

November 21, 1989

Docket Nos. 50-237
and 50-249

Mr. Thomas J. Kovach
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

DISTRIBUTION
Docket file
PDIII-2 r/f
LLuther
OGC
EJordan
WJones
ACRS (10)
OC/LFMB
JCraig

NRC & Local PDRs
JZwolinski
BSiegel
DHagan
GHill (8)
JCalvo
GPA/PA
Plant file

Dear Mr. Kovach:

SUBJECT: TECHNICAL SPECIFICATION AMENDMENTS RELATED TO 4KV UNDERVOLTAGE
SETTING (TAC NOS. 67562 AND 67563)

Re: Dresden Nuclear Power Station, Unit Nos. 2 and 3

The Commission has issued the enclosed Amendment No. 108 to Provisional
Operating License No. DPR-19 for Dresden Unit 2 and Amendment No. 103 to
Facility Operating License No. DPR-25 for Dresden Unit 3. The amendments
are in response to your application dated March 28, 1988.

The amendments correct the discrepancy between the Technical Specification
Table 3.2.2 value for 4KV emergency bus undervoltage trip (3092V) and the
current trip value (2930V) and includes administrative changes which add
clarity and conciseness to the Technical Specifications. However, two of the
Technical Specification you proposed, deletion of "Permissive for starting
ECCS pumps" from page 3/4.2-10 and the addition of a new note 6 Table 3.2-2
have been rejected. The bases for these rejections are discussed in our Safety
Evaluation, and we have also enclosed the Notice of Denial.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance
is being filed with the Office of the Federal Register for publication.

Sincerely,

151

Byron L. Siegel, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 108 to License No. DPR-19
2. Amendment No. 103 to License No. DPR-25
3. Safety Evaluation
4. Denial Notice

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cc w/enclosures:
See next page

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Sincerely,

Byron L. Siegel, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

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2. Amendment No. 103 to
License No. DPR-25
3. Safety Evaluation
4. Denial Notice

cc w/enclosures:
See next page

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PDIII-2
BSiegel
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PDIII-2
PShemanski
10/ /89

OGC *CB*
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 21, 1989

Docket Nos. 50-237
and 50-249

Mr. Thomas J. Kovach
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Kovach:

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SETTING (TAC NOS. 67562 AND 67563)

Re: Dresden Nuclear Power Station, Unit Nos. 2 and 3

The Commission has issued the enclosed Amendment No. 108 to Provisional Operating License No. DPR-19 for Dresden Unit 2 and Amendment No. 103 to Facility Operating License No. DPR-25 for Dresden Unit 3. The amendments are in response to your application dated March 28, 1988.

The amendments correct the discrepancy between the Technical Specification Table 3.2.2 value for 4KV emergency bus undervoltage trip (3092V) and the current trip value (2930V) and includes administrative changes which add clarity and conciseness to the Technical Specifications. However, two of the Technical Specification you proposed, deletion of "Permissive for starting ECCS pumps" from page 3/4.2-10 and the addition of a new note 6 Table 3.2-2 have been rejected. The bases for these rejections are discussed in our Safety Evaluation, and we have also enclosed the Notice of Denial.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance is being filed with the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in cursive script that reads "Byron L. Siegel".

Byron L. Siegel, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 108 to License No. DPR-19
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cc w/enclosures:
See next page

Mr. Thomas J. Kovach
Commonwealth Edison Company

Dresden Nuclear Power Station
Units 2 and 3

cc:

Michael I. Miller, Esq.
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Resident Inspectors Office
Dresden Station
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Morris, Illinois 60450

Chairman
Board of Supervisors of
Grundy County
Grundy County Courthouse
Morris, Illinois 60450

Regional Administrator
Nuclear Regulatory Commission, Region III
799 Roosevelt Road, Bldg. #4
Glen Ellyn, Illinois 60137

Illinois Department of Nuclear Safety
Office of Nuclear Facility Safety
1035 Outer Park Drive
Springfield, Illinois 62704



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 108
License No. DPR-19

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated March 28, 1988 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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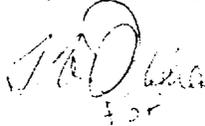
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B. of Provisional Operating License No. DPR-19 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 108, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John W. Craig, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 21, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 108

PROVISIONAL OPERATING LICENSE DPR-19

DOCKET NO. 50-237

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3/4.2-10

B 3/4.2-33

INSERT

3/4.2-10

B 3/4.2-33

B 3/4.2-33a

TABLE 3.2.2
 INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Min. No. of Operable Inst. Channels per Trip System (1)	Trip Function	Trip Level Setting	Remarks
2	Reactor Low Low Water Level	84" (plus 4, minus 0 inches) above top of active fuel (5)	1. In conjunction with low reactor pressure initiates core spray and LPCI. 2. In conjunction with high dry-well pressure, 120 sec. time delay, and low pressure core cooling interlock initiates auto blowdown. 3. Initiates HPCI and SBGTS. 4. Initiates starting of diesel generators.
2	High Drywell Pressure (2), (3)	Less than or equal to 2 PSIG	1. Initiates core spray LPCI, HPCI, and SBGTS. 2. In conjunction with low low water level 120 sec. time delay and low pressure core cooling interlock initiates auto blowdown. 3. Initiates starting of diesel generators.
1	Reactor Low Pressure	Greater than or equal to 300 PSIG & less than or equal to 350 PSIG	1. Permissive for opening core spray and LPCI admission valves. 2. In conjunction with low low reactor water level initiates core spray and LPCI.
1(4)	Containment Spray Interlock 2/3 Core Height	Greater than or equal to 2/3 core height	Prevents inadvertent operation of containment spray during accident conditions.
2(4)	Containment High Pressure	Greater than or equal to 0.5 PSIG & less than or equal to 1.5 PSIG	Prevents inadvertent operation of containment spray during accident conditions.
1	Timer Auto Blowdown	Less than or equal to 120 seconds	In conjunction with low low reactor water level, high dry-well pressure and low pressure core cooling interlock initiates auto blowdown.
2	Low Pressure Core Cooling Pump Discharge Pressure	Greater than or equal to 50 PSIG & less than or equal 100 PSIG	* Defers APR actuation pending confirmation of low pressure core cooling system operation.
2/Bus	4 KV Loss of Voltage Emergency Buses	Trip on 2930 volts plus or minus 5% decreasing voltage	1. Initiates starting of diesel generators. 2. Permissive for starting ECCS pumps. 3. Removes nonessential loads from buses. 4. Trips emergency bus normal feed breakers.
2	Sustained High Reactor Pressure	Less than or equal to 1070 PSIG for 15 seconds	Initiates isolation condenser.
2/Bus	Degraded Voltage on 4 KV Emergency Buses	Greater than or equal to 3708 volts (equals 3784 volts less 2% tolerance) after less than or equal to 5 minutes (plus 5% tolerance) with a 7 second (plus or minus 20%) inherent time delay	Initiates alarm and picks up time delay relay. Diesel generator picks up load if degraded voltage not corrected after time delay.

Notes: (See next page)

3.2 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

For effective emergency core cooling for small pipe breaks, the HPCI system must function since reactor pressure does not decrease rapidly enough to allow either core spray or LPCI to operate in time. The automatic pressure relief function is provided as a backup to the HPCI in the event the HPCI does not operate. The arrangement of the tripping contacts is such as to provide this function when necessary and minimize spurious operation. The trip settings given in the specification are adequate to assure the above criteria are met (Ref. SAR Section 6.2.6.3). The specification preserves the effectiveness of the system during periods of maintenance, testing or calibration and also minimizes the risk of inadvertent operation; i.e., only one instrument channel out of service.

Two radiation monitors are provided on the refueling floor which initiate isolation of the reactor building and operation of the standby gas treatment systems. The trip logic is one out of two. Trip settings of less than or equal to 100 mR/hr for the monitors on the refueling floor are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the reactor building via the normal ventilation stack but that all the activity is processed by the standby gas treatment system.

The instrumentation which is provided to monitor the post accident condition is listed in Table 3.2.6. The instrumentation listed and the limiting conditions for operation on these systems ensure adequate monitoring of the containment following a loss-of-coolant accident. Information from this instrumentation will provide the operator with a detailed knowledge of the conditions resulting from the accident. Based on this information he can make logical decisions regarding post accident recovery.

The specifications allow for post accident instrumentation to be out of service for a period of 30 days. This period is based on the fact that several diverse instruments are available for guiding the operator should an accident occur, on the low probability of an instrument being out of service and an accident occurring in the 30-day period, and on engineering judgment.

The radioactive liquid and gaseous effluent instrumentation is provided to monitor the release of radioactive materials in liquid and gaseous effluents during releases. The alarm setpoints for the instruments are provided to ensure that the alarms will occur prior to exceeding the limits of 10 CFR 20.

The relay setting for 4KV emergency bus loss of voltage is chosen to give positive indication of the need to start the diesel generator,

3.2 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

without being affected by normal voltage fluctuations due to pumps starting. Reset of the relay, approximately 11% above the trip point, indicates that the diesel generator has restored bus voltage and will accept ECCS loads. The reset signal provides a permissive for starting ECCS pumps.

The setting for 4KV emergency bus degraded voltage is chosen to detect sustained degraded voltage which may cause equipment damage, while preventing trips caused by voltage fluctuations. The reset point for degraded voltage indicates restoration of normal bus voltage.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 103
License No. DPR-25

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated March 28, 1988 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B. of Facility Operating License No. DPR-25 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 103, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John W. Craig, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 21, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 103

FACILITY OPERATING LICENSE DPR-25

DOCKET NO. 50-249

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3/4.2-10

B 3/4.2-33

INSERT

3/4.2-10

B 3/4.2-33

B 3/4.2-33a

TABLE 3.2.2
 INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

<u>Min. No. of Operable Inst. Channels per Trip System (1)</u>	<u>Trip Function</u>	<u>Trip Level Setting</u>	<u>Remarks</u>
(2)	Reactor Low Low Water Level	84" (plus 4, minus 0 inches) above top of active fuel (5)	<ol style="list-style-type: none"> 1. In conjunction with low reactor pressure initiates core spray and LPCI. 2. In conjunction with high dry-well pressure, 120 sec. time delay, and low pressure core cooling interlock initiates auto blowdown. 3. Initiates HPCI and SBGTS. 4. Initiates starting of diesel generators.
2	High Drywell Pressure (2), (3)	Less than or equal to 2 PSIG	<ol style="list-style-type: none"> 1. Initiates core spray LPCI, HPCI, and SBGTS. 2. In conjunction with low low water level 120 sec. time delay and low pressure core cooling interlock initiates auto blowdown. 3. Initiates starting of diesel generators.
1	Reactor Low Pressure	Greater than or equal to 300 PSIG & less than or equal to 350 PSIG	<ol style="list-style-type: none"> 1. Permissive for opening core spray and LPCI admission valves. 2. In conjunction with low low reactor water level initiates core spray and LPCI.
1(4)	Containment Spray Interlock 2/3 Core Height	Greater than or equal to 2/3 core height	Prevents inadvertent operation of containment spray during accident conditions.
2(4)	Containment High Pressure	Greater than or equal to 0.5 PSIG & less than or equal to 1.5 PSIG	Prevents inadvertent operation of containment spray during accident conditions.
1	Timer Auto Blowdown	Less than or equal to 120 seconds	In conjunction with low low reactor water level, high dry-well pressure and low pressure core cooling interlock initiates auto blowdown.
2	Low Pressure Core Cooling Pump Discharge Pressure	Greater than or equal to 50 PSIG & less than or equal 100 PSIG	* Defers APR actuation pending confirmation of low pressure core cooling system operation.
2/Bus	4 KV Loss of Voltage Emergency Buses	Trip on 2930 volts plus or minus 5% decreasing voltage	<ol style="list-style-type: none"> 1. Initiates starting of diesel generators. 2. Permissive for starting ECCS pumps. 3. Removes nonessential loads from buses. 4. Trips emergency bus normal feed breakers.
2	Sustained High Reactor Pressure	Less than or equal to 1070 PSIG for 15 seconds	Initiates isolation condenser.
2/Bus	Degraded Voltage on 4 KV Emergency Buses	Greater than or equal to 3708 volts (equals 3784 volts less 2% tolerance) after less than or equal to 5 minutes (plus 5% tolerance) with a 7 second (plus or minus 20%) inherent time delay	Initiates alarm and picks up time delay relay. Diesel generator picks up load if degraded voltage not corrected after time delay.

Notes: (See next page)

3.2 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

For effective emergency core cooling for small pipe breaks, the HPCI system must function since reactor pressure does not decrease rapidly enough to allow either core spray or LPCI to operate in time. The automatic pressure relief function is provided as a backup to the HPCI in the event the HPCI does not operate. The arrangement of the tripping contacts is such as to provide this function when necessary and minimize spurious operation. The trip settings given in the specification are adequate to assure the above criteria are met. (Ref. Section 6.2.6.3 SAR.) The specification preserves the effectiveness of the system during periods of maintenance, testing, or calibration, and also minimizes the risk of inadvertent operation; i.e., only one instrument channel out of service.

Two radiation monitors are provided on the refueling floor which initiate isolation of the reactor building and operation of the standby gas treatment systems. The trip logic is one out of two. Trip settings of less than or equal to 100 mR/hr for the monitors on the refueling floor are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the reactor building via the normal ventilation stack but that all the activity is processed by the standby gas treatment system.

The instrumentation which is provided to monitor the post accident condition is listed in Table 3.2.6. The instrumentation listed and the limiting conditions for operation on these systems ensure adequate monitoring of the containment following a loss-of-coolant accident. Information from this instrumentation will provide the operator with a detailed knowledge of the conditions resulting from the accident. Based on this information he can make logical decisions regarding post accident recovery.

The specifications allow for post accident instrumentation to be out of service for a period of 30 days. This period is based on the fact that several diverse instruments are available for guiding the operator should an accident occur, on the low probability of an instrument being out of service and an accident occurring in the 30-day period, and on engineering judgment.

The radioactive liquid and gaseous effluent instrumentation is provided to monitor the release of radioactive materials in liquid and gaseous effluents during releases. The alarm setpoints for the instruments are provided to ensure that the alarms will occur prior to exceeding the limits of 10 CFR 20.

The relay setting for 4KV emergency bus loss of voltage is chosen to give positive indication of the need to start the diesel generator, without being affected by normal voltage fluctuations due to pumps starting.

3.2 LIMITING CONDITION FOR OPERATION BASES (Cont'd.)

Reset of the relay, approximately 11% above the trip point, indicates that the diesel generator has restored bus voltage and will accept ECCS Loads. The reset signal provides a permissive for starting ECCS pumps.

The setting for 4KV emergency bus degraded voltage is chosen to detect sustained degraded voltage which may cause equipment damage, while preventing trips caused by voltage fluctuations. The reset point for degraded voltage indicates restoration of normal bus voltage.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 108 TO PROVISIONAL OPERATING LICENSE NO. DPR-19
AND AMENDMENT NO. 103 TO FACILITY OPERATING LICENSE NO. DPR-25

COMMONWEALTH EDISON COMPANY

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

DOCKET NOS. 50-237 AND 50-249

1.0 INTRODUCTION

By letter dated March 28, 1988, the licensee for Dresden Nuclear Power Station, Units 2 and 3, requested various changes to the plant's Technical Specifications related to the 4KV loss of voltage and degraded voltage relays. The staff has reviewed the requested changes and finds five acceptable and two unacceptable as discussed below.

2.0 EVALUATION

The licensee proposed the following editorial type changes to the plants Technical Specifications:

- Change 1 - On page 3/4.2-10 under the column "Trip Function" delete "Undervoltage on 4KV Emergency Buses" and substitute "4KV Emergency Buses Loss of Voltage" for the second to last entry in Table 3.2.2.
- Change 2 - On page 3/4.2-10 under the column "Remarks" add "Trips emergency bus normal feed breakers" for the second to last entree in Table 2.3.3.
- Change 3 - On page 3/4.2-10 under the column "Trip Level Setting" delete "3748 volts" and substitute "3784 volts" for the last entry in Table 3.2.2 to correct a typographical error.
- Change 4 - On page B3/4.2-33 add the following two new paragraphs which provide a discussion of the bases for functions of the 4KV undervoltage relays:

"The relay setting for 4KV emergency bus loss of voltage is chosen to give positive indication of the need to start the diesel generator, without being affected by normal voltage fluctuations due to pumps starting. Reset of the relay, approximately 11% above the trip point, indicates that the

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diesel generator has restored bus voltage and will accept ECCS loads. The reset signal provides a permissive for starting ECCS pumps.

The setting for 4KV emergency bus degraded voltage is chosen to detect sustained degraded voltage which may cause equipment damage, while preventing trips caused by voltage fluctuations. The reset point for degraded voltage indicates restoration of normal bus voltage."

These changes add clarity and conciseness to this section of the Technical Specification and are acceptable. The licensee also proposed to delete "Permissive for Starting ECCS Pumps" from Table 3.2.2 (page 3/4.2-10) under the column "Remarks" for the 4KV loss of voltage relays. We find this change unacceptable since these relays do provide this function and it too should be encompassed by the Technical Specifications.

The licensee also proposed to add a new note 6 to Table 3.2i2 to encompass new limiting conditions for operation (LCO) for the 4KV loss of voltage and degraded voltage instrumentation channels (relays). If one of the two relays per bus in either trip function was determined to be inoperable, the new note states that the associated emergency power source is therefore considered inoperable and the LCO of Section 3.9.B applies. This is in lieu of the old LCO which states that with one of the two relays per bus inoperable, the trip system shall be tripped. In a letter dated June 29, 1988, the staff expressed concern about the inadequacy and lack of clarity of the new proposed LCO. Our concern was that if either of the two relays in the 2-out-of-2 loss of voltage and 2-out-of-2 degraded voltage trip logic is found inoperable, the new LCO would allow plant operation to continue for 7 days with no clear indication as to the status (tripped/non-tripped) into which the logic or relays would be placed. The status (tripped/non-tripped) of the loss of voltage/degraded voltage relays and logic not only potentially effects (loss of function or spurious operation) the automatic initiation of the associated diesel generators but also can prevent the automatic loading of ECCS pumps on the emergency buses by the loss of permissive signals. Additionally, loss of equipment undervoltage protection is also possible. We believe these design problems have not and cannot be adequately addressed by a Technical Specification change such as the new proposed LCO.

In response to our concern, the licensee in a letter dated July 19, 1988, stated that the tripped condition for an undervoltage relay does not represent a "fail-safe" mode since it also must provide a permissive and that the new LCO "is not intended to direct the operator to disable circuitry, it is an acknowledgement of the overall effect of an inoperable undervoltage relay." The staff believes this response does not adequately address our concern. Therefore, we find the licensee's proposed new LCO for the 4KV loss of voltage and degraded voltage instrumentation to be unacceptable. We recommend that either the licensee propose a change to the existing LCO which, in the event of an undervoltage relay failure, requires the associated diesel generator to be declared inoperable and requires the associated 4KV emergency bus to be declared inoperable

and maintained de-energized to protect equipment powered by this bus from undervoltage conditions or the licensee modify the existing relay configuration to ensure all functions performed by the undervoltage relays/logic are maintained given a relay failure.

The licensee has also proposed to reduce the trip setpoint for the 4KV emergency bus loss of voltage relays from greater than or equal to 3092 volts (3255 - 5% tolerance) to 2930 volts plus or minus 5% to be consistent with the manufacturer's specification and the actual asset value. In a letter dated June 29, 1988, the staff expressed a concern that the new Technical Specification setpoint, when taking into account the negative tolerance, can result in a trip occurring at 2784 volts (approximately 67% of bus voltage) and may result in 4KV (and smaller) motors operating at voltages lower than the one minute rating (75% of rated voltage) recommended in Section 14.3 of ANSI C50.41-1977, "American National Standard Polyphase Induction Motors for Power Generating Stations" since the degraded voltage relays have 5 minute time delays.

In response to this concern, the licensee in a July 19, 1988 letter stated that the staff historical position has been to accept loss of voltage setpoints in the range of 70% or less. As a result of further discussion, the licensee provided in an October 27, 1988 letter, analyses which evaluated the effects of operation at 67% of rated voltage on 4KV and 480V AC motor qualified life and which concluded that the effects were negligible on motor thermal qualification. In response to continuing discussion, the licensee's letter dated December 23, 1988, stated that the proposed new setpoints are consistent with those currently applied in the field and that if 4KV motors were ever subjected to voltages of 67% of rated voltage, they would be tripped on overcurrent especially during starting when the motors would stall. The staff concluded that these responses by the licensee did not adequately alleviate our concerns.

On March 20, 1989, a meeting was held with the licensee to discuss the adequacy of the Dresden 4KV undervoltage protection scheme. As a result of the discussions of that meeting, the staff concluded that the proposed reduction in the 4KV emergency bus loss of voltage relay setpoints is acceptable conditioned by the following licensee actions:

1. A procedure must be developed and implemented which requires the operator to immediately disconnect an emergency 4KV bus from its offsite power if the bus voltage drops below 75% of the nominal bus voltage for longer than a minute if automatic action has not occurred.
2. A list of safety-related Class 1E equipment (down to 120Vac) which are normally energized or may be energized under transient conditions or for safe shutdown and which may experience the degraded voltage condition must be provided.

In a letter dated April 21, 1989, the licensee stated that procedure changes were developed, approved and in the process of being implemented. These actions taken satisfy the requirements stated under Item 1.

In a letter dated August 17, 1989, the licensee provided a list of safety-related Class IE equipment which satisfies the requirements stated under Item 2.

3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding no significant impact has been prepared and published (53 FR 26515) in the Federal Register on July 13, 1988. Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

4.0 CONCLUSION

The Commission has issued a Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for Hearing which was published in the Federal Register (53 FR 15755) on May 3, 1988. No petition to intervene or request hearing has been filed on this action.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security nor to the health and safety of the public.

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