

## **RADIOLOGICAL WORK PRACTICES**

### **1.0 Objective**

The objective of this surveillance is to evaluate the practices of workers performing tasks in radiological controlled areas to ensure that these practices protect the safety and health of the workers and comply with DOE requirements.

### **2.0 References**

- 2.1 10 CFR 835, *Occupational Radiation Protection*
- 2.2 DOE/EH-0256T, Rev. 1, *U.S. Department of Energy Radiological Control Manual, Rev. 1*
- 2.3 DOE P441.1, *Department of Energy Radiological Health and Safety Policy*

### **3.0 Surveillance Activities**

The Facility Representative or Environmental, Safety, and Health Support Specialist performs the following activities to evaluate the effectiveness of work practices by laboratory personnel in minimizing exposure to radiological hazards.

1. Attend a pre-job briefing before maintenance or construction work is initiated in a radiologically controlled area.
2. Observe work activities following the pre-job briefing.
3. Observe worker practices at the entrance to and exit from a radiological control area.

**Surveillance Guideline  
RADIOLOGICAL WORK PRACTICES**

Surveillance No.: \_\_\_\_\_

Facility: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Activity 1 - Observe Pre-job Briefing.

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Was the scope of work to be performed completely described?	_____	_____	_____
2. Did the briefing fully describe the radiological conditions in the workplace?	_____	_____	_____
3. Were procedures and requirements of the radiation work permit discussed?	_____	_____	_____
4. Did the briefing discuss any special radiological control requirements?	_____	_____	_____
5. Were limiting conditions such as contamination or radiation levels that would void the work permit discussed?	_____	_____	_____
6. Were radiological control hold points identified?	_____	_____	_____
7. Did the briefing address communication and coordination with other groups?	_____	_____	_____
8. Were housekeeping and final cleanup provisions discussed?	_____	_____	_____
9. Did the briefing address emergency response?	_____	_____	_____
10. Was the briefing conducted by the supervisor for the work?	_____	_____	_____

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		<u>YES</u>	<u>NO</u>	<u>N/A</u>
11.	Was the content of the briefing and attendance at the briefing documented?	_____	_____	_____
	Activity 2 - Observe Work Activities.			
12.	Did personnel performing the work and radiation technicians monitoring the work attend the briefing?	_____	_____	_____
13.	Did the briefing accurately describe radiological conditions associated with the work?	_____	_____	_____
14.	Did workers follow procedures discussed at the briefing?	_____	_____	_____
15.	Did workers adhere to requirements of the radiation work permit?	_____	_____	_____
16.	Do training records substantiate that workers have the required training to perform work inside radiological control areas?	_____	_____	_____
17.	Did workers conform with radiological hold points established in the work documents?	_____	_____	_____
	Activity 3 - Observe practices at entry into Radioactive Materials Areas or Radiation Areas and at the exit from a Contamination Area.			
18.	Do personnel don appropriate protective clothing as specified by the radiological controls manager?	_____	_____	_____
19.	Do personnel sign radiation work permits before entry?	_____	_____	_____
20.	Are personnel wearing appropriate dosimetry before entry?	_____	_____	_____
21.	Is a step-off pad located outside the exit point of the contamination area?	_____	_____	_____
22.	Is the step-off pad free of radioactive contamination?	_____	_____	_____

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	<u>YES</u>	<u>NO</u>	<u>N/A</u>
23. Are labeled containers located inside the boundary of the contamination area to collect protective clothing and equipment?	_____	_____	_____
24. Do personnel use the following sequence in removing protective clothing?			
• Remove exposed tape	_____	_____	_____
• Remove rubber overshoes	_____	_____	_____
• Remove gloves	_____	_____	_____
• Remove hood from front to rear	_____	_____	_____
• Remove respiratory protection, as applicable	_____	_____	_____
• Remove coveralls, inside out, touching inside only	_____	_____	_____
• Take down barrier closure as applicable	_____	_____	_____
• Remove tape or fastener from inner shoe covers	_____	_____	_____
• Remove each shoe cover, placing shoe onto clean step-off pad	_____	_____	_____
• Remove cloth glove liners	_____	_____	_____
• Replace barrier closure as applicable	_____	_____	_____
25. Are personnel careful never to touch skin or place anything in their mouths during protective clothing removal?	_____	_____	_____
26. Are instructions for protective clothing removal located near the step-off pad and consistent with the above procedure?	_____	_____	_____
27. Is contamination monitoring equipment located close to the step-off pad?	_____	_____	_____
28. Is the background radiation level at the contamination monitoring equipment sufficiently low to permit detection of contamination?	_____	_____	_____

**Surveillance Guidance  
 RADIOLOGICAL WORK PRACTICES (cont.)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
29. When monitoring for contamination before leaving the contamination area, do personnel use the following procedure?			
• Verify that the instrument is in service, set to the proper scale and that the audio output can be heard during frisking	_____	_____	_____
• Frisk the hands before picking up the probe	_____	_____	_____
• Frisk the whole body as follows			
— Head (pausing at mouth and nose for approximately 5 seconds)	_____	_____	_____
— Neck and shoulders	_____	_____	_____
— Arms (pause at each elbow)	_____	_____	_____
— Chest and abdomen	_____	_____	_____
— Back, hips and seat of pants	_____	_____	_____
— Legs (pause at each knee)	_____	_____	_____
— Shoe tops	_____	_____	_____
— Shoe bottoms (pause at sole and heel)	_____	_____	_____
— Personnel and supplemental dosimeters	_____	_____	_____
— Any items being carried out of the area	_____	_____	_____
• Return the probe to its holder on the side or face up to allow the next person to monitor their hands before handling the probe.	_____	_____	_____
• Probe should be moved <u>slowly</u> over the area being monitored at approximately 2 inches per second.	_____	_____	_____
• The probe should be less than 1/2 inch from the surface being monitored for beta and gamma contamination and approximately 1/4 inch for alpha contamination.	_____	_____	_____
30. Are instructions for performing contamination monitoring posted near the survey instrument and consistent with the above procedure?	_____	_____	_____

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**RADIOLOGICAL WORK PRACTICES (cont.)**

OTHER:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NOTES/COMMENTS:

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PERSONNEL CONTACTED: \_\_\_\_\_

_____
_____
_____
_____
_____

**Surveillance Guidance**  
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**IF MORE SPACE IS NEEDED FOR FINDINGS, OBSERVATIONS, AND FOLLOWUP  
ITEMS - USE ADDITIONAL SHEETS**

FINDINGS:

Finding No.: \_\_\_\_\_

Description: \_\_\_\_\_

\_\_\_\_\_

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Finding No.: \_\_\_\_\_

Description: \_\_\_\_\_

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Finding No.: \_\_\_\_\_

Description: \_\_\_\_\_

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**OBSERVATIONS:**

Observation No.: \_\_\_\_\_

Description: \_\_\_\_\_

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Observation No.: \_\_\_\_\_

Description: \_\_\_\_\_

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Observation No.: \_\_\_\_\_

Description: \_\_\_\_\_

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\_\_\_\_\_

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**FOLLOWUP ITEMS:**

Followup Item No.: \_\_\_\_\_

Description: \_\_\_\_\_

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Followup Item No.: \_\_\_\_\_

Description: \_\_\_\_\_

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Followup Item No.: \_\_\_\_\_

Description: \_\_\_\_\_

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**Surveillance Guidance**  
**RADIOLOGICAL WORK PRACTICES (cont.)**

LABORATORY MANAGEMENT DEBRIEFED AND RESULTS: \_\_\_\_\_

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Facility Representative or  
Environmental, Safety, and Health Support Specialist