

## CONSTRUCTION SAFETY

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### **1.0 SCOPE**

This Performance Assessment Guide for Construction Safety will be used to carry out the oversight responsibility of the U.S. Department of Energy (DOE) Brookhaven Group. This guide was prepared to assist in conducting performance-based assessments of both DOE prime contractors and subcontractors to ensure that their construction safety programs identify, disposition, and take corrective action on issues that affect satisfactory facility performance. The goals are to ensure that laboratory employees and the public do not experience injuries and illness as a result of construction safety activities and that there is little or no economic loss to the Government.

Construction safety assessments will be directed at all prime contractors and subcontractors working at DOE sites. DOE line management must ensure that these contractors comply with DOE Orders and Federal and State regulations. Information developed from this assessment will determine the degree to which this is being done as well as the effectiveness of the laboratory's program.

### **2.0 ATTRIBUTES AND LINES OF INQUIRY**

This section provides lines of inquiry to help assess whether the organization has implemented a program that ensures that construction safety requirements are incorporated into line activities. This section will be used to evaluate the laboratory's line organization.

**2.1** The laboratory has a process to ensure that construction contracts adequately address occupational safety and health concerns.

- Are contracts drawn to provide proper guidance for safety considerations?
- Do all contracts require that safety plans contain language incorporating by reference all DOE directives and OSHA regulations and standards, as per DOE 5480.4?
- Do contracts awarded rely on any prequalifying safety considerations such as excessive OSHA violations, a high Experience Modifier Rate (EMR), or failure to meet previous DOE safety considerations?

- Are there contract provisions to allow the laboratory to either hold the contractor's contract in abeyance until the contractor's plan is submitted and approved, or is there a procedure where work is disallowed until a plan is submitted and approved?
- Is there evidence that contractors have been allowed to work without submitting a properly prepared safety and health plan? What contract language requires an occupational safety and health plan to be submitted? Are any contractors now working without a plan? Why?
- Does the contract spell out authority to stop work or who can take action in situations of imminent danger or in cases where serious harm would be expected from anticipated actions or lack of proper actions? How restrictive or broad is the language?
- Who has authority to stop work? Who is aware of the authority?
- Has such authority been exercised? by whom? how?
- Are subcontractor violations tracked for the purpose of evaluating their safety performance and desirability for continued work at the site? What percent of violations, accidents, or incidents onsite involve subcontractor operations?

**2.2** The laboratory's supervisors are responsible for employee occupational safety at all construction projects.

- Are supervisors and foremen held accountable for safety?
- Are there statements of safety duties and responsibilities available for all line positions that influence safety in the field?
- How are managers, supervisors, and foremen held accountable for their safety performance? Is safety part of their salary review and performance evaluations?

**2.3** The laboratory performs adequate hazard evaluations and inspections at all construction projects.

- Are the premises, work areas, employees, equipment, materials, and special hazards being adequately monitored through inspections, surveys, and walkdowns? Are hazards adequately corrected or removed and is correction or removal done in a timely fashion?
- What groups, individuals, or entities make up or participate in job site inspections? What are their qualifications?

- Where various onsite visits are made and where unsafe conditions are observed, do the visits result in a written record? If no record is made, why not?
- How are the results of safety inspections transmitted to management? What process is used to track them and ensure correction?
- Do employees participate in hazard evaluations, walkarounds, safety inspections, and surveys?
- Can employees make suggestions for correction? How is this accomplished? Are there any examples that this system has worked?
- Can employees make suggestions without fear of reprisal? Have they been advised of their rights to nonrecrimination? Does the laboratory have a written policy on nonreprisal?

**2.4** The laboratory has a process to identify special hazards and implement adequate safety controls (i.e., confined space work, hoisting and rigging of extremely heavy loads).

- Are special hazards or operations properly identified and competently inspected, and are they being adequately controlled?
- Are conditions where employees are engaged in confined space entries, working with respirators, painting with exotic polymers, applying or using organic solvents, removing lead-containing materials, hoisting special loads, or employing the use of a personnel platform receiving special inspections?
- Does the laboratory have site-specific, special inspection checklists for all such operations? Are records and reports maintained per OSHA regulations or ANSI standards?
- Are written procedures for these operations included in the laboratory's onsite safety manual? Is the manual readily available onsite? Is it up-to-date and complete?
- Do work permits accurately reflect the work being performed? Are permits displayed for lockout/tagout, confined spaces, tunneling, and the like?
- Are job safety analyses made for all such special operations?

**2.5** The laboratory has a process to implement adequate safety controls for major equipment.

- Do major pieces of equipment receive the necessary attention required for inspection, operation, and maintenance?
- Are motor vehicles regularly inspected? Do drivers have state driver's licenses if necessary? Are laboratory vehicles operated by designated drivers? Are permit checks made for all drivers?
- Are major pieces of equipment, such as mobile and tower cranes, annually inspected by competent personnel? What are their qualifications? Is documentation of the process on file at the time of this survey?
- Is special machinery (i.e., forklifts, scissor lifts, backhoes, and materials hoists) required to be inspected by a competent person prior to use at the site? Are certification reports/operators manuals/checklists available?
- Before operating such equipment, are operators qualified through special training? By whom? What records are maintained?
- Are there specific checklists for daily or periodic machine inspections?
- Are qualified operators operating the machines at the time of this survey?

**2.6** The laboratory has a process to implement adequate safety controls for hazardous material operations.

- Are the dangers associated with hazardous materials adequately controlled within the site?
- Does the laboratory's emergency preparedness plan encompass a mishap with all types of hazardous materials likely to be encountered at the site?

**2.7** The laboratory has an adequate construction safety and health training program in place at the site.

- Does the laboratory and all subcontractors maintain an adequate, comprehensive safety training program to cover all aspects of construction safety?
- Do all employees receive adequate construction safety indoctrination training?
- Do all laboratory and contractor employees receive a site-specific indoctrination? Is the training entered in the employee's records? How often is it repeated? Does "short-duration" work allow workers to avoid this training?
- What are the content and quality of the training materials? Are there handouts?

- Do construction workers at the site receive job-specific indoctrination training for special work conditions? What is included? Who presents the training? What are the trainer's qualifications?
- Does the laboratory conduct meaningful, regularly scheduled (i.e., weekly toolbox) training sessions?
  - Who presents the material?
  - What are the instructor's qualifications for presenting the material? Are records kept of attendees and materials presented?
- Do language or literacy barriers present special problems? Are special materials available to mitigate these problems? If so, what materials?
- How is the training agenda determined? Are the training sessions either the trade or related to accident-producing conditions onsite, special hazards, special emphasis programs, or tailored for compliance with OSHA regulations?
- What special training has been provided to supervisors in hazard recognition, evaluation, control, and abatement at site construction projects? Do they receive other training in handling worker complaints and management techniques?

**2.8** The laboratory employs a system of progressive discipline for employees who have recurring safety mishaps.

- Does the laboratory maintain a system of discipline to control employee misbehavior onsite?
- Does the laboratory have a written plan that details discipline for workers' errant behavior? Does it contain provisions for progressive steps of discipline?
- Where reports of accidents or damage to equipment reveal a failure to abide by rules, has there been any application of this program? Have employees been disciplined for damaging equipment through negligence, which could cause an accident to themselves or others?

### **3.0 STANDARDS AND REQUIREMENTS**

**3.1** Specific DOE Orders and Standards.

- DOE O 232.1A, "Occurrence Reporting and Processing of Operations Information."
- DOE O 420.1, "Facility Safety."

- DOE O 440.1A, "Worker Protection Management for DOE and Contractor Employees."
- DOE 2300.1B, "Audit Resolution and Followup."
- DOE 2321.1B, "Auditing of Programs and Operations."
- DOE 5480.4, "Environmental Protection, Safety and Health Protection Standards."
- DOE 5700.6C, "Quality Assurance."

### 3.2 Title 10 CFR Requirements.

- 10 CFR 830.120, "Quality Assurance for DOE Nuclear Facilities."

### 3.3 OSHA Title 29 CFR Requirements.

- 29 CFR 1910, "Occupational Safety and Health Standards."
- 29 CFR 1926, "Safety and Health Regulations for Construction."

### 3.4 Industry Standards and Practices.

- *Construction Safety Manual*, Construction Safety Institute.
- *Construction Safety Standards*, Department of Interior.

## **4.0 GUIDANCE TO ASSESSOR**

This assessment guide is intended to assist in conducting a performance assessment of construction safety. It is not to be considered as all-inclusive, inflexible, or limiting reasonable assessment concentration when lines of inquiry responses dictate that an area must be more thoroughly probed.

The following is a list of suggestions that the assessor may find helpful in the performance of this assessment:

- Obtain copies of all reports evaluated. Label them as to the section or part of the report you intend to support.
- Include support for issues by interviewing employees. Maintain their confidentiality. Make rough draft notes of all DOE and laboratory personnel interviews.

- Select a major condition that is a recognized hazard or hindrance. Develop the report with examples that support the hazard noted (i.e., where the condition hinders operations, produces an inferior product, presents a personal safety hazard, or could interrupt DOE operations, etc.) by tying the deficiency to various management levels and/or deficiencies within the safety plan.
- Make unannounced inspections in the field for safety-related hazards, such as OSHA violations. Connect them to all applicable parts of the program. For instance, a violation involving an incorrect checklist for a crane may reveal operator incompetence due to insufficient training, incorrect inspection methods, program deficiencies, and the like.
- Attend several safety training sessions. Make an evaluation of the quality of the training session.
- Follow up one or several meaningful accidents or incidents involving construction operations or equipment. Was the report on time, was there followup, were there suggestions for correction, were there any lessons learned, etc.? Evaluate the process. Are the accidents being properly reported?
- Select one of the subcontractors at random and obtain a copy of their safety program. Track their compliance all through this inquiry guide.