



J. Phillip Bayne
Executive Vice President
Nuclear Generation

March 6, 1984
IPN-84-08

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Indian Point 3 (IP-3) Systems Interaction
(SI) Study

Reference: Letter from J. P. Bayne to S. A. Varga dated
November 30, 1983 (IPN-83-95: "Indian Point 3
Systems Interaction Study")

Dear Sir:

This letter serves to provide an updated status of the information relative to the IP-3 SI Study that was submitted in the referenced letter and reflects the ongoing nature of the Authority efforts to close the 643 interactions identified by EBASCO as requiring Authority resolution. As indicated in the referenced letter, these 643 interactions were comprised of 20 connected, 620 non-connected, and 3 area-specific interactions in addition to the separately documented interactions that were identified as part of the central control room (CCR) review. As of November 30, 1983, the Authority had closed 18 of the 20 connected and 267 of the 620 nonconnected interactions as indicated in Tables 3 and 4 of the referenced letter.

Since November 30, 1983, the Authority has been working towards resolving the remaining open interactions. To this extent, the Authority has closed an additional 154 interactions bringing the total number closed to 439 of the original 643 interactions. In addition, the concerns identified as part of the CCR review have been resolved.

Tables 1 ("Interaction-Specific Summary/Status as of March 6, 1984") and 2 ("System-Specific Summary/Status of Interaction Resolutions as of March 6, 1984") of this letter provide summary resolution information with respect to the 439

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interactions that have been closed to date by the Authority. As indicated in these tables, all of the 20 connected, 417 of the 620 nonconnected, and 2 of the 3 area-specific interactions have been closed and comprise the total of 439 interactions cited above.

With respect to the remaining open interactions, the Authority has provided for a review and walkdown of these interactions independent of the SI Task Force activities. The preliminary findings of these efforts indicate that these interactions are not of a significant nature. However, the Authority will evaluate the final results of these efforts to determine whether modifications are required to close these interactions.

The Authority is looking forward to meeting with members of your staff to discuss these resolution efforts and will periodically provide an updated status of these efforts to keep you informed.

Should you or your staff have any questions regarding this matter, please contact Mr. P. Kokolakis of my staff.

Very truly yours,



J. P. Bayne
Executive Vice President
Nuclear Generation

cc: Resident Inspector's Office
Indian Point Unit 3
U. S. Nuclear Regulatory Commission
P. O. Box 66
Buchanan, New York, 10511

NONCONNECTED

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 7 Control RH Vent

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD/TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD/TEST	PROCEDURAL CHANGE
E-7-2-5		X						
E-7-3-5		X						
E-7-6-5		X						
E-7-7-3		X						
E-7-7-5		X						
E-7-13-2		X						
E-7-14-2		X						
E-7-14-4		X						
E-7-16-2		X						
E-7-17-2		X						
E-7-36-1		X						
E-7-50-2		X						
E-7-51-2		X						
E-7-52-2		X						
E-7-53-2		X						
E-7-54-2		X						
I-7-3-1		X						
I-7-4-7		X						
L-7-5-7		X						
L-7-6-7		X						
L-7-7-1		X						
L-7-7-3		X						
L-7-7-7		X						
L-7-8-1		X						

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 8 Service Water

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD/TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD/TEST	PROCEDURAL CHANGE
E-8-1-1					X			
E-8-2-1					X			
E-8-6-1					X			
E-8-7-1					X			
E-8-11-1					X			
E-8-12-1					X			
E-8-16-1					X			
E-8-17-1					X			
E-8-21-1					X			
E-8-22-1					X			
E-8-26-1					X			
E-8-27-1					X			
E-8-31-2					X			
E-8-53-2						X		
E-8-53-3						X	X	
E-8-54-2						X		
E-8-54-3						X	X	
E-8-55-2						X		
E-8-55-3						X	X	
E-8-56-4						X		
E-8-57-4						X		
E-8-76-1						X		
E-8-77-1						X		
E-8-78-1						X		

NONCONNECTED

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1934

SYSTEM 8 Service Water

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD/TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD/TEST	PROCEDURAL CHANGE
E-8-79-1						X		
E-8-80-1						X		
E-8-81-1						X		
E-8-82-1						X		
E-8-83-1						X		
E-8-84-1						X		
E-8-85-1						X		
E-8-86-1						X		
E-8-87-1						X		
E-8-88-1						X		
E-8-89-1						X		
E-8-90-1						X		
E-8-91-1						X		
E-8-92-1						X		
E-8-93-1						X		
E-8-94-1						X		
E-8-95-1						X		
E-8-96-1						X		
E-8-97-1						X		
E-8-98-1						X		
E-8-99-1						X		
E-8-100-1						X		
E-8-101-1						X		
E-8-102-1						X		

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 8 Service Water

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD./TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD./TEST	PROCEDURAL CHANGE
E-8-103-1						X		
E-8-104-1						X		
E-8-105-1						X		
E-8-106-1						X		
E-8-107-1						X		
E-8-108-1						X		
E-8-109-1						X		
E-8-110-1						X		
E-8-111-1						X		
E-8-112-1						X		
E-8-113-1						X		
E-8-114-1						X		
I-8-30-2							X	
I-8-31-2							X	
I-8-36-2		X						
I-8-36-3		X						
I-8-36-4		X						
I-8-37-2		X						
I-8-37-3		X						
I-8-37-4		X						
I-8-38-2		X						
I-8-38-3		X						
I-8-38-4		X						
I-8-39-2		X						

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 8 Service Water

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD./TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD./TEST	PROCEDURAL CHANGE
I-8-102-3		X						
I-8-103-1							X	
I-8-103-3		X						
I-8-104-1							X	
I-8-104-3		X						
I-8-107-1						X		
I-8-108-1						X		
I-8-109-1						X		
I-8-110-1						X		
I-8-111-1						X		
I-8-112-1						X		
I-8-113-1						X		
I-8-114-1						X		
I-8-115-1						X		
I-8-116-1						X		
I-8-117-1						X		
I-8-118-1						X		
I-8-119-3						X	X	
I-8-119-4						X	X	
I-8-120-1						X	X	
I-8-120-2						X	X	
L-8-227-1		X						
L-8-228-1		X						
L-8-229-1		X						

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 9 Component Cooling

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD/TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD/TEST	PROCEDURAL CHANGE
L-9-16-6		X						
L-9-22-6		X						
L-9-24-6							X	
L-9-27-6		X						
L-9-31-1		X						
L-9-32-1		X						
L-9-116-4		X						
L-9-125-2							X	
L-9-126-2							X	
L-9-127-2							X	
L-9-128-2							X	
L-9-129-2							X	
L-9-130-2							X	
L-9-170-3		X						
L-9-171-3		X						
L-9-217-3		X						
L-9-229-2				X				
L-9-252-5		X						
L-9-253-5		X						
L-9-262-1		X						
L-9-263-1		X						
L-9-277-1		X						
L-9-297-1						X		
L-9-297-2						X		

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 9 Component Cooling

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD./TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD./TEST	PROCEDURAL CHANGE
L-9-298-1						X		
L-9-298-2						X		
L-9-299-3						X		
L-9-299-4						X		
L-9-300-3						X		
L-9-300-4						X		
L-9-304-1						X		
L-9-304-2						X		
L-9-305-1						X		
L-9-305-2						X		
L-9-305-3						X		
L-9-305-4						X		
L-9-306-1						X		
L-9-306-2						X		
L-9-306-3						X		
L-9-306-4						X		
L-9-309-1		X						
L-9-310-1		X						
L-9-311-1		X						
L-9-312-1		X						
L-9-313-1		X						
L-9-314-1		X						
L-9-315-1		X						
L-9-316-1		X						

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 14 Main Steam

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD./TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD./TEST	PROCEDURAL CHANGE
E-14-14-1				X				
E-14-15-1				X				
E-14-16-1				X				
E-14-16-2				X				
E-14-17-1				X				
E-14-17-2				X				
E-14-18-1				X				
E-14-19-1				X				
I-14-14-1						X		
I-14-15-1						X		
I-14-40-1						X		
I-14-41-1						X		
I-14-57-3						X		
I-14-57-4						X		
I-14-58-3						X		
I-14-58-4						X		
I-14-59-3						X		
I-14-59-4						X		
I-14-60-3						X		
I-14-60-4						X		
I-14-61-1						X		
I-14-61-4						X		
I-14-62-1						X		
I-14-62-4						X		

TABLE 1

INTERACTION - SPECIFIC SUMMARY STATUS
AS OF MARCH 6, 1984

SYSTEM 16 Hydrogen Recombiner

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD./TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD./TEST	PROCEDURAL CHANGE
I-16-17-2							X	
I-16-35-2					X			
I-16-35-4							X	
I-16-36-3							X	
I-16-37-1							X	
I-16-37-3		X						
I-16-37-8					X			
I-16-39-1							X	
I-16-39-3		X						
I-16-39-8					X			
I-16-41-11							X	
I-16-44-11							X	
I-16-45-11							X	
I-16-51-2		X						
I-16-52-1							X	
I-16-52-2							X	
I-16-52-4						X		
I-16-52-5						X		
L-16-1-1					X		X	
L-16-1-2					X			
L-16-21-2					X			
L-16-32-2		X						
L-16-33-2		X						
L-16-34-1		X						

NONCONNECTED

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS
AS OF MARCH 6, 1984

SYSTEM 17 Reactor Protection

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD./TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD./TEST	PROCEDURAL CHANGE
E-17-96-1						X		
E-17-97-1						X		
E-17-98-1						X		
E-17-99-1						X		
E-17-100-1						X		
E-17-101-1						X		
E-17-102-1						X		
E-17-103-1						X		
E-17-104-1						X		
E-17-105-1						X		
I-17-31-1							X	
I-17-34-1							X	
I-17-47-3		X						
I-17-47-4		X						
I-17-48-3		X						
I-17-48-4		X						
I-17-49-3		X						
I-17-49-4		X						
I-17-50-3		X						
I-17-50-4		X						
I-17-51-3		X						
I-17-51-4		X						
I-17-52-3		X						
I-17-52-4		X						

TABLE 1

INTERACTION - SPECIFIC SUMMARY/STATUS

AS OF MARCH 6, 1984

SYSTEM 18 Electric Trays

INTERACTION NUMBER	IF OPEN (PLAN OF ACTION/RESOLUTION)			IF CLOSED (METHOD OF CLOSURE)				
	ANALYSIS	PHYS. MOD./TEST	PROCEDURAL CHANGE	ANALYSIS	WALKDOWN	REVIEW	PHYS. MOD./TEST	PROCEDURAL CHANGE
E-18-36-1					X		X	
E-18-37-1					X		X	
E-18-39-1					X		X	
E-18-40-1					X		X	
E-18-43-1					X		X	
E-18-53-1					X		X	
E-18-54-1					X		X	
E-18-102-3					X		X	
E-18-103-3					X		X	
E-18-108-1					X		X	
E-18-125-5		X						
E-18-125-6		X						
E-18-125-8		X						
E-18-144-1		X						
E-18-144-2		X						
E-18-145-1		X						
E-18-145-2		X						
E-18-149-2					X			
E-18-149-3					X		X	
E-18-150-2					X			
E-18-151-2					X			
E-18-152-2					X			
E-18-153-2					X			
E-18-154-2					X			

TABLE 2

SYSTEM - SPECIFIC SUMMARY/STATUS OF INTERACTION RESOLUTIONS AS OF MARCH , 1984

	<u>NO. OF INTERACTIONS REQUIRING AUTHORITY RESOLUTION</u>	<u>NUMBER CLOSED BY AUTHORITY</u>	<u>NUMBER REMAINING OPEN</u>
<u>NONCONNECTED</u>			
<u>System</u>			
1	Rod Control	1	0
2	Safety Injection	21	8
3	Chemical Vol Cntl	35	2
4	Residual Ht Reml	16	5
5	Reactor Coolant	13	5
7	Control RH Vent	0	42
8	Service Water	119	36
9	Component Cooling	41	45
10	Nitrogen Backup	30	2
11	Diesel Generator	34	3
12	DC Power	11	0
13	Cont Isolation	1	9
14	Main Steam	40	0
16	Hydrogen Recombiner	18	11
17	Reactor Protection	12	24
18	Electric Trays	23	8
21	Containment Recirc	0	2
23	Auxiliary Feedwater	2	1
	<u>620</u>	<u>439</u>	<u>203</u>

CONNECTED - PHYSICAL PROCESS

<u>System</u>			
2	Safety Injection	4	0
3	Chemical Vol Cntl	1	0
8	Service Water	5	0
	<u>10</u>	<u>10</u>	<u>0</u>

TABLE 2

SYSTEM - SPECIFIC SUMMARY/STATUS OF INTERACTION RESOLUTIONS AS OF MARCH , 1984

	<u>NO. OF INTERACTIONS REQUIRING AUTHORITY RESOLUTION</u>	<u>NUMBER CLOSED BY AUTHORITY</u>	<u>NUMBER REMAINING OPEN</u>
<u>CONNECTED - INDUCED OPERATOR ERRORS</u>			
<u>System</u>			
5 Reactor Coolant	9	9	0
10 Nitrogen Backup	<u>1</u>	<u>1</u>	<u>0</u>
	<u>10</u>	<u>10</u>	<u>0</u>
<u>AREA - SPECIFIC</u>			
o Systems interactions induced by internally generated missiles and pipe whip	1	1	0
o Systems Interactions induced by severe environment within Class I structures	1	0	1
o Systems interactions induced by the effects of internally gener- ated floods	1	1	0
<u>CENTRAL CONTROL ROOM REVIEW</u>	1	1	0