

ATTACHMENT B

PROPOSED CHANGES TO APPENDIX A,  
TECHNICAL SPECIFICATIONS, OF FACILITY  
OPERATING LICENSES NPF-37 AND NPF-66

Revision to:	3/4.7-17
	3/4.7-19
	3/4.7-20
	3/4.7-21
	3/4.9-15

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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 ~~27.2  $\pm$  2.7~~ kW when tested in accordance with ANSI N510-1980. (greater than or equal to 24.0)
  - 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

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

#### LIMITING CONDITION FOR OPERATION

3.7.7<sup>f</sup> 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 37 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 ~~66,900 cfm ± 10%~~ for the train and ~~22,300 cfm ± 10%~~ per bank; *between 55,669 cfm and 68,200 cfm*
  - 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 methylene chloride penetration of less than 1% when tested at the temperature of 30°C and a relative humidity of 70%;

~~\*Not applicable to July 1, 1985.~~

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

between 55,669 cfm and 68,200 cfm

- 3) Verifying a system flow rate of ~~66,900 cfm  $\pm$  10%~~ through the train and ~~22,300 cfm  $\pm$  10%~~ per bank 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 of ~~66,900 cfm  $\pm$  10%~~ through the train and ~~22,300 cfm  $\pm$  10%~~ per bank 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.  
*between 55,669 cfm and 68,200 cfm*
- 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 of ~~66,900 cfm  $\pm$  10%~~ through the train and ~~22,300 cfm  $\pm$  10%~~ per bank; *between 55,669 cfm and 68,200 cfm*
  - 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 of ~~66,900 cfm  $\pm$  10%~~ through the train and ~~22,300 cfm  $\pm$  10%~~ per bank. *between 55,669 cfm and 68,200 cfm*
- 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 of ~~66,900 cfm  $\pm$  10%~~ through the train and ~~22,300 cfm  $\pm$  10%~~ per bank; and *between 55,669 cfm and 68,200 cfm*

~~\*Not applicable to Unit 2 until October 1, 1987.~~

PLANT SYSTEMS

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 of ~~66,900 cfm  $\pm$  10%~~ through the train, and ~~22,300 cfm  $\pm$  10%~~ per bank.  
between 55,669 cfm and 68,200 cfm
- 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.

## REFUELING OPERATIONS

### 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 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 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

## ATTACHMENT C

### EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATIONS

Commonwealth Edison has evaluated the proposed amendment and has determined that it involves no significant hazards considerations. According to 10CFR50.92(c), a proposed amendment to an operating license involves no significant hazards if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. Involve a significant reduction in a margin of safety.

The proposed amendment makes several changes to Byron's Technical Specifications. These changes are 1) a change in control room emergency makeup filter heater dissipation rates, 2) change in VA system total flow rate, 3) deletion of periodic bank flow rate requirements, 4) editorial changes, and 5) deleting "col 1" when describing the DOP used for ventilation system testing.

- A. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. The control room emergency make-up air filter unit heaters were designed to comply with ANSI N509-1976 and Regulatory Guide 1.52 Revision 2 (1978) requirements. These limit the relative humidity of air entering the carbon adsorbents to 70% at the design flow rate. For a LOCA, air conditions were assumed to conservatively reflect atmospheric conditions. It was determined that the relative humidity can be limited to approximately 70% with a heater capacity of 24.0 kW. The proposed Technical Specification change is consistent with this determination, so the probability and consequences of accident remain unaffected.

The revised total system air flow rates for the VA Non-Accessible Area Exhaust Filter Plenums are based on a maximum of 110% of the filter rated capacity. The minimum flow is based on the flow necessary to maintain non-accessible area ALARA and equipment qualification considerations. The new flow rates still ensure that radioactive materials leaking from the ECCS equipment within the pump rooms following a LOCA are filtered prior to reaching the outside environment. Therefore, the operation of this system with revised flow rates does not affect the assumptions of the safety analysis, and the consequences of an accident are not affected.

The deletion of the periodic bank flow testing will not affect the operation or effectiveness of the VA exhaust filter plenum system. The design basis assumes that the system will be tested in accordance with ANSI N510-1980. Since this change aligns the surveillance requirements with the approved method, the consequences of any accident previously evaluated are not affected. An additional surveillance requirement was added to ensure that bank flow testing is done following certain maintenance activities as required by the ANSI method.

The typographical correction does not affect any accident. The deletion of the footnotes has no effect on any accident since the footnotes are no longer applicable.

Deleting the word "cold" when describing the DOP testing is similar to the deletion of bank flow testing. The change is removing a restriction on the test requirement to allow testing to be performed in accordance with an approved method, ANSI N510-1980.

- B. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated. The change to required heater capacity is based upon an analysis that established a minimum heater capacity that envelopes the accident analysis results.

The new VA system flow rates result from a combination of testing, adjusting, and balancing of the VA system, and achieved acceptable system performance characteristics of the system design as outlined in the Update Final Safety Analysis Report (UFSAR). Cooling and pressure requirements are maintained within the design and intent of the UFSAR. The basis for the VA non-accessible area system is to ensure that radioactive materials leaking from the ECCS equipment within the pump rooms following a LOCA are filtered prior to reaching the environment. The system's ability to perform this function is maintained.

Deleting the bank flow testing surveillance requirement does not affect the operation of the VA system. The change will align the testing requirements with the approved ANSI N510-1980 methods. The new surveillance requirement ensures that bank flow testing is performed after structural maintenance on the HEPA filter or charcoal adsorber housing.

Correcting the typographical error has no effect on any accident. Deleting the footnotes that are no longer applicable has no effect on the creation of any accident.

Deleting the word "cold" from the description of DOP testing has no effect on system operation as described in the UFSAR analysis. Since no new equipment is being added and no control changes are being performed, the possibility of an accident or malfunction of a different type than previously evaluated in the UFSAR is not created.

- C. The proposed changes do not involve a significant reduction in a margin of safety. The Basis for Technical Specification 3/4.7.6 states that the operability of the system in conjunction with the control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. Dose calculations are based on a charcoal adsorber capable of removing 99% of radioactive forms of iodine. Charcoal efficiency drops as relative humidity increases. The proposed change limits the relative humidity entering the adsorbents to 70% in accordance with ANSI N509-1976 and Regulatory Guide 1.52 design requirements. With entering air relative humidity maintained below 70%, charcoal efficiency remains above 99%, so the margin of safety is not affected.

The proposed VA system flow rates maintain all ECCS pump room pressures as required. The air flow provides negative pressure in the auxiliary building to ensure that all radioactive materials from ECCS equipment within the pump rooms following a LOCA are filtered prior to reaching the environment. This is consistent with the Basis for Technical Specification 3/4.7.7.

Deleting the periodic VA bank flow testing will not affect the margin of safety because the surveillance requirements are in accordance with ANSI N510-1980.

Deleting the footnotes that are no longer applicable has no effect on the margin of safety. The typographical correction is also editorial in nature and has no effect on the margin of safety.

Deleting the word "cold" from the description of the DOP testing will not affect the margin of safety because the basis document, ANSI N510-1980, allows both "hot" and "cold" DOP testing.

Therefore, based on the above evaluation, Byron Station has concluded that these changes do not involve significant hazards consideration.

## ATTACHMENT D

### ENVIRONMENTAL ASSESSMENT

Commonwealth Edison has evaluated the proposed amendment against the criteria for and identification of licensing and regulatory actions requiring environmental assessment in accordance with 10CFR51.21. It has been determined that the proposed change meets the criteria for a categorical exclusion as provided for under 10CFR51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10CFR50, it involves changes to surveillance requirements and the amendment meets the following specific criteria:

- (i) the amendment involves no significant hazards considerations

As demonstrated in Attachment C, this proposed amendment does not involve any significant hazards considerations.

- (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite

As documented in Attachment A, there will be no change in the types or significant increase in the amounts of any effluents related offsite.

- (iii) there is no significant increase in individual or cumulative occupational radiation exposure

The proposed change will not result in changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore there will be no increase in individual or cumulative occupational radiation exposure resulting from this change.