

**LOCAL MANUAL OPERATOR ACTION STEPS
REVIEWED FOR ACHIEVING HOT STANDBY**

Summary of Number of Local Manual Action Steps to be Performed Outside of the Control Room to Achieve and Maintain Hot Standby

<u>Fire Area / Zone</u>	<u>Number of Manual Action Steps</u>		
	<u>Generic Steps in AOP-36 for All Fire Areas</u>	<u>Area Specific Steps in AOP-036 and Other Procedures Referenced by AOP-36</u>	<u>Total Steps by Fire Area/Zone</u>
1-A-BAL-B	10	29	39
1-A-BATB	10	14	24
1-A-EPA	10	14	24
1-A-ACP	10	45	55

- ONLY 4 ZONES INCLUDED HERE

Listing of AOP-036 Manual Action Steps Reviewed for Safe Shutdown Following a Fire

AOP-36 Section 3.0 Actions (Generic Steps for All Fire Areas/Zones):	
Step 12.c RNO	<p>MONITOR AFW pump suction pressure indicators as an alternative to CST level indication: (Refer to Attachment 4, AFW Suction Pressure vs. CST level)</p> <ul style="list-style-type: none"> • PI-2271 (at TDAFW Pump)
Step 13.b(3)	<p>Locally PERFORM the following (248' RAB):</p> <p>(a) SHUT 1CS-228, Normal Charging FCV Inlet Isolation Valve.</p> <p>(b) THROTTLE 1CS-227, Normal Charging FCV Bypass, as necessary to control charging flow.</p>
Step 13.c RNO	<p>ESTABLISH flow through the Hi Head SI Line, as follows:</p> <p>(1).....(MCR action)</p> <p>(2).....(MCR action)</p> <p>(3) OPEN ONE of the following breakers:</p> <ul style="list-style-type: none"> • 1B31-SB 4C, 1SI-3 BIT Outlet • 1A31-SA 4C, 1SI-4 BIT Outlet <p>(4) WHEN directed by MCR, THEN locally THROTTLE the de-energized valve to maintain PRZ level:</p>

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Step 22	IF BOTH 1SW-270 AND 1SW-276 shut, THEN CROSS-CONNECT ESW Discharge Headers as follows:
Step 22.a	VERIFY OPEN 1SW-274, ESW Return Header B to NSW.
Step 22.b	VERIFY OPEN 1SW-275, ESW Return Header A to NSW.
Step 22.c	VERIFY OPEN 1SW-271, ESW Header B Return to Aux Reservoir.
Step 22.d	WHEN time permits, THEN: (1) DE-ENERGIZE 1SW-270, ESW Header A Return to Aux Reservoir, at breaker 1A35-SA-9C (RAB 261). (2) OPEN 1SW-270 locally (RAB 261). (3) WHEN 1SW-270 has been opened, THEN SHUT 1SW-274, ESW Return Header B to NSW.

AOP-36 Attachment 1 (Area Specific) Actions for Fire Area 1-A-ACP:

Step 1b	SECURE Rod Drive MG sets using OP-104, Rod Control System	
	<u>OP-104 Step Number</u>	<u>Description</u>
	7.3.2.02	Place GENERATOR CIRCUIT BREAKER CONTROL switch 1A to TRIP
	7.3.2.03	Place MOTOR CIRCUIT BREAKER CONTROL switch 1A to TRIP
	7.3.2.04	Open Reactor Trip Breakers, if not already open.
	7.3.2.05	Place GENERATOR CIRCUIT BREAKER CONTROL switch 1B to TRIP
		Place MOTOR CIRCUIT BREAKER CONTROL switch 1B to TRIP
Step 2	If BOTH MDAFW pumps are disabled, THEN:	

Step 2c	Obtain a transfer panel key 33, 34, 35, 36, 99 or 106 (MCR or ACP key locker)...	
	... and de-energize the TDAFW Pump Trip and Throttle Valve by removing fuses 1A-11/1976 and 1A-12/1976	
Step 2d	De-energize 1MS-70 by opening disconnect switch on DP-1A2-SA-2B.	
Step 2f	IF TDAFW Pump is NOT operating properly, THEN locally...	
	...VERIFY OPEN TDAFW Pump Trip and Throttle Valve	
	...VERIFY OPEN 1MS-70, Main Steam B to Aux FW Turbine	
Step 2g	IF MCB CST level indication is NOT available,	
	THEN locally monitor AFW pump suction pressure using Attachment 4.	
Step 4	REMOVE the fuse for 1BD-30 SA at panel ARP-19A	
	REMOVE the fuse for 1BD-49 SA at panel ARP-19A	
Step 6	OPEN the power supply breaker for 1CS-235 at breaker 1B31-SB-10A	
Step 7	ISOLATE AND VENT IA to 1CH-279	
Step 7a	SHUT "1IA-871-I1"	
Step 7b	OPEN air filter drain petcocks on Instrument Air Filter	
Step 7c	CHECK 1CH-279, AH-12 1ASA valve OPEN	
Step 8	OPEN the power supply breaker for 1CS-171 at breaker 1B35-SB-4D	
Step 9	Locally VERIFY OPEN 1CS-171, B CSIP Suction X-Conn valve	
	Locally VERIFY OPEN 1CS-235, Charging Line Isolation valve	
Step 10	Locally verify shut 1BD-30, SG 1B Blowdown Isolation valve	
	Locally verify shut 1BD-49, SG 1C Blowdown Isolation valve	
Step 13	IF SG C PORV cycles erroneously, THEN:	
Step 13c	IF SG C PORV manual/automatic station does <u>not</u> function properly,	
	THEN locally OPERATE SG C PORV using OP-126 for desired cooldown rate.	
	OP-126 Step Number	Description
	8.2.1.2.01	Obtain pliers, flashlight, head set, extension cord

	8.2.1.2.02	Open Servo Valve Solenoid feeder breaker PP-1A312-SA-3
		Open Servo Valve Solenoid feeder breaker PP-1B312-SB-3
		Open Servo Valve Solenoid feeder breaker IDP-1A-SIII-11
	8.2.1.2.03	Remove the cover from the side of the PORV
	8.2.1.2.04	Establish communications with the Control Room
	8.2.1.2.07	To throttle open the PORV,
	8.2.1.2.07a	Rotate Solenoid B manual override approximately 3/4 turn in the clockwise direction
	8.2.1.2.07b	As directed by the Control Room, slowly rotate Solenoid A manual override approximately 3/4 turn in the clockwise direction
	8.2.1.2.07c	When the PORV is at its desired position, place Solenoid A manual override back to its original position
	8.2.1.2.08	To partially shut the PORV,
	8.2.1.2.08a	Check Solenoid A manual override in the fully counterclockwise position.
	8.2.1.2.08b	As directed by the Control Room slowly rotate Solenoid B manual override to its original position by rotating it approximately 3/4 turn in the counterclockwise direction, until the PORV starts to shut.
	8.2.1.2.08c	When the PORV is at the desired position, rotate Solenoid B manual override approximately 3/4 turn in the clockwise direction.
Step 14	IF FCV-2071C, Aux FW C Regulator 1AF-131, spuriously CLOSES, THEN	
Step 14a	REMOVE fuse 1A-5/1952 at Transfer Panel 1B	
Step 14b	THROTTLE 1AF-149, Stm Turb Aux FW C Isolation, to maintain SG C level	

AOP-36 Attachment 2 Actions For SSD 1 Equipment Powered by SSD 2:	
Step 2	IF control power is lost to 1CS-231, Charging Flow controller, THEN PERFORM the following locally: