OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM

SYSTEM: Generic Admin – Radiation Control

TASK: Determine Personnel Exposure and Authorization for Entry into A High Radiation Area (HRA)

TASK NUMBER: 1200100104

JPM NUMBER: 17-01 NRC SRO-A4

ALTERNATE PATH: [ ]

K/A NUMBER: G 2.3.4

IMPORTANCE FACTOR: RO ____ SRO 3.7

APPLICABILITY:
EO [ ] RO [ ] STA [X] SRO [X]

EVALUATION SETTING/METHOD: Classroom / Simulate

REFERENCES: Radiological Survey Map #1108410 dated 5-18-18 (checked 9-6-18)
RP-AA-460, Rev. 19, RP-AA-463, Rev. 5, RP-AA-300, Rev. 6

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 20 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

Developed By: R. Chan Instructor Date: 9-6-18

Validated By: SME or Instructor Date: 9/6/18

Approved By: Training Department Date: 10/30/18

Approved By: Operations Department Date: 10/23/18

ACTUAL JPM COMPLETION TIME:

ACTUAL TIME CRITICAL COMPLETION TIME:

PERFORMED BY:

GRADE: [ ] SAT [ ] UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: **DATE:**

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

REVISION HISTORY

JPM NUMBER: 17-01 NRC SRO-A4

Rev #	Date	Description	Validation Required
00	9-6-18	**This is a NEW JPM**. Added revision history and simulator setup pages. Editorial comments from IP 71111.11 FASA.	Yes

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Generic Administrative – Radiation Control

TASK: Determine Personnel Exposure and Authorization for Entry into A High Radiation Area (HRA)

TASK NUMBER: 1200100104

SIMULATOR IC: **N/A**

MALFUNCTIONS / REMOTES: N/A

OVERRIDES: N/A

SPECIAL INSTRUCTIONS:

PROVIDE copies of the following documents:

- Radiological Survey Map #1108410, S1 AUX 084' PIPE ALLEY (dated 5-18-18)
- RP-AA-300, Radiological Survey Program
- RP-AA-463, High Radiation Area Key Controls
- RP-AA-460, Controls for High and Very High Radiation Areas

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

SYSTEM: Generic Administrative – Radiation Control

TASK: Determine Personnel Exposure and Authorization for Entry into A High Radiation Area (HRA)

TASK NUMBER: 1200100104

INITIAL CONDITIONS:

- Salem 1 is at 100% power.
- A Locked Valve surveillance IAW S1.OP-ST.CAN-0001, Primary Containment Valves Monthly, is scheduled to be performed on your shift.
- One of the valves to be verified is located in the Unit 1 Pipe Alley, Elevation 84 ft. Auxiliary Building.
- An entry into the Pipe Alley has been made since the last performance of this surveillance requiring this valve position to be verified.

INITIATING CUE:

- You are the Unit 1 CRS.
- Using the provided Radiological Survey Map and procedures, determine the following:
    1. What is the Radiological Posting for the area that the task will be performed?
    2. What is the highest On Contact radiation dose rate?
    3. What is the highest General Area dose rate?
    4. What authorization is needed to enter this room?
    5. Calculate the <u>total</u> personnel dose exposure. Assume the following:
        - two (2) operators are need to complete the task
        - it will take 1 minute <u>per</u> operator to complete the task
        - use the highest On Contact radiation dose rate as the General Area dose rate for the room

Successful Completion Criteria:

1. All critical steps completed.
2. All sequential steps completed in order.
3. All time-critical steps completed within allotted time.
4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made.

Task Standard for Successful Completion:

1. **High Radiation Area (HRA), Contaminated Area (CA)**
2. **205 mrem/hr**
3. **10 mrem/hr**
4. **SRPT (may also specify signing onto RWP-1 and HRA brief)**
5. **6.8 mrem (6-7 mrem is acceptable)**

SYSTEM: Generic Administrative – Radiation Control
TASK: Determine Personnel Exposure and Special Requirements for Entry into A High Radiation Area (HRA)

* #	STEP NO.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		PROVIDE copies of the following documents: ♦ Radiological Survey Map #1108410, S1 AUX 084' PIPE ALLEY (dated 5-18-18) ♦ RP-AA-300, Radiological Survey Program ♦ RP-AA-463, High Radiation Area Key Controls ♦ RP-AA-460, Controls for High and Very High Radiation Areas			
	CUE:	**PROVIDE** the operator the initiating cue AND **ENTER** START TIME AFTER operator repeats back the Initiating Cue. **START TIME:**_____			

NAME: _____

DATE: _____

SYSTEM: Generic Administrative – Radiation Control

TASK: Determine Personnel Exposure and Special Requirements for Entry into A High Radiation Area (HRA)

* #	STEP NO.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		What is the Radiological Posting for the area that the task will be performed?	**Operator refers to Radiological Survey Map and determines that the work area is in a <u>High Radiation Area (HRA) and Contaminated Area (CA)</u>**		
*		What is the highest On Contact radiation dose rate?	**Operator refers to Radiological Survey Map and determines that the highest On Contact radiation dose rate is <u>205 mrem/hr</u>.** **Evaluator's Note:** RP-AA-300, Attachment 2 provides definitions of survey map symbols and abbreviations.		

NAME: _____

DATE: _____

SYSTEM: Generic Administrative – Radiation Control

TASK: Determine Personnel Exposure and Special Requirements for Entry into A High Radiation Area (HRA)

* #	STEP NO.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		What is the highest General Area dose rate?	**Operator refers to Radiological Survey Map and determines that the highest General Area (GA) radiation dose rate is <u>10 mrem/hr</u>.** <u>Evaluator's Note</u>: RP-AA-300, Attachment 2 provides definitions of survey map symbols and abbreviations.		
*		What authorization is needed to enter this room?	**Operator determines that the SRPT needs to authorize the key release for entry into HRA IAW RP-AA-463, Attachment 1.** <u>Evaluator's Note</u>: The operator may also identify (but not required) to sign onto RWP-1 and receive a HRA brief from Rad Pro. Refer to RP-AA-460 P&Ls; 2.1.1 and 2.1.3		
*		Calculate the total personnel dose exposure. Assume the following: ▪ two (2) operators are need to complete the task ▪ it will take 1 minute per operator to complete the task use the highest On Contact radiation dose rate as the General Area dose rate for the room	**Operator calculates the following:** **[205 mrem/hr x 1 hr/60 mins] x 2 mins** **= <u>6.8 mrem</u> (6-7 mrem acceptable)**		

OPERATOR TRAINING PROGRAM NAME: _____

JOB PERFORMANCE MEASURE DATE: _____

SYSTEM: Generic Administrative – Radiation Control

TASK: Determine Personnel Exposure and Special Requirements for Entry into A High Radiation Area (HRA)

* #	STEP NO.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	CUE:	WHEN operator informs you the task is complete, OR the JPM has been terminated for other reasons, THEN **RECORD** the STOP TIME. **STOP TIME:**_____	**Terminate JPM after SRO submits the response to you.**		

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

JPM#: 17-01 NRC SRO-A4

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

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

R 2. Knowledge and Abilities (K/A) references are included.

R 3. Performance location specified. (in-plant, control room, or simulator)

R 4. Initial setup conditions are identified.

R 5. Initiating and terminating Cues are properly identified.

R 6. Task standards identified and verified by SME review.

R 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

R 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure: Procedure Rev. _____ Date 9-6-18
RP-AA-300 Rev 6 Survey Map 5-15-18 RP-AA-460 Rev 19 RP-AA-463 Rev 5

R 9. Pilot test the JPM:
a. verify Cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

NA 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

NA 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor: R. Chan Date: 9-6-18

SME/Instructor: R. Lawtins Date: 9/6/18

SME/Instructor: J. Bates Date: 9/24/18

INITIAL CONDITIONS:

- Salem 1 is at 100% power.
- A Locked Valve surveillance IAW S1.OP-ST.CAN-0001, Primary Containment Valves Monthly, is scheduled to be performed on your shift.
- One of the valves to be verified is located in the Unit 1 Pipe Alley, Elevation 84 ft. Auxiliary Building.
- An entry into the Pipe Alley has been made since the last performance of this surveillance requiring this valve position to be verified.

INITIATING CUE:

- You are the Unit 1 CRS.
- Using the provided Radiological Survey Map and procedures, determine the following:

1. What is the Radiological Posting for the area that the task will be performed?

2. What is the highest On Contact radiation dose rate?

3. What is the highest General Area dose rate?

4. What authorization is needed to enter this room?

5. Calculate the <u>total</u> personnel dose exposure. Assume the following:
   - two (2) operators are need to complete the task
   - it will take 1 minute <u>per</u> operator to complete the task
   - use the highest On Contact radiation dose rate as the General Area dose rate for the room

[Provide your answers on this Cue Sheet]

Salem GENERATING STATION — Radiological Survey

MAP # 1108410

Location: S1 AUX 084' PIPE ALLEY | Date: 05/17/18 | Time: 2250 | RWP: 1

Radiation Survey		
γ	Instrument: TPOLE	Serial#: 6609-010
γ	Instrument: N/A	Serial#: N/A

Contamination Survey		
β,γ	Instrument: RM14	Serial#: 7145
α	Instrument: N/A	Serial#: N/A

Contamination β,γ

LOC	dpm/100cm²	LOC	dpm/100cm²
1	<1k		
2	<1k		
3	<1k		
4	<1k		N
5	<1k		A
6	<1k		
7	<1k		
8	<1k		
9	<1k		
10	<1k		

Survey Type		Contamination α		
		LOC	ccpm	dpm/100cm²
N	Clean Area			
	Routine		N	
A	Monthly			A
X	S.O.J.			
N/A	Other			

Surveyed By:

Print

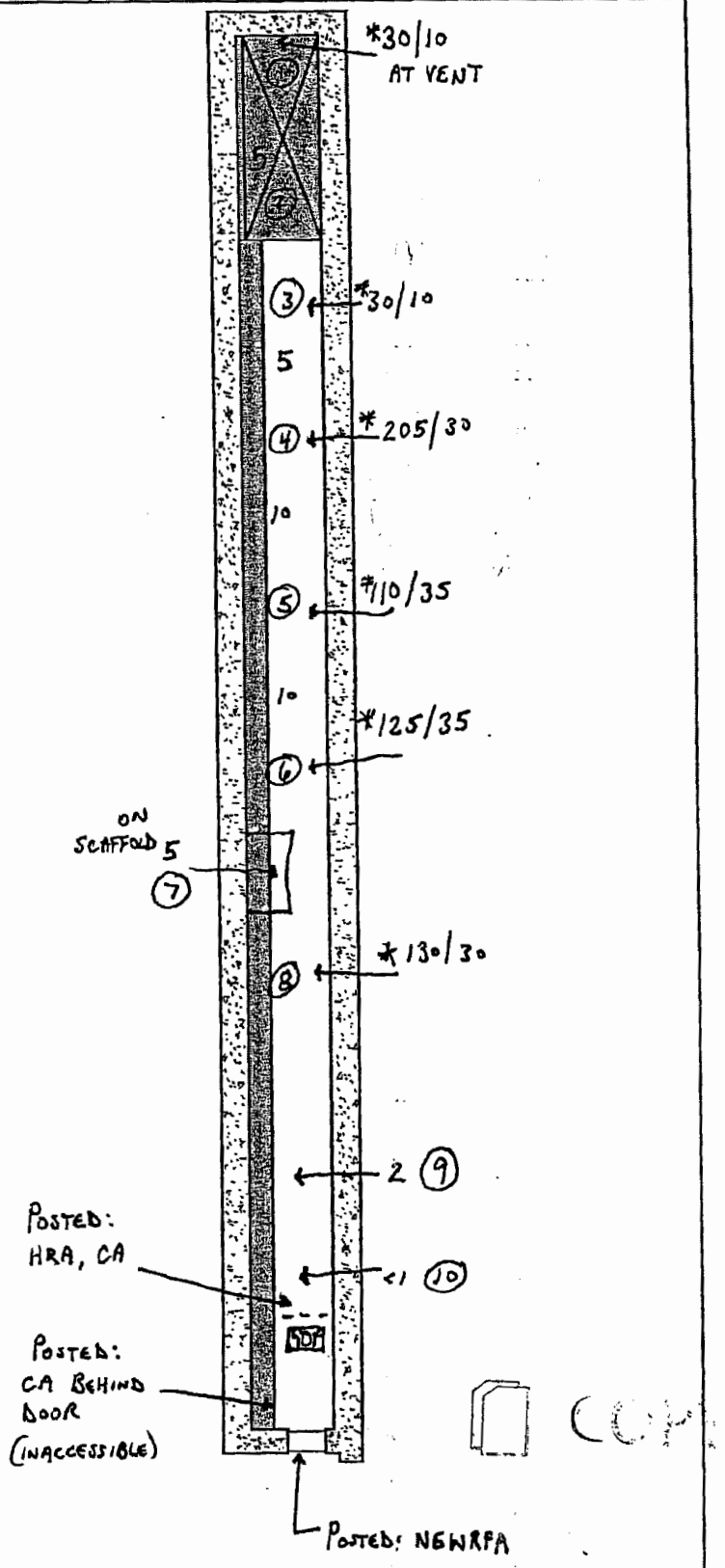
Sign

COMMENTS: ELEVATION POSTED: RA SURVEY FOR OPS ESCORT FOR 509

N/A Dose Rates along masslinn path <1 mRem/hr unless otherwise noted

N/A Masslinn results <1000 dpm/LAS on floors, walls & equipment

[X] Verified Radiological postings, labels, marking, and barriers



Technician Review		Supervisor Review	
Print / Sign: N/A	DATE: N/A	Print / Sign: Alex Johns /	DATE: 5/18/18