ATTACHMENT A

APPLICATION FOR AMENDMENT TO OPERATING LICENSE

Consolidated Edison Company of New York, Inc.

Indian Point Unit No. 2

Docket No. 50-247

July, 1977

TABLE OF CONTENTS (Continued)

LIST OF TABLES

c. The main fire pumps shall be restored to operable status within 7 days or a Special Report shall be prepared and submitted to the Commission pursuant to specification 6.9.2.e within the next 10 days outlining the cause of the malfunction and the plans for restoring the system to operable status.

B. Fire Protection Spray Systems

1. The following spray systems shall be operable whenever equipment in the area is required to be operable:

   a. Electrical Tunnel Fire Protection Water Spray System (El-33' in Control Building to El-68' in PAB).

   b. Diesel Generator Building Water Spray System (El-67' in D.G. Building).

   c. Containment Fan Cooler Charcoal Filter Dousing System (El-68' in Containment).

2. If the requirements of 3.13.B.1 cannot be satisfied:

   a. A continuous fire watch with backup fire suppression equipment shall be established for the accessible unprotected area(s) within 1 hour.

   b. The inoperable spray system(s) shall be restored to operable status within 14 days or a Special Report shall be prepared and submitted to the Commission pursuant to specification 6.9.2.e within the next 10 days outlining the cause of inoperablity and the plans for restoring the spray system(s) to operable status.

C. Penetration Fire Barriers

1. The following penetration fire barriers shall be functional at all times or a continuous fire watch shall be established on at least one side of the affected penetration:

   a. Penetration fire barriers between the central control room floor and the cable spreading room.

   b. Penetration fire barriers between the 480 V switchgear room and the cable spreading room.

   c. Penetration fire barrier between the PAB and the electrical tunnel.

D. Fire Detection Systems

1. As a minimum, the fire detection instrumentation for each location shown in Table 3.13-1 shall be operable whenever equipment in that location is required to be operable.

2. With the number of operable fire detection instruments less than the minimum required by Table 3.13-1:

   a. A fire watch patrol shall be established within 1 hour where accessiblity permits to inspect the location(s) with less than the minimum operable instrumentation at a frequency of at least once per hour.

   b. The minimum operable instrumentation required in Table 3.13-1 shall be restored within 14 days or a Special Report shall be prepared and submitted to the Commission pursuant to specification 6.9.2.e within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrumentation to operable status.

Basis

These specifications are established to assure the operability of fire protection and detection systems provided to protect equipment utilized for safe shutdown of the unit. The fire protection and detection systems are described in Revision 1 to "Review of the Indian Point Station Fire Protection Program" submitted to the NRC by letter dated April 15, 1977.

Table 3.13-1

Fire Detection Instruments

Instrument Location	Minimum Instruments Operable	
	Heat	Smoke (ionization detectors)
1. Central Control Room (Control Building: El-53')	N/A	4
2. Cable Spreading Room (Control Building: El-33')	N/A	7
3. Switchgear Room (Control Building: El-15')	N/A	7
4. Electrical Tunnel (El-33' to El-68')	38*	3
5. Electrical and Piping Tunnel and Piping Penetration Area (PAB and Fan House: El-68' to El-51')	N/A	2
6. Electrical Penetration Area (Fan House: El-46')	N/A	4
7. Diesel Generator Building (El-67')	11	N/A
8. Boric Acid Transfer Pump Area (PAB: El-80')	N/A	1
9. Containment Spray Pump Area (PAB: El-68')	N/A	3
10. Containment Fan Cooler Units (Containment: El-68')	11 per FC unit	N/A

*temperature detector/trip devices

Amendment No.

SURVEILLANCE REQUIREMENTS

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, 19, 25, and 28
- Table 4.1-2 Items 1, 2, and 10 thru 17
- 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 should be performed prior to removing the plant from the subject condition that has precluded the immediate need to run the

TABLE 4.1-3

FREQUENCIES FOR EQUIPMENT TESTS

		Check	Frequency	Maximum Time Between Tests
1.	Control Rods	Rod drop times of all full length rods	Each refueling shutdown	18 months**
2.	Control Rod	Partial movement of all full length rods	Every 2 weeks during reactor critical operations	20 days
3.	Pressurizer Safety Valves	Set point	Each refueling shutdown	18 months**
4.	Main Steam Safety Valves	Set point	Each refueling shutdown	18 months**
5.	Containment Isolation System	Automatic Actuation	Each refueling shutdown	18 months**
6.	Refueling System Interlocks	Functioning	Prior to each refueling shutdown	NA*
7.	Primary System Leakage	Evaluate	5 days/week	NA*
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.	Control Room and Fuel Handling Building Filtration System	Charcoal Filter Pressure Drop Test < 5 inches of water visual inspection Freon - 112 (or equivalent) test $\geq$ 99.5% at ambient conditions	Prior to each refueling outage***	18 months**

TABLE 4.1-3 (CONTINUED)

FREQUENCIES FOR EQUIPMENT TESTS

	Check	Frequency	Maximum Time Between Tests
12. Containment Air Filtration System	Visual Inspection	Every six months for the first two years and every refueling thereafter***	9 months (18 months)
	Pressure Drop Test < 5 inches of water	Each refueling***	18 months**
	Charcoal coupons: iodine and ignition temperature 50% removal for methyl iodine, no ignition below 300° C.	Every six months for the first two years and every refueling thereafter	9 months (18 months)
	HEPA filters DOP ≥ 99% efficiency	Each refueling***	18 months**

* NA - Not Applicable
** Except for the first fuel cycle
*** Or at any time work on the filters could alter their integrity

4.14 FIRE PROTECTION AND DETECTION SYSTEMS

Applicability

This specification applies to the surveillance requirements of fire protection and detection systems provided for protection of safe shutdown systems.

Objective

To verify the operability of fire protection and detection systems.

Specification

A. High Pressure Water Fire Protection System Testing:

1. Testing Requirements:

Item	Frequency
a. City Water Tank Minimum Water Volume.	once/week
b. Main Fire Pump Operability- Each pump operating for at least 15 minutes.	once/month
c. System Functional Test- Verification of proper actuation of the system throughout its operating sequence.	once/18 months
d. Main Fire Pump Capacity and System Flow Check- Pumps shall be verified to have a capacity of at least 1500 gpm each at a net pressure of 93 psig.	once/18 months

B. Electrical Tunnel, Diesel Generator Building and Containment Fan Cooler Fire Protection Spray Systems Testing:

1. Testing Requirements:

Item	Frequency
a. Automatic Valve Operability- one complete cycle for each testable valve.	once/3 months

Item	Frequency
b. System Functional Test- Includes simulated automatic actuation of spray system and verification that automatic valves in the flow path actuate to their correct position.	once/18 months
c. Spray Header Visual Inspection- To verify integrity.	once/18 months
d. Visual Inspection of Each Spray Nozzle- To verify no blockage.	once/18 months
e. Air Flow Test- Perform air flow test through each spray header and verify each spray nozzle is unobstructed.	once/3 years

2. The requirements of 4.14.B.1 shall not apply to self-actuated type spray nozzles which are capable of only one actuation and cannot be periodically cycled or tested. These self-actuated spray nozzles shall be visually inspected at least once per 18 months to verify that no nozzle damage exists and that the nozzles are unobstructed.

C. Penetration Fire Barrier Inspections:

1. The penetration fire barriers listed in specification 3.13.C.1 shall be verified to be functional by visual inspection at least once per 18 months.

D. Fire Detection Systems Testing:

1. The operability of the fire detection instruments utilized in satisfying the requirements of specification 3.13.D.1 shall be verified at least once per 6 months including verification of appropriate alarm actuation.

Basis

These specifications establish the surveillance program for fire protection and detection systems utilized for safe shutdown of the unit. This surveillance program is intended to verify the operability of these systems and will identify for corrective action any conditions which could prevent any portion of the systems from performing its intended function.

The fire protection and detection systems are described in Revision 1 to "Review of the Indian Point Station Fire Protection Program" submitted to the NRC by letter dated April 15, 1977.

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Plant Manager shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

6.2 ORGANIZATION

FACILITY MANAGEMENT AND TECHNICAL SUPPORT

6.2.1 The organization for facility management and technical support shall be as shown on Figure 6.2-1.

FACILITY STAFF

6.2.2 The Facility organization shall be as shown on Figure 6.2-2 and:

a. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.

b. At least one licensed Operator shall be in the control room when fuel is in the reactor.

c. At least two licensed Operators shall be present in the control room during reactor start-up, scheduled reactor shutdown and during recovery from reactor trips.

d. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor.

e. All CORE ALTERATIONS after the initial fuel loading shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling. This individual shall have no other concurrent responsibilities during this operation.

f. A Fire Brigade shall function in accordance with the Indian Point Station Emergency Plan and shall report when required to the Watch Supervisor.

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions.

6.4 TRAINING

6.4.1 A retraining and replacement training program for the facility staff shall be maintained under the direction of the Nuclear Training Director and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix "A" of 10 CFR Part 55.

6.4.2 A training program for the Fire Brigade shall be maintained under the direction of the Nuclear Training Director.

6.5 REVIEW AND AUDIT

6.5.1 STATION NUCLEAR SAFETY COMMITTEE (SNSC)

FUNCTION

6.5.1.1 The Station Nuclear Safety Committee shall function to advise the Plant Manager on all matters related to nuclear safety.

6.5.1.2 The Station Nuclear Safety Committee shall be composed as follows:

Chairman:	Plant Manager
Member:	Technical Engineering Director
Member:	Quality Assurance Engineer
Member:	Chief Operations Engineer
Member:	Security Supervisor
Member:	Test and Performance Engineer
Member:	Instrument and Control Engineer
Member:	Maintenance Engineer
Member:	Chemistry and Radiation Safety Director
Member:	Reactor Engineer
Member:	Manager NPG

ALTERNATES

6.5.1.3 Alternate members shall be appointed in writing by the SNSC Chairman to serve on a temporary basis; however, no more than two alternates shall participate in SNSC activities at any one time.

MEETING FREQUENCY

6.5.1.4 The SNSC shall meet at least once per calendar month and as convened by the SNSC Chairman.

g. Reportable Occurrences, as defined in Regulatory Guide 1.16, Revision 4.

h. Any indication of an unanticipated deficiency in some aspect of design or operation of safety related structures, systems, or components.

i. Reports and meeting minutes of the Station Nuclear Safety Committee.

AUDITS

6.5.2.8 Audits of facility activities shall be performed under the cognizance of the NFSC. These audits shall encompass:

a. The conformance of facility operation to all provisions contained within the Technical Specifications and applicable license conditions at least once per year.

b. The performance, training and qualifications of the entire facility staff at least once per year.

c. The results of all actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety at least once per six months.

d. The performance of all activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50, at least once per two years.

e. The Facility Emergency Plan and implementing procedures at least once per two years.

f. The Facility Security Plan and implementing procedures at least once per two years.

g. Any other area of facility operation considered appropriate by the NFSC or the Senior Company Officer in charge of Power Supply.

h. The Facility Fire Protection Program and implementing procedures at least once per two years.

i. A fire protection and loss prevention inspection and audit shall be performed annually utilizing either qualified offsite licensee personnel or an outside fire protection firm.

j. An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 3 years.

AUTHORITY

6.5.2.9 The NFSC shall report to and advise the Senior Company Officer in charge of Power Supply on those areas of responsibility specified in Sections 6.5.2.7 and 6.5.2.8.

ROUTINE AND REPORTABLE OCCURRENCE REPORTS

6.9.1 Information to be reported to the Commission, in addition to the reports required by Title 10, Code of Federal Regulations, shall be in accordance with the Regulatory Position in Revision 4 of Regulatory Guide 1.16, "Reporting of Operating Information - Appendix "A" Technical Specifications".

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Director of Region 1, Office of Inspection and Enforcement within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

a. Each containment integrated leak rate test shall be the subject of a summary technical report including results of the local leak rate tests since the last report. The report shall include analyses and interpretations of the results which demonstrate compliance in meeting the leak rate limits specified in the Technical Specifications.

b. A report covering the X-Y xenon stability tests within three months upon completion of the tests.

c. To provide the Commission with added verifications of the safety and reliability of the pre-pressurized Zircaloy-clad nuclear fuel, a limited program of non-destructive fuel inspections will be conducted. The program shall consist of a visual inspection (e.g., underwater TV, periscope, or other) of the two lead burnup assemblies in each region during the first, second, and third refueling shutdowns. Any condition observed by this inspection which would lead to unacceptable fuel performance may be the object of an expanded surveillance effort. If another domestic plant which contains pre-pressurized fuel of a similar design reaches fuel exposures equal to or greater than at Indian Point Unit No. 2, and if a limited inspection program is or has been performed there, then the program may not have to be performed at Indian Point Unit No. 2. However, such action requires approval of the Nuclear Regulatory Commission. The results of these inspection will be reported to the Nuclear Regulatory Commission.

d. A written report shall be forwarded within 30 days to the Division of Reactor Licensing and to the Director of the Region 1, Office of Inspection and Enforcement, in the event of:

1. Discovery of the release of radioactive liquids excluding tritium and dissolved noble gases exceeding 5 curies from the site during a consecutive 3 calendar month period.

2. Discovery of the release of radioactive gases exceeding 50% of the limits specified in Specification 3.9.B.3.

e. Inoperable fire protection and detection equipment (Specification 3.13).

ATTACHMENT B

APPLICATION FOR AMENDMENT TO OPERATING LICENSE

Safety Evaluation

Consolidated Edison Company of New York, Inc.

Indian Point Unit No. 2

Docket No. 50-247

July, 1977

Safety Evaluation

This Application is submitted in accordance with the letter dated June 16, 1977 from Mr. Robert W. Reid to Mr. William J. Cahill, Jr. The proposed changes to the Technical Specifications contained in Attachment A to this Application, establish surveillance requirements, limiting conditions for operation, administrative controls and reporting requirements for the fire protection and detection systems at Indian Point Unit No. 2. These proposed specifications conform with the sample Technical Specifications attached to the June 16, 1977 letter to the extent that the present design of the fire protection and detection systems allows.

The proposed changes do not in any way alter the safety analyses performed for Indian Point Unit No. 2. The proposed changes have been reviewed by the Station Nuclear Safety Committee and the Con Edison Nuclear Facilities Safety Committee. Both committees concur that these changes do not represent a significant hazards consideration and will not cause any change in the types or increase in the amounts of effluents or any change in the authorized power level of the facility.