Facility: ANO-2 Date of Examination: February 11, 2002

Examination Level (circle one): RO / (SRO) Operating Test Number: 1

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations 2.1.3	Knowledge of Shift Turnover Practices. New Admin JPM (Verify Shift turnover sheet)
	Conduct Of Operations 2.1.23	Ability to perform specific and integrated plant procedures during all modes of operation New Admin JPM (1015.008 time to boil LOSDC calculation)
A.2	Equipment Control 2.2.24	Ability to analyze the effect of maintenance activities on LCO status New Admin JPM (Complete inoperable equipment checklist)
A.3	Radiation Controls 2.3.11	Ability to control radiation releases. Modified Old Question (OPEN) (Isolate letdown with failed fuel determination AOP)
	Radiation Controls 2.3.1	Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized. Modified Old Question (OPEN) (Emergency Exposure limits. Includes calculation and determination)
A.4	Emergency Plan 2.4.41	Knowledge of Emergency Action Level thresholds and classification. New Question (Classify event based on dynamic) (OPEN)
	Emergency Plan 2.4.44	Knowledge of the Emergency Plan Protective Action recommendations. New Question (Determine PAR for given event) (OPEN)

TYPE: OPEN REFERENCE

COMPLETION TIME 10 Min.

KA VALUE RO: 2.7 SRO: 3.2 KA REFERENCE: 2.3.11

REFERENCE: AOP 2203.020, REVISION 007-05-0, STEP 8.F

SRO OPERATING ADMIN TEST 1 SUBJECT A.3

QUESTION 1:

Given the following:

- 100% full power
- 2RITS-4806A (Letdown Radiation Gross Activity Monitor) reads 4.3E5 CPM and 2RITS-4806B (Letdown Radiation Iodine-131 Activity Monitor) reads 3.1E5 CPM.
- Auxiliary building general area radiation is 300 mr/hr.
- Letdown has been isolated using 2CV-4820-2.

What action should be performed to directly prevent RCS fluid from leaving the Containment Building?

ANSWER:
With SM concurrence:

- Isolate Reactor Coolant Pump controlled bleedoff to VCT.

COMMENTS:

EXAMINEE'S COPY

TYPE: OPEN REFERENCE

SRO OPERATING ADMIN TEST 1 SUBJECT A.3

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Given the following:

- 100% full power
- 2RITS-4806A (Letdown Radiation Gross Activity Monitor) reads 4.3E5 CPM and 2RITS-4806B (Letdown Radiation Iodine-131 Activity Monitor) reads 3.1E5 CPM.
- Auxiliary building general area radiation is 300 mr/hr.
- Letdown has been isolated using 2CV-4820-2.

What action should be performed to directly prevent RCS fluid from leaving the Containment Building?

TYPE: OPEN REFERENCE

COMPLETION TIME 10 Min.

KA VALUE RO: 2.6 SRO: 3.0 KA REFERENCE: 2.3.1

REFERENCE: 1903.033, REVISION 018-00-0, STEPS 5.1 and 6.1.3

SRO OPERATING ADMIN TEST 1 SUBJECT A.3

QUESTION 2:

Given the following:

- The plant has experienced a large break LOCA with indications of fuel damage.
- The Operating Crew has declared a Site Area Emergency, 20 minutes ago.
- The Emergency Response Organization is in the process of manning but **NO** group has completed staffing and activation.
- An estimated 65 gpm leak develops on the "A" HPSI pump mechanical seal.
- A Recirculation Actuation Signal (RAS) occurs.
- General area dose rates in the vicinity of the "A" HPSI isolations is 40 Rem/Hr.
- The crew has secured the "A" HPSI Pump and directed the WCO to isolate it.
- The time required to isolate the pump is 15 minutes.

1. What is the estimated dose to the WCO for this task?

2. Given these conditions, who may authorize the WCO to receive this dose?

ANSWER:

1. 40 Rem/Hr dose rate X .25 Hr = 10 Rem

2. The Shift Manager has the authority to authorize exceeding the 10CFR20 dose limits until the Emergency Response Organizations are activated and relieved of the emergency command and control responsibilities.

COMMENTS:

EXAMINEE'S COPY

TYPE: OPEN REFERENCE

SRO OPERATING ADMIN TEST 1 SUBJECT A.3

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- The crew has secured the "A" HPSI Pump and directed the WCO to isolate it.
- The time required to isolate the pump is 15 minutes.

Answer the following questions:

1. What is the estimated dose to the WCO for this task?

2. Given these conditions, who may authorize the WCO to receive this dose?

TYPE: OPEN REFERENCE

COMPLETION TIME 10 Min.

KA VALUE RO: 2.3 SRO: 4.1 KA REFERENCE: 2.4.41

REFERENCE: 1903.010, Rev 036-03-0, Emergency Action Level 6.9

SRO OPERATING ADMIN TEST 1 SUBJECT A.4

QUESTION 1:

Given the following:

- Plant has been operating for 320 days at 100%.
- A main turbine trip occurs 40 minutes ago.
- Feedwater flow cannot be restored to either SG.
- SG levels are 50" and 60" wide range.
- RCS Tc is 565°F and going up.
- The crew has manually initiated Once Thru Cooling using ECCS vents.
- RCS leakage is estimated to be 875 gpm.
- RVLMS indicates level 4 is dry.
- All other systems operate as designed.
- Containment sump level and containment temperature and pressure are rising rapidly.
- All three charging pumps are running.
- High Range Containment Radiation meters are indicating 50 R/hr.
- SIAS, CCAS, and CIAS have been actuated.
- No RDACS, Radiological Dose Assessment Computer System, alarms are present.

Determine the highest emergency action level, EAL, for the above given conditions.

ANSWER:

SAE, site area emergency, based on EAL 6.9, Loss of both S/Gs as a Heat Removal Method.

COMMENTS:

EXAMINEE'S COPY

TYPE: OPEN REFERENCE

SRO OPERATING ADMIN TEST 1 SUBJECT A.4
QUESTION 1:

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- Containment sump level and containment temperature and pressure are rising rapidly.
- All three charging pumps are running.
- High Range Containment Radiation meters are indicating 50 R/hr.
- SIAS, CCAS, and CIAS have been actuated.
- No RDACS, Radiological Dose Assessment Computer System, alarms are present.

Determine the highest emergency action level, EAL, for the above given conditions.

TYPE: OPEN REFERENCE

COMPLETION TIME 10 Min.

KA VALUE RO: 2.1 SRO: 4.0 KA REFERENCE: 2.4.44

REFERENCE: 1903.010, Rev 036-03-0, Emergency Action Levels 3.4 and 5.4
1903.011, Rev 026-00-0, STEPS 6.2.1, FORM 1903.011S Step 13, and Attachment 6, PARs for a General Emergency

SRO OPERATING ADMIN TEST 1 SUBJECT A.4

QUESTION 2:

Given the following:

- A Loss of Offsite Power has occurred concurrent with a Steam Generator Tube Rupture (SGTR) on the "A" Steam Generator estimated to be 250 gpm
- One Main Steam Safety Valve sticks open on the "A" Main Steam Header
- RCS samples indicate RCS activity to be 30µCi/gm and steady
- Total cladding failure is estimated to be 1% and stable.
- Initial Chemistry dose assessments indicate radiological effluents at the Site Boundary are 750 mrem/hr TEDE and 1500 mrem/hr Child Thyroid CDE
- The radiological release is predicted to last 2 hours
- The wind direction is from 292.6 degrees

Determine any Protective Action Recommendations (PAR) that may be required.

ANSWER:

The projected dose at the site boundary should be calculated as follows:

TEDE = 750 mrem/hr x 2 hours = 1.5 REM
Child Thyroid CDE = 1500 mrem/hr x 2 hours = 3 REM

Based on this Dose projection, PAR 1 and PAR 3 should be combined

Evacuate Zones G, H, K, & U along with any zones projected to exceed the EPA Protective Action Guidelines (Obtained from Dose assessment)

Shelter the remainder of the 10 mile Emergency Planning Zone (EPZ)

COMMENTS:

EXAMINEE'S COPY

TYPE: OPEN REFERENCE

SRO OPERATING ADMIN TEST 1 SUBJECT A.4

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- Initial Chemistry dose assessments indicate radiological effluents at the Site Boundary are 750 mrem/hr TEDE and 1500 mrem/hr Child Thyroid CDE
- The radiological release is predicted to last 2 hours
- The wind direction is from 292.6 degrees

Determine any Protective Action Recommendations (PAR) that may be required.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 000 **DATE:** _____

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

TASK: Calculate Time to Boil using computer program

JTA#: ANO2ROSDCNORM4

KA VALUE **RO:** 3.9 **SRO:** 4.0 **KA REFERENCE:** 2.1.23

APPROVED FOR ADMINISTRATION TO: **RO:** X **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: 10 Minutes

REFERENCE(S): 1015.008 Attachment E, Rev 017-02-0

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 1064.023 Attachment 6 with the examinee.

JPM INITIAL TASK CONDITIONS:

Plant shutdown for repair of Steam Generator Tube Leak. Making preparations for draining the RCS to 24 inches above the bottom of the hotleg to install nozzle dams. PZR level is 40% and open to atmosphere. Time after shutdown = 72 hours; one (1) PZR code safety valve is removed; PZR manway is installed; ECCS vent valves are de-energized OPEN; NO RCP seal work inprogress; NO RCS cold leg openings; RCS Temperature is 105°F.

TASK STANDARD:

Time to boil calculation has been calculated using the computer program.

TASK PERFORMANCE AIDS:

1015.008 attachment E, Computer operational with the current revision of LOSDC2 installed (SP-94-C-0001, Rev. 10)., set up shortcut to program on the desktop.

SIMULATOR SETUP:

NA

EXAMINER'S NOTES:

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

The SM/CRS directs, "Using the computer program LOSDC2, calculate a projected time to boil 7.5 hours from now with RCS level 24" above bottom of Hot Leg, using current temperature and pressure."

CRITICAL ELEMENTS (C): 19

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	1.	Start the LOSDC2 program. (it is permissible to start the program using windows file manager or double click)	Double click on the shortcut to start the LOSDC2 program OR Go to file manager and start LOSDC2 program.	N/A SAT UNSAT
	2.	Verify that program is current.	At question prompt, "Is this the current version of program?" (version SP-94-C-0001-01, Rev. 10) Type 'Y' and hit ENTER.	N/A SAT UNSAT
	3.	Input that RCS pressure boundary is closed.	At Question prompt, "Pressure Boundary Closed?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	4.	Input that Reactor Head is not removed.	At Question prompt, "Reactor Head removed?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	5.	Input that ECCS valves are open.	At Question prompt, "ECCS Valve Open?" , type 'Y' and hit ENTER.	N/A SAT UNSAT
	6.	Input that One PZR code safety valve is removed.	At Question prompt, "Number of Code Safety Valves removed, 0,1,2?" , type '1' and hit ENTER.	N/A SAT UNSAT
	7.	Input that the pressurizer manway is not removed.	At Question prompt, "Pressurizer manway removed?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	8.	Input that the RCS cold legs are not open.	At Question prompt, "Cold Leg hole?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	9.	Input that RCP seal work is not in progress.	At Question prompt, "RCP seal work in progress?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	10.	Input that 'A' SG cold leg manway is not removed.	At Question prompt, "'A' SG cold leg manway removed?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	11.	Input that 'B' SG cold leg manway is not removed.	At Question prompt, "'B' SG cold leg manway removed?" , type 'N' and hit ENTER.	N/A SAT UNSAT

ADMINISTRATIVE JOB PERFORMANCE MEASURE

PERFORMANCE CHECKLIST			STANDARDS	(Circle One)
	12.	Input that 'A' SG hot leg manway is not removed.	At Question prompt, "'A' SG hot leg manway removed?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	13.	Input that 'B' SG hot leg manway is not removed.	At Question prompt, "'B' SG hot leg manway removed?" , type 'N' and hit ENTER.	N/A SAT UNSAT
	14.	Input that time after shutdown is 3 days 7.5 hours. (note this is the 3 days time after shutdown given in initial conditions plus the 7.5 hour given in the initiating cue.)	At Question prompt, "Enter time after shutdown?" , type '3,7.5' and hit ENTER.	N/A SAT UNSAT
	15.	Input that water level input is to be in inches above bottom of hot leg.	At Question prompt, "Enter water level above the bottom of the hot leg?" , type '1' and hit ENTER.	N/A SAT UNSAT
	16.	Input that projected water level is 24" above the bottom of the hotleg.	At Question prompt, "water level projected?" , type '24' and hit ENTER.	N/A SAT UNSAT
	17.	Input that current RCS temperature is 105°F.	At Question prompt, "Current Coolant temperature?" , type '105' and hit ENTER.	N/A SAT UNSAT
	18.	Input that this is not a refueling outage and that core reload is not to be done.	At Question prompt, "Has core shuffle/reload been completed?" , type 'N' and hit ENTER.	N/A SAT UNSAT
C	19.	Record / Report that Time to Boil the RCS is 19 minutes 19 seconds. Acceptable value ∓ 2 minutes	Report that the Time to boil the RCS is 19 minutes and 19 seconds.	N/A SAT UNSAT

EXAMINER'S NOTE:

Prompt the Examinee that the file should not be printed but, may be saved and then reviewed. The file should be saved as 'Their First Name.dat'. (Examinee will then open the file via file manager). This file should then be deleted after the JPM is over.

END

ADMINISTRATIVE JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

Given the following Plant conditions:

- Plant shutdown for repair of Steam Generator Tube Leak.
- Making preparations for draining the RCS to 24 inches above the bottom of the hot leg to install nozzle dams.
- PZR level is 40% and open to atmosphere.
- Time after shutdown = 72 hours;
- One (1) PZR code safety valve is removed;
- PZR manway is installed;
- ECCS vent valves are de-energized OPEN;
- NO RCP seal work inprogress;
- NO RCS cold leg openings;
- RCS Temperature is 105°F.

INITIATING CUE:

The SM/CRS directs, "Using the computer program LOSDC2, calculate a projected time to boil 7.5 hours from now with RCS level 24" above bottom of Hot Leg, using current temperature and pressure."

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 000 **DATE:** _____

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

TASK: Verify Shift Turnover Checklist

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: 10 Minutes

REFERENCE(S): 1015.016B, Shift Turnover Checklist, Rev. 23-00-0

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
- CBOT has completed the Shift Turnover checklist

TASK STANDARD: The examinee has reviewed the attached Shift Turnover Cheklist and has identified two of the mistakes on the turnover checklist:

- #1 EDG checked as inoperable, but no comment made.
- In section I, 2P7B room cooler checked as inoperable, but 2P7B not checked as inoperable per OP 2104.006 limit and precaution.
- In Section J, both 2VEF-38A and 2VEF-38B are checked as being in AUTO when one must be in PTL (Note: on the checklist, question 1 is checked correctly).

TASK PERFORMANCE AIDS: Shift Turnover Checklist, 1015.016B

Fill out the turnover checklist including the errors identified in the standard.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

The CBOT has completed the Shift Turnover Checklist. Verify the checklist for correctness and identify two of the mistakes.

CRITICAL ELEMENTS (C) 2

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
	1. Review Shift turnover checklist.	Examinee reviewed Shift turnover checklist.	N/A SAT UNSAT
(C)	2. Identify completeness of form.	Examinee identified two of three mistakes/missing information: • #1 EDG checked as inoperable, but no comment made. • In section I, 2P7B room cooler checked as inoperable, but 2P7B not checked as inoperable per OP 2104.006 limit and precaution. • In Section J, both 2VEF-38A and 2VEF-38B are checked as being in AUTO when one must be in PTL (Note: on the checklist, question 1 is checked correctly).	N/A SAT UNSAT
	3. Take appropriate corrective action.	Examinee discussed informing CBOT of the errors and correcting the checklist.	N/A SAT UNSAT
END			

ADMINISTRATIVE JOB PERFORMANCE MEASURE

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power
- CBOT has completed the Shift Turnover checklist

INITIATING CUE:

The CBOT has completed the Shift Turnover Checklist. Verify the checklist for correctness and identify two of the mistakes.

NOTE: THIS WILL BE FILLED OUT PER TASK STANDARD BEFORE STARTING JPM

SHIFT TURNOVER CHECKLIST MODES 1 - 4

INSTRUCTIONS:

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

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

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

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: _____ Date: _____ Time: _____

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 TS Figure 3.1-1 and RWT. (TRM 3.1.2.8)

1.	Boric Acid Tank (2T-6A) Level per TRM Figure 3.1-1	YES	NO
2.	Boric Acid Tank (2T-6A) Boron Concentration 4375 to 6125 ppm	YES	NO
3.	Boric Acid Tank (2T-6A) Temperature > 55°F	YES	NO
4.	Boric Acid Tank (2T-6B) Level per TRM Figure 3.1-1	YES	NO
5.	Boric Acid Tank (2T-6B) Boron Concentration 4375 to 6125 ppm	YES	NO
6.	Boric Acid Tank (2T-6B) Temperature > 55°F	YES	NO
7.	RWT Level 92% to 99%	YES	NO
8.	RWT Boron Concentration 2500 to 3000 ppm	YES	NO
9.	RWT Temperature 45 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
	Are required boron injection flow paths operable for the operable boron water source?	YES	NO
	Are at least two charging pumps operable, one on each train?	YES	NO

NOTE: THIS WILL BE FILLED OUT PER TASK STANDARD BEFORE STARTING JPM

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: THIS WILL BE FILLED OUT PER TASK STANDARD BEFORE STARTING JPM

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
2DO1	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 YES NO

NOTE: THIS WILL BE FILLED OUT PER TASK STANDARD BEFORE STARTING JPM

of
sightglass?

- Add water at 1.5″ H_2O
- Initiate Condition Report at 1″ H_2O
  [ER002956E202, CR-ANO-C-2001-0175]

NOTE: THIS WILL BE FILLED OUT PER TASK STANDARD BEFORE STARTING JPM

SHIFT TURNOVER CHECKLIST MODES 1 - 4

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
2. 2CV-8831-1 (PRVS B Filter X-Connect to 2VEF-38A) open YES NO
3. 2CV-8832-2 (PRVS A Filter X-Connect to 2VEF-38B) open YES NO

2CV-8831-1 and 2CV-8832-2 are not required for the operability of the Penetration Room Ventilation System per CR-2-1999-0415 and CR-2-1999-0417.

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
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

{3.3.4}

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

NOTE: THIS WILL BE FILLED OUT PER TASK STANDARD BEFORE STARTING JPM

SHIFT TURNOVER CHECKLIST MODES 1 - 4

W. MAIN STEAM AND MAIN FEEDWATER

1. IF MSSV(s) inoperable,
   THEN perform the following:

   A. Refer to 1015.016Q (MTC vs EFPD AND POWER) to obtain limiting MTC value _____

   B. Refer to Tech Spec Figure 3.7-1(MTC vs High Linear Power Trip Setpoint) 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),
   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:

_____

_____

_____

_____

_____

If position manned, then list on shift personnel:

SM _____ CRS _____

CRSA _____ TRO _____

CBOR _____ CBOT _____

WCO _____ AO _____

EOP _____ SE _____

PERFORMEDBY:_____

REVIEWED BY: _____

ADMINISTRATIVE JOB PERFORMANCE MEASURE

UNIT: 2 **REV #:** 000 **DATE:** _____

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

TASK: Verify Inoperable Equipment Checklist

JTA#: ANOSROADMINNORM231

KA VALUE **RO:** 2.6 **SRO:** 3.8 **KA REFERENCE:** 2.2.24

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: 10 Minutes

REFERENCE(S): 1015.017, Rev. 07-00-0; Computer generated inoperable equipment checklist

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.
- 'A' HPSI and 'B' HPSI pumps are aligned for service.
- 'A' and 'C' Service water pumps are in service. 'A' Service water pump is aligned to ACW. 'B' Service water pump is aligned to red train.

MAI WORK SCOPE:

- 2P-89A COUPLING IS LEAKING GREASE. THIS MAI IS TO DISASSEMBLE, CLEAN AND INSPECT, AND REASSEMBLE THE COUPLING.

TASK STANDARD: The examinee identifies two of the incorrect entries:

- Normal/Emergency Power Supplies for Required Redundant Equipment operable? Is checked N/A. This should be checked **YES**.
- Surveillance Required on Redundant Equipment? Is checked N/A. This should be checked **NO**.
- Status Board Entry required? ? Is checked NO. This should be checked **YES**.
- Clearance or Caution Card Required? Is checked NO. This should be checked **YES**.

TASK PERFORMANCE AIDS: 1015.017 and completed inoperable equipment checklist.

ADMINISTRATIVE JOB PERFORMANCE MEASURE

INITIATING CUE:

As CRS, verify for approval the Inoperable Equipment Checklist for 2P-89A in accordance with 1015.017, Equipment Status and Control and identify two of the mistakes/errors.

CRITICAL ELEMENTS (C) 2

	PERFORMANCE CHECKLIST	STANDARD	(Circle One)
NOTE: **Examinee may or may not use 1015.017 section 9.3 when reviewing the inoperable checklist.**			
	1. Review inoperable checklist for 2P89A.	Review inoperable checklist for 2P89A using OP 1015.017 section 9.3.	N/A SAT UNSAT
NOTE: **If asked about status of surveillance on 2P89C, report that surveillance requirements are up to date.** **If asked about CR operability determinations on 2P89C or any HPSI equipment, report that no outstanding condition reports exist on any redundant equipment.** **If asked about fire impairments during performance of maintenance, report that none are required.**			
C	2. Identify errors in completion of form (Two of four required):	Examinee reviewed the inoperable checklist for 2P89A and discovered the following discrepancies: • Normal/Emergency Power Supplies for Required Redundant Equipment operable? Is checked N/A. This should be checked **YES**. • Surveillance Required on Redundant Equipment? Is checked N/A. This should be checked **NO**. • Status Board Entry required? Is checked NO. This should be checked **YES**. • Clearance or Caution Card Required? Is checked NO. This should be checked **YES**.	N/A SAT UNSAT
	3. Take appropriate action to correct discrepancies.	Informed Preparer of discrepancies and have them corrected.	N/A SAT UNSAT
END			

EXAMINEE'S COPY

JPM INITIAL TASK CONDITIONS:

- The plant is at 100% power.
- 'A' HPSI and 'B' HPSI pumps are aligned for service.
- 'A' and 'C' Service water pumps are in service. 'A' Service water pump is aligned to ACW. 'B' Service water pump is aligned to red train.

MAI WORK SCOPE:

- 2P-89A COUPLING IS LEAKING GREASE. THIS MAI IS TO DISASSEMBLE, CLEAN AND INSPECT, AND REASSEMBLE THE COUPLING.

INITIATING CUE:

As CRS, verify for approval the Inoperable Equipment Checklist for 2P-89A in accordance with 1015.017, Equipment Status and Control and identify two of the mistakes/errors.

EQUIPMENT NO. 2P89A SYSTEM HPSI

EQUIPMENT DESCRIPTION HI PRESS SAFETY INJECTION PUMP

REASON FOR INOPERABILITY

2P-89A coupling is leaking grease, disassemble, clean and inspect, and reassemble the coupling.

{3.4.4}

IS REDUNDANT EQUIP REQUIRED TO BE OPERABLE? ……	●	**Y**	○	**N**	○	**N/A**
IF YES ANSWER THE FOLLOWING, (OTHERWISE N/A) ;						
*** ARE NORMAL/EMERGENCY POWER SUPPLIES FOR REQUIRED REDUNDANT EQUIPMENT OPERABLE? ……**	○	**Y**	○	**N**	●	**N/A**
*** SURVEILLANCE REQUIRED ON REDUNDANT EQUIPMENT? ….**	○	**Y**	○	**N**	●	**N/A**
*** REDUNDANT EQUIPMENT SWING ALIGNMENT VERIFIED? …..**	○	**Y**	●	**N**	○	**N/A**
*** ARE ANY CR OPERABILITY DETERMINATIONS OPEN ON THE REDUNDANT EQUIPMENT? ……..**	○	**Y**	●	**N**	○	**N/A**

LIST REDUNDANT EQUIP/TRAIN REQUIREMENTS:

2P89C and 2P89B aligned for ES standby. Align 2P89C to red train per OP-2104.039 Attachment 'B'.

ARE CONTINGENCY ACTIONS REQUIRED TO COMPLY WITH TECH SPECS, SAR, TRM, PROCEDURES,OR OTHER REGULATORY BASES?….	○	**Y**	●	**N**	○	**N/A**

IF YES, LIST REQUIRED CONTINGENCIES:

DOES INOPERABILITY RENDER ANY EQUIPMENT, (OTHER THAN THE COMPONENT LISTED ABOVE) INOP?……	○	**Y**	●	**N**	○	**N/A**
DOES INOPERABILITY RENDER OTHER TRAIN INOP?……	○	**Y**	●	**N**	○	**N/A**
DOES INOPERABILITY RENDER OTHER SYSTEM INOP?……	○	**Y**	●	**N**	○	**N/A**

IF YES, LIST OTHER EQUIP/TRAIN/SYSTEM:

AFFECTED SPECS

LCO	MODE TYPE	TIME LIMIT
3.5.2	1,2,3 >1700 PSIA	72 HR

{3.4.2} Duel Unit Impact? ……..…	○	Y	●	N
Status Board entry required? ……..	○	Y	●	N
{3.4.3} Control Room Log entry required? ……	●	Y	○	N
MAI required to be submitted? ……..	○	Y	●	N
Redundant equipment required to be operable? ……	●	Y	○	N
Contingency Actions required? ……	○	Y	●	N
Clearance or Caution Card Required? ……	○	Y	●	N
Fire Impairment report required? ……..	○	Y	●	N
Condition report required? ……	○	Y	●	N

Section 1

Prepared by: _____ DATE/TIME _____

Approved by: _____ DATE/TIME _____
SM/CRS

==========

	Initials
Opposite Unit informed, if required. (Otherwise N/A) ……	
Status Board entry made, if required. (Otherwise N/A) ……	
Control Room log entry made, if required. (Otherwise N/A) ……	
MAI submitted, if required. (Otherwise N/A) ……	
Redundant Equipment requirements met, if required. (Otherwise N/A) ……	
Contingency Actions implemented, if required. (Otherwise N/A) ……	
Clearance or Caution card installed, if required. (Otherwise N/A) ……	
Fire Impairment Report made, if required. (Otherwise N/A) ……	
Condition Report made, if required. (Otherwise N/A) ……	

TIME CLOCK START _____ / _____ ENDS _____ / _____

If inoperable equipment requires entry into a TS, TRM, or Fire Protection System action statement time clock, place checklist in the Inoperable Equipment Notebook until equipment is returned to service. (Otherwise N/A) _____

Section 2

Performed by: _____ DATE/TIME _____

NOTE

There are no record retention requirements for this form.

When equipment is returned to service, remove this sheet from Inoperable Equipment Notebook and, if required, inform Opposite Unit.