DUANE ARNOLD

APRIL 2001

NRC COMMENTS ON OPERATING TEST

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
A1a R	E	NRC Review: The JPM, as submitted, simply requires the applicant to recognize that the plant is at approximately 100% power but the 3-D Monicore states that the plant is at approximately 55 percent. Recommend enhancing the JPM as follows: once the applicant recognizes the power level discrepancy, hand them the correct 3-D Monicore and have them complete STP 3.0.0-01. Completing the form addresses potential entry into tech spec 3.3.2.1. Change the Initiating Cues to read...OSS directs you, as the RO.... Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Facility added a cue for the examiner to hand the candidate a correct 3D-case once the candidate determines the original is incorrect. Another critical step was added for the candidate to determine whether a limiting control rod pattern exists.
A1b R	E	NRC Review: The JPM, as submitted, requires the applicant to answer closed-reference questions for topics they may not have demonstrated a weakness in. This is contrary to NUREG-1021. Delete the closed-reference questions. Also, only the HPCI issue carries any safety-significance. Therefore, it is the only "critical task" in the JPM. Change the Initiating Cues to read...OSS directs you, as the RO.... The K/A importance should be (3.7/4.4). Validation Week: 1. Add note to verify A RHS pump running in the instructor's actions. 2. Reduce task standard to identify HPCI problem only. This is the only safety significant component problem in the JPM. The candidate must identify this problem to pass the JPM. The other items should be identified by the candidate but are not considered critical tasks because of their lack of safety consequences. Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Added "reset to any power IC" in the simulator setup notes. 3. Added note to verify A RHS pump running in the instructor's actions. 4. Modified task standard as suggested. Also changed performance steps to non-critical as appropriate. 5. Eliminated the pre-scripted questions.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
A1a S	E	NRC Review: K/A 2.1.33 requires the applicant to demonstrate knowledge of (i.e., recognize) entry conditions for tech specs. The JPM, as submitted, tells the applicant that this situation dictates entry into tech specs. The applicant is then only required to pick the right LCO. Stating in the Initiating Cues that the applicant is to simply respond to the event as the OSS (would review ARPs, comply with TS, etc.). Add a note for the examiners to the second Performance Step on sheet 6 of the JPM referring to Tech Spec Table 3.3.2.1-1, Note (d). This note states how to determine that a LCRP exists. Validation Week: 1. Add a critical step for candidate to obtain a 3-D monicore case. 2. Eliminate last performance step and associated cue (what happens when 24 hours have elapsed.) This is not needed because it should be discussed when candidate identifies the TS in the previous step. Summary of Changes: 1. Added "Select an non-edge control rod" to the Simulator Setup. 2. Changed the initiating cue from "and determine the Technical Specification requirements for the Rod Block Monitoring system" to "and respond appropriately." 3. Added critical step to obtain a 3-D monicore case.
A1b S	E	NRC Review: The Initial Conditions state "all systems are operable..."; however, due to the condition of CS system valve MO-2115, the CS system is not operable. Per validating operators, this statement is not needed - it is assumed. Summary of Changes: 1. Deleted the statement that all systems are operable.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
A2	E	NRC Review: Change the Initiating Cues to read...OSS directs you, as the RO.... Steps 7.1.30 and 7.1.31 require the applicant to determine if an "acceptable value" is indicated. What stipulates what an "acceptable value" would be? Need to re-evaluate critical steps. Steps which are "verify" with no alternate path are not critical steps as there is no way an examiner can verify the step was complete. Re-look at procedure steps 7.1.2, 7.1.4, 7.1.7, 7.1.9.....etc. Candidate will describe expected relay condition - not just state energized or de-energized. Validation Week: Determined that range has not been provided to define "acceptable." This will be discussed at the exit meeting. Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Changed critical steps per discussion with chief. 3. Added cue that "relay fingers are toward us" for de-energized condition - this requires candidate to identify that the relay **is** de-energized. Similar cue for energized condition.
A3	U	NRC Review: The JPM, as submitted, does not require the applicant to demonstrate knowledge of the dosimetry required to be obtained prior to entering a HRA. This is contrary to ACP 1411.22, "Control of Access to Radiological Areas," Revision 9, and as a result, the JPM is considered unsatisfactory The JPM, as submitted, does not require the applicant to demonstrate knowledge of the requirement to either obtain a device that monitors dose rate or to be escorted by a RP tech escort in order to enter a HRA. This is contrary to ACP 1411.22, "Control of Access to Radiological Areas," Revision 9, and as a result, the JPM is considered unsatisfactory. Validation Week: Summary of Changes: 1. Modified last performance step to require candidate to give a reverse briefing - to cover dosimetry, monitoring requirements, etc. This resolves the "U" grading.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
A4 R	E	NRC Review: The RWCU pump room ARM reading is at the "MAX NORM" level (1000). The checklist states that "alarming" ARM data should be provided to the Operations Shift Manager. Is a RWCU pump room ARM reading of 1000 an "alarming" condition or just a maximum normal condition (i.e., is the applicant required to take any action?). Need to agree on critical tasks - if candidate writes down "30" R instead of "3" is this considered a failure? K/A selected not a very good match. Summary of Changes: 1. Changed K/A to 2.4.43 2. Changed as-found condition to 2000, not 1000. 3. Agreed that if candidate writes down a value which is larger than the respective alarming condition, then the candidate will fail the critical step.
A4 S	E	NRC Review: We will not involve the state in this JPM. The evaluator will role-play all people. Low discriminatory value - just pick up the phone. Suggest adding performance step assuming one county did not answer the initial call. Validation Week: Need to know what day it is - weekend or week day. Summary of Changes: 1. Eliminate involvement of the State. Made changes accordingly. 2. Added "middle of the week" to the initial conditions. 3. Added Linn county not answering - requires candidate to simulate calling using the number in the emergency phone book.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
B1a	E	NRC Review: Task does not match the K/A. The stated K/A is A2.01 which is to predict the impact on the CRD hydraulic system and use procedures to address the "B" pump trip. The JPM does not require the applicant to predict impact, only to start the "A" CRD pump. As submitted, the proper K/A should be A4.01 (3.1/3.1). In order to meet the intent of K/A 2.01, recommend the following changes: 1) change the Initial Conditions to list the annunciators associated with the tripped CRD pump rather than stating the "pump tripped" and 2) change the Initiating Cues to direct the applicant, as the RO, to respond to the event. With these changes in place, the examiner can evaluate the applicant's ability to 1) diagnose the problem, 2) report the problem, 3) use the ARPs, and 3) start the "A" CRD pump. That meets the intent of K/A A2.01. Change the Initiating Cues to read...OSS directs you, as the RO [whatever you refer to them as], to respond... Validation Week: Procedure OI 255 was revised - please incorporate additional step 3.3(2) to the JPM. Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Changed initial conditions to reflect K/A better. Removed "B CRD pump has just tripped" and "Electrical....pump." Added "Annunciator 1CO5A....alarmed" 3. Changed initiating cue to required the candidate to respond to the annunciator. 4. Revised procedure OI255 was reviewed and new steps were added to the JPM.
B1b	E	NRC Review: State in the Initial Conditions that the scram procedure has been entered. Change the Initiating Cues to read...OSS directs you, as the RO [whatever you refer to them as], to start...in accordance with OI-644, Section 10.2 Providing a vessel level control band in the Initiating Cues. Validation Week: Procedure OI 644 was revised - need method to prevent the candidate from using the startup feed reg valve. Also modify the JPM to reflect any new steps. Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Significantly changed the initial conditions. Added statements for entering IPOI5, EOP 1, level band, when the scram occurred, and the S/U FRV has been tagged out. 3. Added "hang a warning tag on the S/U FRV" to the Instructor Actions. 4. Added new #1 performance step to verify HC-1579 and HC-1621 in manual and both FRV closed. This reflects procedure change. As Administered Changes: 1. Added critical task to control level within the specified level band because if level isn't controlled, the reactor will scram and the "B" feedwater pump will trip - negating the JPM task.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
B1c	E	NRC Review: Task does not match the K/A. The stated K/A is A2.01 which is to predict the impact on the main and reheat steam and use procedures to control/mitigate the abnormal condition. The JPM does not require the applicant to predict impact, only to depressurize the RPV IAW EOP Defeat 5. As submitted, the proper K/A should be A4.02. Change the Initiating Cues to read...OSS directs you, as the RO [whatever you refer to them as], to perform... Validation Week: Please separate the performance step on page 7 (verify MSIVs closed and Group I pushbuttons depressed) Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Changed K/A to A4.02. 3. Separated performance step as requested. As Administered Changes: 1. The simulator was not operating properly on the administration day. Three applicants were administered this JPM as a "walk-through" with the simulator down. This was done because the outage time was unknown and to reduce the amount of stress on the applicants.
B1d	E	NRC Review: Change the Initiating Cues to read...OSS directs you, as the RO [whatever you refer to them as], to startup...in accordance with OI 150, Section 5.2. The JPM is missing steps 5.2(1) and 5.2(2) of OI 150. Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Added steps 5.2(1) and 5.2.(2) as the first two performance steps for this JPM.
B1e	E	NRC Review: Change the Initiating Cues to read...OSS directs you, as the RO [whatever you refer to them as], to re-energize... Need cue that step 1 of the procedure is complete. Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Added "Electrical maintenance have been contacted" as first cue/performance step.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
B1f	U	NRC Review: This JPM has no alternate path. By performing the ARPs for the annunciators received, the applicant will be able to successfully reset the ½ scram. Because there is no alternate path, this JPM is considered to be unsatisfactory. Change the Initiating Cues to read...OSS directs you, as the RO [whatever you refer to them as], to diagnose... ***Facility worked on a new JPM for our review during validation week. (The JPM used during validation week was retained. The following comments reflect requested changes to this JPM.)**** Validation Week: Increase validation time from 15 minutes to 20 minutes. Add cue for examiner that the candidate may check other flow units or reactor power at the front panel when s/he confirms percent flow meter reading is consistent with plant conditions. Add ARP references where appropriate Add statement that if the candidate initiates a reactor scram, the candidate will fail (i.e. step to reset ½ will be critical. Summary of Changes: New JPM 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Validation week comments were incorporated.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
B1g	U	NRC Review: The alternate path for this JPM is inadequate. NUREG-1021, Appendix C, requires alternate path actions to be procedurally driven. In order to complete this JPM, the applicant is required to receive verbal direction from the SRO. Because the alternate path is not in accordance with NUREG-1021, this JPM is considered to be unsatisfactory. It appears that starting the SBGT system using the test pushbuttons bypasses the initiation of secondary containment isolation. This does not match the task standard. ***Facility worked on a new JPM for our review during validation week. (The JPM used during validation week was retained. The following comments reflect requested changes to this JPM.)**** Validation Week: The new version of the JPM did not work because the alternate path would potentially required the candidate to ask unit supervisor for direction - in other words, the candidate would identify the fan tripped but was not required by procedure to start the other SBGT train. The examiners and facility worked together to develop a "shell" JPM. The JPM and "shell" JPM were retained. This JPM was worked on through out the week. The final version (as-given) was validated on March 21, 2001. No changes were made to this version. Summary of Changes: New JPM.
B2a	E	NRC Review: Task does not match the K/A. The JPM lists many K/As as being applicable; however, the proper K/A should be A4.01 (3.1/3.1). Change the Initiating Cues to read...OSS directs you, as the RO [whatever you refer to them as], to take local control...in accordance with OI 264, Section 8. The JPM is missing step (8) of OI 264, Section 8. Validation Week: Procedure OI 264 was revised. Please incorporate procedure changes to the JPM. Summary of Changes: 1. Changed K/A to 2.1.30. 2. Facility added "You are the...." to the initial conditions/initial cue. 3. The procedure revision modified the wording of one step. The change was not significant - no change to the JPM performance step wording was necessary.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
B2b	U	NRC Review: The alternate path for this JPM is inadequate. NUREG-1021, Appendix C, requires alternate path actions to be procedurally driven. In order to complete this JPM, the applicant is required to receive verbal direction from the SRO. Because the alternate path is not in accordance with NUREG-1021, this JPM is considered to be unsatisfactory. The level of difficulty for this JPM is 1 and it is not discriminatory. Because of the low level of discrimination, this JPM is considered to be unsatisfactory. The outline lists this JPM as satisfying Safety Function 5, "Containment Integrity." Per NUREG-1123, this task is accomplished using System 223001, "Primary Containment System and Auxiliaries." As submitted, the system assigned to this task was 209001, "Low Pressure Core Spray." This satisfies Safety Function 2, "Reactor Water Inventory Control." Bottom line, change the applicable System to 209001 and the K/A to A2.11 (3.6/3.8). ****Prior to validation week, the facility modified the JPM to require the candidate to use the opposite train. Validation Week: The newly revised JPM was unsatisfactory because it did not increase the discrimination level. The examiners and facility discussed possible alternate path JPMs to use. The facility selected a standby diesel generator - air compressor failure JPM. We validated this JPM during validation week. The comments in the summary of changes reflect the changes made to this validated JPM. Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. JPM was updated to reflect the latest procedure revision. 3. The K/A was changed to 2.1.30 which more accurately reflects the activity.\ 4. ARP 1C94 was added to the list of referenced material. 5. Equipment nomenclature was added (ex. HS -3234B added to performance step 1) 6. Expected audible cues were added (ex. Hearing a "clunk" when fuel racks moved.) 7. Added note to expect the candidates to climb under the grating to locate equipment. 8. Remove "215 psig" and replace with "as you see it" in the cue for PI-3253B indication.

NRC Comments on Facility Category A and B JPMs
Duane Arnold Energy Center/April 2001

JPM Task	U/S/E	Notes
B2c	E	NRC Review: Task does not match the K/A. The stated K/A is A3.04 which is to monitor the automatic operations of the fire protection system. The JPM Initiating Cue directs the applicant to manually initiate the CSR Cardox. Change the Initiating Cues to read...OSS directs you, as the RO... Validation Week: Modify cue "inform operator that green OFF lights...are ON." Summary of Changes: 1. Facility added "You are the...." to the initial conditions/initial cue. 2. Added K/A/G 2.130 to the K/A reference. 3. Modified cue to read "green OFF lights are lit".

NRC Comments on Facility Category C Scenarios
Duane Arnold Energy Center/April 2001

Scenario #	U/S/E	Notes
12	3/9 U	NRC Review: Event 3 - The BOP operator has no substantive actions during this event. The applicant will simply acknowledge, monitor, notify, and refer to procedures. However, the SRO can be credited for actions. Event 6 - The SRO should determine tech spec applicability. Event 6 - No operator has substantive actions during this event. The applicants will simply recognize the event but are not likely to take any further actions. Also, this event does not complicate the success path. Due to Events 8 and 9 not being valid, there are no post-major event component or instrument failures. This is contrary to NUREG-1021, ES-301. Event 9 - This is a continuation of Event 7 and would not credited as an additional Event. Due to Events 8 and 9 not being valid, there are no post-major event component or instrument failures. This is contrary to NUREG-1021 Validation Week: After observing this scenario, the team decided NOT to use this scenario as a evaluating scenario. The scenario was down graded to a spare. Administration Week: During administration week, one candidate manually initiated HPCI prior to the auto-initiation signal - which was supposed to be a component failure. Therefore, one instrument/component failure was missing for this candidate. Therefore, portions of this scenario were administered: specifically, event 4, 5, 6 and 7.

NRC Comments on Facility Category C Scenarios
Duane Arnold Energy Center/April 2001

Scenario #	U/S/E	Notes
13	0/10 U	NRC Review: Event 3 -This event is like a JPM. How long will it take the crew to complete the required actions? Event 9 - The saturation conditions appear to be the result of the recirc line break in Event 6. The crews recognition and action do not constitute an additional event. Event 10 - The crews recognition of the need to transition to RPV flooding does not constitute an additional event. it is the same as the NRC comment for Event 9. Overall, not enough substantive actions to credit BOP (assuming RO in scenario #12) for 4 instrument/component failures. Overall, TS calls need to be specified. Validation Week: Decided to run scenario set as #13 and #11 - using #12 as a spare. Added a main condenser hotwell reject valve failure to scenario #13 to increase the number of component/instrument failures for the BOP operator (RO in #11) Event #3 was found acceptable as-is
11 (spare)	1/9 U	NRC Review: Event 2 (steam line flow deviation) - Although the SRO could be credited with some actions, the RO simply "observes and monitors," i.e., the RO has no substantive actions. Event 5 - AGAIN, although the SRO could be credited with some actions, the RO simply "observes and monitors," i.e., the RO has no substantive actions. Validation Week: Removed credit for event #2 and renumbered accodingly. Event #5: kept as is. Good diagnostic and operator needs to take manual control.

B.1-f comment.

DUANE ARNOLD ENERGY CENTER

JOB PERFORMANCE MEASURE

NUMBER: 215005-02

TASK NUMBER: 99.12

TITLE: Restoration of a Flow Unit
Respond to APRM Upscale and Remove a Flow Unit from Service
Alternate Path

Rev. 2

DEVELOPED BY: _____ _____
Instructor Date

VALIDATED BY: _____ _____
SME/Instructor Date

REVIEWED BY: _____ _____
Plant Reviewer Date

APPROVED BY: _____ _____
Training Supervisor-Operations Date

DUANE ARNOLD ENERGY CENTER

JOB PERFORMANCE MEASURE

JPM No. 215005-02	**JPM Description:** Restoration of a Flow Unit/Respond to APRM Upscale and Remove a Flow Unit from Service Alternate Path	
Task No. 99.12	**Task Description:** Respond to APRM Upscale.	
K/A Reference: **215005**	A4.03 (3.2/3.3)	
APPLICABLE METHOD OF TESTING: RO/SRO		
Simulate Performance	Actual Performance X	
Simulator X	In-Plant	Control Room
Time for Completion: ~~15~~ 20 minutes		

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE

All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 7 through 10.

JPM No. 215005-02 JPM Title Restoration of a Flow Unit/Respond to APRM Upscale and Remove a Flow Unit from Service. (Alternate Path)

_____ 1. Task description and number, JPM description and number are identified

_____ 2. Task elements identified and K/A references are included

_____ 3. Performance location specified

a. in-plant

b. control room

c. simulator

_____ 4. Initial conditions and cues identified

a. setup, required materials, and procedure

b. malfunctions and instructor actions

c. initiating and terminating cues

_____ 5. Task standards identified and verified by SME review

_____ 6. Critical tasks/steps identified meet criteria and identified with a "C"

_____ 7. Verify JPM steps fit the most current procedures
Procedure Rev. _____ Date _____

_____ 8. Pilot test JPM

a. verify cues both verbal and visual are free of conflict

b. ensure performance time is accurate

9. If the JPM cannot be performed as written with proper responses, then revise the JPM

_____ 10. When JPM is revalidated, SME/Instructor signs and dates JPM

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

SIMULATOR SETUP:

EVENT TRIGGERS

Trigger Number	Trigger File Name	Trigger Logic Statement	Trigger Word Description
1	N/A	ZDINMC51FUBYP(1) .le. 0	Flow Unit Rod Block Bypass switch in Normal

MALFUNCTIONS:

Time	Malfunction No.	Malfunction Title	ET	Delay	F. Sev.	Ramp	I. Sev.
0	NM11A	A APRM Flow Unit Inop	1	10	0	0	N/A

OVERRIDES:

None

REMOTE FUNCTIONS:

None

INSTRUCTOR ACTIONS:

1. At 1C05, bypass "A" APRM Flow Unit.
2. Place "A" APRM Flow Unit Mode Switch in the ZERO position.
3. Read initial conditions and initiating cues to the operator.

TASK STANDARDS:

1. Flow Unit Mode Switch (S1) placed in the OPERATE position.
2. "A" Flow Unit removed from BYPASS and BYPASS indicating light is verified OFF.
3. "A" Flow Unit is determined to be the cause of the half scram and rod block.
4. FLOW UNIT ROD BLOCK BYPASS switch taken to "A".
5. At 1C-37, MODE switch for the "A" flow unit taken to a position other than OPERATE or STANDBY.

REQUIRED MATERIALS:

OI-878.4
ARP 1C05A

GENERAL REFERENCES:

ARP 1C05A

OI-878.4 Rev. 22

Read to the operator the following information:

INITIAL CONDITIONS:

1. You are the BOP Operator.
2. "A" APRM Flow Unit failed and was removed from service.
3. I&C Technicians have repaired and calibrated "A" APRM Flow Unit.
4. The tagout has been cleared and verified.

INITIATING CUES:

As the OSS, I direct you to restore the "A" APRM Flow Unit to service per OI-878.4.

This task is not time critical.

Inform the evaluator when you have completed the task.

PERFORMANCE INFORMATION

NOTE:
Critical steps are denoted with a "C". Failure to meet the standard for this step constitutes failure.

Time Start _____

PERFORMANCE STEP: Critical: C	At 1C37, place the mode switch (S1) to OPERATE.
STANDARD:	Mode Switch (S1) placed in the OPERATE position.
COMMENTS:	

PERFORMANCE STEP: Critical:	Depress RESET and confirm INOP, COMPAR, TEST and UPSCALE lights are off.
STANDARD:	INOP, COMPAR, TEST and UPSCALE lights confirmed off.
COMMENTS:	

PERFORMANCE STEP: Critical:	Verify test switch (S2) in sum ZERO.
STANDARD:	Switch S2 verified in the sum ZERO position.
COMMENTS:	

PERFORMANCE STEP: Critical:	Confirm Flow Unit PERCENT FLOW meter indicates flow consistent with plant conditions.
STANDARD:	Flow Unit PERCENT FLOW meter confirmed to be consistent with plant conditions.
COMMENTS: other flow units Front. — Candidate may check other flow units or check at front panel.	

Power

PERFORMANCE STEP: Critical: C	At 1C05, remove Flow Unit from BYPASS using bypass switch Flow Unit Rod Block HS-C51B-S7 and verify BYPASS indicating light is OFF.
STANDARD:	"A" Flow Unit removed from BYPASS and BYPASS indicating light is verified OFF.
COMMENTS: Note: Ten seconds after the switch is taken out of BYPASS, "A" Flow Unit will fail. ARP (E-2)	

PERFORMANCE STEP: Critical: C	Determine that the "A" Flow Unit is the cause of the half scram and rod block.
STANDARD:	"A" Flow Unit is determined to be the cause of the half scram and rod block.
COMMENTS: When informed of the failure of "A" Flow Unit, and when asked about bypassing the flow unit, as the OSS direct the student to bypass the "A" Flow Unit. If asked, direct the student to return the Flow Unit mode switch to ZERO.	

PERFORMANCE STEP: Critical: C	Place the FLOW UNIT ROD BLOCK BYPASS switch in the position for the malfunctioning flow unit with permission from the OSS .
STANDARD:	FLOW UNIT ROD BLOCK BYPASS switch taken to "A".
COMMENTS:	

PERFORMANCE STEP: Critical:	Verify that the alarm and rod withdrawal block conditions clear.
STANDARD:	Verify that 1C05A, E-2 clears and Identify that the ROD BLOCK annunciator DOES NOT clear.
COMMENTS: The APRM upscale condition prevents the reset of the Rod Block annunciator. (This discrepancy is the source of a JPM follow-up question). As necessary, Role Play SS/SM: State that the problem will be investigated at a later time direct the operator to continue.	

PERFORMANCE STEP: Critical: **C**	If the malfunctioning flow unit is producing an APRM rod block and scram condition by reducing APRM flow biased setpoints, perform the following in addition to bypassing the affected flow limit rod block: Place the MODE switch for the affected flow unit in a position other than OPERATE or STANDBY.
STANDARD:	At 1C-37, MODE switch for the "A" flow unit taken to a position other than OPERATE or STANDBY.
COMMENTS: Cue: If asked for tagout, inform the student that another operator will write and hang the tag. You are to continue with the actions of the ARP.	

PERFORMANCE STEP: Critical:	While at 1C37, Operator may depress the reset pushbuttons for the Flow Unit COMPAR and/or APRM UPSCALE alarm lights. (Not procedurally required)
STANDARD:	Operator may depress the reset pushbuttons for the Flow Unit COMPAR and/or APRM UPSCALE alarm lights.
COMMENTS:	

PERFORMANCE STEP: Critical:	Verify that the alarm and rod withdrawal block conditions clear.
STANDARD:	Verify 1C05A C-2 (APRM Upscale) and 1C05B, A-6 (Rod Block) annunciators reset.
COMMENTS:	

PERFORMANCE STEP: Critical:	Reset the 1/2 Scram per OI 358 (RPS).
STANDARD:	Turn the REACTOR SCRAM RESET switch C71A-S5 first to one side then to the other.
COMMENTS: Critical if Rx. Scram.	

PERFORMANCE STEP: Critical:	Verify the SCRAM GROUP indication lights are on.
STANDARD:	SCRAM GROUP indication lights verified on.
COMMENTS:	

PERFORMANCE STEP: Critical:	Verify the "A" RPS AUTO SCRAM (1C05A, A-2) annunciator is reset.
STANDARD:	Annunciator 1C05A, A-2 confirmed reset.
COMMENTS:	

Time Stop _____

TERMINATING CUES:

VERIFICATION OF COMPLETION

JPM No.: 215005-02 JPM Description: Restoration of a Flow Unit/Respond to APRM Upscale and Remove a Flow Unit from Service. Alternate Path

Operator: _____ Evaluator: _____

Licensee: ☐ RO ☐ SRO ☐ SRO Cert
☐ STA ☐ NSPEO

Result: ☐ SATISFACTORY ☐ UNSATISFACTORY

COMMENTS/FEEDBACK: (Note any trainee discrepancies or misperformed steps.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____
Evaluator's Signature Date

B.1.g

DUANE ARNOLD ENERGY CENTER

JOB PERFORMANCE MEASURE

NUMBER: 261000-07

RO Task Number: 7.04

TITLE: MANUAL INITIATION OF SBGT AND SECONDARY CONTAINMENT ISOLATION

Modified - Alternate Path

Rev. 2

DEVELOPED BY: _____ _____
Instructor Date

VALIDATED BY: _____ _____
SME/Instructor Date

REVIEWED BY: _____ _____
Plant Reviewer Date

APPROVED BY: _____ _____
Training Supervisor-Operations Date

DUANE ARNOLD ENERGY CENTER

JOB PERFORMANCE MEASURE

JPM No. 261000-07	**JPM Description:** Manual Initiation of SBGT and Secondary Containment Isolation (Alternate Path).		
Task No. 7.04	**Task Description:** Perform Manual Initiation (of SBGT) with Group III.		
K/A Reference: 261000	A3.01 3.2/3.3 A3.02 3.2/3.1 A3.03 3.0/2.9	A4.03 3.0/3.0	
APPLICABLE METHOD OF TESTING: SRO/RO			
Simulate Performance		Actual Performance X	
Simulator X	In-Plant	Control Room	
Time for Completion: 8 minutes			

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

* * *

NOTE

All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 7 through 10.

* * *

JPM #: 261000-07 JPM Description: Manual Initiation of SBGT and Secondary Containment Isolation (Alternate Path)

_____ 1. Task description and number, JPM description and number are identified

_____ 2. Task elements identified and K/A references are included

_____ 3. Performance location specified
in-plant
control room
simulator

_____ 4. Initial conditions and cues identified
setup, required materials, and procedure
malfunctions and instructor actions
initiating and terminating cues

_____ 5. Task standards identified and verified by SME review

_____ 6. Critical tasks/steps identified meet criteria and identified with a "C"

_____ 7. Verify JPM steps fit the most current procedures
Procedure Rev. _____ Date _____

_____ 8. Pilot test JPM
verify cues both verbal and visual are free of conflict
ensure performance time is accurate

9. If the JPM cannot be performed as written with proper responses, then revise the JPM

_____ 10. When JPM is revalidated, SME/Instructor signs and dates JPM

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

SIMULATOR SETUP: Any IC with the Group 3 Isolations reset

EVENT TRIGGERS:

None

MALFUNCTIONS:

Time	Malfunction No.	Malfunction Title	ET	Delay	F. Sev.	Ramp	I. Sev.
Setup	STPC02	SBGT B Fails to Auto Start	n/a	0	n/a	n/a	n/a

OVERRIDES:

NONE

REMOTE FUNCTIONS:

NONE

INSTRUCTOR ACTIONS:

1. Read initial conditions and initiating cues to the operator.
2. Reset to any IC without a Group 3 isolation signal present.
3. Insert malfunction.
4. Place simulator in run.

TASK STANDARDS:

1. RIS-4131A and RIS-4131B in the TRIP TEST position.
2. RIS 4131A and RIS-4131B in the OPERATE position.
3. L/R-5830A verified to be in the TRIP position.
4. L/R 5830B determined to be in the non-tripped position.
5. B SBGT Train manually initiated.

REQUIRED MATERIALS:

OI 170 Section 5.1 and 4.1

GENERAL REFERENCES:

OI 170, Rev. 25, 5/30/97

Read to the operator the following information:

INITIAL CONDITIONS:

1. Refuel floor evolutions are in progress.
2. A crate of highly radioactive material has been dropped from the Reactor Building crane.
3. Health Physics has reported that airborne radioactivity levels in the Reactor Building are increasing.
4. You are the BOP operator.

INITIATING CUES:

OSS directs you to manually initiate Standby Gas Treatment system and secondary containment isolation with both trains running.

This task is not time critical.

Inform the evaluator when you have completed the task.

1349

PERFORMANCE INFORMATION

* * *

NOTE:

Critical steps are denoted with a "C". Failure to meet the standard for this step constitutes failure.

* * *

Time Start _____

PERFORMANCE STEP: Critical: C	Place the mode switches for both Fuel Pool Exhaust Radiation Monitors, RIS-4131A and RIS-4131B, in the TRIP TEST position.
STANDARD:	The operator places the switches for the Fuel Pool Exhaust Radiation Monitors, RIS-4131A and RIS-4131B, to the TRIP TEST position at 1C36.
COMMENTS: **Cue:** Acknowledge Report	

PERFORMANCE STEP: Critical: C	Return both Fuel Pool Exhaust Radiation Monitor mode switches, Channels A and B, to the OPERATE position.
STANDARD:	The operator returns the switches for the Fuel Pool Exhaust Radiation Monitors, RIS-4131A and RIS-4131B, to the in the Operate position at 1C36.
COMMENTS:	

PERFORMANCE STEP: Critical:	Depress the Reset Pushbuttons on both Fuel Pool Exhaust Rad. Monitors.
STANDARD:	At 1C36 depress and then release the Reset Pushbuttons on both Fuel Pool Exhaust Rad Monitors.
COMMENTS:	

BOLD

NOTE: Candidate may complete the verification of the A SBGT train before addressing the B SBGT train. The below CUE should be given later in that case.

PERFORMANCE STEP: Critical: C	Verify that the Lockout Relays L/R-5830A and B are in the TRIP position at Panels 1C24A and B.
STANDARD:	At 1C24, the operator observe that Lockout Relay L/R-5830A is in the TRIPPED position **AND** that Lockout Relay L/R-5830B is not tripped.
COMMENTS: **CUE:** When the operator communicates the failure of the B SBGT lockout relay, direct the operator to start the B SBGT train.	

PERFORMANCE STEP: Critical: C	Start the B SBGT Train by depressing the test pushbutton PB-5831B on Panel 1C24B.
STANDARD:	The operator depresses the TEST pushbutton for B SBGT on Panel 1C24B.
COMMENTS:	

PERFORMANCE STEP: Critical:	Verify applicable SBGT system automatic actions per Section 4.0.
STANDARD:	The Operator verifies proper responses of the A and B SBGT trains in the following steps from Section 4.0 of OI 170.
COMMENTS:	

PERFORMANCE STEP: Critical:	Acknowledge SBGT 1C24 TROUBLE, 1C07A, B-11, annunciator
STANDARD:	The operator acknowledges SBGT 1C24 TROUBLE annunciator 1C07A, B-11 NOTE: This annunciator may be acknowledged by the Simulator Driver acting as an operator that would be in the front panels.
COMMENTS:	

NOTE: The following step applies to BOTH trains of SBGT

PERFORMANCE STEP: Critical:	Acknowledge A (B) SBGT RUNNING 1C24A[B], A-2, annunciator	
STANDARD:	The operator acknowledges A (B) SBGT RUNNING annunciator 1C24A [B], A-2	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	If the automatic startup is due to a Group III isolation, verify that Inboard[Outboard] Isolation Lockout Relay L/R-5830A[B] for A[B] SBGT train is in the TRIP position.
STANDARD:	The operator verifies that L/R-5830A is tripped and L/R-5830B is not tripped. NOTE: This step may be skipped, since it was previously performed.
COMMENTS:	

NOTE: The following steps apply to BOTH trains of SBGT

PERFORMANCE STEP: Critical:	Verify Cooldown/Outside Air Valve AV-5801A[B] indicates closed	
STANDARD:	The operator verifies that the Cooldown/Outside Air Valve AV-5801A[B] GREEN closed light is on.	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	Verify Intake Valve AV-5825A[B] is open.	
STANDARD:	The operator verifies that the Intake Valve AV-5825A[B] RED open light is on.	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	Confirm the Constant Heater EC-5805A[B] indicates on when air flow is greater than 2400 scfm	
STANDARD:	The operator verifies that the Constant Heater EC-5805A[B] RED on light is on.	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	Confirm the Variable Heater dT Controller DTIC-5805A[B] is operating properly by observing the desired temperature rise (approx. 16 degrees-dT) as controlled on 1C24A[B] (subtract TI-5805A[B] from TI-5833A[B].	
STANDARD:	The operator verifies that there is a temperature difference between TI-5805A[B] and TI-5833A[B]. NOTE: There is a time delay before the variable heaters can establish the 16 degrees-dT.	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	Verify Fan Inlet Valve AV-5815A[B] is open.	
STANDARD:	The operator verifies that the Fan Inlet Valve AV-5815A[B] RED open light is on.	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	Verify Exhaust fans 1V-EF-15A[B] is running.	
STANDARD:	The operator verifies that the Exhaust Fan 1V-EF-15A[B] RED running light is on.	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	Verify Discharge Valve AV-5817A[B] is open.	
STANDARD:	The operator verifies that Discharge Valve AV-5817A[B] RED open light is on.	
Train Checked:	A:	B:
COMMENTS:		

PERFORMANCE STEP: Critical:	Verify air flow less than or equal to 4000 cfm on FIC-5828A[B].	
STANDARD:	The operator verifies air flow less than or equal to 4000CFM on FIC-5828A[B].	
Train Checked:	A:	B:
COMMENTS:		

The following steps are not common steps.

PERFORMANCE STEP: Critical:	Verify Rx Bldg. to outside air ΔP is greater than or equal to .25" H_2O on DPI-4638.
STANDARD:	The operator verifies that Rx Bldg. to outside air ΔP is greater than or equal to .25" H_2O on DPI-4638
COMMENTS:	

PERFORMANCE STEP: Critical:	For the OG stack exhaust fan 1V-EF-18A[B], verify that one fan is running and that the other fan hand switch is in AUTO
STANDARD:	The operator verifies that one OG stack exhaust fan 1V-EF-18A[B] RED running light is on and that the other fan's handswitch is in AUTO
COMMENTS:	

PERFORMANCE STEP: Critical:	At Panel 1C23A[B], verify that AV-7602A[B] Inlet Valve is open.
STANDARD:	The operator verifies that Inlet Valve AV-7602A RED open light is on. The operator verifies that Inlet Valve AV-7602B GREEN closed light is on.
COMMENTS: Inlet Valve AV-7602B is closed due to lockout relay failure.	

PERFORMANCE STEP: Critical:	Record start time in the SBGT run log.
STANDARD:	The operator logs the SBGT start times.
COMMENTS: Do not fillout.	

PERFORMANCE STEP: Critical:	Proceed to Section 4.2 in order to place an activated SBGT train in the standby mode, if desired.
STANDARD:	The operator asks the SS if it is desired to place one SBGT train in the standby mode.
COMMENTS: CUE: Instruct the operator that both trains are to remain running due to the B train failure.	

NOTE: The following step is optional and is allowed to be performed at an earlier stage after starting the B SBGT train.

PERFORMANCE STEP: Critical:	As desired to establish air flow greater than 2400 scfm and less than 4000 scfm, open Refuel Pool to SBGT inlet valve AV-7604U.
STANDARD:	The operator places the Refuel Pool to SBGT Inlet Valve AV-7604U handswitch to the OPEN position and verifies that the RED running light is on.
COMMENTS:	

Time Stop _____

TERMINATING CUES: When the Auto Actions of Section 4 have been verified Cue the operator that the JPM is complete.

B.1.g

① INITIATING CUES

~~LTO TRIPPED, SBGT~~

Partial Loss of WW. cont. @ 1-2 PS19 very slow turned up.

- NORMAL cont. vent. SBGT IS REQ'D FOR VENT.
  START ~~ONE~~ SBGT PER OI 170 TO support vent
- TRIP FAN / COW FLOW alarm?

B1S-~~32~~ New

① Critical - start one train
② Verify steps
③ Alarm (Lo Flow) comes in
④ Respond to ARP
⑤ Critical start other train
⑥ Critical secure 1st train.

I disagree. Competency for procedural compliance maybe. No safety significance to restoring a tripped unit

B.2.b

DUANE ARNOLD ENERGY CENTER

JOB PERFORMANCE MEASURE

NUMBER 264000-08

Task Number: NSPEO 26.05

TITLE: Return the SBDG to a Standby Readiness Condition (Alternate Path = Starting Diesel Air Compressor)

Rev. 2

08/22/97

DEVELOPED BY: Duane A. Johnson — Instructor — 8/26/97 — Date

VALIDATED BY: T. J. Fiel — SME/Instructor — 8-27-97 — Date

REVIEWED BY: Dan Curtis — Plant Reviewer — 8/29/97 — Date

APPROVED BY: John Christensen — Training Supervisor-Operations — 8/29/97 — Date

DUANE ARNOLD ENERGY CENTER

JOB PERFORMANCE MEASURE

JPM No. 264000-08	**JPM Description:** Return the SBDG to a standby readiness condition. (Alternate path = starting diesel air compressor.)		
Task No. NSPEO 26.05	**Task Description:** Assist with diesel generator operability test.		
K/A Reference: 264000 2.1.30	~~K4.01 (3.5/3.7)~~ ~~A4.04 (3.7/3.7)~~ ~~SG-1~~	~~A4.01 (3.3/3.4)~~ ~~A3.4 (3.1/3.1)~~	~~K5.05 (3.4/3.4)~~ K4.07 (3.3/3.4)
APPLICABLE METHOD OF TESTING: SRO/RO			
Simulate Performance X		Actual Performance	
Simulator	In-Plant X	Control Room	
Time for Completion: 15 minutes			

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE

All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 7 through 10.

JPM No. 264000-08 JPM Title Return the SBDG to a standby readiness condition. (Alternate parth = starting diesel air compressor)

RJ 1. Task description and number, JPM description and number are identified

RJ 2. Task elements identified and K/A references are included

RJ 3. Performance location specified

a. in-plant

b. control room

c. simulator

RJ 4. Initial conditions and cues identified

a. setup, required materials, and procedure

b. malfunctions and instructor actions

c. initiating and terminating cues

RJ 5. Task standards identified and verified by SME review

RJ 6. Critical tasks/steps identified meet criteria and identified with a "C"

RJ 7. Verify JPM steps fit the most current procedures
Procedure Rev. 38 Date 12/11/96

RJ 8. Pilot test JPM

a. verify cues both verbal and visual are free of conflict

b. ensure performance time is accurate

9. If the JPM cannot be performed as written with proper responses, then revise the JPM

RJ 10. When JPM is revalidated, SME/Instructor signs and dates JPM

SME/Instructor _____ Date _____

SME/Instructor _____ Date _____

SME/Instructor _____ Date _____

SIMULATOR SETUP: N/A

EVENT TRIGGERS: None

MALFUNCTIONS: None

OVERRIDES: None

REMOTE FUNCTIONS: None

INSTRUCTOR ACTIONS:

1. Note any discrepancies in the comments section for any misperformed steps.
2. Read initial conditions and initiating cues to the operator.

TASK STANDARDS:

1. Overspeed trip lever tripped (simulated).
2. Close V-32-0109 (simulated).
3. Override SV-3262B and admit starting air to 1G-21 (simulated).
4. Open then close V-32-110 (simulated).
5. Open V-32-0109 (simulated).
6. Reset overspeed trip lever (simulated).
7. Reset alarms on 1C92 (simulated).
8. Reset alarms on 1C94 (simulated).
9. Start diesel air compressor (simulated).

REQUIRED MATERIALS:

OI 324
ARP 1C94

GENERAL REFERENCES:

OI 324, Rev. ~~35, 07/27/95~~ 50
1C94, C-2 Rev 7,

Read to the operator the following information:

INITIAL CONDITIONS:

1. 1G-21 SBDG was shutdown 45 minutes ago following an auto start due to a lightning strike at DAEC.
2. You are additional Licensed Operator assigned to the work control Center.

INITIATING CUES:

The OSS directs you to return 1G-21 to the standby readiness condition IAW OI 324 in the SBDG room.

This task is not time critical.

Inform the evaluator when you have completed the task.

PERFORMANCE INFORMATION

NOTE:
Critical steps are denoted with a "C". Failure to meet the standard for this step constitutes failure.

Time Start _____

HS-3234A

PERFORMANCE STEP: Critical:	Place the droop switch on panel 1C-94 in the UNIT position.
STANDARD:	Operator simulates placing droop switch on Panel 1C-94 in UNIT position.
COMMENTS: NOTE: No action should be required since the SBDG auto started and droop switch was not repositioned.	

PERFORMANCE STEP: Critical:	Secure ESW pump 1P-99B.
STANDARD:	Operator simulates requesting the control room to secure "B" ESW pump 1P-99B.
COMMENTS: Cue: Acknowledge request from operator and report back when complete.	

PERFORMANCE STEP: Critical:	At 1A411, verify Diesel Generator Lockout relay 186-DG2 is reset.
STANDARD:	Operator verifies Diesel Generator Lockout relay 186-DG2 is reset.
COMMENTS: Cue: Inform operator that the lockout relay has been verified to be reset.	

PERFORMANCE STEP: Critical:	Adjust the Woodward governor.
STANDARD:	Operator simulates placing droop setting at 0. Fuel control at "Max" and speed control at "18.25".
COMMENTS: NOTE: This step is not required since the SBDG was not slow started. The operator may verify the correct settings.	

PERFORMANCE STEP: Critical: C	Operator trips injection pump control racks by depressing the emergency stop pushbutton (overspeed trip) at the engine.
STANDARD:	Operator simulates depressing the emergency stop pushbutton (overspeed trip).
COMMENTS: Cue: Inform the operator the fuel racks moved forward (towards generator end) when the emergency stop pushbutton was depressed.	

PERFORMANCE STEP: Critical: C	Confirm annunciator 1C-94 A-1 ENGINE OVERSPEED has annunciated.
STANDARD:	Operator verifies annunciator alarming.
COMMENTS: Cue: Inform the operator that the engine overspeed annunciator is flashing.	

PERFORMANCE STEP: Critical: C	Close the air isolation to oil booster tanks valve V-32-0109.
STANDARD:	Operator closing the air isolation to oil booster tanks valve V-32-0109.
COMMENTS: Cue: Inform the operator that the valve handle is perpendicular to the air line.	

PERFORMANCE STEP: Critical: C	Using the manual override of the normal air start solenoid SV-3262B, admit starting air to "B" diesel generator 1G-21 for 1 to 3 seconds.
STANDARD:	Operator simulates overriding SV-3262B, admitting starting air to "B" diesel generator 1G-21 for 1 to 3 seconds.
COMMENTS: Cue: Inform the operator 1G-21 has rotated one revolution after they simulate overriding the solenoid.	

PERFORMANCE STEP: Critical: C	Vent air on the line to the bearing oil boosters by opening and closing the "B" SBDG air start header vent V-32-110, close vent valve.
STANDARD:	Operator simulates venting air on the line to the bearing oil boosters by opening and closing the "B" SBDG air start header vent V-32-110.
COMMENTS: Cue: Inform operator that a health physics person has surveyed the tools prior to bringing them into the diesel generator room.	

PERFORMANCE STEP: Critical: C	Open the air isolation to oil booster tanks valve V-32-0109.
STANDARD:	Operator simulates opening the air isolation to oil booster tanks valve V-32-0109.
COMMENTS: Cue: Inform the operator that the valve handle is in line with the air line.	

PERFORMANCE STEP: Critical: C	Reset the overspeed trip using the reset lever as follows: 1. Take the reset lever to the reset position, i.e., opposite of generator end (feel the latch drop in place, hear a click). 2. Slowly take the reset lever to the reset potion to verify the latch is holding the plunger.
STANDARD:	Operator simulates resetting the overspeed trip using the reset lever as follows: 1. Take the reset lever to the reset position, i.e., opposite of generator end (feel the latch drop in place, hear a click). 2. Slowly take the reset lever to the reset potion to verify the latch is holding the plunger.
COMMENTS: Cue: Inform the operator that the Overspeed Trip lever is reset.	

PERFORMANCE STEP: Critical: C	Depress alarm reset pushbutton on 1C-92.
STANDARD:	Operator simulates depressing alarm reset pushbutton on 1C-92.
COMMENTS: Cue: Alarm pushbutton moves in.	

PERFORMANCE STEP: Critical:	Confirm engine overspeed annunciator is reset at 1C94 A-1.
STANDARD:	Operator confirms engine overspeed annunciator is reset at 1C94 A-1.
COMMENTS: Cue: Inform the operator the engine overspeed annunciator is flashing slowly, if asked about other annunciators inform the operator C-2 and D-4 are flashing fast.	

PERFORMANCE STEP: Critical:	Verify diesel oil storage tank 1T-35 level on LIS-3201 greater than 36,317 gallons.
STANDARD:	Operator verifies diesel oil storage tank 1T-35 level on LIS-3201 greater than 36,217 gallons.
COMMENTS: Cue: Inform the operator that the Aux Operator has verified the level on their rounds.	

PERFORMANCE STEP: Critical: C	Reset all annunciator alarms on 1C94.
STANDARD:	Operator simulates resetting all annunciator alarms on 1C94.
COMMENTS: Instructor will point to each annunciator window. Cue: Inform the operator that annunciator windows C-2 and D-4 are illuminated and did not reset ~~and A-1 did reset.~~	

PERFORMANCE STEP: Critical:	Operator goes to 1C92 to verify air pressures.
STANDARD:	Operator confirms the low pressure for the 1K-10D diesel air compressor.
COMMENTS: Cue: Inform the operator that PI-3253B (AC air comp) indicates 215 psig and PI-3256B (diesel air comp) indicates 175 psig.	

PERFORMANCE STEP: Critical:	Operator notifies the control room of the low air pressure and the affected system.
STANDARD:	Operator simulates using a radio or goes to a page system and notifies the control room of the low pressure.
COMMENTS: Note: Acknowledge communications as the control room operator.	

PERFORMANCE STEP: Critical: C	Operator starts 1K-10D
STANDARD:	a) Ensuring clutch is disengaged. b) Depress and hold down TATTLETA[illegible]N. Press down START SWITCH and release [illegible]ine starts. [illegible] BUTTON. c) When engine is running, release T[illegible] d) Engage clutch to start compressor.
COMMENTS: This start procedure is found in section 3.0, "Placing the [illegible] STBY/Readiness Condition", and in the ARP. Cue: After the clutch lever has been simulated engaged, inform the op[illegible] the diesel air compressor has started and is running OK.	

PERFORMANCE STEP: Critical:	The operator verifies that 1K10D trips [illegible] to 240 psig.
STANDARD:	The operator simulates observing PI-3[illegible]ressure increasing and verifies that 1K-10D trip[illegible]
COMMENTS: Cue: Inform the operator that PI-3256B pressure is increasing and that [illegible]minute time laps has occurred and the air compressor tripped at 232 psig.	

JPM

PERFORMANCE STEP: Critical:	Complete the SBDG standby/readiness checklist, Attachment 10. Notify OSS of out of spec.
STANDARD:	Operator completes the SBDG standby/readiness checklist, Attachment 10. Notify OSS of out of spec.
COMMENTS: Cue: Inform the operator that the Aux Operator has completed the attachment.	

Time Stop _____

TERMINATING CUES: 'B' SBDG 1G-21 is in standby readiness condition and 1K-10D is shutdown.

VERIFICATION OF COMPLETION

JPM No.: 264000-08 JPM Description: Return the SBDG to a standby readiness condition. (Alternate path = starting diesel air compressor)

Operator: _____ Evaluator: _____

Licensee: ☐ RO ☐ STA ☐ SRO ☐ NSPEO ☐ SRO Cert

Result: ☐ SATISFACTORY ☐ UNSATISFACTORY

COMMENTS/FEEDBACK: (Note any trainee discrepancies or misperformed steps.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____

Evaluator's Signature Date