ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 REV #: 000 DATE: _____

SYSTEM/DUTY AREA: Equipment Control (A.2)

TASK: Determine actions for maintaining configuration control with inoperable containment penetration isolation valve.

JTA#: _____

KA VALUE RO: 2.1 SRO: 3.0 KA REFERENCE: 2.2.14

APPROVED FOR ADMINISTRATION TO: RO: _____ SRO: X

TASK LOCATION: INSIDE CR: _____ OUTSIDE CR: _____ BOTH: X

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ SIMULATOR: Perform CLASSROOM: Perform

POSITION EVALUATED: RO: _____ SRO: _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ PLANT SITE: _____ CLASSROOM: _____

TESTING METHOD: SIMULATE: _____ PERFORM: _____

APPROXIMATE COMPLETION TIME IN MINUTES: 15 Minutes

REFERENCE(S): Unit 2 Tech Specs, P&ID's, OP 1015.034, Containment Penetration Administration Control and 2104.014, LRW and BMS Operations.

EXAMINEE'S NAME: _____ SSN: _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ UNSATISFACTORY: _____

PERFORMANCE CHECKLIST COMMENTS:

_____

_____

Start Time _____ Stop Time _____ Total Time _____

SIGNED: _____ DATE: _____

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power and Steady State.
- Maintenance is in progress repairing Stator Water Cooling Deionizer flow indicator, 2FI-9785.
- New CVCS resin bed, 2T36A, is being placed in service. 2CVC-12A is approximately 1 turn open. Currently an approximate 100 ppm difference exists between RCS and DI effluent.
- CCW leak exists on common supply line to RCP's inside containment of ~ 0.5 gpm.
- Maintenance on CCW line is expected to occur in 7 days.
- Containment sump draining via normal drain to Aux Building Sump is completed.
- 2CV-2061-2, Containment Sump Isolation valve, will not close.
- Maintenance on 2CV 2061-2, Containment Sump Isolation valve, is expected to take 12 hours.

TASK STANDARD: Determine the following requirements for controlling containment penetration isolation due to inoperable 2CV-2061-2, Containment Sump Isolation valve:

- TS 3.6.3.1 is applicable.
- Within 4 hours, to comply with Tech Spec 3.6.3.1, containment penetration '2P68' must be isolated by closing 2CV-2060-1, Containment Sump Isolation valve and deenergizing the valve.
- To maintain configuration control on 2CV 2060-1, a clearance tag should be installed on the breaker. It is also acceptable to record position of the valve status on 1015.034A, Containment Penetration Valve Log or the Component Out of Position Computer log.

TASK PERFORMANCE AIDS: OP 1015.034, Containment Penetration Administrative Control, OP 2104.014, LRW and BMS Operations and PID 2213 sh1 and 8.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

Based on initial conditions, determine the Tech Spec applicability and required actions, including administrative configuration controls required.

CRITICAL ELEMENTS (C) 1, 2, 3

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	1. Review OP 1015.034, Containment Penetration Administrative Control and identify Tech Spec 3.6.3.1 applicability.	Examinee determined that 2CV-2061-2, Containment Sump Isolation valve, failure to close required entry into Tech Spec 3.6.3.1 four-hour action statement.	N/A SAT UNSAT
(C)	2. Determine that Tech Spec compliance is achieved by closing and controlling the operation of valve 2CV-2060-1, Containment Sump Isolation valve, using P&ID 2213 SH 1 and 2.	Examinee determined that closing 2CV-2060-1, Containment Sump Isolation valve, and maintaining containment penetration "2P68" secure is required for Tech Spec compliance.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	3. Plant configuration control maintained by placing a clearance tag on the supply breaker, 2B51-B2 to 2CV-2060-1, Containment Sump Isolation valve, in the open position. EXAMINER's CUE: Report that 2CV 2060-1 is in a high radiation area and a local lock or clearance tag is not required.	Examinee complied with TS 3.6.3.1 and maintained plant configuration control of penetration by: • Within 4 hours containment penetration '2P68' must be secured by opening the supply breaker to 2CV-2060-1, Containment Sump Isolation valve, 2B51-B1. AND • Placing a Clearance tag on the breaker in open position. OR • Recording position of the valve and breaker in the COOP log or Containment penetration valve log.	N/A SAT UNSAT
EXAMINERS NOTE: The Candidate may discuss use of a clearance tag on the drain valves 2ABS 2061A and 2ABS 2061B. Also, the candidate may discuss gagging the thermal relief in the penetration 2PSV 2000. These steps are not required for successful completion of this JPM.			
END			

EXAMINER'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power and Steady State.
- Maintenance is in progress repairing Stator Water Cooling Deionizer flow indicator, 2FI-9785.
- New CVCS resin bed, 2T36A, is being placed in service. 2CVC-12A is approximately 1 turn open. Currently an approximate 100 ppm difference exists between RCS and DI effluent.
- CCW leak exists on common supply line to RCP's inside containment of ~ 0.5 gpm.
- Maintenance on CCW line is expected to occur in 7 days.
- Containment sump draining via normal drain to Aux Building Sump is completed.
- 2CV-2061-2, Containment Sump Isolation valve, will not close.
- Maintenance on 2CV 2061-2, Containment Sump Isolation valve, is expected to take 12 hours.

INITIATING CUE:

Based on initial conditions, determine the Tech Spec applicability and required actions, including administrative configuration controls required.

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power and Steady State.
- Maintenance is in progress repairing Stator Water Cooling Deionizer flow indicator, 2FI-9785.
- New CVCS resin bed, 2T36A, is being placed in service. 2CVC-12A is approximately 1 turn open. Currently an approximate 100 ppm difference exists between RCS and DI effluent.
- CCW leak exists on common supply line to RCP's inside containment of ~ 0.5 gpm.
- Maintenance on CCW line is expected to occur in 7 days.
- Containment sump draining via normal drain to Aux Building Sump is completed.
- 2CV-2061-2, Containment Sump Isolation valve, will not close.
- Maintenance on 2CV 2061-2, Containment Sump Isolation valve, is expected to take 12 hours.

INITIATING CUE:

Based on initial conditions, determine the Tech Spec applicability and required actions, including administrative configuration controls required.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 REV #: 000 DATE: _____

SYSTEM/DUTY AREA: Emergency Plan (A.4)

TASK: Determine EAL Classification and complete Shift Manager paperwork.

JTA#: _____

KA VALUE RO: 2.2 SRO: 4.0 KA REFERENCE: 2.4.38

APPROVED FOR ADMINISTRATION TO: RO: _____ SRO: X

TASK LOCATION: INSIDE CR: _____ OUTSIDE CR: _____ BOTH: X

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ SIMULATOR: Perform CLASSROOM: Perform

POSITION EVALUATED: RO: _____ SRO: _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ PLANT SITE: _____ CLASSROOM: _____

TESTING METHOD: SIMULATE: _____ PERFORM: _____

APPROXIMATE COMPLETION TIME IN MINUTES: 20 Minutes

REFERENCE(S): 1903.011, Emergency Response / Notifications, 1903.010, EAL

EXAMINEE'S NAME: _____ SSN: _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ UNSATISFACTORY: _____

PERFORMANCE CHECKLIST COMMENTS:

_____

_____

Start Time _____ Stop Time _____ Total Time _____

SIGNED: _____ DATE: _____

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

- The plant is tripped 30 minutes ago from 100% power for 250 days.
- RCS Tc is 450°F and cool down in progress.
- HPSI Flow total is 900 gpm.
- PZR pressure is 825 psia.
- Both Steam Generator Pressures are 700 psia.
- 850 gpm LOCA inside containment.
- LOCA EOP is being implemented.
- Plant evacuation nor Exclusion Area evacuation have NOT been initiated.
- Valid RDACS alarm present 2K11 J10.
- Dose Assessment reports that RDACS indicates a release is in progress with the following projected Dose Rates:
  - 0.62 mile dose rate of 0.350 REM/HR TEDE and 0.550 REM/HR Thyroid
  - 1.45 mile dose rate of 0.035 REM/HR TEDE and 0.053 REM/HR Thyroid
  - 3.45 mile dose rate of 0.004 REM/HR TEDE and 0.005 REM/HR Thyroid
  - 7.23 mile dose rate of 0.000 REM/HR TEDE and 0.000 REM/HR Thyroid
- Dose Assessment reports that RDACS indicates a release is in progress with the following projected dose:
  - 0.62 mile dose of 1.400 REM TEDE and 2.201 REM Thyroid
  - 1.45 mile dose of 0.140 REM TEDE and 0.210 REM Thyroid
  - 3.45 mile dose of 0.014 REM TEDE and 0.021 REM Thyroid
  - 7.23 mile dose of 0.002 REM TEDE and 0.002 REM Thyroid
- RDACS is indicating evacuate Zone 'G' and shelter the remaining zones.
- Wind direction is from 190° and speed is 11 mph.
- 2RY-8925-1, High Range Containment Radiation Monitor is reading 705 R/HR.
- 2RY-8925-2, High Range Containment Radiation Monitor is reading 723 R/HR.
- Containment pressure is 34 psia.
- All other systems and actuations are operating as designed.

TASK STANDARD: Determine the following:

GE; EAL 1.7, or 5.4, Radiological Effluents ≥ 250mr/hr TEDE or ≥ 500mr/hr Child Thyroid CDE and use 1903.011S form.
PAR 1 & PAR 3, zones evacuated are G, K, N.
and shelter the remaining zones.
Perform plant evacuation by route 1 and 3.
Perform exclusion area evacuation.

TASK PERFORMANCE AIDS: 1903.010, Emergency Action Levels; 1903.011, Emergency Response / Notifications; Steam Tables

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

Determine the highest EAL classification and PAR, if required, from the given initial conditions and complete applicable Shift Manager emergency direction and control checklist.

CRITICAL ELEMENTS (C) 1, 2, 5, 8, 10,11,13

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	1. Review OP 1903.010, EAL for classifying event using Step 4.10, 4.11 and EAL index.	Examinee determined the Proper EAL classification was a GE based on EAL 1.7, challenge or failure of 3 fission product barriers and/or EAL 5.4, Radiological Effluents ≥ 250mr/hr TEDE or ≥ 500mr/hr Child Thyroid CDE	N/A SAT UNSAT
(C)	2. Determine that 1903.011S, GE emergency direction and control checklist for shift manager was appropriate checklist for event.	Examinee determined that 1903.011S was appropriate form for event in progress.	N/A SAT UNSAT
	3. Determine initial notification paperwork completion and ENS notifications are required. EXAMINER's CUE: Inform examinee that the Initial notification paperwork and ENS notifications are being completed by opposite unit Shift Engineer.	Examinee determined that Initial notification paperwork and ENS notifications are required and would direct the shift engineer to complete it.	N/A SAT UNSAT
	4. Determine need to inform control room staff of EAL.	Inform Control Room staff that a General Emergency has been declared on Unit 2 due to EAL 1.7 or 5.4.	

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	5. Determine Evacuation routes 1 and 3 are appropriate due to wind direction being from 190°.	Examinee determined that plant evacuation routes 1 and 3 should be used.	N/A SAT UNSAT
EXAMINER's NOTE: No areas need to be avoided during plant evacuation.			
	6. Identify need to contact Security for performance of initial accountability within 30 minutes and for notification that plant evacuation is required. EXAMINER's CUE: Inform Examinee that security has been contacted.	Examinee determined that security must be contacted to perform initial accountability within 30 minutes and that a plant evacuation is required.	N/A SAT UNSAT
EXAMINER's NOTE: Secondary Guard station does not need to be opened and manned.			
	7. Identify need to notify HP to monitor personnel at exit portal monitors. EXAMINER's CUE: Inform examinee that HP has been contacted to perform personnel monitoring at exit portal monitors and to relax decontamination and radiation protection measures as necessary to expedite evacuation.	Examinee determined that HP is needed to monitor personnel at exit portal monitors and relax decontamination and radiation protection measures as necessary to expedite evacuation.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	8. Determine need to perform Plant Evacuation. EXAMINER's CUE: Inform examinee that SE has performed steps 9 and 10 of 1903.011S when either a plant announcement has been started or when requested that SE perform actions.	Examinee determined that plant evacuation is required and needs to make announcement.	N/A SAT UNSAT
	9. Identify need to instruct Control Room personnel to log badges into card reader for initial accountability. EXAMINER's CUE: Inform examinee that control room personnel on both unit's have been notified and both unit's NLO's have been notified.	Determined that Control Room personnel and NLO's on both unit's must be notified to log badges into card reader for initial accountability.	N/A SAT UNSAT
(C)	10. Perform Exclusion area Evacuation. EXAMINER's CUE: Inform examinee that security and Corp of Engineers have been informed.	Examinee determined that exclusion area evacuation is required and needs to direct security to perform it and the Corp of Engineers also must be notified to access portions of the lake within the exclusion area by boat.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	11. Using 1903.011 attachment 8 and attachment 6, determine that PAR 1 and 3 should be recommended and zones 'G, K, N' should be evacuated and shelter the remaining zones.	Examinee determined that PAR 1 and PAR 3 should be combined and zones 'G, K, N' from PAR 1 and Zone 'G' from PAR 3 should be evacuated and shelter the remaining zones.	N/A SAT UNSAT
	12. Determine that chemistry should be contacted to monitor RDACS. EXAMINER's CUE: Inform examinee that Chemistry has been informed and reports that RDACS indicates a radioactive plume extending over the Sally Port and north plant access road to highway 333.	Examinee determined that chemistry should monitor RDACS.	N/A SAT UNSAT
(C)	13. Determine that Security needs to be informed that approach route to the plant via the route impacted by the radioactive plume should be avoided. EXAMINER's CUE: Inform examinee that security has been informed.	Examinee determined that security should be informed that evacuation route 2 or the areas affected by the radioactive plume to the plant should be avoided.	N/A SAT UNSAT
	END		

EXAMINER'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant tripped 30 minutes ago after operating at 100% power for 250 days.
- RCS Tc is 450°F and cool down in progress.
- HPSI Flow total is 900 gpm.
- PZR pressure is 825 psia.
- Both Steam Generator Pressures are 700 psia.
- 800 gpm LOCA inside containment.
- LOCA EOP is being implemented.
- Plant evacuation has NOT been initiated.
- Valid RDACS alarm present 2K11 J10.
- Dose Assessment reports that RDACS indicates a release is in progress with the following projected Dose Rates:
  - 0.62 mile dose rate of 0.350 REM/HR TEDE and 0.550 REM/HR Thyroid
  - 1.45 mile dose rate of 0.035 REM/HR TEDE and 0.053 REM/HR Thyroid
  - 3.45 mile dose rate of 0.004 REM/HR TEDE and 0.005 REM/HR Thyroid
  - 7.23 mile dose rate of 0.000 REM/HR TEDE and 0.000 REM/HR Thyroid
- Dose Assessment reports that RDACS indicates a release is in progress with the following projected dose:
  - 0.62 mile dose of 1.400 REM TEDE and 2.201 REM Thyroid
  - 1.45 mile dose of 0.140 REM TEDE and 0.210 REM Thyroid
  - 3.45 mile dose of 0.014 REM TEDE and 0.021 REM Thyroid
  - 7.23 mile dose of 0.002 REM TEDE and 0.002 REM Thyroid
- RDACS is indicating evacuate Zone 'G' and shelter the remaining zones.
- Wind direction is from 190° and speed is 11 mph.
- 2RY-8925-1, High Range Containment Radiation Monitor is reading 705 R/HR.
- 2RY-8925-2, High Range Containment Radiation Monitor is reading 723 R/HR.
- Containment pressure is 34 psia.
- All other systems and actuations are operating as designed.

INITIATING CUE:

Determine the highest EAL classification and PAR, if required, from the given initial conditions and complete applicable Shift Manager emergency direction and control checklist.

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is tripped 30 minutes ago from 100% power for 250 days.
- RCS Tc is 450°F and cool down in progress.
- HPSI Flow total is 900 gpm.
- PZR pressure is 825 psia.
- Both Steam Generator Pressures are 700 psia.
- 800 gpm LOCA inside containment.
- LOCA EOP is being implemented.
- Plant evacuation has NOT been initiated.
- Valid RDACS alarm present 2K11 J10.
- Dose Assessment reports that RDACS indicates a release is in progress with the following projected Dose Rates:
  - 0.62 mile dose rate of 0.350 REM/HR TEDE and 0.550 REM/HR Thyroid
  - 1.45 mile dose rate of 0.035 REM/HR TEDE and 0.053 REM/HR Thyroid
  - 3.45 mile dose rate of 0.004 REM/HR TEDE and 0.005 REM/HR Thyroid
  - 7.23 mile dose rate of 0.000 REM/HR TEDE and 0.000 REM/HR Thyroid
- Dose Assessment reports that RDACS indicates a release is in progress with the following projected dose:
  - 0.62 mile dose of 1.400 REM TEDE and 2.201 REM Thyroid
  - 1.45 mile dose of 0.140 REM TEDE and 0.210 REM Thyroid
  - 3.45 mile dose of 0.014 REM TEDE and 0.021 REM Thyroid
  - 7.23 mile dose of 0.002 REM TEDE and 0.002 REM Thyroid
- RDACS is indicating evacuate Zone 'G' and shelter the remaining zones.
- Wind direction is from 190° and speed is 11 mph.
- 2RY-8925-1, High Range Containment Radiation Monitor is reading 705 R/HR.
- 2RY-8925-2, High Range Containment Radiation Monitor is reading 723 R/HR.
- Containment pressure is 34 psia.
- All other systems and actuations are operating as designed.

INITIATING CUE:

Determine the highest EAL classification and PAR, if required, from the given initial conditions and complete applicable Shift Manager emergency direction and control checklist.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 REV #: 000 DATE: _____

SYSTEM/DUTY AREA: Conduct of Operations (A.1)

TASK: Verify RPS trip setpoint determination for inoperable MSSV

JTA#: _____

KA VALUE RO: 3.0 SRO: 3.4 KA REFERENCE: 2.1.3

APPROVED FOR ADMINISTRATION TO: RO: _____ SRO: X

TASK LOCATION: INSIDE CR: _____ OUTSIDE CR: _____ BOTH: X

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ SIMULATOR: Perform CLASSROOM: Perform

POSITION EVALUATED: RO: _____ SRO: _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ PLANT SITE: _____ CLASSROOM: _____

TESTING METHOD: SIMULATE: _____ PERFORM: _____

APPROXIMATE COMPLETION TIME IN MINUTES: 15 Minutes

REFERENCE(S): Form 1015.016B, Shift turnover checklist, form 1015.016Q, MTC VS EFPD and power and Unit 2 Tech Specs.

EXAMINEE'S NAME: _____ SSN: _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ UNSATISFACTORY: _____

PERFORMANCE CHECKLIST COMMENTS:

_____

_____

Start Time _____ Stop Time _____ Total Time _____

SIGNED: _____ DATE: _____

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

- The plant is at 80% power, 325 EFPD, Steady State.
- Plant refueling outage is expected to start in 36 hours.
- 2P-4B, 'B' SW pump, is out of service for repacking.
- TSI, Turbine Supervisory Instrumentation is **DISABLED** to work on MTG vibration probe.
- MSSV testing is in progress.
- One MSSV, 2PSV-1054 has been declared inoperable just prior to shift turnover.
- The CBOT has completed the Shift Turnover checklist.
- All other systems are aligned in normal Mode 1 configuration.

TASK STANDARD: Verify shift turnover checklist and independently determine the maximum High Linear Power Level and RPS trip setpoint to be 88.5 to 86.5% to comply with Technical Specification 3.7.1.1.

TASK PERFORMANCE AIDS: Shift Turnover Checklist, form 1015.016B, Unit 2 Tech Specs, Moderator Temperature Coefficient VS EFPD and Power, form 1015.016Q, and a straight edge.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

As oncoming CRS, based on initial conditions, verify the shift turnover checklist for correctness.

CRITICAL ELEMENTS (C) 3, 4

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
EXAMINER's NOTE: TSI disabled on the MTG has no impact on plant operation or shift turnover checklist. The out of service 'B' service water pump has no Tech Spec implications due to 'A' and 'C' service water pumps being operable.			
	1. Review Shift turnover checklist for correctness. EXAMINER's CUE: Inform examinee that an independent review of the values for maximum linear power and trip setpoint derived by CBOT is required.	Examinee reviewed shift turnover checklist.	N/A SAT UNSAT
	2. Determine that 'B' service water pump inoperability had no Tech Spec implication.	Examinee correctly determined that 'A' and 'C' service water pumps being operable satisfied the Tech Spec requirement for two independent service water loops.	N/A SAT UNSAT
(C)	3. Using form 1015.016Q, determine MTC for 325 EFPD to be approximately –1.4 X E-4 delta K/K/degree F.	Examinee correctly derived from graph based on 325 EFPD and 80% power curve that MTC is approximately –1.4 X E-4 delta K/K/degree F.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	4. Using Tech Spec 3.7.1 figure 3.7-1 determines new maximum power and RPS linear power trip setpoint to be 87.5% ± 1%.	Examinee correctly derived from graph based on MTC of –1.4XE-4 delta K/K/degree F and knowing that one MSSV is inoperable determined that maximum power and RPS linear power trip setpoint should be 87.5% ± 1%. OR Examinee correctly interpolated from points given on the graph that maximum power and RPS linear power trip setpoint should be 87.5% ± 1%.	N/A SAT UNSAT
	5. Determine that the CBOT calculation for maximum power and RPS linear power trip setpoint is correct and sign 1015.016B reviewed by blank.	Examinee determined the maximum power and RPS linear power trip setpoint calculated by CBOT to be correct and signed 1015.016B reviewed by blank.	N/A SAT UNSAT
EXAMINER's NOTE: Examinee may discuss the Tech Spec applicability at this point stating that Tech Spec 3.7.1.1 LCO to allows power operations to continue provided that within 4 hours power is reduced to the maximum power of 79% or as allowed by figure 3.7-1 and within 12 hours, the RPS trip setpoint adjusted to be less than the value of 79% or as allowed in figure 3.7-1 per table 3.7-1, but this discussion is not required for successful completion of the JPM.			
END			

EXAMINER'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 80% power, 325 EFPD, Steady State.
- Plant refueling outage is expected to start in 36 hours.
- 2P-4B, 'B' SW pump, is out of service for repacking.
- TSI, Turbine Supervisory Instrumentation is **DISABLED** to work on MTG vibration probe.
- MSSV testing is in progress.
- One MSSV, 2PSV-1054 has been declared inoperable just prior to shift turnover.
- The CBOT has completed the Shift Turnover checklist.
- All other systems are aligned in normal Mode 1 configuration.

INITIATING CUE:

As oncoming CRS, based on initial conditions, verify the shift turnover checklist for correctness.

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 80% power, 325 EFPD, Steady State.
- Plant refueling outage is expected to start in 36 hours.
- 2P-4B, 'B' SW pump, is out of service for repacking.
- TSI, Turbine Supervisory Instrumentation is **DISABLED** to work on MTG vibration probe.
- MSSV testing is in progress.
- One MSSV, 2PSV-1054 has been declared inoperable just prior to shift turnover.
- The CBOT has completed the Shift Turnover checklist.
- All other systems are aligned in normal Mode 1 configuration.

INITIATING CUE:

As oncoming CRS, based on initial conditions, verify the shift turnover checklist for correctness.

INSTRUCTIONS:

1.0 CIRCLE YES, NO OR N/A FOR EACH ITEM IN ANY DESIRED ORDER.

2.0 N/A ITEMS NOT APPLICABLE DUE TO MODE OR BEING ALIGNED TO OTHER TRAIN.

3.0 IF NO IS CIRCLED, THEN EXPLAIN IN THE REMARKS SECTION.

4.0 IF NO IS CIRCLED ON A TECH SPEC (TS) REQUIRED COMPONENT, THEN REFER TO ASSOCIATED TECH SPEC ACTION STATEMENT AND NOTIFY OPPOSITE UNIT, AS APPLICABLE.

Mode: 1 Date: current Time: current

A. **SDBCS ALIGNMENT (2C02)**

1.	2CV-1002 (A S/G Upstream ADV Isol) closed	YES	NO
2.	2CV-1052 (B S/G Upstream ADV Isol) closed	YES	NO
3.	2CV-1001 (Upstream ADV) closed, HIC in Manual, permissive in Off	YES	NO
4.	2CV-1051 (Upstream ADV) closed, HIC in Manual, permissive in Off	YES	NO
5.	2CV-0301 (DDV) closed, HIC in Auto and permissive HS in Auto	YES	NO
6.	2CV-0305 (DDV) closed, HIC in Auto and permissive HS in Auto	YES	NO
7.	2CV-0302 (Bypass Vlv) closed, HIC in Auto, permissive HS in Auto	YES	NO
8.	2CV-0303 (Bypass Vlv) closed, HIC in Auto, permissive HS in Auto	YES	NO
9.	2CV-0306 (Bypass Vlv) closed, HIC in Auto, permissive HS in Auto	YES	NO

B. **SHUTDOWN COOLING (2C04)**

Two independent ECCS subsytems required operable in Mode 1, 2 & 3 with PZR pressure ≥ 1700 psia. (TS 3.5.2)

1.	2CV-5091 (LPSI Disch Header) open.	YES	NO	N/A
2.	2HS-5091 in ESF with the key removed.	YES	NO	N/A
3.	2FIC-5091 (LPSI Disch Hdr Flow) in Auto & set at ~ 2400 gpm.	YES	NO	N/A

C. **BORATION WATER SOURCES**

Each of the following borated water sources shall be operable: BAMT(s) IAW 2104.003 Supplement 4 Figure 1 (TRM 3.1.2.8) and RWT. (TRM 3.1.2.8)

1.	BAM Tanks 2T-6A and/or 2T-6B in the acceptable region of 2104.003 Supplement 4 Figure 1	YES	NO
2.	Boric Acid Tank (2T-6A) Temperature > 55°F	YES	NO
3.	Boric Acid Tank (2T-6B) Temperature > 55°F	YES	NO
4.	RWT Level 92% to 99%	YES	NO
5.	RWT Boron Concentration 2500 to 3000 ppm	YES	NO
6.	RWT Temperature 47 to 110°F (CR-2-00-687)	YES	NO
	Are required operable boron water sources available?	YES	NO

D. **BORATION FLOW PATHS AND COMPONENTS (2C09 AND 2C33)**

At least two charging pumps required operable. (TRM 3.1.2.4)
At least one charging pump in the Boron Injection Flow Path required operable. (TRM 3.1.2.2)

1.	2P-36A, associated room cooler, and room cooler SW valve operable.	YES	NO
2.	2P-36B, associated room cooler, and room cooler SW valve operable.	YES	NO
3.	2P-36C, associated room cooler and room cooler SW valve operable all powered from the same train (RED or GREEN).	YES	NO
4.	Boric Acid Pump (2P-39A) operable.	YES	NO
5.	Boric Acid Pump (2P-39B) operable.	YES	NO
6.	2CV-4916-2 (Emergency Borate) operable	YES	NO
7.	2CV-4920-1 (Gravity Feed) operable.	YES	NO
8.	2CV-4921-1 (Gravity Feed) operable.	YES	NO
9.	2CV-4950-2 (RWT to CCP suction) operable.	YES	NO
10.	2CV-4873-1 (VCT Outlet) operable	YES	NO

Circle Paths/component(s) for which credit taken (TRM 3.1.2.2)

ONE BAMT meets Volume Requirements – 2 of 3 paths required:

- One flow path from the appropriate BAM tank via a BAM pump and a Charging pump.
- One flow path from the appropriate BAM tank via Gravity Feed connection and Charging pump.
- One flow path from the RWT via a Charging pump.

BOTH BAMTs needed to meet Volume Requirements – 4 of 5 paths required:

- One flow path from BAM tank A via a BAM pump and a Charging pump.
- One flow path from BAM tank B via a BAM pump and a Charging pump.
- One flow path from BAM tank A via Gravity Feed connection and Charging pump.
- One flow path from BAM tank B via Gravity Feed connection and Charging pump.
- One flow path from the RWT tank via a Charging pump.

Are required boron injection flow paths operable for the operable boron water source? (TRM 3.1.2.2)	YES	NO
Are at least two charging pumps operable, one on each train? (TRM 3.1.2.4)	YES	NO

E. **EMERGENCY DIESEL GENERATORS (2C33)**

Two Diesel Generators are required operable. (TS 3.8.1.1)

1. 2DG1 Trouble/Not Available alarms clear — YES NO
2. 2HS-2809-1 (Engine Start) in Normal After Stop — YES NO
3. 2DG2 Trouble/Not Available alarms clear — YES NO
4. 2HS-2829-2 (Engine Start) in Normal After Stop — YES NO

Are both EDGs operable? — YES NO

F. **AC ELECTRICAL SYSTEMS (2C10, 2C33 AND SPDS)**

Two independent circuits between offsite transmission network and onsite ESF buses shall be operable. (TS 3.8.1.1)
SU2 HS may be in PTL with breaker available.

1. Circle Operable Circuits

RED		GREEN	
SU2	SU3	SU2	SU3
2A1	2A1	2A2	2A2
2A3	2A3	2A4	2A4

Are two physically independent circuits between the offsite transmission network and onsite ESF buses operable? — YES NO

Both trains of ESF Electrical buses shall be operable & energized with tie breakers open between redundant buses. (TS 3.8.2.1)
2RS1, 2, 3 & 4 are required to be operable. (TS 3.8.2.1)

2. Circle Operable Circuits

RED	GREEN
2A3	2A4
2B5	2B6
2B51	2B61
2B52	2B62
2B53	2B63
2B54	2B64
2RS1 ~ 120V on SPDS (Note)	2RS2 ~ 120V on SPDS (Note)
2RS3 ~ 120V on SPDS (Note)	2RS4 ~ 120V on SPDS (Note)
2RS1 inverter trouble alarm clear	2RS2 inverter trouble alarm clear
2RS3 inverter trouble alarm clear	2RS4 inverter trouble alarm clear
2A-310 IN PTL	2A-410 IN PTL
2B-513 IN PTL	2B-613 IN PTL

Are both ESF electrical trains operable and energized with tie breakers open between redundant buses? — YES NO

Note: If a swing inverter is in service, then verify RS Panel voltage ~ 120V on SPDS using computer point E2RS1RS3 or E2RS2RS4.

G. **DC ELECTRICAL SYSTEMS (2C10, 2C33 AND SPDS)**

Both trains of DC electrical sources shall be operable with each train consisting of a 125 VDC bus, a battery bank & a full capacity charger. (TS 3.8.2.3)

DC Buses are verified operable by checking corresponding Undervoltage, Not Available, and Trouble alarms clear and bus voltage normal (~130V) on SPDS.

Circle Operable Trains

RED	GREEN
2D01	2D02
2D11	2D12
2D31A OR 2D31B	2D32A OR 2D32B

Are both trains of DC electrical sources operable? YES NO

H. **CONTROL ROOM EMERGENCY AIR CONDITIONING AND VENTILATION SYSTEMS (2C33, C19 AND LOCAL)**

Two independent Control Room Emergency Air Conditioning and Air Filtration Systems are required operable.
(Unit 2 TS 3.3.3.1, Table 3.3-6, 3.7.6.1 and TRM 3.3.3.7 and
Unit 1 TS 3.5.1.13, Table 3.5.1-1, 3.9.1, 3.9.2 and TRM 3.5.1)

1. 2VSF-9 operable and handswitch in AUTO. YES NO
2. 2VE-1A and 2VUC-27A operable. YES NO
3. 2VE-1B and 2VUC-27B operable. YES NO
4. At least one Control Room Rad Monitor (2RITS-8750-1A or 2RITS-8750-1B) operable and indicating between minimum and maximum values from OPS B-28 and OPS B-43. (TS 3.3.3.1) YES NO
5. Both 2DG1 and 2DG2 operable YES NO
6. ESF Buses separated (NOT cross-tied) YES NO
7. Chlorine Monitors operable (Unit 2 TRM 3.3.3.7, Unit 1 TRM 3.5.1) YES NO
8. VSF-9 operable and handswitch in Auto. YES NO
9. VSF-9 aligned to operable EDG power source. YES NO
10. At least one Unit One CR Rad Monitor operable. (2RITS-8001A or 2RITS-8001B) YES NO

    Are required CR Emergency Air Conditioning and Filtration Systems operable? YES NO
    If NO is circled, then notify Unit 1 of equipment status and refer to Tech Specs.

11. Control Room Emergency AC units (2VUC-27A & 2VUC-27B) drain loop seals (2SG-8600A and 2SG-8600B) indicate > 1.5″ H_2O above bottom of sightglass? YES NO
    - Add water at 1.5″ H_2O
    - Initiate Condition Report at 1″ H_2O [ER002956E202, CR-ANO-C-2001-0175]

I. EMERGENCY FEEDWATER

Two EFW pumps and associated flow paths are required operable in Mode 1, 2 & 3. (TS 3.7.1.2) All valves except 2CV-0707 and
2CV-1532-1 must be energized. 2CV-0711-2 (2P-7A Suction from SW)/2CV-0716-1 (2P-7B Suction from SW) checked OPEN or OPERABLE is required for surveillance action if SW is supply to EFW (TS 4.7.1.3.2)

2C33

1. 2CV-0707 - Heaters removed, valve open. Check open by either remote or local position indication. YES NO N/A
2. 2EFW-0706 (SU/BD Demin Effluent to EFW) closed when ≥ 10%. YES NO N/A

2C17

3. 2CV-1000-1 (Main Steam to EFWP Turbine 2K-3) open. YES NO N/A
4. 2CV-1038-2 (2P-7B Discharge to S/G A) open. YES NO N/A
5. 2CV-1036-2 (2P-7B Discharge to S/G B) open. YES NO N/A
6. 2CV-1025-1 (2P-7B Flow Control to S/G A) closed. YES NO N/A
7. 2CV-1075-1 (2P-7B Flow Control to S/G B) closed. YES NO N/A
8. 2CV-0716-1 (2P-7B Suction From SW) closed. YES NO N/A
9. 2CV-0789-1 (2P-7B Suction From CST) open. YES NO N/A
10. EFW Pump 2P-7B operable. YES NO N/A
11. EFW Pump 2P-7B Room Cooler 2VUC-6B operable. (CR-ANO-2-2000-0109) YES NO N/A
12. EFW Pump 2P-7B Room Cooler 2VUC-6B SW MOV 2CV-1532-1 operable OR de-energized open. (CR-ANO-2-2000-0109) YES NO N/A

2C16

13. 2CV-1050-2 (Main Steam to EFWP Turbine 2K-3) open. YES NO N/A
14. 2CV-1026-2 (2P-7A Discharge to S/G A) closed. YES NO N/A
15. 2CV-1076-2 (2P-7A Discharge to S/G B) closed. YES NO N/A
16. 2CV-1037-1 (2P-7A Discharge to S/G A) open. YES NO N/A
17. 2CV-1039-1 (2P-7A Discharge to S/G B) open. YES NO N/A
18. 2CV-0340-2 (Steam to EFWP Turbine 2K-3) closed. YES NO N/A
19. 2CV-0711-2 (2P-7A Suction from SW) closed. YES NO N/A
20. 2CV-0795-2 (2P-7A Suction from CST) open. YES NO N/A

Are required EFW pumps and associated flow paths operable? YES NO N/A

J. **CONTAINMENT PENETRATION ROOM EXHAUST VENTILATION**

Maintain either 2VEF-38A or 2VEF-38B in PTL to prevent both fans from auto starting on CIAS (CR-2-93-0061).

	Circle Fan Status	
2VEF-38A:	AUTO	PTL
2VEF-38B:	AUTO	PTL

1. Is ONE Penetration Room Exhaust Fan in AUTO and ONE in PTL? YES NO

K. **CONTAINMENT COOLING SYSTEM**

Two independent Containment Cooling groups are required operable (TS 3.6.2.3), both fans in a group are required for that group to be operable. Valves must be energized.

2C17

1. CNTMT Cooling Fan 2VSF-1B operable. YES NO
2. 2CV-1519-1 (2VSF-1A/1B SW Outlet) closed. YES NO
3. 2CV-1511-1 (2VSF-1A/B SW Inlet) closed. YES NO
4. 2SV-1511-1 (SW Bypass for 2CV-1511-1) open. YES NO
5. CNTMT Cooling Fan 2VSF-1A operable. YES NO

2C16

6. CNTMT Cooling Fan 2VSF-1D operable. YES NO
7. 2CV-1513-2 (2VSF-1C/D SW Outlet) closed. YES NO
8. 2CV-1510-2 (2VSF-1C/D SW Inlet) closed. YES NO
9. 2SV-1510-2 (SW Bypass for 2CV-1510-2) open. YES NO
10. CNTMT Cooling Fan 2VSF-1C operable. YES NO

Are required Containment Cooling groups operable? YES NO

L. SAFETY INJECTION TANKS

SIT isolation valves are required to be open in Mode 1, 2 & 3
with PZR pressure ≥ 700 psia (TS 4.5.1.a.2)

2C17

1. 2CV-5003-1 (SIT 2T-2A Outlet) locked open, key removed. YES NO N/A
2. 2CV-5023-1 (SIT 2T-2B Outlet) locked open, key removed. YES NO N/A

2C16

3. 2CV-5043-2 (SIT 2T-2C Outlet) locked open, key removed. YES NO N/A
4. 2CV-5063-2 (SIT 2T-2D Outlet) locked open, key removed. YES NO N/A

Are all required SIT outlet valves open? YES NO N/A

M. LOW PRESSURE SAFETY INJECTION

Two independent ECCS subsystems are required in Mode 1, 2 & 3 with PZR pressure ≥ 1700 psia (TS 3.5.2) Valves Must Be Energized

2C17

1. 2CV-5017-1 (LPSI to 2P-32A Loop) closed. YES NO N/A
2. LPSI Pump 2P-60A operable. YES NO N/A
3. 2CV-5037-1 (LPSI to 2P-32B Loop) closed. YES NO N/A

2C16

4. 2CV-5057-2 (LPSI to 2P-32C Loop) closed. YES NO N/A
5. LPSI Pump 2P-60B operable. YES NO N/A
6. 2CV-5077-2 (LPSI to 2P-32D Loop) closed. YES NO N/A

Are required ECCS subsystems (LPSI) operable? YES NO N/A

N. **HIGH PRESSURE SAFETY INJECTION**

Two independent ECCS subsystems are required in Modes 1, 2 & 3 with PZR pressure ≥ 1700 psia (TS 3.5.2). One ECCS subsystem is required in Modes 3 & 4 with PZR pressure < 1700 psia (TS 3.5.3). Valves must be energized except 2CV-5101-1 and 2CV-5102-2.

2C17

1.	2CV-5630-1 (RWT 2T-3 Outlet) open	YES NO N/A
2.	2CV-5101-1 (HPSI HDR #1 Hot Leg Injection) closed	YES NO N/A
3.	2CV-5015-1 (HPSI HDR #1 to 2P-32A Loop) closed	YES NO N/A
4.	2CV-5035-1 (HPSI HDR #1 to 2P-32B Loop) closed	YES NO N/A
5.	2CV-5055-1 (HPSI HDR #1 to 2P-32C Loop) closed	YES NO N/A
6.	2CV-5075-1 (HPSI HDR #1 to 2P-32D Loop) closed	YES NO N/A
7.	2P-89C operable if aligned to A header (If not required for auto start, then HS in PTL.)	YES NO N/A
8.	2P-89A operable (If not required for auto start, then HS in PTL.)	YES NO N/A
9.	2CV-5647-1 (CNTMT Sump Suction Isol) locked open, key removed)	YES NO N/A
10.	2CV-5649-1 (CNTMT Sump Suction Isol) closed	YES NO N/A

2C16

11.	2CV-5631-2 (RWT 2T-3 outlet) open	YES NO N/A
12.	2CV-5102-2 (HPSI HDR #2 Hot Leg Injection) closed	YES NO N/A
13.	2CV-5016-2 (HPSI HDR #2 to 2P-32A Loop) closed	YES NO N/A
14.	2CV-5036-2 (HPSI HDR #2 to 2P-32B Loop) closed	YES NO N/A
15.	2CV-5056-2 (HPSI HDR #2 to 2P-32C Loop) closed	YES NO N/A
16.	2CV-5076-2 (HPSI HDR #2 to 2P-32D Loop) closed	YES NO N/A
17.	2P-89C operable if aligned to B header (If not required for auto start, then HS in PTL.)	YES NO N/A
18.	2P-89B operable (If not required for auto start, then HS in PTL.)	YES NO N/A
19.	2CV-5648-2 (CNTMT Sump Suction Isol) locked open, key removed	YES NO N/A
20.	2CV-5650-2 (CNTMT Sump Suction Isol) closed	YES NO N/A
	Are required ECCS (HPSI) subsystems operable?	YES NO

O. **SERVICE WATER (2C16 AND 2C17)**

Two independent SW loops are required operable (TS 3.7.3.1)
Valves Must Be Energized

2C17

1. 2CV-1453-1 (SDC HX 2E-35A SW Inlet) closed — YES NO
2. SW Pump 2P-4B - Disconnect closed if aligned to Loop 1 — YES NO N/A 1
3. SW Pump 2P-4B powered from RED train and operable — YES NO N/A
4. SW Pump 2P-4A operable — YES NO
5. 2CV-1400-1 (SW ESF Header Isol) open — YES NO
6. 2CV-1541-1 (SW Return to ECP) closed — YES NO

2C16

7. 2CV-1456-2 (SDC HX 2E-35B SW Inlet) closed — YES NO
8. SW Pump 2P-4B - Disconnect closed if aligned to Loop 2 — YES NO N/A
9. SW Pump 2P-4B powered from GREEN train and operable. — YES NO N/A
10. SW Pump 2P-4C operable — YES NO
11. 2CV-1406-2 (SW ESF Header Isol) open — YES NO
12. 2CV-1560-2 (SW Return to ECP) closed — YES NO

Are required SW pumps and loops operable? — YES NO

P. **ESF PUMP RECIRCS**

Two independent ECCS subsystems are required operable in Mode 1, 2 & 3 with PZR pressure > 1700 psia (TS 3.5.2).
One ECCS subsystem is required operable in Modes 3 & 4 with PZR pressure < 1700 psia (TS 3.5.3). Valves must be energized.

1. 2CV-5123-1 (LPSI 2P-60A Recirc Isol) open — YES NO N/A
2. 2CV-5673-1 (CNTMT Spray 2P-35A Recirc Isol) open — YES NO N/A
3. 2CV-5124-1 (LPSI 2P-60B Recirc Isol) open — YES NO N/A
4. 2CV-5672-1 (CNTMT Spray 2P-35B Recirc Isol) open — YES NO N/A
5. 2CV-5126-1 (HPSI 2P-89A Recirc Isol) open — YES NO N/A
6. 2CV-5128-1 (HPSI 2P-89B Recirc Isol) open — YES NO N/A
7. 2CV-5127-1 (HPSI 2P-89C Recirc Isol) open — YES NO N/A
8. 2CV-5628-2 (ESF Mini-Recirc Header Isol) open — YES NO N/A

Are required ESF recirc valves open? — YES NO

Q. **CONTAINMENT SPRAY SYSTEM**

Two independent Containment Spray Systems are required operable in Modes 1, 2 & 3 (TS 3.6.2.1) Valves Must Be Energized

2C17

1. 2CV-5612-1 (CNTMT Spray Header Isol) closed — YES NO N/A
2. CNTMT Spray Pump 2P-35A operable — YES NO N/A
3. 2CV-5647-1 (CNTMT Sump Suction Isol) locked open, key removed — YES NO N/A
4. 2CV-5649-1 (CNTMT Sump Suction Isol) closed — YES NO N/A

2C16

5. 2CV-5613-2 (CNTMT Spray Header Isol) closed — YES NO N/A
6. CNTMT Spray Pump 2P-35B operable — YES NO N/A
7. 2CV-5648-2 (CNTMT Sump Suction Isol) locked open, key removed — YES NO N/A
8. 2CV-5650-2 (CNTMT Sump Suction Isol) closed — YES NO N/A

Are required Spray Systems operable? — YES NO N/A

R. **CONTAINMENT FIREWATER (2C16)**

Containment penetration firewater system is required operable. (Fire Spec 9D.3, 1000.152) Valve Must Be Energized.

1. 2CV-3200-2 (CNTMT Firewater Isol) closed — YES NO

S. **HIGH POINT VENTS (2C336-1 AND 2C336-2)**

Position verification per NUREG-0737 Item II.B.1

1. 2HS-4671-1 (High Point Vents Control Power) On — YES NO
2. 2SV-4668-1 (Rx Head Vent) Closed — YES NO
3. 2SV-4636-1 (Pressurizer Vent) Closed — YES NO
4. 2SV-4669-1 (Vent to Quench Tank) Closed — YES NO
5. 2HS-4671-2 (High Point Vents Control Power) On — YES NO
6. 2SV-4668-2 (Rx Head Vent) Closed — YES NO
7. 2SV-4636-2 (Pressurizer Vent) Closed — YES NO
8. 2SV-4670-2 (Vent to CNTMT Atmosphere) Closed — YES NO

T. **FUSE BLOCKS**

1. 2C16 Fuse blocks (2) - Fuses not blown. — YES NO
2. 2C17 Fuse blocks (2) - Fuses not blown. — YES NO
3. 2C33-1 Fuse blocks (1) - Fuses not blown. — YES NO
4. 2C33-2 Fuse blocks (1) - Fuses not blown. — YES NO

U. **ANNUNCIATORS**

1. Annunciator test for all Control Room Annunciators completed?. — YES NO
2. Alarms acknowledged on all reflash units 2C10(1); 2C11(1); 2C14(5); 2C16(1); 2C17(1); 2C32(1); 2C33(3) — YES NO
3. All annunciator disabling toggle switches ON (UP)? — YES NO

V. **FIRE BRIGADE**

1. Qualified Fire Brigade assigned? — YES NO

W. MAIN STEAM AND MAIN FEEDWATER

1. IF MSSV(s) inoperable,
   THEN perform the following: ST (2)
   A. Refer to 1015.016Q (MTC vs EFPD AND POWER) to obtain limiting MTC value
   B. Refer to Tech Spec Figure 3.7-1 (Maximum High Linear Power Level and Trip Setpoint Versus MTC) and use MTC value obtained from 1015.016Q to obtain High Linear Power Level Trip Setpoint for 1 MSSV inoperable or 1 MSSV/header inoperable.

2. IF a component required for MFW isolation becomes inoperable (i.e., a Condensate, MFW, or Heater Drain pump will not trip on MSIS or CSAS), NA
   THEN restore the component within 48 hours or place it in its MSIS or CSAS actuated state. Otherwise be in Hot Standby in 6 hours.

COMMENTS:

(1) 'B' Service water pump is out of service for repacking.

(2) 2PSV-1054 is inoperable; Maximum High Linear Power level and Trip Setpoint determined to be 87.5%.

If position manned, then list on shift personnel:

SM *Sam Manager* CRS *Charlie Supervisor*

CRSA NA TRO NA

CBOR *Robert Reactor* CBOT *Sam Turbine*

WCO *William Operator* AO *Art Jones*

EOP *Eddie Plant* SE *Emil Engineer*

PERFORMED BY: *Sam Turbine*

REVIEWED BY: _____

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 REV #: 000 DATE: _____

SYSTEM/DUTY AREA: Conduct of Operations (A.1)

TASK: Verify RPS trip setpoint determination for inoperable MSSV

JTA#: _____

KA VALUE RO: 3.0 SRO: 3.4 KA REFERENCE: 2.1.3

APPROVED FOR ADMINISTRATION TO: RO: _____ SRO: X

TASK LOCATION: INSIDE CR: _____ OUTSIDE CR: _____ BOTH: X

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ SIMULATOR: Perform CLASSROOM: Perform

POSITION EVALUATED: RO: _____ SRO: _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ PLANT SITE: _____ CLASSROOM: _____

TESTING METHOD: SIMULATE: _____ PERFORM: _____

APPROXIMATE COMPLETION TIME IN MINUTES: 15 Minutes

REFERENCE(S): Form 1015.016B, Shift turnover checklist, form 1015.016Q, MTC VS EFPD and power and Unit 2 Tech Specs.

EXAMINEE'S NAME: _____ SSN: _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ UNSATISFACTORY: _____

PERFORMANCE CHECKLIST COMMENTS:

_____

_____

Start Time _____ Stop Time _____ Total Time _____

SIGNED: _____ DATE: _____

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

- The plant is at 80% power, 325 EFPD, Steady State.
- Plant refueling outage is expected to start in 36 hours.
- 2P-4B, 'B' SW pump, is out of service for repacking.
- TSI, Turbine Supervisory Instrumentation is **DISABLED** to work on MTG vibration probe.
- MSSV testing is in progress.
- One MSSV, 2PSV-1054 has been declared inoperable just prior to shift turnover.
- The CBOT has completed the Shift Turnover checklist.
- All other systems are aligned in normal Mode 1 configuration.

TASK STANDARD: Verify shift turnover checklist and independently determine the maximum High Linear Power Level and RPS trip setpoint to be 88.5 to 86.5% to comply with Technical Specification 3.7.1.1.

TASK PERFORMANCE AIDS: Shift Turnover Checklist, form 1015.016B, Unit 2 Tech Specs, Moderator Temperature Coefficient VS EFPD and Power, form 1015.016Q, and a straight edge.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

As oncoming CRS, based on initial conditions, verify the shift turnover checklist for correctness.

CRITICAL ELEMENTS (C) 3, 4

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
EXAMINER's NOTE: TSI disabled on the MTG has no impact on plant operation or shift turnover checklist. The out of service 'B' service water pump has no Tech Spec implications due to 'A' and 'C' service water pumps being operable.			
	1. Review Shift turnover checklist for correctness. EXAMINER's CUE: Inform examinee that an independent review of the values for maximum linear power and trip setpoint derived by CBOT is required.	Examinee reviewed shift turnover checklist.	N/A SAT UNSAT
	2. Determine that 'B' service water pump inoperability had no Tech Spec implication.	Examinee correctly determined that 'A' and 'C' service water pumps being operable satisfied the Tech Spec requirement for two independent service water loops.	N/A SAT UNSAT
(C)	3. Using form 1015.016Q, determine MTC for 325 EFPD to be approximately –1.4 X E-4 delta K/K/degree F.	Examinee correctly derived from graph based on 325 EFPD and 80% power curve that MTC is approximately –1.4 X E-4 delta K/K/degree F.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	4. Using Tech Spec 3.7.1 figure 3.7-1 determines new maximum power and RPS linear power trip setpoint to be 87.5% ± 1%.	Examinee correctly derived from graph based on MTC of –1.4XE-4 delta K/K/degree F and knowing that one MSSV is inoperable determined that maximum power and RPS linear power trip setpoint should be 87.5% ± 1%. OR Examinee correctly interpolated from points given on the graph that maximum power and RPS linear power trip setpoint should be 87.5% ± 1%.	N/A SAT UNSAT
	5. Determine that the CBOT calculation for maximum power and RPS linear power trip setpoint is correct and sign 1015.016B reviewed by blank.	Examinee determined the maximum power and RPS linear power trip setpoint calculated by CBOT to be correct and signed 1015.016B reviewed by blank.	N/A SAT UNSAT
EXAMINER's NOTE: Examinee may discuss the Tech Spec applicability at this point stating that Tech Spec 3.7.1.1 LCO to allows power operations to continue provided that within 4 hours power is reduced to the maximum power of 79% or as allowed by figure 3.7-1 and within 12 hours, the RPS trip setpoint adjusted to be less than the value of 79% or as allowed in figure 3.7-1 per table 3.7-1, but this discussion is not required for successful completion of the JPM.			
END			

EXAMINER'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 80% power, 325 EFPD, Steady State.
- Plant refueling outage is expected to start in 36 hours.
- 2P-4B, 'B' SW pump, is out of service for repacking.
- TSI, Turbine Supervisory Instrumentation is **DISABLED** to work on MTG vibration probe.
- MSSV testing is in progress.
- One MSSV, 2PSV-1054 has been declared inoperable just prior to shift turnover.
- The CBOT has completed the Shift Turnover checklist.
- All other systems are aligned in normal Mode 1 configuration.

INITIATING CUE:

As oncoming CRS, based on initial conditions, verify the shift turnover checklist for correctness.

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 80% power, 325 EFPD, Steady State.
- Plant refueling outage is expected to start in 36 hours.
- 2P-4B, 'B' SW pump, is out of service for repacking.
- TSI, Turbine Supervisory Instrumentation is **DISABLED** to work on MTG vibration probe.
- MSSV testing is in progress.
- One MSSV, 2PSV-1054 has been declared inoperable just prior to shift turnover.
- The CBOT has completed the Shift Turnover checklist.
- All other systems are aligned in normal Mode 1 configuration.

INITIATING CUE:

As oncoming CRS, based on initial conditions, verify the shift turnover checklist for correctness.

INSTRUCTIONS:

1.0 CIRCLE YES, NO OR N/A FOR EACH ITEM IN ANY DESIRED ORDER.

2.0 N/A ITEMS NOT APPLICABLE DUE TO MODE OR BEING ALIGNED TO OTHER TRAIN.

3.0 IF NO IS CIRCLED, THEN EXPLAIN IN THE REMARKS SECTION.

4.0 IF NO IS CIRCLED ON A TECH SPEC (TS) REQUIRED COMPONENT, THEN REFER TO ASSOCIATED TECH SPEC ACTION STATEMENT AND NOTIFY OPPOSITE UNIT, AS APPLICABLE.

Mode: 1 Date: current Time: current

A. **SDBCS ALIGNMENT (2C02)**

1.	2CV-1002 (A S/G Upstream ADV Isol) closed	YES	NO
2.	2CV-1052 (B S/G Upstream ADV Isol) closed	YES	NO
3.	2CV-1001 (Upstream ADV) closed, HIC in Manual, permissive in Off	YES	NO
4.	2CV-1051 (Upstream ADV) closed, HIC in Manual, permissive in Off	YES	NO
5.	2CV-0301 (DDV) closed, HIC in Auto and permissive HS in Auto	YES	NO
6.	2CV-0305 (DDV) closed, HIC in Auto and permissive HS in Auto	YES	NO
7.	2CV-0302 (Bypass Vlv) closed, HIC in Auto, permissive HS in Auto	YES	NO
8.	2CV-0303 (Bypass Vlv) closed, HIC in Auto, permissive HS in Auto	YES	NO
9.	2CV-0306 (Bypass Vlv) closed, HIC in Auto, permissive HS in Auto	YES	NO

B. **SHUTDOWN COOLING (2C04)**

Two independent ECCS subsytems required operable in Mode 1, 2 & 3 with PZR pressure ≥ 1700 psia. (TS 3.5.2)

1.	2CV-5091 (LPSI Disch Header) open.	YES	NO	N/A
2.	2HS-5091 in ESF with the key removed.	YES	NO	N/A
3.	2FIC-5091 (LPSI Disch Hdr Flow) in Auto & set at ~ 2400 gpm.	YES	NO	N/A

C. **BORATION WATER SOURCES**

Each of the following borated water sources shall be operable: BAMT(s) IAW 2104.003 Supplement 4 Figure 1 (TRM 3.1.2.8) and RWT. (TRM 3.1.2.8)

1.	BAM Tanks 2T-6A and/or 2T-6B in the acceptable region of 2104.003 Supplement 4 Figure 1	YES	NO
2.	Boric Acid Tank (2T-6A) Temperature > 55°F	YES	NO
3.	Boric Acid Tank (2T-6B) Temperature > 55°F	YES	NO
4.	RWT Level 92% to 99%	YES	NO
5.	RWT Boron Concentration 2500 to 3000 ppm	YES	NO
6.	RWT Temperature 47 to 110°F (CR-2-00-687)	YES	NO
	Are required operable boron water sources available?	YES	NO

D. **BORATION FLOW PATHS AND COMPONENTS (2C09 AND 2C33)**

At least two charging pumps required operable. (TRM 3.1.2.4)
At least one charging pump in the Boron Injection Flow Path required operable. (TRM 3.1.2.2)

1.	2P-36A, associated room cooler, and room cooler SW valve operable.	YES	NO
2.	2P-36B, associated room cooler, and room cooler SW valve operable.	YES	NO
3.	2P-36C, associated room cooler and room cooler SW valve operable all powered from the same train (RED or GREEN).	YES	NO
4.	Boric Acid Pump (2P-39A) operable.	YES	NO
5.	Boric Acid Pump (2P-39B) operable.	YES	NO
6.	2CV-4916-2 (Emergency Borate) operable	YES	NO
7.	2CV-4920-1 (Gravity Feed) operable.	YES	NO
8.	2CV-4921-1 (Gravity Feed) operable.	YES	NO
9.	2CV-4950-2 (RWT to CCP suction) operable.	YES	NO
10.	2CV-4873-1 (VCT Outlet) operable	YES	NO

Circle Paths/component(s) for which credit taken (TRM 3.1.2.2)

ONE BAMT meets Volume Requirements – 2 of 3 paths required:

- One flow path from the appropriate BAM tank via a BAM pump and a Charging pump.
- One flow path from the appropriate BAM tank via Gravity Feed connection and Charging pump.
- One flow path from the RWT via a Charging pump.

BOTH BAMTs needed to meet Volume Requirements – 4 of 5 paths required:

- One flow path from BAM tank A via a BAM pump and a Charging pump.
- One flow path from BAM tank B via a BAM pump and a Charging pump.
- One flow path from BAM tank A via Gravity Feed connection and Charging pump.
- One flow path from BAM tank B via Gravity Feed connection and Charging pump.
- One flow path from the RWT tank via a Charging pump.

Are required boron injection flow paths operable for the operable boron water source? (TRM 3.1.2.2)	YES	NO
Are at least two charging pumps operable, one on each train? (TRM 3.1.2.4)	YES	NO

E. **EMERGENCY DIESEL GENERATORS (2C33)**

Two Diesel Generators are required operable. (TS 3.8.1.1)

1. 2DG1 Trouble/Not Available alarms clear — YES NO
2. 2HS-2809-1 (Engine Start) in Normal After Stop — YES NO
3. 2DG2 Trouble/Not Available alarms clear — YES NO
4. 2HS-2829-2 (Engine Start) in Normal After Stop — YES NO

Are both EDGs operable? — YES NO

F. **AC ELECTRICAL SYSTEMS (2C10, 2C33 AND SPDS)**

Two independent circuits between offsite transmission network and onsite ESF buses shall be operable. (TS 3.8.1.1)
SU2 HS may be in PTL with breaker available.

1. Circle Operable Circuits

RED		GREEN	
SU2	SU3	SU2	SU3
2A1	2A1	2A2	2A2
2A3	2A3	2A4	2A4

Are two physically independent circuits between the offsite transmission network and onsite ESF buses operable? — YES NO

Both trains of ESF Electrical buses shall be operable & energized with tie breakers open between redundant buses. (TS 3.8.2.1)
2RS1, 2, 3 & 4 are required to be operable. (TS 3.8.2.1)

2. Circle Operable Circuits

RED	GREEN
2A3	2A4
2B5	2B6
2B51	2B61
2B52	2B62
2B53	2B63
2B54	2B64
2RS1 ~ 120V on SPDS (Note)	2RS2 ~ 120V on SPDS (Note)
2RS3 ~ 120V on SPDS (Note)	2RS4 ~ 120V on SPDS (Note)
2RS1 inverter trouble alarm clear	2RS2 inverter trouble alarm clear
2RS3 inverter trouble alarm clear	2RS4 inverter trouble alarm clear
2A-310 IN PTL	2A-410 IN PTL
2B-513 IN PTL	2B-613 IN PTL

Are both ESF electrical trains operable and energized with tie breakers open between redundant buses? — YES NO

Note: If a swing inverter is in service, then verify RS Panel voltage ~ 120V on SPDS using computer point E2RS1RS3 or E2RS2RS4.

G. **DC ELECTRICAL SYSTEMS (2C10, 2C33 AND SPDS)**

Both trains of DC electrical sources shall be operable with each train consisting of a 125 VDC bus, a battery bank & a full capacity charger. (TS 3.8.2.3)

DC Buses are verified operable by checking corresponding Undervoltage, Not Available, and Trouble alarms clear and bus voltage normal (~130V) on SPDS.

Circle Operable Trains

RED	GREEN
2D01	2D02
2D11	2D12
2D31A OR 2D31B	2D32A OR 2D32B

Are both trains of DC electrical sources operable? YES NO

H. **CONTROL ROOM EMERGENCY AIR CONDITIONING AND VENTILATION SYSTEMS (2C33, C19 AND LOCAL)**

Two independent Control Room Emergency Air Conditioning and Air Filtration Systems are required operable.
(Unit 2 TS 3.3.3.1, Table 3.3-6, 3.7.6.1 and TRM 3.3.3.7 and
Unit 1 TS 3.5.1.13, Table 3.5.1-1, 3.9.1, 3.9.2 and TRM 3.5.1)

1. 2VSF-9 operable and handswitch in AUTO. YES NO
2. 2VE-1A and 2VUC-27A operable. YES NO
3. 2VE-1B and 2VUC-27B operable. YES NO
4. At least one Control Room Rad Monitor (2RITS-8750-1A or 2RITS-8750-1B) operable and indicating between minimum and maximum values from OPS B-28 and OPS B-43. (TS 3.3.3.1) YES NO
5. Both 2DG1 and 2DG2 operable YES NO
6. ESF Buses separated (NOT cross-tied) YES NO
7. Chlorine Monitors operable (Unit 2 TRM 3.3.3.7, Unit 1 TRM 3.5.1) YES NO
8. VSF-9 operable and handswitch in Auto. YES NO
9. VSF-9 aligned to operable EDG power source. YES NO
10. At least one Unit One CR Rad Monitor operable. (2RITS-8001A or 2RITS-8001B) YES NO

    Are required CR Emergency Air Conditioning and Filtration Systems operable? YES NO
    If NO is circled, then notify Unit 1 of equipment status and refer to Tech Specs.

11. Control Room Emergency AC units (2VUC-27A & 2VUC-27B) drain loop seals (2SG-8600A and 2SG-8600B) indicate > 1.5″ H_2O above bottom of sightglass? YES NO
    - Add water at 1.5″ H_2O
    - Initiate Condition Report at 1″ H_2O [ER002956E202, CR-ANO-C-2001-0175]

I. EMERGENCY FEEDWATER

Two EFW pumps and associated flow paths are required operable in Mode 1, 2 & 3. (TS 3.7.1.2) All valves except 2CV-0707 and
2CV-1532-1 must be energized. 2CV-0711-2 (2P-7A Suction from SW)/2CV-0716-1 (2P-7B Suction from SW) checked OPEN or OPERABLE is required for surveillance action if SW is supply to EFW (TS 4.7.1.3.2)

2C33

1. 2CV-0707 - Heaters removed, valve open. Check open by either remote or local position indication. YES NO N/A
2. 2EFW-0706 (SU/BD Demin Effluent to EFW) closed when ≥ 10%. YES NO N/A

2C17

3. 2CV-1000-1 (Main Steam to EFWP Turbine 2K-3) open. YES NO N/A
4. 2CV-1038-2 (2P-7B Discharge to S/G A) open. YES NO N/A
5. 2CV-1036-2 (2P-7B Discharge to S/G B) open. YES NO N/A
6. 2CV-1025-1 (2P-7B Flow Control to S/G A) closed. YES NO N/A
7. 2CV-1075-1 (2P-7B Flow Control to S/G B) closed. YES NO N/A
8. 2CV-0716-1 (2P-7B Suction From SW) closed. YES NO N/A
9. 2CV-0789-1 (2P-7B Suction From CST) open. YES NO N/A
10. EFW Pump 2P-7B operable. YES NO N/A
11. EFW Pump 2P-7B Room Cooler 2VUC-6B operable. (CR-ANO-2-2000-0109) YES NO N/A
12. EFW Pump 2P-7B Room Cooler 2VUC-6B SW MOV 2CV-1532-1 operable OR de-energized open. (CR-ANO-2-2000-0109) YES NO N/A

2C16

13. 2CV-1050-2 (Main Steam to EFWP Turbine 2K-3) open. YES NO N/A
14. 2CV-1026-2 (2P-7A Discharge to S/G A) closed. YES NO N/A
15. 2CV-1076-2 (2P-7A Discharge to S/G B) closed. YES NO N/A
16. 2CV-1037-1 (2P-7A Discharge to S/G A) open. YES NO N/A
17. 2CV-1039-1 (2P-7A Discharge to S/G B) open. YES NO N/A
18. 2CV-0340-2 (Steam to EFWP Turbine 2K-3) closed. YES NO N/A
19. 2CV-0711-2 (2P-7A Suction from SW) closed. YES NO N/A
20. 2CV-0795-2 (2P-7A Suction from CST) open. YES NO N/A

Are required EFW pumps and associated flow paths operable? YES NO N/A

J. **CONTAINMENT PENETRATION ROOM EXHAUST VENTILATION**

Maintain either 2VEF-38A or 2VEF-38B in PTL to prevent both fans from auto starting on CIAS (CR-2-93-0061).

	Circle Fan Status	
2VEF-38A:	AUTO	PTL
2VEF-38B:	AUTO	PTL

1. Is ONE Penetration Room Exhaust Fan in AUTO and ONE in PTL? YES NO

K. **CONTAINMENT COOLING SYSTEM**

Two independent Containment Cooling groups are required operable (TS 3.6.2.3), both fans in a group are required for that group to be operable. Valves must be energized.

2C17

1. CNTMT Cooling Fan 2VSF-1B operable. YES NO
2. 2CV-1519-1 (2VSF-1A/1B SW Outlet) closed. YES NO
3. 2CV-1511-1 (2VSF-1A/B SW Inlet) closed. YES NO
4. 2SV-1511-1 (SW Bypass for 2CV-1511-1) open. YES NO
5. CNTMT Cooling Fan 2VSF-1A operable. YES NO

2C16

6. CNTMT Cooling Fan 2VSF-1D operable. YES NO
7. 2CV-1513-2 (2VSF-1C/D SW Outlet) closed. YES NO
8. 2CV-1510-2 (2VSF-1C/D SW Inlet) closed. YES NO
9. 2SV-1510-2 (SW Bypass for 2CV-1510-2) open. YES NO
10. CNTMT Cooling Fan 2VSF-1C operable. YES NO

Are required Containment Cooling groups operable? YES NO

L. SAFETY INJECTION TANKS

SIT isolation valves are required to be open in Mode 1, 2 & 3
with PZR pressure ≥ 700 psia (TS 4.5.1.a.2)

2C17

1. 2CV-5003-1 (SIT 2T-2A Outlet) locked open, key removed. YES NO N/A
2. 2CV-5023-1 (SIT 2T-2B Outlet) locked open, key removed. YES NO N/A

2C16

3. 2CV-5043-2 (SIT 2T-2C Outlet) locked open, key removed. YES NO N/A
4. 2CV-5063-2 (SIT 2T-2D Outlet) locked open, key removed. YES NO N/A

Are all required SIT outlet valves open? YES NO N/A

M. LOW PRESSURE SAFETY INJECTION

Two independent ECCS subsystems are required in Mode 1, 2 & 3 with PZR pressure ≥ 1700 psia (TS 3.5.2) Valves Must Be Energized

2C17

1. 2CV-5017-1 (LPSI to 2P-32A Loop) closed. YES NO N/A
2. LPSI Pump 2P-60A operable. YES NO N/A
3. 2CV-5037-1 (LPSI to 2P-32B Loop) closed. YES NO N/A

2C16

4. 2CV-5057-2 (LPSI to 2P-32C Loop) closed. YES NO N/A
5. LPSI Pump 2P-60B operable. YES NO N/A
6. 2CV-5077-2 (LPSI to 2P-32D Loop) closed. YES NO N/A

Are required ECCS subsystems (LPSI) operable? YES NO N/A

N. **HIGH PRESSURE SAFETY INJECTION**

Two independent ECCS subsystems are required in Modes 1, 2 & 3 with PZR pressure ≥ 1700 psia (TS 3.5.2). One ECCS subsystem is required in Modes 3 & 4 with PZR pressure < 1700 psia (TS 3.5.3). Valves must be energized except 2CV-5101-1 and 2CV-5102-2.

2C17

1.	2CV-5630-1 (RWT 2T-3 Outlet) open	YES NO N/A
2.	2CV-5101-1 (HPSI HDR #1 Hot Leg Injection) closed	YES NO N/A
3.	2CV-5015-1 (HPSI HDR #1 to 2P-32A Loop) closed	YES NO N/A
4.	2CV-5035-1 (HPSI HDR #1 to 2P-32B Loop) closed	YES NO N/A
5.	2CV-5055-1 (HPSI HDR #1 to 2P-32C Loop) closed	YES NO N/A
6.	2CV-5075-1 (HPSI HDR #1 to 2P-32D Loop) closed	YES NO N/A
7.	2P-89C operable if aligned to A header (If not required for auto start, then HS in PTL.)	YES NO N/A
8.	2P-89A operable (If not required for auto start, then HS in PTL.)	YES NO N/A
9.	2CV-5647-1 (CNTMT Sump Suction Isol) locked open, key removed)	YES NO N/A
10.	2CV-5649-1 (CNTMT Sump Suction Isol) closed	YES NO N/A

2C16

11.	2CV-5631-2 (RWT 2T-3 outlet) open	YES NO N/A
12.	2CV-5102-2 (HPSI HDR #2 Hot Leg Injection) closed	YES NO N/A
13.	2CV-5016-2 (HPSI HDR #2 to 2P-32A Loop) closed	YES NO N/A
14.	2CV-5036-2 (HPSI HDR #2 to 2P-32B Loop) closed	YES NO N/A
15.	2CV-5056-2 (HPSI HDR #2 to 2P-32C Loop) closed	YES NO N/A
16.	2CV-5076-2 (HPSI HDR #2 to 2P-32D Loop) closed	YES NO N/A
17.	2P-89C operable if aligned to B header (If not required for auto start, then HS in PTL.)	YES NO N/A
18.	2P-89B operable (If not required for auto start, then HS in PTL.)	YES NO N/A
19.	2CV-5648-2 (CNTMT Sump Suction Isol) locked open, key removed	YES NO N/A
20.	2CV-5650-2 (CNTMT Sump Suction Isol) closed	YES NO N/A
	Are required ECCS (HPSI) subsystems operable?	YES NO

O. **SERVICE WATER (2C16 AND 2C17)**

Two independent SW loops are required operable (TS 3.7.3.1)
Valves Must Be Energized

2C17

1. 2CV-1453-1 (SDC HX 2E-35A SW Inlet) closed — YES NO
2. SW Pump 2P-4B - Disconnect closed if aligned to Loop 1 — YES NO N/A 1
3. SW Pump 2P-4B powered from RED train and operable — YES NO N/A
4. SW Pump 2P-4A operable — YES NO
5. 2CV-1400-1 (SW ESF Header Isol) open — YES NO
6. 2CV-1541-1 (SW Return to ECP) closed — YES NO

2C16

7. 2CV-1456-2 (SDC HX 2E-35B SW Inlet) closed — YES NO
8. SW Pump 2P-4B - Disconnect closed if aligned to Loop 2 — YES NO N/A
9. SW Pump 2P-4B powered from GREEN train and operable. — YES NO N/A
10. SW Pump 2P-4C operable — YES NO
11. 2CV-1406-2 (SW ESF Header Isol) open — YES NO
12. 2CV-1560-2 (SW Return to ECP) closed — YES NO

Are required SW pumps and loops operable? — YES NO

P. **ESF PUMP RECIRCS**

Two independent ECCS subsystems are required operable in Mode 1, 2 & 3 with PZR pressure > 1700 psia (TS 3.5.2).
One ECCS subsystem is required operable in Modes 3 & 4 with PZR pressure < 1700 psia (TS 3.5.3). Valves must be energized.

1. 2CV-5123-1 (LPSI 2P-60A Recirc Isol) open — YES NO N/A
2. 2CV-5673-1 (CNTMT Spray 2P-35A Recirc Isol) open — YES NO N/A
3. 2CV-5124-1 (LPSI 2P-60B Recirc Isol) open — YES NO N/A
4. 2CV-5672-1 (CNTMT Spray 2P-35B Recirc Isol) open — YES NO N/A
5. 2CV-5126-1 (HPSI 2P-89A Recirc Isol) open — YES NO N/A
6. 2CV-5128-1 (HPSI 2P-89B Recirc Isol) open — YES NO N/A
7. 2CV-5127-1 (HPSI 2P-89C Recirc Isol) open — YES NO N/A
8. 2CV-5628-2 (ESF Mini-Recirc Header Isol) open — YES NO N/A

Are required ESF recirc valves open? — YES NO

Q. **CONTAINMENT SPRAY SYSTEM**

Two independent Containment Spray Systems are required operable in Modes 1, 2 & 3 (TS 3.6.2.1) Valves Must Be Energized

2C17

1. 2CV-5612-1 (CNTMT Spray Header Isol) closed — YES NO N/A
2. CNTMT Spray Pump 2P-35A operable — YES NO N/A
3. 2CV-5647-1 (CNTMT Sump Suction Isol) locked open, key removed — YES NO N/A
4. 2CV-5649-1 (CNTMT Sump Suction Isol) closed — YES NO N/A

2C16

5. 2CV-5613-2 (CNTMT Spray Header Isol) closed — YES NO N/A
6. CNTMT Spray Pump 2P-35B operable — YES NO N/A
7. 2CV-5648-2 (CNTMT Sump Suction Isol) locked open, key removed — YES NO N/A
8. 2CV-5650-2 (CNTMT Sump Suction Isol) closed — YES NO N/A

Are required Spray Systems operable? — YES NO N/A

R. **CONTAINMENT FIREWATER (2C16)**

Containment penetration firewater system is required operable. (Fire Spec 9D.3, 1000.152) Valve Must Be Energized.

1. 2CV-3200-2 (CNTMT Firewater Isol) closed — YES NO

S. **HIGH POINT VENTS (2C336-1 AND 2C336-2)**

Position verification per NUREG-0737 Item II.B.1

1. 2HS-4671-1 (High Point Vents Control Power) On — YES NO
2. 2SV-4668-1 (Rx Head Vent) Closed — YES NO
3. 2SV-4636-1 (Pressurizer Vent) Closed — YES NO
4. 2SV-4669-1 (Vent to Quench Tank) Closed — YES NO
5. 2HS-4671-2 (High Point Vents Control Power) On — YES NO
6. 2SV-4668-2 (Rx Head Vent) Closed — YES NO
7. 2SV-4636-2 (Pressurizer Vent) Closed — YES NO
8. 2SV-4670-2 (Vent to CNTMT Atmosphere) Closed — YES NO

T. **FUSE BLOCKS**

1. 2C16 Fuse blocks (2) - Fuses not blown. — YES NO
2. 2C17 Fuse blocks (2) - Fuses not blown. — YES NO
3. 2C33-1 Fuse blocks (1) - Fuses not blown. — YES NO
4. 2C33-2 Fuse blocks (1) - Fuses not blown. — YES NO

U. **ANNUNCIATORS**

1. Annunciator test for all Control Room Annunciators completed?. — YES NO
2. Alarms acknowledged on all reflash units 2C10(1); 2C11(1); 2C14(5); 2C16(1); 2C17(1); 2C32(1); 2C33(3) — YES NO
3. All annunciator disabling toggle switches ON (UP)? — YES NO

V. **FIRE BRIGADE**

1. Qualified Fire Brigade assigned? — YES NO

W. MAIN STEAM AND MAIN FEEDWATER

1. IF MSSV(s) inoperable,
   THEN perform the following: ST (2)
   A. Refer to 1015.016Q (MTC vs EFPD AND POWER) to obtain limiting MTC value
   B. Refer to Tech Spec Figure 3.7-1 (Maximum High Linear Power Level and Trip Setpoint Versus MTC) and use MTC value obtained from 1015.016Q to obtain High Linear Power Level Trip Setpoint for 1 MSSV inoperable or 1 MSSV/header inoperable.

2. IF a component required for MFW isolation becomes inoperable (i.e., a Condensate, MFW, or Heater Drain pump will not trip on MSIS or CSAS), NA
   THEN restore the component within 48 hours or place it in its MSIS or CSAS actuated state. Otherwise be in Hot Standby in 6 hours.

COMMENTS:

(1) 'B' Service water pump is out of service for repacking.

(2) 2PSV-1054 is inoperable; Maximum High Linear Power level and Trip Setpoint determined to be 87.5%.

If position manned, then list on shift personnel:

SM *Sam Manager* CRS *Charlie Supervisor*

CRSA NA TRO NA

CBOR *Robert Reactor* CBOT *Sam Turbine*

WCO *William Operator* AO *Art Jones*

EOP *Eddie Plant* SE *Emil Engineer*

PERFORMED BY: *Sam Turbine*

REVIEWED BY: _____

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 REV #: 000 DATE: _____

SYSTEM/DUTY AREA: Conduct of Operations (A.1)

TASK: Determine requirements for issuing Containment air lock access key.

JTA#: _____

KA VALUE RO: 2.0 SRO: 2.9 KA REFERENCE: 2.1.13

APPROVED FOR ADMINISTRATION TO: RO: _____ SRO: X

TASK LOCATION: INSIDE CR: _____ OUTSIDE CR: _____ BOTH: X

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ SIMULATOR: Perform CLASSROOM: Perform

POSITION EVALUATED: RO: _____ SRO: _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ PLANT SITE: _____ CLASSROOM: ___

TESTING METHOD: SIMULATE: _____ PERFORM: _____

APPROXIMATE COMPLETION TIME IN MINUTES: 20 Minutes

REFERENCE(S): 1015.005A, Shift Managers Key Log, 1015.005, Operations Key Control and Unit 2 Tech Specs.

EXAMINEE'S NAME: _____ SSN: _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ UNSATISFACTORY: _____

PERFORMANCE CHECKLIST COMMENTS:

_____

_____

Start Time _____ Stop Time _____ Total Time _____

SIGNED: _____ DATE: _____

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power.
- Green train maintenance week; minimal risk.
- Containment Personnel Hatch is locked.
- Containment Personnel Hatch was last closed on July 5, 2001 at 1900 with all required surveillances completed.
- Irvin Calibrate is ready to enter the Unit 2 Containment Building. Access is required for on-line surveillance testing. This testing will continue for the next three days under MAI # 57449 on 'B' SIT instrumentation on 386' elevation.
- Radiation Protection requirements have been completed and HP, Roger Health, badge number 3432, is requesting key for entry to Containment Personnel Hatch (#298).

TASK STANDARD: Determine the following requirements for issuance of the Containment Personnel Hatch key:

- Status board entry for Containment Personnel Hatch LLRT due.
- Status board entry for Containment visual inspection per form 1015.016M is required daily, and when entry complete and prior to LLRT on Containment Personnel Hatch.
- Inform NP&S to enter requirements onto daily and surveillance schedule.
- Ensure daily visual inspection of areas affected and final inspection at completion of entry is performed using form 1015.016M and a station log entry is performed to satisfy Tech Spec 4.5.2.C.2.
- Ensure that during the first entry Tech Spec 4.6.1.3.2 required surveillance on the Containment Personnel Hatch door interlock (task 020626) is performed.
- Obtain Name, Badge number and signature of person receiving the key.

TASK PERFORMANCE AIDS: OP 1015.005A, Shift Manager's Key Log and 1015.005, Operations Key Control and Unit 2 Tech Spec's.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

Determine the requirements for issuance of the Containment Personnel Hatch access key and Containment Building entry and complete required form to issue key per 1015.005, Operations Key Control.

CRITICAL ELEMENTS (C) 3, 5, 6

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
	1. Review OP 1015.005, Operations Key Control to determine requirements.	Examinee reviewed steps 6.1 and 6.5 of 1015.005 to determine requirements for issuing key.	N/A SAT UNSAT
EXAMINER'S NOTE: If candidate asks, report that I&C is entering Containment immediately after the issuance of the key and the requirements after entry are applicable. HP is the person receiving the Key.			
	2. Using 1015.005 log key number, Individual's name, individual's badge number, MAI number, SM name, Date/Time key issued to Containment Personnel Hatch.	Examinee obtained key number(298), name (Roger Health), badge number (3432), MAI number (57449) and signature of person receiving the key from initial conditions. Examinee signed and dated with the time that key was issued.	N/A SAT UNSAT
(C)	3. Using 1015.005 determine status board entry requirements. EXAMINER'sCUE: If asked, HES-02 requires LLRT within 7 days of completion of this maintenance.	Examinee determined Status board entry: • Containment Personnel Hatch LLRT due • Containment visual inspection per form 1015.016M.	N/A SAT UNSAT
	4. Using 1015.005 determine need to inform NP&S to enter requirements onto daily and surveillance schedule.	Examinee contacted or discussed requirement to inform NP&S to enter requirements onto daily and surveillance schedule.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
(C)	5. Using 1015.005 determine need to satisfy Tech Spec 4.5.2.C.2 surveillance requirements for containment entry.	Examinee determined a required daily visual inspection of areas affected using form 1015.016M along with a station log entry and a required final inspection at the completion of entry using form 1015.016M and a station log entry.	N/A SAT UNSAT
(C)	6. Using 1015.005 determine need satisfy Tech Spec 4.6.1.3.2 surveillance requirements for containment entry.	Examinee determined surveillance on the Containment Personnel Hatch door interlock (task 020626) on initial entry needed to satisfy 4.6.1.3.2 surveillance requirements.	N/A SAT UNSAT
EXAMINER's NOTE: If asked about mechanical support for Containment Personnel Hatch door interlock surveillance, report that mechanics are standing by the personnel hatch ready to perform surveillance on the initial entry into containment building.			
END			

EXAMINER'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power.
- Green train maintenance week; minimal risk.
- Containment Personnel Hatch is locked.
- Containment Personnel Hatch was last closed on July 5, 2001 at 1900 with all required surveillances completed.
- Irvin Calibrate is ready to enter the Unit 2 Containment Building. Access is required for on-line surveillance testing. This testing will continue for the next three days under MAI # 57449 on 'B' SIT instrumentation on 386' elevation.
- Radiation Protection requirements have been completed and HP, Roger Health, badge number 3432, is requesting key for entry to Containment Personnel Hatch (#298).

INITIATING CUE:

Determine the requirements for issuance of the Containment Personnel Hatch access key and Containment Building entry and complete required form to issue key per 1015.005, Operations Key Control.

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power.
- Green train maintenance week; minimal risk.
- Containment Personnel Hatch is locked.
- Containment Personnel Hatch was last closed on July 5, 2001 at 1900 with all required surveillances completed.
- Irvin Calibrate is ready to enter the Unit 2 Containment Building. Access is required for on-line surveillance testing. This testing will continue for the next three days under MAI # 57449 on 'B' SIT instrumentation on 386' elevation.
- Radiation Protection requirements have been completed and HP, Roger Health, badge number 3432, is requesting key for entry to Containment Personnel Hatch (#298).

INITIATING CUE:

Determine the requirements for issuance of the Containment Personnel Hatch access key and Containment Building entry and complete required form to issue key per 1015.005, Operations Key Control.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 REV #: 000 DATE: _____

SYSTEM/DUTY AREA: Radiation Controls (A.3)

TASK: Approve administration of Potassium Iodide.

JTA#: _____

KA VALUE RO: 2.9 SRO: 3.3 KA REFERENCE: 2.3.10

APPROVED FOR ADMINISTRATION TO: RO: _____ SRO: X

TASK LOCATION: INSIDE CR: _____ OUTSIDE CR: _____ BOTH: X

SUGGESTED TESTING ENVIRONMENT AND METHOD (PERFORM OR SIMULATE):

PLANT SITE: _____ SIMULATOR: Perform CLASSROOM: Perform

POSITION EVALUATED: RO: _____ SRO: _____

ACTUAL TESTING ENVIRONMENT: SIMULATOR: _____ PLANT SITE: _____ CLASSROOM: _____

TESTING METHOD: SIMULATE: _____ PERFORM: _____

APPROXIMATE COMPLETION TIME IN MINUTES: 15 Minutes

REFERENCE(S): 1903.035, Administration of Potassium Iodide

EXAMINEE'S NAME: _____ SSN: _____

EVALUATOR'S NAME: _____

THE EXAMINEE'S PERFORMANCE WAS EVALUATED AGAINST THE STANDARDS CONTAINED IN THIS JPM AND IS DETERMINED TO BE:

SATISFACTORY: _____ UNSATISFACTORY: _____

PERFORMANCE CHECKLIST COMMENTS:

_____

_____

Start Time _____ Stop Time _____ Total Time _____

SIGNED: _____ DATE: _____

SIGNATURE INDICATES THIS JPM HAS BEEN COMPARED TO ITS APPLICABLE PROCEDURE BY A QUALIFIED INDIVIDUAL (NOT THE EXAMINEE) AND IS CURRENT WITH THAT REVISION.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

THE EXAMINER SHALL REVIEW THE FOLLOWING WITH THE EXAMINEE:

The examiner shall review the "Briefing Checklist - System Walkthrough" portion of OP 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

- The plant is tripped from 100% power.
- 300 gpm LOCA in progress.
- Loss of Offsite power is in progress.
- LOCA EOP is being implemented.
- RDACS indicates an off site release in progress.
- Data indicates I-131 concentration of 5.0 E-04 μ ci/cc in area of work in Upper South Piping Penetration room.
- Whole body dose rates in area of work are 1Rem/hr.
- General Emergency has just been declared.
- Joe Mechanic is standing by to perform task in Upper South Piping Penetration room.
- RP estimates that it will take approximately 15 minutes to complete emergency actions and stop the release and all RP required controls/authorizations are complete.
- Air Purifying Respirator with Iodine Canister having a protection factor of 1.0 will be used in place of a SCBA due to piping interference.
- EOF, OSC and TSC have NOT been staffed.

TASK STANDARD: Determine that KI should be administered.

TASK PERFORMANCE AIDS: OP 1903.0035, Potassium Iodide Administration, completed form 1903.035C, ANO Medical Questionnaire-Iodine Sensitivity and 1903.035A, Potassium Iodide Administration.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

Determine the need to issue KI, Potassium Iodide and complete necessary paperwork, using OP 1903.035.

CRITICAL ELEMENTS (C) 2, 3, 5

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
	1. Review OP 1903.035, Administration of Potassium Iodide to determine criteria for administering KI.	Examinee determined the criteria for administration of KI is 25 REM exposure to Thyroid committed dose equivalent or if concentration is unknown, the possibility exists for receiving large amounts of radioactive airborne iodine.	N/A SAT UNSAT
(C)	2. Using graph on 1903.035 Attachment 1 and information provided in initial conditions, determine that Joe Mechanic will exceed 25 REM during the maintenance evolution.	Determined that expected exposure will exceed 25 REM threshold.	N/A SAT UNSAT
(C)	3. Determine that Joe Mechanic is not sensitive to nor experienced an allergic reaction to Iodide. EXAMINER's CUE: Give examinee completed 1903.035C form.	Ask Joe Mechanic for completed 1903.035C form and determined that Joe Mechanic was not sensitive to nor experienced an allergic reaction to Iodide.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
	4. Complete form 1903.035A.	Completed all areas of form 1903.035A, Potassium Iodide Administration, from initial conditions: • Estimated Thyroid dose commitment. • Date. • Respiratory protection. • Signature of Joe Mechanic that he chooses to receive KI.	N/A SAT UNSAT
(C)	5. Determine that KI may be approved for distribution to Joe Mechanic during the Upper South Piping penetration room work.	Examinee approved distribution of KI to Joe Mechanic by signing and dating form.	N/A SAT UNSAT
END			

EXAMINER'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is tripped from 100% power.
- 300 gpm LOCA in progress.
- Loss of Offsite power is in progress.
- LOCA EOP is being implemented.
- RDACS indicates an off site release in progress.
- Data indicates I-131 concentration of 5.0 E-04 μ ci/cc in area of work in Upper South Piping Penetration room.
- Whole body dose rates in area of work are 1Rem/hr.
- General Emergency has just been declared.
- Joe Mechanic is standing by to perform task in Upper South Piping Penetration room.
- RP estimates that it will take approximately 15 minutes to complete emergency actions and stop the release and all RP required controls/authorizations are complete.
- Air Purifying Respirator with Iodine Canister having a protection factor of 1.0 will be used in place of a SCBA due to piping interference.
- EOF, OSC and TSC have NOT been staffed.

INITIATING CUE:

Determine the need to issue KI, Potassium Iodide and complete necessary paperwork, using OP 1903.035.

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is tripped from 100% power.
- 300 gpm LOCA in progress.
- Loss of Offsite power is in progress.
- LOCA EOP is being implemented.
- RDACS indicates an off site release in progress.
- Data indicates I-131 concentration of 5.0 E-04 μ ci/cc in area of work in Upper South Piping Penetration room.
- Whole body dose rates in area of work are 1Rem/hr.
- General Emergency has just been declared.
- Joe Mechanic is standing by to perform task in Upper South Piping Penetration room.
- RP estimates that it will take approximately 15 minutes to complete emergency actions and stop the release and all RP required controls/authorizations are complete.
- Air Purifying Respirator with Iodine Canister having a protection factor of 1.0 will be used in place of a SCBA due to piping interference.
- EOF, OSC and TSC have NOT been staffed.

INITIATING CUE:

Determine the need to issue KI, Potassium Iodide and complete necessary paperwork, using OP 1903.035.