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

May 30, 1985

Docket Nos. 50-237/249
LS05-85-05-041

Mr. Dennis L. Farrar
Director of Nuclear Licensing
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Farrar:

SUBJECT: TECHNICAL SPECIFICATION AMENDMENTS RESOLVING SEP TOPICS VI-7.C.1 AND XV-16

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

The Commission has issued the enclosed Amendment No. 87 to Provisional Operating License No. DPR-19 for Dresden Unit 2 and Amendment No. 80 to Facility Operating License No. DPR-25 for Dresden Unit 3. The amendments are in response to your application dated February 10, 1984 as supplemented by letter dated August 2, 1984.

The amendments revise the Dresden 2 and 3 Technical Specifications (TS) to incorporate General Electric Standard TS limits on dose equivalent iodine-131 in the primary coolant and action statements to survey these limits. They also change TS sections 3.9.A and 4.9.A and their bases which provide a suitable TS for a Limiting Condition for Operation with a battery system out of service. These actions resolve the outstanding issues in Sections 4.31, 4.32, and 4.21.4 of NUREG-0823 (Integrated Plant Safety Assessment Dresden Nuclear Power Station, Unit 2). While NUREG-0823 is only related to Dresden 2, you have requested that these changes also be applied to Dresden 3 since the units are identical.

A Notice of Consideration of Issuance of Amendments to License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action in the February 10 and August 2, 1984 letters was published in the Federal Register on December 31, 1984 (49 FR 50799). No public comments or requests for hearing were received.

A copy of our related Safety Evaluation is also enclosed. This action will appear in the Commission's monthly notice publication in the Federal Register.

Sincerely,

Thomas V. Wambach
for John A. Zwolinski, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosures:
1. Amendment No. 87 to License No. DPR-19
2. Amendment No. 81 to License No. DPR-25
3. Safety Evaluation

cc w/enclosures:
See next page

A copy of our related Safety Evaluation is also enclosed. This action will appear in the Commission's monthly notice publication in the Federal Register.

Sincerely,

Original signed by;

John A. Zwolinski, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosures:
1. Amendment No. 87 to License No. DPR-19
2. Amendment No. 80 to License No. DPR-25
3. Safety Evaluation

cc w/enclosures:
See next page

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cc: Robert G. Fitzgibbons Jr.
Isham, Lincoln & Beale
Three First National Plaza
Suite 5200
Chicago, Illinois 60602

Mr. Doug Scott
Plant Superintendent
Dresden Nuclear Power Station
Rural Route #1
Morris, Illinois 60450

U. S. Nuclear Regulatory Commission
Resident Inspectors Office
Dresden Station
Rural Route #1
Morris, Illinois 60450

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

U. S. Environmental Protection Agency
Federal Activities Branch
Region V Office
ATTN: Regional Radiation Representative
230 South Dearborn Street
Chicago, Illinois 60604

Regional Administrator
Nuclear Regulatory Commission, Region III
799 Roosevelt Street
Glen Ellyn, Illinois 60137

Gary N. Wright, Manager
Nuclear Facility Safety
Illinois Department of Nuclear Safety
1035 Outer Park Drive, 5th Floor
Springfield, Illinois 62704

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 87
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 February 10, 1984, as supplemented by a letter dated August 2, 1984, 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 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. 87, 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

for Thomas V. Wambach
John A. Zwolinski, Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 30, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 87

PROVISIONAL OPERATING LICENSE DPR-19

DOCKET NO. 50-237

Revise 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	INSERT
3/4.6-3	3/4.6-3
3/4.6-4	3/4.6-4
3/4.6-5	3/4.6-5*
3/4.6-6	3/4.6-6*
3/4.6-7	3/4.6-7*
3/4.9-1	3/4.9-1
3/4.9-4	3/4.9-4
3/4.9-5	3/4.9-5*
3/4.9-6	3/4.9-6*
B 3/4.9-7	B 3/4.9-7

*Pagination change only

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.6 SURVEILLANCE REQUIREMENT (Cont'd.)
	3. Neutron flux monitors and samples shall be installed in the reactor vessel adjacent to the vessel wall at the core midplane level. The monitor and sample program where possible conform to ASTM E 185. The monitors and samples will be removed and tested as outlined in Table 4.6.2 to experimentally verify the calculated values of integrated neutron flux that are used to determine NDTT for Figure 4.6.1.
C. Coolant Chemistry	C. Coolant Chemistry
1. a. The reactor coolant activity shall be maintained less than 0.2 microcuries per gram DOSE EQUIVALENT I-131 during Reactor Power operation.	1. a. A sample of reactor coolant shall be taken at least every 96 hours and analyzed for DOSE EQUIVALENT I-131 and total activity content.
b. If the reactor coolant activity is greater than 0.2 microcuries per gram and less than or equal to 4.0 microcuries per gram DOSE EQUIVALENT I-131, for more than 48 continuous hours (one continuous time interval) an orderly shutdown shall be immedi-	b. When an isotopic analysis shows reactor coolant activity to be in excess of 0.2 microcuries per gram and less than 4.0 microcuries per gram DOSE EQUIVALENT I-131, additional reactor coolant

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.6 SURVEILLANCE REQUIREMENT (Cont'd.)
ately initiated and the unit shall be in cold shutdown within 24 hours.	samples shall be taken and analyzed at least 3 times every 24 hours.
c. If a sample of reactor coolant activity is greater than 4.0 microcuries per gram DOSE EQUIVALENT I-131, a second sample shall be taken and analyzed within 8 hours. If the second sample indicates a reactor coolant activity greater than 4.0 microcuries per gram DOSE EQUIVALENT I-131, an orderly shutdown shall be initiated and the unit shall be in cold shutdown within 24 hours. Should the second sample indicate a reactor coolant activity less than or equal to 4.0 microcuries per gram DOSE EQUIVALENT I-131, statement 3.6.C.1b shall apply.	c. When reactor coolant activity is greater than 4.0 microcuries per gram DOSE EQUIVALENT I-131, reactor coolant samples shall be taken and analyzed every 8 hours until the reactor is in a cold shutdown condition.
2. The reactor coolant water shall not exceed the following limits with steaming rates less than 100,000 pounds per hour except as specified in 3.6.C.3: Conductivity 2 micro-mho/cm Chloride ion 0.1 ppm	2. During startups and at steaming rates below 100,000 pounds per hour, a sample of reactor coolant shall be taken every four hours and analyzed for conductivity and chloride content.
3. For reactor startups the maximum value for conductivity shall not exceed 10 micro-mho/cm and the maximum value for chloride ion concentration shall not exceed 0.1 ppm, for the first 24	3. a. With steaming rates greater than or equal to 100,000 pounds per hour, a reactor coolant sample shall be taken at least every 96 hours and when the continuous conductivity

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.6 SURVEILLANCE REQUIREMENT (Cont'd.)
hours after placing the reactor in the power operating condition.	monitors indicate abnormal conductivi (other than short-term spikes) and analyzed for conductivity and chloride ion content.
	b. When the continuous conductivity monitor is inoperable, a reactor coolant samp should be taken at least daily and analyzed for conductivity and chloride ion content.
4. Except as specified in 3.6.C.3 above, the reactor coolant water shall not exceed the following limits with steaming rates greater than or equal to 100,000 pounds per hour: Conductivity 5 micro-mho/cm Chloride ion 0.5 ppm	
5. If Specification 3.6.C.1, 3.6.C.2, 3.6.C.3 or 3.6.C.4 is not met, an orderly shutdown shall be initiated.	
D. Coolant Leakage	D. Coolant Leakage
1. Any time irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212°F, reactor coolant leakage into the primary containment from unidentified sources shall not exceed 5	1. Reactor coolant system leakage shall be checked by the sump and air sampling system. Sump flow monitoring and recording shall be performed once per 4 hours. Air sampling shall be performed once per day.

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)

gpm. In addition, the total reactor coolant system leakage into the primary containment shall not exceed 25 gpm. If these conditions cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown condition within 24 hours.

2. After completion of the investigation, or containment inspection, specified in 4.6.D.2.a or 4.6.D.2.b, if the leakage is determined to be due to a thru wall pipe crack on the reactor coolant pressure boundary, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown condition within 24 hours.

4.6 SURVEILLANCE REQUIREMENT (Cont'd.)

2. The following additional leakage limits shall be met until the recirculation piping indications have been resolved.

Whenever the reactor is at operating pressure, the following will apply to unidentified leakage:

a. If a 1 gpm increase over the previous 4 hours occurs or when leakage equals 3 gpm total, an investigation of the cause of the leakage increase will be performed. This investigation should consist of taking drywell air and water samples, and a review of any previous plant evolutions to the extent necessary to determine the source of leakage.

b. If leakage equals 4 gpm, a containment inspection will be conducted to determine the source of leakage.

E. Safety and Relief Valves

1. During reactor power operating conditions and whenever the reactor coolant pressure is greater than 90 psig and temperature

E. Safety and Relief Valves

A minimum of 1/2 of all safety valves shall be bench checked or replaced with a bench checked valve each refueling outages.

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)

greater than 320°F, all nine of the safety valves shall be operable. The solenoid activated pressure valves shall be operable as required by Specification 3.5.D.

2. If Specification 3.6.E.1 is not met, an orderly shutdown shall be initiated and the reactor coolant pressure and temperature shall be less than or equal to 90 psig and less than or equal to 320° F within 24 hours.

F. Structural Integrity

The structural integrity of the primary system boundary shall be maintained at the level required by the ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components".

Components of the primary system boundary whose inservice examination reveals the absence of flaw indications or flaw

4.6 SURVEILLANCE REQUIREMENT (Cont'd.)

The popping point of the safety valves shall be set as follows:

Number of Valves	Set Point (Psig)
1	1135*
2	1240
2	1250
2	1260
2	1260

The allowable set point error for each valve is plus or minus 1%.

All relief valves shall be checked for set pressure each refueling outage. The set pressures shall be:

Valve No.	Set Point (psig)
203-3A	1124*
203-3B	1101
203-3C	1101
203-3D	1124
203-3E	1124

* Target rock combination safety/relief valve.

The allowable setpoint error for each valve is plus or minus 1%.

F. Structural Integrity

1. Beginning November 1, 1978, and updated every 40 months thereafter, the component inservice inspection program shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been given by the NRC pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

3.9 LIMITING CONDITION FOR OPERATION

AUXILIARY ELECTRICAL SYSTEMS

Applicability:

Applies to the auxiliary electrical power system.

Objective:

To assure an adequate supply of electrical power during plant operation.

Specification:

A. The reactor shall not be made critical unless all the following requirements are satisfied:

1. One 345 KV line, associated switchgear, and the reserve auxiliary power transformer capable of carrying power to Unit 2.

2. The Dresden 2 diesel generator and the Unit 2/3 diesel generator shall be operable.

3. An additional source of power consisting of one of the following:

(a) One other 138 KV line, fully operational and

4.9 SURVEILLANCE REQUIREMENT

AUXILIARY ELECTRICAL SYSTEMS

Applicability:

Applies to the periodic testing requirements of the auxiliary electrical system.

Objective:

Verify the operability of the auxiliary electrical system.

Specification:

A. Station Batteries

1. Every week the specific gravity, voltage and temperature of the pilot cell and overall battery voltage shall be measured.

2. Every three months the measurements shall be made of voltage of each cell to nearest 0.01 volt, specific gravity of each cell, and temperature of every fifth cell.

3. Every refueling outage, the unit's batteries shall be subjected to a rated load discharge test. Determine specific gravity and voltage of each cell after the discharge.

3.9 LIMITING CONDITION FOR OPERATION (Cont'd.)

4.9 SURVEILLANCE REQUIREMENT (Cont'd.)

operable, provided that during such seven days the operable diesel generator shall be demonstrated to be operable at least once each day and two off-site lines are available.

3. From and after the date that one of the two 125 or 250V battery systems is made or found to be inoperable, except as specified in 3.9.B.4a or b, Unit shutdown shall be initiated within 2 hours and the unit shall be in cold shutdown in 24 hours unless the failed battery can be sooner made operable.

4. a. Each 125 or 250 volt battery may be inoperable for a maximum of 7 days per operating cycle for maintenance and testing.

b. If it is determined that a battery need be replaced as a result of maintenance or testing, a specific battery may be inoperable for an additional 7 days per operating cycle.

3.9 LIMITING CONDITION FOR OPERATION (Cont'd.)

C. Diesel Fuel

There shall be a minimum of 10,000 gallons of diesel fuel supply on site for each diesel.

D. Diesel Generator Operability

Whenever the reactor is in the Cold Shutdown or Refueling modes, a minimum of one diesel generator (either the Dresden 2 diesel generator or the Unit 2/3 diesel generator) shall be operable whenever any work is being done which has the potential for draining the vessel, secondary containment is required, or a core or containment cooling system is required.

4.9 SURVEILLANCE REQUIREMENT (Cont'd.)

C. Diesel Fuel

Once a month the quantity of diesel fuel available shall be logged.

Once a month a sample of diesel fuel shall be checked for quality.

D. Diesel Generator Operability

1. Each diesel generator shall be manually started and loaded once each month to demonstrate operational readiness. The test shall continue until both the diesel engine and the generator are at equilibrium conditions of temperature while full load output is maintained.

2. During the monthly generator test the diesel starting air compressor shall be checked for operation and its ability to recharge air receivers.

3. During the monthly generator test the diesel fuel oil transfer pumps shall be operated.

4. Additionally, during each refueling outage, a simulated loss of off-site power in

3.9 LIMITING CONDITION FOR OPERATION
(Cont'd.)

4.9 SURVEILLANCE REQUIREMENT
(Cont'd.)

conjunction with
ECCS initiation
signal test shall
be performed on t
4160 volt emergen
bus by:

(a) Verifying
de-energization o
the emergency bus
and load shedding
from the emergenc
buses.

(b) Verifying the
diesel starts fro
ambient condition
on the auto-start
signal, energizes
the emergency bus
with permanently
connected loads,
energizes the
auto-connected
emergency loads
through the load
sequencer, and
operates for
greater than or
equal to 5 minute
while its generat
is loaded with th
emergency loads.

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3124A

3.9 LIMITING CONDITION FOR OPERATION BASES

A. The general objective of this Specification is to assure an adequate source of electrical power to operate the auxiliaries during plant operation, to operate facilities to cool and lubricate the plant during shutdown, and to operate the engineered safeguards following an accident. There are three sources of electrical energy available; namely, the 138 KV transmission system, the diesel generators, and the 345 KV transmission system through the 4160 volt bus tie.

The d-c supply is required for control and motive power for switchgear and engineered safety features. The electrical power required provides for the maximum availability of power; i.e., one active off-site source and two back-up sources of off-site power and the maximum amount of on-site sources.

B. Auxiliary power for Unit 2 is supplied from two sources, either the Unit 2 auxiliary transformer or the Unit 2 reserve auxiliary transformer. Both of these transformers are sized to carry 100% of the auxiliary load. If the reserve auxiliary transformer is lost, the unit can continue to run for 7 days since the unit auxiliary transformer is available and both diesel generators are operational. A reduced period is provided since if an accident occurs during this period, the unit would trip and power to the unit auxiliary transformer would be lost and the diesels would be the only source of power.

In the normal mode of operation the 138 KV system is operating and two diesel generators are operational. One diesel generator may be allowed out of service based on the availability of power to the 138 KV switchyard, a source of power available from the 345 KV system through a 4160 volt bus tie and the fact that one diesel carries sufficient engineered safeguards equipment to cover all breaks. Off-site power is quite reliable. In the last 25 years there has only been one instance in which all off-site power was lost at a Commonwealth Edison generating station.

Two battery chargers are supplied for each of the 125 volt batteries, while for the 250 volt system a battery charger is supplied for each battery and a third battery charger acts as a shared unit. Thus, on loss of a battery charger, another battery charger is available. Since an alternate charger is available, one battery charger per unit for the 125 volt and one battery charger overall for the 250 volt battery system can be out of service for thirty days. The system becomes inoperable whenever there is a loss of the battery or loss of both chargers for that system and a battery voltage of 105 volts for the 125 or 210 volts for the 250 volt batteries.

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 80
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 February 10, 1984, as supplemented by a letter dated August 2, 1984, 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. 80, 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

for Thomas V. Wambach
John A. Zwolinski, Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 30, 1985.

ATTACHMENT TO LICENSE AMENDMENT NO. 80

FACILITY OPERATING LICENSE DPR-25

DOCKET NO. 50-249

Revise 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	INSERT
3/4.6-3	3/4.6-3
3/4.6-4	3/4.6-4
3/4.6-5	3/4.6-5*
3/4.6-6	3/4.6-6*
3/4.6-7	3/4.6-7*
3/4.9-1	3/4.9-1
3/4.9-4	3/4.9-4
3/4.9-5	3/4.9-5*
3/4.9-6	3/4.9-6*
B 3/4.9-7	B 3/4.9-7

*Pagination change only

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)

4.6 SURVEILLANCE REQUIREMENT (Cont'd.)

3. Neutron flux monitors and samples shall be installed in the reactor vessel adjacent to the vessel wall at the core midplane level. The monitor and sample program where possible conform to ASTM E 185. The monitors and samples will be removed and tested as outlined in Table 4.6.2 to experimentally verify the calculated values of integrated neutron flux that are used to determine NDTT for Figure 4.6.1.

C. Coolant Chemistry

C. Coolant Chemistry

1. a. The reactor coolant activity shall be maintained less than 0.2 microcuries per gram DOSE EQUIVALENT I-131 during Reactor Power operation.

1. a. A sample of reactor coolant shall be taken at least every 96 hours and analyzed for DOSE EQUIVALENT I-131 and total activity content.

b. If the reactor coolant activity is greater than 0.2 microcuries per gram and less than or equal to 4.0 microcuries per gram DOSE EQUIVALENT I-131, for more than 48 continuous hours (one continuous time interval) an orderly shutdown shall be immedi-

b. When an isotopic analysis shows reactor coolant activity to be in excess of 0.2 microcuries per gram and less than 4.0 microcuries per gram DOSE EQUIVALENT I-131, additional reactor coolant

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.6 SURVEILLANCE REQUIREMENT (Cont'd.)
ately initiated and the unit shall be in cold shutdown within 24 hours.	samples shall be taken and analyzed at least 3 times every 24 hours.
c. If a sample of reactor coolant activity is greater than 4.0 microcuries per gram DOSE EQUIVALENT I-131, a second sample shall be taken and analyzed within 8 hours. If the second sample indicates a reactor coolant activity greater than 4.0 microcuries per gram DOSE EQUIVALENT I-131, an orderly shutdown shall be initiated and the unit shall be in cold shutdown within 24 hours. Should the second sample indicate a reactor coolant activity less than or equal to 4.0 microcuries per gram DOSE EQUIVALENT I-131, statement 3.6.C.1b shall apply.	c. When reactor coolant activity is greater than 4.0 microcuries per gram DOSE EQUIVALENT I-131, reactor coolant samples shall be taken and analyzed every 8 hours until the reactor is in a cold shutdown condition.
2. The reactor coolant water shall not exceed the following limits with steaming rates less than 100,000 pounds per hour except as specified in 3.6.C.3: Conductivity 2 micro-mho/cm Chloride ion 0.1 ppm	2. During startups and at steaming rates below 100,000 pounds per hour, a sample of reactor coolant shall be taken every four hours and analyzed for conductivity and chloride content.
3. For reactor startups the maximum value for conductivity shall not exceed 10 micro-mho/cm and the maximum value for chloride ion concentration shall not exceed 0.1 ppm, for the first 24	3. a. With steaming rates greater than or equal to 100,000 pounds per hour, a reactor coolant sample shall be taken at least every 96 hours and when the continuous conductivity

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)

hours after placing the reactor in the power operating condition.

4. Except as specified in 3.6.C.3 above, the reactor coolant water shall not exceed the following limits with steaming rates greater than or equal to 100,000 pounds per hour:
Conductivity 5 micro-mho/cm
Chloride ion 0.5 ppm

5. If Specification 3.6.C.1, 3.6.C.2, 3.6.C.3 or 3.6.C.4 is not met, an orderly shutdown shall be initiated.

D. Coolant Leakage

1. Any time irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212°F, reactor coolant leakage into the primary containment from unidentified sources shall not exceed 5

4.6 SURVEILLANCE REQUIREMENT (Cont'd.)

monitors indicate abnormal conductivity (other than short-term spikes) and analyzed for conductivity and chloride ion content.

b. When the continuous conductivity monitor is inoperable, a reactor coolant sample should be taken at least daily and analyzed for conductivity and chloride ion content.

D. Coolant Leakage

1. Reactor coolant system leakage shall be checked by the sump and air sampling system. Sump flow monitoring and recording shall be performed once per shift. Air sampling shall be performed once per day.

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.6 SURVEILLANCE REQUIREMENT (Cont'd.)
gpm. In addition, the total reactor coolant system leakage into the primary containment shall not exceed 25 gpm. If these conditions cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown condition within 24 hours.	
2. The primary containment sump sampling system and an air sampling system shall be operable during power operation. If either a sump water sample or a containment air sample cannot be obtained for any reason, reactor operation is permissible only during the succeeding seven days unless the system is made operable during this period.	2. The primary containment sump sampling and air sampling system operability will be observed as part of 4.6.D.2.
E. Safety and Relief Valves	E. Safety and Relief Valves
1. During reactor power operating conditions and whenever the reactor coolant pressure is greater than 90 psig and temperature greater than 320°F, all nine of the safety valves shall be operable. The solenoid activated pressure valves shall be operable as required by Specification 3.5.D.	A minimum of 1/2 of all safety valves shall be bench checked or replaced with a bench checked valve each refueling outages. The popping point of the safety valves shall be set as follows:

Number of Valves	Set Point (Psig)
1	1135*
2	1240
2	1250
2	1260
2	1260

* (See next page)

3.6 LIMITING CONDITION FOR OPERATION (Cont'd.)

2. If Specification 3.6.E.1 is not met, an orderly shutdown shall be initiated and the reactor coolant pressure and temperature shall be less than or equal to 90 psig and less than or equal to 320° F within 24 hours.

F. Structural Integrity

The structural integrity of the primary system boundary shall be maintained at the level required by the ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components".

Components of the primary system boundary whose inservice examination reveals the absence of flaw indications or flaw indications not in excess of the allowable indication standards of this Code are acceptable for continued service. Plant operation with components which have inservice examination flaw

4.6 SURVEILLANCE REQUIREMENT (Cont'd.)

The allowable set point error for each valve is plus or minus 1%.

All relief valves shall be checked for set pressure each refueling outage. The set pressures shall be:

Valve No.	Set Point (psig)
203-3A	1124*
203-3B	1101
203-3C	1101
203-3D	1124
203-3E	1124

* Target Rock combination safety/relief valve

The allowable setpoint error for each valve is plus or minus 1%.

F. Structural Integrity

1. Beginning November 1, 1978, and updated every 40 months thereafter, the component inservice inspection program shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been given by the NRC pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

3.9 LIMITING CONDITION FOR OPERATION

AUXILIARY ELECTRICAL SYSTEMS

Applicability:

Applies to the auxiliary electrical power system.

Objective:

To assure an adequate supply of electrical power during plant operation.

Specification:

A. The reactor shall not be made critical unless all the following requirements are satisfied:

1. One 345 KV line, associated switchgear, and the reserve auxiliary power transformer capable of carrying power to Unit 3.

2. The Dresden 3 diesel generator and the Unit 2/3 diesel generator shall be operable.

3. An additional source of power consisting of one of the following:

   (a) One other 345 KV line, fully operational and

4.9 SURVEILLANCE REQUIREMENT

AUXILIARY ELECTRICAL SYSTEMS

Applicability:

Applies to the periodic testing requirements of the auxiliary electrical system.

Objective:

Verify the operability of the auxiliary electrical system.

Specification:

A. Station Batteries

1. Every week the specific gravity, voltage and temperature of the pilot cell and overall battery voltage shall be measured.

2. Every three months the measurements shall be made of voltage of each cell to nearest 0.01 volt, specific gravity of each cell, and temperature of every fifth cell.

3. Every refueling outage, the unit's batteries shall be subjected to a rated load discharge test. Determine specific gravity and voltage of each cell after the discharge.

3.9 LIMITING CONDITION FOR OPERATION (Cont'd.)	4.9 SURVEILLANCE REQUIREMENT (Cont'd.)
operable, provided that during such seven days the operable diesel generator shall be demonstrated to be operable at least once each day and two off-site lines are available.	
3. From and after the date that one of the two 125 or 250V battery systems is made or found to be inoperable, except as specified in 3.9.B.4a or b, Unit shutdown shall be initiated within 2 hours and the unit shall be in cold shutdown in 24 hours unless the failed battery can be sooner made operable.	
4. a. Each 125 or 250 volt battery may be inoperable for a maximum of 7 days per operating cycle for maintenance and testing.	
b. If it is determined that a battery need be replaced as a result of maintenance or testing, a specific battery may be inoperable for an additional 7 days per operating cycle.	

3.9 LIMITING CONDITION FOR OPERATION (Cont'd.)

C. Diesel Fuel

There shall be a minimum of 10,000 gallons of diesel fuel supply on site for each diesel.

D. Diesel Generator Operability

Whenever the reactor is in the Cold Shutdown or Refueling modes, a minimum of one diesel generator (either the Dresden 3 diesel generator or the Unit 2/3 diesel generator) shall be operable whenever any work is being done which has the potential for draining the vessel, secondary containment is required, or a core or containment cooling system is required.

4.9 SURVEILLANCE REQUIREMENT (Cont'd.)

C. Diesel Fuel

Once a month the quantity of diesel fuel available shall be logged.

Once a month a sample of diesel fuel shall be checked for quality.

D. Diesel Generator Operability

1. Each diesel generator shall be manually started and loaded once each month to demonstrate operational readiness. The test shall continue until both the diesel engine and the generator are at equilibrium conditions of temperature while full load output is maintained.

2. During the monthly generator test the diesel starting air compressor shall be checked for operation and its ability to recharge air receivers.

3. During the monthly generator test the diesel fuel oil transfer pumps shall be operated.

4. Additionally, during each refueling outage, a simulated loss of off-site power in

3.9 LIMITING CONDITION FOR OPERATION (Cont'd.)

4.9 SURVEILLANCE REQUIREMENT (Cont'd.)

conjunction with an ECCS initiation signal test shall be performed on the 4160 volt emergency bus by:

(a) Verifying de-energization of the emergency buses and load shedding from the emergency buses.

(b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency buses with permanently connected loads, energizes the auto-connected emergency loads through the load sequencer, and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads.

3.9 LIMITING CONDITION FOR OPERATION BASES

A. The general objective of this Specification is to assure an adequate source of electrical power to operate the auxiliaries during plant operation, to operate facilities to cool and lubricate the plant during shutdown, and to operate the engineered safeguards following an accident. There are three sources of electrical energy available; namely, the 345 KV transmission system, the diesel generators, and the 138 KV transmission system through the 4160 volt bus tie.

The d-c supply is required for control and motive power for switchgear and engineered safety features. The electrical power required provides for the maximum availability of power; i.e., one active off-site source and two back-up sources of off-site power and the maximum amount of on-site sources.

B. Auxiliary power for Unit 3 is supplied from two sources, either the Unit 3 auxiliary transformer or the Unit 3 reserve auxiliary transformer. Both of these transformers are sized to carry 100% of the auxiliary load. If the reserve auxiliary transformer is lost, the unit can continue to run for 7 days since the unit auxiliary transformer is available and both diesel generators are operational. A reduced period is provided since if an accident occurs during this period, the unit would trip and power to the unit auxiliary transformer would be lost and the diesels would be the only source of power.

In the normal mode of operation the 345 KV system is operating and two diesel generators are operational. One diesel generator may be allowed out of service based on the availability of power to the 345 KV switchyard, a source of power available from the 138 KV system through a 4160 volt bus tie and the fact that one diesel carries sufficient engineered safeguards equipment to cover all breaks. Off-site power is quite reliable. In the last 25 years there has only been one instance in which all off-site power was lost at a Commonwealth Edison generating station.

Two battery chargers are supplied for each of the 125 volt batteries, while for the 250 volt system a battery charger is supplied for each battery and a third battery charger acts as a shared unit. Thus, on loss of a battery charger, another battery charger is available. Since an alternate charger is available, one battery charger per unit for the 125 volt and one battery charger overall for the 250 volt battery system can be out of service for thirty days. The system becomes inoperable whenever there is a loss of the battery or loss of both chargers for that system and a battery voltage of 105 volts for the 125 or 210 volts for the 250 volt batteries.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 87 TO PROVISIONAL OPERATING LICENSE NO. DPR-19

AND AMENDMENT NO. 80 TO FACILITY OPERATING LICENSE NO. DPR-25

COMMONWEALTH EDISON COMPANY

DRESDEN NUCLEAR POWER STATION, UNIT NOS. 2 AND 3

DOCKET NOS. 50-237/249

1.0 INTRODUCTION

The staff's original Safety Evaluation Report (SER) on this subject, for Dresden 2, was issued in NUREG-0823, "Integrated Plant Safety Assessment Dresden Nuclear Power Station, Unit 2." Section 4.21.4 required that the licensee provide a suitable Technical Specification (TS) for a Limiting Condition for Operation (LCO) with a battery system out of service. In Sections 4.31 and 4.32, the staff concluded that the licensee should adopt the BWR Standard Technical Specifications (STS) limits for dose-equivalent iodine-131 in the primary coolant to minimize the radiological consequences of events involving a release of primary coolant outside the containment without significant core damage. Further, the staff concluded that the licensee should develop appropriate plant-specific actions to be taken in the event that these limits are exceeded; the limits and actions should be incorporated into the LCO in the plant TS. The licensee agreed.

In a letter dated February 10, 1984, the licensee provided revised TS for both Dresden 2 and Dresden 3, since the latter is identical to Unit 2, for each of the above staff concerns. These proposed TS were reformatted, revised and resubmitted by the licensee in a letter dated August 2, 1984.

A Notice of Consideration of Issuance of Amendments to License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action was published in the Federal Register on December 31, 1984 (49 FR 50799). No public comments or requests for hearing were received.

2.0 REVIEW CRITERIA

The review criteria that govern an LCO with a battery system out of service are identified in Section 8.3.2, Part II, Items 1 and 2 of the NRC Standard Review Plan. Those for primary coolant iodine are identified in the November 10, 1982 SER for Systematic Evaluation Program (SEP) Topic XV-16 and in the February 2, 1982 SER for SEP Topic XV-18.

3.0 RELATED SAFETY TOPICS

The related safety topics for primary coolant iodine are identified in the topic SERs, listed above. There were none for an LCO with a battery system out of service.

4.0 REVIEW GUIDELINES

For an LCO with a battery system out of service, the review was limited to considering the degree to which redundant equipment was protected from a loss of power as a result of a single failure while a battery was out of service.

For primary coolant iodine, the review was limited to a comparison of the licensee's proposed TS to the STS to determine whether the licensee included the appropriate STS limits and action statement.

5.0 EVALUATION

5.1 LCO With a Battery System Out of Service

In the February 10 and August 2, 1984 submittals, the licensee submitted a proposed TS and basis that was prepared in response to the staff concerns expressed in Section 4.21.4 of NUREG-0823. The proposed change limits operation to 2 hours with a failed battery system. A cumulative exception (on a refueling cycle basis) is made for testing and maintenance. A second cumulative exception is made for cell replacement.

The 2-hour limit satisfies the requirement specified in Section 4.21.4 of NUREG-0823 and is, therefore, acceptable to the staff. The exceptions have been considered and the staff believes that they are necessary to permit the operation of Units 2 and 3 while routine testing and maintenance is being conducted. TS page B 3/4.9-7 provides the licensee's basis for its LCO. The staff's basis for approval is a finding that the limited time for the exception satisfies the requirements of IEEE Std. 279-1971 Section 4.11, "Channel Bypass or Removal from Operation."

5.2 Primary Coolant Iodine

A comparison of the licensee's TS with the STS shows that the licensee has included the dose equivalent I-131 (DEI-131) and total activity limits in the LCO for the revised Dresden TS.

The action statements in the STS include sampling and reporting requirements which are intended to provide plant-specific data that could be used to investigate iodine spiking behavior and isotopic distributions. The licensee has proposed to take a sample of reactor coolant and perform an isotopic analysis at least every 96 hours. Sampling frequencies would increase to at least three samples every 24 hours when readings are above 0.2 and less than 4.0 microcuries per gram DEI-131. In the event that DEI-131 concentration exceeds the 0.2 equilibrium limit for more than 48 hours or exceeds a maximum of 4 microcuries per gram, the licensee would initiate a plant shutdown to investigate the cause of the high activity. When readings above 4 microcuries per gram are taken, the licensee must verify the reading within 8 hours and, if the second reading is above 4 microcuries per gram, then plant shutdown must be initiated. Although the proposed action requirements do not conform exactly with those in the STS, they accomplish the same objective: the proposed LCO will ensure that the potential for an accident involving a release of primary coolant with a DEI-131 concentration above the equilibrium limit is acceptably small. The proposed TS for primary coolant iodine are therefore acceptable.

6.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

7.0 CONCLUSION

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 or to the health and safety of the public.

8.0 ACKNOWLEDGEMENT

This Safety Evaluation has been prepared by R. Scholl and T. Michaels.

Dated: May 30, 1985.