

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8503150429 DOC. DATE: 85/03/11 NOTARIZED: NO DOCKET #:
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387
 AUTH. NAME: AUTHOR AFFILIATION
 CURTIS, N.W. Pennsylvania Power & Light Co.
 RECIP. NAME: RECIPIENT AFFILIATION
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Responds to request for addl info on 840518 proposed Amend
 43 to License NPF-14 re reactor protection sys electrical
 protecting assembly circuit breakers. One oversized drawing
 encl. Aperture card available in PDR.

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NOTES: 1cy NMSS/FCAF/PM. LPDR 2cys Transcripts. 05000387
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Pennsylvania Power & Light Company

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Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
215/770-7501

MAR 11 1985

Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
RESPONSE TO NRC QUESTIONS - AM. 43
ER 100450 FILE 841-8
PLA-2428

Docket No. 50-387

Reference: Letter, "Proposed Amendment 43 to License No. NPF-14",
N. W. Curtis to A. Schwencer, dated May 18, 1984

Dear Mr. Schwencer:

The following information is being supplied at the request of your staff in order to support their review of one of the changes in the referenced proposed amendment.

The change in question affects Specification 4.8.4.3a., which requires functional testing of the Reactor Protection System (RPS) Electrical Protection Assembly (EPA) circuit breakers. The change would allow the test to be performed only when in COLD SHUTDOWN for at least 24 hours if the test has not been performed within the previous six months, as opposed to every six months regardless of operating condition.

The reason the change was proposed was to avoid a choice between performing the test at power with a higher than usual probability of scram and unnecessary cycling of equipment, or taking an unplanned shutdown to perform the test.

On February 22, 1985 in a telecon with members of the NRC staff, PP&L supplied the following information pertinent to this issue:

- o Portions of the Reactor Building Chilled Water system (RBCW) isolate upon the loss of an RPS power supply. The major effect this isolation has is loss of cooling water to the reactor recirculation pumps (see Detail "A" of the attached drawing, which provides the control scheme for the affected solenoid valves SV18791 A1, A2, B1, B2). Based on our experience, it is

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SSES
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Mr. A. Schwencer

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File 841-8

our position that these pumps will have to be shutdown within approximately ten minutes should cooling not be restored; this will force unit shutdown per the Technical Specifications (3.4.1.1).

- o Reactor Building Ventilation system Zones I and III isolate (fans trip, dampers close) upon loss of an RPS power supply. Both HPCI and RCIC pipe routing areas heat up due to the subsequent lack of ventilation; our experience has shown that these systems will isolate on high temperature (sensed by leak detection instrumentation) within 10-15 minutes. Loss of both of these high pressure systems forces Specification 3.0.3, which requires immediate unit shutdown.
 - o The Reactor Water Cleanup system (RWCU) inboard isolation valves close on loss of an RPS power supply. Should the holding pump not get up to speed fast enough after the isolation (this is not an uncommon occurrence), the filter resins will be lost. The resins then become an unnecessary input to the solid radwaste system, which makes our goal of radwaste minimization more difficult to achieve.
 - o Operations personnel will lose approximately one entire shift (8 hours) of normal work time due to preparation and recovery from the subject test, if shutdown does not occur. This can be broken down as follows:
 - o restoration of normal Reactor Building ventilation - 2 hours.
 - o probable replacement of RWCU filter - 5 hours.
 - o regular shift logging - 3 hours.
- It is important to note that the regular logging will be hurried and that few, if any work authorizations would be provided from operations during the affected shift.
- o Finally, it is PP&L's position that this test, if required unconditionally every six months, constitutes unnecessary overcycling of equipment. The attached listing shows the individual components affected by the loss of either the "A" or "B" RPS power supply.



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ER 100450 File 841-8
Mr. A. Schwencer

If you need any further clarification on this issue, please contact Mr.
R. Sgarro at (215) 770-7855.

Very truly yours,



N. W. Curtis
Vice President-Engineering & Construction-Nuclear

Attachments

cc: M. J. Campagnone USNRC
R. H. Jacobs USNRC

T. M. Gerusky, Director
Bureau of Radiation Protection
Pa. Dept. of Environmental Resources
P. O. Box 2063
Harrisburg, PA 17120

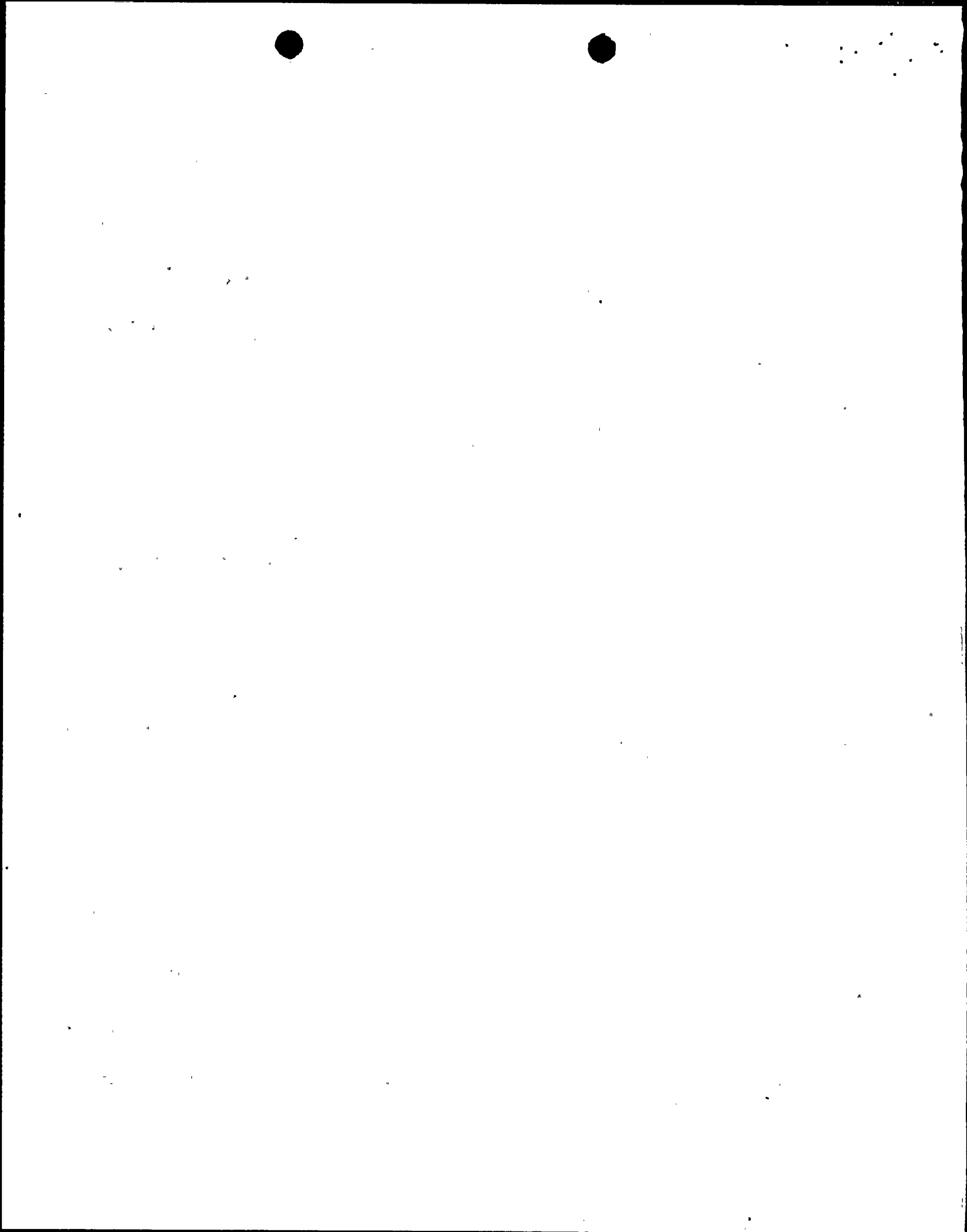
Automatic Operations on Loss of "A" RPS Power Supply

<u>EQUIPMENT IDENTIFICATION</u>	<u>AUTOMATIC OPERATION</u>	
HV-151F015A	RHR Inboard Injection Valve If In Shutdown Cooling Mode	Closes
HV-143F019	Reactor Water Sample Inboard Valve	Closes
HV-144F001	Reactor Water Cleanup Inboard Valve	Closes
HV-151F009	RHR Suction Cooling Inboard Valve	Closes
HV-151F022	RHR Reactor Head Spray Inboard Valve	Closes
HV-151F079A	RHR Sample Line A Inboard Valve	Closes
HV-151F080A	RHR Sample Line A Outboard Valve	Closes
HV-151F040	RHR Discharge to Radwaste Inboard Valve	Closes
HV-141F016	Main Steam Drain Inboard Valve	Closes
SV-15725	Suppression Chamber In Purge Isolation Valve	Closes
SV-15722	Containment Purge In Isolation Valve	Closes
1P506A	RHR SW Pump 1A	Trips
SV-18791A1	Reactor Building Chilled Water Isolation Valve	Closes
SV-18791A2	Reactor Building Chilled Water Isolation Valve	Closes
SV-18792A1	Reactor Building Chilled Water Isolation Valve	Closes
SV-18792A2	Reactor Building Chilled Water Isolation Valve	Closes
HD-17524A	Reactor Building Zone One Damper	Closes
HD-17576A	Reactor Building Zone One Damper	Closes
HD-17586A	Reactor Building Zone One Damper	Closes
HD-17601A	Reactor Building Recirc Damper	Opens
HD-17602A	Reactor Building Recirc Damper	Opens
HD-17657A	Reactor Building Recirc Damper	Opens
HD-17508A	Drywell Purge Damper	Closes
SV-16108A1	Drywell Floor Drain Sump Valve	Closes
SV-16116A1	Drywell Equipment Drain Tank Valve	Closes
OV105	Control Structure Access and Lab Area Supply Fan	Trips
OV101A	Control Room Emergency Fan Air Supply	Starts
OV101B	Control Room Emergency Fan Air Supply	Starts
HD-07872A	Control Room Toilet Exhaust Damper	Closes
HD-07872B	Control Room Toilet Exhaust Damper	Closes
HD-07873A	Control Room Kitchen/Conf. Room Exhaust Damper	Closes
HD-07873B	Control Room Kitchen/Conf. Room Exhaust Damper	Closes
HD-07802A	Outside Air Supply Damper	Closes
HD-07802B	Outside Air Supply Damper	Closes
1V206A	Reactor building Zone One Equipment Exhaust Fan	Trips
SV-15752A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15742A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15774A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15734A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15740A	Cont. Gas Analyzer Isolation Loop A	Closes

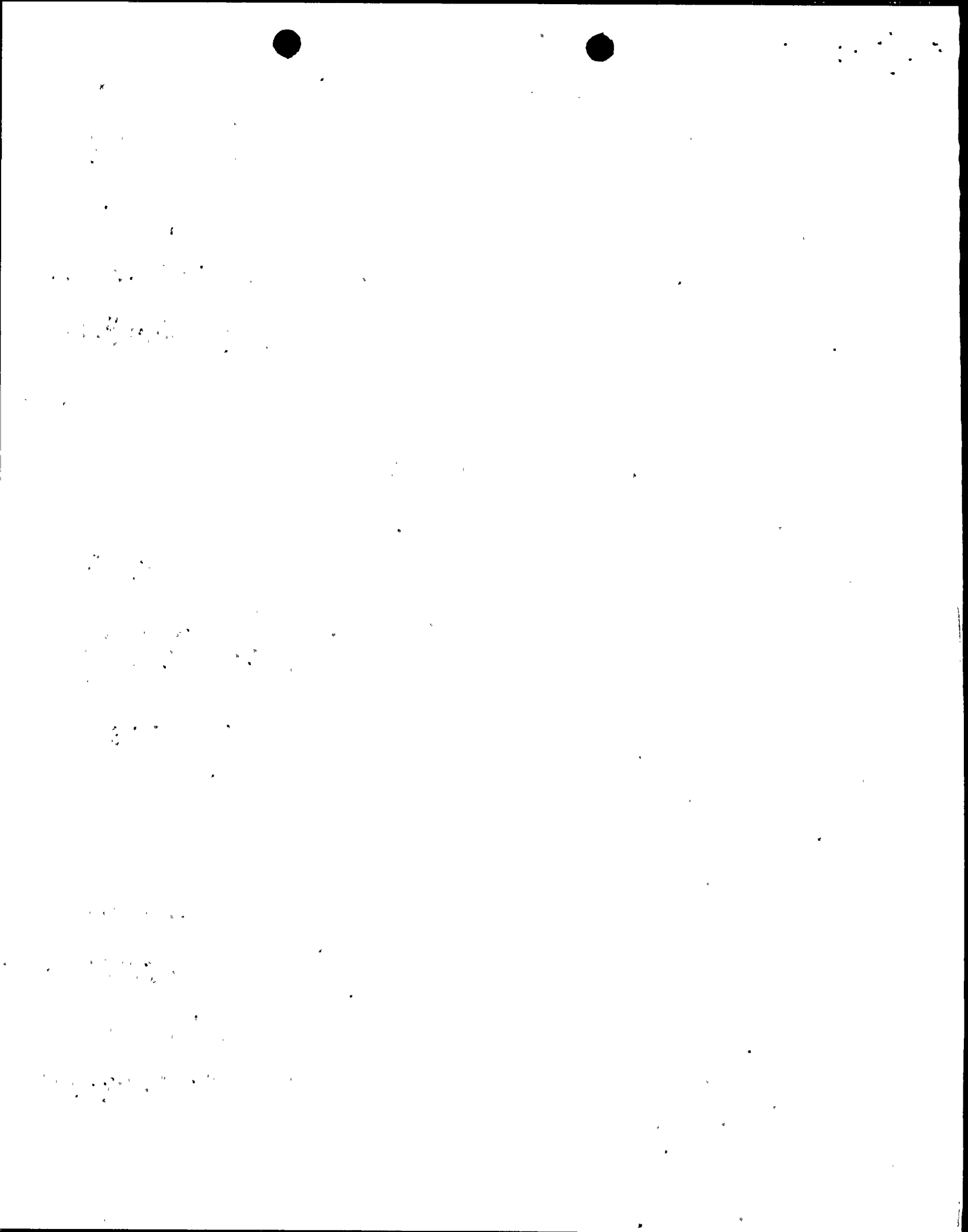


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SV-15750A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15776A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15782A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15736A	Cont. Gas Analyzer Isolation Loop A	Closes
SV-15780A	Cont. Gas Analyzer Isolation Loop A	Closes
1V219A	Containment Gas Analyzer Pump	Trips
1V220A1	Cont Gas Rad Monitor Pmp	Trips
1V220A2	Cont Gas Rad Monitor Pmp	Trips
HV-15713	Containment Purge Exhaust Isolation Valve	Closes
HV-15703	Suppression Pool Exhaust Isolation Valve	Closes
SV-12661	Instrument Gas TIP Index.Iso. Valve	Closes
SV-12671	Instrument Gas Vacuum Relief Isolation Valve	Closes
HV-15766	Suppression Pool Filter Pump Suction Valve	Closes
FV-15769	Suppression Pool Filter Pump Discharge Valve	Closes
1P229	Suppression Pool Filter Pump	Trips
OV201A	Reactor Building Recirculation Fan	Starts
HD-07543A	Zone III Recirculation Damper	Opens
HD-17502A	Zone III Isolation Damper	Close
HD-17514A	Zone III Isolation Damper	Close
HD-17564A	Zone III Isolation Damper	Close
HD-27502A	Zone III Isolation Damper	Close
HD-27514A	Zone III Isolation Damper	Close
HD-27564A	Zone III Isolation Damper	Close
HD-07554A	SBGTS Control Damper	Opens
OV109A(B)	Lead SBT Fan	Starts
HD-17534A	Airlock Isolation Damper	Closes
HD-17534B	Airlock Isolation Damper	Closes
HD-17534C	Airlock Isolation Damper	Closes
HD-17534D	Airlock Isolation Damper	Closes
HD-17534E	Airlock Isolation Damper	Closes
HD-17534F	Airlock Isolation Damper	Closes
HD-17534H	Airlock Isolation Damper	Closes
HD-27534A	Airlock Isolation Damper	Closes
HD-27534B	Airlock Isolation Damper	Closes
HD-27534C	Airlock Isolation Damper	Closes
HD-27534D	Airlock Isolation Damper	Closes
HD-27534E	Airlock Isolation Damper	Closes
HD-27534F	Airlock Isolation Damper	Closes
HD-27534G	Airlock Isolation Damper	Closes
HD-27534H	Airlock Isolation Damper	Closes
HD-27534I	Airlock Isolation Damper	Closes
1V217A	Zone Three Filter Exhaust Fan	Trips
2V217A	Zone Three Filter Exhaust Fan	Trips
Channel A	Main Steam Monitor	De-energized
Channel C	Main Steam Monitor	De-energized



Channel A	Refueling Floor Wall Exhaust Hi Rad Monitor	De-energized
Channel A	Refueling Floor High Wxhaust Hi Rad Monitor	De-energized
Channel A	SBG T Exhaust Vent Hi Rad Monitor	De-energized
Channel A	Emergency Outside Air Hi Rad Monitor	De-energized
Channel A	Access Area Hi Rad Monitor	De-energized

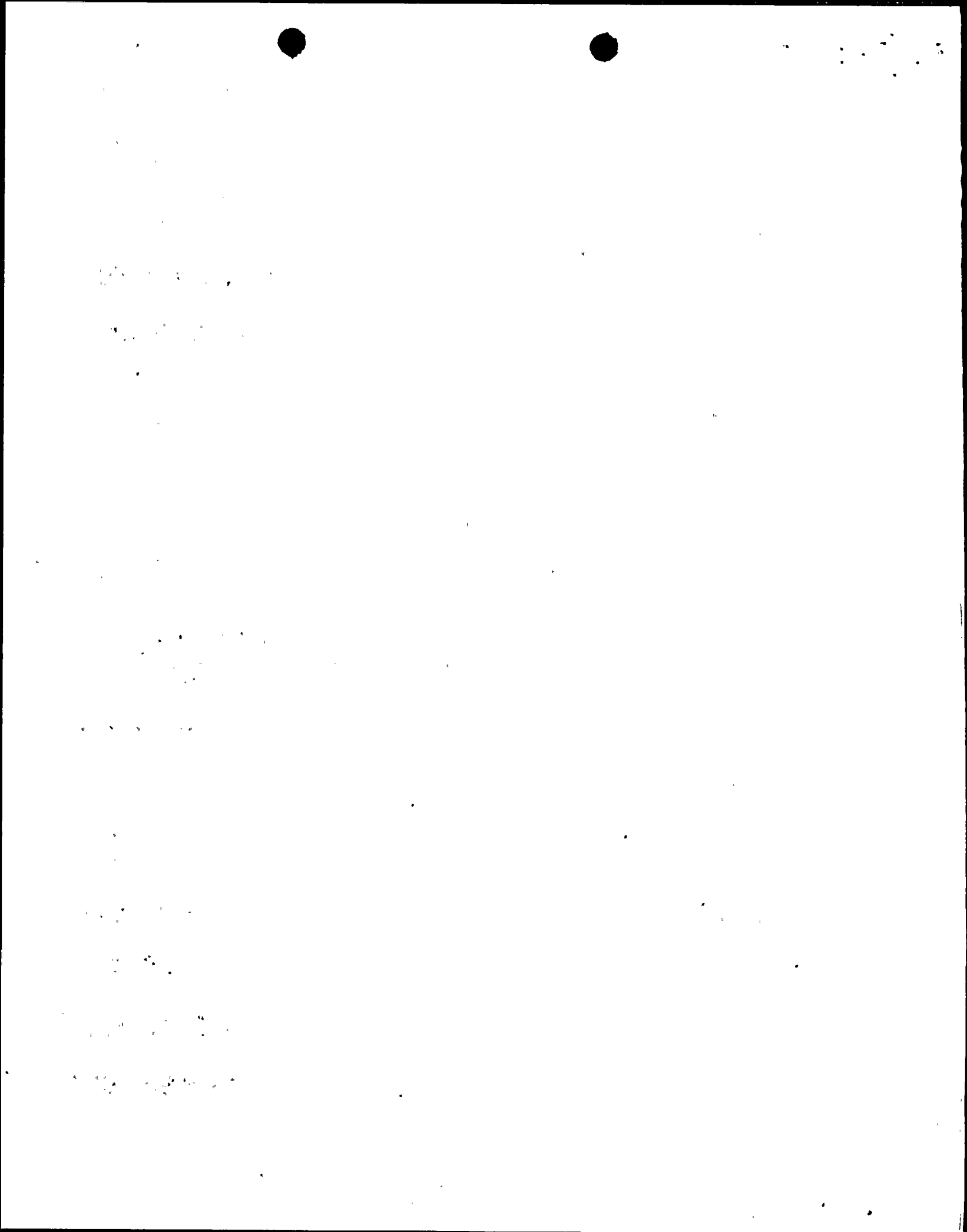


Automatic Operations on Loss of "B" RPS Power Supply

EQUIPMENT IDENTIFICATION

AUTOMATIC OPERATION

HV-15768	Suppression Pool Filter Pump Suction Valve	Closes
1P506B	RHR SW Pump 1B	Trips
SV-15704	Supp. Chamber Vent Isolation Valve	Closes
SV-15714	Containment Vent Isolation Valve	Closes
SV-15721	Nitrogen Purge Isolation Valve	Closes
SV-15723	Containment Isolation Air Purge Valve	Closes
SV-15724	Supp. Chamber Air Purge Isolation Valve	Closes
SV-18791B1	Reactor Building Chilled Water Isolation Valve	Closes
SV-18791B2	Reactor Building Chilled Water Isolation Valve	Closes
SV-18792B1	Reactor Building Chilled Water Isolation Valve	Closes
SV-18792B2	Reactor Building Chilled Water Isolation Valve	Closes
HD-17524B	Reactor Building Zone One Damper	Closes
HD-17576B	Reactor Building Zone One Damper	Closes
HD-17586B	Reactor Building Zone One Damper	Closes
HD-17601B	Reactor Building Recirc Dampers	Opens
HD-17602B	Reactor Building Recirc Dampers	Opens
HD-17657B	Reactor Building Recirc Dampers	Opens
HD-17508B	Drywell Purge Valve	Closes
SV-16108A2	Drywell Floor Drain Sump Valve	Closes
SV-16116A2	Drywell Equipment Drain Tank Valve	Closes
HD-07802A	Outside Air Supply Damper	Closes
HD-07802B	Outside Air Supply Damper	Closes
OV105	Control Structure Access and Lab Area Supply Fan	Trips
OV101A	Control Room Emergency Fan Air Supply	Starts
OV101B	Control Room Emergency Fan Air Supply	Starts
HD-07872A	Control Room Toilet Exhaust Damper	Closes
HD-07872B	Control Room Toilet Exhaust Damper	Closes
HD-07873A	Control Room Kitchen/Conf. -Room Exhaust Damper	Closes
HD-07873B	Control Room Kitchen/Conf. Room Exhaust Damper	Closes
1V206B	Reactor Building Zone One Equipment Exhaust Fan	Trips
SV-15737	Supp. Pool Nitrogen Makeup Valve	Closes
SV-15767	Supp. Pool Nitrogen Makeup Valve	Closes
SV-15738	Supp. Pool Nitrogen Makeup Valve	Closes
SV-15768	Supp. Pool Nitrogen Makeup Valve	Closes
HV-15705	SGTS Exhaust Bypass - Supp. Pool	Closes
HV-15711	SGTS Exhaust Bypass - Drywell	Closes
SV-12643	ADS Instrument Gas Valve	Opens
SV-12644	ADS Instrument Gas Valve	Closes
SV-12648	ADS Instrument Gas Valve	Closes

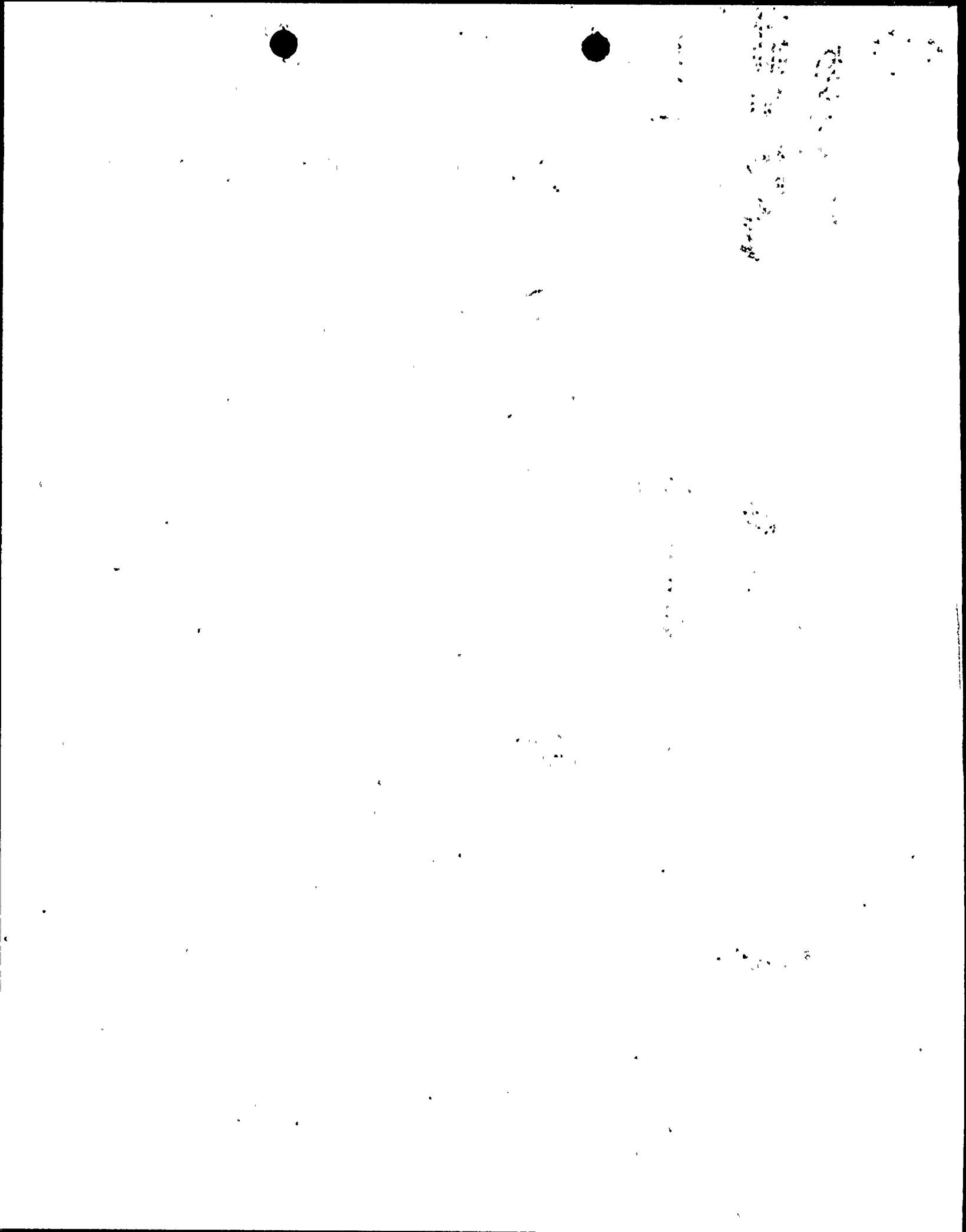


SV-12649	ADS Instrument Gas Valve	Opens
HV-144F004	Reactor Water Cleanup Outboard Valve	Closes
HV-151F008	RHR Suction Cooling Outboard Valve	Closes
HV-151F023	RHR Reactor Head Spray Outboard Valve	Closes
HV-151F079B	RHR Sample Line B Inboard Valve	Closes
HV-151F080B	RHR Sample Line B Outboard Valve	Closes
HV-151F049	RHR Discharge to Rad-Waste Inboard	Closes
HV-141F019	Main Steam Drain Outboard Valve	Closes
HV-151F015B	RHR Inboard Injection Valve If In Shutdown Cooling Mode	Closes
HV-143F020	Reactor Water Sample Outboard Valve	Closes
SV-15742B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15752B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15774B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15734B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15782B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15740B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15750B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15776B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15736B	Containment Gas Analyzer Iso. Loop B	Closes
SV-15780B	Containment Gas Analyzer Iso. Loop B	Closes
1V219B	Containment Gas Analyzer Pump	Trips
1V220B1	Cont Gas Rad Monitor Pmp	Trips
1V220B2	Cont Gas Rad Monitor Pmp	Trips
TIP	Probe Retracts and Ball Valves	Close
OV201B	Zone III Recirculation Fan	Starts
1V217B	Zone III Filtered Exhaust Fan	Trips
2V217B	Zone III Filtered Exhaust Fan	Trips
OV109A(B)	Lead SBTG Fan	Starts
HD-07554B	SBGTS Control Damper	Opens
HD-07543B	Zone III Recirculation Damper	Opens
HD-17502B	Zone III Isolation Damper	Closes
HD-17514B	Zone III Isolation Damper	Closes
HD-17564B	Zone III Isolation Damper	Closes
HD-27502B	Zone III Isolation Damper	Closes
HD-27514B	Zone III Isolation Damper	Closes
HD-27564B	Zone III Isolation Damper	Closes
Channel B	Main Steam Monitor	De-energized
Channel D	Main Steam Monitor	De-energized
Channel B	Refueling Floor Wall Exhaust Hi Rad Monitor	De-energized
Channel B	Refueling Floor High Exhaust Hi Rad Monitor	De-energized
Channel B	SBGT Exhaust Vent Hi Rad Monitor	De-energized
Channel B	Emergency Outside Air Hi Rad Monitor	De-energized
Channel B	Access Area Hi Rad Monitor	De-energized

Automatic Operations On Loss of Both "A" and "B" RPS Power Supplies

<u>EQUIPMENT IDENTIFICATION</u>		<u>AUTOMATIC OPERATION</u>
HV-141F022A	Main Steam Isolation Valve-Inboard	Closes
HV-141F022B	Main Steam Isolation Valve-Inboard	Closes
HV-141F022C	Main Steam Isolation Valve-Inboard	Closes
HV-141F022D	Main Steam Isolation Valve-Inboard	Closes
HV-141F028A	Main Steam Isolation Valve-Outboard	Closes
HV-141F028B	Main Steam Isolation Valve-Outboard	Closes
HV-141F028C	Main Steam Isolation Valve-Outboard	Closes
HV-141F028D	Main Steam Isolation Valve-Outboard	Closes

Additionally, all equipment in Attachment B and C Operates.



March 05, 1985

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DOCKET NO(S). 50-387/388

Mr. Norman W. Curtis, Vice President
Engineering and Construction
Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

The following documents concerning our review of the subject facility are transmitted for your information.

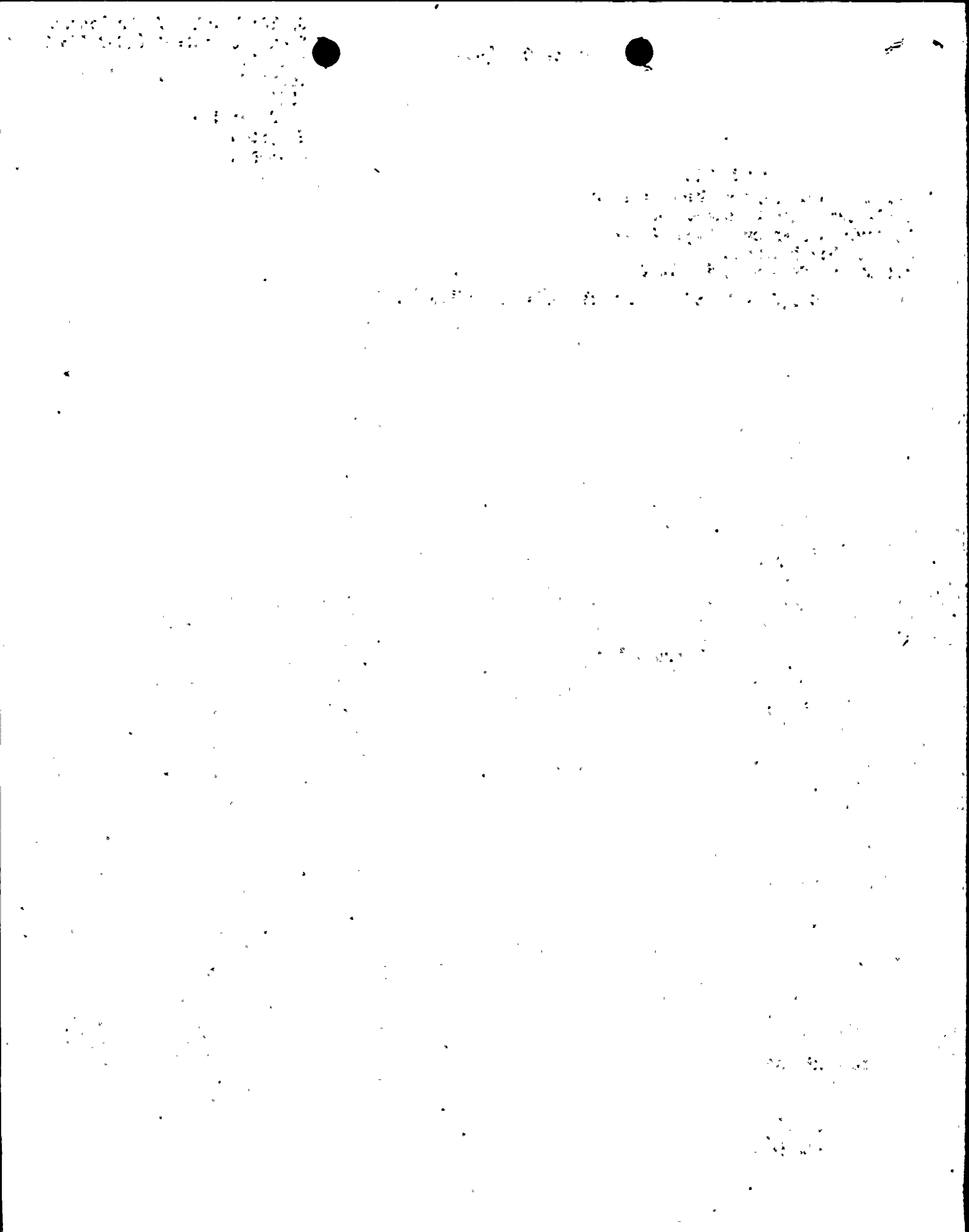
- Notice of Receipt of Application, dated _____.
- Draft/Final Environmental Statment, dated _____.
- Notice of Availability of Draft/Final Environmental Statement, dated _____.
- Safety Evaluation Report, or Supplement No. _____, dated _____.
- Notice of Hearing on Application for Construction Permit, dated _____.
- Notice of Consideration of Issuance of Facility Operating License, dated _____.
- Monthly Notice; Applications and Amendments to Operating Licenses Involving no Significant Hazards Considerations, dated February 1985.
- Application and Safety Analysis Report, Volume _____.
- Amendment No. _____ to Application/SAR dated _____.
- Construction Permit No. CPPR- _____, Amendment No. _____ dated _____.
- Facility Operating License No. _____, Amendment No. _____, dated _____.
- Order Extending Construction Completion Date, dated _____.
- Other (Specify) _____

Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc: See next page

OFFICE	LB#2/D/						
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DATE	3-5-85						



Susquehanna

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