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JRBuchanan

Docket Nos: 50-237
50-249

MAY 04 1976

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
Post Office Box 767
Chicago, Illinois 60690

Gentlemen:

In response to your request dated March 5, 1976, the Commission has issued the enclosed Amendment Nos. 19 and 17 to Facility License Nos. DPR-19 and DPR-25 for Units 2 and 3 of the Dresden Nuclear Power Station, respectively.

These amendments delete the requirement to conduct 25 rod scram tests following outages of greater than 72 hours duration.

A copy of the related Safety Evaluation Report and Federal Register Notice are also enclosed.

Sincerely,

Original signed by:
Dennis L. Ziemann
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:
1. Amendment No. 19 to License DPR-19
2. Amendment No. 17 to License DPR-25
3. Safety Evaluation Report
4. Notice

cc w/enclosures:
See next page

OFFICE	DOR:ORB #2	DOR:ORB #2	DOR:ORB #2	OELD	DOR:ORB #2	
SURNAME	RMDiggs	MHFletcher:ah	RDSilver	DSwanson	DLZiemann	
DATE	4/20/76	4/21/76	4/21/76	4/29/76	5/4/76	

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-526-166

cc w/enclosures:
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Roisman, Kessler and Cashdan
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Washington, D. C. 20036

Morris Public Library
604 Liberty Street
Morris, Illinois 60451

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

cc w/enclosures and cy of CECo filing
dtd. 3/5/76:
Mr. Leroy Stratton
Bureau of Radiological Health
Illinois Department of Public Health
Springfield, Illinois 62706

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. 19
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 5, 1976, 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. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the
Technical Specifications

Date of Issuance: MAY 0 1976

ATTACHMENT TO AMENDMENT NO. 19

PROVISIONAL OPERATING LICENSE NO. DPR-19

DOCKET NO. 50-237

Replace existing pages 58, 59, and 64 with the attached revised pages bearing the same numbers. Changed areas on the revised pages are shown by marginal lines.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

3.3 LIMITING CONDITION FOR OPERATION

C. Scram Insertion Times

1. The average scram insertion time, based on the de-energization of the scram pilot valve solenoids as time zero, of all operable control rods in the reactor power operation condition shall be no greater than:

% Inserted From Fully Withdrawn	Avg. Scram Insertion Times (sec)
5	0.375
20	0.900
50	2.00
90	3.50

The average of the scram insertion times for the three fastest control rods of all groups of four control rods in a two by two array shall be no greater than:

% Inserted From Fully Withdrawn	Avg. Scram Insertion Times (sec)
5	0.398
20	0.954
50	2.120
90	3.800

2. The maximum scram insertion time for 90% insertion of any operable control rod shall not exceed 7.00 seconds.

4.3 SURVEILLANCE REQUIREMENTS

C. Scram Insertion Times

1. After each refueling outage and prior to power operation with reactor pressure above 800 psig, all control rods shall be subject to scram-time tests from the fully withdrawn position. The scram times shall be measured without reliance on the control rod drive pumps.

2. At 16 week intervals, 50% of the control rod drives shall be tested as in 4.3.C.1 so that every 32 weeks all of the control rods shall have been tested. Whenever 50% of the control rod drives have been scram tested, an evaluation shall be made to provide reasonable assurance that proper control rod drive performance is being maintained.

3.3 LIMITING CONDITION FOR OPERATION	4.3 SURVEILLANCE REQUIREMENT
D. Control Rod Accumulators At all reactor operating pressures, a rod accumulator may be inoperable provided that no other control rod in the nine-rod square array around this rod has a: 1. Inoperable accumulator, 2. Directional control valve eletrically disarmed while in a non-fully inserted position. 3. Scram insertion greater than maximum permissible insertion time. If a control rod with an inoperable accumulator is inserted "full-in" and its directional control valves are electrically disarmed, it shall not be considered to have an inoperable accumulator and the rod block associated with that inoperable accumulator may be bypassed.	D. Control Rod Accumulators Once a shift check the status of the pressure and level alarms for each accumulator.

Approximately 70 milliseconds after neutron flux reaches the trip point, the pilot scram valve solenoid de-energizes. Approximately 200 milliseconds later, control rod motion begins. The time to de-energize the pilot valve scram solenoids is measured during the calibration tests required by Specification 4.1. The 200 milliseconds are included in the allowable scram insertion times specified in Specification 3.3.C.

The scram times for all control rods will be determined at the time of each refueling outage.

Fifty percent of the control rods will be checked every 16 weeks to verify the performance.

The history of drive performance accumulated to date indicates that the 90% insertion times of new and overhauled drives approximate a normal distribution about the mean which tends to become skewed toward longer scram times as operating time is accumulated. The probability of a drive not exceeding the mean 90% insertion time by 0.75 seconds is greater than 0.999 for a normal distribution. The measurement of the scram performance of the drives surrounding a drive exceeding the expected range of

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. 17
License No. DPR-25

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Commonwealth Edison Company (the licensee) dated March 5, 1976, 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. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the
Technical Specifications

Date of Issuance: MAY 04 1976

ATTACHMENT TO AMENDMENT NO. 17

FACILITY OPERATING LICENSE NO. DPR-25

DOCKET NO. 50-249

Replace existing pages 58, 59, and 64 with the attached revised pages bearing the same numbers. Changed areas on the revised pages are shown by marginal lines.

OFFICE ➤						
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DATE ➤						

3.3 LIMITING CONDITION FOR OPERATION

C. Scram Insertion Times

1. The average scram insertion time, based on the de-energization of the scram pilot valve solenoids as time zero, of all operable control rods in the reactor power operation condition shall be no greater than:

% Inserted From Fully Withdrawn	Avg. Scram Insertion Times (sec)
5	0.375
20	0.900
50	2.00
90	3.50

The average of the scram insertion times for the three fastest control rods of all groups of four control rods in a two by two array shall be no greater than:

% Inserted From Fully Withdrawn	Avg. Scram Insertion Times (sec)
5	0.398
20	0.954
50	2.120
90	3.800

2. The maximum scram insertion time for 90% insertion of any operable control rod shall not exceed 7.00 seconds.

4.3 SURVEILLANCE REQUIREMENTS

C. Scram Insertion Times

1. After each refueling outage and prior to power operation with reactor pressure above 800 psig, all control rods shall be subject to scram-time tests from the fully withdrawn position. The scram times shall be measured without reliance on the control rod drive pumps.

2. At 16 week intervals, 50% of the control rod drives shall be tested as in 4.3.C.1 so that every 32 weeks all of the control rods shall have been tested. Whenever 50% of the control rod drives have been scram tested, an evaluation shall be made to provide reasonable assurance that proper control rod drive performance is being maintained.

3.3 LIMITING CONDITION FOR OPERATION	4.3 SURVEILLANCE REQUIREMENT
D. Control Rod Accumulators At all reactor operating pressures, a rod accumulator may be inoperable provided that no other control rod in the nine-rod square array around this rod has a: 1. Inoperable accumulator, 2. Directional control valve eletrically disarmed while in a non-fully inserted position. 3. Scram insertion greater than maximum permissible insertion time. If a control rod with an inoperable accumulator is inserted "full-in" and its directional control valves are electrically disarmed, it shall not be considered to have an inoperable accumulator and the rod block associated with that inoperable accumulator may be bypassed.	D. Control Rod Accumulators Once a shift check the status of the pressure and level alarms for each accumulator.

Approximately 70 milliseconds after neutron flux reaches the trip point, the pilot scram valve solenoid de-energizes. Approximately 200 milliseconds later, control rod motion begins. The time to de-energize the pilot valve scram solenoids is measured during the calibration tests required by Specification 4.1. The 200 milliseconds are included in the allowable scram insertion times specified in Specification 3.3.C.

The scram times for all control rods will be determined at the time of each refueling outage.

Fifty percent of the control rods will be checked every 16 weeks to verify the performance.

The history of drive performance accumulated to date indicates that the 90% insertion times of new and overhauled drives approximate a normal distribution about the mean which tends to become skewed toward longer scram times as operating time is accumulated. The probability of a drive not exceeding the mean 90% insertion time by 0.75 seconds is greater than 0.999 for a normal distribution. The measurement of the scram performance of the drives surrounding a drive exceeding the expected range of

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 19 AND 17 TO LICENSE NOS. DPR-19 AND DPR-25

COMMONWEALTH EDISON COMPANY

DRESDEN UNITS 2 AND 3

DOCKET NOS. 50-237 AND 50-249

INTRODUCTION

By letter dated March 5, 1976, Commonwealth Edison Company requested changes to the Technical Specifications appended to Facility Operating License Nos. DPR-19 and DPR-25 for the Dresden Units 2 and 3. The proposed changes would eliminate the requirement to conduct 25 rod scram tests following outages of greater than 72 hours duration.

DISCUSSION

On some earlier boiling water reactors, the control rod scram times were degraded by a buildup of foreign matter which plugged an internal control rod filter through which the scram discharge water had to pass. Restricted water flow through the plugged filter resulted in increased scram times for the affected control rod(s). To eliminate this condition, the control rod drive was redesigned by relocating the filter out of the scram discharge flow path. To assure that the modification to the control rod drive had eliminated the cause of the increased scram insertion times, an accelerated test program was required by the Dresden 2/3 Technical Specifications to obtain data that would verify that scram insertion times were not increasing.

The NRC has previously reviewed the results of an accelerated scram test program at Pilgrim Nuclear Station (Amendment 8, January 28, 1975, Docket No. 50-293). In that review, we concluded that the control rod drive filter modification eliminated the potential failure mode associated with filter plugging.

EVALUATION

The NRC staff has reviewed the evaluation submitted by the licensee in support of the amendment and verified that no significant degradation of scram insertion time has occurred throughout the accelerated test program. In each of the accelerated tests, the control rods were inserted at a rate that was faster than the Technical Specifications require. We conclude that the accelerated test program has verified that the design modification to

the Dresden Unit 2 and 3 control rod drives has eliminated the potential failure mode associated with filter plugging. Because the accelerated test program has fulfilled its intended purpose, deletion of the program would be justified. Sufficient monitoring of control rod scram performance would be maintained by the normal control rod scram surveillance program which requires scram tests of all rods following refueling and 50% of all rods at sixteen week intervals.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the changes do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the changes do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Date:

MAY 04 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-237 AND 50-249

COMMONWEALTH EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 19 and 17 to Facility Operating License Nos. DPR-19 and DPR-25, respectively, issued to the Commonwealth Edison Company (the licensee), which revised Technical Specifications for operation of the Dresden Nuclear Power Station Units 2 and 3 (the facilities) located in Grundy County, Illinois. The amendments are effective as of their date of issuance.

The amendments change the provisions in the Technical Specifications to delete the requirement to conduct 25 rod scram tests following outages of greater than 72 hours duration.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

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DATE ➤						

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of the amendments.

For further details with respect to this action, see (1) the application for amendments dated March 5, 1976, (2) Amendment No. 19 to License No. DPR-19, (3) Amendment No. 17 to License No. DPR-25, and (4) the Commission's concurrently issued related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Morris Public Library, 604 Liberty Street, Morris, Illinois 60451. A single copy of items (2), (3) and (4) above may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this [illegible] 1976

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

OFFICE ➤						
SURNAME ➤						
DATE ➤						