

NRC REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM: RO, SRO-U SYSTEM d

**TITLE: SAMPLE CONTAINMENT FOR
HYDROGEN**

CANDIDATE: _____

EXAMINER: _____

JOB PERFORMANCE MEASURE
DATA PAGE

Task: Left channel of Containment Hydrogen monitoring in service.

Alternate Path: YES

Facility JPM #: PL-OPS-HYR-003J

K/A: 028A4.03 Importance: RO: 3.1 SRO: 3.3

K/A Statement: Location and operation of hydrogen sampling and analysis of containment atmosphere, including alarms and indications

Task Standard: Left channel of Containment Hydrogen monitoring placed in service in the 'Accident Mode'.

Preferred Evaluation Location: Simulator In Plant

Preferred Evaluation Method: Perform Simulate

References: EOP-4.0, Loss Of Coolant Recovery
SOP-38, Gaseous Waste Monitoring System

Validation Time: 12 minutes Time Critical: NO

Candidate: _____

Time Start: _____ Time Finish: _____

Performance Time: _____ minutes

Performance Rating: SAT _____ UNSAT _____

Comments:

Examiner: _____
Signature

Date: _____

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

- SOP-38, Gaseous Waste Monitoring System, Section 7.5.1, Rev. 24

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE**DIRECTION TO CANDIDATE:**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- The plant has been tripped due to a primary coolant leak.
- EOP-1.0 actions are complete, EOP-4.0 is the in use procedure.
- Both channels of Hydrogen Monitoring have been in standby for greater than 6 hours.

INITIATING CUES:

- During performance of EOP-4.0, the CRS directs you to sample containment for hydrogen utilizing the LEFT CHANNEL Hydrogen Monitor per EOP-4.0 step 12.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Locate EOP-4.0, Loss Of Coolant Accident, Step 12	Step 12 of EOP-4.0 located	S U
Comment:			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
n/a	Locate SOP-38, Gaseous Waste Monitoring System, Section 7.5.2, To Sample Containment For H ₂	SOP-38, step 7.5.2 located.	S U
Comment: <i>Evaluator provides the operator a working copy SOP-38, Section 7.5.2.</i>			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
7.5.2a	ENSURE sampling system in STANDBY for at least six hours.	Operator determines sampling system in standby for at least six hours (given in initial conditions).	S U
Comment: <i>EVALUATOR CUE: If Operator asks if step 7.5.1 actions are complete, CUE that step 7.5.1 actions are complete.</i>			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
7.5.2b	CHECK desired hand switch in normal position <u>Left Channel</u> HS-2419	HS-2419 verified in the normal position	S U
Comment:			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
7.5.2c	CHECK Range selector switch to the "0-10% range, for desired channel."	Left channel Hydrogen Monitor Range select switch verified set to the 0-10% range position.	S U
Comment:			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
7.5.2d	If CHP or CHR signal present or imminent, THEN ENABLE the sample valves to be opened by turning the appropriate Key Switch to the ACCI position. <u>Left Channel</u> HS-2419 (Key 364)	Key 364 obtained AND Inserts Key in HS-2419. AND Places HS-2419 to the ACCI position.	S U
Comment: <i>EVALUATOR NOTE: HS-2419 to ACCI position is required by EOP-4.0 step 12.</i> <i>EVALUATOR CUE: If asked if HS-2419 is to be placed in the ACCI position, REPORT that the procedural direction is to be followed.</i> CRITICAL STEP			

Proc. Step	TASK ELEMENT 7	STANDARD	Grade
7.5.2e	For the desired channel, OPERATE the following hand switches to the OPEN position AND RELEASE : <u>Left Channel</u> HS-2417	HS-2417 placed to the open position. AND HS-2417 released.	S U
Comment: CRITICAL STEP			

Proc. Step	TASK ELEMENT 8	STANDARD	Grade
7.5.2f	For the desired channel, PLACE the following hand switches to the OPEN position: <u>Left Channel</u> HS-2413A HS-2413B HS-2415A HS-2415B	HS-2413A placed to open position (red open light on, green close light off). AND HS-2413B placed to open position (red open light on, green close light off). AND HS-2415A placed to open position (red open light on, green close light off). AND HS-2415B placed to open position (red open light on, green close light off).	S U
Comment: CRITICAL STEP			

Proc. Step	TASK ELEMENT 9	STANDARD	Grade
7.5.2g	ENERGIZE Recorder AR-2401, Containment Hydrogen Recorder, as follows: <ol style="list-style-type: none"> PLACE Power Switch to ON (Left Side of Recorder) PLACE Chart Drive Switch to ON (Top of Recorder) 	Recorder AR-2401 power switch placed to on. AND Recorder AR-2401 chart drive switch placed to on	S U
Comment:			

Proc. Step	TASK ELEMENT 10	STANDARD	Grade
7.5.2h	PLACE the desired hand switch to the ANALYZE position. <u>Left Channel</u> HS-2427L	HS-2427L placed to the analyze position.	S U
Comment: <i>EVALUATOR NOTE: Sample light will not light as expected.</i> <i>EVALUATOR NOTE: EK-0227, Cont H₂ Mont C-161 Fail (on front of Panel C-11A) will annunciate as expected.</i> CRITICAL STEP			

Proc. Step	TASK ELEMENT 11	STANDARD	Grade
7.5.2i	PUSH ALARM RESET pushbutton to clear any alarms	Alarm reset pushbutton on left channel hydrogen monitor pushed.	S U
Comment: <i>EVALUATOR NOTE: Sample light will not light as expected.</i>			

Proc. Step	TASK ELEMENT 12	STANDARD	Grade
7.5.2j.1	<p><u>IF</u> the SAMPLE light does <u>NOT</u> light, <u>THEN</u>:</p> <p>1. PUSH desired REMOTE SELECTOR pushbutton <u>Left Channel</u> HS-2426L</p>	<p>HS-2426L is pushed. AND SAMPLE light lights.</p>	S U
<p>Comment:</p> <p><i>EVALUATOR NOTE: Sample light will light as expected.</i></p> <p>CRITICAL STEP</p>			

Proc. Step	TASK ELEMENT 13	STANDARD	Grade
7.5.2j.2	<p>ENSURE the desired Function Selector Switch in the SAMPLE position.</p> <p><u>Left Channel</u> HS-2428L</p>	<p>HS-2428L is verified in the SAMPLE position.</p>	S U
<p>Comment:</p>			

Proc. Step	TASK ELEMENT 14	STANDARD	Grade
7.5.2k	<p><u>WHEN</u> Hydrogen Monitor has been in ANALYZE for at least 15 minutes, <u>THEN</u> READ % H₂.</p>	<p>Operator determines that 15 minutes will have to elapse to perform this step.</p>	S U
<p>Comment:</p> <p><i>EVALUATOR CUE: CUE Operator that another Operator will perform this step.</i></p>			

Proc. Step	TASK ELEMENT 15	STANDARD	Grade
n/a	Notify CRS that the left channel of Containment Hydrogen monitoring is in service.	CRS notified that the left channel of Containment Hydrogen monitoring has been placed in service.	S U
<p>Comment:</p>			

END OF TASK

CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

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INITIATING CUES:

- During performance of EOP-4.0, the CRS directs you to sample containment for hydrogen utilizing the LEFT CHANNEL Hydrogen Monitor per EOP-4.0 step 12.

SIMULATOR OPERATOR INSTRUCTIONS

USE IC-79