

April 9, 1990

Docket Nos. 50-315
and 50-316

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Mr. Milton P. Alexich, Vice President
Indiana Michigan Power Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Alexich:

SUBJECT: AMENDMENT NOS.135 AND120 TO FACILITY OPERATING LICENSE NOS. DPR-58
AND DPR-74: (TAC NOS. 73278/73279)

The Commission has issued the enclosed Amendment No. 135 to Facility
Operating License No. DPR-58 and Amendment No.120 to Facility Operating
License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2.
The amendments consist of changes to the Technical Specifications in response
to your application dated January 12, 1989.

These amendments modify Technical Specification Table 3.3-3 (Engineered Safety
Features Actuation System Instrumentation) so that it more accurately reflects
the actuation signals for the auxiliary feedwater (AFW) system.

A copy of our related Safety Evaluation is also enclosed. Notice of Issuance
will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by

Joseph Gitter, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 135 to DPR-58
2. Amendment No.120 to DPR-74
3. Safety Evaluation

cc w/enclosures:
See next page

LA/PD31: DRSP
PShuttleworth
3/19/90 *JM*

PM/PD31: DRSP
JGitter
3/13/90

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(A)D/PD31: DRSP
JThoma
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 9, 1990

Docket Nos. 50-315
and 50-316

Mr. Milton P. Alexich, Vice President
Indiana Michigan Power Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Alexich:

SUBJECT: AMENDMENT NOS. 135 AND 120 TO FACILITY OPERATING LICENSE NOS. DPR-58
AND DPR-74: (TAC NOS. 73278/73279)

The Commission has issued the enclosed Amendment No. 135 to Facility Operating License No. DPR-58 and Amendment No. 120 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated January 12, 1989.

These amendments modify Technical Specification Table 3.3-3 (Engineered Safety Features Actuation System Instrumentation) so that it more accurately reflects the actuation signals for the auxiliary feedwater (AFW) system.

A copy of our related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joseph Giitter".

Joseph Giitter, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 135 to DPR-58
2. Amendment No. 120 to DPR-74
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. Milton Alexich
Indiana Michigan Power Company

Donald C. Cook Nuclear Plant

cc:
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Lansing, Michigan 48909

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Lansing, Michigan 48909



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 135
License No. DPR-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated January 12, 1989, 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 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 135, 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 C. Thoma

John C. Thoma, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 9, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 135

TO FACILITY OPERATING LICENSE NO. DPR-58

DOCKETS NOS. 50-315

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

REMOVE

3/4 3-21a

INSERT

3/4 3-21a

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS					
a. Steam Generator Water Level -- Low-Low	3/Stm. Gen.	2/Stm. Gen. any Stm. Gen.	2/Stm. Gen.	1, 2, 3	14*
b. 4 kv Bus Loss of Voltage Pump Start	3/Bus	2/Bus 2/bus (T11A-Train B; T11D-Train A)	2/Bus	1, 2, 3	14*
Valve Actuation (Both trains)		2/bus on (T11A & T11B or 2 busses T11C & T11D)			
c. Safety Injection	2	1	2	1, 2, 3	18*
d. Loss of Main Feedwater Pumps	2	2	2	1, 2	18*
7. TURBINE DRIVEN AUXILIARY FEEDWATER PUMPS					
a. Steam Generator Water Level -- Low-Low	3/Stm. Gen.	2/Stm. Gen. any 2 Stm. Gen.	2/Stm. Gen.	1, 2, 3	14*
b. Reactor Coolant Pump Bus Undervoltage	4-1/Bus	2	3	1, 2, 3	19*
8. LOSS OF POWER					
a. 4 kv Bus Loss of Voltage	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	14*
b. 4 kv Bus Degraded Voltage	3/bus	2/Bus	2/Bus	1, 2, 3, 4	14*



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 120
License No. DPR-74

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated January 12, 1989, 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 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 120 , 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 O. Thoma

John O. Thoma, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 9, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 120
TO FACILITY OPERATING LICENSE NO. DPR-74
DOCKET NO. 50-316

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

REMOVE

3/4 3-20a

INSERT

3/4 3-20a

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS					
a. Steam Generator Water Level -- Low-Low	3/Stm. Gen.	2/Stm. Gen. any Stm. Gen.	2/Stm. Gen.	1, 2, 3	14*
b. 4 kv Bus Loss of Voltage	3/Bus	2/Bus	2/Bus	1, 2, 3	14*
Pump Start		2/bus (T11A-Train B; T11D-Train A)			
Valve Actuation (Both trains)		2/bus on (T11A & T11B or 2 busses T11C & T11D)			
c. Safety Injection	2	1	2	1, 2, 3	18*
d. Loss of Main Feedwater Pumps	2	2	2	1, 2	18*
7. TURBINE DRIVEN AUXILIARY FEEDWATER PUMPS					
a. Steam Generator Water Level -- Low-Low	3/Stm. Gen.	2/Stm. Gen. any 2 Stm. Gen.	2/Stm. Gen.	1, 2, 3	14*
b. Reactor Coolant Pump Bus Undervoltage	4-1/Bus	2	3	1, 2, 3	19*
8. LOSS OF POWER					
a. 4 kv Bus Loss of Voltage	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	14*
b. 4 kv Bus Degraded Voltage	3/bus	2/Bus	2/Bus	1, 2, 3, 4	14*

COOK NUCLEAR PLANT - UNIT 2

3/4 3-20a

AMENDMENT NO. 77, 120



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 135 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 120 TO FACILITY OPERATING LICENSE NO. DPR-74
INDIANA MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By letter dated January 12, 1989, the Indiana Michigan Power Company (IMPC) submitted a license amendment application that would modify Technical Specification (TS) Table 3.3-3 (Engineered Safety Features Actuation System Instrumentation) so that it more accurately reflects the actuation signals for the auxiliary feedwater (AFW) system.

2.0 DISCUSSION

Each D. C. Cook Unit employs two 50% capacity motor-driven auxiliary feedwater (MDAFW) pumps and one 100% capacity turbine-driven auxiliary feedwater (TDAFW) pump. In each unit, the Train A (East) MDAFW pump supplies the No. 2 steam generator (SG) through motor operated valve FMO-222 and the No. 3 SG through FMO-232. The Train B (West) MDAFW pump supplies the No. 1 SG through FMO-212 and the No. 4 SG through FMO-242. This design is illustrated in Figure 1.

As shown in Figure 2, the emergency power source for the Train A MDAFW pump is 4KV bus T11D. Bus T11D supplies 600V bus 11D (via a 4KV/600V transformer) which provides power to the Train A motor operated valves (FMO 222 and 232). Likewise, bus T11A, the emergency power source for the Train B MDAFW pump, supplies 600V bus 11A which provides power to the Train B motor operated valves (FMO 212 and 242).

Each of the 4KV emergency busses have three loss of voltage relays. Actuation of two out of the three relays on bus T11A will result in auto-start of the Train B EDG and MDAFW pump. Similarly, actuation of any two relays on Bus T11D will start the Train A EDG and MDAFW pump. A loss of voltage condition (2 out of 3) on both safety busses associated with a given train (e.g., T11C and T11D for Train A) will cause motor operated valves in both trains to open, if they are closed.

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In their license amendment application, IMPC proposed the following changes to improve the clarity and accuracy of TS Table 3.3-3:

- * TS Table 3.3-3, Item 6.b (4KV Bus loss of voltage for the MDAFW Pumps) currently lists the total no. of channels as "2/Bus." As discussed earlier this should read "3/Bus."
- * "Valve Actuation" and "Pump start" are added under "4KV loss of voltage." The number of channels to trip for pump start is specified as 2/bus on T11A (Train B) or T11D (Train A). The number of channels to trip for valve actuation is specified as 2/bus on T11A & T11B or T11C & T11D.

3.0 EVALUATION

The changes described in Section 2 are purely editorial. The changes improve existing TS Table 3.3-3 by correctly specifying the number of loss of voltage channels per bus and by clarifying that both busses of a particular train must indicate a loss of voltage to result in the opening of the motor operated valves that supply flow from the MDAFW pumps. The staff has determined that the changes proposed by the licensee are acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change in a surveillance requirement. We have 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 amendment.

5.0 CONCLUSION

We have 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: April 9, 1990

Principal Contributor: J. Giitter

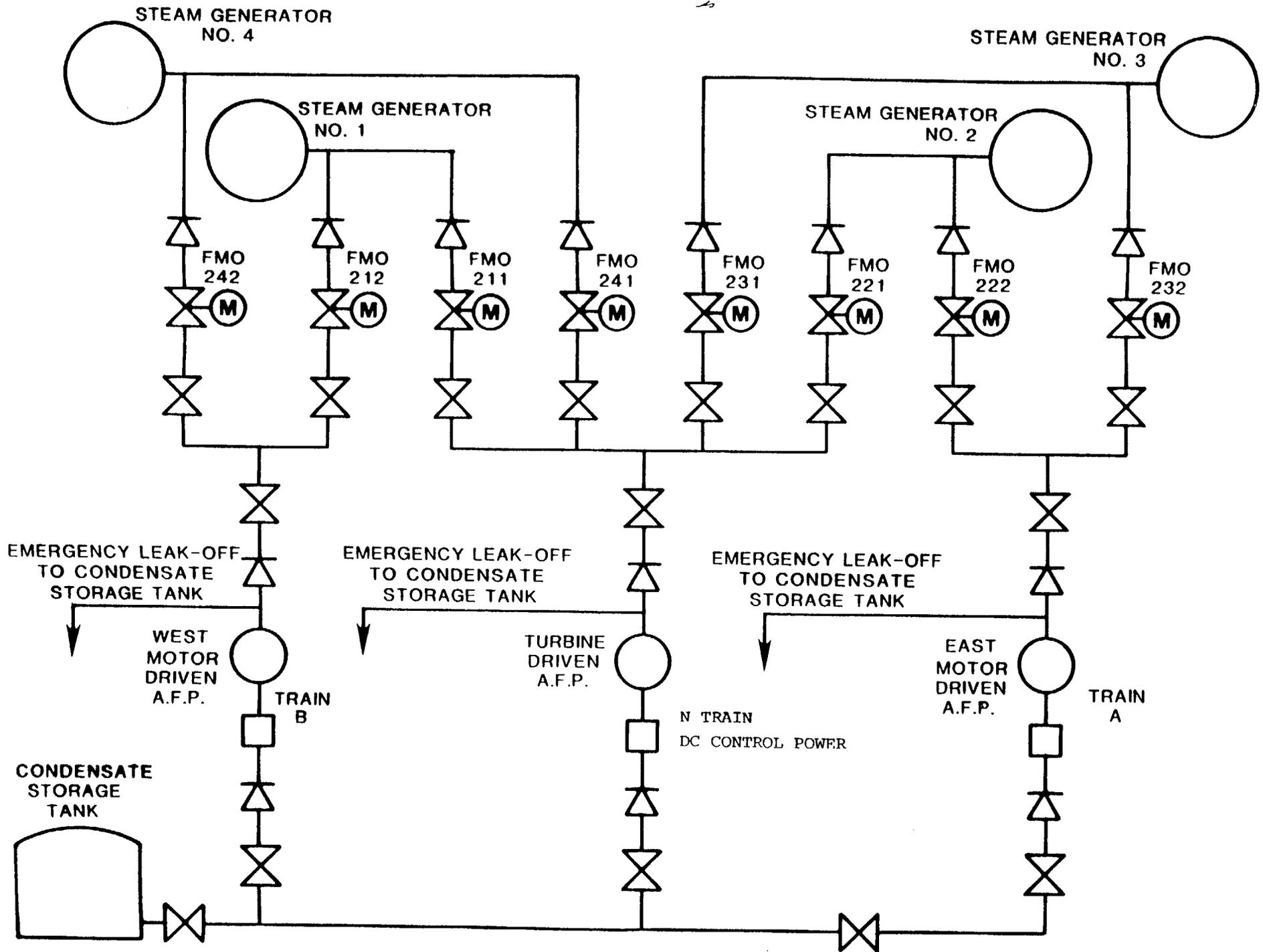


Figure 1 Donald C. Cook Nuclear Plant auxiliary feedwater system

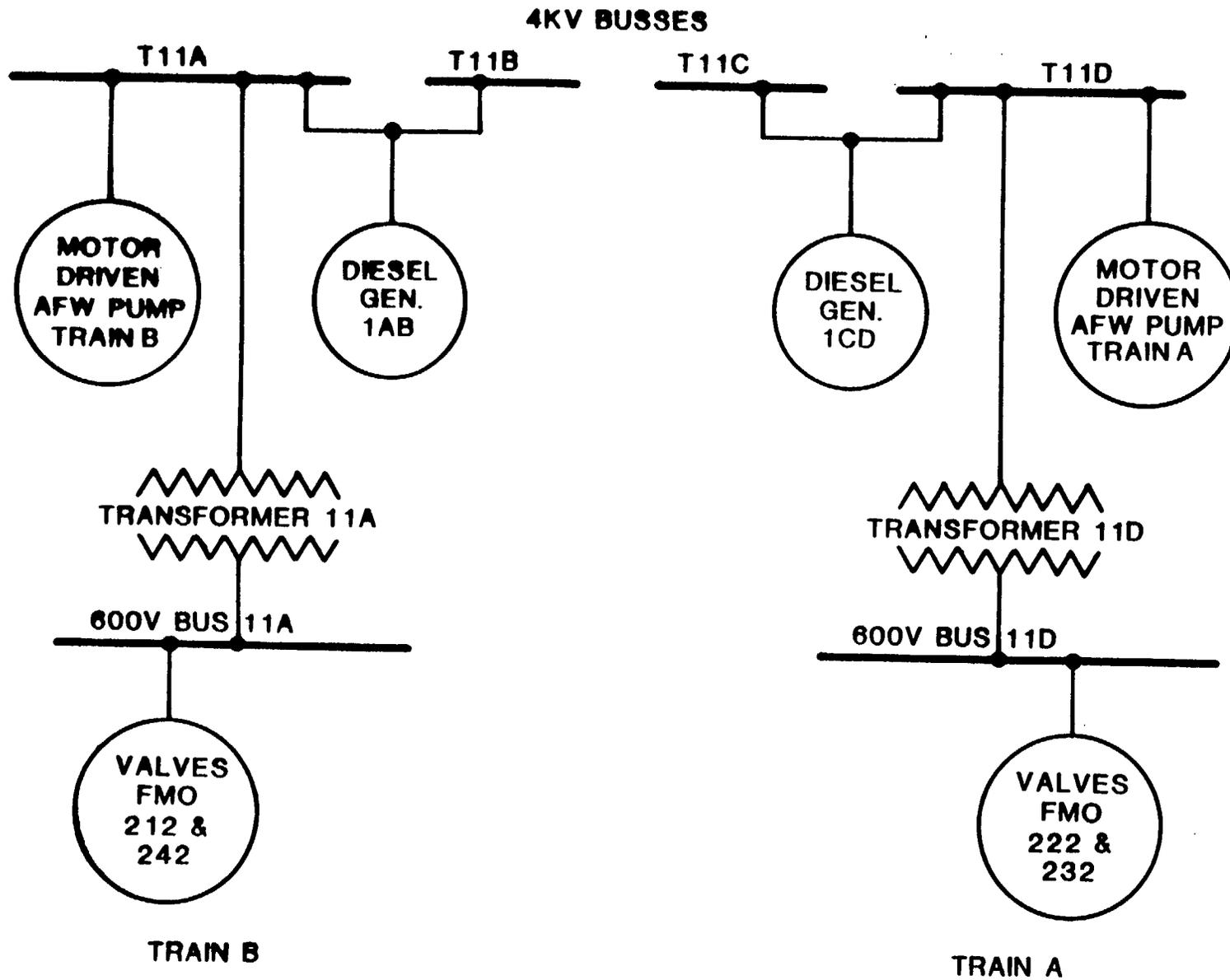


Figure 2 Power sources for motor driven auxiliary feedwater pumps and associated valves