ATTACHMENT A

REVISED TECHNICAL SPECIFICATION PAGES

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

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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)*1	Q (2)	1) Heat balance calibration 2) Signal to delta T; bistable action (permissive, rod stop, trips) 3) Upper and lower chambers for axial offset.
2.	Nuclear Intermediate Range	S (1)	N.A.	S/U (2)*2	1) Once/shift when in service Log level; bistable action (permissive, rod stop, trip)
3.	Nuclear Source Range	S (1)	N.A.	S/U (2)*2	1) Once/shift when in service 2) Bistable action (alarm, trip)
4.	Reactor Coolant Temperature	S	R#	Q (1)	Calibration of setpoint generators extended on a one time basis to 37 months 1) Overtemperature - delta T 2) Overpower - delta T
5.	Reactor Coolant Flow	S	R#	Q	Calibration of transmitters extended on a one time basis to 37 months.
6.	Pressurizer Water Level	S	R#	Q	Calibration of transmitters extended on a one time basis to 37 months.
7.	Pressurizer Pressure (High & Low)	S	R#	Q	Calibration of transmitters extended on a one time basis to 37 months.

Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels

	Channel Description	Check	Calibrate	Test	Remarks
8.	6.9 kV Voltage & Frequency	N.A.	R##	Q	Reactor Protection circuits only
9.	Analog Rod Position	S	R#	M	
10.	Rod Position Bank Counters	S	N.A.	N.A.	With analog rod position
11.	Steam Generator Level	S	R#	Q	Calibration of transmitters extended on a one time basis to 37 months.
12.	Charging Flow	N.A.	R#	N.A.	
13.	Residual Heat Removal Pump Flow	N.A.	R#	N.A.	Calibration of transmitters extended on a one time basis to 37 months.
14.	Boric Acid Tank Level	W	R#	N.A.	Bubbler tube rodded during calibration
15.	Refueling Water Storage Tank Level	W	Q	N.A.	
16.	DELETED				
17.	Volume Control Tank Level	N.A.	R##	N.A.	
18a.	Containment Pressure	D	R#	Q	Wide Range
18b.	Containment Pressure	S	R#	Q	Narrow Range

Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels

	Channel Description	Check	Calibrate	Test	Remarks
18c.	Containment Pressure (PT-3300,PT-3301)	M	R#	N.A.	High Range
19.	Process Radiation Monitoring System	D	R#	M	
19a.	Area Radiation Monitoring System	D	R#	M	
19b.	Area Radiation Monitoring System (VC)	D	R#	M	
20.	Boric Acid Make-up Flow Channel	N.A.	R#	N.A.	
21a.	Containment Sump and Recirculation Sump Level (Discrete)	S	R##	R##	Discrete Level Indication Systems.
21b.	Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous)	S	R#	R#	Continuous Level Indication Systems. Calibration of transmitters extended on a one time basis to 37 months. Testing of transmitters extended on a one time basis to 37 months.
21c.	Reactor Cavity Level Alarm	N.A.	R#	R#	Level Alarm System
21d.	Containment Sump Discharge Flow	S	R#	M	Flow Monitor

Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels

Channel Description		Check	Calibrate	Test	Remarks
21e.	Containment Fan Cooler Condensate Flow	S	R#	M*3	Calibration of transmitters extended on a one time basis to 37 months.
22a.	Accumulator Level	S	R#	N.A.	Calibration of transmitters extended on a one time basis to 37 months.
22b.	Accumulator Pressure	S	R#	N.A.	Calibration of transmitters extended on a one time basis to 37 months.
23.	Steam Line Pressure	S	R#	Q	Calibration of transmitters extended on a one time basis to 37 months.
24.	Turbine First Stage Pressure	S	R#	Q	
25.	Reactor Trip Logic Channel Testing	N.A.	N.A.	M*9	
26.	Engineered Safety Features (S1) Logic Channel Testing	N.A	N.A.	M*9	
27.	Turbine Trip a. Low Auto Stop Oil Pressure	N.A.	R#	N.A.	
28.	Control Rod Protection (for use with LOPAR fuel)	N.A.	R#	*4	

Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels

	Channel Description	Check	Calibrate	Test	Remarks
29.	Loss of Power				
	a. 480v Emergency Bus Undervoltage (Loss of Voltage)	N.A.	R##	R##	
	b. 480v Emergency Bus Undervoltage (Degraded Voltage)	N.A.	R##	R##	
	c. 480v Emergency Bus Undervoltage (Alarm)	N.A.	R##	M	
30.	Auxiliary Feedwater				
	a. Steam Generator Water Level (Low-Low)	S	R#	R#	Calibration and testing of transmitters extended on a one time basis to 37 months.
	b. Low-Low Level AFWS Automatic Actuation Logic	N.A.	N.A.	M	Test one logic channel per month on an alternating basis.
	c. Station Blackout (Undervoltage)	N.A.	R##	R##	
	d. Trip of Main Feedwater Pumps	N.A.	N.A.	R#	
31.	Reactor Coolant System Subcooling Margin Monitor	M	R#	N.A.	
32.	PORV Position Indicator (Limit Switch)	M	R#	R#	

Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels

	Channel Description	Check	Calibrate	Test	Remarks
33.	PORV Block Valve Position Indicator (Limit Switch)	M*5	R#	R#	
34.	Safety Valve Position Indicator (Acoustic Monitor)	M	R#	R#	
35.	Auxiliary Feedwater Flow Rate	M	R#	R#	
36.	PORV Actuation/ Reclosure Setpoints	N.A.	R##	N.A.	
37.	Overpressure Protection System (OPS)	N.A.	R#	*6	Calibration of transmitters extended on a one time basis to 37 months.
38.	Wide Range Plant Vent Noble Gas Effluent Monitor (R-27)	S	R#	N.A.	
39.	Main Steam Line Radiation Monitor (R-28, R-29, R-30, R-31)	S	R#	N.A.	
40.	High Range Containment Radiation Monitor (R-25, R-26)	S	R#*7	N.A.	
41.	Containment Hydrogen Monitor	Q	Q*8	N.A.	

Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels

	Channel Description	Check	Calibrate	Test	Remarks
42.	Manual Reactor Trip	N.A.	N.A.	R#	Includes: 1) Independent verification of reactor trip and bypass breakers undervoltage trip circuit operability up to and including matrix contacts of RT-11/RT-12 from both manual trip initiating devices, 2) independent verification of reactor trip and bypass breaker shunt trip circuit operability through trip actuating devices from both manual trip initiating devices.
43.	Reactor Trip Breaker	N.A.	N.A.	M*9	Includes independent verification of undervoltage and shunt trip attachment operability.
44.	Reactor Trip Bypass Breaker	N.A.	N.A.	M*9	Includes: 1) Automatic undervoltage trip, 2) Manual shunt trip from either the logic test panel or locally at the switchgear prior to placing breaker into service.
45.	Service Water Inlet Temperature Monitoring Instrumentation	S	R#	A	The test shall take place prior to T.S. 3.3.F.b Applicability.

Minimum Frequencies for Checks, Calibrations and Tests of Instrument Channels

Footnotes:

*1 By means of the movable incore detector system.

*2 Prior to each reactor startup if not done previous week.

*3 Monthly visual inspection of condensate weirs only.

*4 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 opened during RCS cooldown when T_{cold} is less than 350°F.

*5 Except when block valve operator is deenergized.

*6 Within 31 days prior to entering a condition in which OPS is required to be operable and at monthly intervals thereafter when OPS is required to be operable.

*7 Acceptable criteria for calibration are provided in Table II.F-13 of NUREG-0737.

*8 Calibration will be performed using calibration span gas.

*9 Each train shall be tested at least every 62 days on a staggered test basis (i.e., one train per month).

ATTACHMENT B

WESTINGHOUSE DRIFT EVALUATION METHODOLOGY

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

WESTINGHOUSE DRIFT EVALUATION METHODOLOGY

The Westinghouse drift evaluation methodology has been utilized to evaluate the effect of increased surveillance intervals on instrument drift on several other plant dockets (Reference: NYPA License Amendment TAC No. MA1641 dated December 16, 1998 and Diablo Canyon License Amendment TAC Nos. M97472 – Unit 1 and M97473 –Unit 2). This methodology organizes the as-left / as-found calibration data into computer spreadsheets and converts the data to per cent span drift. The resulting drift data is examined along with site calibration records to identify and remove any data that is flawed by mechanistic causes such as transmitters that were declared to be failed, identifiable calibration anomalies, etc. Following this screening, the data is examined with respect to distribution type using commercially available software. The sample data is then extrapolated to the population using descriptive statistics and tolerance factors, resulting in drift allowances at specified probability and confidence levels. If the data is determined not to be from a normal distribution, appropriate conservatism is introduced. The drift is established using a graded approach whereby the probability and confidence level of the drift (95/95 - those functions that provide RPS/ESFS functions, or critical control functions used to establish initial conditions for the accident analysis; 95/75 - those functions that are used for Emergency Operating Procedures or used for important NSSS control; 95/conservative engineering judgment - those functions that are considered to be miscellaneous control functions) is selected in accordance with the safety significance of the channel. In addition to the identification of data that is flawed by mechanistic causes, the approach also makes use, on an infrequent basis, of statistical outlier techniques, whereby a data set may be removed from consideration if a majority of the data points are determined to be flawed. Finally, the drift data is examined for the presence of time dependence using a combination of statistical and visual checks. The use of both pre 1991 (nominal 18-month intervals) and post 1991 (nominal 24-month interval) data provides a variation in surveillance time intervals to assist in the determination of whether time dependency exists. Pre 1991 data is excluded when a transmitter model change after 1991 is identified. If the data is determined to be time dependent, linear regression is used to adjust the drift allowance to yield a value applicable to 37 months. The resulting drift is then employed in channel uncertainty calculations and evaluations, which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

ATTACHMENT C

REACTOR COOLANT FLOW TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R2-1 – Reactor Coolant Flow Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 5

The present RRD (final date) for this item is: 11-10-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 technical Specifications Section 4.1, Table 4.1-1, Item 5, to allow a one-time extension of the surveillance interval for the calibration of the Reactor Coolant System flow channels due in 11-10-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

Elbow taps are used in the primary coolant system as an instrument device that indicates the status of the reactor coolant flow. The basic function of this device is to provide information as to whether or not a reduction in flow rate has occurred. The correlation flow reduction and elbow tap read out has been well established by the following equation:

$\Delta P/\Delta P_0 = (\omega / \omega_0)^2$

Where ΔP_0 is the reference pressure differential with the corresponding referenced flow rate ω_0, and ΔP is the pressure differential with the corresponding referenced flow rate. The full flow reference point was established during initial plant startup. The low flow trip setpoint was then established by extrapolating along the correlation curve. The technique has been well established in providing core protection against low coolant flow in Westinghouse PWR plants.

Technical Specification Section 4.1, Table 4.1-1, specifies the frequency of calibration and testing of the Reactor Coolant System flow channels. It requires the performance of a calibration of the flow channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one time basis to a maximum of 37 months.

The current Indian Point Unit 2 Technical Specifications require that the RCS flow channels be capable of providing a reactor trip with a nominal trip setpoint of $\geq$ 92% of normal indicated flow (Section 2.3.1.B).

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the reactor coolant system flow channels was determined using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift and bias is accommodated by the channel uncertainty calculations for the reactor coolant system flow transmitters. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift and bias would be bounded by the CSA originally calculated for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of uncertainties for the RCS flow channels for a 30-month operating cycle was performed. A corresponding statistical evaluation of the projected drift over a 37-month operating cycle has also been performed. The drift and bias thus calculated has been evaluated with regard to RCS flow CSA versus the Safety Analysis limits and it has been determined that the drift can be accommodated within the existing related Safety Analysis limits. It has also been determined that there is no general impact upon any Technical Specification requirements or the related Safety Analysis limits.

The existing margin between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the reactor coolant system flow instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the transmitters will not result in a channel statistical allowance which exceeds the current margin and therefore the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis

Report. Based on past test results, the one-time extension of the surveillance interval for the transmitters by seven months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the reactor coolant system flow calibration. The calibration listed is not being modified or revised in any manner that would cause the reactor coolant system to not comply with its present safety requirements. The operation of the reactor coolant system is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazard consideration as defined in 10CFR50.92.

ATTACHMENT D

CONTAINMENT SUMP LEVEL (DISCRETE)
RECIRCULATION SUMP LEVEL (DISCRETE)

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PT-R2A Containment Sump Level (DISCRETE)
PT-R2B Recirculation Sump Level (DISCRETE)

The applicable Technical Specification section is: IP-2 Technical Specifications
Section 4.1 Table 4.1-1 Item 21a

The present RRD (final date) for this item is: 11-23-99 & 12-13-99 respectively

The number of months needed to extend to reach June 3, 2000: Seven (7) & Six (6)

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise Section 4.1, Table 4.1-1, Item 21a, to allow a one-time extension of the surveillance interval for the test of the Containment Sump Level (Discrete) and Recirculation Sump Level (Discrete) which are due in 11-23-99 and 12-13-99, respectively. If approved, this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

Technical Specification Table 4.1-1, specifies the frequency of calibration and testing of the Containment Sump and Recirculation Sump level indication system (Discrete). It requires the calibration and test of the channels every 24 months (plus 25%). It is proposed that the surveillance frequency of Containment Sump Level (Discrete) and Recirculation Sump Level (Discrete) be extended on a one time basis to a maximum of 37 months.

The level in the containment sump is controlled through the action of two containment sump pumps. Three diverse level indication systems are provided. Two of the level indication systems are continuous level indicating systems, and the other is a discrete system. The discrete system is redundant and uses two thermal probes with 9 wet sensors on each probe for level detection.

The level in the recirculation sump is detected by one continuous detector and two discrete detectors. Each discrete detector is comprised of three sequential float operated, discrete voltage dividers.

The current Indian Point Unit 2 Technical Specifications governing the Containment Sump Level (Discrete) and Recirculation Sump Level (Discrete) require a channel check be performed every shift. In addition, a channel calibration and a channel functional test must be performed at each refueling interval. Verification that the discrete channels can support their required function is accomplished by performance testing implemented through procedures PT-R2A and PT-R2B for normal environment conditions.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of these channels was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications, and the impact of the Measurement and Test Equipment (M&TE) used to record the data. This current review encompassed completed surveillance procedures from 1993 though, and including, 1997. The results of the combined review are as discussed below.

For the containment sump level, only the portion of the test procedure involving the discrete level indication system was considered for this evaluation, since the procedure performs testing which goes beyond the Technical Specification requirements. In the 1989 test, it was noted that one sensor in LT-940 did not function. In 1995, an issue related to the amount of water pumped, as determined by a flow-indicating transmitter and interpretation of a volume graph, was discovered during testing. This issue was determined not to be related to the level instrumentation in the containment sump.

For the recirculation sump level, in all of the tests, the operability criteria and the overall acceptance criteria were satisfied.

The thermal probes, float operated voltage dividers and associated circuits are generally reliable devices as evidenced by the test results discussed above. Both redundancy and diverse level indication systems exist. As a minimum, one discrete and one continuous channel is always available for sump level monitoring. The two anomalies noted above did not either affect the level indication system or render the level indication system non-operational, and were not deemed dependent on the interval between tests. Therefore, based on the redundancy and the reliability of the systems, extension of the surveillance interval for a maximum of seven months for these tests would have negligible effect upon the reliability of the discrete level indication systems. The historical data supports the conclusion that safety will not be compromised by extending the interval between surveillances on a one-time basis to a maximum of 37 months.

No changes to the Technical Specification limits or Safety Analysis limits are required as a result of this change. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

It has been concluded that there will be no impact upon any Technical Specification Requirement or Safety Analysis Limits. Of the surveillance anomalies identified since 1986, only one impacted an instrument channel. In this instance, level indication continued to be maintained due to redundancy. As added assurance, the current Indian Point Unit 2 Technical Specifications require a channel check be performed every shift, providing a means to monitor the channels for gross failure.

The existing margin between the Technical Specification limits and the Safety Analysis limits remains unchanged and provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the channels will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. The increased surveillance interval (one-time only) will not adversely affect the Containment sump level and Recirculation Sump Level instrumentation functions. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety.. The surveillance anomalies noted did not render the level indication system non-operational. Therefore, based on the redundancy and the reliability of the system, extension of the surveillance interval for a maximum of seven months for these tests would have little affect on the reliability of the discrete level indication systems. The historical data supports the conclusion that the margin of safety will not be compromised by extending the interval between tests on a one-time basis to a maximum of 37 months. Based on past test results, the one-time extension of six months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of Containment Sump Level and Recirculation Sump Level tests. The tests listed are not being modified or revised in any manner that would cause the discrete Containment Sump Level or Recirculation Sump Level systems to not comply with their present safety requirements. The operation of discrete Containment Sump Level or Recirculation Sump level systems is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT E

PRESSURIZER LEVEL TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R3-1 – Pressurizer Level Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 6

The present RRD (final date) for this item is: 12-11-99

The number of months needed to extend to reach June 3, 2000: Six (6)

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 6, to allow a one-time extension of the surveillance interval for the calibration of the Pressurizer Level Transmitters due in 12-11-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be six months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

The pressurizer maintains the required reactor coolant pressure during steady state operation, limits the pressure changes caused by coolant thermal expansion and contraction during normal load transients, and prevents the pressure in the reactor coolant system from exceeding the design pressure.

Technical Specifications section 4.1, Table 4.1-1, specifies the frequency of calibration and testing of the Pressurizer Level channels. It requires the performance of a calibration of the level channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

The Indian Point 2, Technical Specifications require that the Pressurizer Level channels be capable of initiating a reactor trip with a nominal trip setpoint equal to, or less than, 90% (Section 2.3.1.C). The Pressurizer Level channels are also used to support Emergency Operating Procedures (EOP) for accident conditions and as an input to Pressurizer Pressure Control.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures were statistically evaluated to determine a projected

drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the Pressurizer Level channels was determined in 1992 using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift and bias are accommodated by the channel uncertainty calculations for Pressurizer Level transmitters. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift and bias would be bounded by the CSA originally calculated for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of channel uncertainty for a 30 month operating cycle was previously performed. A corresponding statistical evaluation of the projected drift of the transmitter over a 37-month operating cycle has currently been performed. Subsequently, when drift of the remainder of the channel (calibrated at the Technical Specification frequency of 24 months) is combined with the drift and bias of the transmitter projected at 37 months, the sum is accommodated by the channel uncertainty calculations. Therefore, the channel uncertainty derived for

30 months is valid for a 37-month operating cycle providing the rack is calibrated at the 24-month (plus 25%) frequency and the transmitter is calibrated at 37 months.

It can also be concluded that sufficient allowance exists between the existing Technical Specification limits and the licensing basis Safety Analysis limits to accommodate the channel statistical error resulting from a 37 month operating cycle (with a rack calibration at 24 months plus 25%).

The existing allowance between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. Thus, the Channel Statistical Allowance for 37 months can be accommodated without impacting the licensing basis Safety Analysis.

It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the Pressurizer Level instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the transmitters will not result in a channel statistical allowance which exceeds the current margin and therefore the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded.

This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds any margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Thus, the Channel Statistical Allowance

for 37 months can be accommodated without impacting the licensing basis Safety Analysis. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of the surveillance interval for the transmitters by six months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the Pressurizer Level calibration test. The test listed is not being modified or revised in any manner that would cause Pressurizer Level monitoring or indications to not comply with their present safety requirements. The operation of Pressurizer Level control or its associated systems is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT F

480 VOLT UNDERVOLTAGE

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PT-R61 – 480 Volt Undervoltage

The applicable Technical Specification section is: IP-2 Technical Specifications
Section 4.1, Table 4.1-1,
Items 29a, 29b, 29c & 30c

The present RRD (final date) for this item is: 12-16-99

The number of months needed to extend to reach June 3, 2000: Six

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications, Section 4.1, Table 4.1-1, Items 29a, 29b, 29c, and 30c to allow a one-time extension of the surveillance interval for the calibration and testing of the 480 Volt Loss of Power [under voltage (loss of voltage), under voltage (degraded voltage), station blackout (under voltage) and under voltage (alarm)] due in 12-16-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be six months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

Technical Specification Section 4.1, Table 4.1-1, specifies the frequency of calibration and testing of the 480 Volt Loss of Power [under voltage (loss of voltage), under voltage (degraded voltage), station blackout (under voltage) and under voltage (alarm)] channels. It requires the performance of a calibration of the channels every 24 months (plus 25%). It is proposed that the surveillance frequency of the 480 Volt Loss of Power channel [under voltage (loss of voltage), under voltage (degraded voltage), station blackout (under voltage) and under voltage (alarm)] relays be extended on a one time basis to a maximum of 37 months.

There are no other Technical Specifications limits applicable to the loss of power (480 volt) relays.

Along with other trips, the 480 volt bus normal supply breakers are tripped by the following:

1. Safety Injection and Blackout (approximately 45% on bus 5A or 6A) or "No Safety Injection with Unit Trip and Blackout.

2. Degraded voltage on each respective bus.

3. Degraded voltage with a safety injection signal for 10 seconds.

The "short time" under voltage relays (item 1 above) provide logic inputs to the sequencing logic and diesel start circuitry. The setpoints (app. 45%) are designed to give fast trip response for complete loss of power.

The transfer from normal supply to EDG supply of 480 Volt safeguards buses upon sustained under voltage and is actuated by two under voltage relays (one set at appr. 85% on each bus). Two out of two logic will activate an Agastat (one set at 180 +/- 30 seconds and a second set at 10+/-2 seconds, which is in series with safety injection contacts) which in turn trips its respective 480 volt normal supply breaker. This trip provides additional protection of the safeguard loads against degraded voltage conditions and provides an alternate power supply to establish a correct voltage. The station blackout relays provide a loss of offsite power input to the automatic start feature on the steam driven auxiliary pump.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from 1984, 1987, 1989, and 1991 were reviewed. LER's based on the test results of the 1984 and 1986 refueling intervals were reviewed. The undervoltage and station blackout relays were always found within specification. The review did yield eight occurrences where a degraded voltage relay (27S1, 27S2) was judged to be out of tolerance, but no instances of a failure to operate. These eight occurrences involved four out of the eight relays installed. Except for some difficulty in calibration and one out of tolerance during one test, the alarm relays were found within specification. Details of each refueling interval test are as follows:

1984 Test Results

Although all the degraded voltage relays appear to be out of tolerance in the test results, these deviations were really the result of a setpoint change as documented by LER 84 – 014. A review of the calibration data indicated that one degraded voltage relay (27S1/6A) could be considered out of tolerance (low). It was also noted that all three phases of the alarm relays could not be calibrated to within specification at the same time. However, it was observed that this did not occur in subsequent calibrations.

1986 Test Results

LER 86-008 reported three degraded voltage relays out of tolerance, 27S1/5A (low), 27S2/5A (low), and 27S1/2A (high).

1987 Test Results

Degraded voltage relay 27S2/5A was found out of tolerance (high). This relay was also found out of specification in 1986. Alarm relay 47/2A was also found out of tolerance (low).

1989 Test Results

Degraded voltage relays 27S1/5A and 27S2/5A were found out of tolerance (high). The latter was out of tolerance for the third straight calibration period.

1991 Test Results
Degraded voltage relay 27S1/6A was found out of tolerance (high).

The CSAs for the under voltage and degraded voltage channels were determined using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects.

This evaluation showed that one relay experienced instability however, evidence from the remaining tests demonstrated that the setpoint drift over several subsequent refueling periods was not a concern. Therefore, extending the surveillance period for the calibration and testing of the undervoltage relays covered by PT-R61 to 24 months, with a maximum of 30 months, was determined not have a detrimental effect on the safety of the plant.

In 1991, Modification EGP-91-06786-E replaced the Westinghouse SV relays used in the 480 volt safety related buses undervoltage circuitry with Asea Brown Boveri (ABB) Type 27N high accuracy undervoltage relays. In 1993, the setpoints of the Agastat timers were reset to compensate for the ABB Type 27N undervoltage relays time delay during dropout.

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift is accommodated by the channel uncertainty calculations for the 480-volt, under voltage and degraded voltage relays. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals from 1991 to 1997. The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the relays based on 37 months project that the relay drift and bias would be bounded by the CSA originally calculated for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of uncertainties for the 480 volt under voltage and degraded voltage relay channels for a 30-month operating cycle was performed. A corresponding statistical evaluation of the projected drift over a 37-month operating cycle has also been performed. The drift thus calculated has been evaluated with regard to the original CSA and has been found to be bounded by the CSA value. In addition, the relay setpoints have been compared with the Safety Analysis limits and it has been determined that the drift and bias can be accommodated within the existing related Safety Analysis limits. It has also been determined that there is no general impact upon any Technical Specification requirements or the related Safety Analysis limits.

The existing margin between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the 480 volt under voltage and degraded voltage relays will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the 480 Volt under voltage or degraded voltage instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the relays will not result in a channel statistical allowance which exceeds the current margin and therefore the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-

time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of six months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the 480 Volt under voltage and degraded voltage calibration and testing. The calibration and test listed is not being modified or revised in any manner that would cause the 480 Volt system/Alarms to not comply with its present safety requirements. The operation of the 480 Volt system is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazard consideration as defined in 10CFR50.92.

ATTACHMENT G

6.9 kV UNDERVOLTAGE RELAYS
6.9 kV UNDERFREQUENCY RELAYS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R5A – 6.9 kV Undervoltage Relays
PC-R5B – 6.9 kV Underfrequency Relays

The applicable Technical Specification section is: IP-2 Technical Specifications
Section 4.1, Table 4.1-1, item 8

The present RRD (final date) for this item is: 11/27/99 and 01/10/2000 respectively

The number of months needed to extend to reach June 3, 2000: Seven (7)

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications, Section 4.1, Table 4.1-1, Item 8, to allow a one-time extension of the surveillance intervals for the calibration of the 6.9 kV Under Voltage and Under Frequency channels which are due in November 27, 1999 and January 10, 2000, respectively. If approved, these surveillances will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

A reactor trip on under frequency is generated by a signal indicating an under frequency condition on two-out-of-four buses which opens all reactor coolant pump breakers, which in turn trips the reactor. An under voltage trip is also generated on a signal indicating an under voltage condition on two-out-of-four buses, with one signal per bus.

Technical Specification Section 4.1, Table 4.1-1, specifies the frequency of calibration and testing of the 6.9 kV Under Voltage and Under Frequency channels. It requires the performance of a calibration of the channels every 24 months (plus 25%). It is proposed that the surveillance frequency of the under voltage and under frequency relay channels be extended on a one-time basis to a maximum of 37 months.

Currently, the Indian Point Unit 2 Technical Specifications also require the 6.9 kV under voltage trip setpoint be set equal to, or greater than, 70% of nominal voltage (Section 2.3.1.B.7.) and that the under frequency channel trip setpoint be set equal to, or greater than, 57.5 cps (Section 2.3.1.B.6b). These channels are required for normal operation and alarm functions. Indication is not required for EOP purposes.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of these channels was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the

surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSAs for the 6.9 kV Under Voltage and Under Frequency channels were determined using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects.

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift is accommodated by the uncertainty calculations for the 6.9 kV Under Voltage and Under Frequency channels. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30-month drift (24 months + 25%) and is therefore accommodated within the channel uncertainty which supports the RTS and the safety analysis initial condition assumptions.

The results of the drift evaluations for the under voltage and under frequency relays, based on 37 months (at a 95/95-probability/confidence level), project that relay drifts would be bounded by the drifts originally projected for 30 months. Therefore, it can be concluded that the CSAs, previously determined, remain valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of uncertainties for the 6.9 kV Under Voltage and Under Frequency relay channels for a 30-month operating cycle was performed. Corresponding statistical evaluations of the projected drifts over a 37-month operating cycle has

also been performed. It has been confirmed that the drifts for 37 months will be no greater than the drifts projected for 30 months. The drifts thus calculated have been evaluated with regard to under voltage and under frequency set points versus the Safety Analysis limits and it has been determined that the drift can be accommodated within the existing related Safety Analysis limits with no decrease in margin. It has also been determined that there is no general impact upon any Technical Specification requirements or the related Safety Analysis limits.

The existing margin between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the under voltage and under frequency relays will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. The increased surveillance interval (one-time only) will not adversely affect the 6.9 kV Under Voltage and Under Frequency instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the relays will not result in a channel statistical allowance which reduces the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which impacts the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of seven months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of 6.9 kV Under Voltage and Under Frequency calibration. The calibration procedure is not being modified or revised in any manner that would cause the 6.9 kV system to not comply with its present safety requirements. The operation of the 6.9 kV system is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT H

STEAM GENERATOR LEVEL - TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R7-1 – Steam Generator Level – Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Items 11, 30a

The present RRD (final date) for this item is: 11-19-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications Section 4.1, Table 4.1-1, Items 11 and 30a to allow a one-time extension of the surveillance interval for the calibration of the Steam Generator Level – Transmitters, due in 11-19-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance. Technical Specification Section 4.1, Table 4.1-1, specifies the frequency of calibration and testing of the Steam Generator Level channels. It requires the performance of a calibration of the level channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

The current Indian Point 2 Technical Specifications require that the Steam Generator Narrow Range level channels be capable of providing a reactor trip with a nominal setpoint of ≥7% of narrow range instrument span (Section 2.3.1.C), provide ESFAS initiation of Aux Feedwater (per Technical Specification Table 3.5-1, Item 6). The Steam Generator Narrow Range Level channels are also used to support the Emergency Operating Procedures for post accident conditions, as an input to steam generator level control, provide a backup reactor trip on High Steam Generator Level and provide a backup turbine trip on Low Steam Generator Level through AMSAC.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift is the determination of all other channel uncertainties

including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the Steam Generator Level channels was determined in 1992 using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift and bias is accommodated by the channel uncertainty calculations for the steam generator level transmitters. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift and bias would be bounded by the CSA originally calculated for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of channel uncertainty for a 30 month operating cycle was previously performed. A corresponding statistical evaluation of the projected drift of the transmitters over a 37-month operating cycle has currently been performed. Subsequently, when drift of the remainder of the channel (calibrated at the Technical Specification frequency of 24 months) is combined with the drift and bias of the transmitter projected at 37 months, the sum does not exceed the original CSA at 30 months. Therefore, the channel uncertainty derived for 30 months is valid for a 37-month operating cycle providing the rack is calibrated at the 24-month (plus 25%) frequency and the transmitter is calibrated at 37 months. It has been demonstrated that sufficient allowance exists between the existing

Technical Specification limits and the licensing basis Safety Analysis limits to accommodate the channel statistical error resulting from a 37 month operating cycle (with a rack calibration at 24 months plus 25%).

The existing allowance between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitters will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the steam generator level instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the transmitter will not result in a channel statistical allowance which exceeds the current margin and therefore will not exceed the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of the surveillance interval for the transmitters by seven months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the steam generator level calibration. The calibration listed is not being modified or revised in any manner that would cause steam generator level trips, monitoring or indications to not comply with their present safety requirements. The operation of the steam generators or associated systems is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT I

RHR FLOW CALIBRATION - TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R9-1 – RHR Flow Calibration – Transmitters

The applicable Technical Specification section is IP-2 Technical Specifications Section 4.1 Table 4.1-1 Item 13

The present RRD (final date) for this item is: 11-17-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 13, to allow a one-time extension of the surveillance interval for the transmitters for calibration of the RHR Flow channel beginning in 11-17-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

Technical Specification section 4.1, Table 4.1-1, specifies the frequency of calibration of the RHR Flow channels. It requires the performance of a calibration of the flow channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

The Residual Heat Removal loop consists of heat exchangers, pumps, and piping, along with the required valves and instrumentation. During plant shutdown, coolant flows from the reactor coolant system to the residual heat removal pumps, through the tube side of the residual heat exchangers and back to the reactor coolant system. The inlet line to the residual heat removal loop starts at the hot leg of one reactor coolant loop and the return line connects to the safety injection system piping. The residual heat exchangers are also used to cool the water during the later phase of safety injection system operation. Adequate core cooling following a loss-of-coolant accident is provided by the safety injection system. One of the four possible modes of operation is injection by the residual heat removal pumps drawing borated water from the Refueling Water Storage Tank. The residual heat removal pumps are located in the primary auxiliary building. The residual heat removal (low-head) pumps are normally used during reactor shutdown operations. Whenever the reactor is at power, the pumps are aligned for emergency duty. The RHR pumps have a design flow of 3000 gpm and maximum flow rate of 5500 gpm (design head 350 ft, shutoff head 390 ft).

The current Indian Point 2 Technical Specifications do not specify a setpoint / limit for RHR flow. Per emergency operating procedure (EOP) requirements, RHR flow indication is used by the operators following a LOCA as part of the decision process of change over from the injection phase to the recirculation phase (UFSAR Section 6.2).

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the RHR Flow channels was determined in 1992 using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift and bias is accommodated by the channel uncertainty calculations for the RHR Flow function. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift and bias was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by the channel uncertainty calculations which support the EOP and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift and bias would be bounded by the CSA originally calculated for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, the enclosed application is judged to involve no significant hazards based on the following:

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

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical

analysis of channel uncertainty for a 30 month operating cycle was previously performed. A corresponding statistical evaluation of the projected drift of the transmitter over a 37-month operating cycle has currently been performed. Subsequently, when drift of the remainder of the channel (calibrated at the Technical Specification frequency of 24 months) is combined with the drift and bias of the transmitter projected at 37 months, the sum does not exceed the original projection at 30 months. Therefore, the channel uncertainty derived for 30 months is valid for a 37-month operating cycle providing the rack is calibrated at the 24-month (plus 25%) frequency and the transmitter is calibrated at 37 months.

The proposed change does not affect the existing Safety Analysis limit nor any Technical specification limits. Plant equipment will function as before, in order to preserve Safety Analysis limits.

It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitters will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the RHR Flow instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the transmitter will not impact any Technical Specification limit or Safety Analysis limit. Plant protective functions will occur as designed.

This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which affects the margin between any current Technical Specification limit and any licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. In conclusion, based upon the recently completed 37 month drift value

being less than the existing 24 month drift value, the one-time extension of the surveillance interval for the transmitter for seven months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the RHR Flow transmitter calibration. The transmitter calibration procedure listed is not being modified or revised in any manner that would cause RHR Flow monitoring or indications to not comply with their present safety requirements. The operation of the RHR system is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT J

ACCUMULATOR LEVEL TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R17A-1 – Accumulator Level Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 22a

The present RRD (final date) for this item is: 11-06-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 22a, to allow a one-time extension of the surveillance interval for the calibration of the Accumulator Level channels due in 11-06-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

Each of the safety injection system accumulator tanks contains two differential-pressure-type liquid level transmitters providing the signal for separate channel level indicators, high and low level alarms in the central control room.

Technical Specifications Section 4.1 Table 4.1-1, specifies the frequency of calibration of the Accumulator Level channels. It requires the performance of a calibration of the level channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one time basis to a maximum of 37 months.

The current Indian Point Unit 2 Technical Specifications require that the Accumulator Level be maintained between a minimum level of 723 cubic feet and a maximum level of 875 cubic feet (Section 3.3A1.c.).

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was a determination of all other channel uncertainties

including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the accumulator level channels was determined using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects.

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift and bias is accommodated by the channel uncertainty calculations for the accumulator level transmitters. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) including bias or was otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitter drift and bias would be bounded by the CSA originally projected for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of uncertainties for the accumulator level channels for a 30-month operating cycle was performed. A corresponding statistical evaluation of the projected drift over a 37-month operating cycle has also been performed. It has been confirmed that the drift, including bias, for 37 months will be bounded by the CSA originally calculated for 30 months. The drift thus calculated has been evaluated with regard to level setpoints versus the Safety Analysis limits and it has been determined that the drift, including bias, can be accommodated within the existing related Safety Analysis limits. It has also been determined that there is no general impact upon any Technical Specification requirements or the related Safety Analysis limits.

The existing margin between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the accumulator level instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the level transmitters will not result in a channel statistical allowance which exceeds the current margin and therefore the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of the surveillance interval for the transmitter by seven months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

ALARA Program
Security and Fire Protection Programs

Emergency Plan
UFSAR or SER Conclusions
Overall Plant Operations and the Environment

The proposed amendment provides for extending the surveillance interval of the accumulator level calibration. The calibration listed is not being modified or revised in any manner that would cause the accumulator level system to not comply with its present safety requirements. The operation of the accumulator and associated systems is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT K

ACCUMULATOR PRESSURE TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R17B-1 – Accumulator Pressure Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 22b

The present RRD (final date) for this item is: 11-02-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 22b, to allow a one-time extension of the surveillance interval for the calibration of the Accumulator Pressure channels due in 11-02-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

The accumulators are pressure vessels filled with borated water and pressurized with nitrogen gas. During normal plant operation, each of the four accumulators is isolated from the reactor coolant system by two check valves in series. Should the reactor coolant system pressure fall below the accumulator pressure, the check valves open and borated water is forced into the cold legs of the reactor coolant system. Mechanical operation of the swing-disk check valves is the only action required to open the injection path from the accumulators to the core via the cold leg. The accumulators are passive engineered safety features since nitrogen gas forces injection and no external source of power or signal transmission is needed to obtain fast-acting, high-flow capability when injection is required. One accumulator is attached to each of the four cold legs of the reactor coolant system.

Technical Specifications Section 4.1, Table 4.1-1, specifies the frequency for calibration of the Accumulator Pressure channels. It requires the performance of a calibration of the pressure channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

The current Indian Point Unit 2 Technical Specifications require that the Accumulator be pressurized to a minimum of 598 psig and a maximum of 685 psig (Section 3.3.A.1.c.).

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the accumulator pressure channels was determined using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift is accommodated by the channel uncertainty calculations for the accumulator pressure transmitters. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month cycles) as well as those prior to 1991 (18-month cycles), except for PT-937A which was changed to Foxboro Model NE11GM. The drift results are based on Foxboro Model 611 GM. The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or were otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift would be bounded by the drift originally projected for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of uncertainties for the accumulator pressure channels for a 30-month operating cycle was performed. A corresponding statistical evaluation of the projected drift over a 37-month operating cycle has also been performed. It has been confirmed that the drift for 37 months will be no greater than the drift projected for 30 months. The drift thus calculated has been evaluated with regard to accumulator pressure setpoints versus the Safety Analysis limits and it has been determined that the drift can be accommodated within the existing related Safety Analysis limits. It has also been determined that there is no general impact upon any Technical Specification requirements or the related Safety Analysis limits.

The accumulators are passive engineered safety features since gas forces injection and no external source of power or signal transmission is needed to obtain fast-acting, high-flow capability when injection is required. One accumulator is attached to each of the four cold legs of the reactor coolant system.

The existing margin between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the accumulator pressure instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the transmitters will not result in a channel statistical allowance which exceeds the current margin and therefore the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which

exceeds the margin existing between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of the surveillance interval for the transmitter by seven months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the accumulator pressure calibration. The calibration listed is not being modified or revised in any manner that would cause the accumulator pressure system to not comply with its present safety requirements. The operation of the accumulator and associated systems is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT L

STEAM LINE PRESSURE TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R18-1 – Steam Line Pressure Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications
Section 4.1, Table 4.1-1, Item 23

The present RRD (final date) for this item is: 12-12-99

The number of months needed to extend to reach June 3, 2000: Six

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications, Section 4.1, Table 4.1-1, Item 23, to allow a one-time extension of the surveillance interval for the calibration of the Steam Line Pressure channel transmitters due on 12-12-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be six months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

Signals are provided to actuate ESF upon sensing the effects of a steamline break accident. Therefore, ESF actuation following a steamline break is designed to occur upon sensing high differential steam pressure between any two steam generators or upon sensing high steamline flow in coincidence with low reactor coolant average temperature or low steamline pressure.

Technical Specifications Section 4.1 table 4.1-1, specifies the frequency of calibration and testing of the Steam Line Pressure channels. It requires the performance of a calibration of the pressure channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one time basis to a maximum of 37 months.

The current Indian Point Unit 2 Technical specifications require that the Steam Line Pressure channels be capable of providing both a safety injection signal on low steam pressure (nominal set point $\leq$ 525 psig) or a high differential steam pressure (nominal setpoint $\leq$ 155 psi), Table 3.5-1, Items 4, and 5. The steam line pressure channels are also used to support the EOPs.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have

resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the steam line pressure channels was determined using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift is accommodated by the channel uncertainty calculations for the steam line pressure transmitters. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month cycles), after the transmitters were changed to Foxboro Model NE11GM. This data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift would be bounded by the drift originally projected for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle (No CSA calculations were revised) so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of uncertainties for the steam line pressure channels for a 30-month operating cycle was performed. A corresponding statistical evaluation of the projected drift over a 37-month operating cycle has also been performed. It has been confirmed that the drift for 37 months will be no greater than the drift

projected for 30 months. The drift thus calculated has been evaluated with regard to steam line pressure setpoints versus the Safety Analysis limits and it has been determined that the drift can be accommodated within the existing related Safety Analysis limits. It has also been determined that there is no general impact upon any Technical Specification requirements or the related Safety Analysis limits. The existing margin between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the steam line pressure instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the relays will not result in a channel statistical allowance which exceeds the current margin and therefore the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of the surveillance interval for the transmitter by six months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the steam line pressure calibration. The calibration listed is not being modified or revised in any manner that would cause the steam line pressure instrument loop to not comply with its present safety requirements. The operation of the steam line pressure instrument loop and its associated system is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT M

CONTAINMENT SUMP
RECIRCULATION SUMP
REACTOR CAVITY LEVEL (CONTINUOUS)
CONTAINMENT SUMP (CONTINUOUS)

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R21A-1 - Containment Sump
PC-R21B-1 - Recirculation Sump
PC-R21C-1 - Reactor Cavity Level (Continuous)
PC-R26-1 - Containment Sump (Continuous)

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 21b

The present RRD (final date) for this item is: PC-R21A-1, 11-20-99
PC-R21B-1, 11-26-99
PC-R21C-1, 11-04-99
PC-R26-1, 11-10-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specification Section 4.1, Table 4.1-1, Item 21b, to allow a one-time extension of the surveillance interval for calibration and test of the Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous) channel transmitters commencing on 11-04-99 and continuing through 11-26-99. If approved, these surveillances will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillances.

Redundant containment sump level indicators in each sump show that water has been delivered to the containment following a loss of coolant accident, and subsequently show that sufficient water has been collected by the sump to permit recirculation to the reactor and/or to the spray headers. Differential pressure transmitters mounted inside containment provide continuous sump, recirculation sump, and reactor cavity pit level indications.

Technical Specification Section 4.1, Table 4.1-1, specifies the frequency of calibration and testing of the Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous) channels. It requires the performance of a calibration and test of the level channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

The Indian Point 2, Technical Specifications require that the reactor be placed in cold shutdown within 36 hours if the water in the Containment Sump reaches 45 feet, or the water in the Recirculation Sump or the water in the Reactor Cavity reaches 20 feet.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures were statistically evaluated to determine a projected drift at 30 months with a 95/75 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSAs for the Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous) channels were determined in 1992 using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects.

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift and bias are accommodated by the channel uncertainty calculations for the Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous) functions. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) and is therefore accommodated by the channel uncertainty calculations.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/75-probability/confidence level) project that transmitter drift and bias would be bounded by the CSA originally calculated for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical

analysis of channel uncertainty for a 30 month operating cycle was previously performed. A corresponding statistical evaluation of the projected drift and bias of the transmitters over a 37-month operating cycle has currently been performed. Subsequently, when drift of the remainder of the channels (calibrated at the Technical Specification frequency of 24 months) is combined with the drift and bias of the transmitters projected at 37 months, the sum does not exceed the original projections at 30 months. Therefore, the channel uncertainty derived for 30 months is valid for a 37-month operating cycle providing the rack is calibrated at the 24-month (plus 25%) frequency and the transmitters are calibrated at 37 months. The sump level indications are provided to the control room by both magnetic switch / float-type detectors (series of 5 lights provide discrete level indication) and differential pressure transmitter (continuous level indication) which encompasses redundancy and diversity associated with containment sump level monitoring.

The existing allowance between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. No change in these allowances has occurred due to the proposed revision in surveillance interval of the transmitters.

It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. The proposed change in operating cycle length due to an increased surveillance interval for the transmitters will not result in a channel statistical allowance which impacts the current margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded.

This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. The change in surveillance interval resulting from an increased

operating cycle will not result in a channel statistical allowance which impacts any margin which exists between the current Technical Specification limits and the licensing basis Safety Analysis limits. Therefore, protective functions will continue to occur unchanged so that Safety Analysis limits are not exceeded. There is no reduction in the margin between any existing Technical Specification limit and its related Safety Analysis limit. Therefore, the proposed change for a one-time extension of the calibration and test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of the surveillance frequency for the channel transmitters does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance intervals for the calibration and test of the transmitters of the Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous) channels. The surveillances are not being modified or revised in any manner that would cause Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous) monitoring or indications to not comply with their present safety requirements. The operation of the Containment Sump, Recirculation Sump and Reactor Cavity Level (Continuous) systems is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazard consideration as defined in 10CFR50.92.

ATTACHMENT N

VOLUME CONTROL TANK LEVEL

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R13-1 – VCT Level – Transmitters
PC-R13 – VCT Level

The applicable Technical Specification section is: IP-2 Technical Specifications
Section 4.1, Table 4.1-1, Item 17

The present RRD (final date) for this item is: 11-27-99, PC-R13-1
11-28-99, PC-R13

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specification Section 4.1, Table 4.1-1, Item 17, to allow a one-time extension of the surveillance interval for the calibration of the Volume Control Tank Level channels due in 11-27-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

The Chemical and Volume Control system adjusts the concentration of boric acid for nuclear reactivity control, maintains the proper water inventory in the reactor coolant system, provides the required seal water flow for the reactor coolant pump shaft seals, maintains the proper concentration of corrosion inhibiting chemicals in the reactor coolant, maintains the reactor coolant and corrosion product activities within design levels, and is used to fill and hydrostatically test the Reactor Coolant system. Coolant from the reactor coolant filter enters the volume control tank through a spray nozzle. The coolant flows from the volume control tank to the charging pumps that raise the pressure above that in the reactor coolant system.

Technical Specification Section 4.1, Table 4.1-1, specifies the frequency of calibration of the Volume Control Tank Level channels. It requires the performance of a calibration of the level channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

There are no nominal setpoints within the IP-2 Technical Specifications for the level of the Volume Control Tank nor are there any applicable Safety Analysis Limits. Thus, the Channel Statistical Allowance for 37 months can be accommodated without impacting the licensing basis Safety Analysis.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/75 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the Volume Control Tank Level channels was determined in 1992 using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift is accommodated by the channel uncertainty calculations for the Volume Control Tank level functions. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by margins in the channel uncertainty calculations.

The results of the drift evaluation for the channel based on 37 months (at a 95/75-probability/confidence level) project that the channel drift would be bounded by the drift originally projected for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle. No Safety Analysis Limit is affected. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of channel uncertainty for a 30 month operating cycle was previously

performed. A corresponding statistical evaluation of the projected drift of the channel over a 37-month operating cycle has currently been performed. It has been confirmed that the channel drift for a 37-month interval is bounded by the existing drift allowance used in the current uncertainty calculations. Therefore, the channel uncertainty derived for 30 months is valid for a 37-month operating cycle. There are no nominal setpoints within the Technical Specifications for the level of the Volume Control Tank nor are there any applicable Safety Analysis Limits. Thus, the Channel Statistical Allowance for 37 months can be accommodated without impacting the licensing basis Safety Analysis.

It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. There are no nominal setpoints within the Technical Specifications for the level of the Volume Control Tank nor are there any applicable Safety Analysis Limits. Thus, the Channel Statistical Allowance for 37 months can be accommodated without impacting the licensing basis Safety Analysis.

Other Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will continue to provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. The change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which impacts any Technical Specification limits nor any licensing basis Safety Analysis limit. Protective functions will continue to occur so that Safety Analysis limits are not exceeded. There are no nominal setpoints within the Technical Specifications for the level of the Volume Control Tank nor are there any applicable Safety Analysis Limits.

Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents

considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of seven months for calibration of the channel does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the VCT level calibration. The calibration procedure is not being modified or revised in any manner that would cause VCT level monitoring or indications to not comply with their present safety requirements. The operation of the VCT is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT O

FCU COOLING FLOW TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R36-1 – FCU Cooling Water Flow Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications
Section 4.1, Table 4.1-1, Item 21e

The present RRD (final date) for this item is: 11-12-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specification Section 4.1, Table 4.1-1, Item 21e, to allow a one-time extension of the surveillance interval for the calibration of the transmitters for the Fan Cooler Unit (FCU) flow channels due in 11-12-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

Technical Specification Section 4.1, Table 4.1-1, specifies the frequency of calibration of the FCU flow channels. It requires the performance of a calibration of the level channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

The Indian Point Unit 2 Technical Specifications do not specify a specific setpoint. The reactor fan coolers are a principal means of post-accident heat removal. The fans draw dense atmosphere through banks of finned cooling coils and mix the cooled steam and air mixture with the rest of the containment atmosphere. The coils are kept at a low temperature by maintaining the required flow of cooling water from the service water system. The ability of the containment air recirculation coolers to function properly in the accident environment is demonstrated by the coil vendor's analysis. This analysis determines the plate-fin cooling coil heat removal rate when operating in a saturated steam-air mixture. In the heat removal analysis of the fan cooler coils, a mass flow rate of cooling water is first established. This determines the inside film coefficient of the tube. Next, the resistance to heat transfer between the cooling water and the outside of the fin collars is computed, including inside film coefficient, fouling factor, tube radial conduction, fin-collar interface resistance, and conduction across the fin collars. The analysis is iterative, assuming an overall heat transfer rate Q_{tot} and the temperature at the outside of the fin collars is determined from Q_{tot} and the sum of the resistances cited above.

IP2 Setpoint Modification FIX-98-12939-I was completed on 8/19/98, which changed the Service Water Low Flow Alarm to the Fan Cooler Units from 1500 gpm (decreasing) to 1600 gpm (decreasing). The setpoints of the alarms were changed to provide the operator

with an earlier warning of potential system and/or equipment problems and to compensate for an increase in temperature of the heat sink to 95°F. The alarms are used as an operator aid in detecting a malfunction of the FCU and associated system components. The operator uses the flow indicators for EOP purposes and maintains the flow above 1740 gpm for each cooler.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the FCU flow channels was determined using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects.

In order to support a 37-month surveillance interval, without interim calibration of the transmitters, it must be demonstrated that the projected 37-month drift and bias are accommodated by the channel uncertainty calculations for the FCU flow functions. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by the margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial conditions assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift and bias would be bounded by the drift and CSA originally calculated for 30 months. In addition, the flow controllers to the Fan Cooling Units have had their low flow setpoints raised to provide operators with earlier alarms associated with FCU system flow degradation. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, the enclosed application is judged to involve no significant hazards based on the following information for Surveillance PC-R36-1.

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

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of uncertainties for the FCU flow channels for a 30-month operating cycle was performed. A corresponding statistical evaluation of the projected drift of the transmitters over a 37-month operating cycle has also been performed. When drift of the remainder of the channel (calibrated at 24 months) is combined with the drift and bias of the transmitter at 37 months, the sum does not exceed the original projection at 30 months. Therefore, the channel uncertainty derived for 30 months is valid for a 37 month operating cycle providing the rack is calibrated at the 24 month (plus 25%) frequency and the transmitter is calibrated at 37 months. In addition, the flow controllers to the Fan Cooling Units have had their low flow setpoints raised to provide operators with earlier alarms associated with FCU system flow degradation

It has been determined that there is no general impact upon any Technical Specification requirements or related Safety Analysis limits. The Indian Point Unit 2 Technical Specification does not specify a specific setpoint.
It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report.

The proposed change in surveillance interval for the transmitter will not result in any impact upon existing Technical Specifications or Safety Analysis. Therefore, plant equipment will continue to provide protective functions to assure that Safety Analysis limits are not exceeded.

This will prevent the possibility a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety.

Because the change in surveillance interval resulting from an increased operating cycle will not impact the margin which exists between current Technical Specification limits and licensing basis Safety Analysis limits, protective functions will continue to occur so that Safety Analysis limits are not affected. In addition, the flow controllers to the Fan Cooling Units have had their low flow setpoints raised to provide operators with an earlier warning associated with FCU system flow degradation. Therefore, the proposed change for a one-time extension of the transmitter surveillance interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the FCU flow calibration. The calibration is not being modified or revised in any manner that would cause the FCU system to not comply with its present safety requirements. The operation of the FCU system is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT P

OPS PRESSURE TRANSMITTERS (FIELD)
PRESSURIZER PORV's

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R40-1 – OPS Pressure Transmitters (Field)
PT-R62 – Pressurizer PORV's

The applicable Technical Specification section is: IP-2 Technical Specifications
Section 4.1, Table 4.1-1, Items 36 & 37

The present RRD (final date) for these items are: PC-R40-1, 11-17-99,
PT-R62, 12-15-99

The number of months needed to extend to reach June 3, 2000: Seven

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications Section 4.1, Table 4.1-1, Items 36 and 37, to allow a one-time extension of the surveillance interval for the calibration of the Over Pressure Protection System (OPS) and PORV Actuation / Reclosure functions due on 11-17-99 & 12-15-99, respectively. If approved, these surveillances will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of an extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillances.

The Over Pressurization Protection system uses a two-out-of-three actuation logic on high reactor coolant pressure, when reactor coolant temperature is less than a predetermined arming temperature, to open the power-operated relief valves automatically. This relief prevents the reactor coolant system from exceeding pressure limits given in 10 CFR 50, Appendix G.

Technical Specifications Section 4.1, Table 4.1-1, specifies the frequency of calibration of the PORV Actuation/Reclosure and Overpressure Protection System (OPS) functions. It requires the performance of a calibration of the two functions every 24 months (plus 25%). It is proposed that the surveillance frequencies of the transmitters in the OPS channels, as well as for the open/closure set points for the PORVS (456C & 456), be extended on a one time basis to a maximum of 37 months.

The current Indian Point Unit 2 Technical Specifications require that the Over Pressurization Protection System (OPS) be capable of providing protection from over pressurization of the reactor system for the conditions described in Section 3.1.A.4. The PORVs also provide support to this function. The applicable safety analysis limits are those which pertain to compliance with Appendix G to 10CFR50.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequencies of these channels were extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine projected drifts at 30 months with a 95/95 probability / confidence level. These drift values were used as input to determine the Channel Statistical Allowances (CSA). Included in the evaluations along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSAs for the PORV Actuation/Reclosure function and Overpressure Protection System (OPS) function were determined in 1992 using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects.

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift for each function is accommodated by the channel uncertainty calculations for the PORV Actuation/Reclosure and Overpressure Protection System (OPS) functions. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology (discussed below) to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) and is therefore accommodated by the channel uncertainty calculations.

The results of the drift evaluation for the OPS Pressure transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift would be bounded by the drift originally projected for 30 months. Similarly, the results of the evaluation for the Pressurizer PORV channel, based upon 37 months (at a 95/95 probability/confidence level) project that the channel drift would be bounded by the drift originally projected for 30 months. Therefore, for both cases, it can be concluded that the CSAs previously determined remain valid for the 37 month operating cycle so that no Safety Analysis Limits will be exceeded. No changes in the Technical Specifications or Safety Analysis Limits are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. Statistical analyses of OPS pressure and PORV channel uncertainties for a 30 month operating cycle were previously performed.

A corresponding statistical evaluation of the projected drift of the OPS pressure transmitter over a 37-month operating cycle has currently been performed. It has been confirmed that when the transmitter drift for a 37-month interval is determined it is bounded by the existing drift allowance used in the uncertainty calculations. Subsequently, when drift of the remainder of the channel (calibrated at the Technical Specification frequency of 24 months) is combined with the drift of the transmitter projected at 37 months, the sum does not exceed the original projection at 30 months. Therefore, the channel uncertainty derived for 30 months is valid for a 37-month operating cycle providing the rack is calibrated at the 24-month (plus 25%) frequency and the transmitter is calibrated at 37 months.

Similarly, a statistical evaluation of the projected drift of the PORV channel over a 37 month operating cycle has currently been performed. It has been confirmed that the channel drift for a 37-month interval is bounded by the existing drift allowance used in the current uncertainty calculations. Therefore, the channel uncertainty derived for thirty months is valid for a 37 month-operating cycle.

It can also be concluded that sufficient allowance exists between the existing Technical Specification limits and the licensing basis Safety Analysis limits to accommodate the channel statistical errors resulting from a 37 month operating cycle.

The existing allowance between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the OPS pressure transmitter and the PORV channels will not result in a significant increase in the probability or consequences of any accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. The increased surveillance interval (one-time only) will not adversely affect the PORV Actuation/Reclosure and Overpressure Protection System (OPS) instrumentation functions. The proposed change in operating cycle length due to

an increased surveillance interval will not result in channel statistical allowance which exceeds current margins and therefore, the margins between existing Technical Specification limits and Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin existing between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the calibration intervals does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of seven months for the OPS transmitters and six months for PORV set point calibrations does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance intervals of PORV Actuation/Reclosure and Overpressure Protection System (OPS) calibrations. The calibrations listed are not being modified or revised in any manner that would cause PORV Actuation/Reclosure and Overpressure Protection System (OPS) functions or indications to not comply with their present safety requirements. The operations of the systems are not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as

previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT Q

PRESSURIZER PRESSURE - TRANSMITTERS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-R4-1 – Pressurizer Pressure Transmitters

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 7

The present RRD (final date) for this item is: 11-12-99

The number of months needed to extend to reach June 3, 2000: Seven (7)

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 7, to allow a one-time extension of the surveillance interval for the calibration of the Pressurizer Pressure Instrument channel transmitters due in 11-12-99. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be seven months.

Without this one-time extension, an outage will be necessary to perform the required surveillance.

The pressurizer maintains the required reactor coolant pressure during steady state operation, limits the pressure changes caused by coolant thermal expansion and contraction during normal load transients, and prevents the pressure in the reactor coolant system from exceeding the design pressure.

Technical Specifications Section 4.1, Table 4.1-1, specifies the frequency of calibration and testing of the Pressurizer Pressure Instrument channels. It requires the performance of a calibration of the channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the channel transmitters be extended on a one-time basis to a maximum of 37 months.

The current Indian Point Unit 2 Technical Specifications require that the Pressurizer Pressure channels be capable of providing both a HIGH and LOW Reactor Trip with Nominal Trip Setpoints of ≤2363 psig and ≥1928 psig, respectively (Section 2.3.1.B), as well as provide a Safety Injection signal at ≥1833 psig (Table 3.5-1). The Pressurizer Pressure channels are also used to support Emergency Operating Procedures (EOP) and provide input to Pressurizer pressure control.

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the

completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA). Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions.

The CSA for the Pressurizer Pressure channels was determined in 1992 using Westinghouse methodology for evaluating channel uncertainties. Each uncertainty term was determined according to the instrument characteristics/specifications with specific calculations for process effects.

In order to support a 37-month surveillance interval, without interim calibration, it must be demonstrated that the projected 37-month drift and bias is accommodated by the channel uncertainty calculations for the Pressurizer Pressure channels. This is demonstrated by performing an as-left / as-found evaluation of the surveillance data taken from the executed test procedures for the affected equipment. This data evaluation includes the surveillance intervals since 1991 (24-month fuel cycles) as well as those prior to 1991 (18-month fuel cycles). The combined data set was evaluated using the Westinghouse drift methodology to determine a projected 37-month drift. In all cases the projected 37-month drift was bounded by the existing 30 month drift (24 months + 25%) or was otherwise accommodated by margins in the channel uncertainty calculations which support the RTS/ESF and EOP setpoints and the safety analysis initial condition assumptions.

The results of the drift evaluation for the transmitters based on 37 months (at a 95/95-probability/confidence level) project that the transmitters drift and bias would be bounded by the CSA originally calculated for 30 months. Therefore, it can be concluded that the CSA previously determined remains valid for the 37 month operating cycle so that no Safety Analysis Limit will be exceeded. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, 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?

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of channel uncertainty for a 30 month operating cycle was previously performed. A corresponding statistical evaluation of the projected drift of the transmitter over a 37-month operating cycle has currently been performed. Subsequently, when drift of the remainder of the channel (calibrated at the Technical Specification frequency of 24 months) is combined with the drift and bias of the transmitters projected at 37 months, the sum does not exceed the

original projection at 30 months. Therefore, the channel uncertainty derived for 30 months is valid for a 37-month operating cycle providing the rack is calibrated at the 24-month (plus 25%) frequency and the transmitter is calibrated at 37 months. It can also be concluded that sufficient allowance exists between the existing Technical Specification limits and the licensing basis Safety Analysis limits to accommodate the channel statistical error resulting from a 37 month operating cycle (with a rack calibration at 24 months plus 25%).

The existing allowance between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. Also, the increased surveillance interval (one-time only) will not adversely affect the Pressurizer Pressure channel instrumentation functions. The proposed change in operating cycle length due to an increased surveillance interval for the transmitter will not result in a channel statistical allowance which exceeds the current margin and therefore the margin between the existing Technical Specification limits and the Safety Analysis limits. Plant equipment, which will be nominally set at (or more conservatively than) Technical Specification limits, will provide protective functions to assure that Safety Analysis limits are not exceeded. This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. Based on past test results, the one-time extension of the surveillance interval for the transmitters by seven months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of Pressurizer Pressure channel calibration . The surveillance listed is not being modified or revised in any manner that would Pressurizer Pressure channel functions or indications to not comply with their present safety requirements. The operation of the system is not being affected and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT R

OTΔT and OPΔT SETPOINT GENERATORS

SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SURVEILLANCE NUMBER: PC-EM37 – OP/OT ΔT Setpoint Generator

The applicable Technical Specification section is: IP-2 Technical Specifications Section 4.1, Table 4.1-1, Item 4

The present RRD (final date) for this item is: December 1, 1999

The number of months needed to extend to reach June 3, 2000: Six

SECTION I – DESCRIPTION OF CHANGE

This application for amendment to the Indian Point 2 (IP2) Technical Specifications proposes to revise Technical Specifications, Section 4.1, Table 4.1-1, Item 4, to allow a one-time extension of the surveillance interval for the calibration test of the OP/OT ΔT Setpoint Generator functions (Lead / Lag: TM-412B, TM-422B, TM-432B, TM-442B; Impulse / Lag: TM-412D, TM-422D, TM-432D, TM-442D; Summer: TM-412E, TM-422E, TM-432E, TM-442E) due in December 1999. If approved this surveillance will be completed during the next refueling outage, which will commence no later than June 3, 2000. Based on the above dates, the maximum length of the extension would be six months.

Technical Specifications, Section 4.1, Table 4.1-1, Item 4, specifies the frequency of calibration and testing of the OP/OT ΔT channels, which include the setpoint generators. It requires the performance of a calibration of the channel every 24 months (plus 25%). It is proposed that the surveillance frequency of the setpoint generators be extended on a one-time basis to a maximum of 37 months.

The current Indian Point Unit 2 Technical Specifications require that the Overtemperature and Overpower ΔT functions be capable of providing a reactor trip as follows:

Overtemperature ΔT

$\Delta T \leq \Delta T_0 [K_1 - K_2 (T - T') - K_3 (P - P') - f(\Delta I)]$

Overpower ΔT

$\Delta T \leq \Delta T_0 [K_4 - K_5 (dT/dt) - K_6 (T - T')]$

Where,

$\Delta T \leq$ Measured ΔT by hot and cold leg RTD's

$\Delta T_0 \leq$ Indicated ΔT at rated power, (°F)

T = Average Temperature, (°F)

T' = Design full power T_{avg} at rated power, ≤ 579.7 °F

P = Pressurizer pressure

P' = 2235 psig

K_1 = Bias gain (OT ΔT)

$K_2 = T_{ave}$ Gain (OT ΔT)

K_3 = Pressure gain (OT ΔT)

K_4 = Bias gain (OP ΔT)
K_5 = Overpower dynamic term (OP ΔT)
K_6 = T_{ave} Gain (OP ΔT)
dT / dt = Rate of change of T_{ave} (OP ΔT)

PC-EM37 (OTΔT and OPΔT Setpoint Generators) calibrates and tests the gains and dynamic terms (time constants) of the OTΔT setpoint generators, the OPΔT setpoint generators, and the OPΔT impulse lag modules. The modules that are calibrated by this procedure represent a portion of OTΔT and OPΔT channels. The remainder of the OTΔT and OPΔT channels are calibrated using PC-R1A (Narrow Range Temperature R/E Converters Calibration), PC-R1B (Tavg and Delta T Instrumentation Calibration), PT-Q52 (OPΔT and OTΔT Bistables), and PT-V11A-1 (2) (3) (4) (Recalibration Of NIS and OT / OP ΔT Parameters).

SECTION II – EVALUATION OF CHANGE

In 1992, the surveillance frequency of this channel was extended in accordance with Generic Letter 91-04 to 24 months (plus 25%). As part of the process to extend the surveillance frequency, all applicable completed calibration procedures from February 1986 through 1991 were reviewed. This included any mid cycle outage calibrations that may have resulted due to channel failures or modifications. The "as found/as left" data from the completed calibration procedures was statistically evaluated to determine a projected drift at 30 months with a 95/95 probability / confidence level. This drift value was used as input to determine the Channel Statistical Allowance (CSA) for the 24-month surveillance frequency extension. Included in the evaluation along with instrument drift was the determination of all other channel uncertainties including sensor, rack, M&TE and process effects for normal and adverse environmental conditions. A result of the 1992 evaluation of the Overtemperature ΔT and the Overpower ΔT trips was a Con Ed commitment to revise the quarterly setpoint functional test in such a manner that the K_1 and K_4 setpoints are verified / tested through the R/E modules. This resulted in a calculation that reflected drift of the instrument string based on a quarterly basis rather than a 30-month.

With respect to the Westinghouse setpoint methodology and the OTΔT/OPΔT uncertainty calculations of record for Con Ed, the pertinent uncertainty allowances are derived from PC-R1A, PC-R1B, and PT-Q52. Of these, the quarterly surveillance performed via PT-Q52 provides the governing uncertainty allowances because it performs a functional check of the complete channel from rack input through output (bistable) every 90 days. This includes the R/E converters, E/I converters, I/I converters, OTΔT setpoint generators, OPΔT setpoint generators, OPΔT impulse lag modules, and the bistables. If a problem is detected in PT-Q52, other procedures (PC-R1A, PC-R1B, PT-V11A) are invoked to perform thorough evaluation and recalibration, as necessary. Therefore, the rack drift allowance incorporated in the OTΔT and OPΔT setpoint calculations are based on the performance of PT-Q52. Thus, continued performance of PT-Q52 on a quarterly basis, even in conjunction with the one time extension of PC-EM37, provides assurance that all modules are performing correctly.

As additional support of a one-time extension of PC-EM37, it should be noted that the uncertainty calculations are considered static uncertainty calculations relative to a comparison of the nominal trip setpoint and the safety analysis limit. The function dynamics specified in PC-EM37 are modeled in the safety analysis. Therefore, PC-EM37 does not provide applicable input data to the setpoint calculations.

Therefore, it can be concluded that the CSA previously determined is unaffected by the extension of PC-EM37. Continued performance of PT-Q52 on a quarterly basis provides assurance that all modules are performing correctly. No changes in the Technical Specifications or Safety Analysis Limit are required. No changes to the EOPs are required.

SECTION III – NO SIGNIFICANT HAZARDS EVALUATION

Consistent with the criteria of 10CFR50.92, the enclosed application is judged to involve no significant hazards based on the following information for Surveillance Test PC-EM37.

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

The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. A statistical analysis of channel uncertainty for a 30 month operating cycle was previously performed. The OTΔT/OPΔT uncertainty calculations of record for Con Ed are derived from PC-R1A, PC-R1B, and PT-Q52. Of these, the quarterly surveillance performed via PT-Q52 provides the governing uncertainty allowances because it performs a functional check of the complete channel from rack input through output (bistable) every 90 days. This includes the R/E converters, E/I converters, I/I converters, OTΔT setpoint generators, OPΔT setpoint generators, OPΔT impulse lag modules, and the bistables. If a problem is detected in PT-Q52, other procedures (PC-R1A, PC-R1B, PT-V11A) are invoked to perform thorough evaluation and recalibration, as necessary. Therefore, the rack drift allowance incorporated in the OTΔT and OPΔT setpoint calculations are based on the performance of PT-Q52. Thus, continued performance of PT-Q52 on a quarterly basis, even in conjunction with the one time extension of PC-EM37, provides assurance that all modules are performing correctly.

Therefore, the channel uncertainty derived for 30 months is valid for a 37-month operating cycle since the rack components are checked on a quarterly frequency. It can also be concluded that sufficient margin exists between the existing Technical Specification limits and the licensing basis Safety Analysis limits to accommodate the channel statistical error resulting from a 37 month operating cycle (with a rack calibration at 24 months plus 25%).

The existing margin between the Technical Specification limits and the Safety Analysis limits provides assurance that plant protective functions will occur as required. It is therefore concluded that changing the surveillance interval from 24 months (plus 25%) to 37 months for the transmitter will not result in a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed license amendment does not create the possibility of a new or different kind of accident from any previously evaluated. The proposed change does not involve the addition of any new or different type of equipment, nor does it involve operating equipment required for safe operation of the facility in a manner that is different from that addressed in the Updated Final Safety Analysis Report. The increased surveillance interval (one-time only) will not adversely affect the OP/OT ΔT instrumentation functions since these loop functions are checked on a quarterly basis under PT-Q52. The proposed change in operating cycle length due to an increased surveillance interval for the setpoint generators will not result in a channel statistical allowance which exceeds the current margin. It can also be concluded that sufficient margin exists between the existing Technical Specification limits and the licensing basis Safety Analysis limits to accommodate the channel statistical error resulting from a 37 month operating cycle (with a rack calibration at 24 months plus 25%).

This will prevent the possibility of a new or different kind of accident from any previously evaluated from occurring.

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

The proposed license amendment does not involve a significant reduction in a margin of safety. Because the change in surveillance interval resulting from an increased operating cycle will not result in a channel statistical allowance which exceeds the margin which exists between the current Technical Specification limit and the licensing basis Safety Analysis limit, protective functions will occur so that Safety Analysis limits are not exceeded. Therefore, the proposed change for a one-time extension of the test interval does not adversely affect the performance of any safety related system, component or structure and does not result in increased severity of any of the accidents considered in the Updated Final Safety Analysis Report. The OP/OT ΔT instrumentation loop functions are checked on a quarterly basis under PT-Q52. Based on past test results, the one-time extension of six months does not involve a significant reduction in a margin of safety.

SECTION IV – IMPACT OF CHANGES

These changes will not adversely impact the following:

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

The proposed amendment provides for extending the surveillance interval of the OP/OT deta T setpoint generator calibration test. The test listed is not being modified or revised in any manner that would cause OP/OT ΔT monitoring or indications to not comply with their present safety requirements. The operation of the system is not being affected by this one time extension and will function as described in the UFSAR. Therefore, there is no UFSAR impact. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment.

SECTION V – CONCLUSION

The incorporation of this change: a) will not significantly increase the probability or consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report; b) will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the Updated Final Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification.

Therefore, this change does not involve a significant hazards consideration as defined in 10CFR50.92.

ATTACHMENT S

SUMMARY OF THE PROPOSED CHANGE

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
APRIL 1999

SUMMARY OF THE PROPOSED CHANGE

The proposed amendment will provide for a one-time extension of the surveillance test intervals for the tests described herein. There are no new failure modes introduced by this change. There are no functional or physical changes to any equipment. The extension of each surveillance interval covered by this change has been reviewed and approved by the Station Nuclear Safety Committee and the Nuclear Facilities Safety Committee.