ATTACHMENT I TO IPN-92- 003

PROPOSED TECHNICAL SPECIFICATION CHANGES

RELATED TO

24 MONTH OPERATING CYCLES AND SNUBBER FUNCTIONAL TESTING

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

TABLE 4.1-1 (Sheet 1 of 5)

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TESTS OF INSTRUMENT CHANNELS

Channel Description	Check	Calibrate	Test	Remarks
1. Nuclear Power Range	S	D (1) M(3)*	Q (2)** Q (4)	1) Heat balance calibration 2) Bistable action (permissive, rod stop, trips) 3) Upper and lower chambers for axial offset 4) Signal to Δ T
2. Nuclear Intermediate Range	S (1)	N.A.	P (2)	1) Once/shift when in service 2) Verification of channel response to simulated inputs
3. Nuclear Source Range	S (1)	N.A.	P (2)	1) Once/shift when in service 2) Verification of channel response to simulated inputs
4. Reactor Coolant Temperature	S	18M	Q (1) Q (2)	1) Overtemperature - Δ T 2) Overpower - Δ T
5. Reactor Coolant Flow	S	18M	Q	
6. Pressurizer Water Level	S	18M	Q	
7. Pressurizer Pressure	S	18M	Q	High and Low
8. 6.9 KV Voltage & Frequency	N.A.	18M	Q	Reactor protection circuits only
9. Analog Rod Position	S	18M	M	

Amendment No. 38, 63, 74, 93, 107,

It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g. transient conditions or other ongoing surveillance or maintenance activities. It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are performed at each refueling outage and are specified with an 18-month or 24-month surveillance interval. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillances that are not performed on an 18-month or 24-month basis. Likewise, it is not the intent that 24 month surveillances be performed during power operation unless it is consistent with safe plant operation. The limitation of Definition 1.12 is based on engineering judgement and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. This provision is sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

Based on experience in operation of both conventional and nuclear plant systems, when the plant is in operation, the minimum checking frequency of once per shift is deemed adequate for reactor and steam system instrumentation.

Calibration

Calibrations are performed to ensure the presentation and acquisition of accurate information.

The nuclear flux (linear level) channels are calibrated daily against a heat balance standard to account for errors induced by changing rod patterns and core physics parameters.

Other channels are subject only to the "drift" errors induced within the instrumentation itself and, consequently, can tolerate longer intervals between calibration. Process system instrumentation errors induced by drift can be expected to remain within acceptable tolerances if recalibration is performed at intervals of 18 months.

Substantial calibration shifts within a channel (essentially a channel failure) will be revealed during routine checking and testing procedures.

Thus, minimum calibration frequencies of once-per-day for the nuclear flux (linear level) channels, and 18 months for the process system channels is considered acceptable.

Amendment No. 98, 97,

TABLE 4.1-1 (Sheet 2 of 5)

Channel Description	Check	Calibrate	Test	Remarks
10. Steam Generator Level	S	18M	Q	
11. Residual Heat Removal Pump Flow	N.A.	18M	N.A.	
12. Boric Acid Tank Level	S	18M	N.A.	Bubbler tube rodded during calibration
13. Refueling Water Storage Tank Level	W	18M	N.A.	Low level alarms
14. Containment Pressure	S	18M	Q	High and High-High
15. Process and Area Radiation Monitoring Systems	D	18M	Q	
16. Containment Water Level Monitoring System:				
a. Containment Sump	N.A.	18M	N.A.	Narrow Range, Analog
b. Recirculation Sump	N.A.	18M	N.A.	Narrow Range, Analog
c. Containment Water Level	N.A.	18M	N.A.	Wide Range
17. Accumulator Level and Pressure	S***	18M	N.A.	
18. Steam Line Pressure	S	18M	Q	
19. Turbine First Stage Pressure	S	18M	Q	
20. Reactor Protection Relay Logic	N.A.	N.A.	TM	
21. Turbine Trip Low Auto Stop Oil Pressure	N.A.	18M	N.A.	
22. Boron Injection Tank Return Flow	S	18M	N.A.	

Amendment No. 8, 38, 68, 68, 74, 93, 107,

TABLE 4.1-1 (Sheet 3 of 5)

Channel Description	Check	Calibrate	Test	Remarks
23. Temperature Sensor in Auxiliary Boiler Feedwater Pump Building	N.A.	N.A.	18M	
24. Temperature Sensors in Primary Auxiliary Building				
a. Piping Penetration Area	N.A.	N.A.	18M	
b. Mini-Containment Area	N.A.	N.A.	18M	
c. Steam Generator Blowdown Heat Exchanger Room	N.A.	N.A.	18M	
25. Level Sensors in Turbine Building	N.A.	N.A.	18M	
26. Volume Control Tank Level	N.A.	18M	N.A.	
27. Boric Acid Makeup Flow Channel	N.A.	18M	N.A.	
28. Auxiliary Feedwater:				
a. Steam Generator Level	S	18M	Q	Low-Low
b. Undervoltage	N.A.	18M	18M	
c. Main Feedwater Pump Trip	N.A.	N.A.	18M	
29. Reactor Coolant System Subcooling Margin Monitor	D	18M	N.A.	
30. PORV Position Indicator	N.A.	18M	18M	Limit Switch
31. PORV Position Indicator	D	18M	18M	Acoustic Monitor
32. Safety Valve Position Indicator	D	18M	18M	Acoustic Monitor
33. Auxiliary Feedwater Flow Rate	N.A.	18M	N.A.	

Amendment No. 38, 83, 74, 93, 100, 107,

TABLE 4.1-1 (Sheet 5 of 5)

Channel Description	Check	Calibrate	Test	Remarks
43. Reactor Trip Bypass Breakers	N.A.	N.A.	(1)	1) Manual shunt trip prior to each use
			18M(2)	2) Independent operation of under-voltage and shunt trip from Control Room manual push-button
			18M(3)	3) Automatic undervoltage trip
44. Reactor Vessel Level Indication System (RVLIS)	D	18M	N.A.	
45. Ambient Temperature Sensors Within the Containment Building	D	18M	N.A.	
46. River Water Temperature # (installed)	S	18M	N.A.	1) Check against installed instrumentation or another portable device
47. River Water Temperature # (portable)	S (1)	Q (2)	N.A.	2) Calibrate within 30 days prior to use and quarterly thereafter

* By means of the movable incore detector system

** Quarterly when reactor power is below the setpoint and prior to each startup if not done previous month.

*** If either an accumulator level or pressure instrument channel is declared inoperable, the remaining level or pressure channel must be verified operable by interconnecting and equalizing (pressure and/or level wise) a minimum of two accumulators and crosschecking the instrumentation.

\# These requirements are applicable when specification 3.3.F.5 is in effect only.

S - Each Shift
P - Prior to each startup if not done previous week
NA - Not Applicable
D - Daily
W - Weekly
M - Monthly
Q - Quarterly
18M - At least once per 18 months
TM - At least every two months on a staggered test basis (i.e., one train per month)

TABLE 4.1-1 (Sheet 4 of 5)

Channel Description	Check	Calibrate	Test	Remarks
34. Plant Effluent Radioiodine/ Particulate Sampling	N.A.	N.A.	18M	Sample line common with monitor R-13
35. Loss of Power				
a. 480v Bus Undervoltage Relay	N.A.	18M	M	
b. 480v Bus Degraded Voltage Relay	N.A.	18M	M	
c. 480v Safeguards Bus Undervoltage Alarm	N.A.	18M	M	
36. Main Steam Line Radiation Monitors	D	18M	Q	R-62A, B, C, D
37. Containment Hydrogen Monitors	D	Q	M	
38. Wide Range Plant Vent Monitor	D	18M	Q	R-27
39. High Range Containment Radiation Monitors	D	18M	Q	R-25, R-26
40. Core Exit Thermocouples	D	N.A.	N.A.	
41. Overpressure Protection System (OPS)	D	18M	18M	
42. Reactor Trip Breakers	N.A.	N.A.	TM(1)	1) Independent operation of under-voltage and shunt trip attachments
			18M(2)	2) Independent operation of under-voltage and shunt trip from Control Room manual push-button

Amendment No. 38, 44, 34, 83, 87, 74, 93,

TABLE 4.1-3 (Sheet 1 of 2)

FREQUENCIES FOR EQUIPMENT TESTS		
	Check	Frequency
1. Control Rods	Rod drop times of all control rods	18M
2. Control Rods	Movement of at least 10 steps in any one direction of all control rods	Every 31 days during reactor critical operations
3. Pressurizer Safety Valves	Set Point	18M
4. Main Steam Safety Valves	Set Point	18M
5. Containment Isolation System	Automatic actuation	18M
6. Refueling System Interlocks	Functioning	Each refueling, prior to movement of core components
7. Primary System Leakage	Evaluate	5 days/week
8. Diesel Generators Nos. 31, 32 & 33 Fuel Supply	Fuel Inventory	Weekly
9. Turbine Steam Stop Control Valves	Closure	Yearly
10. L.P. Steam Dump System (6 lines)	Closure	Monthly
11. Service Water System	Each pump starts and operates for 15 minutes (unless already operating)	Monthly
12. City Water Connections to Charging Pumps and Boric Acid Piping	Temporary connections available and valves operable	18M

C. Sensitive Leakage Rate

1. Test

A sensitive leakage rate test shall be conducted with the containment penetrations, weld channels, and certain double gasketed seals and isolation valve interspaces at a minimum pressure of 43 psig and with the containment building at atmospheric pressure.

2. Acceptance Criteria

The test shall be considered satisfactory if the leak rate for the containment penetrations, weld channel and other pressurized zones is equal to or less than 0.2% of the containment free volume per day.

3. Frequency

A sensitive leakage rate test shall be performed at a frequency of at least every 3 years.

D. Air Lock Tests

1. The containment air locks shall be tested at a minimum pressure of 43 psig and at a frequency of every 6-months. The acceptance criteria is included in E.2a. The equipment hatch is to be leak rate tested after every reinsertion prior to requiring containment integrity.

2. Whenever containment integrity is required, verification shall be made of proper repressurization to at least 43 psig of the double-gasket air lock door seal upon closing an air lock door.

TABLE 4.1-3 (Sheet 2 of 2)

13.	RHR Valves 730 and 731	Automatic isolation and interlock action	18M*
14.	PORV Block Valves	Operability through 1 complete cycle of full travel	18M
15.	PORV Valves	Operability	18M
16.	Reactor Vessel Head Vents	Operability	18M

18M - At least once per 18 months

* If not done during the previous 18 months, the check will be performed next time plant is cooled down.

Amendment No. 10, 38, 83, 93, 99,

I. Residual Heat Removal System

1. Test

a. (1) The portion of the Residual Heat Removal System that is outside the containment shall be tested either by use in normal operation or hydrostatically tested at 350 psig at the interval specified below.

(2) The piping between the residual heat removal pumps suctions and the containment isolation valves in the residual heat removal pump suction line from the containment sump shall be hydrostatically tested at no less than 100 psig at the interval specified below.

b. Visual inspection shall be made for excessive leakage during these tests from components of the system. Any significant leakage shall be measured by collection and weighing or by another equivalent method.

2. Acceptance Criterion

The maximum allowable leakage from the Residual Heat Removal System components located outside of the containment shall not exceed two gallons per hour.

3. Corrective Action

Repairs or isolation shall be made as required to maintain leakage within the acceptance criterion.

4. Test Frequency

Tests of the Residual Heat Removal System shall be conducted at least once per 18 months.

4.5 TESTS FOR ENGINEERED SAFETY FEATURES AND AIR FILTRATION SYSTEMS

Applicability

Applies to testing of the Safety Injection System, the Containment Spray System, the Hydrogen Recombiner System, and the Air Filtration Systems.

Objective

To verify that the subject systems will respond promptly and perform their design functions, if required.

Specification

A. SYSTEM TESTS

1. Safety Injection System

a. System tests shall be performed at least once per 18 months. With the Reactor Coolant System pressure less than or equal to 350 psig and temperature less than or equal to 350°F, a test safety injection signal will be applied to initiate operation of the system. The safety injection and residual heat removal pumps are made inoperable for this test.

b. The test will be considered satisfactory if control board indication and visual observations indicate that all components have received the safety injection signal in the proper sequence and timing, that is, the appropriate pump breakers shall have opened and closed, and the appropriate valves shall have completed their travel.

c. Conduct a flow test of the high head safety injection system after any modification is made to either its piping and/or valve arrangement.

d. Verify that the mechanical stops on Valves 856 A, C, D, E, F, H, J and K are set at the position measured and recorded during the most recent ECCS operational flow test or flow tests performed in accordance with (c) above. This surveillance procedure shall be performed following any maintenance on these valves or their associated motor operators and at a convenient outage if the position of the mechanical stops have not been verified in the preceding three months.

2. Containment Spray System

a. System tests shall be performed at least once per 18 months. 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.

b. The spray nozzles shall be checked for proper functioning at least every five years.

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

3. Hydrogen Recombiner and Containment Hydrogen Monitoring Systems

a. 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.

b. 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.

c. Containment hydrogen monitoring system tests shall be performed at intervals no greater than six months. The test shall include drawing a sample from the fan cooler units.

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

e. Each recombiner air-supply blower shall be started at intervals not greater than two months. Acceptable levels of performance shall be that the blowers start, deliver flow, and operate for at least 15 minutes.

4. Containment Air Filtration System

a. Visual inspection of the filter installations shall be performed in accordance with ANSI N 510 (1975) every six months for the first two years and at least once per 18 months thereafter, or at any time fire, chemical releases or work done on the filters could alter their integrity.

b. At least once per 18 months, the following conditions shall be demonstrated before the system can be considered operable:

(1) The pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at ambient conditions and accident design flow rates.

(2) Using either direct or indirect measurements, the flow rate of the system fans shall be shown to be at least 90% of the accident design flow rate.

(3) The charcoal filter isolation valves shall be tested to verify operability.

c. At least once per 18 months or at any time fire, chemical releases or work done on the filters could alter their integrity or after every 720 hours of charcoal adsorber use since the last test, the following conditions shall be demonstrated before the system can be considered operable:

(1) Impregnated activated charcoal from each of the five units shall have a methyl iodine removal efficiency $\geq$ 85% $\pm$ 20% of the accident design flow rate, 5 to 15 mg/m^3 inlet methyl iodine concentration, $\geq$ 95% relative humidity and $\geq$ 250°F. In addition, ignition shall not occur below 300°F.

(2) A halogenated hydrocarbon (freon) test on charcoal adsorbers at ± 20% of the accident design flow rate and ambient conditions shall show ≥ 99% halogenated hydrocarbon removal.

(3) A locally generated DOP* test of the HEPA filters at ± 20% of the accident design flow rate and ambient conditions shall show ≥ 99% DOP removal.

5. Control Room Air Filtration System

a. Visual inspection of the filter installations shall be performed in accordance with ANSI N 510 (1975) every six months for the first two years and at least once per 18 months thereafter, or at any time fire, chemical releases or work done on the filters could alter their integrity.

b. The charcoal filtration system shall be operated for a minimum of 15 minutes every month.

c. At least once per 18 months, the following conditions shall be demonstrated before the system can be considered operable:

(1) The pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at ambient conditions and accident design flow rates.

(2) Using either direct or indirect measurements, the flow rate of the system fans shall be shown to be at least 90% of accident design flow rate.

d. At least once per 18 months or at any time fire, chemical releases or work done on the filters could alter their integrity or after every 720 hours of charcoal adsorber use since the last test, the following conditions shall be demonstrated before the system can be considered operable:

*Dioctylphthalate Particles

(1) The charcoal shall have a methyl iodine removal efficiency $\geq$ 90% at $\pm$ 20% of the accident design flow rate, 0.05 to 0.15 mg/m^3 inlet methyl iodine concentration, $\geq$ 95% relative humidity and $\geq$ 125°F.

(2) A halogenated hydrocarbon (freon) test on charcoal adsorbers at $\pm$ 20% of the accident design flow rate and ambient conditions shall show $\geq$ 99% halogenated hydrocarbon removal.

(3) A locally generated DOP test of the HEPA filters at $\pm$ 20% of the accident design flow rate and ambient conditions shall show $\geq$ 99% DOP removal.

e. Each toxic gas monitoring system shall be demonstrated operable by performance of a channel check at least once per day, a channel test at least once per 31 days and a channel calibration at least once per 18 months.

6. Fuel Storage Building Emergency Ventilation System

a. The fuel storage building emergency ventilation system fan shall be operated for a minimum of 15 minutes every month when there is irradiated fuel in the spent fuel pit.

b. Prior to handling of irradiated fuel, the following conditions shall be demonstrated before the system can be considered operable:

(1) The pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at ambient conditions and accident design flow rates.

(2) Using either direct or indirect measurements, the flow rate of the system fans shall be shown to be at least 90% of the accident design flow rate.

(3) The filtration system bypass assembly shall be isolated and leak tested to assure that it is properly sealed.

B. Component Tests

1. Pumps

a. The safety injection pumps, residual heat removal pumps, containment spray pumps and the auxiliary component cooling water pumps shall be started at intervals not greater than one month. The recirculation pumps shall be started at least once per 18 months.

b. Acceptable levels of performance shall be that the pumps start, reach their required developed head on recirculation flow, and operate for at least fifteen minutes.

2. Valves

a. Each spray additive valve shall be cycled by operator action with the pumps shut down at least once per 18 months.

b. The accumulator check valves shall be checked for operability at least once per 18 months.

c. The following check valves shall be checked for gross leakage at least once per 18 months:

857A & G	857J	857S & T	897B
857B	857K	857U & W	897C
857C	857L	895A	897D
857D	857M	895B	838A
857E	857N	895C	838B
857F	857P	895D	838C
857H	857Q & R	897A	838D

d. In addition to 4.5.B.2.c., the following check valves shall be checked for gross leakage each time the unit is shutdown and the reactor coolant system has been depressurized to 700 psig or less, prior to returning to power:

838A	895A	897A
838B	895B	897B
838C	895C	897C
838D	895D	897D

Basis

The Safety Injection System and the Containment Spray System are principal plant safeguards that are normally on standby 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 shutdowns, with more frequent component tests, which can be performed during reactor operation.

The 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 allow actuation of the master relay, while at the same time blocking the slave relays. Verification that the logic is accomplished is indicated by the matrix test light. The

4.6 EMERGENCY POWER SYSTEM PERIODIC TESTS

Applicability

Applies to periodic testing and surveillance requirements of the emergency power system.

Objective

To verify that the emergency power system will respond promptly and properly when required.

Specification

The following tests and surveillance shall be performed as stated:

A. Diesel Generators

1. Each month each diesel generator shall be manually started and synchronized to its bus or buses and shall be allowed to assume the normal bus load and run for a period of time sufficient to reach stable operating temperatures.

2. At least once per 18 months each diesel generator shall be manually started, synchronized and loaded up to its nameplate rating and run for a period of time sufficient to reach operating temperatures.

3. At least once per 18 months to assure that each diesel generator will automatically start and assume the required load within 60 seconds after the initial start signal the following shall be accomplished by simulating a loss of all normal AC station service power supplies and simultaneously simulating a Safety Injection signal observations shall verify automatic start of each diesel generator, required bus load shedding and restoration to operation of particular vital equipment. To prevent Safety Injection flow to the core, certain safeguard valves will be closed and made inoperable.

4. Each diesel generator shall be inspected and maintained following the manufacturer's recommendations for this class of stand-by service.

The above tests will be considered satisfactory if the required minimum safeguards equipment operates as designed.

B. Station Batteries

1. Every month the voltage of each cell, the specific gravity and temperature of a pilot cell in each battery and each battery voltage shall be measured and recorded.

2. Every 3 months each battery shall be subjected to a 24 hour equalizing charge, and the specific gravity of each cell, the temperature reading of every fifth cell, the height of electrolyte, and the amount of water added shall be measured and recorded.

3. At each time data is recorded, new data shall be compared with old to detect signs of abuse or deterioration.

4. At least once per 18 months each battery shall be subjected to a load test and a visual inspection of the plates.

Basis

The tests specified are designed to demonstrate that the diesel generators will provide power for operation of equipment. They also assure that the emergency generator system controls and the control systems for the safeguards equipment will function automatically in the event of a loss of all normal 480v AC station service power.

The testing frequency specified will be often enough to identify and correct any mechanical or electrical deficiency before it can result in a system failure. The fuel supply is continuously monitored. An abnormal condition in these systems would be signaled without having to place the diesel generators themselves on test.

Each diesel generator has a continuous rating of 1750 kw and a 2000 HR rating of 1950 kw. Two diesels can power the minimum safeguards loads.

Station batteries will deteriorate with time, but precipitous failure is extremely unlikely. The surveillance specified is that which has been demonstrated over the years to provide an indication of a cell becoming unserviceable long before it fails. The periodic equalizing charge will ensure that the ampere-hour capability of the batteries is maintained.

The load test for each battery, together with the visual inspection of the plates, will assure the continued integrity of the batteries. The batteries are of the type that can be visually inspected, and this method of assuring the continued integrity of the battery is proven standard power plant practice.

Reference

FSAR, Section 8.2

4.7 MAIN STEAM STOP VALVES

Applicability

Applies to periodic testing of the main steam stop valves.

Objective

To verify the ability to the main steam stop valves to close upon signal.

Specification

The main steam stop valves shall be tested at least once per 18 months with the reactor at cold shutdown. Closure time of five seconds or less shall be verified.

Basis

The main steam stop valves serve to limit an excessive Reactor Coolant System cooldown rate and resultant reactivity insertion following a main steam break incident. (1) Their ability to close upon signal should be verified at least once per 18 months. A closure time of five seconds was selected as being consistent with expected response time for instrumentation as detailed in the steam line break incident analysis. (2)

References

(1) FSAR - Section 10.5

(2) FSAR - Section 14.2.5

4.8 AUXILIARY FEEDWATER SYSTEM

Applicability

Applies to periodic testing requirements of the Auxiliary Feedwater System.

Objective

To verify the operability of the Auxiliary Feedwater System and its ability to respond properly when required.

Specification

1. a. Each auxiliary feedwater pump will be started manually from the control room at monthly intervals with full flow established to the steam generators at least once per 18 months.

   b. The auxiliary feedwater pumps discharge valves will be tested by operator action at intervals not greater than six months.

   c. Backup supply valves from the city water system will be tested at least once per 18 months.

2. Acceptance levels of performance shall be that the pumps start, reach their required developed head and operate for at least fifteen minutes.

3. At least once per 18 months,

   a. Verify that the recirculation valve will actuate to its correct position.

   b. Verify that each auxiliary feedwater pump will start as designated automatically upon receipt of each auxiliary feedwater actuation test signal.

Basis

The testing of the auxiliary feedwater pumps will verify their operability. The capacity of any one of the three auxiliary feedwater pumps is sufficient to meet decay heat removal requirements.

Amendment No. 38,

TABLE 4.10-2

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS			
INSTRUMENTS AND SENSOR LOCATION	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. Triaxial Time-History Accelographs			
a. EL 46' -0" VC Base Mat	M*	18M	SA
b. EL 99' -0" VC Wall	M*	18M	SA
2. Triaxial Peak Accelographs			
a. STM GEN #31	NA	18M	NA
b. RC Pump #31	NA	18M	NA
c. Pressurizer	NA	18M	NA
3. Triaxial Response-Spectrum Recorders			
a. EL 46' -0" VC Base Mat**	M	18M	SA

18M - At least once per 18 months

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* Except seismic trigger
** With reactor control room indications.

Amendment No.

2. Visual inspection shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundations or supporting structure are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for the particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.11.B.5. However, when the fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be declared inoperable via functional testing for the purpose of establishing the next visual inspection period. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

B. Functional Testing

1. At least once per 24 months during plant shutdown, a representative sample of 10% of all the safety-related hydraulic snubbers shall be functionally tested for operability, either in place or on a bench test. For each snubber that does not meet the requirement of 4.11.B.5, an additional 10% of the total installed of that type of hydraulic snubber shall be functionally tested. This additional testing will continue until no failures are found or until all snubbers of the same type have been functionally tested. The representative sample shall include each size and type of snubber in use in the plant.

2. The representative sample selected for functional testing should include the various configurations, operating environments, sizes and capacities of snubbers. At least 25% or the maximum possible if less than 25%, of the snubbers in the representative sample should include snubbers from the following three categories:

   a. The first snubber away from each reactor vessel nozzle.

5. The hydraulic snubber functional test shall verify that:

   a. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.

   b. Snubber bleed, or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

C. Snubber Service Life Monitoring

1. A record of the service life of each snubber, the date at which the designated service life commences, as well as the installation and maintenance records on which the designated service life is based shall be maintained as required by specification 6.10.2.o. The service life may be modified based on a performance evaluation.

2. At least once per 24 months the installation and maintenance records for each safety-related snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be revaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This re-evaluation, replacement or reconditioning shall be indicated in the records.

Basis

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before the interval has elapsed may be used as a new reference point to determine the next scheduled inspection; however, the results of such early inspections performed

4.13 Containment Vent and Purge System

Applicability

This specification applies to the surveillance requirements of the containment vent and purge system during normal operations and when reactor fuel is anticipated to be moved before the reactor has been subcritical for at least 365 hours.

Objective

To verify the operability of the containment vent and purge system.

Specification

The following surveillance shall be performed as stated.

A. Isolation Valves

1. Each month verify that the containment purge supply and exhaust isolation valves are closed during operation above cold shutdown.

2. At least once per 18 months verify that the mechanical stops on the containment vent isolation valve (PCV-1190, -1191, -1192) actuator is limited to the valve opening angle to 60° (90° = full open).

B. HEPA Filters and Charcoal Absorbers

If fuel movement is to take place before the reactor has been subcritical for at least 365 hours, the containment vent and purge system shall be demonstrated operable as follows:

1. Within 18 months prior to fuel movement and (1) after each complete or partial replacement of a HEPA filter or charcoal adsorber bank within 18 months prior to fuel movement, or (2) after structural maintenance on the HEPA filter or charcoal adsorber housing within 18 months prior to fuel movement, which could effect system operation:

   a. Verify that the charcoal adsorbers remove $\geq$ 99% of halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the ventilation system at the operating flow $\pm$ 10%.

   b. Verifying that the HEPA filter banks remove $\geq$ 99% of the DOP when they are tested in-place while operating the ventilation system at the operating flow rate $\pm$ 10%.

2. Within 18 months prior to fuel movement and after every 720 hours of system operation, subject a representative sample of carbon from the charcoal adsorbers to a laboratory analysis and verify within 31 days a removal efficiency of $\geq$ 90% for radioactive methyl iodine at an operating air flow velocity $\pm$ 20% per test 5.b in Table 2 of Regulatory Guide 1.52, March 1978.

Amendment No. 30, 87,

ATTACHMENT II TO IPN-92-003

SAFETY EVALUATION

RELATED TO

24 MONTH OPERATING CYCLES AND SNUBBER FUNCTIONAL TESTING

TECHNICAL SPECIFICATION CHANGES

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

Section I - Description of Changes

Starting with cycle nine (scheduled to start in May 1992), Indian Point 3 will begin 24 month operating cycles, instead of the current 18 month cycles. In order to accommodate operation on a 24 month cycle, this application for amendment to the Indian Point 3 Technical Specifications proposes to:

- change the frequency of snubber functional testing (specified in section 4.11.B.1) and reviews of snubber maintenance records (specified in section 4.11.C.2) to accommodate operation with a 24 month operating cycle (Please note that the Authority previously, by letter dated November 15, 1991, submitted proposed Technical Specification changes to extend snubber visual inspection intervals.),

- change the basis of section 4.1, consistent with NRC Generic Letter 91-04, to specify that the extension time for surveillance requirements allowed by definition 1.12 is applicable to surveillances performed once every 24 months,

- change the following Technical Specification pages to clearly distinguish between those surveillances to be performed once per 18 months and those that receive approval to be performed once per 24 months: pages 4.1-3, 4.4-3, 4.4-6, 4.5-1 through 4.5-5, 4.5-7, 4.5-8, 4.6-1 through 4.6-3, 4.7-1, 4.8-1, 4.10-4, 4.13-1, table 4.1-1, and table 4.1-3,

- change specification 4.5.B.2.d., to reflect the guidance of the NRC's letter to licensees dated February 23, 1980, and the requirement of the NRC's letter to the Power Authority dated February 11, 1980,

- change item 6 of Table 4.1-3, to more clearly indicate that the frequency of this item is at each refueling, and

- correct a typographical error (on page 4.11-2) introduced by an earlier amendment.

Section II - Evaluation of Changes

Starting with cycle nine, Indian Point 3 will begin 24 month operating cycles. The current IP3 Technical Specifications (4.11.B.1) require functional testing of a representative sample (10%) of the safety-related snubbers at least every 18 months. Because functional testing requires a plant shutdown (so that snubbers can be removed and tested) functional testing of the snubbers needs to be extended to at least once per 24 months to accommodate the plant's operating cycle. The review of snubber maintenance records is being changed to be consistent with the length of the operating cycles. The review of maintenance records will continue to ensure that snubber service life will not be exceeded prior to the next scheduled review.

The proposed changes increase the interval between functional tests. The type of testing performed, and the actions taken if a snubber were to fail its functional test, remain unchanged. Past operating experience indicates that the snubber program successfully minimizes snubber failures. During the past five years, no snubbers have failed their functional test. The Technical Specifications for snubber testing are punitive and self-correcting. If any snubber fails a functional test, the Technical Specifications require additional testing of a random 10% sample of that type of snubber. Also, in addition to the regular sample, snubbers that failed the previous functional test

are re-tested during the next inspection period. These inspection criteria ensure a 95% confidence level that at least 90% of all snubbers are operable.

As stated above, the change to the basis of section 4.1 follows the guidance of Generic Letter 91-04. The changes to the other pages listed above change wording from "every refueling outage," or similar words, to "once per 18 months." These changes are being made to avoid confusion between existing surveillance intervals and those surveillance intervals that receive approval to be extended to once per 24 months. Item 6 of Table 4.1-3 is being clarified to indicate that the required frequency is tied to the activity of refueling.

The change to specification 4.5.B.2.d. is making the specification consistent with the guidance of the NRC's letter to licensees dated February 23, 1980. Specification 4.5.B.2.d. will now require the listed check valves to be checked for gross leakage each time the plant is shutdown and depressurized to 700 psig or less. This is also consistent with the requirement of the NRC's letter to the Power Authority to verify valve operability whenever the Reactor Coolant System pressure has decreased to within 100 psig of Residual Heat Removal system design pressure. A change is being made to page 4.11-2 to correct a typographical error that was introduced by Amendment No. 83.

Section III - No Significant Hazards Evaluation

Consistent with the requirements of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards based on the following information:

(1) Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response:

The proposed changes do not involve a significant increase in the probability or consequences of a previously-analyzed accident. The changes for snubber testing do not involve any physical changes to the plant, nor do they alter the way the snubbers function. The type of testing performed, and the actions taken if a snubber were to fail its functional test, remain unchanged. The punitive and self-corrective nature of the Technical Specification would force a more frequent test interval if the snubber failure rate rose. The review of snubber maintenance records will continue to ensure that the indicated snubber service life will not be exceeded prior to the next scheduled review. The change to the basis of section 4.1 clarifies, consistent with Generic Letter 91-04, that the extension time for surveillance requirements allowed by definition 1.12 is applicable to surveillances performed once per 24 months. Changing the wording of existing specifications from "every refueling outage," or similar words, to "once per 18 months," will avoid confusion between existing surveillance intervals and those surveillance intervals that receive approval to be extended to once per 24 months. The change in the check valve leakage check is consistent with the guidance of the NRC's letter to licensees dated February 23, 1980, and the requirement of the NRC's letter to the Power Authority dated February 11, 1980.

(2) Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response:

The proposed changes do not create the possibility of a new or different kind of accident. The changes for snubber testing do not involve any physical changes to the plant, nor do they alter the way the snubbers function. The ability of the snubbers to provide dynamic load support during a design basis event remains as is. The type of testing performed, and the actions taken if a snubber were to fail its functional test, remain unchanged. The punitive and self-corrective nature of the Technical Specification would force a more frequent test interval if the snubber failure rate rose. The review of snubber maintenance records will continue to ensure that the indicated snubber service life will not be exceeded prior to the next scheduled review. The change to the basis of section 4.1 clarifies, consistent with Generic Letter 91-04, that the extension time for surveillance requirements allowed by definition 1.12 is applicable to surveillances performed once per 24 months. Changing the wording of existing specifications from "every refueling outage," or similar words, to "once per 18 months," will avoid confusion between existing surveillance intervals and those surveillance intervals that receive approval to be extended to once per 24 months. The change in the check valve leakage check is consistent with the guidance of the NRC's letter to licensees dated February 23, 1980, and the requirement of the NRC's letter to the Power Authority dated February 11, 1980.

(3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response:

The proposed changes do not involve a significant reduction in a margin of safety. Past operating experience indicates that the snubber program successfully minimizes snubber failures. The type of testing performed, and the actions taken if a snubber were to fail its functional test, remain unchanged. The punitive and self-corrective nature of the Technical Specification would force a more frequent test interval if the snubber failure rate rose. The review of snubber maintenance records will continue to ensure that the indicated snubber service life will not be exceeded prior to the next scheduled review. The change to the basis of section 4.1 clarifies, consistent with Generic Letter 91-04, that the extension time for surveillance requirements allowed by definition 1.12 is applicable to surveillances performed once per 24 months. Changing the wording of existing specifications from "every refueling outage," or similar words, to "once per 18 months," will avoid confusion between existing surveillance intervals and those surveillance intervals that receive approval to be extended to once per 24 months. The change in the check valve leakage check is consistent with the guidance of the NRC's letter to licensees dated February 23, 1980, and the requirement of the NRC's letter to the Power Authority dated February 11, 1980.

Section IV - Impact of Changes

These changes will not adversely impact the following:

ALARA Program
Security and Fire Protection Programs
Emergency Plan
FSAR or SER Conclusions
Overall Plant Operations and the Environment

Section V - Conclusions

The incorporation of these changes: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any Technical Specification; d) does not constitute an unreviewed safety question; and e) involves no significant hazards considerations as defined in 10 CFR 50.92.

Section VI - References

a) IP-3 FSAR
b) IP-3 SER
c) NRC Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.