Indian Point 3
Nuclear Power Plant
P.O. Box 215
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New York Power Authority

Robert J. Barrett
Site Executive Officer

June 30,1999
IPN-99-069

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Supporting Information on Proposed Technical Specification Change
Relocating The Chemical Volume and Control System Specification

References:
1. IPN-98-113 dated October 16, 1998, "Proposed Relocation of Technical Specifications Regarding Chemical Volume and Control System."
2. IPN-99-012 dated January 28, 1999, "Supplement To Proposed Technical Specification Change Relocating The Chemical Volume and Control System Specification."

Dear Sir:

This letter provides supporting information for an application to amend the Indian Point 3 Technical Specifications to relocate Technical Specification 3.2, "Chemical Volume and Control System" (CVCS) and associated surveillance requirements and Bases. The application was submitted in the referenced letters.

During a June 7, 1999 teleconference, NYPA and the NRC staff discussed the probabilistic risk assessment aspects of the proposed amendment, including the "cutsets" associated with the calculated contributions to core damage frequency for the CVCS components. At that time, NYPA agreed to send information identifying the dominant "cutsets" associated with the 1.4% contribution to core damage frequency (CDF) associated with the CVCS hardware failure that was identified in Reference 2. When we perform risk assessment, we define CDF considering failures of equipment and failures of personnel to properly operate equipment. Although these combined failures are associated with a 2.3 % contribution to CDF, we do not consider the operator error contribution as relevant to the relocation of the Technical Specification. This is because the limits on equipment availability provided by the Technical Specifications only affect failures of equipment, not failures of personnel to operate equipment.

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Attachment 1 presents the top 20 "cutsets" that provide approximately 67 percent of the total contribution of CVCS equipment failure to CDF. Each component level "cutset" is presented with its corresponding event tree sequence and contribution to total CDF.

No new commitments are made by the Authority in this submittal.

If you have any questions, please contact Mr. K. Peters.

Very truly yours,

Robert J. Barrett
Site Executive Officer
Indian Point 3 Nuclear Power Plant

Attachment

cc: U.S. Nuclear Regulatory Commission
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King of Prussia, PA 19406

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ATTACHMENT 1
TOP 20 CVCS CUTSETS (HARDWARE FAILURES ONLY)
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	Cutset	Cutset Description	Basic Event Probability	Sequence Frequency	Event Tree Sequence	Contribution to Total CDF
	IE-TSWS-NE	LOSS OF NON-ESSENTIAL SERVICE WATER INITIATOR	2.11E-03	1.09E-07	TSWS-159-TCCW-26	0.25%
	CVC-RRV-CO-CH218	SEAL WTR REL VLV CH-218 FAIL TO RM CLOSE	5.16E-05		(Note 1)	
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	5.40E-08	T3-4-S2-13	0.12%
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	DC1-CCF-HW-3132P	CCF OF 125VDC PPS 31&32	6.00E-06			
	IE-TSWS-NE	LOSS OF NON-ESSENTIAL SERVICE WATER INITIATOR	2.11E-03	3.63E-08	TSWS-159-TCCW-26	0.08%
	CVC-FLT-PG-SERTU	SEAL WATER RETURN FILTER PLUGGED	1.72E-05		(Note 1)	
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	2.91E-08	T3-4-S2-13	0.07%
	CVC-PDP-FR-PM31	PM 31 FAIL TO CONTU TO RUN IN MAX SPEED	1.35E-03			
	DC1-CCF-HW-3132P	CCF OF 125VDC PPS 31&32	6.00E-06			
	IE-TDC32	LOSS OF 125VDC PP 32 INITIATOR	3.00E-03	2.60E-08	Note 2	0.06%
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	SAS-XLF-TE-SASA	SAS TRAIN A IN FUNCTIONAL TEST	3.47E-03			
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	2.17E-08	T3-4-S2-74	0.05%
	AC4-RCK-NO-BCH37	FAULTS AT MCC37 TO BATT CHGR 32	2.50E-03			
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	DC1-MAI-MA-BCC31	BATT CHGR 31 IN MAINTENANCE	9.64E-03			
	NR-CHGR35	FAILURE TO PROPERLY ALIGN BACKUP CHARGER	1.00E-01			
	IE-TCCW	LOSS OF COMPONENT COOLING WATER INITIATING EVENT	3.98E-04	2.05E-08	TCCW-26	0.05%
	CVC-RRV-CO-CH218	SEAL WTR REL VLV CH-218 FAIL TO RM CLOSE	5.16E-05		(Note 1)	
	IE-T2	LOSS OF MAIN FW INITIATOR	1.10E+00	1.65E-08	T2-28-S2-74	0.04%
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	DC1-CCF-HW-3132P	CCF OF 125VDC PPS 31&32	6.00E-06			
	IE-TSWS-NE	LOSS OF NON-ESSENTIAL SERVICE WATER INITIATOR	2.11E-03	1.41E-08	TSWS-159-TCCW-26	0.03%
	CVC-HTX-VF-SERTU	SEAL RETURN WATER HEAT EXCHANGER FAILURE	6.67E-06		(Note 1)	

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	Cutset	Cutset Description	Basic Event Probability	Sequence Frequency	Event Tree Sequence	Contribution to Total CDF
	IE-TDC32	LOSS OF 125VDC PP 32 INITIATOR	3.00E-03	1.40E-08	Note 2	0.03%
	CVC-PDP-FR-PM31	PM 31 FAIL TO CONTU TO RUN IN MAX SPEED	1.35E-03			
	SAS-XLF-TE-SASA	SAS TRAIN A IN FUNCTIONAL TEST	3.47E-03			
	IE-TSWS-NE	LOSS OF NON-ESSENTIAL SERVICE WATER INITIATOR	2.11E-03	1.27E-08	TSWS-159-TCCW-26	0.03%
	CVC-CCF-CC-4CKVS	COMMON CAUSE FAILURE OF 4 CHECK VLVS	6.00E-06		(Note 1)	
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	1.17E-08	T3-4-S2-74	0.03%
	AC4-RCK-NO-BCH37	FAULTS AT MCC37 TO BATT CHGR 32	2.50E-03			
	CVC-PDP-FR-PM31	PM 31 FAIL TO CONTU TO RUN IN MAX SPEED	1.35E-03			
	DC1-MAI-MA-BCC31	BATT CHGR 31 IN MAINTENANCE	9.64E-03			
	NR-CHGR35	FAILURE TO PROPERLY ALIGN BACKUP CHARGER	1.00E-01			
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	1.10E-08	T3-4-S2-3	0.03%
	CVC-RRV-CO-CH218	SEAL WTR REL VLV CH-218 FAIL TO RM CLOSE	5.16E-05			
	SWS-CCF-FR-NESPM	CCF OF RUNNING NON-ESSEN SWS PUMPS	5.90E-05			
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	9.37E-09	T3-4-S2-51	0.02%
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	DC1-MAI-MA-BCC32	BATT CHGR 32 IN MAINTENANCE	3.00E-03			
	SAS-XLF-TE-SASA	SAS TRAIN A IN FUNCTIONAL TEST	3.47E-03			
	NR-CHGR35	FAILURE TO PROPERLY ALIGN BACKUP CHARGER	1.00E-01			
	IE-T2	LOSS OF MAIN FW INITIATOR	1.10E+00	8.89E-09	T2-28-S2-74	0.02%
	CVC-PDP-FR-PM31	PM 31 FAIL TO CONTU TO RUN IN MAX SPEED	1.35E-03			
	DC1-CCF-HW-3132P	CCF OF 125VDC PPS 31&32	6.00E-06			
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	7.81E-09	T3-4-S2-51	0.02%
	AC4-RCK-NO-BCH37	FAULTS AT MCC37 TO BATT CHGR 32	2.50E-03			
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	SAS-XLF-TE-SASA	SAS TRAIN A IN FUNCTIONAL TEST	3.47E-03			
	NR-CHGR35	FAILURE TO PROPERLY ALIGN BACKUP CHARGER	1.00E-01			

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	Cutset	Cutset Description	Basic Event Probability	Sequence Frequency	Event Tree Sequence	Contribution to Total CDF
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	7.62E-09	T3-4-S2-74	0.02%
	CVC-SPC-DN-S141A	SPEED CONTROLLER SC-141A DOES NOT OPERAT	3.53E-04			
	DC1-CCF-HW-3132P	CCF OF 125VDC PPS 31&32	6.00E-06			
	IE-TDC32	LOSS OF 125VDC PP 32 INITIATOR	3.00E-03	7.23E-09	Note 2	0.02%
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	DC1-MAI-MA-BCC31	BATT CHGR 31 IN MAINTENANCE	9.64E-03			
	NR-CHGR35	FAILURE TO PROPERLY ALIGN BACKUP CHARGER	1.00E-01			
	IE-TCCW	LOSS OF COMPONENT COOLING WATER INITIATING EVENT	3.98E-04	6.85E-09	TCCW-26	0.02%
	CVC-FLT-PG-SERTU	SEAL WATER RETURN FILTER PLUGGED	1.72E-05		(Note 1)	
	IE-T3	TURBINE TRIP W/ FW AVAIL INITIATOR	3.60E+00	6.75E-09	T3-4-S2-74	0.02%
	AC4-RCK-NO-BCH39	FAULTS AT MCC39 TO BATT CHGR 31	2.50E-03			
	CVC-RCK-NO-PM31	PUMP 31 CONTROL CIRCUIT NO OUTPUT	2.50E-03			
	DC1-MAI-MA-BCC32	BATT CHGR 32 IN MAINTENANCE	3.00E-03			
	NR-CHGR35	FAILURE TO PROPERLY ALIGN BACKUP CHARGER	1.00E-01			

Notes

1 No credit was taken for operator action to manually align backup city water cooling to RHR Pump 31.

2 This event tree sequence was not depicted in the original IPE. It was added based on the resolution of NRC Requests for Additional Information (RAIs) submitted to the NRC on 6/20/95. These changes were in effect at the time that the NRC Staff Evaluation Report (SER) on the IP3 IPE was received on 12/11/95.