

**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
<b>Comment:</b> <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	<b>READ</b> the "As Found" count rate on RIA-1113, Waste Gas Discharge Monitor	$9.5 \times 10^1$ "As Found" count rate read on RIA-1113 (given in initial conditions)	S U
<b>Comment:</b>			

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
<b>Comment:</b> 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
<b>Comment:</b>			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
7.3.6d	<b>PRESS</b> Enter button to display the High Alarm setpoint.	Enter button pressed and one digit blinking.	<b>S U</b>
<p><b>Comment:</b></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><b>CRITICAL STEP</b></p>			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
7.3.6e	<p><b>SET</b> 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"> <li>▪ <b>IF</b> changing the digit value, <b>THEN</b> <b>PRESS</b> the Value pushbutton until the desired value for that digit is displayed</li> <li>▪ <b>IF</b> selecting another digit, <b>THEN</b> <b>PRESS</b> the Digit pushbutton</li> </ul>	"Digit" and "Value" push buttons used to change the trip setpoint to $8.6 \times 10^3$ (8600) CPM value.	<b>S U</b>
<p><b>Comment:</b></p> <p><b>CRITICAL STEP</b></p>			

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

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

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

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

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

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

**END OF TASK**

## CANDIDATE CUE SHEET

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

### INITIAL CONDITIONS:

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- 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 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  $2.5 \times 10^3$
- 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  $2.5 \times 10^3$

**RESET RIA-1113 to  $2.5 \times 10^3$  at end of JPM**

**WGDT RELEASE AUTHORIZATION**

WGDT # T-101C Batch Number 08 013

Isolation Date <b>07/12/07</b> Time <b>1200</b>	Release Volume <b>32.5 m<sup>3</sup></b>
Isolation Pressure <b>93</b> psig	Gamma Conc <b>7.24E<sup>-5</sup></b> μCi/cc
Release Pressure <b>93</b> psig	Expected RIA-1113 RDG <b>9.5 x 10<sup>1</sup></b> cpm

Qtr ΣA<sub>i</sub>/C<sub>i</sub> 0.1 (must be < 0.5)

Year-to-Date ΣA<sub>i</sub>/C<sub>i</sub> 0.24 (must be < 1.0)

APPROVAL TO RELEASE	
RIA-1113 Release Limit <u>8.5E<sup>-3</sup></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 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 <b>6.5 X 10<sup>5</sup></b> cpm
	RIA-1113 Release Limit <b>8.5 x 10<sup>3</sup></b> cpm
	RIA-1113 Background + <b>9.5 x 10<sup>1</sup></b> cpm
	RIA-1113 Alarm Setpt = <b>8.6 x 10<sup>3</sup></b> 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"> <li>At least two independent samples are analyzed; and</li> <li>At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge line valving.</li> </ol> <p>Palisades ODCM Appendix A, Table A-1, Item 1.a Action 1.</p>
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Remarks: