

Enclosure 5

Case Study 1: Structure of TS for Ultrasonic Flow Meters -
Meeting Summary of the January 27 & 28 Meeting with
NRC/TSTF

Dated March 9, 2009

Case Study 1: Structure of TS for Ultrasonic Flow Meters

The NRC has required that Davis-Besse and Crystal River revise the Reactor Protection System (RPS) Specification to specifically address the use of ultrasonic flow meters (UFMs) in order to obtain approval of their power uprate amendments.

Whether such changes to the Specifications were necessary for those plants has been discussed, but is not the issue in this case study. In both cases, the NRC and the licensee agreed to Specifications that do not follow the ITS format, content, and usage rules.

The Crystal River TS predated the Davis-Besse TS.

Crystal River

LCO

3.3 INSTRUMENTATION

3.3.1 Reactor Protection System (RPS) Instrumentation

LCO 3.3.1 Four channels of RPS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.

Table 3.3.1-1

FUNCTION	SPECIFIED CONDITIONS	REQUIRED ACTION D.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Nuclear Overpower -				
a. High Setpoint	1,2 ^(d)	F	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.5 ^(e) SR 3.3.1.7	≤ 104.9% RTP ^(d) ≤ 103.3% RTP ^(e)

(d) With secondary heat balance based on required high accuracy instrumentation.

(e) With secondary heat balance not based on required high accuracy instrumentation.

To this point, the Specification is internally consistent. The high setpoint value required for Operability depends on the accuracy of the instrument.

However, SR 3.3.1.2 requires the use of the UFMs unless Condition J has been entered:

SR 3.3.1.2	-----NOTES-----	
	1. Not required to be performed until 24 hours after THERMAL POWER is \geq 15% RTP. 2. High accuracy instrumentation is required to be utilized when performing calorimetric secondary heat balance comparison unless Condition J has been entered.	
	Verify calorimetric secondary heat balance is \leq 2% RTP greater than power range channel output. Adjust power range channel output if calorimetric exceeds power range channel output by $>$ 2% RTP.	24 hours

This wording is unprecedented in the ITS as it's based on being in a Condition instead of Operability or meeting the LCO.

Condition J states:

J. Secondary heat balance not based on required high accuracy instrumentation.	J.1 Reduce THERMAL POWER to \leq 2568 MW _{th}	12 hours
	<u>AND</u>	
	J.2 Reduce Nuclear Overpower - High Setpoint to \leq 103.3% RTP.	48 hours

Per the Notes in Table 3.3.1-1, the LCO is met when not utilizing the UFM's provided the Allowable Value is $<$ 103.3% RTP. The LCO does not require that the secondary heat balance be based on the required high accuracy instrumentation.

Condition J and the SR Note form a circular reference. Enter Condition J if the UFM's not used for the SR but the UFM's don't have to be used if in Condition J. I don't have UFM's, I enter J, I no longer need UFM's, I exit J.

The wording in the SR note would allow the UFM to be unavailable and to stay at the higher power level until the next performance of SR 3.3.1.2 ("when performing.")

Both the Condition and the SR are inconsistent with the Operability requirements in the LCO table.

Both the Condition and the SR are inconsistent with what's required for the Limiting Condition for Operation, as operation at the lower Allowable Value allows the system to perform its specified safety function.

Davis-Besse

A different approach was taken in Davis-Besse

LCO:

LCO 3.3.1 Four channels of RPS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE:

AND

The ultrasonic flow meter (UFM) instrumentation shall be used to perform SR 3.3.1.2 when THERMAL POWER is > 50% RTP.

The second portion of the LCO is a detail of SR performance, not a Limiting Condition for Operation.

Table 3.3.1-1

1. High Flux -

a. High Setpoint	1,2 ^(a) ,3 ^(b)	D	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.3 ^{(c)(d)} SR 3.3.1.8	≤ 104.9% RTP ^(e) with four pumps operating, and ≤ 80.6% RTP when reset for three pumps operating per LCO 3.4.4, "RCS Loops - MODES 1 and 2"
------------------	--------------------------------------	---	--	---

(e) ≤ 103.3% RTP when reset per ACTION F due to UFM instrumentation not being used to perform SR 3.3.1.2 when THERMAL POWER is > 50% RTP.

This construction leaves the Operator in a conundrum. If the UFM's are not available and power is reduced to 103.3%, I now meet Table 3.3.1-1 and appear to be Operable. There is no other location in the ITS in which a reduced power setpoint from a Required Action is also listed as an Operability requirement.

Action F:

F. UFM instrumentation not used to perform SR 3.3.1.2 when THERMAL POWER is > 50% RTP.

F.1 NOTE
Only required if four reactor coolant pumps (RCPs) are operating.

Initiate action to reduce THERMAL POWER to $\leq 98.4\%$ RTP.

Immediately

AND

F.2 NOTE
Only required if three RCPs are operating.

Initiate action to reduce THERMAL POWER to $\leq 73.8\%$ RTP.

Immediately

AND

F. (continued)

F.3 NOTE
Only required if four RCPs are operating.

Reset High Flux - High Setpoint Allowable Value to $\leq 103.3\%$ RTP

10 hours

SR 3.3.1.2

SR 3.3.1.2

NOTES

1. Adjust power range channel output if the calorimetric heat balance calculation results exceed power range channel output by > 2% RTP.
2. Not required to be performed until 24 hours after THERMAL POWER is $\geq 15\%$ RTP.

Compare result of calorimetric heat balance calculation to power range channel output.

24 hours

Again, this causes confusion because the LCO Table states that the LCO is met when the lower setpoint is used. More confusing is the LCO directs how an SR is to be performed (not met).

There are several ways that the Specifications could have been made internally consistent. The most straightforward would be to simply retain the Table 3.3.1-1 dual Allowable Values and associated footnotes and eliminate the other changes. The plant must meet one or the other setpoints for the LCO to be met. Any solution would need to apply at all times, not just when the SR is performed.

3.3 INSTRUMENTATION

3.3.1 Reactor Protection System (RPS) Instrumentation

LCO 3.3.1 Four channels of RPS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1-1.

ACTIONS

CONDITIONS	REQUIRED ACTION	COMPLETION TIME
A. One channel inoperable.	A.1 Place channel in bypass or trip.	1 hour
B. Two channels inoperable.	B.1 Place one channel in trip.	1 hour
	<u>AND</u> B.2 Place second channel in bypass.	1 hour
C. One or more RCPPM for one RCP inoperable.	C.1 Trip the RCPPM(s).	4 hours
D. Required Action and associated Completion Time of Condition A or B not met.	D.1 Enter the Condition referenced in Table 3.3.1-1 for the Function.	Immediately
E. Required Action and associated Completion Time of Condition C not met.	E.1.1 Verify 4 RCPs in operation.	1 hour
	<u>AND</u> E.1.2 Reduce THERMAL POWER <2475 MW _{th}	1 hour
	<u>OR</u> E.2 Enter Condition F	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. As required by Required Action D.1 and referenced in Table 3.3.1-1 or by Required Action E.2.	F.1 Be in MODE 3.	6 hours
	<u>AND</u> F.2 Open all CONTROL ROD drive (CRD) trip breakers.	6 hours
G. As required by Required Action D.1 and referenced in Table 3.3.1-1.	G.1 Open all CRD trip breakers.	6 hours
H. As required by Required Action D.1 and referenced in Table 3.3.1-1.	H.1 Reduce THERMAL POWER < 45% RTP.	6 hours
I. As required by Required Action D.1 and referenced in Table 3.3.1-1.	I.1 Reduce THERMAL POWER < 20% RTP.	6 hours
J. Secondary heat balance not based on required high accuracy instrumentation.	J.1 Reduce THERMAL POWER to $\leq 2568 \text{ MW}_{\text{th}}$	12 hours
	<u>AND</u> J.2 Reduce Nuclear Overpower - High Setpoint to $\leq 103.3\%$ RTP.	48 hours
K. Required Action and associated Completion Time of Condition J not met.	K.1 Be in MODE 3.	6 hours
	<u>AND</u> K.2 Open all Control Rod drive (CRD) trip breakers.	6 hours

SURVEILLANCE REQUIREMENTS

-----NOTE-----
Refer to Table 3.3.1-1 to determine which SRs apply to each RPS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.1.2	<p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. Not required to be performed until 24 hours after THERMAL POWER is $\geq 15\%$ RTP. 2. High accuracy instrumentation is required to be utilized when performing calorimetric secondary heat balance comparison unless Condition J has been entered. <p>-----</p> <p>Verify calorimetric secondary heat balance is $\leq 2\%$ RTP greater than power range channel output. Adjust power range channel output if calorimetric exceeds power range channel output by $> 2\%$ RTP.</p>	24 hours
SR 3.3.1.3	<p>-----NOTE-----</p> <p>Not required to be performed until 24 hours after THERMAL POWER (TP) is $\geq 30\%$ RTP.</p> <p>-----</p> <p>Compare out of core measured AXIAL POWER IMBALANCE (API_0) to incore measured AXIAL POWER IMBALANCE (API_1) as follows:</p> $(RTP/TP)(API_0 - API_1) = \text{imbalance error}$ <p>Perform CHANNEL CALIBRATION if the absolute value of the imbalance error is $\geq 2.5\%$ RTP.</p>	31 days
SR 3.3.1.4	Perform CHANNEL FUNCTIONAL TEST.	45 days on a STAGGERED TEST BASIS

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.5 -----NOTES-----</p> <ol style="list-style-type: none"> 1. Neutron detectors and RC flow sensors are excluded from this Surveillance. 2. Verification of bypass function is excluded from this Surveillance. <p>-----</p> <p>Perform CHANNEL CALIBRATION.</p>	<p>92 days</p>
<p>SR 3.3.1.6 -----NOTE-----</p> <p>Neutron detectors and RCPM current and voltage sensors are excluded from CHANNEL CALIBRATION.</p> <p>-----</p> <p>Perform CHANNEL CALIBRATION.</p>	<p>24 months</p>
<p>SR 3.3.1.7 -----NOTE-----</p> <p>Neutron detectors and RCPM current and voltage sensors and the watt transducer are excluded from RPS RESPONSE TIME testing.</p> <p>-----</p> <p>Verify RPS RESPONSE TIME is within limits.</p>	<p>24 months on a STAGGERED TEST BASIS</p>

Table 3.3.1-1 (page 1 of 1)
Reactor Protection System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Nuclear Overpower -				
a. High Setpoint	1,2 ^(a)	F	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.5 ^(f,g) SR 3.3.1.7	≤ 104.9% RTP ^(d) ≤ 103.3% RTP ^(e)
b. Low Setpoint	2 ^(b) , 3 ^(b) 4 ^(b) , 5 ^(b)	G	SR 3.3.1.1 SR 3.3.1.5	≤ 5% RTP
2. RCS High Outlet Temperature	1,2	F	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6	≤ 618°F
3. RCS High Pressure	1,2	F	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6 SR 3.3.1.7	≤ 2355 psig
4. RCS Low Pressure	1,2 ^(a)	F	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6 SR 3.3.1.7	≥ 1900 psig
5. RCS Variable Low Pressure	1,2 ^(a)	F	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6	RCS Variable Low Pressure equation in COLR
6. Reactor Building High Pressure	1,2,3 ^(c)	F	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6	≤ 4 psig
7. Reactor Coolant Pump Power Monitor (RCPPM)	1,2 ^(a)	F	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6 SR 3.3.1.7	More than one pump drawing ≤ 1152 or ≥ 14,400 kW
8. Nuclear Overpower RCS Flow and Measured AXIAL POWER IMBALANCE	1,2 ^(a)	F	SR 3.3.1.1 SR 3.3.1.3 SR 3.3.1.5 SR 3.3.1.6 SR 3.3.1.7	Nuclear Overpower RCS Flow and AXIAL POWER IMBALANCE setpoint envelope in COLR
9. Main Turbine Trip (Control Oil Pressure)	≥ 45% RTP	H	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6	≥ 45 psig
10. Loss of Both Main Feedwater Pumps (Control Oil Pressure)	≥ 20% RTP	I	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6	≥ 55 psig
11. Shutdown Bypass RCS High Pressure	2 ^(b) , 3 ^(b) 4 ^(b) , 5 ^(b)	G	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.6	≤ 1820 psig

(a) When not in shutdown bypass operation.

(b) During shutdown bypass operation with any CRD trip breakers in the closed position and the CRD Control System (CRDCS) capable of rod withdrawal.

(c) With any CRD trip breaker in the closed position and the CRDCS capable of rod withdrawal.

(d) With secondary heat balance based on required high accuracy instrumentation.

(e) With secondary heat balance not based on required high accuracy instrumentation.

(f) If the as-found channel setpoint is conservative with respect to the Allowable Value (AV), but outside its predefined as-found acceptance criteria band, then the channel should be evaluated to verify that it is functioning as required before returning the channel to service. If the as-found instrument channel setpoint is not conservative with respect to the AV, the channel shall be declared inoperable.

(g) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance of the pre-established In-Plant Setpoint, or a value that is more conservative than the pre-established In-Plant Setpoint; otherwise the channel shall not be returned to OPERABLE status. The pre-established In-Plant Setpoint and the methodology used to determine the pre-established In-Plant Setpoint, the predefined as-found acceptance criteria band, and the as-left acceptance criteria are specified in the FSAR.

3.3 INSTRUMENTATION

3.3.1 Reactor Protection System (RPS) Instrumentation

LCO 3.3.1 Four channels of RPS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.

AND

The ultrasonic flow meter (UFM) instrumentation shall be used to perform SR 3.3.1.2 when THERMAL POWER is > 50% RTP.

APPLICABILITY: According to Table 3.3.1-1.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel inoperable.	A.1 Place channel in bypass or trip.	1 hour
B. Two channels inoperable.	B.1 Place one channel in trip.	1 hour
	<u>AND</u> B.2 Place second channel in bypass.	1 hour
C. Required Action and associated Completion Time of Condition A or B not met. <u>OR</u> Three or more channels inoperable.	C.1 Enter the Condition referenced in Table 3.3.1-1 for the Function.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. As required by Required Action C.1 and referenced in Table 3.3.1-1.	D.1 Be in MODE 3.	6 hours
	<p><u>AND</u></p> <p>D.2 <u>NOTE</u> Only applicable to Functions 1.a, 3, and 6.</p> <p>Open all CONTROL ROD drive (CRD) trip breakers.</p>	
E. As required by Required Action C.1 and referenced in Table 3.3.1-1.	E.1 Open all CRD trip breakers.	6 hours
F. UFM instrumentation not used to perform SR 3.3.1.2 when THERMAL POWER is > 50% RTP.	<p>F.1 <u>NOTE</u> Only required if four reactor coolant pumps (RCPs) are operating.</p> <p>Initiate action to reduce THERMAL POWER to $\leq 98.4\%$ RTP.</p> <p><u>AND</u></p>	Immediately
	<p>F.2 <u>NOTE</u> Only required if three RCPs are operating.</p> <p>Initiate action to reduce THERMAL POWER to $\leq 73.8\%$ RTP.</p> <p><u>AND</u></p>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. (continued)	<p>F.3 <u>NOTE</u></p> <p>Only required if four RCPs are operating.</p> <hr/> <p>Reset High Flux – High Setpoint Allowable Value to $\leq 103.3\%$ RTP</p>	10 hours

SURVEILLANCE REQUIREMENTS

NOTE

Refer to Table 3.3.1-1 to determine which SRs apply to each RPS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.1.2	<p><u>NOTES</u></p> <ol style="list-style-type: none"> Adjust power range channel output if the calorimetric heat balance calculation results exceed power range channel output by $> 2\%$ RTP. Not required to be performed until 24 hours after THERMAL POWER is $\geq 15\%$ RTP. <hr/> <p>Compare result of calorimetric heat balance calculation to power range channel output.</p>	24 hours

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.3</p> <hr/> <p style="text-align: center;">NOTES</p> <hr/> <ol style="list-style-type: none"> 1. Neutron detectors are excluded from CHANNEL CALIBRATION. 2. For Function 8, flow rate measurement sensors may be excluded from CHANNEL CALIBRATION. <hr/> <p>Perform CHANNEL CALIBRATION.</p>	<p>23 days on a STAGGERED TEST BASIS</p>
<p>SR 3.3.1.4</p> <hr/> <p style="text-align: center;">NOTES</p> <hr/> <ol style="list-style-type: none"> 1. Adjust the power range channel imbalance output if the absolute value of the offset error is $\geq 2.5\%$. 2. Not required to be performed until 24 hours after THERMAL POWER is $\geq 50\%$ RTP. <hr/> <p>Compare results of out of core measured AXIAL POWER IMBALANCE (API_0) to incore measured AXIAL POWER IMBALANCE (API_1) as follows:</p> <p>$(RTP/TP)(API_0 - API_1) = \text{offset error.}$</p>	<p>31 days</p>
<p>SR 3.3.1.5</p> <p>Perform CHANNEL FUNCTIONAL TEST.</p>	<p>46 days on a STAGGERED TEST BASIS</p>
<p>SR 3.3.1.6</p> <p>Perform CHANNEL CALIBRATION.</p>	<p>18 months</p>
<p>SR 3.3.1.7</p> <hr/> <p style="text-align: center;">NOTE</p> <hr/> <p>For Function 8, flow rate measurement sensors are only required to be calibrated.</p> <hr/> <p>Perform CHANNEL CALIBRATION.</p>	<p>24 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.8	<div><div>NOTE</div><div>Neutron detectors are excluded from RPS RESPONSE TIME testing.</div><div>Verify that RPS RESPONSE TIME is within limits.</div></div>	24 months on a STAGGERED TEST BASIS

Table 3.3.1-1 (page 1 of 2)
Reactor Protection System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. High Flux -				
a. High Setpoint	1,2 ^(a) ,3 ^(b)	D	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.3 ^{(c)(d)} SR 3.3.1.8	≤ 104.9% RTP ^(e) with four pumps operating, and ≤ 80.6% RTP when reset for three pumps operating per LCO 3.4.4, "RCS Loops - MODES 1 and 2"
b. Low Setpoint	2 ^(f) ,3 ^(f) ,4 ^(f) , 5 ^(f)	E	SR 3.3.1.1 SR 3.3.1.3	≤ 5% RTP
2. RC High Temperature	1,2	D	SR 3.3.1.1 SR 3.3.1.5 SR 3.3.1.7	≤ 618°F
3. RC High Pressure	1,2 ^(a) ,3 ^(b)	D	SR 3.3.1.1 SR 3.3.1.5 SR 3.3.1.7 SR 3.3.1.8	≤ 2355 psig
4. RC Low Pressure	1,2 ^(a)	D	SR 3.3.1.1 SR 3.3.1.5 SR 3.3.1.7 SR 3.3.1.8	≥ 1900 psig

- (a) When not in shutdown bypass operation.
- (b) With any CRD trip breaker in the closed position, the CRD System capable of rod withdrawal, and not in shutdown bypass operation.
- (c) If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predefined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service.
- (d) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance around the Limiting Trip Setpoint, or a value that is more conservative than the Limiting Trip Setpoint; otherwise, the channel shall be declared inoperable. The Limiting Trip Setpoint and the methodology used to determine the Limiting Trip Setpoint, the predefined as-found acceptance criteria band and the as-left setpoint tolerance band are specified in the Technical Requirements Manual.
- (e) ≤ 103.3% RTP when reset per ACTION F due to UFM instrumentation not being used to perform SR 3.3.1.2 when THERMAL POWER is > 50% RTP.
- (f) During shutdown bypass operation with any CRD trip breaker in the closed position and the CRD System capable of rod withdrawal.

Table 3.3.1-1 (page 2 of 2)
Reactor Protection System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
5. RC Pressure - Temperature	1,2 ^(a)	D	SR 3.3.1.1 SR 3.3.1.5 ^{(c)(d)} SR 3.3.1.7 ^{(c)(d)}	$\geq (16.25 \cdot T_{out} - 7899.0)$ psig
6. Containment High Pressure	1,2,3 ^(g)	D	SR 3.3.1.1 SR 3.3.1.5 SR 3.3.1.6	≤ 4 psig
7. High Flux/Number of Reactor Coolant Pumps On	1,2 ^(a)	D	SR 3.3.1.1 SR 3.3.1.3 SR 3.3.1.8	$\leq 55.1\%$ RTP with one pump operating in each loop, $\leq 0.0\%$ RTP with two pumps operating in one loop and no pumps operating in the other loop, $\leq 0.0\%$ RTP with one pump or no pumps operating
8. Flux - Δ Flux - Flow	1,2 ^(a)	D	SR 3.3.1.1 SR 3.3.1.3 SR 3.3.1.4 SR 3.3.1.7 SR 3.3.1.8	Flux - Δ Flux - Flow Allowable Value envelope in COLR
9. Shutdown Bypass High Pressure	2 ^(f) , 3 ^(f) , 4 ^(f) , 5 ^(f)	E	SR 3.3.1.1 SR 3.3.1.5 SR 3.3.1.7	≤ 1820 psig

(a) When not in shutdown-bypass operation.

(c) If the as-found channel setpoint is conservative with respect to the Allowable Value but outside its predefined as-found acceptance criteria band, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service.

(d) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance around the Limiting Trip Setpoint, or a value that is more conservative than the Limiting Trip Setpoint; otherwise, the channel shall be declared inoperable. The Limiting Trip Setpoint and the methodology used to determine the Limiting Trip Setpoint, the predefined as-found acceptance criteria band and the as-left setpoint tolerance band are specified in the Technical Requirements Manual.

(f) During shutdown bypass operation with any CRD trip breaker in the closed position and the CRD System capable of rod withdrawal.

(g) With any CRD trip breaker in the closed position and the CRD System capable of rod withdrawal.