

ATTACHMENT I TO IPN-96-086

SUPPLEMENT TO PROPOSED TECHNICAL SPECIFICATION CHANGES  
REGARDING SURVEILLANCE INTERVAL FOR INSTRUMENT CHANNELS  
TO ACCOMMODATE A 24-MONTH OPERATING CYCLE

NEW YORK POWER AUTHORITY  
INDIAN POINT 3 NUCLEAR POWER PLANT  
DOCKET NO. 50-286

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PDR ADDCK 05000286  
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**TABLE 4.1-1** (Sheet 3 of 6)

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
e. Main Steam Lines Process Radiation Monitors (R-62A, R-62B, R-62C, and R-62D)	D	24M	Q	
f. Gross Failed Fuel Detectors (R-63A and R-63B)	D	24M	Q	
16. Containment Water Level Monitoring System:	N.A.	24M	N.A.	Narrow Range, Analog Narrow Range, Analog Wide Range
a. Containment Sump	N.A.	24M	N.A.	
b. Recirculation Sump	N.A.	24M	N.A.	
c. Containment Water Level				
17. Accumulator Level and Pressure	S	18M*** 24M	N.A.	
18. Steam Line Pressure	S	24M	Q	
19. Turbine First Stage Pressure	S	N.A.	Q	
20a. Reactor Trip Relay Logic	N.A.	N.A.	TM	
20b. ESF Actuation Relay Logic	N.A.	24M	TM	
21. Turbine Trip Low Auto Stop Oil Pressure	N.A.		N.A.	
22. DELETED	DELETED	DELETED	DELETED	
23. Temperature Sensor in Auxiliary Boiler Feedwater Pump Building	N.A.	N.A.	18M	
24. Temperature Sensors in Primary Auxiliary Building				
a. Piping Penetration Area	N.A.	N.A.	24M	
b. Mini-Containment Area	N.A.	N.A.	24M	
c. Steam Generator Blowdown Heat Exchanger Room	N.A.	N.A.	24M	

**Table Notation**

- \* By means of the movable incore detector system
- \*\* Quarterly when reactor power is below the setpoint and prior to each startup if not done previous month.
- \*\*\* This surveillance requirement may be extended on a one time basis to no later than April 26, 1997.
- # These requirements are applicable when specification 3.3.F.5 is in effect only.
- S - Each Shift
- W - Weekly
- P - Prior to each startup if not done previous week
- M - Monthly
- NA - Not Applicable
- Q - Quarterly
- D - Daily
- 18M - At least once per 18 months
- TM - At least every two months on a staggered test basis (i.e., one train per month)
- 24M - At least once per 24 months
- 6M - At least once per 6 months

**ATTACHMENT II TO IPN-96-086**

**SUPPLEMENTAL INFORMATION SUPPORTING  
PROPOSED TECHNICAL SPECIFICATION CHANGES  
REGARDING SURVEILLANCE INTERVALS FOR INSTRUMENT CHANNELS  
TO ACCOMMODATE A 24-MONTH OPERATING CYCLE**

**NOTE:**

**On August 16, 1996 the NRC verbally requested additional information regarding the proposed changes (IPN-96-067) for accumulator pressure and level. The requested information as understood by the Power Authority is identified in this attachment.**

**NEW YORK POWER AUTHORITY  
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Question	Accumulator Pressure	Accumulator Level
<p>Provide 95/75 drift allowances for the accumulator pressure and accumulator level functions for comparison to the previously supplied 75/75 drift allowances.</p>	<p>75/75 Drift: <math>\pm 0.5</math>            95/75 Drift: <math>\pm 1.1</math></p> <p><i>All errors expressed in % span random unless otherwise stated.</i></p>	<p>75/75 Drift: <math>+ 0.3 \pm 1.7</math>            95/75 Drift: <math>- 0.5 \pm 2.7</math></p> <p><i>All errors expressed in % span random unless otherwise stated.</i></p>
<p>Identify the bases for the current 18-month channel uncertainties and setpoints for accumulator pressure and accumulator level.</p>	<p>Existing accumulator pressure High/low alarms (665/620psig) are based on the IP3 Precautions, Limitations, and Setpoints (PLS) originally generated by Westinghouse. These setpoints were selected to alert the operator to maintain pressure within the Technical Specification limits of 600 to 700 psig. The safety analyses initial conditions were based on these tech spec limits.</p>	<p>Existing accumulator level high/low alarms (810/780 ft<sup>3</sup>) are based on the IP3 PLS originally generated by Westinghouse. These setpoints were selected to alert the operator to maintain level within the Technical Specification limits of 775 to 815 ft<sup>3</sup>. The safety analyses initial conditions were based on these tech. spec. limits.</p>

Question	Accumulator Pressure	Accumulator Level
<p>Identify the significance of the drift term to the overall channel uncertainty calculations for accumulator pressure and accumulator level (i.e., the sensitivity of the overall uncertainty to drift).</p>	<p>The calculated channel uncertainty increases slightly from 21.4 to 22.6 psi based on changing in the drift basis from 75/75 to 95/75. However, the uncertainty still remains bounded by the <math>\pm 30</math> psi used to calculate the new alarm setpoints of 630 and 670 psig. The sensitivity is approximately 2.5 psi increase in channel uncertainty for each 1% of span increase in transmitter drift. Also, Westinghouse addressed a value of 541 psig for the safety analyses (safety evaluation SECL-96-103) as submitted by letter IPN-96-067 on 6/21/96) and determined that all acceptance criteria continue to be met.</p>	<p>The calculated channel uncertainty increases slightly from + 11.2/-8.3 ft<sup>3</sup> based on changing the drift basis from 75/75 to 95/75. This corresponds to a change of approximately 3% in indicated level (42/16% to 39/19%). The sensitivity is approximately 1.75 ft<sup>3</sup> random (2.5 ft<sup>3</sup> bias) for each 1 % of span increase in transmitter drift. Westinghouse addressed a revised safety analysis volume range of 760 to 827.5 ft<sup>3</sup> for the safety analyses and determined that all acceptance criteria continue to be met.</p>
<p>Identify other functions or areas (i.e., safety analyses, EOPs) that may be affected by the accumulator pressure or accumulator level channel uncertainties.</p>	<p>Redundant accumulator pressure channels provide indication and high/low alarms to the control room to allow the operator to maintain pressure within Technical Specification limits. Also, an initial condition on accumulator pressure is used in the IP3 safety analysis. Westinghouse safety evaluation SECL-96-103 identifies IP3 licensing basis safety analyses that are potentially affected, and why the revised pressure limits are acceptable.</p>	<p>Redundant accumulator level channels provide indication and high/low alarms to the control room to allow the operator to maintain level within Technical Specification limits. Also, an initial condition on accumulator level is used in the IP3 safety analyses.</p>

Question	Accumulator Pressure	Accumulator Level
<p>Will the accumulators be able to function consistent with the safety analyses assumptions based on the new uncertainties for accumulator pressure and level?</p>	<p>Revised uncertainties for indication of accumulator pressure and level, developed based on both 75/75 (IPN-96-067, dated 6/21/96) and the newly determined 95/75 drift allowances have been evaluated by Westinghouse in terms of potential effects on the IP3 licensing basis accident analyses (safety analyses). Westinghouse is responsible for these analyses, which use values for initial conditions of accumulator pressure and level that conservatively account for total channel uncertainties. Westinghouse has determined that the 24-month uncertainties for these parameters, based on both 75/75 and 95/75 drift allowances, do not adversely affect the results of the IP3 safety analyses. In other words, the performance of the accumulators will continue to be acceptable with uncertainties based on 75/75 or 95/75 drift allowances.</p>	
<p>Identify the number of instrument channels there are for each of the accumulator pressure and accumulator level functions?</p>	<p>Two redundant channels per accumulator.</p>	<p>Two redundant channels per accumulator.</p>
<p>Where was margin applied in the instrument channel uncertainty calculations?</p>	<p>Refer to response to the third question.</p>	<p>The revised accumulator volume range of 760 to 827.5 ft<sup>3</sup> has been evaluated by Westinghouse with no effect on the IP3 safety analyses.</p>

Attachment III to IPN-96-086

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List of Commitments

Number	Commitment	Due
IPN-96-086-01	The proposed increase in the surveillance interval for the Accumulator level and pressure instrument channels is a one time extension. After the surveillance is complete, the supporting calculations will be revised, as necessary, to reflect the 18 month surveillance interval unless a request for a permanent 24 month surveillance interval has been approved prior to the end of the refueling outage.	During refueling outage