

## **TRENCHING AND EXCAVATION**

### **1.0 Objective**

The objective of this surveillance is to ensure that trenching and excavation activities performed by the laboratory and contractors to the laboratory are performed safely and in accordance with DOE requirements. A key element is a joint walkthrough conducted with the laboratory's representative who is responsible for daily monitoring of all excavation projects.

### **2.0 References**

2.1 DOE O 440.1A, *Worker Protection Management for DOE Federal and Contractor Employees*

2.2 29 CFR 1926, Subpart P, *Excavations*

### **3.0 Surveillance Activities**

The Facility Representative or Environmental, Safety, and Health Support Specialist performs the following activities in completing this surveillance:

1. Accompany laboratory representative responsible for daily inspections of excavating activities.
2. Observe operations in a trench or excavation.

**Surveillance Guideline  
TRENCHING AND EXCAVATION**

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

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

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

YES      NO      N/A

**Activity 1 - Accompany Contractor Representative**

- |    |  |       |       |       |
|----|--|-------|-------|-------|
| 1. | Does the Laboratory Representative perform daily inspections of the excavation site(s) and adjacent areas?   | _____ | _____ | _____ |
| 2. | Does the Laboratory Representative look for the following:   |       |       |       |
|    | a. Evidence of situations that could result in possible cave-ins?  | _____ | _____ | _____ |
|    | b. Indications of failure of protective systems?   | _____ | _____ | _____ |
|    | c. Hazardous atmospheres or other hazardous conditions?  | _____ | _____ | _____ |
| 3. | Does the Laboratory Representative conduct inspections before the start of work each day, and as needed throughout the shift?                              | _____ | _____ | _____ |
| 4. | Does the Laboratory Representative conduct inspections after each rain?  | _____ | _____ | _____ |
| 5. | Does the Laboratory Representative document the results of each inspection?  | _____ | _____ | _____ |
| 6. | Are procedures or written instructions used for performing the required inspections?   | _____ | _____ | _____ |
| 7. | Does the Laboratory Representative have the authority to suspend work and ensure that employees are removed from the identified hazard until it is abated? | _____ | _____ | _____ |

**Surveillance Guideline**  
**TRENCHING AND EXCAVATION (cont.)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
<b>Activity 2 - Observe Operations at an Excavation Site</b>			
8. Were all above-ground features such as rocks, trees, etc., that could endanger workers in an excavation, removed before the excavation commenced?	_____	_____	_____
9. Was the location of each underground installation that might be encountered during excavations identified before the excavation began?	_____	_____	_____
10. If the excavation is four feet or more deep, is a stairway, ladder, ramp, or other safe means of egress provided? (Employees should not have to travel more than 25 feet to reach the means of egress)	_____	_____	_____
11. Do employees and supervisors ensure that no workers pass underneath loads that are being handled by lifting or digging equipment?	_____	_____	_____
12. Was an appropriate sampling of atmosphere in the excavation completed, before workers entered the excavation, if risks existed of oxygen deficient atmospheres, exposure to hazardous substances, or accumulation of flammable gas?	_____	_____	_____
13. If hazards were identified and appropriate protective actions were initiated, was a program to monitor conditions during work established?	_____	_____	_____
14. If hazardous atmosphere conditions exist or may develop, has required emergency rescue equipment such as breathing apparatus, safety harnesses and lines, or basket stretchers been provided?	_____	_____	_____
15. Is the excavation free from water accumulation?	_____	_____	_____

**Surveillance Guideline**  
**TRENCHING AND EXCAVATION (cont.)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
16. If the excavation is not free from water accumulation, have any of the following adequate precautions been implemented:			
a. Are special supports or shield systems used to protect workers from cave-ins?	_____	_____	_____
b. Is water removal equipment used to control the level of water in the excavation?	_____	_____	_____
c. If water removal equipment is used, is a person capable of identifying and correcting deficiencies monitoring the use of the equipment to ensure proper operations?	_____	_____	_____
17. If the excavation could affect the stability of adjacent structures, are support systems such as shoring, bracing, or underpinnings provided?	_____	_____	_____
18. Have steps been taken to protect workers at excavation sites from loose rock or soil that could pose a hazard?	_____	_____	_____
19. Where employees or vehicles must pass over excavations, are guard rails provided on walkways or bridges?	_____	_____	_____
20. For excavations that are more than five feet deep, can the contractor demonstrate that protection systems to protect employees from cave-ins meet OSHA requirements in 29 CFR 1926.652?	_____	_____	_____
21. Do training records show that personnel and supervisors who are working in excavations have received training on excavation safety?	_____	_____	_____
22. Is training on excavation safety current for personnel and supervisors working in the excavation?	_____	_____	_____

**Surveillance Guideline**  
**TRENCHING AND EXCAVATION (cont.)**

YES    NO    N/A

**OTHER:**

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**NOTES/COMMENTS:**

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**PERSONNEL CONTACTED:**

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**Surveillance Guideline**  
**TRENCHING AND EXCAVATION (cont.)**

**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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**Surveillance Guideline**  
**TRENCHING AND EXCAVATION (cont.)**

**OBSERVATIONS:**

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

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

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

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

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

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

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**Surveillance Guideline**  
**TRENCHING AND EXCAVATION (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 Guideline**  
**TRENCHING AND EXCAVATION (cont.)**

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

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

Facility Representative or  
Environmental, Safety, and Health Support Specialist