

October 22, 1993

Docket Nos. STN 50-454
and STN 50-455

Mr. D. L. Farrar
Manager, Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III, Suite 500
1400 OPUS Place
Downers Grove, Illinois 60515

DISTRIBUTION:

Docket Files	J. Roe
PDIII-2 p/f	J. Zwolinski
J. Hickman	J. Dyer
C. Moore	OGC
D. Hagan	B. Clayton, RIII
Ghill(4)	OC/LFDCB
C. Grimes	ACRS(10)
OPA	NRC & Local PDRs

Dear Mr. Farrar:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M84154 AND M84155)

The U. S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 56 to Facility Operating License No. NPF-37 and Amendment No. 56 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively. The amendments are in response to your application dated July 27, 1992.

The amendments revise the Technical Specifications relative to ventilation flow rates, a heater dissipation rate, a testing method, and a footnote reference that is no longer applicable.

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

Sincerely,

Original signed by:

John B. Hickman, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 56 to NPF-37
2. Amendment No. 56 to NPF-66
3. Safety Evaluation

cc w/enclosures:
See next page

OFC	LA:PDIII-2	PM:PDIII-2	D:PDIII-2	SPLB	OGC	
NAME	CMOORE	JHICKMAN	JDYER JM	CMCCRACKEN	R Bachmann	
DATE	8/20/93	8/24/93	8/24/93	9/29/93	10/11/93	1/93
COPY	(YES/NO)	(YES/NO)	YES/NO	(YES/NO)	YES/NO	YES/NO

270021

NRC FILE CENTER COPY

9310290133 931022
PDR ADOCK 05000454
P PDR

Mr. D. L. Farrar
Commonwealth Edison Company

cc:

Mr. William P. Poirier, Director
Westinghouse Electric Corporation
Energy Systems Business Unit
Post Office Box 355, Bay 236 West
Pittsburgh, Pennsylvania 15230

Joseph Gallo, Esquire
Hopkins and Sutter
888 16th Street, N.W.
Suite 700
Washington, D.C. 20006

Michael I. Miller, Esquire
Sidley and Austin
One First National Plaza
Chicago, Illinois 60690

Mr. Edward R. Crass
Nuclear Safeguards and
Licensing
Sargent & Lundy Engineers
55 East Monroe Street
Chicago, Illinois 60603

U. S. Nuclear Regulatory Commission
Byron Resident Inspectors Office
4448 North German Church Road
Byron, Illinois 61010-9750

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

Chairman, Ogle County Board
Post Office Box 357
Oregon, Illinois 61061

Robert Neumann
Office of Public Counsel
State of Illinois Center
100 W. Randolph
Suite 11-300
Chicago, Illinois 60601

Byron Station
Unit Nos. 1 and 2

Ms. Lorraine Creek
Rt. 1, Box 182
Manteno, Illinois 60950

Douglass Cassel, Esquire
17 East Monroe Street, Suite 212
Chicago, Illinois 60603

Mrs. Phillip B. Johnson
1907 Stratford Lane
Rockford, Illinois 61107

Attorney General
500 South 2nd Street
Springfield, Illinois 62701

EIS Review Coordinator
EPA Region V
230 S. Dearborn Street
Chicago, Illinois 60604

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

Commonwealth Edison Company
Byron Station Manager
4450 North German Church Road
Byron, Illinois 61010



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-454

BYRON STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 56
License No. NPF-37

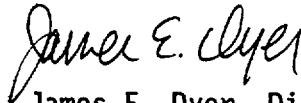
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated July 27, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and 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. NPF-37 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 56 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



James E. Dyer, Director
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 22, 1993



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-455

BYRON STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 56
License No. NPF-66

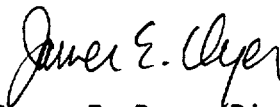
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated July 27, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and 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. NPF-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A (NUREG-1113), as revised through Amendment No. 56 and revised by Attachment 2 to NPF-66, and the Environmental Protection Plan contained in Appendix B, both of which were attached to License No. NPF-37, dated February 14, 1985, are hereby incorporated into this license. Attachment 2 contains a revision to Appendix A which is hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



James E. Dyer, Director
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 22, 1993

ATTACHMENT TO LICENSE AMENDMENT NOS. 56 AND 56
FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66
DOCKET NOS. STN 50-454 AND STN 50-455

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. Pages marked with an asterisk are provided for convenience.

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 7-17	3/4 7-17
*3/4 7-18	*3/4 7-18
3/4 7-19	3/4 7-19
3/4 7-20	3/4 7-20
3/4 7-21	3/4 7-21
3/4 7-22	3/4 7-22
3/4 9-15	3/4 9-15
*3/4 9-16	*3/4 9-16

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample from the Emergency Makeup System obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and a relative humidity of 70%; and
 - 3) Verifying a system flow rate of 6000 cfm \pm 10% for the Emergency Makeup System and 49,500 cfm \pm 10% for the Recirculation System when tested in accordance with ANSI N510-1980.
- d. After every 720 hours of Emergency Makeup System operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and a relative humidity of 70%;
- e. At least once per 18 months by:
- 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.0 inches Water Gauge while operating the Emergency Makeup System at a flow rate of 6000 cfm \pm 10%,
 - 2) Verifying that on a Safety Injection or High Radiation-Control Room Outside Air Intake test signal, the system automatically switches into a makeup mode of control room ventilation with flow through the Emergency Makeup System HEPA filters and charcoal adsorber banks and the recirculation charcoal adsorber;
 - 3) Verifying that the Emergency Makeup System maintains the control room at a positive nominal pressure of greater than or equal to 1/8 inch Water Gauge relative to ambient pressure in areas adjacent to the control room area when operating an Emergency Makeup System at a flowrate of 6,000 cfm \pm 10% and the recirculation charcoal adsorber at a flowrate of 49,500 cfm \pm 10%.
 - 4) Verifying that the heaters dissipate greater than or equal to 24.0 kW when tested in accordance with ANSI N510-1980.
 - 5) Verifying that the Emergency Makeup System maintains the Upper Cable Spreading Area at a positive nominal pressure of greater than or equal to 0.02 inches Water Gauge relative to the ambient pressure in areas adjacent to the upper cable spreading area (except for adjacent control room areas pressurized as specified above) when operating an Emergency Makeup System at a flow rate of 6,000 cfm \pm 10% and the recirculation charcoal adsorber at a flowrate of 49,500 cfm \pm 10%.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- f. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the Emergency Makeup System at a flow rate of 6000 cfm \pm 10%; and
- g. After each complete or partial replacement of a charcoal adsorber bank in the Emergency Makeup System by verifying that the cleanup system satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 6000 cfm \pm 10%.
- h. At least once per 18 months or (1) after any structural maintenance on the charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the recirculation charcoal adsorber by:
 - (1) Verifying that the recirculation charcoal adsorber satisfies the in-place penetration testing acceptance criteria of less than 2% total bypass and uses the test procedure guidance in Regulatory Positions C.5.a, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 49,500 cfm \pm 10% for the recirculation charcoal adsorber;
 - (2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample from the recirculation charcoal adsorber obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1% when tested at a temperature of 30°C and a relative humidity of 70%; and
 - (3) Verifying a system flow rate of 49,500 cfm \pm 10% for the Recirculation Charcoal Adsorber when tested in accordance with ANSI N510-1980.
- i. After each complete or partial replacement of a charcoal adsorber bank in the Recirculation Charcoal Adsorber System by verifying that the cleanup system satisfies the in-place penetration testing acceptance criteria of less than 0.1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating at a system flowrate of 49,500 cfm \pm 10%.
- j. After every 720 hours of Recirculation Charcoal Adsorber operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 meets the laboratory testing criteria of Regulatory Guide 1.52, Revision 2, March 1978 for a methyl iodide penetration of less than 1% when tested at a temperature of 30°C and a relative humidity of 70%.

PLANT SYSTEMS

3/4.7.7 NON-ACCESSIBLE AREA EXHAUST FILTER PLENUM VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Three independent non-accessible area exhaust filter plenums (50% capacity each) shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one non-accessible area exhaust filter plenum inoperable, restore the inoperable plenum to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.7 Each non-accessible area exhaust filter plenum shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that operation occurs for at least 15 minutes;
- b. At least once per 18 months, or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the exhaust filter plenum by:
 - 1) Verifying that the exhaust filter plenum satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% when using the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the flow rate is between 55,669 cfm and 68,200 cfm for the train;
 - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample from each bank of adsorbers of the train obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for methyl iodide penetration of less than 1% when tested at the temperature of 30°C and a relative humidity of 70%;

SURVEILLANCE REQUIREMENTS (Continued)

- 3) Verifying a system flow rate between 55,669 cfm and 68,200 cfm through the exhaust filter plenum during operation when tested in accordance with ANSI N510-1980; and
 - 4) Verifying that with the system operating at a flow rate between 55,669 cfm and 68,200 cfm through the train and exhausting through the HEPA filter and charcoal adsorbers, the total bypass flow of the system and the damper leakage is less than or equal to 1% when the system is tested by admitting cold DOP at the system intake and the damper leakage rate is determined by either direct measurements or pressure decay measurements at a test pressure of 2 inches of water and the auxiliary building exhaust fans are operating at their rated flow.
- c. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained from each bank of adsorbers of the train in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, when the average for a methyl iodide penetration of less than 1% when tested at a temperature of 30°C and a relative humidity of 70%.
- d. At least once per 18 months by:
- 1) Verifying for each filter bank of the train that the pressure drop across the combined HEPA filters and charcoal adsorber banks of less than 6.0 inches Water Gauge while operating the exhaust filter plenum at a flow rate between 55,669 cfm and 68,200 cfm through the train;
 - 2) Verifying that the exhaust filter plenum starts on manual initiation or Safety Injection test signal; and
 - 3) Verifying that the system maintains the ECCS equipment rooms at a negative pressure of greater than or equal to 1/4 in. Water Gauge relative to the outside atmosphere during system operation while operating at a flow rate between 55,669 cfm and 68,200 cfm through the train.
- e. After each complete or partial replacement of a HEPA filter bank, by verifying that the exhaust filter plenum satisfies the in-place penetration testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a DOP test aerosol while operating at a flow rate between 55,669 cfm and 68,200 cfm through the train; and

SURVEILLANCE REQUIREMENTS (Continued)

- f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the exhaust filter plenum satisfies the in-place penetration testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate between 55,669 cfm and 68,200 cfm through the train.
- g. After any structural maintenance of the HEPA filter or charcoal adsorber housings, by verifying that the exhaust filter plenum satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% when using the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the flow rate is between 55,669 cfm and 68,200 cfm for the train, and between 18,556 and 22,733 cfm per bank.

PLANT SYSTEMS

3/4.7.8 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.8 All snubbers shall be OPERABLE. Snubbers excluded from this requirement are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety-related system.

APPLICABILITY: MODES 1, 2, 3, and 4. MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES.

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.8g. on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.8 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers are categorized as inaccessible or accessible during reactor operation. Each of these groups (inaccessible and accessible) may be inspected independently according to the schedule below. The first inservice visual inspection of each type of snubber shall be performed after 4 months but within 10 months of commencing POWER OPERATION and shall include all hydraulic and mechanical snubbers. If all snubbers of each type are found OPERABLE during the first inservice visual inspection, the second inservice visual inspection of that type shall be performed at the first refueling outage. Otherwise, subsequent visual inspections of a given type shall be performed in accordance with the following schedule:

SURVEILLANCE REQUIREMENTS (Continued)

- 1) Verifying that the Fuel Handling Building Exhaust Filter Plenum satisfies the in-place penetration testing acceptance criteria of less than 1% when using the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the flow rate is 21,000 cfm \pm 10%;
 - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, and by showing a methyl iodide penetration of less than 10% when tested at a temperature of 30°C and a relative humidity of 95%.
 - 3) Verifying a flow rate of 21,000 cfm \pm 10% through the Fuel Handling Building Exhaust Filter Plenum during operation when tested in accordance with ANSI N510-1980; and
 - 4) Verifying that with the system operating at a flow rate of 21,000 cfm \pm 10% and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the system and the leakage is less than or equal to 1% when the system is tested by injecting DOP at the system intake and the damper leakage rate is determined by either direct measurements or pressure decay measurements at a test pressure of 2 inches of water and the auxiliary building exhaust fans are operating at their rated flow.
- c. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 10% when tested at a temperature of 30°C and a relative humidity of 95%.
- d. At least once per 18 months by:
- 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the exhaust filter plenum at a flow rate of 21,000 cfm \pm 10%;
 - 2) Verifying that on a Safety Injection or a High Radiation test signal, the system automatically starts (unless already operating) and directs its exhaust flow through the HEPA filters and charcoal adsorber banks; and

REFUELING OPERATIONS

SURVEILLANCE REQUIREMENTS (Continued)

- 3) Verifying that the Fuel Handling Building Exhaust Filter Plenum maintains the fuel building at a negative pressure of greater than or equal to 1/4 inch Water Gauge relative to the outside atmosphere during operation.
- e. After each complete or partial replacement of a HEPA filter bank, by verifying that the Fuel Handling Building Exhaust Filter Plenum satisfies the in-place penetration testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 21,000 cfm \pm 10%; and
- f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the Fuel Handling Building Exhaust Filter Plenum satisfies the in-place penetration testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 21,000 cfm \pm 10%.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 56 TO FACILITY OPERATING LICENSE NO. NPF-37
AND AMENDMENT NO. 56 TO FACILITY OPERATING LICENSE NO. NPF-66
COMMONWEALTH EDISON COMPANY
BYRON STATION, UNIT NOS. 1 AND 2
DOCKET NOS. STN 50-454 AND STN 50-455

1.0 INTRODUCTION

By letter dated July 27, 1992, Commonwealth Edison Company (CECo, the licensee) submitted a request for several proposed changes to the Byron Technical Specifications (TS). Specifically, the proposed changes would modify the control room ventilation heater dissipation requirement and the nonaccessible area exhaust filter plenum ventilation system flow rate, would eliminate bank flow testing for the nonaccessible area exhaust filter plenum ventilation system, would make several editorial changes, and would allow the use of hot di-2-ethylhexyl phthalate (DOP) testing.

2.0 EVALUATION

2.1 Control Room Ventilation Heater Dissipation

Currently, TS 4.7.6.e.4 requires verification that the control room ventilation heaters dissipate 27.2 ± 2.7 kW when tested in accordance with ANSI N510-1980. The Updated Final Safety Analysis Report, section 6.5.1.2.1.d.2 states that the single-stage electric heater is sized to reduce the humidity of the airstream to at least 70% relative humidity for the worst inlet conditions. Further, that a heater capacity of 23.8 kW was calculated using 110% of the filter design flow rate and entering air conditions of 95°F and 100% relative humidity. This calculated minimum required heater capacity is a revision of the original design basis for the heaters. The revision is based on a revised assumption that the air within the turbine building, the emergency source of the suction for the control room emergency air filter units, is identical with the atmospheric conditions for the design basis accident condition. This change in assumption reduced the calculated heating requirement from 92,860 Btu/hr (27.21 kW) to 23.8 kW. Based on, in part, this revised calculation, the licensee has proposed a change to the TS to verify that the heaters dissipate *greater than or equal to 24.0 kW* when tested in accordance with ANSI N510-1980. The proposed revision of the minimum acceptable value from 24.5 kW (27.2 - 2.7) to 24.0 kW is acceptable as this meets the requirements of the revised design calculation. The proposed change deleting the maximum acceptable value of 29.9 kW (27.2 + 2.7) is acceptable as an increased heat dissipation will not degrade the heaters capability to

perform their design function and the licensee will continue to have administrative controls to protect the heaters themselves from excessive voltage/current for equipment operability.

2.2 Nonaccessible Area Exhaust Filter Plenum System Flow Rate

The purpose of the nonaccessible area exhaust filter plenum ventilation (VA) system is to direct radioactive materials, that may leak from the ECCS equipment within the pump rooms following a LOCA, to filters prior to reaching the environment. The design nonaccessible area exhaust filter plenum flow rate is based on minimizing airborne contamination for ALARA and maintaining area temperatures appropriate for equipment qualification. Original plant design calculations established a plenum design flow rate of 66,900 cfm based on calculated room heat loads. Currently, TS 4.7.7 requires VA system flow to be 66,900 cfm \pm 10%.

During Byron, Unit 2, startup testing, the VA system flow rates were less than originally calculated. Due to this discrepancy, the calculated room heat loads were reassessed and the minimum acceptable air flow rate was recalculated. Specifically, the revised minimum acceptable system flow rate was calculated to be 55,669 cfm and the revised system design flow rate was calculated to be 62,730 cfm. As a result, the licensee has proposed to revise the TS lower bound and nominal flow rate to be the revised calculated minimum acceptable and design flow rates, respectively. The upper bound is proposed to be 110% of the filter rated capacity of 62,000 cfm, or 68,200 cfm. CECO's engineering calculations demonstrated that the lower flow rates were acceptable for both the total ventilation requirement and for the individual room ventilation requirement. The lower flow rates will increase residence time in the charcoal adsorbers, which will improve filtration efficiency. The absolute pressure in the auxiliary building is not significantly changed by the new flow rate and, therefore, the differential pressure between the control room and adjacent areas is unaffected. Based on the above, the proposed change to the nonaccessible area exhaust filter plenum ventilation system flow rate is acceptable.

2.3 VA System Bank Flow Testing

Currently, several of the surveillance requirements in section 4.7.7 for the non-accessible area exhaust filter plenum require verification of both total system flow and flow in each train of the system. CECO is proposing that the individual train flows be verified only after any structural maintenance or modification to the filter housing.

The flow distribution for the VA Nonaccessible plenums was set during initial construction by installation of welded baffle plates. Since there are no moveable dampers controlling flow distribution there is no reason for the flow distribution to change. The initial startup test program verified that the flow distribution was acceptable and subsequent surveillances have found no change in the air flow distribution since the baffle plates were installed. Current plant procedures OBVS XDP-1 requires a monthly surveillance of the

differential pressure across each on-line HEPA filter and procedure OBVS 7.7.b.1-1 requires an 18-month visual inspection of the HEPA filter banks. These surveillances will provide adequate assurance that the HEPA filters have not become clogged. In addition, the performance of the bank flow verification requires that plant staff take measurements inside the plenums while the fans are in operation. This poses a potential safety hazard. Based on the fixed flow controls for the plenums and the implementation of a verification surveillance should modifications be performed, the deletion of the current bank flow surveillance requirement is acceptable.

The licensee has also proposed revised upper and lower bounds for the new post-maintenance bank flow surveillance requirement. These new flow rates were calculated by evenly dividing the revised VA system flow rate (see above). This provides for an evenly distributed flow, and is, therefore, acceptable.

2.4 DOP Testing

Currently, TS Surveillances 4.7.7.b.4 and 4.9.12.b.4 specify that cold DOP (di-2-ethylhexyl phthalate) is to be used for testing the VA system. The licensee has proposed to replace the requirement for "cold" DOP testing with non-specified DOP testing. In support, the licensee references ANSI N510-1980 which allows the use of "cold" or "hot" DOP. "Cold" DOP refers to a DOP aerosol generated by a particular method which uses compressed air. For in-place testing using a DOP aerosol, the critical parameter is the distribution of droplet sizes in the aerosol. Any method of generating the droplet size distribution specified in ANSI N510-1975, 1980, or 1989, satisfies the guidance of Regulatory Guide 1.52 with regard to in-place testing using DOP. Based on the licensee's reference to ANSI N510-1980, the deletion of the "cold" specification for DOP testing is acceptable.

2.5 Editorial Changes

The licensee proposed the deletion of a footnote to TS 3.7.7, stating that the requirement is not applicable prior to July 1, 1985, and the deletion of a footnote to TS 4.7.7.d.3 stating that the requirement is not applicable to Unit 2 until October 1, 1987. Since both of these dates are now passed and the footnotes are no longer necessary, their deletion is acceptable. The licensee also proposed to correct a typographical error in TS 4.7.7.b.2 which refers to methyl "iodide" when it should read methyl "iodide." This change is also acceptable. In addition, during the review of this proposed amendment, a footnote on page 3/4 7-22 was noted as no longer applicable. Specifically, the footnote required that "The visual inspection of the inaccessible snubbers for Unit 1, Cycle 3 must be completed by January 24, 1990." The time frame for this requirement has now passed. Therefore, the deletion of the footnote is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change 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 change surveillance requirements. The NRC 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 the amendments involve no significant hazards consideration, and there has been no public comment on such finding (57 FR 48815). Accordingly, the 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 the amendments.

5.0 CONCLUSION

The Commission 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, (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.

Principal Contributor: John B. Hickman

Date: October 22, 1993