

Stephen B. Bram
Vice President

Consolidated Edison Company of New York, Inc.
Indian Point Station
Broadway & Bleakley Avenue
Buchanan, NY 10511
Telephone (914) 737-8116

July 11, 1989

Re: Indian Point Unit No. 2
Docket No. 50-247

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US Nuclear Regulatory Commission
Mail Station Pl-137
Washington, DC 20555

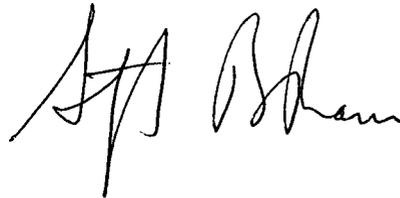
SUBJECT: Containment Spray and Electrical Systems Proposed Technical
Specification Amendment - Clarification (TAC No. 73406)

This clarifies our Application for Amendment to the Operating License,
submitted on June 12, 1989.

The Safety Assessment, presented in Attachment II of the June 12, 1989
submittal, has been revised, and is enclosed with this letter. You
should replace Attachment II of the June 12, 1989 submittal with the
enclosed, revised Attachment II.

Should you or your staff have any questions regarding this matter, please
contact Mr. Jude G. Del Percio, Manager, Regulatory Affairs.

Very truly yours,



Attachment

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cc: Mr. William Russell
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1498

Mr. Donald S. Brinkman, Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
US Nuclear Regulatory Commission
Mail Stop 14B-2
Washington, DC 20555

Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
Buchanan, NY 10511

Ms. Donna Ross
Division of Policy Analysis and Planning
New York State Energy Office
Agency Building 2, Empire State Plaza
Albany, NY 12223

Mayor, Village of Buchanan
236 Tate Avenue
Buchanan, NY 10511

Attachment II
Safety Assessment

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
July, 1989

TECHNICAL SPECIFICATION 3.3.B.2

Description of Change

Two changes are proposed for this Technical Specification. The first proposed change is to correct the Limiting Condition for Operation (LCO) for Containment Spray Valves from 24 hours to 72 hours. The second proposed change provides an LCO for the Spray Additive Tank and its associated piping, valves and eductors for up to 72 hours before proceeding into hot shutdown.

Background

In a Con Edison letter dated June 12, 1987 a proposed Technical Specification amendment was submitted to the NRC. Part of this proposed amendment was an LCO change on the Containment Fan Coolers and an LCO change to the Containment Spray Pumps from 24 to 72 hours and the Containment Spray Valves from 24 to 72 hours. Due to ongoing discussions, a revised Safety Assessment was provided by a Con Edison letter dated August 3, 1987. Finally, based on further discussions with the NRC, Con Edison withdrew a portion of the proposed Technical Specification amendment in a letter dated May 10, 1988. On June 29, 1989 the NRC issued Technical Specification Amendment No. 132 for the changes to the Containment Spray Pumps and heat removal capability of the Containment Fan Coolers. The NRC Safety Evaluation for this amendment stated, in part:

"The proposed change to TS Section 3.3.B.2.b would increase the allowable time for one containment spray pump being inoperable from 24 hours to 72 hours. The staff finds that 72 hours is consistent with the Westinghouse Standard Technical Specifications (STS) for these pumps, and is acceptable. It should be noted that the revised pages submitted by letter dated May 10, 1988 deleted the containment spray pump change. This was discussed with the licensee and found to be an administrative error. Per the May 10 letter, only the portions concerning the Fan Cooler units were intended to be deleted."

It is evident that this administrative error also extends to Technical Specification 3.3.B.2.c where, for Containment Spray Valves, 72 hours should have replaced 24 hours for consistency with respect to the Containment Spray Pumps as was proposed in the June 12, 1987 request. The Safety Assessment provided in the June 12, 1987 letter as revised by the Safety Assessment provided in the August 3, 1987 letter and the Safety Evaluation provided with Amendment No. 132 are applicable to and fully cover this proposed change. Therefore, no other assessment of this administrative change is needed.

As a result of the incident discussed in LER 88-08, a review was conducted as to the feasibility of proposing an LCO on the Spray Additive Tank. The resulting proposed LCO is based on Standard Technical Specification 3.6.2.2 (NUREG-0452, Revision 4, Page 3/4 6-21A).

The Spray Additive Tank's function is to assure that sufficient NaOH is added to the Containment Spray in the event of a LOCA. The NaOH concentration and the tank volume assure that the resulting pH value recirculated within containment after a LOCA will minimize the evolution of iodine and also minimize the effect of chloride and caustic stress corrosion on structures, systems and components inside containment.

Although the effect of establishing an allowable out of service time on the unavailability of the Spray Additive Tank and its associated piping, valves and eductors might appear to be significant, the subsequent increase in public health risk is inconsequential even when conservative plant-specific PRA modeling assumptions are used. The principal reason is that for the accident sequences contributing to the offsite doses, the probability of not being able to use NaOH at the time of an accident would be determined primarily by AC power and Containment Spray System failures and not failures associated with the Spray Additive Tank. Therefore, no unacceptable safety related consequences would result from this change.

Basis for "No Significant Hazards Considerations" Determination

The Commission has provided guidance concerning the application of the standards for determining whether a "Significant Hazards Consideration" exists by providing examples in 51 FR 7751 (dated March 6, 1986). Example (i) of the Commission's Examples of Amendments That Are Considered Not Likely To Involve Significant Hazards Considerations relates to an administrative change. This is the case with the proposed change to the Containment Spray Valves LCO from 24 to 72 hours. In a Con Edison letter dated June 12, 1987 a proposed Technical Specification amendment was submitted to the NRC. Part of this proposed amendment was an LCO change on the Containment Fan Coolers and an LCO change to the Containment Spray Valves from 24 to 72 hours. Due to ongoing discussions, a revised Safety Assessment was provided and Con Edison withdrew a portion of the proposed Technical Specification amendment. On June 29, 1989 the NRC issued Technical Specification Amendment No. 132 for the heat removal capability of the Containment Fan Coolers and the Containment Spray Pump LCO change from 24 to 72 hours. In its letter the NRC noted that an administrative error occurred in the May 10, 1988 Con Edison letter in which the Containment Spray Pump LCO was accidentally deleted. It is evident that this administrative error also extends to Technical Specification 3.3.B.2.c where, for containment spray valves, 72 hours should have replaced 24 hours for consistency with respect to the Containment Spray Pumps. The Safety Assessment provided in the June 12, 1987 letter as revised by the August 3, 1987 letter and the Safety Evaluation provided with Amendment No. 132 are applicable to this proposed administrative change. Thus, the change to the Containment Spray Valves LCO from 24 to 72 hours is similar to Example (i).

Example (vi) of the Commission's Examples of Amendments that Are Considered Not Likely to Involve Significant Hazards Considerations relates to a change which may reduce a safety margin but where the results are clearly within all acceptable criteria with respect to the system or component. The proposed Technical Specification 3.3.B.2.d (i.e., the Spray Additive Tank LCO) is such a change. In the absence of this proposed Technical Specification, the LCO of Specification 3.0.1 is applied which is overly restrictive for this component.

In accordance with the requirements of 10 CFR 50.92, the proposed addition of Technical Specification 3.3.B.2.d is deemed not to involve a "Significant Hazards Consideration" because operation of Indian Point Unit No. 2 in accordance with this change would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

Since the Spray Additive Tank and its associated piping, valves and eductors are a passive system with the exception of its two isolation valves which are air operated, fail open, and installed in parallel; since these components deal only with accident mitigation; and since these components do not provide any sort of automatic initiation; there are no credible

equipment failures that would initiate an accident. In addition, since the entire assembly is located outside containment, there are no credible failures attributable to this equipment that could directly affect the Reactor Coolant System. Thus, unavailability of the Spray Additive Tank would not significantly increase the probability of an accident previously evaluated.

With respect to a significant increase in the consequences of an accident previously evaluated, it is important to note that the accident mitigation capabilities of the Spray Additive Tank are the removal of iodine from the containment atmosphere and the pH balancing of the recirculated water to prevent corrosion in a post-LOCA condition. In addressing the iodine removal capability of the Spray Additive Tank, a plant-specific PRA evaluation was conducted to determine the effects of a 72 hour LCO. The results of this evaluation determined that a 72 hour LCO showed an inconsequential increase in the public health risk. In addition, Section 1.1 of WCAP-11611 ("Methodology for Elimination of the Containment Spray Additive", March 1988) states:

"Analyses performed by Westinghouse, utilizing current NRC methodology (SRP 6.5.2, Revision 1) and combined with knowledge gained from many studies on the behavior of iodine in the post-LOCA environment, have demonstrated the relatively minor role of the spray additive in meeting the dose guidelines of 10CFR100. The proposed Revision 2 to SRP 6.5.2 goes even further in demonstrating this relatively minor role of the spray additive by eliminating its consideration."

As for pH balancing, it is also possible to add NaOH to the Boric Acid Batching Tank and then inject the solution via the normal Chemical and Volume Control System charging paths into the Reactor Coolant System. The solution would flow out the break that caused the LOCA, mix with water in the bottom of the containment and provide the necessary pH balance. This additional injection pathway methodology is already contained in our Emergency Operating Procedures (ES-1.3, "Transfer to Cold Leg Recirculation") as the alternate method for assuring long term pH control. Finally, the proposed LCO has the same time limit as the Standard Technical Specifications' LCO. Thus, it is concluded that there is no significant increase in the consequences of an accident previously evaluated.

Therefore, this proposed change to Technical Specification 3.3.B.2 does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change provides an LCO for the Spray Additive Tank that has the same time limit as the Standard Technical Specifications' LCO. No physical changes to the Spray Additive Tank or its associated components are required with respect to this proposed LCO. Therefore, the proposed change to Technical Specification 3.3.B.2 does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Involve a significant reduction in a margin of safety.

The accident mitigation capabilities of the Spray Additive Tank are the removal of iodine from the containment atmosphere and the pH balancing of the recirculated water to prevent corrosion in a post-LOCA condition. As discussed above, a plant-specific PRA evaluation determined that a 72 hour LCO showed an inconsequential increase in the public health risk. Additionally, Section 1.1 of WCAP-11611 ("Methodology for Elimination of the Containment Spray Additive", March 1988) concluded that the role of the spray additive in meeting the dose guidelines of 10CFR100 is relatively minor and that the proposed Revision 2 to SRP 6.5.2 goes even further in demonstrating this relatively minor role of the spray additive by eliminating its consideration.

As for pH balancing, alternative proceduralized paths exist to add NaOH to the Boric Acid Batching Tank and then inject the solution via the normal Chemical and Volume Control System charging paths into the Reactor Coolant System. The solution would flow out the break that caused the LOCA, mix with water in the bottom of the containment and provide the necessary pH balance. This injection path is not affected by the proposed change.

Therefore, the proposed change to Technical Specification 3.3.B.2 does not involve a significant reduction in a margin of safety.

Based on the above discussion, Con Edison has determined that the proposed change to Technical Specification 3.3.B.2 does not involve a "Significant Hazards Consideration". Thus, the addition of a 72 hour LCO on the Spray Additive Tank is similar to Example (vi).

Therefore, since these changes satisfy the criteria specified in 10 CFR 50.92, are similar to examples for which "No Significant Hazards Consideration" exists, and are not similar to examples for which "Significant Hazards Consideration" exists, Con Edison has determined that these changes do not involve a "Significant Hazards Consideration".

The proposed changes to Technical Specification 3.3.B.2 have been reviewed by the Indian Point Unit No. 2 Station Nuclear Safety Committee and by the Con Edison Nuclear Facilities Safety Committee. Both committees concur that these proposed changes do not represent a "Significant Hazards Consideration".

TECHNICAL SPECIFICATION 3.7.B

Description of Change

This proposed change provides a Limiting Condition for Operation (LCO) for the Battery Chargers associated with Station Batteries Nos. 21, 22, 23 and 24, permitting one Battery Charger to be inoperable for up to 24 hours before proceeding into hot shutdown.

Background

The Battery Chargers function is twofold: a) to maintain the Station Batteries in a fully charged condition, and b) to provide DC power to its associated loads when either offsite or onsite AC power is available.

As a result of the incident discussed in LER 89-01, a review was conducted as to the feasibility of proposing an LCO on the Battery Chargers. This review determined that, upon loss of the Battery Charger, the associated Station Battery would supply power to the affected loads. Thus, a time period exists when the Battery Charger can be out of service and there would be no effect on plant operation nor any impact on the plant design basis because unaffected safety systems are still operable and the Battery Charger is not necessary to mitigate design basis accidents. Upon entering the proposed LCO the operators would be aware of what loads are carried by the affected Station Battery and through the use of existing procedures (SOP-27.1.6, "Instrument Bus and DC Distribution System" and AOI-27.1.11, "Loss of 125V DC Power"), inappropriate operator action due to degraded voltage on the affected bus would be precluded.

The review also determined that, since the proposed LCO requires the other three Station Batteries be operable and that the surveillance under Technical Specification 4.6.C.1 be implemented frequently on the affected Station Battery to assure its continued operability, the impact on plant safety would be insignificant. By more frequent monitoring of critical battery parameters, timely actions can be taken to assure Station Battery longevity. Under Technical Specification 3.7.B there is an existing LCO which allows one Station Battery to be inoperable for 24 hours provided that all four Battery Chargers and the other three Station Batteries are operable. Under both the existing LCO for the Station Batteries and the proposed LCO for the Battery Chargers, the single active failure of a safety-related component coincident with the Loss-Of-Offsite-Power (LOOP) would still be the most limiting condition for a hypothetical accident. For a design basis accident concurrent with a LOOP, the equipment available under the proposed LCO for the Battery Chargers is different and less limiting because, the DC loads (and possibly the AC loads) are available during the LOOP prior to the energizing of the busses via the Diesel Generators, while under the existing LCO for the Station Batteries these AC and DC loads would not be available until after the Diesel Generators energize the busses. Thus, the existing LCO on the Station Batteries bounds the proposed LCO on the Battery Chargers and therefore, the plant's design basis is not impacted.

Basis for "No Significant Hazards Considerations" Determination

The Commission has provided guidance concerning the application of the standards for determining whether a "Significant Hazards Consideration" exists by providing examples in 51 FR 7751 (dated March 6, 1986). Example (vi) of the Commission's Examples of Amendments That Are Considered Not Likely To Involve Significant Hazards Considerations related to a change which may reduce a safety margin but where the results are clearly within all acceptable criteria with respect to the system or component. The proposed Technical Specification 3.7.B.5 (i.e., the Battery Charger LCO) is such a change. In the absence of this proposed Technical Specification, the LCO of Specification 3.0.1 is applied which is overly restrictive for these components.

In accordance with the requirements of 10 CFR 50.92, the proposed change to Technical Specification 3.7.B is deemed not to involve a "Significant Hazards Consideration" because operation of Indian Point Unit No. 2 in accordance with this change would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

Upon loss of the Battery Charger, the associated Station Battery would supply power to the affected loads. Thus, a time period exists when the Battery Charger can be out of service and there would be no effect on plant operation nor any impact on the plant design basis because unaffected safety systems are still operable and the Battery Charger is not necessary to mitigate design basis accidents. Upon entering the proposed LCO the operators would be aware what loads are carried by the affected Station Battery and through the use of existing procedures inappropriate operator action due to degraded voltage on the affected bus would be precluded. Thus, unavailability of the Battery Charger would not significantly increase the probability of an accident previously evaluated.

With respect to a significant increase in the consequences of an accident previously evaluated, the proposed LCO requires the other three Station Batteries be operable and that the surveillance under Technical Specification 4.6.C.1 be implemented frequently on the affected Station Battery to assure its continued operability. By more frequent monitoring of critical battery parameters, timely actions can be taken to assure Station Battery longevity. Under Technical Specification 3.7.B there is an existing LCO which allows one Station Battery to be inoperable for 24 hours providing all four Battery Chargers and the other three Station Batteries are operable. Under both the existing LCO for the Station Batteries and the proposed LCO for the Battery Chargers, the single active failure of a safety-related component, coincident with a Loss-Of-Offsite-Power (LOOP) would still be the most limiting accident condition. It has been determined that the existing LCO on the Station Batteries bounds the proposed LCO on the Battery Chargers. Therefore, the consequences of an accident previously evaluated remains unchanged.

Therefore, this proposed change to Technical Specification 3.7.B does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed LCO requires the other three Station Batteries be operable and that the surveillance under Technical Specification 4.6.C.1 be implemented frequently on the affected Station Battery to assure its continued operability. By more frequent monitoring of critical battery parameters, timely actions can be taken to assure Station Battery longevity. Under Technical Specification 3.7.B there is an existing LCO which allows one Station Battery to be inoperable for 24 hours providing all four Battery Chargers and the other three Station Batteries are operable. The existing LCO on the Station Batteries bounds the proposed LCO on the Battery Chargers because equipment that could lose power during a Loss-of-Offsite-Power coincident with a postulated accident under the existing Station Battery LCO, would retain power under the proposed Battery Charger LCO.

Therefore, the proposed change to Technical Specification 3.7.B does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Involve a significant reduction in a margin of safety.

The proposed LCO allows a Battery Charger to be inoperable, but also requires the other three Station Batteries be operable and that the surveillance under Technical Specification 4.6.C.1 be implemented frequently on the affected Station Battery to assure its continued operability. Under Technical Specification 3.7.B there is an existing LCO which allows one Station Battery to be inoperable for 24 hours providing all four Battery Chargers and the other three Station Batteries are operable. Although the Battery Charger will now be allowed a limited out of service time of 24 hours maximum, this condition is bounded by the already allowed LCO on the Station Batteries because equipment that could lose power during a Loss-of-Offsite-Power coincident with a postulated accident under the existing Station Battery LCO, would retain power under the proposed Battery Charger LCO.

Therefore, the proposed change to Technical Specification 3.7.B does not involve a significant reduction in a margin of safety.

Based on the above discussion Con Edison has determined that the proposed change to Technical Specification 3.7.B does not involve a "Significant Hazards Consideration". Thus, the addition of a 72 hour LCO on the Battery Chargers is similar to Example (vi).

Therefore, since this change satisfies the criteria specified in 10 CFR 50.92, is similar to examples for which "No Significant Hazards Consideration" exists, and is not similar to examples for which "Significant Hazards Consideration" exists, Con Edison has determined that this change does not involve a "Significant Hazards Consideration".

The proposed change to Technical Specification 3.7.B has been reviewed by the Indian Point Unit No. 2 Station Nuclear Safety Committee and by the Con Edison Nuclear Facilities Safety Committee. Both committees concur that this proposed change does not represent a "Significant Hazards Consideration".