



Entergy Nuclear Northeast
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December 5, 2005

Re: Indian Point Unit 2
Docket No. 50-247
NL-05-135

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: **Response to Request for Additional Information Regarding Relief from
System Hydrostatic Test Requirements for Large Bore Pipe (RR-74 / MC7307)**

- References:
1. Entergy letter NL-05-073 to NRC, dated June 8, 2005; "Request for Relief from System Hydrostatic Test Requirements for Large Bore (> 1 inch) ASME Code Class 1 Reactor Coolant Pressure Boundary, Process, Drain, Test, and Flush Lines and Connections."
 2. Entergy letter NL-05-118 to NRC, dated October 27, 2005; regarding reply to NRC RAI for subject Relief Request.


Dear Sir:

Entergy Nuclear Operations, Inc (Entergy) is submitting additional information to support NRC review of an Inservice Inspection Program relief request submitted in Reference 1. Entergy previously submitted additional information in Reference 2 and during a followup telecom with NRC staff, the need for further clarification was identified. The requested information is provided in the Attachments to this letter.

AD47

There are no new commitments identified in this submittal. If you have any questions or require additional information, please contact Mr. Patric W. Conroy, Licensing Manager at (914) 734-6668.

Very truly yours,


Patric W. Conroy
Licensing Manager
Indian Point Energy Center

cc: Mr. John P. Boska, Senior Project Manager, NRC NRR
Mr. Samuel J. Collins, Regional Administrator, NRC Region 1
NRC Resident Inspector's Office, Indian Point Unit 2
Mr. Peter R. Smith, NYSERDA
Mr. Paul Eddy, NYS Department of Public Service

ATTACHMENT 1 TO NL-05-135

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

REGARDING

INDIAN POINT 2 ISI RELIEF REQUEST RR-74

**ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET NO. 50-247**

The following clarifications requested by NRC were discussed during a conference call with Entergy personnel on November 15, 2005 and pertain to information submitted in Entergy letter NL-05-118 dated October 27, 2005.

NRC QUESTION:

Provide additional information regarding the hardship of complying with the hydrostatic pressure test requirements for the pipe segments described in line items 10 through 18 of the Attachment 2 Table in Entergy letter dated October 27, 2005.

These pipe segments are part of the Residual Heat Removal or Safety Injection systems and may be subject to alternate test pressures as previously approved by the NRC staff in ML050810464. Determine if the system design at Indian Point 2 supports the implementation of similar alternate test pressures.

ENTERGY RESPONSE:

Entergy is providing a revision of the previously submitted Pipe Segment Data Table to incorporate responses to the NRC followup questions regarding hardship and alternate test pressure for the pipe segments described by line items 10 through 18 in the Table.

The additional hardship information for line items 11 through 18 reflects the personnel safety and spill considerations associated with the use of temporary jumper hoses to bypass check valves. The additional hardship information for line item 10 reflects the need to bypass the pressure interlock in the control circuit for valve 731.

The table is also updated to document the proposed test pressure that Entergy has agreed to incorporate in this relief request. The RHR pipe segments in line items 10, 12, and 14 will be inspected at a pressure of at least 350 psig. The SI pipe segments in line items 11, 13, and 15 through 18 will be inspected at a pressure of at least 1450 psig. These inspections will meet the current VT-2 visual examination hold-time limits of 10 minutes for non-insulated components and 4 hours for insulated components. It is reasonable to expect that the proposed test pressures and examination hold times will be sufficient to produce detectable leakage from significant service-induced degradation sources, if they exist, which satisfies the intent of the pressure test.

IP2 ISI RELIEF REQUEST RR-74 PIPE SEGMENT DATA

NOTE: THIS TABLE SUPERSEDES AND REPLACES THE ATTACHMENT 2 TABLE OF NL-05-118

#	Pipe Segment	Schedule Diameter	Line No.	Pipe Material	Pipe Design Pressure	Proposed Test Pressure	Transient Press/Temp	Other ISI Examinations	ISO Dwg No.	Length	Dose Savings	Request
1	Regenerative Heat Exchanger flush taps.	SCH 160 3" Dia	# 19	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	PT on 19-5AA in 2000. No indication.	206684	< 1 ft	2.82 mr	Relief is requested from cycling valve 4970 in order to pressurize downstream pipe piece and blank.
2	Regenerative Heat Exchanger flush taps.	SCH 160 3" Dia	# 27	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	PT on 27-12AA in 2000. No indication.	206685	< 1 ft	0.33 mr	Relief is requested from cycling valve 4972 in order to pressurize downstream pipe piece and blank.
3	Regenerative Heat Exchanger flush taps.	SCH 160 3" Dia	# 80	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	PT on 80-10AA in 1997. No indication.	206714	< 1 ft	575 mr	Relief is requested from cycling valve 4978 in order to pressurize downstream pipe piece and blank.
4	Regenerative Heat Exchanger flush taps.	SCH 160 3" Dia	# 64	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	No inspection performed	206711	< 1 ft	67 mr	Relief is requested from cycling valve 4974 in order to pressurize downstream pipe piece and blank.
5	Regenerative Heat Exchanger flush taps.	SCH 160 3" Dia	# 79	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	No inspection performed	206713	< 1 ft	575 mr	Relief is requested from cycling valve 4976 in order to pressurize downstream pipe piece and blank.
6	Reactor Coolant System loop drain lines.	SCH 160 2" Dia	# 81	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	PT on 81-6, 81-7, 81-8 in 1997. No indication.	206715	1 ft	13 mr	Relief is requested from cycling valve 508A in order to pressurize downstream pipe piece and valves 508B and 542.
7	Reactor Coolant System loop drain lines.	SCH 160 2" Dia	# 82	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	No inspection performed	206716	1 ft	13 mr	Relief is requested from cycling valve 505A in order to pressurize downstream pipe piece and valve 505B.
8	Reactor Coolant System loop drain lines.	SCH 160 2" Dia	# 83	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	No inspection performed	206717	1 ft	13 mr	Relief is requested from cycling valve 511A in order to pressurize downstream pipe piece and valve 511B.

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#	Pipe Segment	Schedule Diameter	Line No.	Pipe Material	Pipe Design Pressure	Proposed Test Pressure	Transient Press/Temp	Other ISI Examinations	ISO Dwg No.	Length	Dose Savings	Request
9	Reactor Coolant System loop drain lines.	SCH 160 2" Dia	# 84	A 376 Type 316	2580 psig	NONE	NONE - dead leg remains isolated	PT on 84-6 in 2000. No indication.	206718	1 ft	13 mr	Relief is requested from cycling valve 515A in order to pressurize downstream pipe piece and valve 515B.
10	Residual Heat Removal Line from the Reactor Coolant System.	SCH 140 14" Dia	# 10	A 376 Type 316	2580 psig	≥ 350 psig	700 psig / 400 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for RHR. Transient conditions will not exceed these values.	UT and PT on 10-17, 10-18 in 2000. No indication.	206669	75 ft	< 1.0 mr	Relief is requested from cycling valve 731 in order to pressurize downstream pipe piece and valve 730. Valve interlocks prevent valve opening above 365 psig RCS pressure.
11	Safety Injection and Residual Heat Removal Lines to the Reactor Coolant System.	SCH 140 10" Dia SCH 160 6" Dia SCH 160 2" Dia	# 351 # 355 # 56	A 376 Type 316	2580 psig	≥ 1450 psig	1500 psig / 300 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for SI. The transient conditions will not exceed these values.	PT on 56-91 in 1997. No indication.	206903 206906 206700	28 ft and 2 ft and 1 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 897A check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.
12	Safety Injection and Residual Heat Removal Lines to the Reactor Coolant System.	SCH 140 10" Dia SCH 160 6" Dia	# 352 # 356	A 376 Type 316	2580 psig	≥ 350 psig	700 psig / 400 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for RHR. Transient conditions will not exceed these values.	No inspection performed	206904 206907	12 ft and < 1 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 897B check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.

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#	Pipe Segment	Schedule Diameter	Line No.	Pipe Material	Pipe Design Pressure	Proposed Test Pressure	Transient Press/Temp	Other ISI Examinations	ISO Dwg No.	Length	Dose Savings	Request
13	Safety Injection and Residual Heat Removal Lines to the Reactor Coolant System.	SCH 140 10" Dia SCH 160 6" Dia SCH 160 2" Dia	# 353 # 358 # 56	A 376 Type 316	2580 psig	≥ 1450 psig	1500 psig / 300 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for SI. The transient conditions will not exceed these values.	UT and PT on 353-6 in 1995. Root geometry found and accepted on the UT. Minor indication found and accepted during PT.	206905 206908 206701	10 ft and 12 ft and 3 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 897C check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.
14	Safety Injection and Residual Heat Removal Lines to the Reactor Coolant System.	SCH 140 10" Dia SCH 160 6" Dia	# 350 # 361	A 376 Type 316	2580 psig	≥ 350 psig	700 psig / 400 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for RHR. The transient conditions will not exceed these values.	No inspection performed	206901 206910	18 ft and < 1 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 897D check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.
15	Safety Injection Lines to the Reactor Coolant System.	SCH 160 2" Dia	# 16	A 376 Type 316	2580 psig	≥ 1450 psig	1500 psig / 300 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for SI. The transient conditions will not exceed these values.	PT on 16-48,16-49,16-50,16-51,16-51A in 1997. No indication.	206683	87 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 857A check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.

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#	Pipe Segment	Schedule Diameter	Line No.	Pipe Material	Pipe Design Pressure	Proposed Test Pressure	Transient Press/Temp	Other ISI Examinations	ISO Dwg No.	Length	Dose Savings	Request
16	Safety Injection Lines to the Reactor Coolant System.	SCH 160 2" Dia	# 56	A 376 Type 316	2580 psig	≥ 1450 psig	1500 psig / 300 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for SI. The transient conditions will not exceed these values.	PT on 56-10,56-11,56-12,56-13,56-22,56-23,56-24,56-24.1,56-24.2,56-25,56-26 in 1997. Minor indication found and accepted on 56-24.2.	206702	61 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 857B check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.
17	Safety Injection Lines to the Reactor Coolant System.	SCH 160 2" Dia	# 16	A 376 Type 316	2580 psig	≥ 1450 psig	1500 psig / 300 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for SI. The transient conditions will not exceed these values.	No inspection performed	206682	37 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 857C check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.
18	Safety Injection Lines to the Reactor Coolant System.	SCH 160 2" Dia	# 16	A 376 Type 316	2580 psig	≥ 1450 psig	1500 psig / 300 deg F. Taken from IP2 UFSAR 6.2.2.3.13 Piping as a Design Parameter for SI. The transient conditions will not exceed these values.	No inspection performed	206683	15 ft	< 1.0 mr	Relief is requested from installing and removing temporary jumper hoses from downstream of 857D check valve to pressurize upstream piping due to increased risk of coolant spill and personnel hazard at high pressure and temperature.