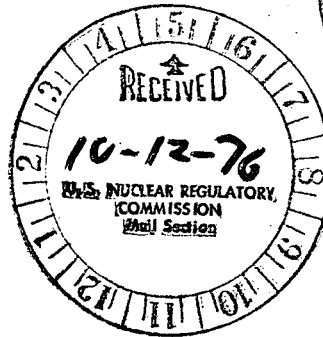
LEE LIU  
VICE PRESIDENT - ENGINEERING

October 6, 1976  
IE-76-1528

## Regulatory Docket File

50 - 331

Mr. George Lear, Chief  
Operating Reactors Branch 3  
Division of Operating Reactors  
Nuclear Regulatory Commission  
Washington, D.C. 20555



Dear Mr. Lear:

Your letter of September 1, 1976 requested that we provide you with: (1) A description of the recirculating pump trip system installed at the Duane Arnold Energy Center and (2) Proposed Technical Specifications for the DAEC recirculating pump trip system.

Enclosed as Attachment (1) is a description of the DAEC recirculating pump trip system.

Iowa Electric believes that the present Technical Specifications, Sections 3.2-G and 4.2-G meet the requirements for proposed Technical Specifications. We, therefore, are not proposing additional Technical Specifications.

Three originals and 37 copies of this submittal are transmitted herewith. This submittal consisting of this letter and the attachments hereto, is true and accurate to the best of my knowledge and belief.

Iowa Electric Light and Power Company

By: Larry D. Root  
Lee Liu  
Vice President, Engineering

LL/KAM/ms  
Encls.

cc: D. Arnold  
J. Newman  
J. Shea (NRC)  
J. Keppler (NRC)  
L. Root  
File A-107  
A-225

Subscribed and Sworn to before me on  
this 6<sup>th</sup> day of October, 1976.

Jean R. Smith  
Notary Public in and for the State  
of Iowa

Jean R. Smith  
NOTARY PUBLIC  
STATE OF IOWA  
Commission Expires  
September 30, 1977

10237

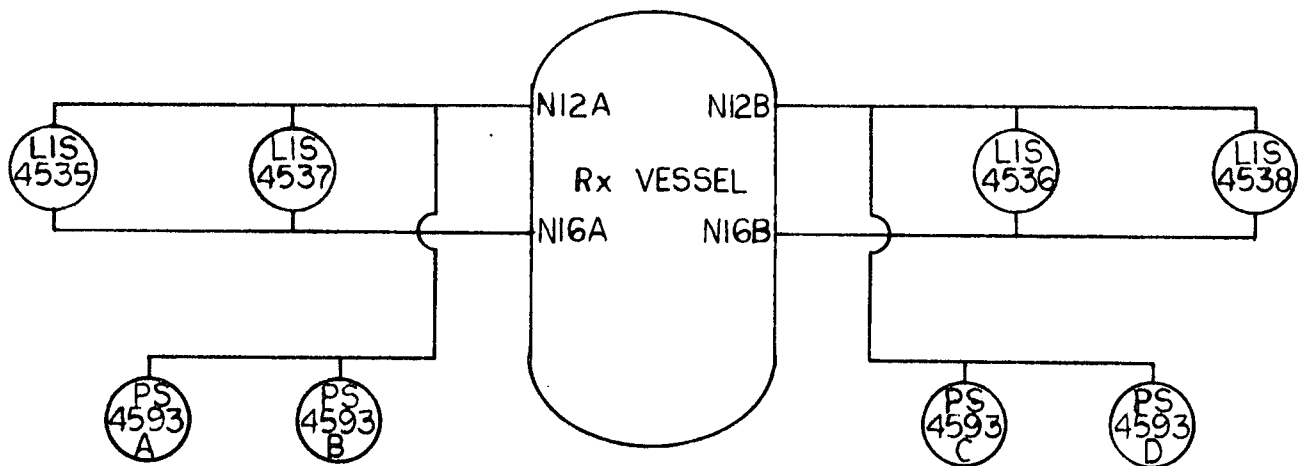
DUANE ARNOLD ENERGY CENTER  
RECIRCULATION PUMP TRIP SYSTEM

The recirculation pump trip system installed at the Duane Arnold Energy Center (DAEC) is as shown in the attached sketch. Two level indicating switches and two pressure switches are provided in each of two redundant instrument loops to sense low reactor water level or high reactor pressure. A trip condition in either instrument loop will cause both Recirculation Pump MG Set Drive Motor Breakers to trip.

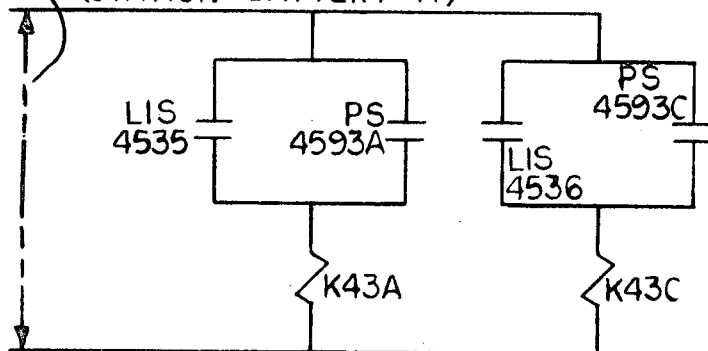
The instrumentation and logic meets IEEE 279 and IEEE 384 criteria for single failure and separation.

The DAEC Final Safety Analysis Report (FSAR) Figure 7.3-1 Sheet 2 (Nuclear Boiler System P&ID) shows the installation of the pressure and level instrumentation. FSAR Figure 7.4-10 Sheet 1 (Recirculation System FCD) shows these trips functionally.

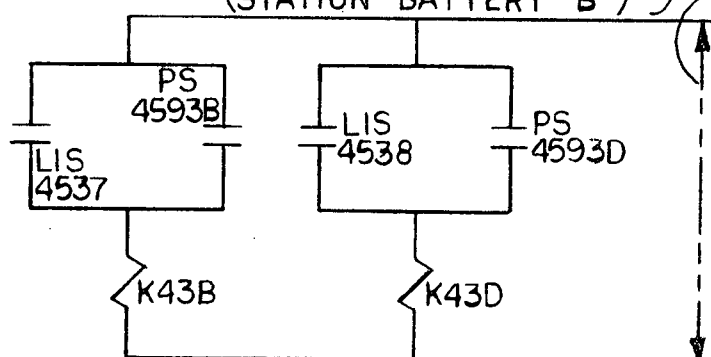
Setpoints and surveillance requirements are as specified in the DAEC Technical Specifications.



125 V DC POWER  
SUPPLY-DIV. I-ESSENTIAL  
(BACKUP FROM  
STATION BATTERY "A")



125 V DC POWER  
SUPPLY-DIV. II-ESSENTIAL  
(BACKUP FROM  
STATION BATTERY "B")



125 V DC FUSED  
SUPPLY BUS IN  
DRIVE MOTOR  
SWITCH GEAR

