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MAY 14 1982

Docket No. 50-247

Mr. John D. O'Toole, Vice President
Nuclear Engineering and Quality Assurance
Consolidated Edison Company
of New York, Inc.
4 Irving Place
New York, New York 10003

Dear Mr. O'Toole:

The Commission has issued the enclosed Amendment No. 77 to Facility Operating License No. DPR-26 for the Indian Point Nuclear Generating Unit No. 2. This amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated August 4, 1980.

The amendment revises Technical Specifications relating to operational and surveillance requirements for the installed post-accident engineered safeguards feature (ESF) atmosphere clean-up system air filtration and absorption units.

During our review of the proposed request, we found that certain changes were necessary. Your staff has agreed to these changes and they have been incorporated.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,
Original signed by
Steven A. Varga

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosures:
1. Amendment No. 77 to DPR-26
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page

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

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

DOCKET NO. 50-247

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 77
License No. DPR-26

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

   A. The application for amendment by Consolidated Edison Company of New York, Inc. (the licensee) dated August 4, 1980, 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.

8205270715

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-26 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 77 , 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

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 14, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 77

FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Revise Appendix A as follows:

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3.3-14	3.3-14
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------	3.3-16
------	3.3-17
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Table 4.1-3	Table 4.1-3
Table 4.1-3 (Continued)	-------
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F. Service Water System

1. The reactor shall not be made critical unless the following condition is met:

   Three service water pumps on the designated essential header together with their associated piping and valves are operable.

2. If during power operation one of the three service water pumps on the designated essential header or any of their associated piping or valves is found inoperable, the operator shall immediately proceed to place in service an essential service water system which meets the requirements of 3.3.F-1. If an essential service water system can not be restored within eight hours, the reactor shall be placed in cold shutdown condition.

G. Hydrogen Recombiner System and Post Accident Containment Venting System

1. The reactor shall not be made critical unless the following conditions are met:

   a) Both hydrogen recombiner units together with their associated piping, valves, oxygen supply system and control system are operable, with the exception of one recombiner unit's equipment located outside of the containment which may be inoperable, provided it is under repair and can be made operable if needed.

   b) The post accident containment venting system is operable.

   c) The containment atmosphere sampling system including the sampling pump, piping and valves is operable.

   d) Hydrogen and oxygen supplies shall not be connected to the hydrogen recombiner units except under conditions of an accident or those specified in specification 4.5.C.1.

2. During power operation, the requirements of 3.3.G.1 may be modified to allow any one of the following components to be inoperable. If the system is not restored to meet the requirements of 3.3.G.1 within the time specified, the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures.

a) One hydrogen recombiner unit or its associated flow path, or oxygen supply system or control system may be inoperable for a period not to exceed thirty days, provided the other recombiner unit and the post accident containment venting system are operable.

b) The post accident containment venting system may be inoperable for a period not to exceed thirty days provided that both hydrogen recombiners are operable.

c) One containment atmosphere sampling line may be inoperable for a period not to exceed seven days, provided the other sampling lines are operable.

d) The containment atmosphere sampling pump may be inoperable for a period not to exceed seven days, provided a spare pump is available at the site for service if required.

H. Control Room Air Filtration System

1. The control room air filtration system shall be operable at all times when containment integrity is required.

2. From the date that the control room air filtration system becomes and remains inoperable for any reason, operations requiring containment integrity are permissible only during the succeeding 3.5 days. At the end of this 3.5 day period if the conditions for the control room air filtration system cannot be met, the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures. If the conditions are not satisfied within an additional 48 hours, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.

I. Cable Tunnel Ventilation Fans

1. The reactor shall not be made critical unless the two cable tunnel ventilation fans are operable.

2. During power operation, the requirement of 3.3.I.1 may be modified to allow one cable tunnel ventilation fan to be inoperable for seven days, provided the other fan is operable.

The limits for the accumulators, and their pressure and volume assure the required amount of water injection following a loss-of-coolant accident, and are based on the values used for the accident analyses.[9,10,11]

Two independent diverse systems are provided for removal of combustible hydrogen from the containment building atmosphere: (a) the hydrogen recombiners, and (b) the post accident containment venting system. Either of the two (2) hydrogen recombiners or the post accident containment venting system are capable of wholly providing this function in the event of a design basis accident.

Two full rated hydrogen recombination systems are provided in order to control the hydrogen evolved in the containment following a loss-of-coolant accident. Either system is capable of preventing the hydrogen concentration from exceeding 2% by volume within the containment. Each of the systems is separate from the other and is provided with redundant features. Power supplies for the blowers and ignitors are separate, so that loss of one power supply will not affect the remaining system. Hydrogen gas is used as the externally supplied fuel. Oxygen gas is added to the containment atmosphere through a separate containment feed to prevent depletion of oxygen in the air below the concentration required for stable operation of the combustor (12%). The containment atmosphere sampling system consists of a sample line which originates in each of the containment fan cooler units. The fan and sampling pump head together are sufficient to pump containment air in a loop from the fan cooler through a containment penetration to a sample vessel outside the containment, and then through a second penetration to the sample termination inside the containment. The design hydrogen concentration for operating the recombiner is established at 2% by volume. Conservative calculations indicate that the hydrogen content within the containment will not reach 2% by volume until 13 days after a loss-of-coolant accident. There is therefore no need for immediate operation of the recombiner following an accident, and the quantity of hydrogen fuel stored at the site will be only for periodic testing of the recombiners.

The Post Accident Containment Venting System consists of a common penetration line which acts as a supply line through which hydrogen free air can be admitted to the containment, and an exhaust line, with parallel valving and piping, through which hydrogen bearing gases from containment may be vented through a filtration system.

The supply flow path makes use of instrument air to feed containment. The nominal flow rate from either of the two instrument air compressors is 200 scfm. If the instrument air system is not available, the station air system is available as a back up.

The exhaust line penetrates the containment and then is divided into two parallel lines. Each parallel line contains a pressure sensor and all the valves necessary for controlling the venting operation. The two lines then rejoin and the exhaust passes through a flow sensor and a temperature sensor before passing through roughing, HEPA and charcoal filters. The exhaust is then directed to the plant vent.

The post accident containment venting system is a passive system in the sense that a differential pressure between the containment and the outside atmosphere provides the driving force for the venting process to take place. The system is designed such that a minimum internal containment pressure of 2.14 psig is required for the system to operate properly.

The flow rate and the duration of venting required to maintain the hydrogen concentration at or below 3 percent of the containment volume are determined from the containment hydrogen concentration measurements and the hydrogen generation rate. The containment pressure necessary to obtain the required vent flow is then determined. Using one of the air compressors, hydrogen free air is pumped into the containment until the required containment pressure is reached. The air supply is then stopped and the supply/exhaust line is isolated by valves outside the containment. The addition of air to pressurize the containment dilutes the hydrogen, therefore the containment will remain isolated until analysis of samples indicates that the concentration is again approaching 3% by volume. Venting will then be started. This process of containment pressurization followed by venting is repeated as may be necessary to maintain the hydrogen concentration at or below 3 volume percent.

The post accident venting system is used only in the absence of hydrogen recombiners and only when absolutely necessary. From the standpoint of minimizing offsite radiation doses, the optimum starting time for the venting system, if needed, is the latest possible time after the accident. Consistent with this

philosophy, the selected venting initiation point of 3 percent hydrogen maximizes the time period before venting is required while at the same time allows a sufficient margin of safety below the lower flammability limit of hydrogen.

The control room air filtration system is designed to filter the control room atmosphere for intake air and/or for recirculation during control room isolation conditions. The control room system is designed to automatically start upon control room isolation. Control room isolation is initiated either by a safety injection signal or by detection of high radioactivity in the control room. If the control room air filtration system is found to be inoperable, there is no immediate threat to the control room and reactor operation may continue for a limited period of time while repairs are being made. If the system cannot be repaired within 3.5 days, the reactor is placed in the hot shutdown condition. If the repairs cannot be completed within an additional 48 hours, the reactor is placed in the cold shutdown condition.

The cable tunnel is equipped with two temperature controlled ventilation fans. Each fan has a capacity of 21,000 cfm and is connected to a 480v bus. One fan will start automatically when the temperature in the tunnel reaches 95°F. The second fan will start if the temperature in the tunnel reaches 100°F. Under the worst conditions, i.e. loss of outside power and all the Engineered Safety Features in operation, one ventilation fan is capable of maintaining the tunnel temperature below 104°F. Under the same worst conditions, if no ventilation fans were operating, the natural air circulation through the tunnel would be sufficient to limit the gross tunnel temperature below a tolerable value of 140°F. However, in order to provide for ample tunnel ventilation capacity, the two ventilation fans are required to be operable when the reactor is made critical. If one ventilation fan is found inoperable, the other fan will ensure that cable tunnel ventilation is available.

Valves 856A, C, D and E are maintained in the open position during plant operation to assure a flow path for high-head safety injection during the injection phase of a loss-of-coolant accident. Valves 856B and F are maintained in the closed position during plant operation to prevent hot leg injection during the injection phase of a loss-of-coolant accident. As an additional assurance of preventing hot leg injection, the valve motor

operators are de-energized to prevent spurious opening of these valves. Power will be restored to these valves at an appropriate time in accordance with plant operating procedures after a loss-of-coolant accident in order to establish hot leg recirculation.

Valves 842 and 843 in the mini-flow return line from the discharge of the safety injection pumps to the refueling water storage tank are de-energized in the open position to prevent an extremely unlikely spurious closure which would cause the safety injection pumps to overheat if the reactor coolant system pressure is above the shutoff head of the pumps.

The specified quantities of water for the RWST include unavailable water (4687 gals) in the tank bottom, inaccuracies (6200 gals) in the alarm setpoints, and minimum quantities required during injection (246,000 gals)[12] and recirculation phases (80,000 gals).[12] The minimum RWST (i.e., 345,000 gals) provides approximately 8,100 gallons margin.

The seven day out of service period for the Weld Channel and Penetration Pressurization System and the Isolation Valve Seal Water System is allowed because no credit has been taken for operation of these systems in the calculation of off-site accident doses should an accident occur. No other safeguards systems are dependent on operation of these systems.[13] The minimum pressure settings for the IVSWS and WC & PPS during operation assures effective performance of these systems for the maximum containment calculated peak accident pressure of 47 psig.

References

(1) FSAR Section 9

(2) FSAR Section 6.2

(3) FSAR Section 6.2

(4) FSAR Section 6.3

(5) FSAR Section 14.3.5

(6) FSAR Section 1.2

(7) FSAR Section 8.2

(8) FSAR Section 9.6.1

(9) FSAR Section 14.3

(10) Indian Point Unit No. 2, "Analysis of the Emergency Core Cooling System in Accordance with the Acceptance Criteria of 10CFR50.46 and Appendix K of 10CFR50", dated December 1978, and "Analysis of the Emergency Core Cooling System in Accordance with the Acceptance Criteria of 10CFR50.46 and 10 CFR Part 50, Appendix K," dated April, 1980.

(11) Letter from William J. Cahill, Jr. of Consolidated Edison Company of New York, to Robert W. Reid of the Nuclear Regulatory Commission, dated July 13, 1976. Indian Point Unit No. 2 Small Break LOCA Analysis.

(12) Indian Point Unit No. 3 FSAR Sections 6.2 and 6.3 and the Safety Evaluation accompanying "Application for Amendment to Operating License" sworn to by Mr. William J. Cahill, Jr. on March 28, 1977.

(13) FSAR Sections 6.5 and 6.6.

4.1 OPERATIONAL SAFETY REVIEW

Applicability

Applies to items directly related to safety limits and limiting conditions for operation.

Objective

To specify the minimum frequency and type of surveillance to be applied to plant equipment and conditions.

Specification

a. Calibration, testing and checking of analog channels, and testing of logic channels shall be performed as specified in Table 4.1-1.

b. Sampling and equipment tests shall be conducted as specified in Tables 4.1-2 and 4.1-3, respectively.

c. Performance of any surveillance test outlined in these specifications is not immediately required if the plant condition is the same as the condition into which the plant would be placed by an unsatisfactory result of that test. Such tests will be performed before the plant is removed from the subject condition that has precluded the immediate need to run the test. If the test provisions require that a minimum higher system condition must first be established, the test will be performed promptly upon achieving this minimum condition. The following surveillance tests, however, must be performed without the above exception:

- Table 4.1-1 Items 3 and 19
- Table 4.1-2 Items 1, 2, and 10
- Table 4.1-3 Items 2, 6, 11 and 12

Basis

A surveillance test is intended to identify conditions in a plant that would lead to a degradation of reactor safety. Should a test reveal such a condition, the Technical Specifications require that either immediately, or after a specified period of time, the plant be placed in a condition which mitigates or eliminates the consequences of additional related casualties or accidents. If the plant is already in a condition which satisfies the failure criteria of the test, then plant safety is not compromised and performance of the test yields information that is not necessary to determine safety limits or limiting conditions for operation of the plant. The surveillance test need not be performed, therefore, as long as the plant remains in this condition. However, this surveillance test would be performed prior to removing the plant from the subject condition that has precluded the immediate need to run the

TABLE 4.1-1 (CONTINUED)

Channel Description	Check	Calibrate	Test	Remarks
22. Accumulator Level and Pressure	S	R	N.A.	
23. Steam Line Pressure	S	R	M	
24. Turbine First Stage Pressure	S	R	M	
25. Logic Channel Testing	N.A.	N.A.	M	
26. Turbine Overspeed Protection Trip Channel (Electrical)	N.A.	R	M	
27. DELETED				
28. Control Rod Protection (for use with LOPAR fuel)	N.A.	R	*	
29. Loss of Power				
a. 480v Emergency Bus Under-voltage (Loss of Voltage)	N.A.	R	R	
b. 480v Emergency Bus Under-voltage (Degraded Voltage)	N.A.	R	R	
c. 480v Emergency Bus Under-voltage (Alarm)	N.A.	R	M	
30. Auxiliary Feedwater:				
a. Steam Generator Water Level (Low-Low)	S	R	R	

* Within 31 days prior to entering a condition in which the Control Rod Protection System is required to be operable unless the reactor trip breakers are manually opened during RCS cooldown prior to T_{cold} decreasing below 350°F and the breakers are maintained open during RCS cooldown when T_{cold} is less than 350°F.

TABLE 4.1-3 (1 of 1)

FREQUENCIES FOR EQUIPMENT TESTS

		Check	Frequency	Maximum Time Between Tests
1.	Control Rods	Rod drop times of all control rods	Each refueling shutdown	**
2.	Control Rods	Partial movement of all control rods	Every 2 weeks during reactor critical operations	20 days
3.	Pressurizer Safety Valves	Set point	Each refueling shutdown	**
4.	Main Steam Safety Valves	Set point	Each refueling shutdown	**
5.	Containment Isolation System	Automatic Actuation	Each refueling shutdown	**
6.	Refueling System Interlocks	Functioning	Each refueling shutdown prior to refueling operation	NA*
7.	DELETED			
8.	Diesel Fuel Supply	Fuel Inventory	Weekly	10 days
9.	Turbine Steam Stop, Control Valves	Closure	Monthly****	45 days****
10.	Cable Tunnel Ventilation Fans	Functioning	Monthly	45 days
11.	DELETED			
12.	DELETED			

*NA - Not Applicable

**See Specification 1.9.

****This test may be waived during end-of-cycle operation when reactor coolant boron concentration is equal to or less than 150 ppm, due to operational limitations.

B. Containment Spray System

1. System tests shall be performed at each reactor refueling interval. The tests shall be performed with the isolation valves in the spray supply lines at the containment and the spray additive tank isolation valves blocked closed. Operation of the system is initiated by tripping the normal actuation instrumentation.

2. The spray nozzles shall be tested for proper functioning at least every five years.

3. The test will be considered satisfactory if visual observations indicate all components have operated satisfactorily.

C. Hydrogen Recombiner System

1. A complete recombiner system test shall be performed at each normal reactor refueling on each unit. The test shall include verification of ignition and attainment of normal operating temperature.

2. A complete control system test shall be performed at intervals not greater than six months on each unit. The test shall consist of a complete dry-run startup using artificially generated signals to simulate light off.

3. Containment atmosphere sampling system tests shall be performed at intervals no greater than six months. The test shall include drawing a sample from the fan cooler units and purging the sampling line.

4. The above tests will be considered satisfactory if visual observations and control panel indication indicate that all components have operated satisfactorily.

5. Each recombiner air-supply blower shall be started at least at two-month intervals. Acceptable levels of performance shall be that the blowers start, deliver flow, and operate for at least 15 minutes.

D. Containment Air Filtration System

Each air filtration unit specified in Specification 3.3B shall be demonstrated operable:

1. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the unit operates for at least 15 minutes.

2. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) at any time painting, fire or chemical releases could alter filter integrity by:

   a) Verifying a system flow rate at ambient conditions, of 65,600 cfm ± 10% during filtration unit operation when tested in accordance with ANSI N510-1975. Verify that the flow rate through the charcoal adsorbers is ≥ 8,000 cfm.

   b) Verifying that the HEPA filters and/or charcoal adsorbers satisfy the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a and C.5.c of Regulatory Guide 1.52, Revision 2, March 1978, at ambient conditions and at a flow rate if 65,600 cfm ± 10% for the HEPA filters.

   c) 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 (except for Position C.6.a(1)) of Regulatory Guide 1.52, Revision 2, March 1978.

3. 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 (except for Position C.6.a(1)) of Regulatory Guide 1.52, Revision 2, March 1978.

4. At least once per 18 months by:

a) Verifying that the pressure drop across the moisture separator and HEPA filters is less than 6 inches Water Gauge while operating the filtration unit at ambient conditions and at a flow rate of 65,600 cfm ±10%.

b) Verifying that the unit starts automatically on a Safety Injection Test Signal.

5. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the unit at ambient conditions and at a flow rate of 65,600 cfm ±10%.

6. After each complete or partial replacement of a charcoal adsorber bank verify that the flow rate through the charcoal adsorbers is ≥8,000 cfm when the system is operating at ambient conditions and a flow rate of 65,600 cfm ±10% when tested in accordance with ANSI N510-1975.

E. Control Room Air Filtration System

The control room air filtration system specified in Specification 3.3.H shall be demonstrated operable:

1. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

2. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) at any time painting, fire or chemical releases could alter filter integrity by:

a) Verifying a system flow rate, at ambient conditions, of 1840 cfm ±10% during system operation when tested in accordance with ANSI N510-1975.

b) Verifying that with the system operating at ambient conditions and at a flow rate of 1840 CFM ±10% and exhausting through the HEPA filters and charcoal adsorbers,

the total bypass flow of the system to the facility vent, including leakage through the system diverting valves, is less than or equal to 1% when the system is tested by admitting cold DOP at the system intake.

c) Verifying that the system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, at ambient conditions and at a flow rate of 1840 cfm ±10%.

d) 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.

3. 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.

4. At least once per 18 months by:

a) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at ambient conditions and at a flow rate of 1840 cfm ±10%.

b) Verifying that on a Safety Injection Test Signal or a high radiation signal in the control room, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks.

c) Verifying that the system maintains the control room at a neutral or positive pressure relative to the outside atmosphere during system operation.

5. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 1840 cfm ±10%.

6. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 1840 cfm ± 10%.

F. Fuel Storage Building Air Filtration System

The fuel storage building air filtration system specified in Specification 3.8 shall be demonstrated operable:

1. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

2. At each refueling shutdown prior to refueling operations or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) at any time painting, fire or chemical releases could alter filter integrity by:

   a) Verifying a system flow rate at ambient conditions of 25,000 cfm ±10% during system operation when tested in accordance with ANSI N510-1975.

b) Verifying that the system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, at ambient conditions and at a flow rate of $\geq$25,000 cfm $\pm$10%.

c) 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.

3. Prior to handling spent fuel which has decayed for less than 35 days verify 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. Such an analysis is good for 720 hours of charcoal adsorber operation. After 720 hours of operation, if spent fuel with a decay time of less than 35 days is still being handled, a new sample is required along with a new analysis.

4. At each refueling shutdown prior to refueling operations by:

a) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at ambient conditions and at a flow rate of 25,000 cfm $\pm$10%.

b) Verifying that the system maintains the spent fuel storage pool area at a pressure less than that of the outside atmosphere during system operation.

5. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 25,000 cfm ±10%.

6. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 25,000 cfm ±10%.

G. Post Accident Containment Venting System

The post accident containment venting system shall be demonstrated operable:

1. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) at any time painting, fire or chemical releases could alter filter integrity by:

   a) Verifying no flow blockage by passing flow through the filter system.

   b) Verifying that the system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, at ambient conditions and at a flow rate of * cfm ±10%.

   c) 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,

*Flow rate will be determined at the cycle 5/6 refueling outage. Value will then be inserted into the technical specifications administratively during a subsequent license amendment.

March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.

2. 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.

3. At least once per 18 months by:

   a) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at ambient conditions and at a flow rate of * cfm ±10%.

   b) Verifying that the system valves can be manually opened.

4. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of * cfm ±10%.

5. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of * cfm ±10%.

*Flow rate will be determined at the cycle 5/6 refueling outage. Value will then be inserted into the technical specifications administratively during a subsequent license amendment.

Basis:

The Safety Injection System and the Containment Spray System are principal plant safeguards that are normally inoperative during reactor operation. Complete systems tests cannot be performed when the reactor is operating because a safety injection signal causes reactor trip, main feedwater isolation and containment isolation, and a Containment Spray System test requires the system to be temporarily disabled. The method of assuring operability of these systems is therefore to combine systems tests to be performed during plant refueling shutdowns, with more frequent component tests, which can be performed during reactor operation.

The refueling systems tests demonstrate proper automatic operation of the Safety Injection and Containment Spray Systems. With the pumps blocked from starting a test signal is applied to initiate automatic action and verification made that the components receive the safety injection signal in the proper sequence. The test demonstrates the operation of the valves, pump circuit breakers, and automatic circuitry.(1)

During reactor operation, the instrumentation which is depended on to initiate safety injection and containment spray is generally checked daily and the initiating circuits are tested monthly (in accordance with Specification 4.1). The testing of the analog channel inputs is accomplished in the same manner as for the reactor protection system. The engineered safety features logic system is tested by means of test switches to simulate inputs from the analog channels. The test switches interrupt the logic matrix output to the master relay to prevent actuation. Verification that the logic is accomplished is indicated by the matrix test light. Upon completion of the logic checks, verification that the circuit from the logic matrices to the master relay is complete is accomplished by use of an ohmmeter to check continuity.

Other systems that are also important to the emergency cooling function are the accumulators, the Component Cooling System, the Service Water System and the containment fan coolers. The accumulators are a passive safeguard. In accordance with Specification 4.1 the water volume and pressure in the accumulators are checked periodically. The other systems mentioned operate when the reactor is in operation and by these means are continuously monitored for satisfactory performance.

For the four flow distribution valves (856 A, C, D & E), verification of the valve mechanical stop adjustments is performed periodically to provide assurance that the high head safety injection flow distribution is in accordance with flow values assumed in the core cooling analysis.

The hydrogen recombiner system is an engineered safety feature which would be used only following a loss-of-coolant accident to control the hydrogen evolved in the containment. The system is not expected to be started until approximately 13 days have elapsed following the accident. At this time the hydrogen concentration in the containment will have reached 2% by volume, which is the design concentration for starting the recombiner system. Actual starting of the system will be based upon containment atmosphere sample analysis. The complete functional tests of each unit at refueling shutdown will demonstrate the proper operation of the recombiner system. More frequent tests of the recombiner control system and air-supply blowers will assure operability of the system. The biannual testing of the containment atmosphere sampling system will demonstrate the availability of this system.

The charcoal portion of the in-containment air recirculation system is a passive safeguard which is isolated from the cooling air flow during normal reactor operation. Hence the charcoal should have a long useful lifetime. The filter frames that house the charcoal are stainless steel and should also last indefinitely. However, the required periodic visual inspections will verify that this is the case. The iodine removal efficiency cannot be measured with the filter cells in place. Therefore, at periodic intervals a representative sample of charcoal is to be removed and tested to verify that the efficiency for removal of methyl iodide is obtained.[2] Such laboratory charcoal sample testing together with the specified in-place testing of the HEPA filters will provide further assurance that the criteria of 10CFR100 continue to be met.

The control room air filtration system is designed to filter the control room atmosphere for intake air and/or for recirculation during control room isolation conditions. The control room air filtration system is designed to automatically start upon control room isolation. High efficiency particulate absolute (HEPA) filters are installed upstream of the charcoal adsorbers to prevent clogging of these adsorbers. The charcoal adsorbers are installed to reduce the potential intake of radioiodine by control room personnel. The required in-place testing and the laboratory charcoal sample testing of the HEPA filters and charcoal

adsorbers will provide assurance that Criterion 19 of the General Design Criteria for Nuclear Power Plants, Appendix A to 10CFR Part 50, continues to be met.

The fuel storage building air filtration system is designed to filter the discharge of the fuel storage building atmosphere to the plant vent. This air filtration system is designed to start automatically upon a high radiation signal. Upon initiation, isolation dampers in the ventilation system are designed to close to redirect air flow through the air treatment system. HEPA filters and charcoal adsorbers are installed to reduce potential releases of radioactive material to the atmosphere. Nevertheless, as required by specification 3.8.A.12, the fuel storage building air filtration system must be operating whenever spent fuel is being moved unless the spent fuel has had a continuous 35 day decay period. The required in-place testing and the laboratory charcoal sample testing of the HEPA filters and charcoal adsorbers will provide added assurance that the criteria of 10CFR100 continue to be met.

The post accident containment venting system may be used in lieu of hydrogen recombiners for removal of combustible hydrogen from the containment building atmosphere following a design basis accident. As was the case for hydrogen recombiner use, this system is not expected to be needed until approximately 13 days have elapsed following the accident. Use of the system will be based upon containment atmosphere sample analysis and availability of the hydrogen recombiners. When in use, HEPA filters and charcoal adsorbers will filter the containment atmosphere discharge prior to release to the plant vent. The required in-place testing and laboratory charcoal sample testing will verify operability of this venting system and provide further assurance that releases to the environment will be minimized.

As indicated for all four (4) of the previously mentioned engineered safety feature (ESF) air filtration systems, high efficiency particulate absolute (HEPA) filters are installed upstream of the charcoal adsorbers to prevent clogging of these adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The laboratory charcoal sample testing periodically verifies that the charcoal meets the iodine removal efficiency requirements of Regulatory Guide 1.52, Revision 2.

Should the charcoal of any of these filtration systems fail to satisfy the specified test acceptance criteria, the charcoal will be replaced with new charcoal which satisfies the requirements for new charcoal outlined in Regulatory Guide 1.52, Revision 2.

References

(1) FSAR Section 6.2

(2) FSAR Section 6.4

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 77 TO FACILITY OPERATING LICENSE NO. DPR-26

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

DOCKET NO. 50-247

Introduction

By a letter dated February 28, 1975, and subsequently revised in a letter dated August 4, 1980, Consolidated Edison Company of New York, Inc. (Con Ed) proposed to amend its operating license DPR-26 for Indian Point, Unit No. 2, by submitting a revision to the Technical Specifications. The proposed changes were submitted in response to our December 18, 1974 request and consist of the addition of items G.1.b and H to Limiting Condition for Operation (LCO) 3.3, the addition of items E-G to Surveillance Requirement (SR) 4.5, and the revisions to item G.2 of existing LCO 3.3, item D of SR 4.5, and Tables 4.1-1 and 4.1-3 of SR 4.1.

Discussion

Our letter of December 18, 1974, to Con Ed indicated the need for Indian Point's, Unit No. 2, Technical Specifications to include additional items within their LCOs and SRs in order to assure confidence that engineered safety feature (ESF) air filtration systems would function reliably, when required, at a degree of efficiency equal to or greater than that assumed in previously performed accident analyses. Con Ed initially responded to our request on February 28, 1975, and following discussions with the NRC staff, modified their response in a letter dated August 4, 1980.

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Con Ed's proposed changes to the Technical Specifications include:

(1) revisions to item G.2 of LCO 3.3, to item D of SR 4.5, and to Tables 4.1-1 and 4.1-3 of SR 4.1, which address the hydrogen recombiner system, the post-accident containment venting system, the control room air filtration system, the fuel handling building filtration system, and the containment air filtration system; and

(2) the addition of items G.1.b and H to LCO 3.3 and items E-G to SR 4.5, which address the control room air filtration system, the fuel storage building air filtration system, and the post-accident containment venting system.

Con Ed's proposal includes the addition of a technical specification on a system not presently covered in the technical specification (the post-accident containment venting system) and the expansion of the present technical specification for the control room air filtration system, the containment air filtration system, and the fuel storage building air filtration system, such that the frequency of some tests are increased and the number of tests performed to establish the system's operability are increased.

The changes were proposed by Con Ed so that the specified filter test program would conform to the objectives of the model Technical Specifications included in our letter of December 18, 1974.

Evaluation

Our evaluation was based upon Positions C.5 (in-place testing criteria) and C.6 (laboratory testing criteria for activated charcoal) of Regualtory Guide 1.52, Revision 2, "Design, Testing, and Maintenance Criteria for Atmosperic Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants", and on the Standard Technical Specifications for ESF air filtration systems for Westinghouse nuclear reactors (NUREG-0452). The technical specifications proposed by Con Ed would add, as a Part of LCO 3.3.G and as SR 4.5.G, limiting conditions for operation and surveillance requirements for the post-accident containment venting system and would add to LCO 3.3, as item H, a limiting condition for operation which addresses the control room air filtration system. The proposed changes to Tables 4.1-1 and 4.1-3 and SR 4.5.D would increase the number of tests to be performed on the control room filtration system, the containment air filtration system and the fuel storage building air filtration system through the addition of SRs 4.5.E and 4.5.F and the modification to 4.5.D.

These proposed additions and revisions to the present technical specifications expand the scope of the LCOs and SRs such that they now specify required operator action if the particular ESF filter system is found inoperable, and increase the frequency and the number of tests to be performed to demonstrate that the system is operable.

The following sections discuss each ESF filter system for which a LCO or SR was added or revised.

Post-Accident Containment Venting System

Con Ed proposed to add to the present LCO 3.3.G limiting conditions of operations for the post-accident containment venting system. The present LCO 3.3.G addresses only the hydrogen recombiner system. At Indian Point, Unit No. 2, either the hydrogen recombiner system or the post-accident containment venting system may be utilized for the purpose of handling the buildup of hydrogen in the containment after a LOCA.

Con Ed proposed in LCO 3.3.G.1 that the reactor could not be made critical unless the post-accident containment venting system was operable. They also proposed that during power operation the requirements of 3.3.G.1 may be modified to allow either the hydrogen recombiner system or the post-accident containment venting system to be inoperable for a period of time. Con Ed proposed that one hydrogen recombiner could be inoperable for a period of 30 days provided the other recombiner unit and the post-accident containment venting system are operable. The present LCO 3.3.G.2.a allows one hydrogen recombiner to be inoperable for a period of 7 days, provided the other recombiner unit is operable.

Con Ed has proposed as LCO 3.3.G.2.b that the post-accident containment venting system may be inoperable for a period of 30 days provided both hydrogen recombiners are operable. Since the hydrogen recombiners and the post-accident containment venting system are redundant systems we find it acceptable to allow either one hydrogen recombiner or the post-accident containment vent system to be inoperable for a period of 30 days.

Con Ed also proposed to modify LCO 3.3.G.2.c and d to alter the periods of operability for the containment atmosphere sampling line and sampling pump from the present 7 days to 30 days. After discussion with the licensee concerning the basis for this request for change, the licensee has agreed to leave the period of inoperability at 7 days for both the sampling line and the sampling pump.

In the present specification 3.3.G.2, if the requirements of LCO 3.3.G.1 could not be satisfied within 48 hours after the allowable period of inoperability, then the reactor was required to be in the cold shutdown condition utilizing normal operating procedures. Con Ed has proposed to eliminate this requirement from LCO 3.3.G.2 since the severity of the accident is when the unit is at significant power level and not at the hot shutdown condition. Therefore, the deletion of this requirement is acceptable.

Con Ed also proposed to add, as SR 4.5.G, various tests to determine the operability of the post-accident containment venting system. These tests included;

(1) verifying a system flow rate during system operations when tested in accordance with ANSI N510;

(2) verifying that the system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52; and

(3) verifying that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regualtory Guide 1.52 meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52.

Con Ed proposed that the tests in (2) and (3) above would be performed once per 18 months, after any structural maintenance of the HEPA filter or charcoal adsorber housings or after any painting, fire or chemical releases occurred which could alter filter integrity. In addition, the tests in (2) above would be performed after complete or partial replacement of the HEPA filter bank or charcoal adsorber. The test in (3) above would also be performed after 720 hours of charcoal adsorber operation. Con Ed also proposed that once per 18 months the pressure drop across the HEPA filter and charcoal adsorbers be verified to be less than 6 inches water gauge while operating at ambient conditions and that it be verified that the system valves can be manually opened.

We have reviewed Con Ed's proposed SR 4.5.G and find it acceptable with some word changes. These changes are common to all the surveillance requirements that Con Ed has proposed for ESF filter systems. Con Ed has used this phase "within ± 10% of the required accident flow rate...". It is our position that the flow rate should be identified for each ESF filter system. We have discussed this with Con Ed. They have agreed with our position and

have provided the flow rate for all ESF grade filter systems except the post-accident containment venting system. The flow rate of the post-accident containment venting system is a function of the pressure in the containment. The system is designed such that a minimum internal containment pressure of 2.14 psig is required for the venting system to operate. The flow rate and the duration of venting required to maintain the hydrogen concentration at or below 3% of the containment volume are determined from the containment hydrogen concentration measurements and the hydrogen generation rate. The containment pressure necessary to obtain the required vent flow is then determined. Using one of the instrument air compressors, hydrogen free air is pumped into the containment until the required containment pressure is reached. The air supply is then stopped and the supply/exhaust line isolated by valves outside containment. The addition of air to pressurize the containment dilutes the hydrogen. The containment will remain isolated until the analysis of samples indicates that the concentration is again approaching 3% by volume. Venting will then be started.

Con Ed has not measured a flow rate in this filter system during the course of its filter testing program. Therefore, after discussions with Con Ed, we have concluded that the flow rate for this system should be left unspecified until the next refueling outage at which time the determination would be made as to its value. This value would then be included in the technical specifications.

Con Ed has also agreed to verify that no flow blockage exists in the system by passing flow through the filter system once per 18 months or after any structural maintenance on the HEPA filter or charcoal adsorber housings or at any time painting, fire, or chemical releases could alter filter integrity.

For the in-place leak rate testing criteria for the HEPA filters, Con Ed proposed a removal efficiency criterion for DOP that was a function of the removal efficiency assumed in the accident evaluation. It is our position that the plant operators should have clear guidance as to the efficiency required for complying with this testing requirement. We have discussed this with Con Ed and they have agreed to include the specific removal efficiency in all specifications involving in-place DOP testing. This value will be 99% for all filter systems.

We have reviewed the proposed addition to LCO 3.3.G and addition of SR 4.5.G for this ESF filter system. We find that the LCO and SR provide a recognition of the importance of this system to the protection of the general health and safety of the public and to plant personnel that is not presently in the existing technical specifications. We find that the proposed specifications meet the intent of position C.5 and C.6 of Regulatory Guide 1.52 and the Standard Technical Specification for ESF filter systems for Westinghouse

reactors. We find the proposed specifications consistent with the intent of present requirements for new operating licensees and that the addition of the proposed specifications will ensure increased confidence that the system will perform when called upon. With the addition of our comments to the proposed technical specifications, LCO 3.3.G and SR 4.5.G are judged acceptable.

Control Room Air Filtration System

Con Ed proposed LCO 3.3.H to address the control room air filtration system. Previously there was no LCO which addressed this system. Con Ed proposed that this system be operable at all times when containment integrity is required. Con Ed also proposed that the system could become inoperable for a period of up to 7 days. If the system is still inoperable at the end of this 7 days, then the reactor is to be placed in the hot shutdown condition utilizing normal operating procedures. If the system is not operable within an additional 48 hours, then the reactor is to be placed in the cold shutdown condition. The control room air filtration system is not a redundant system. It is our position that the time period for the system to be inoperable for nonredundant systems should be 3.5 days rather than 7 days. We have discussed our position with Con Ed and they have agreed to this change.

Table 4.1-1 of SR 4.1 specifies minimum frequencies for checks, calibratrion and tests of instrument channels. In Table 4.1-1 the control room air

filtration system must have its damper checked prior to each refueling outage for proper operation in the accident mode following an isolation signal. In addition, from Table 4.1-3 of SR 4.1, this same system must have its charcoal filter tested in-place and show $\geq$ 99.5% removal of freon or is equivalent, must be inspected visually, and a pressure drop test conducted to show less than 5 inches of water across the filters. Con Ed has proposed to eliminate these testing requirements from Tables 4.1-1 and 4.1-3, and to replace them with tests proposed as SR 4.5.E. The tests proposed in SR 4.5.E are essentially the same as those which were proposed for the post-accident containment vent system. However, two additional requirements, which Con Ed included to demonstrate the system as operable are:

(1) a requirement to initiate from the control room flow through the HEPA filters and charcoal adsorbers once per 31 days and to verify that the system operates for at least 10 hours;

(2) verification that on a Safety Injection Test Signal the system switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks; and

(3) verification that the system maintains the control room at a neutral or positive pressure relative to the outside atmosphere during system operation.

We have reviewed the proposed SR 4.5.E and have the same comments on the proposed SR 4.5.E as we had on the post-accident containment vent system, SR 4.5.G. In addition to these comments, we discussed with the licensee

that since the control room air filtration system does not contain any electrical heaters, the system need only operate for 15 minutes rather than 10 hours and that it should be verified that the system switches into the recirculation mode on a high radiation signal in the control room, in addition to the verification on a Safety Injection Test Signal. Con Ed has agreed to the incorporation of these changes to the proposed SR 4.5.E.

We have reviewed the proposed addition of LCO 3.3.H and SR 4.5.E for this ESF filter system. We find that the LCO and SR provide a recognition of the importance of this system to the protection of the general health and safety of the public and to plant personnel that is not presently in the existing technical specifications. We find that the proposed specifications meet the intent of position C.5 and C.6 of Regulatory Guide 1.52 and the Standard Technical Specification for ESF filter systems for Westinghouse reactors. We find the proposed addition consistent with the intent of present requirements for new operating licensees and that the addition of the proposed specifications will ensure increased confidence that the system will perform when called upon. With the incorporation of our comments, the proposed LCO 3.3.H and SR 4.5.E are judged acceptable.

Containment Air Filtration System

Item 12 of Table 4.1-3 of the present SR 4.1 contains testing requirements for the containment air filtration system. The tests in this Table included

(1) a visual inspection;

(2) pressure drop showing < 5 inches of water;

(3) in-place DOP test showing ≥ 99% removal for HEPA filters;

(4) laboratory test showing ≥ 50% removal for methyl radioiodine; and

(5) ignition test of charcoal showing no ignition at temperatures ≥ 300 C.

Tests 1-3 are performed during each refueling outage or following work on the filters, which could alter the filter system's integrity. The tests that Con Ed has proposed in SR 4.5.D are nearly identical to the tests which were proposed for the control room air filtration system. The comments which were made on the surveillance requirements of the control room are also applicable to the containment air filtration system except that the system need only be verified to start automatically on a Safety Injection Test Signal.

The design of the containment air filtration unit is such that 65,000 cfm flows through the HEPA filter. Of this 65,000 cfm, 8,000 cfm is diverted through the charcoal adsorbers. We have discussed with Con Ed our concern that tests be performed to assure that 65,000 cfm flows to the HEPA filter and that of that flow, 8,000 cfm is diverted to the charcoal adsorbers. We have discussed this concern with Con Ed and they have agreed to include in-place tests to verify that these flow conditions exist. In addition, Con Ed has agreed to add as SR 4.5.D.6 a specification to verify that the flow rate is 65,000 cfm to the HEPA filter and 8,000 cfm to the charcoal adsorber when tested in-place following any partial or complete replacement of the charcoal adsorber bank.

We have reviewed the proposed SR 4.5.D for this ESF filter system. We find that the SR provides a recognition of the importance of this system to the protection of the general health and safety of the public and to plant personnel that is not presently in the existing technical specifications. We find that the proposed specification meets the intent of postion C.5 and C.6 of Regulatory Guide 1.52 and the Standard Technical Specification for ESF filter systems for Westinghouse reactors. We find the proposed addition consistent with the intent of present requirements for new operating licensees and that the addition of the proposed specifications will ensure increased confidence that the system will perform when called upon. With the incorporation of our comments, the proposed SR 4.5.D is judged acceptable.

Fuel Storage Building Air Filtration System

The fuel storage building air filtration system is presently required to undergo the same tests as the containment air filtration system. These tests, which were identified in the previous section of this SER, are identified in the present Table 4.1-3. Con Ed has proposed to eliminate this system from Table 4.1-3 and has proposed SR 4.5.F in its place.

The tests which have been proposed in SR 4.5.F are nearly identical to those which were proposed for the control room air filtration system. Our comments on the control room air filtration system SR 4.5.E are also applicable to the SR for the fuel storage building air filtration system. We have discussed these comments with Con Ed and they have agreed to the incorporation of our

comments. Con Ed has proposed a test to verify that the fuel storage building air filtration system maintains the spent fuel pool storage area at a negative pressure relative to the outside air during system operation. We find this test to be acceptable. Con Ed has not proposed a test to show that the system will actuate on receipt of a safety injection signal as was proposed for the control room air filtration system since the fuel storage building air filtration system will always be operating during refueling operations.

Con Ed proposed as SR 4.5.F.3 that the fuel storage building air filtration system be tested after 720 hours of operation to verify that a representative sample of the charcoal adsorber bed meets the testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Rev. 2, March 1978. The fuel storage building air filtration system operates continuously. Implementation of the proposed SR 4.5.F.3 would have resulted in unnecessary monthly laboratory analyses. The spent fuel building air filtration system is to be used when spent fuel has decayed for less than 35 days. LCO 3.8.12 requires that the system be operating during the movement of spent fuel with a decay time of less than 35 days. Therefore, it is important that the charcoal system be operable prior to handling spent fuel with less than 35 days decay time. The testing after 720 hours of operation is to assess the degradation of the charcoal as a result of weathering. We have discussed this with Con Ed and they have agreed to modifying SR 4.5.F.3 with the addition of the phrase "Prior to handling spent fuel which has decayed for less than 35 days". To ensure that the charcoal has not weathered after 720 hours (30 days) of

operation and prior to the end of the 35 days decay period, a statement was added to SR 4.5.E.3 which states that the laboratory analysis is good only for 720 hours of charcoal adsorber operation and that if spent fuel which has decayed for less than 35 days is still being handled, a new charcoal sample is required to be taken and a new laboratory analysis performed.

Con Ed proposed as SR 4.5.F.2.b that the air filtration system be tested to verify that bypass flow of the system is less than 1%. During discussions with Con Ed, it was determined that there are no diverting valves in the fuel storage building air filtration system. The only component that can be bypassed is the charcoal adsorber. This option has been removed by the sealing of the dampers such that all flow passes through the charcoal adsorbers. The only bypass flow that can occur is through the dampers. The freon test will determine this bypass leakage. Therefore, SR 4.5.F.2.b, as proposed, is not necessary. We have discussed this with Con Ed and they have agreed to its deletion.

We have reviewed the proposed SR 4.5.F for this ESF filter system. We find that the SR provides a recognition of the importance of this system to the protection of the general health and safety of the public and to plant personnel that is not presently in the existing technical specifications. We find that the proposed specifications meets the intent of position C.5 and C.6 of Regulatory Guide 1.52 and the Standard Technical Specification for ESF

filter systems for Westinghouse reactors. We find the proposed addition consistent with the intent of present requirements for new operating licensees and that the addition of the proposed specifications will ensure increased confidence that the system will perform when called upon. With the incorporation of our comments, the proposed SR 4.5.F is judged acceptable.

Summary

We have concluded that the proposed LCOs 3.3.H and 3.3.G and SR 4.5.D through 4.5.G to the Indian Point, Unit No. 2, Technical Specifications, when modified by our comments, are acceptable.

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 an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Part 50.5(d)(4), that an environmental impact statement or negative declaration and 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 amendments do not involve a significant increase in the probability or consequences of accidents previously considered and 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 commen defense and security or to the health and safety of the public.

Dated:

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-247

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

NOTICE OF ISSUANCE OF AMENDMENT OF FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 77 to Facility Operating License No. DPR-26, issued to the Consolidated Edison Company of New York, Inc. (the licensee), which revised Technical Specifications for operation of the Indian Point Nuclear Generating Unit No. 2 (the facility) located in Buchanan, Westchester County, New York. The amendment is effective as of the date of issuance.

The amendment revises the Technical Specifications relating to operational and surveillance requirements for the installed post-accident engineered safeguards feature (ESF) atmosphere cleanup system air filtration and absorption units.

The application for the amendment 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 amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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

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For further details with respect to this action, see (1) the application for amendment dated August 4, 1980, (2) Amendment No. 77 to License No. DPR-26, and (3) the Commission's 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 White Plains Public Library, 100 Martine Avenue, White Plains, New York. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 14th day of May, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing