P.O. Box 63
Lycoming, NY 13093

Constellation Energy®
Nine Mile Point Nuclear Station

NMP-97991
September 9, 2004

Mr. Samuel J. Collins
Regional Administrator
USNRC Region I
475 Allendale Road
King of Prussia, PA 19406 - 1415

ATTENTION: Mr. John G. Caruso, Senior Examiner/Inspector

SUBJECT: NINE MILE POINT UNIT 1 INITIAL OPERATOR EXAMINATION SUBMITTAL

Dear Mr. Collins:

In response to the NRC Letter of June 17, 2004 entitled SENIOR REACTOR AND REACTOR OPERATOR INITIAL EXAMINATIONS - NINE MILE POINT NUCLEAR STATION, UNIT 1, arrangements have been made for the administration of licensing examinations at Nine Mile Point, Unit 1 during the week of 1 November 2004. The examinations have been prepared based on the guidelines in Revision 9 of NUREG 1021, "Operator Licensing Examination Standards for Power Reactors." To meet the examination schedule, Nine Mile Point Nuclear Station was requested to furnish the examinations by September 10, 2004.

Enclosed are the written examinations, operating tests and supporting reference materials for the Reactor Operators and Senior Reactor Operators. The enclosed materials have been approved for use by NMP in accordance with 10CFR55.40(b)(3).

Please withhold this examination material from public disclosure until after the examinations have been completed.

If you have any questions regarding the submittal, please contact Gregg Pitts (General Supervisor Operations Training) at 315-349-1864, or Michael Jaquin (Initial Operations Training Supervisor) at 315-349-1508.

Sincerely,

Terry A. Evans
Manager Nuclear Training

TAE/crr
Enc.

Facility: ***NINE MILE POINT 1***	Date of Examination: ***11/1/2004***
Examination Level (circle one): ***RO***	Operating Test Number: ***NRC-01***

Administrative Topic	Describe activity to be performed:
Conduct of Operations	***ACTIONS FOR DEFEATED ANNUNCIATORS TO INCLUDE DETERMINING AND APPLYING APPROPRIATE STICKERS.*** Make entries for defeated annunciators into defeated annunciator log including posting the appropriate yellow and/or red stickers. *2.1.1 (3.7) Knowledge of conduct of operations requirements.* *2.1.18 (2.9) Ability to make accurate / clear and concise logs / records / status boards / and reports.* ***GAP-OPS-01; 3.10.7 and Attachment 1***
Equipment Control	***VERIFICATION OF ELECTRONIC CLEARANCE.*** Evaluate electronic clearance sheets for correctness and personnel protection requirements including verification of tags for accuracy and their correct use. *2.2.13 (3.6) Knowledge of tagging and clearance procedures.* *2.1.24 (2.8) Ability to obtain and interpret station electrical and mechanical drawings.* ***GAP-OPS-02; 3.11***
Radiation Control	***RADIOLOGICAL REQUIREMENTS RELATED TO OPERATOR INSPECTION OF RAD AND HIGH RAD AREAS.*** Given conditions related to an area to be inspected, radiological conditions in the area as shown on a survey map, and other applicable conditions, ensure the appropriate radiological aspects of the job are met prior to performance of the inspection. *2.3.10 (2.9) Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.* ***GAP-RPP-01; 3.5, 3.6, 3.7, GAP-RPP-02; 3.1, 3,3, GAP-RPP-08; 3.2, 3.3, N1-PM-M5; 6.0, 8.0***
Emergency Plan	***ACTIONS FOR EXTERNAL SECURITY THREATS.*** Given plant conditions, respond to a security threat including actions per SOP-33, External Security Threats, and EPIP-EPP-10, Security Contingency Event, including Attachment 2, Security Contingency Event (CSO Checklist) *2.4.12 (3.4) Knowledge of general operating crew responsibilities during emergency operations.* *2.4.39 (3.3) Knowledge of the RO responsibilities in emergency plan implementation.* ***SOP-33 and EPIP-EPP-10; Attachment 2***

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.

Facility: ***NINE MILE POINT 1***	Date of Examination: ***11/1/2004***
Examination Level (circle one): ***SRO***	Operating Test Number: ***NRC-01***

Administrative Topic	Describe activity to be performed:
Conduct of Operations	***PERFORM PLANT IMPACT REVIEW FOR A DER.*** SRO will be required to perform several actions in response to a DER review including recognition that the event is reportable. *2.1.1 (3.8) Knowledge of conduct of operations requirements.* *2.4.30 (3.6) Knowledge of which events related to system operations/status should be reported to outside agencies.* ***DER-NM-2004-1428, 11 Containment H2O2 System Removed From Service*** ***NIP-ECA-01; 3.2, and Attachment 2.***
Conduct of Operations	***EVALUATE PLANT CHEMISTRY REPORT AND RESPOND.*** Review plant daily status report, which includes plant chemistry, identify and determine required actions in response to out-of-specification reactor coolant chemistry parameters. *2.1.25 (3.1) Ability to obtain and interpret station reference materials such as graphs / monographs / and tables which contain performance data.* *2.1.34 (2.9) Ability to maintain the primary and secondary plant chemistry within allowable limits.* ***DER-NM-2004-958, Exceed GAP-CHE-01 Action Level 1 Threshold for Sulfates*** ***GAP-CHE-01; 3.2; Enclosure 1***
Equipment Control	***DETERMINE POST MAINTENANCE TEST REQUIREMENTS FOR REFUELING EQUIPMENT.*** Given conditions related to a failure of the refueling interlocks during refueling (over-core limit switch failure), the SRO will be required to determine post-maintenance test requirements and implement those requirements by indicating the procedure to be used and the steps that must be performed to demonstrate operability. *2.2.21 (3.5) Knowledge of pre and post maintenance operability requirements.* *2.2.26 (3.7) Knowledge of refueling administrative requirements.* ***GAP-SAT-02; 3.1, Attachments 1 and 2*** ***LER 2002-002. LOSS OF ONE CRD PUMP TRAIN DUE TO CIRCUIT BREAKER FAILURE. Cause was inadequate post maintenance testing. Contributing factors included lack of compliance with admin procedures.***

Facility: ***NINE MILE POINT 1***	Date of Examination: ***11/1/2004***
Examination Level (circle one): ***SRO***	Operating Test Number: ***NRC-01***

Administrative Topic	Describe activity to be performed:
Radiation Control	***DIRECT EXCLUSION AREA EVACUATION IN RESPONSE TO SITE AREA EMERGENCY WITH A RELEASE IN PROGRESS.*** Given plant conditions and a required exclusion area evacuation, direct the appropriate actions per EPIP-EPP-05C. *2.3.10 (3.3) Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.* *2.4.40 (4.0) Knowledge of the SRO's responsibilities in emergency plan implementation.* ***EPIP-EPP-05C; Section 3.1, Attachment 1***
Emergency Plan	***CLASSIFY EMERGENCY EVENTS FOR SCENARIO (EAL) AND COMPLETE NOTIFICATION FACT SHEET (PART 1).*** Classify emergency events based on plant conditions during the simulator scenario in which the candidate is the SRO and complete the notification fact sheet (Part 1 only) for transmittal within a specified period of time (TIME CRITICAL to ensure information can be transmitted within 15 minutes). *2.4.41 (4.1) Knowledge of the emergency action level thresholds and classifications.* *2.4.43 (3.5) Knowledge of emergency communication systems and techniques.* ***EPIP-EPP-01; EPIP-EPP-01-EAL; EPIP-EPP-20; 3.1 and Attachment 1A***

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Actions for defeated Annunciators Revision: NRC 2004

Task Number: 2990090301

Approvals:

9/8/04

General Supervisor Date
Operations Training (Designee)

NA EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA EXAMINATION SECURITY
Configuration Control Date

Performer:_____(RO)

Trainer/Evaluator:_____

Evaluation Method: **PERFORM**

Evaluation Location: **SIMULATOR**

Expected Completion Time: 10 minutes Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time:_____ Completion Time:_____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator Signature:_____ Date:_____

Recommended Start Location: (Completion time based on the start location)

N/A

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:
Simulator available for use to post defeated annunciator sticker(s)

Directions to Operators:
Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the additional / concurrent verifier.

Notes to Instructor / Evaluator:

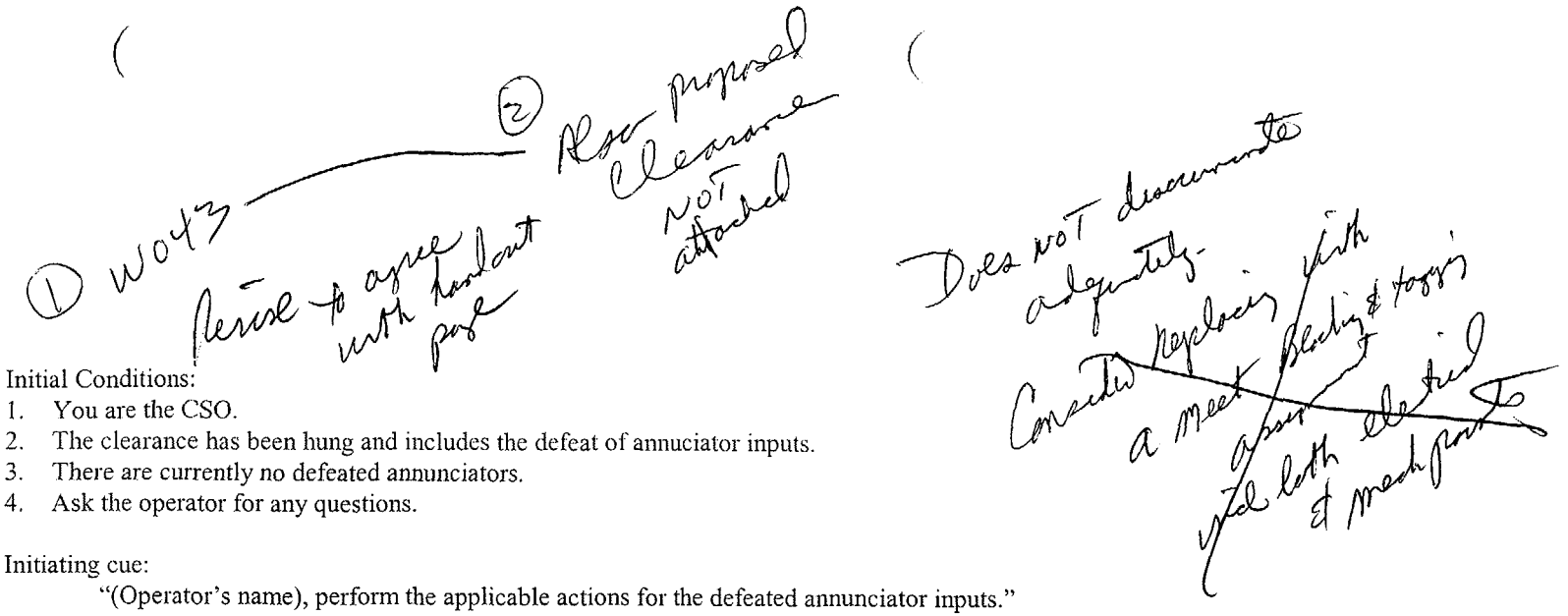
1. Critical steps are identified as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
   - Self-verification shall be demonstrated.
3. During Training JPM:
   - Self-verification shall be demonstrated.
   - No other verification shall be demonstrated.

References:

1. GAP-OPS-01; 3.10.7, and Attachment 1
2. K/A 2.1.1 (3.7) Knowledge of conduct of operations requirements.
3. K/A 2.1.14 (2.5) Knowledge of system status criteria which require the notification of plant personnel.
4. K/A 2.1.18 (2.9) Ability to make accurate / clear and concise logs / records / status boards / and reports.
5. K/A 2.1.24 (2.8) Ability to obtain and interpret station electrical and mechanical drawings.

Tools and Equipment:
1. YELLOW Defeated Annunciator stickers
2. RED Defeated Annunciator stickers.

Task Standard: *Correctly labeled and correct color sticker for the clearance W0403 and correct entries made into the defeated annunciator log. Refer to Attachment 1 for properly completed defeated annunciator.*



Initial Conditions:
1. You are the CSO.
2. The clearance has been hung and includes the defeat of annuciator inputs.
3. There are currently no defeated annunciators.
4. Ask the operator for any questions.

Initiating cue:

"(Operator's name), perform the applicable actions for the defeated annunciator inputs."

Performance Steps	*Standard*	*Grade*	*Comments*
1. Provide repeat back of initiating cue. *Evaluator Acknowledge repeat back providing correction if necessary*	Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat	

RECORD START TIME _____

2. •Obtain a copy of the reference procedure and review/utilize the correct section.	GAP-OPS-01 obtained. - Section 3.10.7 referenced. - Attachment 1 referenced.	Sat/Unsat	

Performance Steps	*Standard*	*Grade*	*Comments*
3. •Correctly identifies the defeated annunciators:			
a. A transparent yellow sticker shall be used to indicate one or more multiple inputs have been defeated	***NOTE: circle the work order evaluated.*** *Determines yellow sticker is appropriate and uses a yellow sticker (W0403).*	**Pass/Fail/NA**	
Prompt: You have entered data on the appropriate sticker and the sticker has been applied to the annunciator. c. Document number authorizing the defeated annunciator and associated computer point(s) identified on the yellow sticker.	*Enters the clearance number and defeated computer points on the yellow sticker (WO403).*	Sat/Unsat	
4. Ensure annunciators defeated by a clearance are entered in the Defeated Annunciator Log.	Obtains a copy of GAP-OPS-01, Attachment 1, DEFEATED ANNUNCIATOR LOG. NOTE: Sample defeated annuciator log for each assignment provided at end of JPM.	**Sat/Unsat**	
a. Complete Item 1 Unit Number. Enter affected unit (1 or 2).	*Enters 1.*	**Pass/Fail**	

Performance Steps	*Standard*	*Grade*	*Comments*
b. •Complete Item 2. Annunciator Window Number: Enter affected annunciator window designation and defeated computer points.	*Enters defeated annunciator L1-1-1 and computer point B048.*	**Pass/Fail**	
c. •Complete Item 3. Controlling Document: Enter control document for defeating the annunciator.	*Enters clearance number.*	**Pass/Fail**	
d. •Complete Item 4. Reason for Defeating: Enter brief description of why the annunciator is defeated.	*Enters reason for defeat:* ***PREVENT MASKING OF ALARM FOR 112 FAN.***	**Pass/Fail**	
Prompt: SM will complete item 5.			
e. •Item 5. Compensatory Action(s) – SM Init/Date: The SM shall enter identified compensatory measures resulting from defeat of annunciators including a brief description of actions applied and shall initial the entry.	*Identified item 5 to be competed by the SM. See step 4 for recommended compensatory actions.*	Sat/Unsat	
f. •Item 6. Defeated - CSO Init/Date: CSO initials and date indicate the annunciator has been temporarily defeated.	*Enters initials and date.*	**Pass/Fail**	

Performance Steps	*Standard*	*Grade*	*Comments*
Prompt: You have entered data on the appropriate sticker and the sticker has been applied to the annunciator.			
g. •Item 7. Sticker On - CSO Init/Date: CSO initials and date indicate the application of a sticker to the annunciator window tile.	*Enters initials and date.*	Sat/Unsat	
h. •Item 8. Restored - CSO Init/Date:	*Determines not applicable until after annunciator is no longer defeated.*	Sat/Unsat	
i. •Item 9. Sticker Off - CSO Init/Date:	*Determines not applicable until after annunciator is no longer defeated.*	Sat/Unsat	
j. •Item 10. Restored - SM Init/Date:	*Determines not applicable until after annunciator is no longer defeated.*	Sat/Unsat	

End of JPM

TERMINATING CUE: Defeated annunciator sticker posted and defeated annunciator log entries made.

RECORD STOP TIME_____

Initial Conditions for clearance W0403:

1. You are the CSO.

2. The clearance has been hung and includes the defeat of annuciator inputs.

   Specifically:
   Relay 2H6 and Relay 2L7 are pulled for ANN L1-1-1.

3. There are currently no defeated annunciators.

4. Ask the operator for any questions.

Initiating cue:
"(Operator's name), perform the applicable actions for the defeated annunciator inputs."

ATTACHMENT 1: DEFEATED ANNUNCIATOR LOG

NINE MILE POINT NUCLEAR STATION	DEFEATED ANNUNCIATOR LOG	1. Unit No. 1

Yellow sticker

2 Annunciator Window Number	3 Controlling Document	4 Reason For Defeating	5 Compensatory Action-SSS-Initials	6 Defeated CSO Initials/Date	7 Sticker On CSO Initials/Date	8 Restored CSO Initials/Date	9 Sticker Off CSO Initials/Date	10 Restored-SSS Initials/Date
L1-1-1	W0403	Prevent Masking 112 fan	blank	Initial date	Initial date	blank	blank	blank

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Verification of an Electronic Clearance

Revision: NRC 2004

Task Number: 2999020305

Approvals:

Gregg R [signature] 9/8/04
General Supervisor Date
Operations Training (Designee)

NA EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA EXAMINATION SECURITY
Configuration Control Date

Performer:_____(RO)

Trainer/Evaluator:_____

Evaluation Method: Perform

Evaluation Location: Admin JPM can be performed in Simulator or other designated location.

Expected Completion Time: 10 minutes Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time:_____ Completion Time:_____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator Signature:_____ Date:_____

Recommended Start Location: (Completion time based on the start location)

Simulator or other designated area with required references available.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:
None.

Directions to Operators:
Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
   - Self-verification shall be demonstrated.
3. During Training JPM:
   - Self-verification shall be demonstrated.
   - No other verification shall be demonstrated.

References:

1. GAP-OPS-02; 3.11.
2. N1-ST-M4A; 8.1.3.a.
3. C-18026-C SH 1; F3, G3.
4. K/A 2.2.13 (3.6).
5. K/A 2.1.24 (2.8).

Tools and Equipment:
1. None

Task Standard:

Clearance boundary points for "EDG 102 – PREVENT START FOR HAND CRANKING" verified and identifies starting air needs to be isolated and starting air pressure downstream of the isolation point needs to be removed.

Initial Conditions:

1. Unit 1 is at 100% power.
2. N1-ST-M4A, Emergency Diesel Generator 102 and PB 102 Operability Test, is scheduled for performance tomorrow.
3. EDG 102 will be marked up for personnel protection during hand jacking.
4. The EDG 102 – PREVENT START FOR HAND CRANKING clearance has been developed and a copy will be provided to you.
5. You have been assigned as the clearance section reviewer for verification of the clearance development.
6. Ask the operator for any questions. Then provide EDG 102 – PREVENT START FOR HAND CRANKING clearance to performer.

Initiating cue:

"(Operator's name), review and verify the adequacy of the EDG 102 – PREVENT START FOR HAND CRANKING clearance section."

Performance Steps	*Standard*	*Grade*	*Comments*
1. Provide repeat back of initiating cue. *Evaluator Acknowledge repeat back providing correction if necessary*	Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	GAP-OPS-02; section 3.11 referenced. N1-ST-M4A; section 8.1.3 referenced. C-18026-C SH 1; F3, G3.	Sat/Unsat/NA Sat/Unsat/NA Sat/Unsat/NA	
3. •Identify boundary points to ensure electrical energy is removed.	Confirm electrical boundary adequate.	Sat/Unsat	
4. •Identify boundary points to ensure mechanical energy is removed.	Determine mechanical boundary inadequate: **Air starting pressure must be isolated:** 96-82 (DGA-30) BV- DG 102 STARTING AIR BEFORE FLEX CONNECTION, is to be tagged closed. **Air start pressure downstream of the isolation point must be removed:** 96-83 (DGA-708) DRAIN – DG 102 AIR START STRAINER 96-76, to be tagged open.	**Pass/Fail** Sat/Unsat **Pass/Fail** Sat/Unsat	**NOTE: The critical steps are to identify that starting air must be isolated and starting air pressure downstream of the isolation point must be removed.** Identifying the specific isolation point and how to remove the starting air pressure is not critical and therefore is measured as Sat/Unsat.

Performance Steps	*Standard*	*Grade*	*Comments*

End of JPM

TERMINATING CUE: Clearance boundary points for "EDG 102 – PREVENT START FOR HAND CRANKING" verified and identifies starting air needs to be isolated and starting air pressure downstream of the isolation point needs to be removed.

RECORD STOP TIME_____

Initial Conditions:

1. Unit 1 is at 100% power.
2. N1-ST-M4A, Emergency Diesel Generator 102 and PB 102 Operability Test, is scheduled for performance tomorrow.
3. EDG 102 will be marked up for personnel protection during hand jacking.
4. The EDG 102 – PREVENT START FOR HAND CRANKING clearance has been developed and a copy will be provided to you.
5. You have been assigned as the clearance section reviewer for verification of the clearance development.
6. Ask the operator for any questions.

Initiating cue:

"(Operator's name), review and verify the adequacy of the EDG 102 – PREVENT START FOR HAND CRANKING clearance section."

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Radiological Requirements Related to Operator Inspection Of High Radiation Areas

Revision: NRC 2004

Task Number: N/A

Approvals:

9/9/04

General Supervisor Operations Training (Designee) Date

NA EXAMINATION SECURITY
General Supervisor Operations (Designee) Date

NA EXAMINATION SECURITY
Configuration Control Date

Performer:_____(RO)

Trainer/Evaluator:_____

Evaluation Method: **PERFORM**

Evaluation Location: **SIMULATOR OR OTHER DESIGNATED LOCATION**

Expected Completion Time: 10 minutes Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time:_____ Completion Time:_____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator Signature:_____ Date:_____

Recommended Start Location: (Completion time based on the start location)

Simulator or other designated location.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

Several RWPs and survey maps are to be provided. The performer must select the RWP and survey maps applicable to the work.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
   - Self-verification shall be demonstrated.
3. During Training JPM:
   - Self-verification shall be demonstrated.
   - No other verification shall be demonstrated.

References:

1. N1-PM-M5; 6.0, 8.0.
2. GAP-RPP-01; 3.5.
3. GAP-RPP-02; 3.3.
4. GAP-RPP-08; 3.2.
5. GAP-RPP-07; 3.2.5
6. K/A 2.3.10 (2.9) Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.

Tools and Equipment:

1. None.

Task Standard: Radiological requirements related to the performance of N1-PM- M5 are met prior to and during the performance of the inspection.

Initial Conditions:

1. Unit 1 is operating at 100% power.
2. N1-PM-M5, OPERATOR INSPECTION OF RAD AND HIGH RAD AREAS, is scheduled for this shift.
3. You will be conducting an inspection of the SHUTDOWN COOLING ROOM.
4. An RWP and survey map are provided.
5. A WCMOSSE steam leak list has been referenced and there are no steam leaks.
6. Your current exposure is 1800 mrem TEDE.
7. Ask the operator for any questions.

Initiating cue:

"(Operator's name), you will be performing N1-PM-M5, OPERATOR INSPECTION OF RAD AND HIGH RAD AREAS, for the SHUTDOWN COOLING ROOM. An RWP and survey amp are provided. Address the radiological aspects of performing this inspection."

Performance Steps	*Standard*	*Grade*	*Comments*
1. Provide repeat back of initiating cue. *Evaluator Acknowledge repeat back providing correction if necessary*	Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat	
RECORD START TIME _____	NOTE: A score card is attached to this JPM identifying the items for the performer to identify.		
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	*N1-PM-M5 obtained; 6.0 and 8.0 referenced.* *GAP-RPP-01; 3.5 referenced.* *GAP-RPP-02; 3.3 referenced.* *GAP-RPP-08; 3.2 referenced.* *GAP-RPP-07; 3.2.5 referenced.*	Sat/Unsat	

Performance Steps	*Standard*	*Grade*	*Comments*
3. •Addresses radiological aspects of N1-PM-05 precautions/limitations:			
a. •Applicable radiological precautions shall be observed. Rad Protection shall be contacted for guidance as required.	*Reviews RWP / Survey Map:*		
	- *Determine radiological controls:* ***HIGH RADIATION AREA*** ***Area dose rates up to 180 mrem/hour.*** ***Notes up to 45000 dpm/100cm2 on floor***	**Pass/Fail***	* **Can also be identified when evaluating the survey map for the area and be considered pass.**
	- *Determine protective clothing:* ***Recognizes no PC requirements outlined and must consult RP for guidancE.***	**Pass/Fail**	
	- *Determine respiratory protection:* ***None required.***	Sat/Unsat	
	- *Determine job coverage:* ***None required***	Sat/Unsat	
	- *Determine entry requirements dosimetry:* ***TLD and ED***	Sat/Unsat	
	- *Determine within delta exposure of 300 mrem and additional approvals required prior to performing the inspection.* **1800+300 = 2100 mrem (Administrative limit is 2000 mrem).**	**Pass/Fail**	

Put in same order as Questionnaire at look

Are we handing them the Questionnaire to fill out?

their 300 comes from

why 2,100 of 2000 limit?

Performance Steps	*Standard*	*Grade*	*Comments*
4. Addresses radiological aspects of steps 8.1 through 8.3:			
a. •Check the Radiation/High Radiation Entry Record Sheet (Attachment 2) for the areas which require inspection.	*Reviews N1-PM-M5 attachment 2.* *References note (*) for SDC ROOM.* ** Areas where contamination may be > 40,000 dpm/100 cm2 and familiarizes himself/herself with the contamination levels on the survey map.* *Notes area 5 and 8 have the highest contamination levels.* *Area 5 is above this threshold so a specific RWP is required.*	**Pass/Fail**	
NOTE: X-R key is for LOCKED HIGH RAD AREAS and is controlled solely by RP. X-R keys are different than keys for HIGH RAD AREAS, which we keep locked. Needs H1R-3 key (indicated on survey map) which can be issued. c. •Obtain associated key(s) from radiation protection.	*PROMPT: If determines X-R key, inform the performer that RP is not authorized to issue X-R keys to operators.* *Determine H1R-3 key is needed from radiation protection (indicated on survey map)*	Sat/Unsat	RP would not issue an X-R key if requested so not critical.

Does RP Have to give Area – Explain this more

Make least question on Questionnaire

End of JPM

TERMINATING CUE: Radiological aspects are addressed prior to performing N1-PM-M5, OPERATION INSPECTION OF RAD AND HIGH RAD AREAS, in the C/U Valve and Heat Exchanger Area.

RECORD STOP TIME_____

Initial Conditions:

1. Unit 1 is operating at 100% power.
2. N1-PM-M5, OPERATOR INSPECTION OF RAD AND HIGH RAD AREAS, is scheduled for this shift.
3. You will be conducting an inspection of the SHUTDOWN COOLING ROOM.
4. An RWP and survey map are provided.
5. A WCMOSSE steam leak list has been referenced and there are no steam leaks.
6. Your current exposure is 1800 mrem TEDE.
7. Ask the operator for any questions.

Initiating cue:

"(Operator's name), you will be performing N1-PM-M5, OPERATOR INSPECTION OF RAD AND HIGH RAD AREAS, for the SHUTDOWN COOLING ROOM. An RWP and survey map is provided. Address the radiological aspects of performing this inspection."

Answer the following when performing this task:	
1.	
Classify the area (check one):	☐ Radiation Area ☐ High Radiation Area ☐ Locked High Radiation Area ☐ Very High Radiation Area
2.	
Designate the key to be obtained:	
3.	
Designate the highest dose rate in the area and the location:	
4.	
Designate the two (2) highest contamination levels in the room and the location:	
5.	
Designate the RWP required to be used (check one):	☐ Current Standing RWP is acceptable ☐ Specific RWP should be requested
6.	
Designate whether or not protective clothing is required (check one):	☐ Yes ☐ No
7.	
Designate required dosimetry to enter the area:	
8.	
Evaluate delta exposure (check one):	☐ Acceptable ☐ Additional approval(s) required

NOTE: THIS IS THE EXAMINER SCORECARD.
DO NOT PROVIDE TO THE CANDIDATE.

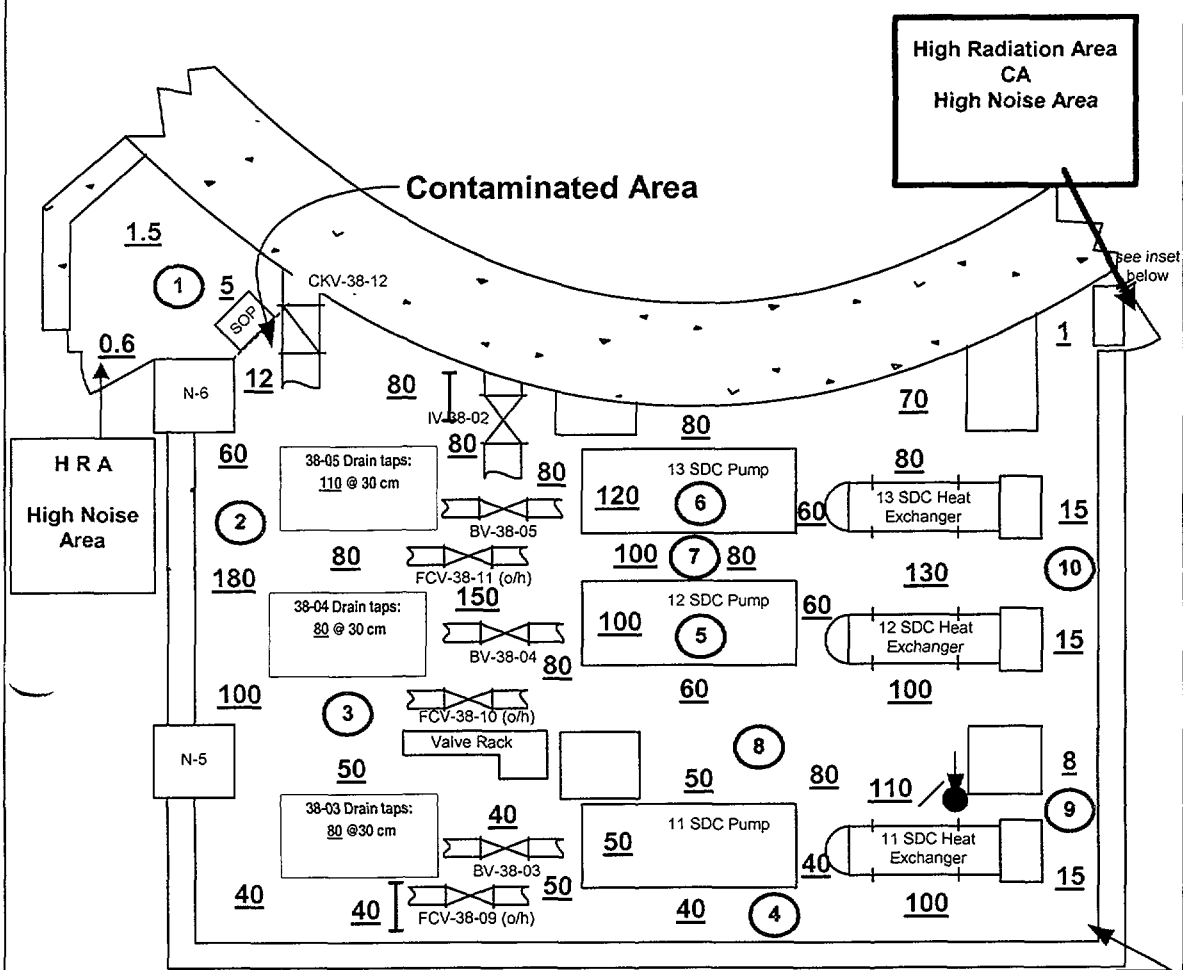
Answer the following when performing this task:	
1. **Pass/Fail**	
Classify the area (check one):	☐ Radiation Area ✓***High Radiation Area*** ☐ Locked High Radiation Area ☐ Very High Radiation Area
2. Sat/Unsat	
Designate the key to be obtained: ***H1R-3***	
3. **Pass/Fail**	
Designate the highest dose rate in the area and the location: ***180 mrem/hr, north of (or adjacent to) 39-04 drain taps***	
4. **Pass/Fail**	
Designate the two (2) highest contamination levels in the room, the level, and location: ***Area ❺ at 45,000 dpm/100cm2 at 12 SDC Pump base*** ***Area ❻ at 5,000 dpm/100cm2 on floor between 11and 12 SDC Pumps***	
5. Sat/Unsat	
Designate the RWP required to be used (check one):	☐ Current Standing RWP is acceptable ✓***Specific RWP should be requested***
6. **Pass/Fail**	
Designate whether or not protective clothing is required (check one):	✓***Yes*** ☐ No
7. Sat/Unsat	
Designate required dosimetry to enter the area: ***TLD and ED (Electronic Dosimeter)***	
8. **Pass/Fail**	
Evaluate delta exposure (check one):	☐ Acceptable ✓***Additional approval(s) required***

Nine Mile Point Unit One	RB 261' Shut-Down Cooling Room	Map No. 25b

North

H1R-3 KEY

Update survey to support scaffold erection, for area coolers 202-83 and 202-84



R0-2 # 3106, CDD 02/14/05
BC-4 # 742, CDD 07/16/04
BC-4 # 677, CDD 07/16/04
SAC-4 # 1034, CDD 8-12-04

No Beta Detected G/A unless otherwise noted

1. — = Rope/Area Boundary
2. (#) = Smear Location
3. # = General Area Unless Noted
4. *#/# = γ/γ β/β Contact; 30 cm
5. (#) = Neutron (mRem/hr)
6. A/S = Air Sample
7. (#) = Large Area Wipe
A = Area Rad Monitor
9. V # = VAMP Number
γ = Readings in mRem/hr. β = Readings in mRad/hr.

Survey No.	1RB-24884
Page	of
Date/Time	06/14/04 @ 1025
RWP No.	104019, Task 1
Rx Power	100 %
H_2 Inj. Rate	4 scfm

#	Item	βγ dpm/100cm2	α dpm/100cm2
1	Floor	<400	
2	Floor	700	
3	Floor	650	
4	Floor	800	
5	Pump Base	45K	<20
6	Pump Base	3K	<20
7	Floor	800	
8	Floor	5K	<20
9	Floor	500	
10	Floor	600	
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			

Remarks:

Number of Smears = 10 All smears <400dpm/100cm² βγ unless noted on map.

Surveyor: Jeff Allen Dose: 5 Reviewed By: Date:

Radiation Work Permit: 1041002

Operations Personnel Standing RWP HRA

Survey Data:

Radiation Levels:

Turbine Building HRA's	2 - 200mRem/hr
Reactor Building HRA's	2 - 250mRem/hr
Rad Waste Buiding HRAs	2 - 600mRem/hr
Off Gas Building HRA's	2 - 120mRem/hr

Contamination Levels: <400 - 10,000 dpm/100cm2
Airborne Levels: <0.3 DAC
Specific areas as per RP briefing and / or survey maps.

Other Ops Activities

TASK: 3 High Radiation Area

********** **Low Risk Activity** **********

Dose Alarm	**50** mRem	**Dose Rate Alarm**	**500** mRem/Hr
Backoff Dose	**40** mRem	**Elapsed Time Alarm**	**780** minutes

Protective Clothing Requirements: PC Set Name - not designated

TLD, Electronic Dosimeter

Instructions:

1) Notify RP prior to venting/draining evolutions or other system breach.
2) No entry above arms reach unless specifically approved by RP.

ALARA Review Number: N/A

Scanning or entering RWP and Task number signify that I have read, understand and will comply with the RWP

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Plant Impact Review for a DER

Revision: NRC 2004

Task Number: 3420160303

Approvals:

9/9/04

General Supervisor Operations Training (Designee) Date

NA EXAMINATION SECURITY
General Supervisor Operations (Designee) Date

NA EXAMINATION SECURITY
Configuration Control Date

Performer:_____(SRO)

Trainer/Evaluator:_____

Evaluation Method: **PERFORM**

Evaluation Location: **SIMULATOR OR OTHER DESIGNATED LOCATION**

Expected Completion Time: 15 minutes Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time:_____ Completion Time:_____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator Signature:_____ Date:_____

Recommended Start Location: (Completion time based on the start location)

N/A

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:
None

Directions to Operators:
Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
   - Self-verification shall be demonstrated.
3. During Training JPM:
   - Self-verification shall be demonstrated.
   - No other verification shall be demonstrated.

References:

1. NIP-ECA-01; 3.2, and Attachment 2
2. DER-NM-2004-1428
3. K/A 2.1.1 (3.8) Knowledge of conduct of operations requirements.
4. K/A 2.4.30 (3.6) Knowledge of which events related to system operation/status should be reported to outside agencies

Tools and Equipment:
1. Access to ESL Log to obtain the next sequential number (for this JPM prompt is added to provide an ESL# (04-0320) verbally when requested by the performer).

Task Standard: NIP-ECA-01 Attachment 2 parts 1, 2, 3, and 4 completed and applicable actions have been identified in response to the DER operability and reportability review.

Initial Conditions:
1. You are the SM.
2. You are being provided DER-NM-2004-1498 for SM plant impact review.
3. Current plant conditions are unchanged from those identified in the DER.
4. Ask the operator for any questions.

Initiating cue:

"(Operator's name), perform the applicable plant impact review for DER-NM-2004-1498, and complete the applicable form."

Performance Steps	*Standard*	*Grade*	*Comments*
1. Provide repeat back of initiating cue. *Evaluator Acknowledge repeat back providing correction if necessary*	Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	*NIP-ECA-01 obtained.* - *Section 3.2 referenced.* - *Attachment 2 referenced.*	Sat/Unsat	
3. •If the DER description does not contain sufficient information to determine whether additional review is necessary, then designate the DER as Not Approved for Screening.	*Determines sufficient information available for screening at this time.*	Sat/Unsat	
4. •If the condition described in DER does not involve an Operability Concern and is not reportable, then, indicate approved for screening, indicate no operability/ reportability concern, enter initials and date, then save. No further action is required.	*Recognizes operability concern and goes to NIP-ECA-01, Attachment 2, Operability and Reportability Review Form.*	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
5. •If the condition described in the DER represents an operability concern or is reportable, complete NIP-ECA-01, Attachment 2, Operability and Reportability Review Form, Page 2 as follows:	*Obtains copy of NIP-ECA-01, Attachment 2, Operability and Reportability Review Form, Page 2.* *Enters DER No. NM-2004-1498*	Sat/Unsat Sat/Unsat	
a. •**PART 1A**: SSCs shall be declared either operable or inoperable and marked on form.	*Determines SSC is inoperable.* *Part 1A: checks Equipment Operable as NO.*	**Pass/Fail**	
b. •**PART 1A**: If SSC was inoperable at time of discovery, but at time of review is operable, the SSC shall be reported operable with comments explaining the previous inoperable condition in Block 4C, Evaluation comments.	*Determines SSC remains inoperable.*	Sat/Unsat	
c. •**PART 1A:** Enter mode(s) which require SSC to be operable.	*Part 1A: enters Required Mode as Power Operating Condition.*	Sat/Unsat	
d. •**PART 1A:** Indicate an operability determination is not required.	*Part 1A: checks Operability Determination as NO.* *Part 4C: checks Basis for Operability Determination as N/A.*	Sat/Unsat	
e. •**PART 1B:** Determine if entry into a LCO is required.	*Determine TS LC0 3.6.11.a, Table 3.6.11-1, Parameter 6, and Table 3.6.11-2, Action 4.a apply. Specifically:* *"prepare and submit a Special Report to the Commission within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status."*	**Pass/Fail**	

Performance Steps	*Standard*	*Grade*	*Comments*
f. •**PART 1B:** Mark the appropriate LCO ENTRY Yes / No option.	*Part 1B: checks LCO Entry as YES.*	Sat/Unsat	
g. •**PART 1B:** Enter the Tech Spec LCO number.	*Part 1B: enters LCO number as TS 3.6.11-2.*	Sat/Unsat	
h. •**PART 1C:** Determine if entry into ESL Log is required.	*References GAP-OPS-01, 3.10.5.b.1.* *Determine entry into ESL Log is required based on station equipment determined to be inoperable which impact Tech Specs.*	Sat/Unsat	
i. •**PART 1C:** Mark the appropriate ESL ENTRY Yes / No option.	*Part 1C: checks ESL Entry as YES.*	Sat/Unsat	
j. •**PART 1C:** Enter the ESL number.	***PROMPT: Provide ESL# 04-0320 if asked.*** *Obtains the next sequential ESL Log number from the ESL Log.* *Part 1C: enters the ESL Log number.*	Sat/Unsat	
k. •**PART 1D:** Nuclear ESA may be requested to support an operability determination.	*Determine Nuclear ESA not required.* *Part 1D: checks Nuclear ESA Requested as NO.* *Part 4C: checks ESA / Requested Action Details as N/A.*	Sat/Unsat	
l. •**PART 1E:** Determine if event constitutes a Tech Spec violation.	*Determines NO Tech Spec violation.*	Sat/Unsat	
m. •**PART 1E:** Mark appropriate TS VIOLATION Yes / No option.	*Part 1C: checks TS Violation as NO.*	Sat/Unsat	

Performance Steps	*Standard*	*Grade*	*Comments*
n. •**PART 1E:** Document the determination in PART 4C, Evaluation Comments.	*Determines no comments are required in Part 4C, Evaluation Comments.* *Part 4C: checks Tech Spec Violation Description as N/A.*	Sat/Unsat	
o. •**PART 2A:** Determine if event is reportable to NRC per NIP-IRG-01 or to other outside agencies per NIP-IRG-02.	*References NIP-IRG-01 as applicable.* *Determines reportable per TS Table 3.6.11-2, Action Statement 4a, which requires a Special Report to the commission within 14 days.*	Sat/Unsat **Pass/Fail**	
p. •**PART 2A:** Document the reportability in space provided.	*Part 2A: checks Deviation/Event Reportable as YES.* *Part 2A: checks Other (Per NIP-IRG-01/02) block.* *Part 4C: Under Other Comments, indicates a Special Report must be prepared and submitted to the Commission within 14 days per TS 3.6.11-2, Action Statement 4a.*	Sat/Unsat Sat/Unsat Sat/Unsat	
q. •**PART 3A:** Notify NRC Resident Inspector and document the person and date/time contacted.	***PROMPT: Provide acknowledgement of notification.*** *Part 3A: checks NRC Resident Inspector Contacted as YES.* *Records name of person contacted and date/time contacted.*	Sat/Unsat	
r. •**PART 3A:** Notify the NRC/NRR (red phone) and document the person and date/time contacted. Otherwise leave blank.	*Part 3A: checks NRC Region/NRR Notified as NO.* *Leaves person contacted and date/time contacted blank.*	Sat/Unsat	

Performance Steps	*Standard*	*Grade*	*Comments*
PROMPT: If asked, electronic ECAP system is available.			
s. •**PART 4A:** Document results by checking if DER is Approved or Not Approved for Screening	*Checks approved for screening block.*	Sat/Unsat	
t. •**PART 4D:** Document Unit, name, and date of review.	*Checks Unit 1 block.*	Sat/Unsat	
	Prints name, initials, and enters date.	Sat/Unsat	
	Checks Other Unit SM Concurrence block as NA.	Sat/Unsat	
PROMPT: You are not required to update ECAP to indicate the results of your review.			
6. •Document required entry into ESL Log and record ESL number in the Comments Section of the DER Identification Page.	*On the DER form:* *Enters ESL Log number in the Operations Comments block.*	Sat/Unsat	
	Signs for Operations Approval.	Sat/Unsat	

End of JPM

TERMINATING CUE: NIP-ECA-01, Attachment 2 completed, and DER approved for screening.

RECORD STOP TIME_____

Initial Conditions:

1. You are the SM.
2. You are being provided DER-NM-2004-1498 for SM plant impact review.
3. Current plant conditions are unchanged from those identified in the DER.
4. Ask the operator for any questions.

Initiating cue:

"(Operator's name), perform the applicable plant impact review for DER-NM-2004-1498 an complete the applicable form."

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Evaluate Plant Chemistry Report and Respond Revision: NRC 2004

Task Number: 3410220303

Approvals:

9/9/04

General Supervisor Operations Training (Designee) Date

NA EXAMINATION SECURITY
General Supervisor Operations (Designee) Date

NA EXAMINATION SECURITY
Configuration Control Date

Performer:_____(SRO)

Trainer/Evaluator:_____

Evaluation Method: **PERFORM**

Evaluation Location: **SIMULATOR OR OTHER DESIGNATED AREA**

Expected Completion Time: 10 minutes Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time:_____ Completion Time:_____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator Signature:_____ Date:_____

Recommended Start Location: (Completion time based on the start location)

N/A

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

To be performed as an administrative JPM.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
   - Self-verification shall be demonstrated.
3. During Training JPM:
   - Self-verification shall be demonstrated.
   - No other verification shall be demonstrated.

References:

1. GAP-CHE-01; 3.2; Enclosure 1.
2. DER-NM-2004-958, Exceeded GAP-CHE-01 Action Level 1 threshold for sulfates during RWCU maintenance.
3. K/A 2.1.25 (3.1) Ability to obtain and interpret station reference materials such as graphs / monographs / and tables which contain performance data.
4. K/A 2.1.34 (2.9) Ability to maintain the primary and secondary plant chemistry within allowable limits.

Tools and Equipment:

1. None.

Task Standard: Determine GAP-CHE-01 Action Level 1 exceeded for reactor water sulfates due to RWCU maintenance outage, and that a plant shutdown is required if not corrected in 96 hours.

Initial Conditions:

1. Unit 1 is at 100% power.
2. You are the Unit 1 CRS.
3. At 02:30 on 3/10/2004 RWCU was removed from service for maintenance with an expected duration of three (3) days. Conductivity recorder was aligned to the recirculation system.
4. Chemistry is taking reactor water samples twice per shift for conductivity and sulfates.
5. At 05:00 on 3/12/2004 Chemistry reports the following reactor water samples:
   - Conductivity = 0.147 υS/cm at 25°C.
   - Sulfates = 5.05 ppb
6. Nobel Metal Chemical Application (NMCA) is not in service.
7. Ask the operator for any questions.

Initiating cue:

"(Operator's name), evaluate the 3/12/2004 05:00 chemistry and respond as necessary."

Performance Steps	*Standard*	*Grade*	*Comments*
1. Provide repeat back of initiating cue. *Evaluator Acknowledge repeat back.*	Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	*GAP-CHE-01 obtained.* - *Enclosure 1 referenced.* - *Section 3.2.1 referenced.*	Sat/Unsat	
3. •Evaluate GAP-CHE-01 Enclosure 1, Part I (TECH SPECS) for applicability.	*Compares sample results to GAP-CHE-01 Enclosure 1, Part I (TECH SPECS), for REACTOR CONDITION 3.* *Determines conductivity **below** ACTION LEVEL 1 limit of 0.19.* *Determines sulfates **above** ACTION LEVEL 1 value of 5 and below ACTION 2 LEVEL value of 20.*	Sat/Unsat **Pass/Fail**	

Performance Steps	Standard	Grade	Comments
4. •Evaluate GAP-CHE-01 Enclosure 1, Part II (FUEL WARRANTY) for applicability.	*Compares sample results to GAP-CHE-01 Enclosure 1, Part II (FUEL WARRANTY), for REACTOR CONDITION 3.* *Determines conductivity **below** ACTION LEVEL 1 limit of 1.00.* *Determines sulfates not evaluated as a fuel warranty limit.*	Sat/Unsat	
5. •Evaluate GAP-CHE-01 Enclosure 1, Part III (EPRI) for applicability.	*Compares sample results to GAP-CHE-01 Enclosure 1, Part III (EPRI), for REACTOR CONDITION 3.* *Determines conductivity **below** ACTION LEVEL 1 limit of 0.30.* *Determines sulfates **above** ACTION LEVEL 1 value of 5 and below ACTION 2 LEVEL value of 20.*	Sat/Unsat **Pass/Fail**	
6. •Reference GAP-CHE-01, Section 3.2 and 3.2.1 as follows:			
a. Event time clock begins at time of discovery.	*Notes time that discovered ACTION LEVEL 1 was exceeded.*	Sat/Unsat	
b. Notify the SM, Operations Manager, General Supervisor Chemistry, Plant General Manager and Principle Engineer Reliability Engineering of the parameter which has exceeded Action Level 1 limits.	*Informs the following the TECH SPEC and EPRI ACTION LEVEL 1 sulfate thresholds are exceeded due to RWCU maintenance:* - *SM* - *Operations Manager* - *General Supervisor Chemistry* - *Plant General Manager* - *Principle Engineer Reliability Engineering*	Sat/Unsat	

Performance Steps	*Standard*	*Grade*	*Comments*
	PROMPT: If asked. RWCU will be returned to service within six (6) hours.		
c. Determine corrective actions be taken to return chemistry to within limits.	*Determines the chemistry parameter (sulfates) must be below the ACTION LEVEL 1 value within 96 hours of time of discovery.*	**Pass/Fail**	
	Determines that returning RWCU to service will restore the sulfate parameter to within ACTION LEVEL 1 value if returned within the predicted time of three (3) days.	Sat/Unsat	

End of JPM

TERMINATING CUE: ENCLOSURE 1, Part I, Part II, and Part III evaluated and it is determined that the TECH SPEC and EPRI ACTION LEVEL 1 thresholds are exceeded for sulfates.

RECORD STOP TIME_____

Initial Conditions:

1. Unit 1 is at 100% power.
2. You are the Unit 1 CRS.
3. At 02:30 on 3/10/2004 RWCU was removed from service for maintenance with an expected duration of three (3) days. Conductivity recorder was aligned to the recirculation system.
4. Chemistry is taking reactor water samples twice per shift for conductivity and sulfates.
5. At 05:00 on 3/12/2004 Chemistry reports the following reactor water samples:
   - Conductivity = 0.147 υS/cm at 25°C.
   - Sulfates = 5.05 ppb
6. Nobel Metal Chemical Application (NMCA) is not in service.
7. Ask the operator for any questions.

Initiating cue:

"(Operator's name), evaluate the 3/12/2004 05:00 chemistry and respond as necessary."

ENCLOSURE 1: WATER CHEMISTRY GUIDELINES - UNIT 1

NOTES:

1. This enclosure has three sections; Technical Specifications, Fuel Warranty, and EPRI Guidelines. **Each section needs to be evaluated for applicability.**

2. Water chemistry limits at specific Reactor Conditions are based on **BULK REACTOR WATER TEMPERATURE AND NOT MODE SWITCH POSITION.**

I. TECHNICAL SPECIFICATIONS

NOTE: Action level 2 limits may be exceeded for a maximum of 24 hours, OR a shutdown shall be initiated within one hour and reactor coolant temperature be reduced to <200°F within 10 hours.

REACTOR CONDITION 2: Reactor water bulk temperature ≥ 200°F AND reactor thermal power ≤ 10 %

Control Parameter	Action Levels		
	1	2	3
Reactor Water			
Conductivity (μS/cm) at 25°C	--	> 1.0**	> 5.0****
Chloride (ppb)	--	> 100	> 200
Sulfate (ppb)	--	> 100	> 200

REACTOR CONDITION 3: Reactor thermal power > 10%

Control Parameter	Action Levels		
	1	2	3
(C1,C2)**Reactor Water**			
Conductivity (μS/cm) at 25°C	>0.19*	> 1.0***	> 5.0
Chloride (ppb)	>5*	> 20	> 100
Sulfate (ppb)	>5*	> 20	> 100

* Technical Specification 3.2.3 bases value NOT a Limiting Condition of Operation

** During Noble Metal Chemical Application (NMCA) the limit is 20 μS/cm. The limit is 2 μS/cm for up to 5 months at power operation following NMCA.

*** Post NMCA the limit is 2 μS/cm for up to a 5 month period at power operations.

**** During NMCA, the limit is 20 μS/cm.

II. FUEL WARRANTY REQUIREMENTS

REACTOR CONDITION 1: Reactor water bulk temperature ≤ 212 °F

System and Control Parameter		Action Levels 1	2	3
Reactor Water and Fuel Storage Pool				
pH at 25° C(applied only when reactor water >1.0μS/cm)	(Low)	<5.3	<4.9	<4.6
	(High)	>8.6	>9.3	>9.6
Conductivity (μs/cm @25°C)		>2.0	>5.0	>10.0
Chloride, sulfate (ppb)		>100	>200	>500

REACTOR CONDITION 2: Reactor water bulk temperature >212°F

System and Control Parameter		Action Levels 1	2	3
Reactor Water				
pH at 25° C(applied only when reactor water >1.0μS/cm)	(Low)	<5.6	<4.9	<4.6
	(High)	>8.6	>9.3	>9.6
Conductivity (μs/cm @ 25°C)		>1.0	>5.0	>10.0
Chloride, sulfate (ppb)		>100	>200	>500

REACTOR CONDITION 3: Reactor thermal power > 25%

System and Control Parameter		Action Levels 1	2	3
Reactor Water				
pH at 25° C(applied only when reactor water >1.0μS/cm)	(Low)	<5.6	<4.9	<4.6
	(High)	>8.6	>9.3	>9.6
Conductivity (μs/cm @ 25°C)		>1.0	>5.0	>10.0
Chloride, sulfate (ppb)		>100	>200	>500
Condensate Effluent and Feedwater				
Conductivity at 25°C		>0.065	>0.1	>0.2
Dissolved Oxygen (ppb)	(Low)	<30		<10
	(High)	>200		>500
Feedwater				
Total Copper (ppb) [a]		0.5	>2.0	>4.0
Iron (ppb)	Insoluble	>10	>20	>40
	Soluble	1.0	>2.0	>4.0
Total metals (ppb) Fe,Cu,Ni,Zn (soluble & insoluble)		>15	>30	>60
Total Zinc (ppb)		>1.3		>2

(a) High feedwater copper is known to play a role in fuel cladding corrosion. See DER 2001-5276 for details

III. EPRI BWR WATER CHEMISTRY GUIDELINE

REACTOR CONDITION 1: Reactor water bulk temperature < 200°F

System and Control Parameter	Action Levels 1	2	3	Value Prior to Startup
Reactor Water				
Conductivity (µS/cm @ 25°C)(2)(3)	>2.0	—	—	≤1.0
Chloride (ppb)	>100	—	—	≤100
Sulfate (ppb)	>100	—	—	≤100

REACTOR CONDITION 2: Reactor water bulk ≥200°F AND reactor thermal power ≤10%

System and Control Parameter	Action Levels 1	2	3	Value Prior to Power Operation
Reactor Water				
Dissolved Oxygen (ppb)	>300(1)			
Conductivity (µS/cm @ 25°C)(2)(3)		>1.0	>5.0	≤1.0
Chloride, Sulfate (ppb)		>100	>200	≤20
Condensate				
Influent (CDI) conductivity @ 25°C	—	—	>10	—
Feedwater				
Conductivity @ 25°C	>0.15	—	—	
Dissolved Oxygen (ppb) (4)	>200	—	—	<200
Suspended Corrosion Products (ppb)	>100	—	—	—

REACTOR CONDITION 3: Reactor thermal power >10%

System and Control Parameter	Action Levels 1	2	3
Control Rod Drive			
Conductivity @ 25°C	>0.15	—	—
Dissolved Oxygen (ppb)	>200	—	—
Feedwater (*EPRI Guidelines for weekly integrated value)			
*Total Copper (ppb) (a)	>0.2	—	—
*Total Iron (ppb)	>5	—	—
Conductivity @ 25°C	>.065	—	—
Condensate			
Influent (CDI) conductivity @ 25°C	>0.10	—	>10

Reactor Water	**NWC Action Levels** 1	2	3	**HWC/NMCA Action Levels** 1	2	3
Conductivity (µS/cm @ 25°C)	>0.30	>1.0	>5.0	>0.30(3)	>1.0	>5.0
Chloride, Sulfate (ppb)	>5	>20	>100	>5	>50	>200

(1) When Reactor water temperature is >284 degrees F (140°C)
(2) During NMCA, the conductivity will intentionally exceed AL2 for over 48 hours. No additional Corrective action required.
(3) Conductivity excludes contribution from Iron during and post noble metals chemical addition.
(4) After establishing condenser vacuum with steam jet air ejectors.
(a) High feedwater copper is known to play a role in fuel cladding corrosion. See DER 2001-5276 for details

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Determine Post Maintenance Test (PMT) Following Corrective Maintenance (Refueling Bridge Over-Core Limit Switch Replacement) Revision: NRC 2004

Task Number: 3420130303

Approvals:

9/9/04

General Supervisor Operations Training (Designee) Date

NA EXAMINATION SECURITY
General Supervisor Operations (Designee) Date

NA EXAMINATION SECURITY
Configuration Control Date

Performer:_____(SRO)

Trainer/Evaluator:_____

Evaluation Method: **PERFORM**

Evaluation Location: **SIMULATOR OR OTHER DESIGNATED AREA**

Expected Completion Time: 12 minutes Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time:_____ Completion Time:_____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator Signature:_____ Date:_____

Recommended Start Location: (Completion time based on the start location)

Simulator or other designated location.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

To be performed as an administrative JPM.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
   - Self-verification shall be demonstrated.
3. During Training JPM:
   - Self-verification shall be demonstrated.
   - No other verification shall be demonstrated.

References:

1. GAP-SAT-02; 3.1, Attachment 2.
2. LER 2002-002. LOSS OF ONE CRD PUMP TRAIN DUE TO CIRCUIT BREAKER FAILURE. Cause was inadequate post maintenance testing.
3. K/A 2.2.21 (3.5)
4. N1-ST-W3, Refueling Platform Interlock Test

Tools and Equipment:

1. None.

Task Standard: Indicate N1-ST-W3 steps to be performed at a MINIMUM to demonstrate operability are identified. Indicates NOT REQUIRED for steps that do not have to be performed.

Initial Conditions:

1. Unit 1 Refueling Outage is in progress.
2. The first fuel shuffle is in progress. After releasing a fuel assembly in the reactor core and moving the refueling bridge to the spent fuel pool to grapple the fuel assembly specified in the next step, ROD BLOCK INTERLOCK #1 did not clear as expected when the refueling bridge was no longer over the reactor core. The SRO on the refueling bridge contacted the control room and refueling operations have been halted. The refueling bridge is in the spent fuel pool with the main hoist normal up and unloaded.
3. I&C has determined that the refueling bridge over core limit switch broke and remained actuated.
4. A clearance has been hung, the limit switch has been replaced, and the clearance has been removed. WO # 2004-1465.
5. Annunciator F3-4-4, ROD BLOCK, is clear.
6. The refueling bridge is in the spent fuel pool with the main hoist normal up and unloaded.
7. N1-PM-SO is current.
8. Ask the operator for any questions.

Initiating cue:

"(Operator's name), determine the Post Maintenance Test requirements including specific steps to be performed at a MINIMUM to demonstrate operability in N1-ST-W3. Indicate Not Required (N/R) for steps that do not have to be performed.

Performance Steps	*Standard*	*Grade*	*Comments*
1. Provide repeat back of initiating cue. *Evaluator Acknowledge repeat back providing correction if necessary*	Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	*GAP-SAT-02 obtained.* - *Section 3.1 referenced.* - *Attachment 2 referenced.*	Sat/Unsat	
3. •References GAP-SAT-02, Attachment 2, Electrical PMT Guidelines, for limit switches.	*Determine replacement of limit switches requires verifying actuation of controlled device including any interlock(s).*	Sat/Unsat	
4. •Determines N1-ST-W3 is the applicable procedure to be used for post maintenance testing.	*N1-ST-W3 obtained.*	Sat/Unsat	
5. •Determines N1-ST-W3 steps to be performed.			
a. Per step 4.3: When used for PMT, perform sections 1.0 through 6.0.	*Determine Sections 1.0 through 6.0 are required (cannot be N/A or N/R).*	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
b. Per step 4.3: When used for PMT, perform applicable subsections / steps of sections 7.0 through 10.0.	*Step 7.1: checks post-maintenance testing and enters work order number.*	Sat/Unsat	***NOTE: Although testing in Section 8.1 and Section 8.2 are not required for PMT, Section 8.1 steps 8.1.4 and 8.1.5 will have to be performed because Section 8.3 interlock checks require that the dummy fuel assembly be grappled and this is performed in steps 8.1.4 and 8.1.5. Section 8.2 is not required.***
	Step 7.7.1 and 7.7.2 N/R	Sat/Unsat	
	Steps 8.1. 4 and 8.1.5 are required.	**Pass/Fail****	
	Steps 8.1.6 through 8.1.9 are NOT required.	Sat/Unsat	****Because of the organization of the section signoff blocks (lines), the performer may determine all of sections 8.1 and 8.3 are required to be performed. If this determination is made, the minimum required steps will have been identified and these steps are graded as PASS.***
	Steps 8.2.1 through 8.2.3 are NOT required	Sat/Unsat	
	Steps 8.3.1 through 8.3.16 are required.	**Pass/Fail****	
	Steps 8.4.1 through 8.4.2 are NOT required.	Sat/Unsat	
	Section 9.0 steps are required.	**Pass/Fail**	
	Step 10.1.1.a is NOT required.	Sat/Unsat	
	Steps 10.1.1.b through 10.1.1.d are required.	**Pass/Fail**	
	Steps 10.1.2 and 10.1.3 are required.	Sat/Unsat	
	Step 10.2 is required.	Sat/Unsat	
	For steps indicated N/A or N/R document the reason in section 10.1 remarks.	Sat/Unsat	
	Ensure that if steps not performed, then the surveillance frequency is not altered.	Sat/Unsat	

End of JPM

TERMINATING CUE: Indicate N1-ST-W3 steps to be performed at a minimum to demonstrate operability. Indicates NOT REQUIRED for steps that do not have to be performed.

RECORD STOP TIME_____

Initial Conditions:

1. Unit 1 Refueling Outage is in progress.
2. The first fuel shuffle is in progress. After releasing a fuel assembly in the reactor core and moving the refueling bridge to the spent fuel pool to grapple the fuel assembly specified in the next step, ROD BLOCK INTERLOCK #1 did not clear as expected when the refueling bridge was no longer over the reactor core. The SRO on the refueling bridge contacted the control room and refueling operations have been halted. The refueling bridge is in the spent fuel pool with the main hoist normal up and unloaded.
3. I&C has determined that the refueling bridge over core limit switch broke and remained actuated.
4. A clearance has been hung, the limit switch has been replaced, and the clearance has been removed. WO # 2004-1465.
5. Annunciator F3-4-4, ROD BLOCK, is clear.
6. The refueling bridge is in the spent fuel pool with the main hoist normal up and unloaded.
7. N1-PM-SO is current.
8. Ask the operator for any questions.

Initiating cue:

"(Operator's name), determine the Post Maintenance Test requirements including specific steps to be performed at a MINIMUM to demonstrate operability in N1-ST-W3. Indicate Not Required (N/R) for steps that do not have to be performed."

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Direct An Exclusion Area Evacuation Revision: NRC 2004

Task Number: 3440240303

Approvals:

9/9/04

General Supervisor Operations Training (Designee) Date

NA EXAMINATION SECURITY
General Supervisor Operations (Designee) Date

NA EXAMINATION SECURITY
Configuration Control Date

Performer:_____(SRO)

Trainer/Evaluator:_____

Evaluation Method: **PERFORM**

Evaluation Location: **SIMULATOR OR OTHER DESIGNATED AREA**

Expected Completion Time: 15 minutes Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time:_____ Completion Time:_____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator Signature:_____ Date:_____

Recommended Start Location: (Completion time based on the start location)

N/A

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

To be performed as an administrative JPM.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
   - Self-verification shall be demonstrated.
3. During Training JPM:
   - Self-verification shall be demonstrated.
   - No other verification shall be demonstrated.

References:

1. EPIP-EPP-05C; Section 3.1, and Attachment 1.
2. EPIP-EPP-18; Attachment 1 Figure 1, and Attachment 2.
3. EPIP-EPP-08; Attachment 1 Figure 1.5.
4. K/A 2.3.10 (3.3) Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.
5. K/A 2.4.40 (4.0) Knowledge of the SRO's responsibilities in emergency plan implementation.

Tools and Equipment:

1. None.

Task Standard: Directs Exclusion Area Evacuation using the following route(s): Lake Road (w), to Lakeview Road (s), to Rte. 1 (w), to Creamery Road (s), to 104 (w) to Rte. 53 (S) to Howard Road OR continue (s) on Clocks Corner Road to Rte. 4 to Rte. 4 (w) to Rte. 53 (s) to Howard Road OR to Rte. 4 (e) to NYS Rte. 178 (s) to Howard Road or any combination of these routes and roads that connect between them.

Initial Conditions:
1. A Site Area Emergency has been declared on Unit 1 due to release rates.
2. A release is in progress.
3. An Exclusion Area Evacuation is required because of the release. It is safe to perform the evacuation.
4. Wind direction is from 278 degrees with no lake breeze.
5. Ask the operator for any questions.

Initiating cue:

"(Operator's name), direct the required EXCLUSION AREA EVACUATION including specific evacuation routes to the offsite assembly area and completion of the applicable emergency announcement form."

Performance Steps	*Standard*	*Grade*	*Comments*
1. Provide repeat back of initiating cue. *Evaluator Acknowledge repeat back providing correction if necessary*	Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	*Obtains EPIP-EPP-05C.* - *Section 3.1 referenced* - *Attachment 2 referenced.* *May reference EPIP-EPP-18 Attachment 1 Figure 1, to determine type of evacuation.*	Sat/Unsat	
3. •Determines plume direction.	*Determines plume direction from 278 degrees (based on wind direction) and that ERPAs 1,2,3,4,7,9,26,27 could be affected.*	**Pass/Fail**	
4. •Determines evacuation is safe.	*Determines evacuation is safe.*	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
5. •Determine route of travel information to the Offsite Assembly Area based on plume direction.	*NOTE: Travel routes are highlighted and are provided as an attachment to this JPM. References EPIP-EPP-05C, Attachment 2, and determines the evacuation route(s) as:* *Lake Road (w), to Lakeview Road (s), to Rte. 1 (w), to Creamery Road (s), to 104 (w) to Rte. 53 (S) to Howard Road.* *OR* *Lake Road (w), to Lakeview Road (s), to Rte. 1 (w), to Creamery Road (s), continue (s) on Klocks Corner Road to Rte. 4 to Rte. 4 (w) to Rte. 53 (s) to Howard Road.* *OR* *Lake Road (w), to Lakeview Road (s), to Rte. 1 (w), to Creamery Road (s), continue (s) on Klocks Corner Road to Rte. 4 to Rte. 4 (e) to NYS Rte. 178 (s) to Howard Road.* *OR* *Any combination of these routes and roads that connect between them.*	**Pass/Fail**	

Performance Steps	*Standard*	*Grade*	*Comments*
6. •Direct an announcement per EPIP-EPP-18 ensuring route of travel information included as appropriate.	*PROMPT: Direct the performer to complete EPIP-EPP-18, Attachment 2, part 2 and Part 8 (at a minimum)* *Direct announcement per EPIP-EPP-18 Attachment 2, specifically:* - *Part 2 checks sound evacuation alarm* - *Part 8 checks "a" and "1"* - *Part 8 checks "b" and "personnel are to leave the area heading west towards Oswego then turn south" and provides additional guidance on the route(s) to be taken OR which route(s) not to take.*	Sat/Unsat	

End of JPM

TERMINATING CUE: Direst actions for EXCLUSION AREA EVACUATION including determining the appropriate evacuation route(s) to the offsite assembly area and emergency announcement requirements.

RECORD STOP TIME_____

Initial Conditions:

1. A Site Area Emergency has been declared on Unit 1 due to release rates.
2. A release is in progress.
3. An Exclusion Area Evacuation is required because of the release. It is safe to perform the evacuation.
4. Wind direction is from 278 degrees with no lake breeze.
5. Ask the operator for any questions.

Initiating cue:

"(Operator's name), direct the required EXCLUSION AREA EVACUATION including specific evacuation routes to the offsite assembly area and completion of the applicable emergency announcement form."