

## CHEMICAL SAFETY

### 1.0 Objective

The objective of this surveillance is to ensure that practices for handling, using and storing dangerous or toxic chemicals provide effective protection of the health and safety of DOE's workers. The surveillance includes evaluation of compliance with chemical safety standards and requirements applicable to operators at DOE facilities.

### 2.0 References

- 2.1 DOE O 231.1, *Environment, Safety, and Health Reporting*
- 2.2 DOE O 440.1, *Worker Protection Management for DOE Federal and Contractor Employees*
- 2.3 DOE 5480.4, *Environmental Protection, Safety and Health Protection Standards*
- 2.4 29 CFR 1910.119, *Process Safety Management of Highly Hazardous Chemicals*
- 2.5 29 CFR 1910.1200, *Hazard Communication*
- 2.6 29 CFR 1910.1450, *Occupational Exposures to Hazardous Chemicals in Laboratories*
- 2.7 *Field Verification Guide for the Chemical Safety Vulnerability Review*

### 3.0 Surveillance Activities

This surveillance involves separate activities relating to storage of chemicals, maintenance of systems used to handle or process chemicals, and observation of routine operations involving use of chemicals.

Activity 1 - Review conditions in a locker where hazardous chemicals are stored.

Activity 2 - Observe a maintenance activity on a system that contains hazardous chemicals. The Facility Representative or Environmental, Safety, and Health Support Specialist should review the maintenance work package and attend the pre-job briefing by the supervisor.

Activity 3 - Observe routine operations involving handling or use of hazardous chemicals.

**Surveillance Guideline  
CHEMICAL SAFETY**

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

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

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

YES      NO      N/A

**Activity 1 - Review of Conditions In a Locker Where Hazardous Chemicals Are Stored**

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|----|--|-------|-------|-------|
| 1. | Is the locker or storage facility clearly posted as containing hazardous chemicals?  | _____ | _____ | _____ |
| 2. | Are material safety data sheets for the chemicals in the locker located at the locker or is their location identified at the locker?         | _____ | _____ | _____ |
| 3. | Are weight limits for each shelf identified?   | _____ | _____ | _____ |
| 4. | Are shelves designed to prevent tipping of hazardous chemical containers?  | _____ | _____ | _____ |
| 5. | Are any chemicals in the locker past the shelf-life date on the chemical container?  | _____ | _____ | _____ |
| 6. | Are administrative controls imposed on use of the storage locker to prevent storage of chemicals that could react violently with each other? | _____ | _____ | _____ |
| 7. | Is a safety shower and/or an eyewash station located near the storage locker?  | _____ | _____ | _____ |
| 8. | Has the safety shower or eyewash station been verified to be operable?   | _____ | _____ | _____ |

**Surveillance Guideline  
CHEMICAL SAFETY**

**Activity 2 - Observation of a Maintenance Activity on a System That Contains Hazardous Chemicals**

**CAUTION**

The Facility Representative or Environmental, Safety, and Health Support Specialist should avoid interrupting maintenance personnel performing work on systems containing hazardous chemicals. The Facility Representative or Environmental, Safety, and Health Support Specialist should wait for opportune times to transact

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|-----|---|-------|-------|-------|
| 9.  | Has the maintenance work package been reviewed by representatives of the safety organizations?  | _____ | _____ | _____ |
| 10. | Was a job safety analysis performed before approval of the work package?  | _____ | _____ | _____ |
| 11. | Does the work package address use of specific personnel protective equipment such as safety glasses with side shields, rubber gloves, aprons, etc.? | _____ | _____ | _____ |
| 12. | Does the work package include procedures in sufficient detail to ensure the safety and health of the workers?                                       | _____ | _____ | _____ |
| 13. | Does the work package identify appropriate hold points, acceptance inspections, and post-maintenance tests?   | _____ | _____ | _____ |
| 14. | Were potential chemical hazards discussed with workers during the pre-job brief?  | _____ | _____ | _____ |
| 15. | Are workers using the personal protective equipment specified in the work package while performing the maintenance activity?                        | _____ | _____ | _____ |
| 16. | Do workers follow instructions/procedures prescribed in the work package?   | _____ | _____ | _____ |
| 17. | Do workers complete acceptance inspections and post-maintenance tests before closing the work package?  | _____ | _____ | _____ |

**Surveillance Guideline  
 CHEMICAL SAFETY**

|  | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| 18. Can workers describe the chemical hazards associated with the work they are performing?                          | _____      | _____     | _____      |
| 19. Can workers describe the correct response to an emergency involving chemical hazards?                            | _____      | _____     | _____      |
| 20. Do training records substantiate that workers have received required training on hazard recognition and control? | _____      | _____     | _____      |

**Activity 3 - Observe Operations Involving Use of Hazardous Chemicals**

**CAUTION**

The Facility Representative or Environmental, Safety, and Health Support Specialist should avoid interrupting operators who are performing work on systems containing hazardous chemicals. The Facility Representative or Environmental, Safety, and Health Support Specialist should wait for opportune times to transact business with

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|--|-------|-------|-------|
| 21. Is the operation controlled by a procedure or instruction with sufficient detail to ensure the health and safety of the workers?                                 | _____ | _____ | _____ |
| 22. Are workers wearing appropriate personal protective equipment such as safety glasses with side shields, rubber gloves, aprons, lab coats, etc.?                  | _____ | _____ | _____ |
| 23. Do training records substantiate that employees performing operations have received laboratory-specific or process-specific training related to chemical safety? | _____ | _____ | _____ |
| 24. Do training records substantiate that employees performing operations have received training on hazardous materials?   | _____ | _____ | _____ |
| 25. Can employees correctly describe the chemical hazards associated with the work they perform?   | _____ | _____ | _____ |

**Surveillance Guideline  
CHEMICAL SAFETY**

YES      NO      N/A

26. Can employees correctly describe actions that would be taken in response to an emergency involving hazardous chemicals?

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OTHER:

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NOTES/COMMENTS:

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**Surveillance Guideline  
CHEMICAL SAFETY**

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 Guideline  
CHEMICAL SAFETY**

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

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

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**OBSERVATIONS:**

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

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

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

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

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**Surveillance Guideline  
CHEMICAL SAFETY**

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

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

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**FOLLOWUP ITEMS:**

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

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

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

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

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**Surveillance Guideline  
CHEMICAL SAFETY**

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

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

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

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

Facility Representative or  
Environmental, Safety, and Health Support Specialist