

03/25/78

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)
DISTRIBUTION FOR INCOMING MATERIAL

50-275/323

TO: STOLZ J F
NRC

ORG: CRANE P A
PACIFIC GAS & ELEC

DOC DATE: 03/20/78
DATE RCVD: 03/24/78

OBJECT: LETTER NOTARIZED: NO
SUBJECT:

COPIES RECEIVED
LTR 1 ENCL 40

REQUESTING ACKNOWLEDGEMENT OF ENCL MATERIAL, EMERGENCY PWR SYSTEM REVISIONS,
3/17/78, REPLACING ITEMS 1, 2, 3, AND 6 OF POSITION 1 - ADDL POINTS ON PAGE
OF APPLICANT'S RESPONSE OF 02/24/78 RE EMERGENCY PWR SYSTEM DESIGNS FOR
SUSTAINED DEGRADED GRID VOL

PLANT NAME: DIABLO CANYON - UNIT 1
DIABLO CANYON - UNIT 2

REVIEWER INITIAL: XJM
DISTRIBUTER INITIAL: M

***** DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS *****

NOTES:
J SOUDER W/1CY EVERTHING (REG V)
HEBDON W/1CY ENVIRON MATERIAL

PSAR/FSAR AMDTS AND RELATED CORESPONDENCE
(DISTRIBUTION CODE 8001)

FOR ACTION: ASST DIR VASSALLO**LTR ONLY
PROJ MGR ALLISON**W/ENCL

BR CHIEF STOLZ**LTR ONLY
LIC ASST HYLTON**LTR ONLY

INTERNAL: REG FILE**W/ENCL
T & E**W/2 ENCL
P. COLLINS**W/ENCL
HELTEMES**W/ENCL
MIPC**LTR ONLY
BOSNAK**W/ENCL
PAWLICKI**W/2 ENCL
NOVAK**W/ENCL
CHECK**W/ENCL
BENAROYA**W/ENCL
IPPOLITO**W/ENCL
GAMMILL**W/4 ENCL
BUNCH**W/ENCL
KREGER**W/ENCL

NRC PDR**W/ENCL
OELD**LTR ONLY
HOUSTON**W/ENCL
CASE**LTR ONLY
KNIGHT**LTR ONLY
SIHWEIL**W/ENCL
ROSS**LTR ONLY
ROSZTOCZY**W/ENCL
TEDESCO**LTR ONLY
LAINAS**W/ENCL
F. ROSA**W/ENCL
VOLLMER**LTR ONLY
J. COLLINS**W/ENCL
KIRKWOOD**W/ENCL

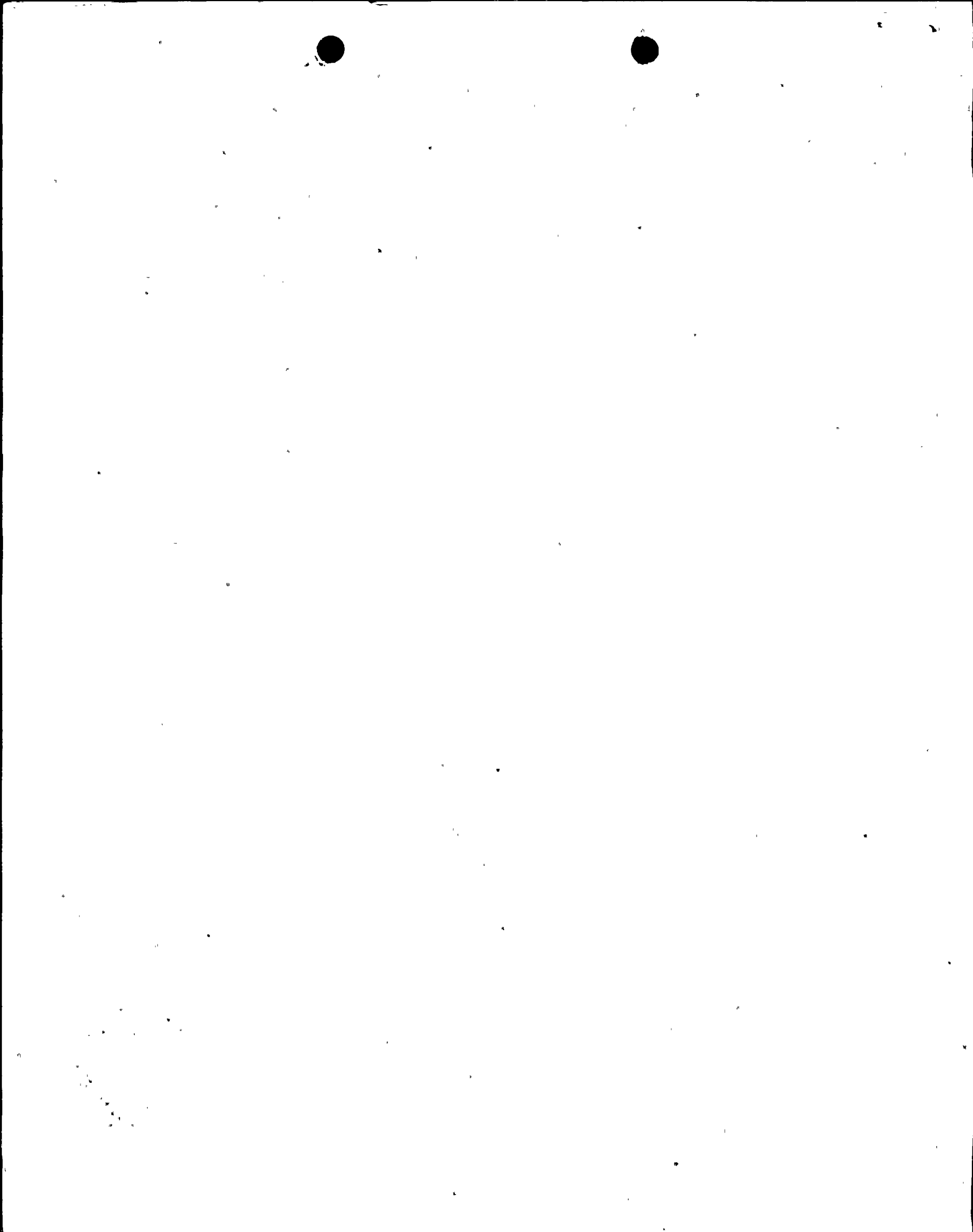
EXTERNAL: LPDR'S
SAN LUIS OBISPO, CA**W/ENCL
TIC**W/ENCL
NSIC**W/ENCL
ACRS CAT A**W/16 ENCL

DISTRIBUTION: LTR 56 ENCL 46
SIZE: 1P+1P

CONTROL NBR: 780830104

***** THE END *****

MA 4
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03/25/78

PACIFIC GAS AND ELECTRIC COMPANY

PG&E + 77 BEALE STREET, 31ST FLOOR • SAN FRANCISCO, CALIFORNIA 94106 • (415) 781-4211

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March 20, 1978

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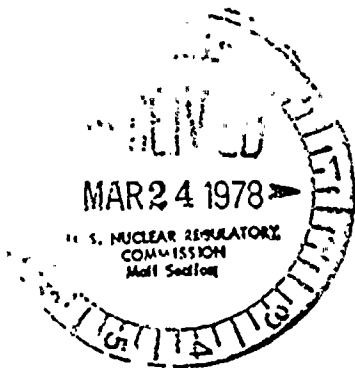
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ATTORNEYS

Mr. John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



Re: Docket No. 50-275-OL
Docket No. 50-323-OL
Diablo Canyon Units 1 & 2

Dear Mr. Stolz:

On January 24, 1978 we responded to your letter of November 22, 1977 regarding the Regulatory Staff's position on emergency power system designs for sustained degraded grid voltage conditions. The attached material, Emergency Power System Revisions, March 17, 1978, replaces Items 1, 2, 3, and 6 of Position 1 - additional points on page 2 of our response.

Kindly acknowledge receipt of this material on the enclosed copy of this letter and return it to me in the enclosed addressed envelope.

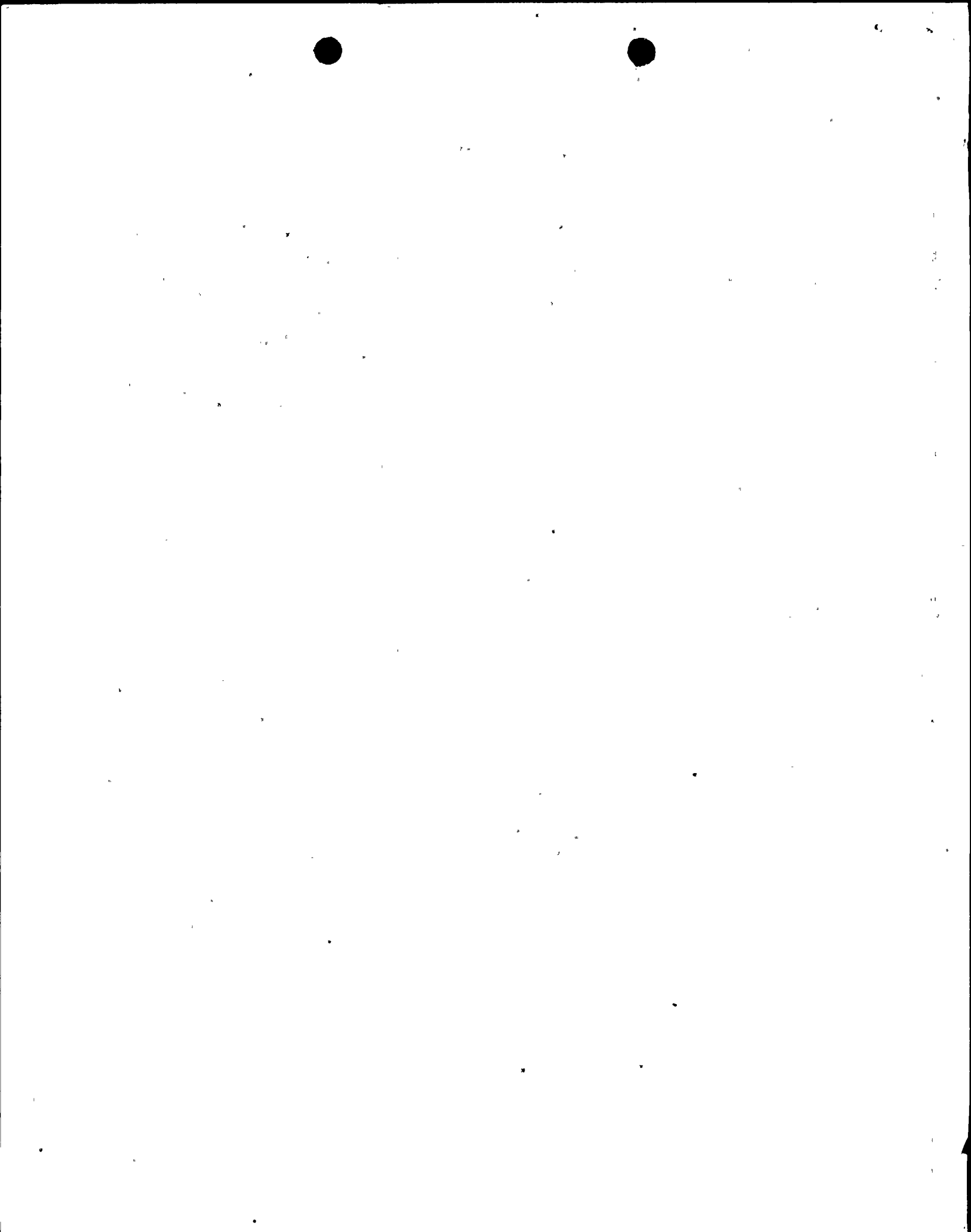
Very truly yours,

Philip A. Grewe, Jr.

Enclosures
CC w/enc.: Service List

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Boo
S
1/40



EMERGENCY POWER SYSTEM
REVISIONS
MARCH 17, 1978

1. Selection of voltage and time set points is based upon the consequences of the initiated action, system and plant status, and the variable sensed.

Initial transfer of ESF loads from the unit to the Standby Startup Source is delayed only 0.8 to 2.3 seconds, depending upon the degree of low voltage, in order to maintain plant operation.

The delay in starting the diesel generators upon detection of Standby Startup low voltage varies from 1.0 second at 0 volts to 6.4 seconds at 90 percent voltage. This prevents nuisance diesel generator starts and, at the same time, minimizes the period when a backup power source is not immediately available.

As described above, initiation of load shedding requires coincident detection and a time delay variable from 4 seconds at 0 volts to 19 seconds at 90 percent voltage. This design is utilized to provide maximum availability and adequate protection for the ESF equipment and to prevent undesirable load shedding.

2. Coincident logic is employed as described above. Offsite power sources are not actually tripped because high voltage breakers are not opened. Coincident logic is therefore not required to prevent spurious trips.
3. Starting of the diesel generator is delayed 1 to 6.4 seconds upon sensing of a low voltage condition on the Standby Startup Source. This delay does not, however, reduce the availability of the offsite source should a backup be required because it is still the preferred source once adequate voltage is restored.
6. Each ESF bus has its own set of protection relay and transfer schemes. The function and installation of these schemes are designed in accordance with IEEE Std. 279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations." Because there are three ESF buses and only two are required for system operation, no single failure in degraded grid protection equipment would result in an unsafe condition.

