

NRC REGION III
INITIAL LICENSE EXAM
JOB PERFORMANCE MEASURE

JPM: RO SYSTEM h

**TITLE: SET RIA-1113 WASTE GAS DISCHARGE
MONITOR HI ALARM SETPOINT**

CANDIDATE: _____

EXAMINER: _____

EXAMINER COPY ONLY

Tools/Equipment/Procedures Needed:

- SOP-38, Gaseous Waste Monitoring System
- Release Order, Form HP 6.6-3 (batch card)
- Safety glasses (optional)
- Fire Retardant Class 1 Electrical Safety Shirt (optional)

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:

- Waste Gas Discharge Monitor, RIA-1113 Batch Card background reading = 95 CPM.
- Waste Gas Discharge Monitor, RIA-1113 Batch Card Release Limit = 8500 CPM
- Waste Gas Discharge Monitor, RIA-1113 Batch Card "High Alarm Setpoint" = 8600 CPM.
- Release Order, Form HP 6.6-3 (batch card) is available.
- Breaker 34 on Y-01 is closed.
- RIA-1113 has been verified aligned for service per Attachment 5, Checklist 38, "Gaseous Process Radiation Monitors System Checklist"
- A check source has been completed on RIA-1113 with a reading of 620000 CPM.

INITIATING CUES:

- The CRS directs you to set up Waste Gas Discharge Monitor, RIA-1113 High Alarm Setpoint using SOP-38 Section 7.3.6 to a setpoint of 8600 cpm.

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Locate SOP-38, Section 7.3.6	SOP-38, Section 7.3.6 located	S U
Comment: <i>Evaluator provides candidate with a Working Copy of SOP-38 and Form HP 6.6-3</i>			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
7.3.6a	READ the "As Found" count rate on RIA-1113, Waste Gas Discharge Monitor	9.5×10^1 "As Found" count rate read on RIA-1113 (given in initial conditions)	S U
Comment:			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
7.3.6b	PULL RIA-1113 out from the panel about (6) inches to access the control buttons	RIA-1113 pulled out from panel about 6 inches.	S U
Comment: NOTE: Operator may don safety glasses and a Fire Retardant Class 1 electrical safety shirt, although this is not required.			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
7.3.6c	VERIFY the Function switch is on "0." (seen on the right side of the switch)	Verifies right side of Function Switch is set to "0".	S U
Comment:			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
7.3.6d	PRESS Enter button to display the High Alarm setpoint.	Enter button pressed and one digit blinking.	S U
<p>Comment:</p> <p>NOTE: Control buttons and Function switch are located on the right, inside RIA-1113. The control buttons are labeled Digit, Value, and Enter.</p> <p>CRITICAL STEP</p>			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
7.3.6e	<p>SET the High Alarm Setpoint per Form HP 6.6-3, WGD T Release Authorization, by performing the following as necessary:</p> <ul style="list-style-type: none"> ▪ IF changing the digit value, THEN PRESS the Value pushbutton until the desired value for that digit is displayed ▪ IF selecting another digit, THEN PRESS the Digit pushbutton 	"Digit" and "Value" push buttons used to change the trip setpoint to 8.6×10^3 (8600) CPM value.	S U
<p>Comment:</p> <p>CRITICAL STEP</p>			

Proc. Step	TASK ELEMENT 7	STANDARD	Grade
7.3.6f	WHEN entire display indicates the desired Setpoint, THEN PRESS the Enter pushbutton	Enter pushbutton pressed	S U
<p>Comment:</p> <p>CRITICAL STEP</p>			

Proc. Step	TASK ELEMENT 8	STANDARD	Grade
7.3.6g	PUSH the monitor back into panel.	Monitor pushed back into panel.	S U
Comment:			

Proc. Step	TASK ELEMENT 9	STANDARD	Grade
7.3.6h	PRESS High Alarm pushbutton on the front of RIA-1113 to verify High Alarm Setpoint is correct.	High Alarm push button pressed and 8.6×10^3 (8600) CPM trip setpoint verified.	S U
Comment:			

Proc. Step	TASK ELEMENT 10	STANDARD	Grade
7.3.6i	PRESS Alarm Ack pushbutton to clear any alarms that may have annunciated.	Alarms clear.	S U
Comment:			

Proc. Step	TASK ELEMENT 11	STANDARD	Grade
7.3.6j	VERIFY EK-1364, "Gaseous Waste Monitoring Hi Radiation" annunciator is CLEAR.	Alarm clear.	S U
Comment:			

Proc. Step	TASK ELEMENT 12	STANDARD	Grade
7.3.6k	NOTIFY RETS/REMP representative of the new High Alarm Setpoint.	Step not necessary, setpoint raised for batch release.	S U
<p>Comment:</p> <p>NOTE: Evaluator: If operator starts to contact RETS/REMP, STATE: they are aware that the High Alarm Setpoint has been raised for the batch release.</p>			

Proc. Step	TASK ELEMENT 13	STANDARD	Grade
n/a	Notify the CRS that RIA-1113 High Alarm Setpoint is 8.6×10^3 (8600) CPM.	CRS notified of RIA-1113 setpoint raised to <u>8.6</u> $\times 10^3$ (8600) CPM.	S U
<p>Comment:</p> <p>NOTE: Evaluator Cue: If Operator asks if Batch Card needs to be signed in "Alarm Set By:" space, RESOND: YES, sign the Batch Card</p>			

END OF TASK

CANDIDATE CUE SHEET

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

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- Release Order, Form HP 6.6-3 (batch card) is available.
- Breaker 34 on Y-01 is closed.
- RIA-1113 has been verified aligned for service per Attachment 5, Checklist 38, “Gaseous Process Radiation Monitors System Checklist”
- A check source has been completed on RIA-1113 with a reading of 620000CPM.

INITIATING CUES:

- The CRS directs you to set up Waste Gas Discharge Monitor, RIA-1113 High Alarm Setpoint using SOP-38 Section 7.3.6 to a setpoint of 8600 cpm.

SIMULATOR OPERATOR INSTRUCTIONS

Initial Setup:

- Any IC
- RIA-1113 initial High alarm setpoint 2.5×10^3
- Fill out WGDT Release Authorization, for HP 6.6-3 (procedure HP-6.6, Attachment 4) as follows:
 - HP 6.6-3, page 1 of 2:
SEE ATTACHED HP FORM
- RIA-1113 initial High alarm setpoint 2.5×10^3

RESET RIA-1113 to 2.5×10^3 at end of JPM

WGDT RELEASE AUTHORIZATION

WGDT # T-101C Batch Number 08 013

Isolation Date 07/12/07 Time 1200	Release Volume 32.5 m³
Isolation Pressure 93 psig	Gamma Conc 7.24E⁻⁵ μCi/cc
Release Pressure 93 psig	Expected RIA-1113 RDG 9.5 x 10¹ cpm

Qtr ΣA_i/C_i 0.1 (must be < 0.5)

Year-to-Date ΣA_i/C_i 0.24 (must be < 1.0)

APPROVAL TO RELEASE	
RIA-1113 Release Limit <u>8.5E⁻³</u> cpm	
RETS Analyst <u>Jane Retssup</u>	<u>Today / 0815</u>
Shift Manager <u>Ralph Manager</u>	<u>Today / 0840</u>

C O N T R O L R M O P E R	Main Exhaust Fan In Service V-6A <input checked="" type="checkbox"/> V-6B <input type="checkbox"/> <i>I/S fan</i>
	Purge RIA-1113 <input checked="" type="checkbox"/>
	Source Check RIA-1113 6.5 X 10⁵ cpm
	RIA-1113 Release Limit 8.5 x 10³ cpm
	RIA-1113 Background + 9.5 x 10¹ cpm
	RIA-1113 Alarm Setpt = 8.6 x 10³ cpm
	Alarm Set By:
	Alarm Verified By:
	Purge RIA-1113 After Release <input type="checkbox"/>
	Reset Alarm to 2500 cpm
Alarm Reset By:	
Alarm Reset Verified By:	

<p>If RIA-1113 is not operational, effluent releases may continue provided that prior to release:</p> <ol style="list-style-type: none"> At least two independent samples are analyzed; and At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge line valving. <p>Palisades ODCM Appendix A, Table A-1, Item 1.a Action 1.</p>

Remarks: