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December 8, 1989

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

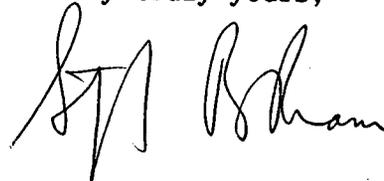
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Washington, DC 20555

SUBJECT: Response to Generic Letter 89-21, 'Request for Information Concerning Status of Implementation of Unresolved Safety Issue (USI) Requirements', dated October 19, 1989

Attached is our response to Generic Letter 89-21 with regard to Indian Point Unit No. 2. The Attachment supersedes our November 30, 1989 partial response and provides a status summary of each USI with applicable cross-references to previously docketed transmittals. This submittal serves merely as an index and does not contain any new or revised commitments, except as indicated for USI A-26. For more specific information regarding particular USIs, please consult the appropriate submittal referenced herein.

Should you or your staff have any questions, please contact Mr. Charles W. Jackson, Manager, Nuclear Safety and Licensing.

Very truly yours,



Attachment

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

Mr. Donald S. Brinkman, Senior Project Manager  
Project Directorate I-1  
Division of Reactor Projects I/II  
US Nuclear Regulatory Commission  
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ATTACHMENT

RESPONSE TO GENERIC LETTER 89-21:  
'REQUEST FOR INFORMATION CONCERNING STATUS OF  
IMPLEMENTATION OF UNRESOLVED SAFETY ISSUE (USI) REQUIREMENTS'

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NO. 2  
DOCKET NO. 50-247  
DECEMBER, 1989

Generic Letter 89-21 Enclosure 1

UNRESOLVED SAFETY ISSUES FOR WHICH A FINAL TECHNICAL RESOLUTION HAS BEEN ACHIEVED

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-1	Water Hammer	SECY 84-119 NUREG-0927, Rev. 1 NUREG-0993, Rev. 1 NUREG-0737 Item I.A.2.3 SRP revisions	All	C/NOTE 1	NOTE 1
A-2/ MPA D-10	Asymmetric Blowdown Loads on Reactor Primary Coolant Systems	NUREG-0609 GL 84-04, GDC-4	PWR	C/NOTE 2	NOTE 2
A-3	Westinghouse Steam Generator Tube Integrity	NUREG-0844 SECY 86-97 SECY 88-272 GL 85-02 (No requirements)	W-PWR	NC	NOTE 3
A-4	CE Steam Generator Tube Integrity	NUREG-0844, SECY 86-97 SECY 88-272 GL 85-02 (No requirements)	CE-PWR	NA	
A-5	B&W Steam Generator Tube Integrity	NUREG-0844, SECY 86-97 SECY 88-272 GL 85-02 (No requirements)	B&W-PWR	NA	
<u>E</u> A-6	Mark I Containment Short-Term Program	NUREG-0408	Mark I-BWR	NA	
A-7/ D-01	Mark I Long-Term Program	NUREG-0661 NUREG-0661, Suppl. 1 GL 79-57	Mark I-BWR	NA	

Generic Letter 89-21 Enclosure 1

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-8	Mark II Containment Pool Dynamic Loads	NUREG-0808 NUREG-0487, Suppl. 1/2 NUREG-0802 SRP 6.2.1.1C GDC 16	Mark II-BWR	NA	
A-9	Anticipated Transients Without Scram	NUREG-0460, Vol. 4 10 CFR 50.62	All	C/NOTE 4	NOTE 4
A-10/ MPA B-25	BWR Feedwater Nozzle Cracking	NUREG-0619 Letter from DG Eisenhut dated 11/13/80 GL 81-11	BWR	NA	
A-11	Reactor Vessel Material Toughness	NUREG-0744, Rev. 1 10 CFR 50.60/ 82-26	All	NC	NOTE 5
A-12	Fracture Toughness of Steam Generator and Reactor Coolant Pump Supports	NUREG-0577, Rev. 1 SRP Revision 5.3.4	PWR	NC	NOTE 6
A-17	Systems Interactions	Ltr: DeYoung to licensees - 9/72 NUREG-1174, NUREG- 1229, NUREG/CR-3922, NUREG/CR-4261, NUREG/ CR-4470, GL 89-18 (No requirements)	All	NC	NOTE 7
A-24/ MPA B-60	Qualification of Class 1E Safety-Related Equipment	NUREG-0588, Rev. 1 SRP 3.11 10 CFR 50.49 GL 82-09, GL 84-24 GL 85-15	All	C/NOTE 8	NOTE 8

Generic Letter 89-21 Enclosure 1

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-26/ MPA B-04	Reactor Vessel Pressure Transient Protection	DOR Letters to Licensees 8/76 NUREG-0224 NUREG-0371 SRP 5.2 GL 88-11	PWR	I/3-31-90	NOTE 9
A-31	Residual Heat Removal Shutdown Requirements	NUREG-0606 RG 1.113, RG 1.139 SRP 5.4.7	All OLS After 01/79.	NA	OL OBTAINED PRIOR TO 1/79
A-36/ C-10, C-15	Control of Heavy Loads Near Spent Fuel	NUREG-0612 SRP 9.1.5 GL 81-07, GL 83-42, GL 85-11 Letter from DG Eisenhut dated 12/22/80	All	C/NOTE 10	NOTE 10
A-39	Determination of SRV Pool Dynamic Loads and Pressure Transients	NUREG-0802 NUREGs-0763,0783,0802 NUREG-0661 SRP 6.2.1.1.C	BWR	NA	
A-40	Seismic Design Criteria	SRP Revisions, NUREG/ CR-4776, NUREG/CR-0054, NUREG/CR-3480, NUREG/ CR-1582, NUREG/CR-1161, NUREG-1233, NUREG-4776 NUREG/CR-3805 NUREG/CR-5347 NUREG/CR-3509	All	NA	ADDRESSED BY USI A-46
A-42/ MPA B-05	Pipe Cracks in Boiling Water Reactors	NUREG-0313, Rev. 1 NUREG-0313, Rev. 2 GL 81-03, GL 88-01	BWR	NA	

Generic Letter 89-21 Enclosure 1

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-43	Containment Emergency Sump Performance	NUREG-0510, NUREG-0869, Rev. 1 NUREG-0897, R.G.1.82 (Rev. 0), SRP 6.2.2 GL 85-22 No Requirements	All	C/NOTE 11	NOTE 11
A-44	Station Blackout	RG 1.155 NUREG-1032 NUREG-1109 10 CFR 50.63	All	I/NOTE 12	NOTE 12
A-45	Shutdown Decay Heat Removal Requirements	SECY 88-260 NUREG-1289 NUREG/CR-5230 SECY 88-260 (No requirements)	All	I/NOTE 13	NOTE 13
A-46	Seismic Qualification of Equipment in Operating Plants	NUREG-1030 NUREG-1211/ GL 87-02, GL 87-03	All	E/NOTE 14	NOTE 14
A-47	Safety Implication of Control Systems	NUREG-1217, NUREG- 1218 GL 89-19	All	E/NOTE 15	NOTE 15
A-48	Hydrogen Control Measures and Effects of Hydrogen Burns on Safety Equipment	10 CFR 50.44 SECY 89-122	All, except PWRs with large dry containments	NA	IP2 IS A LARGE DRY CONTAINMENT
A-49	Pressurized Thermal Shock	RGs 1.154, 1.99 SECY 82-465 SECY 83-288 SECY 81-687 10 CFR 50.61/ GL 88-11	PWR	NC	NOTE 16

## NOTES

### 1. USI A-1: Water Hammer

Indian Point 2 (IP2) experienced a water hammer incident on November 13, 1973 that caused a feedwater line crack inside containment. Modifications were made to the plant to preclude recurrence. A modification was made to the feedwater line to Steam Generator 22 prior to January, 1974 to prevent its rapid draining. An additional restraint on all four feedwater lines was added prior to March, 1974 to prevent excessive motion in a rebound situation. Hydraulic dampers were added to the main feedwater regulating valves prior to March, 1974 to preclude rapid closure in the event the internal valve plug 'hangs up' when the trip solenoid operates. The plug trim on the same valves was modified prior to January, 1974 in accordance with manufacturer's recommendation to provide improved low flow characteristics. J-tubes were added to the feedwater ring prior to August, 1974. Lastly, a startup bypass line was installed around all four main feedwater regulating valves with installation completed by June, 1976.

A July 6, 1979 NRC letter transmitted a Safety Evaluation which found the modifications acceptable to minimize the likelihood of water hammer events, pending review of the stress analysis of modifications to the feedwater lines. The stress analysis was provided by Con Edison letter dated July 27, 1979. An April 9, 1980 letter from the NRC discussing the status of USIs reported the stress analysis was acceptable and that a letter providing the staff's approval was in preparation. A copy of the staff's approval could not be located in our files.

Docketed correspondence on this issue include:

11/14/73, W.J. Cahill, Jr., Con Edison to J.P. O'Reilly, AEC  
11/30/73, W.J. Cahill, Jr., Con Edison to J.P. O'Reilly, AEC  
01/14/74, W.J. Cahill, Jr., Con Edison to J.F. O'Leary, AEC  
01/16/74, W.J. Cahill, Jr., Con Edison to J.F. O'Leary, AEC  
03/12/74, W.J. Cahill, Jr., Con Edison to J.F. O'Leary, AEC  
08/30/74, C.L. Newman, Con Edison to E.G. Case, AEC  
05/27/75, NRC to Con Edison  
07/25/75, W.J. Cahill, Jr., Con Edison to G. Lear, NRC  
09/02/77, R.W. Reid, NRC to W.J. Cahill, Jr., Con Edison  
01/13/78, W.J. Cahill, Jr., Con Edison to R.W. Reid, NRC  
06/18/79, W.J. Cahill, Jr. Con Edison to V. Stello, Jr., NRC  
07/06/79, A. Schwencer, NRC to W.J. Cahill, Jr., Con Edison  
07/27/79, W.J. Cahill, Jr., Con Edison to D. Eisenhut, NRC  
04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison

2. USI A-2: Asymmetric Blowdown Loads on Reactor Primary Coolant Systems

An April 9, 1980 letter from the NRC discussed the status of this USI.

Reactor coolant loop pipe restraints were installed on all four loops with work completed by December, 1982. The blow out shield plugs in the reactor vessel nozzle inspection openings were replaced with an alternate shielding material with work completed by April, 1981. A March 28, 1984 NRC Safety Evaluation concluded that, with the modifications described in the June 15, 1977 Con Edison submittal, there was reasonable assurance that the reactor coolant system could withstand the effects of asymmetric LOCA loads. This letter required us to verify shield plug assumptions and determine the effects of plugs as missiles. These verifications were documented in an internal memo dated June 12, 1984.

Subsequent to the above, by letter dated February 23, 1989, the NRC approved the elimination of the dynamic effects of postulated primary loop pipe ruptures from the design basis of IP2 using 'leak-before-break' technology as permitted by the revised General Design Criterion 4 of Appendix A to 10 CFR 50.

Docketed correspondence on this issue include:

07/22/75, NRC to Con Edison  
08/15/75, Con Edison to NRC  
09/04/75, Con Edison to NRC  
11/17/75, Con Edison to NRC  
06/09/76, NRC to Con Edison  
07/09/76, Con Edison to NRC  
06/15/77, W.J. Cahill, Jr., Con Edison to R.W. Reid, NRC  
04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
03/28/84, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
05/23/88, S.B. Bram, Con Edison to Document Control Desk, NRC  
11/15/88, D. Langford, NRC to S.B. Bram, Con Edison  
01/12/89, S.B. Bram, Con Edison to Document Control Desk, NRC  
02/23/89, D.S. Brinkman, NRC to S.B. Bram, Con Edison

3. USI A-3: Westinghouse Steam Generator Tube Integrity

The status of this USI was discussed in an April 9, 1980 letter from H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison.

We responded to Generic Letter 85-02, 'Staff Recommended Actions Stemming from NRC Integrated Program for the Resolution of Unresolved Safety Issues Regarding Steam Generator Tube Integrity', in a June 17, 1985 letter from J.D. O'Toole to H.L. Thompson, Jr. describing previous actions taken in the areas of prevention and detection of loose parts and foreign objects in steam generators, steam generator tube inservice inspection program, secondary water chemistry program, condenser inservice inspection program, primary to secondary leakage limit, coolant iodine activity limit, and safety injection signal reset.

4. USI A-9: Anticipated Transients Without Scram

An April 9, 1980 letter from the NRC discussed the status of this USI.

By letter dated May 16, 1989, the NRC concluded our proposed ATWS design was in compliance with the ATWS Rule requirements of 10 CFR 50.62, paragraph (c)(1). The conclusion was based on the successful completion of certain noted human-factors engineering reviews and isolation device testing. The human factors review was completed in August, 1988 with a revision to the modification reviewed in January, 1989. Installation of our ATWS mitigating system actuation circuitry (AMSAC) was completed by June, 1989 and a setpoint revision was made in November, 1989.

The NRC is presently reviewing ATWS requirements to determine whether and to what extent technical specifications for AMSAC are appropriate. If technical specifications are required, this issue will become incomplete until approval of specified technical specifications.

Docketed correspondence on this issue include:

04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
10/13/85, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
09/19/86, M.M. Slosson, NRC to M. Selman, Con Edison  
01/16/87, M. Selman, Con Edison to Document Control Desk, NRC  
11/02/87, M. Selman, Con Edison to Document Control Desk, NRC  
09/16/88, S.B. Bram, Con Edison to Document Control Desk, NRC  
04/25/89, S.B. Bram, Con Edison to Document Control Desk, NRC  
05/16/89, D.S. Brinkman, NRC to S.B. Bram, Con Edison

5. USI A-11: Reactor Vessel Material Toughness

The reactor vessel surveillance program includes six specimen capsules to evaluate radiation damage based on pre-irradiation and post-irradiation tensile and Charpy V notch testing of specimens. To date, four capsules (designated T, Y, Z and V) have been evaluated and the results have met the requirements of 10 CFR 50 Appendix G. Also, the status of this USI was discussed in an April 9, 1980 letter from the NRC.

Docketed correspondence on this issue include:

07/19/79, V.S. Noonan, Con Edison to D.G. Eisenhut, NRC  
04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
05/07/84, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
10/12/88, S.B. Bram, Con Edison to Document Control Desk, NRC

6. USI A-12: Fracture Toughness of SG and RCP Supports

The staff requested information regarding fracture toughness and the potential for lamellar tearing of the steam generator and reactor coolant pump support materials by letters dated September 14, 1977 and October 27, 1977. Our December 12, 1978 partial response was superseded by letter dated May 31, 1979. We were requested on July 21, 1980 to provide additional information which we submitted on March 19, 1981. In a letter dated November 23, 1983 the staff considered this USI resolved for IP2 based on conclusions in NUREG-0577. No action was required. Additionally, an April 9, 1980 NRC letter discussed the status of this USI.

Docketed correspondence on this issue include:

09/14/77, NRC to Con Edison  
10/27/77, NRC to Con Edison  
12/12/78, Con Edison to NRC  
05/31/79, W.J. Cahill, Jr., Con Edison to A. Schwencer, NRC  
04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
07/21/80, T.M. Novak, NRC to P. Zarakis [sic], Con Edison  
08/28/80, P. Zarakas, Con Edison to T.M. Novak, NRC  
03/19/81, J.D. O'Toole, Con Edison to T.M. Novak, NRC  
11/23/83, S.A. Varga, NRC to J.D. O'Toole, Con Edison

7. USI A-17: Systems Interactions

An April 9, 1980 NRC letter reported on the status of this USI and stated that, although no particular action to perform a specific type of systems interaction review had been requested, a number of related actions were being taken that should provide additional assurance that IP2 was adequately protected against significant systems interactions. These actions were Items F.1 and F.4 from the proposed Confirmatory Order (subsequently issued February 11, 1980) and Item F.1(f)(1) of the staff's Zion/Indian Point Task Action Plan (Enclosure 4 to April 9, 1980 NRC letter).

Information was provided on Items F.1 and F.4 by letter dated August 11, 1980. Further information was requested on Item F.1 by NRC letter dated February 3, 1981 and provided by Con Edison letter dated May 6, 1981. A Rescission of Order was issued July 5, 1985 which reported Item F.1 as complete and Item F.4 as rescinded. Item F.4 had already been incorporated into the Indian Point Probabilistic Safety Study by that time.

Item F.1(f)(1) stated that IP2 would be reviewed in the first iteration of the Integrated [sic] Reliability Evaluation Program (IREP). When the NRC subsequently implemented IREP, IP2 was not included.

This issue was later resolved for all power reactor licensees by Generic Letter 89-18, 'Resolution of Unresolved Safety Issue A-17, "Systems Interactions in Nuclear Power Plants"', which did not require any actions. Generic Letter 88-20, 'Individual Plant Examination for Severe Accident Vulnerabilities - 10 CFR 50.54(f)', addressed internal plant flooding. Our October 27, 1989 response to Generic Letter 88-20 discussed our position on an internal flooding study.

Docketed correspondence on this issue include:

02/11/80, A. Schwencer, NRC to W.J. Cahill, Jr., Con Edison  
04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
08/11/80, P. Zarakas, Con Edison to H.R. Denton, NRC  
02/03/81, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
05/06/81, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
07/05/85, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
10/27/89, S.B. Bram, Con Edison to Document Control Desk, NRC

8. USI A-24: Qualification of Class 1E Safety-Related Equipment

The status of this USI was discussed in an April 9, 1980 NRC letter.

The IP2 environmental qualification program for electrical equipment important to safety was found to comply with the requirements of 10 CFR 50.49 in a Safety Evaluation forwarded in a letter dated December 7, 1984. The Safety Evaluation referred to proposed resolutions of identified deficiencies.

Subsequent to issuance of the Safety Evaluation, the NRC issued Generic Letter 85-15, 'Information Relating to the Deadlines for Compliance with 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants"', which established a November 30, 1985 deadline for compliance with 10 CFR 50.49. Subsequent NRC inspections were performed to determine compliance by Con Edison with 10 CFR 50.49. These inspections culminated with the NRC's issuance of a Notice of Violation and proposed imposition of civil penalty on November 3, 1988. Con Edison responded by letter dated December 2, 1988 and on May 5, 1989, the NRC issued a letter acknowledging our corrective actions for both the violations and open issues. As a result, Con Edison's compliance with 10 CFR 50.49 was verified by the NRC.

Docketed correspondence on this issue include:

04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
01/05/83, NRC to Con Edison  
05/02/83, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
10/05/84, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
12/07/84, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
09/24/86, R.F. Heishman, NRC to M. Selman, Con Edison  
02/11/88, W.V. Johnston, NRC to S.B. Bram, Con Edison  
03/11/88, S.B. Bram, Con Edison to Document Control Desk, NRC  
06/14/88, W.V. Johnston, NRC to S.B. Bram, Con Edison  
11/03/88, W.T. Russell, NRC to S.B. Bram, Con Edison  
12/02/88, S.B. Bram, Con Edison to Deputy Director, OE, NRC  
05/05/89, H.J. Wong, NRC to S.B. Bram, Con Edison

9. USI A-26: Reactor Vessel Pressure Transient Protection

An April 9, 1980 NRC letter discussed the status of this USI.

A Safety Evaluation transmitted by letters dated April 24, 1984 and June 28, 1984 concluded that our overpressure protection system (OPS) is an adequate solution to the problems of transients at low temperature and pressure. Technical Specifications for the OPS were issued October 23, 1985 in License Amendment No. 101.

Generic Letter 88-11, 'NRC Position on Radiation Embrittlement of Reactor Vessel Materials and its Impact on Plant Operations', indicated that low-temperature-overpressure protection setpoints may need revising as a result of Revision 2 to Reg. Guide 1.99. We responded to Generic Letter 88-11 on November 30, 1988. A January 5, 1989, letter from NRC clarified Generic Letter 88-11 requirements and requested us to revise our November 30, 1988 response. This item is Incomplete and a response will be provided by March 31, 1990.

Docketed correspondence on this issue include:

08/28/78, A. Schwencer, NRC to W.J. Cahill, Jr., Con Edison  
02/27/80, A. Schwencer, NRC to W.J. Cahill, Jr., Con Edison  
04/02/80, W.J. Cahill, Jr., Con Edison to A. Schwencer, NRC  
04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
02/14/83, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
04/24/84, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
06/28/84, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
10/23/85, M.M. Slosson, NRC to J.D. O'Toole, Con Edison  
11/30/88, S.B. Bram, Con Edison to Document Control Desk, NRC  
01/05/89, M.M. Slosson, NRC to S.B. Bram, Con Edison

10. USI A-36: Control of Heavy Loads Near Spent Fuel

By letter dated May 17, 1978 from V. Stello, Jr., NRC to All Licensees for Power Reactors except those in the Systematic Evaluation Program, we were requested to provide information on the movement of heavy loads near spent fuel. We responded to this letter on July 17, 1978 and August 4, 1978.

We requested a Technical Specification Amendment on September 7, 1979 to reflect a change in the value of the neutron multiplication factor and to incorporate a limit on the maximum fuel loading in the assemblies that were to be stored in the new high density racks. Amendment No. 75 was issued January 11, 1982 and included requirements for the control of heavy loads in the fuel storage building.

A July 31, 1980 letter requested us to review our controls for the handling of heavy loads to determine the extent to which Enclosure 1 guidelines were satisfied and to identify any changes and modifications required to fully satisfy those guidelines. We were further requested to implement the interim actions described in Enclosure 2 to the letter. Lastly, we were requested to submit a report in two phases, to include information identified in Enclosure 3 to the letter, documenting the results of our review and the required changes and modifications.

Our Phase I report was submitted June 22, 1981 and described the changes to procedures and minor facility modifications that were or would be required to meet the interim measures and general guidelines. The same letter reported that we had developed the required changes to procedures to satisfy the interim measures guidelines, that the changes had received the necessary reviews and approvals, and that the changes had been issued. A change to the Phase I submittal was made by an August 10, 1982 letter. By letter dated March 15, 1982 we were requested to provide additional information on our Phase I submittal. This information was provided by letters dated September 30, 1982, January 31, 1983, and January 20, 1984. A February 15, 1985 letter from the NRC attached a Safety Evaluation which stated that Phase I was acceptable. A review of relevant documents and interviews with personnel involved in and with knowledge of the actions taken for this issue indicates that the changes and minor facility modifications were implemented by September, 1982.

On December 3, 1981 we submitted our Phase II report which identified any changes or modifications that had been or would be completed to satisfy the guidelines. An August 20, 1984 letter forwarded a draft Technical Evaluation Report on our submittal. By letter dated June 28, 1985 from H.L. Thompson, Jr., NRC, to All Licenses for Operating Reactors, we were informed that a detailed Phase II review of heavy loads was not necessary and Phase II was considered complete. While not a requirement, the Staff encouraged the implementation of any actions identified in Phase II.

By letters dated February 27, 1980, April 9, 1980 and July 7, 1980 we were requested to revise Technical Specifications to impose further restrictions on heavy load movement. We submitted a Technical Specification Amendment on February 14, 1983 with supplements dated October 29, 1984, May 14, 1985, August 14, 1985 and January 3, 1986. License Amendment No. 130 concerning control of heavy loads was issued by letter dated May 3, 1988.

Docketed correspondence on this issue include:

02/25/74, D.J. Skovholt, AEC to W.J. Cahill, Jr., Con Edison  
05/15/74, W.J. Cahill, Jr., Con Edison to K.R. Goller, AEC  
Undated, P.B. Erickson, NRC (Summary of 2/21/75 meeting)  
04/16/75, W.J. Cahill, Jr., Con Edison to K.R. Goller, NRC  
07/28/76, J.P. O'Reilly, NRC to W.J. Cahill, Jr., Con Edison  
07/17/78, W.J. Cahill, Jr., Con Edison to V. Stello, Jr., NRC  
08/04/78, W.J. Cahill, Jr., Con Edison to V. Stello, Jr., NRC  
09/07/79, Con Edison to NRC  
02/27/80, A. Schwencer, NRC to W.J. Cahill, Jr., Con Edison  
04/09/80, H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison  
05/06/80, W.J. Cahill, Jr., Con Edison to H.R. Denton, NRC  
07/07/80, S.A. Varga, NRC to W.J. Cahill, Jr., Con Edison  
07/31/80, D.G. Eisenhut, NRC to W.J. Cahill, Jr., Con Edison  
06/22/81, J.D. O'Toole, Con Edison to D.G. Eisenhut, NRC  
12/03/81, J.D. O'Toole, Con Edison to D.G. Eisenhut, NRC  
01/11/82, J. Hannon, NRC to J.D. O'Toole, Con Edison  
03/15/82, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
04/21/82, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
08/10/82, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
09/30/82, J.D. O'Toole, Con Edison to S.A. Varga, NRC

01/31/83, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
02/14/83, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
01/20/84, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
Undated, S.A. Varga, NRC to J.D. O'Toole, Con Edison (received 8/9/84)  
08/20/84, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
10/29/84, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
02/19/85, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
05/14/85, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
08/14/85, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
01/03/86, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
05/03/88, M.M. Slosson, NRC to S.B. Bram, Con Edison

11. USI A-43: Containment Emergency Sump Performance

A Confirmatory Order was issued on February 11, 1980 which requested us: "to verify that the sump for ESF recirculation is free of debris and determine if flow test verification was initially performed. If not performed, explore means to verify. Review existing procedures and training on recirculation alignment and RWST refill." We responded to the request by letter dated June 10, 1980 from J.D. O'Toole to H.R. Denton, NRC. Procedures for recirculation alignment were revised as a result of the TMI Owners Group recommendations and licensed operators were retrained in these revised procedures as documented in the June 10, 1980 letter. The status of this USI was also discussed in an April 9, 1980 letter from H.R. Denton, NRC to W.J. Cahill, Jr., Con Edison.

12. USI A-44: Station Blackout

An April 9, 1980 NRC letter discussed the status of this USI. It stated that the proposed Confirmatory Order (subsequently issued February 11, 1980) for IP2 included a number of requirements (identified as Items A.7, B.6, C.5, E.1.b, E.1.c, E.1.d, E.1.e, E.1.f, and F.5) that would directly contribute to reducing the potential for and consequences of a station blackout condition.

Items A.7 and B.6 were completed by March, 1980 and closed by Inspection Report No. 50-247/80-03 (issued April 7, 1980). Item C.5 was addressed in Con Edison correspondence dated April 11, 1980, August 27, 1980, December 6, 1982, and May 2, 1984 with the completion of improvements reported in the last letter. By letter dated December 18, 1984, the staff concurred that the modifications and preventive maintenance implemented would enhance the availability of the gas turbines. Information on Items E.1.b through E.1.f was provided in Con Edison letter dated June 10, 1980. NRC Inspection Reports No. 50-247/80-07 (issued September 3, 1980) and No. 50-247/80-15 (issued January 26, 1981) resolved these items. Information on Item F.5 was provided by letter dated August 11, 1980 and Inspection Report 50-247/80-15 (issued January 26, 1981) addressed it. Further, in a Rescission of Order dated July 5, 1985, Items A.7, C.5, E.1.b, E.1.f and F.5 were reported as complete and Items B.6, E.1.c., E.1.d and E.1.e were rescinded.

We submitted our response to the Station Blackout Rule (10 CFR 50.63) on April 14, 1989. As stated in the response, the necessary modifications and associated procedure changes discussed in the response will be completed two years after the notification provided by the Director, Office of Nuclear Reactor Regulation, in accordance with 10 CFR 50.63(c)(3).

Docketed correspondences on this issue include:

02/11/80, A. Schwencer, NRC to W.J. Cahill, Jr., Con Edison  
03/11/80, P.A. Zarakas, Con Edison to H.R. Denton, NRC  
04/07/80, E.J. Brunner, NRC to W.J. Cahill, Jr., Con Edison  
04/11/80, J.D. O'Toole, Con Edison to H.R. Denton, NRC  
06/10/80, J.D. O'Toole, Con Edison to H.R. Denton, NRC  
08/11/80, P. Zarakas, Con Edison to H.R. Denton, NRC  
08/27/80, P. Zarakas, Con Edison to H.R. Denton, NRC  
09/03/80, E.J. Brunner, NRC to P. Zarakas, Con Edison  
01/26/81, E.J. Brunner, NRC to J.D. O'Toole, Con Edison  
12/06/82, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
05/02/84, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
12/18/84, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
07/05/85, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
04/14/89, S.B. Bram, Con Edison to Document Control Desk, NRC

13. USI A-45: Shutdown Decay Heat Removal Requirements

This issue has been subsumed into the IPE program. We submitted our response to Generic Letter 88-20, 'Initiation of the Individual Plant Examination for Severe Accident Vulnerabilities', and Supplement 1 in an October 27, 1989 letter from S.B. Bram. This letter stated that we will adopt the probabilistic risk assessment approach, and that we anticipate completion of the technical effort by the end of 1991 and preparation and submittal of a final response by June, 1992.

14. USI A-46: Seismic Qualification of Equipment in Operating Plants

We submitted our response to Generic Letter 87-02, 'Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (USI) A-46', by letter dated October 4, 1988, S.B. Bram to Document Control Desk. This letter stated it is our plan to resolve USI A-46 by implementation of the generic criteria and methodology included in Revision 0 of the Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment developed by the Seismic Qualification Utility Group. As stated in our response, assuming no major changes in the workscope currently envisioned, we plan to perform the seismic verification plant walkdown required by the GIP by the conclusion of the second refueling outage after receipt of the final SER Supplement and resolution of all open issues.

15. USI A-47: Safety Implication of Control Systems

As required by Generic Letter 89-19, 'Request for Action Related to Resolution of Unresolved Safety Issue A-47 "Safety Implication of Control Systems in LWR Nuclear Power Plants" Pursuant to 10 CFR 50.54(f)', issued September 20, 1989, we will respond to the generic letter within 180 days of the date of the letter.

16. USI A-49: Pressurized Thermal Shock

A Safety Evaluation forwarded to us by a June 15, 1984 letter concluded that the information submitted by us adequately demonstrated reasonable assurance that vessel integrity is maintained for a II.K.2.13 event and found that the requirements set forth in NUREG-0737, Item II.K.2.13 had been satisfied.

Our letter dated January 22, 1986 reported current and projected values of the reference temperature (for nil ductility transition) for pressurized thermal shock evaluation for the reactor vessel belt line material. This letter superseded in part the information provided in a March 29, 1978 letter and itself was supplemented by a January 12, 1987 submittal.

A Safety Evaluation transmitted by letter dated February 27, 1987 accepted our January 23, 1986 and February 20, 1986 submittals in response to the PTS rule (10 CFR 50.61). The Safety Evaluation found the material properties of reactor vessel beltline materials, the projected fluence at the inner surface of the reactor vessel for the end of plant life, and the calculated  $RT_{PTS}$  for the end of plant life to be acceptable.

By letter dated November 30, 1988 we submitted an update to our January 22, 1986 projection for current and projected values of the nil ductility transition reference temperature for pressurized thermal shock evaluation of reactor vessel beltline materials.

Docketed correspondence on this issue include:

03/29/78, W.J. Cahill, Jr., Con Edison to R.W. Reid, NRC  
05/22/81, J.D. O'Toole, Con Edison to D.G. Eisenhut, NRC  
05/07/84, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
06/15/84, S.A. Varga, NRC to J.D. O'Toole, Con Edison  
07/05/85, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
07/22/85, J.D. Neighbors, NRC to J.D. O'Toole, Con Edison  
01/22/86, J.D. O'Toole, Con Edison to S.A. Varga, NRC  
02/20/86, Con Edison to NRC  
01/12/87, M. Selman, Con Edison to Document Control Desk, NRC  
02/27/87, M.M. Slosson, NRC to M. Selman, Con Edison  
11/30/88, S.B. Bram, Con Edison to Document Control Desk, NRC