

## **MAINTENANCE ACTIVITIES**

### **1.0 Objective**

The objective of this surveillance is to evaluate the effectiveness of the laboratory's maintenance activities. Surveillance activities encompass work planning and control, equipment status control, performance of maintenance, return to service, and closeout documentation.

### **2.0 References**

- 2.1 DOE 4330.4B *Maintenance Management Program*
- 2.2 INPO 85-038 Rev 1, *Guidance for the Conduct of Maintenance at Nuclear Power Stations*
- 2.3 INPO 90-008, *Maintenance Programs in the Nuclear Power Industry*

### **3.0 Surveillance Activities**

The Facility Representative or Environmental, Safety, and Health Support Specialist selects a maintenance work package that has been approved and released to the field for work. The Facility Representative or Environmental, Safety, and Health Support Specialist observes work being performed under the package including crew briefings, setup, trouble-shooting, and maintenance activities.

The Facility Representative or Environmental, Safety, and Health Support Specialist should select a work package that is being performed on significant equipment important to worker, public, or laboratory safety for review. The selected package should require at least one of the following: (1) removal of equipment from service; (2) line breaks on radioactive systems; (3) replacement or significant maintenance on important components.

**Surveillance Guideline  
MAINTENANCE ACTIVITIES**

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

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

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

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Has the work package been reviewed by the appropriate staff including occupational safety and health and radiological protection?	_____	_____	_____
2. Was the maintenance work package approved?	_____	_____	_____
3. Does the maintenance work package contain appropriate cautions, warnings, identification of possible hazards, and hold points?	_____	_____	_____
4. Is the level of detail presented in the package sufficient to perform the intended work?	_____	_____	_____
5. Does the work package clearly identify required tools, consumables, and materials?	_____	_____	_____
6. Does the work package specify required lock and tag boundaries, equipment de-energization requirements, and system isolation requirements?	_____	_____	_____
7. Are the required tools, consumables, and materials available to the crew performing the work?	_____	_____	_____
8. Were required tools properly stored and issued to the crew?	_____	_____	_____
9. Is equipment isolated or de-energized before work begins in accordance with work package instructions?	_____	_____	_____
10. Is The control area or the operations supervisor notified before equipment is isolated or de-energized?	_____	_____	_____

**Surveillance Checklist  
 MAINTENANCE ACTIVITIES (cont.)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
11. Are locks and tags installed as required by the work package?	_____	_____	_____
12. Did the pre-job briefing address potential hazards, lockout/tagout requirements, hold points, and any other unique aspects of the work?	_____	_____	_____
13. Do training records substantiate that personnel have the required qualifications to perform the planned work?	_____	_____	_____
14. Are maintenance personnel using required personal protective equipment during maintenance?	_____	_____	_____
15. Are personnel using appropriate dosimetry during maintenance?	_____	_____	_____
16. Does a supervisor or foreman provide effective oversight of maintenance activities through presence at the job site or periodic visits?	_____	_____	_____
17. Do training records substantiate that the supervisor has the required qualifications to oversee the work?	_____	_____	_____
18. Were changes in the work as described in the work package initiated, reviewed, and approved in accordance with procedures?	_____	_____	_____
19. Was maintenance work performed in accordance with the work package and associated procedures?	_____	_____	_____
20. Do workers complete required data sheets and sign completions of individual steps while the work is being completed?	_____	_____	_____
21. Is the work location protected from intrusion of personnel by barriers, tape, etc.?	_____	_____	_____
22. Are sufficient post-maintenance tests completed to ensure operability before equipment is returned to service?	_____	_____	_____

23. Is the control area or operations supervisor notified before equipment is re-energized or returned to service? \_\_\_\_\_

**Surveillance Checklist**  
**MAINTENANCE ACTIVITIES (cont.)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
24. Is measuring and test equipment used for maintenance within current calibration?	_____	_____	_____
25. Do health physics technicians provide effective support during the work by monitoring radiation levels, checking for contamination, and providing recommendations for minimizing exposure?	_____	_____	_____
26. Was the work performed as identified on the daily schedule?	_____	_____	_____
27. Are conflicts with other organizations or work groups resolved promptly to prevent adverse impacts on work in progress?	_____	_____	_____

OTHER:

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

NOTES/COMMENTS:

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**Surveillance Checklist  
MAINTENANCE ACTIVITIES (cont.)**

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

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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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**Surveillance Checklist**  
**MAINTENANCE ACTIVITIES (cont.)**

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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\_\_\_\_\_

**Surveillance Checklist**  
**MAINTENANCE ACTIVITIES (cont.)**

**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 Checklist**  
**MAINTENANCE ACTIVITIES (cont.)**

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

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\_\_\_\_\_

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

Facility Representative or  
Environmental, Safety, and Health Support Specialist