

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. The Unit is in mode 1.

INITIATING CUES:

1. Both Main FW pumps have tripped.
2. The US directs you to trip the U1 Reactor and perform your immediate actions.
3. This is a **time critical JPM**.

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

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2. The Unit is in mode 1.

INITIATING CUES:

1. Both Main FW pumps have tripped.
3. The US directs you to trip the U1 Reactor and perform your immediate actions.
3. This is a **time critical JPM**.

JOB PERFORMANCE MEASURE

Rev. 3, 04/26/2006

TASK TITLE: Respond to an ATWS (Anticipated Transient Without Scram) – AF Pumps Fail to Start

JPM No.: N-13at

TPO No: 4D.FR-01

K&A No.: 013A4.01

K&A IMP. 4.5/4.8

EXAMINEE: _____

DATE: ___/___/___

The Examinee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR X _____

MATERIALS:

Batch file mlscrow

GENERAL REFERENCES:

1. 1BEP-0, Reactor Trip or Safety Injection (Rev. 108)
2. 1BFR-S.1, Response to Nuclear Power Generation/ATWS (Rev. 102)

TASK STANDARDS:

From memory, perform the steps necessary to complete the immediate actions of 1BEP-0 and 1BFR-S.1.

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. The Unit is in mode 1.

INITIATING CUES:

1. Both Main FW pumps have tripped.
2. The US directs you to trip the U1 Reactor and perform your immediate actions.
3. This is a **time critical JPM**.

CRITICAL ELEMENTS: (*) 2, 5, 7, & 9

CRITICAL COMPLETION TIME: 30 seconds to JPM step 7 & 60 seconds to JPM step 9

APPROXIMATE COMPLETION TIME: 5 minutes

NOTE

If this JPM is performed in the simulator, only the cues underlined are required to be provided to the examinee.

This JPM correlates with the immediate action steps of the procedure. The examinee is expected to perform these steps from memory without aid of the procedure.

RECORD START TIME __:__:__ (include seconds)

NOTE: JPM step 1 is after the first attempt to trip and maybe performed after JPM step 2.

1. Verify reactor trip

At 1PM05J, VERIFY:

Cue: Rod bottom lights are NOT LIT

o Rod bottom lights LIT

Cue: Reactor trip breakers 'GREEN' lights are LIT

o Reactor Trip and Bypass breakers OPEN

Cue: Reactor trip bypass breakers lights are 'DARK' (including TSLB)

- o RTA and BYA
- o RTB and BYB

Cue: Neutron flux is 98% on all power range NIS

o Neutron Flux DROPPING

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

2. Manually trip reactor

Cue: Reactor trip switch at 1PM05J had NO EFFECT

- MANUALLY trip reactor from 1PM05J

Cue: Reactor trip switch at 1PM06J had NO EFFECT

- MANUALLY trip reactor from 1PM06J

NOTE: Reference cue(s) in JPM step 1 as required.

NOTE

The examinee is to transition to 1BFR-S.1, continuing without use of a procedure. JPM Steps 3 and 4 need not be performed if previously performed as Steps 1 and 2. The failure of the reactor to trip both automatically and manually has been previously verified.

3. Verify reactor trip

At 1PM05J, VERIFY:

Cue: Rod bottom lights are NOT LIT

- o Rod bottom lights LIT

Cue: Reactor trip breakers 'GREEN' lights are LIT

- o Reactor Trip and Bypass breakers OPEN

Cue: Reactor trip bypass breakers lights are 'DARK' (including TSLB)

- o Reactor Trip and Bypass breakers OPEN
 - o RTA and BYA
 - o RTB and BYB

Cue: Neutron flux is 98% on all power range NIS

- o Neutron Flux DROPPING

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

4. Manually trip reactor

Cue: Reactor trip switch at 1PM05J had NO EFFECT

o MANUALLY trip reactor from 1PM05J

Cue: Reactor trip switch at 1PM06J had NO EFFECT

o MANUALLY trip reactor from 1PM06J

*5. Allow rods to insert in automatic

At 1PM05J:

Cue: Rods are stepping in at 72 steps per minute in AUTO

o CHECK rods inserting at >48 spm

Note: Applicant will allow rods to step IN, in AUTO at greater than 48 steps/min; when rod speed is less than 48 steps/min applicant should manually insert control rods.

• ALLOW auto insertion to continue

6. Verify turbine trip

At 1PM02J:

Cue: All turbine throttle valves 'GREEN' lights are LIT

o All turbine throttle valves CLOSED

Cue: All turbine governor valves 'GREEN' lights are LIT

o All turbine governor valves CLOSED

*7. Manually trip the turbine

At 1PM02J:

Cue: The turbine trip pushbutton is depressed

• Depress the Turbine trip pushbutton

NOTE TIME: __:__:__

o Verify All turbine governor valves CLOSED

Cue: All turbine throttle valves 'RED' lights are LIT

o Verify All turbine governor valves CLOSED

Cue: All turbine governor valves 'RED' lights are LIT

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

Time from start to Turbine Trip = _____ seconds

$\phi \leq 30$ seconds

8. Check AF pumps running

At 1PM06J:

Cue: *AF pumps 'GREEN' lights are LIT*

o CHECK AF pump run lights LIT

*9. Manually start the AF pumps

At 1PM06J:

Cue: *Both AF pumps 'RED' lights are lit*

• PLACE control switches for both AF pumps to START

NOTE TIME (when the first AF pump starts): __:__:__

Time from start to the first AF pump start = _____ seconds

$\phi \leq 60$ seconds

Cue: *This JPM is completed*

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. RCS is in Mode 3, with Tave = 557°F and pressure = 2235 psig.
3. All plant systems and controls are normal for this condition, with Shutdown Banks fully withdrawn.
4. Recently calculated ECC for S/U is Bank D at 150 steps, and boron = 829 ppm.
5. Most recent confirmed boron sample = 894 ppm.

INITIATING CUES:

1. The Unit Supervisor directs you to set up a dilution to dilute half of the amount to the critical boron concentration.
2. The Unit Supervisor directs you to add the calculated amount of Primary Water over a 45 minute period of time using the Dilute Mode per BOP CV-5.

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. RCS is in Mode 3, with Tave = 557°F and pressure = 2235 psig.
3. All plant systems and controls are normal for this condition, with Shutdown Banks fully withdrawn.
4. Recently calculated ECC for S/U is Bank D at 150 steps, and boron = 829 ppm.
5. Most recent confirmed boron sample = 894 ppm.

INITIATING CUES:

1. The Unit Supervisor directs you to set up a dilution to dilute half of the amount to the critical boron concentration.
2. Add the amount over a 45 minute period using the Dilute Mode per BOP CV-5.

JOB PERFORMANCE MEASURE

Rev. 8, 4/28/2006

TASK TITLE: Perform 65 PPM Boron Dilution (S/D)

JPM No.: N-25

TPO No: 4C.CV-04

K&A No.: 004A4.07

K&A IMP. 3.9 / 3.7

EXAMINEE: _____

DATE: ___/___/___

The Examinee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: SIMULATOR X _____

MATERIALS:

1. Copy of BOP CV-5
2. Copy of BCB-1 Book

GENERAL REFERENCES:

1. BOP CV-5, Operation of the Reactor Makeup System in the Dilute and Alternate Dilute Mode (Rev. 20)
2. BCB-1 Table 3-1, Byron Boration Dilution Tables (Rev. 1)

TASK STANDARDS:

1. Calculate the amount of primary water necessary to lower the RCS boron concentration by 65 PPM.
2. Add the correct amount of primary water to the RCS.

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. RCS is in Mode 3, with Tave = 557°F and pressure = 2235 psig.
3. All plant systems and controls are normal for this condition, with Shutdown Banks fully withdrawn.
4. Recently calculated ECC for S/U is Bank D at 150 steps, and boron = 829 ppm.
5. Most recent confirmed boron sample = 894 ppm.

INITIATING CUES:

1. The Unit Supervisor directs you to set up a dilution to dilute **half** of the amount to the critical boron concentration.
2. Add the amount over a 45 minute period using the Dilute Mode per BOP CV-5.

CRITICAL ELEMENTS: (*) 2, 5, 6, 7, & 10

APPROXIMATE COMPLETION TIME: 25 minutes

RECORD START TIME _____

NOTE

If this JPM is performed on the simulator, only the cues underlined are required to be provided to the examinee.

- | | | | | |
|--|----------------------------|--------------------------|--------------------------|--------------------------|
| 1. Refer to BOP CV-5, Operation of the Reactor Makeup System in the Dilute and Alternate Dilute Mode | ◦ LOCATE and OPEN BOP CV-5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|----------------------------|--------------------------|--------------------------|--------------------------|

Note: Step 1 may be performed at any time.

Cue: All prerequisites are met

- | | | | | |
|--|--|--------------------------|--------------------------|--------------------------|
| *2. Determine amount of PW to be added | • DETERMINE desired gallons of PW using BCB-1 Table 3-1: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--|--------------------------|--------------------------|--------------------------|

Note: Must use 557°F Table

~ 5180 gallons total (**half is ~ 2590**)

- | | | | | |
|----------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| *3. Determine PW flow rate | ◦ DETERMINE PW flow rate: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|----------------------------|---------------------------|--------------------------|--------------------------|--------------------------|

Note: May be performed in step 6

2590/45 ~ 57.56 gpm

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

*4. Stop makeup

At 1PM05J:

- PLACE makeup control switch in STOP

*5. Set makeup mode

At 1PM05J:

- PLACE mode select switch in DILUTE

*6. Set flow rate

At 1PM05J:

Note: If initially set wrong, flow rate may be corrected in step 10

Note: The primary water flow control pot should be set to 3.60 turns

- ADJUST 1FK-111 to 3.60 turns

$$57.56/16 = 3.60$$

*7. SET PW/Total Flow Counter:

At 1PM05J:

Note: 2590 should be INSERTED a range of 2585-2595 gallons is an acceptable range.

- PRESS "RST"
- PRESS "PST"
- PRESS "→"
- PRESS "+" or "-" to insert 2590
- PRESS "ENT"
- VERIFY 2590

NOTE

The examinee **may** lower the pot setting for 1CV112A per Step F.8, mark JPM step 8 N/A if not performed

8. Lower POT setting to maintain VCT pressure	At 1PM05J: <ul style="list-style-type: none">◦ VERIFY 1CV112A in AUTO◦ RECORD POT setting of 1LK112◦ ADJUST 1LK112 to maintain VCT pressure in desired band	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Note: VCT Pressure will be increasing and should be adjusted)				
9. Verify valve alignment	VERIFY/PLACE in AUTO: <ul style="list-style-type: none">◦ 1CV111A◦ 1CV111B◦ 1CV110B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*10. Start dilution	<ul style="list-style-type: none">• PLACE makeup control switch to START	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

11. Verify flow

At 1PM05J, ENSURE
OPENS:

- 1CV111A
- 1CV111B
- VERIFY 1FR-110
indicates expected flow rate

12. Equalize boron concentration

At 1PM05J:

- VERIFY/PLACE at least
two backup heater
groups A/B/D to ON
- VERIFY pressurizer
spray valves modulate
open

Cue: *This JPM is completed*

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit NSO.
2. The unit is in Mode 1, steady state power.

INITIATING CUES:

1. Respond to alarms on 1PM05J.

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit NSO.
2. The unit is in Mode 1, steady state power.

INITIATING CUES:

1. Respond to alarms on 1PM05J.

JOB PERFORMANCE MEASURE

Rev. 9, 04/27/2005

TASK TITLE: Respond to a Pressurizer Pressure Control Channel Malfunction

JPM No.: Sim JPM a

TPO No: IV.D.OA-11

K&A No.: 010A4.01

K&A IMP. 3.6/3.4

EXAMINEE: _____

DATE: ___/___/___

The Examinee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____

SIMULATE _____

LOCATION: IN PLANT _____

SIMULATOR X

MATERIALS:

1. Copy of 1BOA INST-2, Attachment B
2. Simulator malfunction rx21a to 1700

GENERAL REFERENCES:

1. 1BOA INST-2, Operation with a Failed Instrument (Rev. 103)
2. BAR 1-12-A1 PZR PRESS LOW RX TRIP STPT ALERT (Rev. 1)
3. BAR 1-12-B1 PZR PRESS LOW (Rev. 1)

TASK STANDARDS:

1. Identify a failed pressurizer pressure channel.
2. Restore pressurizer pressure to normal.

TASK CONDITIONS:

1. You are the Unit NSO.
2. The unit is in Mode 1, steady state power.

INITIATING CUES:

1. Respond to alarms on 1PM05J.

CRITICAL ELEMENTS: (*) 3, 4, & 8

APPROXIMATE COMPLETION TIME: 18 minutes

RECORD START TIME _____

NOTE

If this JPM is performed on the simulator, only the cues underlined are required to be provided to the examinee.

Cue (once the examinee has the Unit):

Annunciator 1-12-A1 PZR PRESS LOW RX TRIP STPT ALERT is LIT and

Annunciator 1-12-B1 PZR PRESS LOW is LIT.

- | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|
| 1. Refer to 1BOA INST-2, Operation with a Failed Instrument | ◦ LOCATE and OPEN 1BOA INST-2, Attachment B | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|---|--------------------------|--------------------------|--------------------------|

Note: Provide the examinee with a copy of 1BOA INST-2, Attachment B.

Note: The examinee may perform this step after the unit is stable

Cue: (if needed) The Unit Supervisor is unavailable.

- | | | | | |
|-------------------------------|---|--------------------------|--------------------------|--------------------------|
| 2. Check pressurizer pressure | At 1PM05J, CHECK pressurizer pressure NORMAL: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | ◦ 1PI 455 | | | |
| | ◦ 1PI 456 | | | |
| | ◦ 1PI 457 | | | |
| | ◦ 1PI 458 | | | |

<u>PERFORMANCE CHECKLIST</u>	<u>STANDARDS</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
*3. Manual control of pressure	At 1PM05J, Take manual control to restore pressure:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Note: Pressure is decreasing slowly to 2235 psig	<ul style="list-style-type: none"> • PLACE master pressurizer pressure controller in MANUAL • REDUCE pressurizer pressure to NORMAL 			
*4. Manual control of pressure	At 1PM05J:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Note: Channel 457/458 should be selected	<ul style="list-style-type: none"> • SELECT an operable pressurizer pressure control channel on pressurizer pressure control channel select switch 			
5. Check PORVs	At 1PM05J, CHECK PORVs CLOSED:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> ◦ 1RY455A ◦ 1RY456 			
6. Check Spray valves	At 1PM05J, CHECK spray valves NORMAL:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Note: 1RY455B&1RY455C indicate an INTERMEDIATE position	<ul style="list-style-type: none"> ◦ 1RY455B ◦ 1RY455C 			

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

7. Check heaters

At 1PM05J:

Note: All backup heaters are in AUTO

- CHECK heaters NORMAL

NOTE

The examinee may have previously placed the master pressurizer pressure controller in AUTO once pressure was returned to normal.

*8. Restore the master controller to auto

At 1PM05J:

- Verify the PZR PORVs and Spray valves are in AUTO
- PLACE the master pressurizer pressure controller in AUTO

9. Operable channels to recorders

At 1PM05J:

- SELECT channel 456,457, or 458 on pressurizer pressure recorder selector switch
- Select 1B, 1C, or 1D on the ΔT recorder

NOTE

Placement of dots is a method to ensure coincidences are not met. The evaluator should apply discretion in accepting alternate methods since no specific method is stated in 1BOA INST-2.

NOTE

An extra NSO will be required, insure the examinee can discuss how the tripping of the bistables would be verified.

10. Trip associated bistables

Direct a second NSO to trip bistables:

- 1PB455A
- 1PB455B
- 1PB455C
- 1PB455D
- 1TB411C
- 1TB411D

Cue: *The US will hold a PJB for tripping bistables.*

Cue: *That completes this JPM*

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. The Unit is at 100% power.

INITIATING CUES:

1. Annunciator 1-7-B3 "RCP SEAL LEAKOFF FLOW HIGH" has just gone into alarm.

JOB PERFORMANCE MEASURE

Rev. 2, 3/5/08

TASK TITLE: **Respond to High RCP Seal Leakoff Flow**

JPM No.: Sim JPM 1

TPO No: IV.D.OA.05

K&A No.: 003 A2.01

K&A IMP. 3.5/3.9

Examinee: _____

DATE: ___/___/___

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM X SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR X

MATERIALS:

1BOA RCP-1, Rev. 102, Reactor Coolant Seal Failure

GENERAL REFERENCES:

1. 1BOA RCP-1, Rev. 102, Reactor Coolant Seal Failure
2. BAR 1-7-B3, Rev 10, RCP Seal Leakoff Flow High

TASK STANDARDS:

Respond to RCP Leakoff from No. 1 Seal.

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. The Unit is at 100% power.

INITIATING CUES:

Annunciator 1-7-B3 "RCP SEAL LEAKOFF FLOW HIGH" has just gone into alarm.

CRITICAL ELEMENTS: (*)

3,4 & 5

APPROXIMATE COMPLETION TIME: 5 minutes

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

RECORD START TIME_____

1. Refer to BAR 1-7-B3, and perform Immediate Operator Actions.

Locate and Open BAR 1-7-B3 and perform the following Immediate Operator Actions:

- CHECK Seal Injection Flows.

- DETERMINE which pump is alarming by SER printout.

Cue: The extra NSO will take care of subsequent actions

- REFER to 1BOA RCP-1.

Cue: US Directs NSO to Implement 1BOA RCP-1

Note:

Provide examinee a copy of 1BOA RCP-1

2. Enter 1BOA RCP-1 and Check No. 1 Seal DP.

- STEP 1: CHECK 1D RCP No. 1 Seal DP GREATER THAN 200 PSID.

<u>PERFORMANCE CHECKLIST</u>		<u>STANDARDS</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
*3.	Check No. 1 Seal Leakoff Flow Note: No. 1 seal leakoff flow should be 5.5 gpm.	STEP 2: Perform the following to DETERMINE RCP Seal Leakoff Flow is HIGH: <ul style="list-style-type: none"> ◦ DETERMINE Seal DP by comparing Charging Header Pressure to VCT Pressure. • CHECK 1B RCP No. 1 Seal Leakoff Flows. • DETERMINE Actual 1D RCP No. 1 Seal Leakoff Flow is HIGH by comparing to Figure 1BOA RCP-1-1 and GO TO 1BOA RCP-1 step 6. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*4.	Monitor RCP Seal Parameters	<ul style="list-style-type: none"> • Step 6: Determine 1D RCP No. 1 seal leakoff flow is less than 6 GPM and GO TO 1BOA RCP-1 step 7 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Check No. 2 seal leakoff high flow alarm on sequence of events recorder	<ul style="list-style-type: none"> • 1BOA RCP-1 Step 7a: Determine 1D RCP No. 2 seal leakoff flow is NOT IN ALARM. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Dispatch NLO to locally check No. 2 seal leakoff flow: 1D RCP 1FIS-CV0191.	<ul style="list-style-type: none"> • 1BOA RCP-1 Step 7b: Determines No. 2 seal leakoff flow is 0.8 gpm. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cue: NLO reports No. 2 seal leakoff flow at 0.8 gpm					

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

*7.	Sum of No. 1 and No. 2 seal leakoff flows Greater than 6 gpm.	• 1BOA RCP-1 Step 7c: Determines Total seal leakoff flow is 6.3 gpm which is greater than 6 gpm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*8.	Sum of No. 1 and No. 2 seal leakoff flows Greater than 7 gpm.	• 1BOA RCP-1 Step 7d: Maintain at least 9 gpm seal injection flow.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		• Initiate a Unit shutdown per 1BGP 100-4, Power Descension.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		• Monitor RCP parameters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cue: US acknowledges the need to shutdown the Rx

Cue: This completes the JPM.

RECORD STOP TIME _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

JPM NO: Sim JPM

REQUIRED SIMULATOR MODE(S): 100% power steady state

MALFUNCTION #'S:

- 1) IMF CV27B Ramp from 5 gpm to 5.5 gpm over 30 seconds.

COMMENTS:

- 1) Insert malf and freeze simulator, go to run after examinee has been cued.
- 2) Ensure SER is on and the correct SER point (2072) is visible on the terminal at the NSO desk.
- 3) VCT level at top of green band.
- 4) 1D RCP Leakoff recorder should indicate greater than 5.5 gpm.

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the extra NSO.
2. Unit 1 is starting to increase RCS temperature and needs to start the 1B Containment Chiller to maintain containment temperatures within limits.
3. All procedural prerequisites, precautions, limitations and actions have been verified.
4. An NLO has been briefed and is standing by to assist you with starting the 1B VP Chiller.

INITIATING CUES:

The Unit Supervisor directs you to start the 1B Containment Chiller from the main control room in accordance with BOP VP-1, RCFC Refrigeration Unit and Chilled Water System Startup.

JOB PERFORMANCE MEASURE

Rev. 6, 04/27/2006

TASK TITLE: Start the 1B VP Chiller and Chilled water pump.

JPM No.: Sim JPM e

TPO No:

K&A No.: 022A4.02

K&A IMP. 3.2/3.1

EXAMINEE: _____

DATE: ___/___/___

The Examinee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____

SIMULATE _____

LOCATION: IN PLANT _____

SIMULATOR X _____

MATERIALS:

- 1. Batch file mlsmetrostars
- 2. Copy of BOP DG-11

GENERAL REFERENCES:

- 1. BOP VP-1, RCFC Refrigeration Unit and Chilled Water System Startup.

TASK STANDARDS:

Perform the actions necessary to start the 1B Containment Chiller.

TASK CONDITIONS:

- 1. You are the extra NSO.
- 2. Unit 1 is starting to increase RCS temperature and needs to start the 1B Containment Chiller to maintain containment temperatures within limits.
- 3. All procedural prerequisites, precautions, limitations and actions have been verified.
- 4. An NLO has been briefed and is standing by to assist you with starting the 1B VP Chiller.

INITIATING CUES:

The Unit Supervisor directs you to start the 1B Containment Chiller from the main control room in accordance with BOP VP-1, RCFC Refrigeration Unit and Chilled Water System Startup.

CRITICAL ELEMENTS: (*) 6, 9, & 11

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

APPROXIMATE COMPLETION TIME: 15 minute

Start Time: _____

Cue: Provide applicant with a copy of BOP VP-1 and remind them that all prerequisites, precautions and limitations & actions are complete.

1. Obtain a copy of BOP VP-1, RCFC Refrigeration Unit and Chilled Water System Startup	Obtain BOP VP-1, RCFC Refrigeration Unit and Chilled Water System Startup	___	___	___
2. Verify/Open 1SX016B RCFC SX Supply Isol Valve (1PM06J)	Open 1SX016B, RCFC SX Supply Isol Valve (1PM06J)	___	___	___
3. Verify/Open 1SX027B, RCFC SX Return Hdr Isol Valve (1PM06J)	Open 1SX027B, RCFC SX Return Hdr Isol Valve (1PM06J)	___	___	___
4. Verify/Open 1SX112B, Cnmt Chiller SX supply valve (0PM02J)	Open 1SX112B, Cnmt Chiller SX supply valve (0PM02J)	___	___	___
5. Verify/Open 1SX114B, Cnmt Chiller SX return valve (0PM02J)	Open 1SX114B, Cnmt Chiller SX return valve (0PM02J)	___	___	___
6. Verify/Open 1WO006B, RCFC cooling coil inlet Cnmt isol valve (1PM06J)	Open 1WO006B, RCFC cooling coil inlet Cnmt isol valve (1PM06J)	___	___	___
7. Verify/Open 1WO020B, RCFC cooling coil outlet Cnmt isol valve (1PM06J)	Open 1WO020B, RCFC cooling coil outlet Cnmt isol valve (1PM06J)	___	___	___
8. Verify/Open 1WO056B, RCFC cooling coil outlet Cnmt isol valve (1PM06J)	Open 1WO056B, RCFC cooling coil outlet Cnmt isol valve (1PM06J)	___	___	___

Cue: As NLO locally inform applicant that the “1B Chilled water pump suction pressure is 35 psig”

<u>PERFORMANCE CHECKLIST</u>	<u>STANDARDS</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
9. Verify chilled water pump suction pressure > 10 psig	Chilled water pump suction pressure is 35 psig locally	___	___	___
*10. Start 1WO01PB chilled water pump	1WO01PB pump started from main control room	___	___	___
Cue: Chilled water flow is 3000 gpm				
11. Locally Verify chilled water flow is above 2700 gpm	NLO asked to determine if chilled water flow > 2700 gpm	___	___	___
Cue: Oil level is visible in sight glass				
12. Locally verify chiller oil level is visible in sight glass	NLO asked to verify chiller oil level is visible	___	___	___
Cue: Oil temperature is 145°F				
13. Locally verify oil reservoir temperature is 135°F - 150°F	NLO asked to verify chiller oil temp is 135°F - 150°F	___	___	___
Cue: Capacity Control Switch is in Auto				
14. Locally Place Capacity Control Switch to Auto	NLO asked to place capacity control switch to AUTO	___	___	___
Cue: Electrical demand selector is at 60%				
15. Locally place electrical demand selector switch at 60%	NLO asked to place electrical demand selector switch to 60%	___	___	___
Cue: Local control switch is in STOP				
16. Locally place the local control switch to STOP	NLO asked to place local control switch to STOP	___	___	___
Cue: Local/Remote transfer switch is in REMOTE				
*17. Place local/remote transfer switch to REMOTE	NLO asked to place local/remoter transfer switch to REMOTE	___	___	___

PERFORMANCE CHECKLIST

STANDARDS

SAT

UNSAT

N/A

*18. Place control switch for 1WO01CB on 0PM02J to CLOSE

PLACE control switch for 1WO01CB on 0PM02J to CLOSE

___ ___ ___

Cue: Reset button depressed and released for safety indicators

19. Locally Push reset button for safety indicators at the local control panel and release

Ask NLO to push reset button for safety indicators at local control panel and release

___ ___ ___

20. Locally Program timer light comes on at local control panel

Program timer light illuminates on local control panel

___ ___ ___

21. Oil pump starts in approximately 25 seconds

Oil pump start after approximately 25 seconds

___ ___ ___

22. Verify Compressor starts approximately 30 seconds after oil pump starts.

Chiller compressor starts approximately 55 seconds after control switch is taken to CLOSE

___ ___ ___

That Completes this JPM

Completion Time _____

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the extra NSO.
2. Unit 1 is starting to increase RCS temperature and needs to start the 1B Containment Chiller to maintain containment temperatures within limits.
3. All procedural prerequisites, precautions, limitations and actions have been verified.
4. An NLO has been briefed and is standing by to assist you with starting the 1B VP Chiller.

INITIATING CUES:

The Unit Supervisor directs you to start the 1B Containment Chiller from the main control room in accordance with BOP VP-1, RCFC Refrigeration Unit and Chilled Water System Startup

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the extra NSO.
2. The unit's ESF busses are being supplied by the SATs.
3. The 1A Diesel Generator has been running unloaded for approximately fifteen minutes after a manual start.
4. Jacket water and lube oil temperatures are acceptable for loading the diesel generator.

INITIATING CUES:

The Unit Supervisor directs you to parallel and load the 1A Diesel Generator to 5400 KW per step F.5 of BOP DG-11.

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

4. You are the extra NSO.
5. The unit's ESF busses are being supplied by the SATs.
6. The 1A Diesel Generator has been running unloaded for approximately fifteen minutes after a manual start.
4. Jacket water and lube oil temperatures are acceptable for loading the diesel generator.

INITIATING CUES:

The Unit Supervisor directs you to parallel and load the 1A Diesel Generator to 5400 KW per step F.5 of BOP DG-11.

JOB PERFORMANCE MEASURE

Rev. 6, 04/27/2006

TASK TITLE: Synchronize a D/G to a Bus and Load to 5400 KW JPM No.: Sim JPM 6
(DG will not pick up load)

TPO No: 4C.DG-02

K&A No.: 064A2.09

K&A IMP. 3.1/3.3

EXAMINEE: _____

DATE: ___/___/___

The Examinee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____

SIMULATE _____

LOCATION: IN PLANT _____

SIMULATOR X

MATERIALS:

1. Batch file mlsmetrostars
2. Copy of BOP DG-11

GENERAL REFERENCES:

1. BOP DG-11, Diesel Generator Startup (Rev. 19)

TASK STANDARDS:

Perform the actions necessary to synchronize and load the 1A Diesel Generator to it's ESF bus.

TASK CONDITIONS:

1. You are the extra NSO.
2. The unit's ESF busses are being supplied by the SATs.
3. The 1A Diesel Generator has been running unloaded for approximately fifteen minutes after a manual start.
4. Jacket water and lube oil temperatures are acceptable for loading the diesel generator.

INITIATING CUES:

The Unit Supervisor directs you to parallel and load the 1A Diesel Generator to 5400 KW per step F.5 of BOP DG-11.

CRITICAL ELEMENTS: (*) 6, 9, & 11

APPROXIMATE COMPLETION TIME: 15 minutes

RECORD START TIME _____

NOTE

If this JPM is given on the simulator, only the cues underlined are required to be given to the examinee.

- | | | | | |
|---|---------------------------------------|--------------------------|--------------------------|--------------------------|
| 1. Refer to BOP DG-11, Diesel Generator Startup | ◦ LOCATE and OPEN BOP DG-11, step F.5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|---------------------------------------|--------------------------|--------------------------|--------------------------|

Cue: All prerequisites have been met

Cue: (If asked) The 1A DG was started per step F.1

Cue: (If asked) The 1A DG was started fifteen minutes ago

Note: Provide the examinee a copy of BOP DG-11.

- | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|
| 2. Notify Electric Operations of pending diesel generator parallel operation, estimated run time, and loading | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--|--------------------------|--------------------------|--------------------------|

Cue: Electric Operations has been informed ◦ Notify Electric Operations

- | | | | | |
|--|------------|--------------------------|--------------------------|--------------------------|
| 3. Auto Re-close Circuit Arm Selector Switch | At 1PM01J: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|------------|--------------------------|--------------------------|--------------------------|

◦ PLACE Auto Re-close Circuit Arm Selector Switch to SURV TEST

<u>Performance Checklist</u>	<u>Standard</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
4. Verify DG operating properly	At 1PM01J, CHECK: <ul style="list-style-type: none"> ◦ DG frequency ◦ DG voltage 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Verify the same voltage across each phase.	At 1PM01J, CHECK: <ul style="list-style-type: none"> ◦ DG phase voltages 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*6. Turn on the 1A DG Feed to 141 Sync Selector switch.	At 1PM01J: <ul style="list-style-type: none"> • TURN Sync Selector switch for DG 1A Feed to 4KV Bus 141 to ON 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*7. Adjust the incoming voltage.	At 1PM01J: <ul style="list-style-type: none"> ◦ ADJUST incoming voltage SLIGHTLY HIGHER than running voltage using DG 1A Volt Adj control 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*8. Adjust 1A DG speed.	At 1PM01J: <ul style="list-style-type: none"> ◦ Adjust speed so synchroscope rotates SLOWLY in FAST DIRECTION using DG 1A Gov Adj control 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Performance Checklist</u>	<u>Standard</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
*9. Synchronize the DG	At 1PM01J:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Cue: (If requested) NLO is locally monitoring temperatures per notes in BOP</u>	<ul style="list-style-type: none"> PLACE control switch for ACB 1413 to CLOSE when synchroscope is slightly before 12 o'clock 			
10. Verify the synchroscope is locked in.	At 1PM01J:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> VERIFY synchroscope "locks in" at 12 o'clock 			
*11. Immediately load the 1A DG to 1000 KW.	At 1PM01J:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Note: The governor adjust is failed such that the diesel generator will NOT load	<ul style="list-style-type: none"> IMMEDIATELY load DG to 1000 KW by going to RAISE on Gov Adj Control OPEN output breaker 			
12. Notify the US of the unsuccessful loading of the diesel		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Cue: The Unit Supervisor acknowledges the failure and will initiate an WR for maintenance to investigate</u>	<ul style="list-style-type: none"> NOTIFY Unit Supervisor of the unsuccessful loading of the diesel 			
<u>Cue: This JPM is complete</u>				

RECORD STOP TIME _____

COMMENTS:

Job Performance Measure

Task Conditions:

1. You are an extra NSO in the control room during a LOCA event.
2. The crew has performed the actions contained in 1BEP-0, Reactor Trip or Safety Injection and is currently in 1BEP-1, Loss of Reactor or Secondary Coolant at step 11.d.
3. Containment Isolation Phase A has just been reset.

Initiating Cue:

The Unit Supervisor has just ordered you to perform step 11.d of 1BEP-1, Loss of Reactor or Secondary Coolant to place the Hydrogen Monitors in service per BOP PS-9, Post LOCA Containment Hydrogen Monitoring System Operation.

Job Performance Measure

Task Conditions:

1. You are an extra NSO in the control room during a LOCA event.
2. The crew has performed the actions contained in 1BEP-0, Reactor Trip or Safety Injection and is currently in 1BEP-1, Loss of Reactor or Secondary Coolant at step 11.d.
3. Containment Isolation Phase A has just been reset.

Initiating Cue:

The Unit Supervisor has just ordered you to perform step 11.d of 1BEP-1, Loss of Reactor or Secondary Coolant to place the Hydrogen Monitors in service per BOP PS-9, Post LOCA Containment Hydrogen Monitoring System Operation.

JOB PERFORMANCE MEASURE

Rev. 0, 03/20/2008

TASK TITLE: Start Hydrogen Monitoring System per BOP PS-9 JPM No.: Sim JPM g

TPO No: K&A No.: 029A2.04

K&A IMP. 2.5/3.2

EXAMINEE: _____

DATE: ___/___/___

The Examinee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____

SIMULATE _____

LOCATION: IN PLANT _____

SIMULATOR X

MATERIALS:

- 1. Copy of BOP PS-9, Post LOCA Containment Hydrogen Monitoring System Operation
- 2. Copy of 1BEP-1, Loss of Reactor or Secondary Coolant

GENERAL REFERENCES:

- 1. BOP PS-9, Post LOCA Containment Hydrogen Monitoring System Operation

TASK STANDARDS:

Perform the actions necessary to align and start the Post LOCA Cnmt Hydrogen Monitoring System.

TASK CONDITIONS:

- 1. You are an extra NSO in the control room during a LOCA event.
- 2. The crew has performed the actions contained in 1BEP-0, Reactor Trip or Safety Injection and is currently in 1BEP-1, Loss of Reactor or Secondary Coolant at step 11.d.
- 3. Containment Isolation Phase A has just been reset.

INITIATING CUES:

The Unit Supervisor has just ordered you to perform step 11.d of 1BEP-1, Loss of Reactor or Secondary Coolant to place the Hydrogen Monitors in service per BOP PS-9, Post LOCA Containment Hydrogen Monitoring System Operation.

CRITICAL ELEMENTS: (*)

APPROXIMATE COMPLETION TIME: 15 minutes

Record Start Time _____

<u>Performance Checklist</u>	<u>Standard</u>	<u>Sat</u>	<u>Unsat</u>	<u>N/A</u>
1. Obtain a copy of BOP PS-9, Review BOP PS-9, Post Loca Post Loca Cnmt Hydrogen Monitoring System Operation	Cnmt Hydrogen Monitoring System Operation procedure	___	___	___
*2. Open the following valves on 1PM11J.				
*1. 1PS228A Pri Cnmt Isol to H ₂ Monitor	OPEN 1PS228A on 1PM11J	___	___	___
*2. 1PS230A Return Cnmt Isol from H ₂ Monitor	OPEN 1PS230A on 1PM11J	___	___	___
*3. 1PS228B Pri Cnmt Isol to H ₂ Monitor	OPEN 1PS228B on 1PM11J	___	___	___
*4. 1PS229A Sec Cnmt Isol to H ₂ Monitor	OPEN 1PS229A on 1PM11J	___	___	___
*5. 1PS229B Sec Cnmt Isol to H ₂ Monitor	OPEN 1PS229B on 1PM11J	___	___	___
*6. 1PS230B Return Cnmt Isol from H ₂ Monitor	OPEN 1PS230B on 1PM11J	___	___	___

Cue: NLO to report that Valves have been locally Opened

*3. Direct NLO to locally open the following valves at 1PS47J & 1PS48J				
• 1PS232A Manual Inlet Isol to H ₂ Monitor	1PS232A locally OPENED	___	___	___
• 1PS233A Manual Outlet Isol from H ₂ Monitor	1PS233A locally OPENED	___	___	___
• 1PS232B Manual Inlet Isol to H ₂ Monitor	1PS232B locally OPENED	___	___	___
• 1PS233B Manual Outlet from H ₂ Monitor	1PS233B locally OPENED	___	___	___

Cue: ALARM SET / NORMAL switch is in the NORMAL position

Performance Checklist

Standard

Sat Unsat N/A

*4. Locally verify the ALARM SET / NORMAL switch is set to NORMAL on 1PS43J & 1PS44J ALARM SET / NORMAL switch is set to NORMAL _____

*5. Place the ON-OFF switch on 1HSU-PS345 & 1HSU-PS346 on 1PM12J to the ON position ON-OFF switch on 1HSU-PS345 & 346 on 1PM12J are ON _____

Cue: Four minutes have elapsed.

6. Verify the H₂ & System Status Alarm lights on 1HSU-PS345 & 1HSU-PS346 are not ON H₂ & System Status Alarm lights are ON _____

Cue: The LO RANGE lights are ON

7. Verify on 1PM06J 1EL-PS343 & 1EL-PS344 LO RANGE lights are ON LO RANGE lights are ON _____

That Completes This JPM

Record Completion Time _____

Comments:

Job Performance Measure

Task Conditions:

1. You are an extra NSO in the control room.
2. Unit 1 Containment pressure is at 0.9 psig and needs to be reduced.
3. A Gaseous Effluent Release Form has been prepared and approved for use by the Unit 1 Unit Supervisor.
4. 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. Cnmt Purge Effluent 1PR01J Source/Channel Check has been completed.

Initiating Cue:

The Unit Supervisor has just ordered you to release the Unit 1 Containment per the release package and BOP VQ-6 using the Mini-Purge Exhaust Fan 1VQ05C.

Job Performance Measure

Task Conditions:

1. You are an extra NSO in the control room.
2. Unit 1 Containment pressure is at 0.9 psig and needs to be reduced.
3. A Gaseous Effluent Release Form has been prepared and approved for use by the Unit 1 Unit Supervisor.
4. 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. Cnmt Purge Effluent 1PR01J Source/Channel Check has been completed.

Initiating Cue:

The Unit Supervisor has just ordered you to release the Unit 1 Containment per the release package and BOP VQ-6 using the Mini-Purge Exhaust Fan 1VQ05C.

JOB PERFORMANCE MEASURE

Rev. 0, 03/25/2008

TASK TITLE: Release Unit 1 Cnmt per BOP VQ-6

JPM No.: Sim JPM h

TPO No:

K&A No.: 071A4.26

K&A IMP. 3.1/3.9

EXAMINEE: _____

DATE: ___/___/___

The Examinee: PASSED _____ this JPM
 FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____

SIMULATE _____

LOCATION: IN PLANT _____

SIMULATOR X

MATERIALS:

1. BCP 400-TCNMT/ROUTINE, Gaseous Effluent Release Form
2. Copy of BOPVQ-6, Containment Mini-Purge System Operation
3. 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. Cnmt Purge Effluent 1PR01J Source/Channel Check

GENERAL REFERENCES:

1. BCP 400-TCNMT/ROUTINE, Gaseous Effluent Release Form
2. Copy of BOPVQ-6, Containment Mini-Purge System Operation
3. 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. Cnmt Purge Effluent 1PR01J Source/Channel Check

TASK STANDARDS:

Perform the actions necessary to align and start the Mini-Purge System to vent Unit 1 containment. The applicant will isolate the Mini-Purge System after the receipt of a high radiation alarm on 1PR01J.

TASK CONDITIONS:

1. You are an extra NSO in the control room.
2. Unit 1 Containment pressure is at 0.9 psig and needs to be reduced.
3. A Gaseous Effluent Release Form has been prepared and approved for use by the Unit 1 Unit Supervisor.
4. 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. Cnmt Purge Effluent 1PR01J Source/Channel Check has been completed.

INITIATING CUES:

The Unit Supervisor has just ordered you to release the Unit 1 Containment per the release package and BOP VQ-6 using the Mini-Purge Exhaust Fan 1VQ05C.

CRITICAL ELEMENTS: (*)

APPROXIMATE COMPLETION TIME: 15 minutes

<u>Performance Checklist</u>	<u>Standard</u>	<u>Sat</u>	<u>Unsat</u>	<u>N/A</u>
Record Start Time _____				
1. Obtain Release Package with a copy of BOP VQ-6	Obtain Release Package with BOP VQ-6	___	___	___
2. Review BOP VQ-6 Prerequisites, Precautions, & Limitations and Actions	Review BOP VQ-6	___	___	___
3. Determine that steps F.8 & F.9 will be used	Determine that steps F.8 & F.9 are applicable	___	___	___
4. Verify the Gaseous Effluent Release Form is approved by the Shift Manager or designated SRO Licensed Assistant	Verify Release Form is approved by SM or designee	___	___	___
5. Verify that 0VA02CA/B, VA Exh Fan 0A of 0B is in operation	Verify that 0VA02CA is in operation	___	___	___
6. N/A steps F.3, F.4, F.5, F.6, & F.7 of BOP VQ-6	N/A steps F.3, F.4, F.5, F.6, & F.7	___	___	___
*7. OPEN 1VQ005A, Mini flow Prg Exh Inside Isol	OPEN 1VQ005A, Mini flow Prg Exh Inside Isol	___	___	___
*8. OPEN 1VQ005B, Mini flow Prg Exh Outside Isol	OPEN 1VQ005B, Mini flow Prg Exh Outside Isol	___	___	___
*9. OPEN 1VQ005C, Mini flow Prg Exh Outside Isol	OPEN 1VQ005C, Mini flow Prg Exh Outside Isol	___	___	___

<u>Performance Checklist</u>	<u>Standard</u>	<u>Sat</u>	<u>Unsat</u>	<u>N/A</u>
10. Record time release began on Gaseous Effluent Release Form	Record time release began on Gaseous Effluent Release Form	___	___	___
*11. Start 1VQ05C, Cnmt Mini-Purge Exhaust Fan	Start 1VQ05C, Cnmt Mini-Purge Exhaust Fan	___	___	___
12. Record start time of fan on Gaseous Effluent Release Form	Record start time of 1VQ05C on Gaseous Effluent Release Form	___	___	___
13. Monitor Containment Pressure	Monitor Cnmt Pressure	___	___	___
Note: Alternate path of JPM begins here				
14. Respond to 1PR01J radiation alarm on RM-11	Respond to 1PR01J alarm on RM-11	___	___	___
15. Refer to BAR RM11-2-1PR01J	Refer to BAR RM11-2-1PR01J	___	___	___
Note: Applicant can use BAR RM-11-2-1PR01J or Limitations and Actions E.2 as guidance to secure the Cnmt Vent				
*16. Secure the U-1 Cnmt Release per BOP VQ-6 step F.9	Determine that the U-1 Cnmt Release must be isolated	___	___	___
*17. Stop 1VQ05C, Cnmt Mini Flow Purge Exhaust Fan	Stop 1VQ05C, Cnmt Mini-Purge Exhaust Fan	___	___	___

Performance Checklist

Standard

Sat Unsat N/A

18. Record fan stop time on
Gaseous Effluent Release
Form

Record fan stop time on
Gaseous Effluent Release
Form

___ ___ ___

That completes this JPM

Completion Time_____

Comments: