

SUBJECT: CONSTRUCTION PROJECT SAFETY AND HEALTH MANAGEMENT

1. PURPOSE. To establish specific requirements for the management of Occupational Safety and Health (OSH) on Department of Energy (DOE) construction projects.
2. CANCELLATION. DOE 5480.9, CONSTRUCTION SAFETY AND HEALTH PROGRAM, of 12-18-80 and republished 11-18-87.
3. SCOPE. The provisions of this Order apply to all Departmental elements and, to the extent provided in their contracts/subcontracts, to contractors and subcontractors performing work on DOE construction projects which exceed the monetary threshold (currently \$2,000) for application of the wage standards prescribed by the Davis-Bacon Act (40 U.S.C 276a-276a-7).
4. APPLICABILITY. The requirements of this Order shall apply to contracts at Government-owned or -leased facilities upon which the contract clause "Safety and health (Government-Owned or -Leased Facility)" (DEAR 970.5204-2) applies.
5. EXCLUSIONS.
 - a. Director, Naval Nuclear Propulsion Program. Executive Order 12344, statutorily prescribed by Public Law 98-525 (42 U.S.C. 7158, Note (1984)) establishes the Director of the Naval Nuclear Propulsion Program (who is also the Director, Office of Naval Reactors within the Department) for all facilities and activities that comprise the Program, a joint Navy-DOE organization. These executive and legislative actions establish that the Director is responsible for all matters pertaining to naval nuclear propulsion, including direction and oversight of environment, safety and health matters for all program facilities and activities. Accordingly, the Naval Nuclear Propulsion Program is exempt from the provisions of this Order.
 - b. Power Marketing Administration. In accordance with Section 302 of the Department of Energy Organization Act (PL 95-91), the Secretary operates and maintains the Power Marketing Administration (PMA) electric power transmission systems by and through the PMA Administrators. The PMA has management programs in place that are geared to the special needs of utility operations, that respond to coordinated multi-utility system requirements, and that conform with prudent utility practice. In view of the unique nature of the Administrators' obligations to meet their statutory and public utility responsibilities for the safety, security, and reliability of electric power transmission and of their legal and contractual obligations, the Administrators' shall determine an appropriate program for the management of construction project safety and health with due consideration of applicable program elements outlined within this Order.
6. REFERENCES AND DEFINITIONS. See Attachment 1.
7. IMPLEMENTATION. The requirements of this Order shall be implemented on projects for which construction services are ordered or solicited on a date 6 months or later from the approval date of the Order. There is no requirement to modify any fixed-price construction contract based upon a solicitation predating this effective date.
8. ASSISTANCE. Questions from DOE Field Organizations concerning this Order should be directed to EW 212 (201) 992 0876

Order should be directed to EN-515, (501) 905-9876.

9. RESPONSIBILITIES AND AUTHORITIES.

a. Heads of Field Organizations or their designees shall:

- (1) Develop local instructions as needed for implementation of this Order. Local adoption of the terms used in this Order is nonmandatory, both within any local implementing instructions or subsequent contract language.
- (2) Ensure that project managers are provided with the training, resources, and technical support necessary to perform the duties prescribed by this Order.
- (3) Ensure that the construction project acquisition documents for all construction projects include the program requirements prescribed by this Order.
- (4) Ensure that construction project acquisition documents include provisions which allow for noncompensable work stoppages for construction contractor refusal to comply with project safety and health requirements (refer to DEAR 970.5204-2).
- (5) Review safety and health programs developed or implemented by the host for their maintenance and operational activities and recommended for application to construction activities (e.g., confined space entry, hazard communication, lock out/tag out, etc.) to determine their utility, applicability and cost effectiveness for use on construction projects managed by the host or other site contractors. Ensure that construction project acquisition documents identify the specific facility host programs, or parts thereof, which must be incorporated into the construction contractor's OSH program and project safety and health plan.
- (6) Review and approve construction contractor evaluations performed by the project manager and use these evaluations to determine bidder responsibility on solicitations for future DOE fixed-price construction prime contracts (refer to FAR 36.201).
- (7) For projects managed by the Resident Construction Management Contractor (RCM) or host, ensure that the RCM or host:
 - (a) Develops and implements a system for evaluating the effectiveness of contractor safety and health programs on each construction project.
 - (b) Applies this system to the determination of bidder responsibility on future construction projects.

b. Project Manager. The project manager is responsible and accountable for management of the construction project and for providing project oversight to ensure compliance by the construction contractor with the safety and health program requirements. The project manager may designate a firm or individual to perform any of the required duties listed below. In such cases, this firm or individual must be independent of the construction contractor and construction manager. The designation shall be in writing and shall appropriately describe the assigned responsibilities of the designee. The project manager or his/her designee shall:

- (1) Avail himself/herself of the skills, training, expertise, and technical support necessary to perform the duties prescribed

below.

- (2) Based upon the recommendation of construction manager, determine the necessity for requiring dedicated construction contractor OSH personnel on the construction worksite. If it is determined that dedicated construction contractor OSH personnel are needed, ensure the requirement (including duties and necessary qualifications) is specified in the construction project acquisition documents.
- (3) Perform worksite inspections in conformance with paragraph 11.c. below.
- (4) Evaluate the effectiveness of the construction contractor's safety and health program for projects performed through fixed-price prime contracts with DOE. Refer to the method prescribed by FAR 36.201 for guidance on contractor evaluation. Review construction contractor performance evaluations prepared by either a RCM or host for construction projects exceeding \$500,000.
- (5) Ensure the construction manager:
 - (a) Provides, or has access to, qualified staff and sufficient resources to fully implement the requirements of this Order.
 - (b) Provides within the project acquisition documents information or reference to the existence of documentation, along with its location and means of access, which describe known hazards to which project employees may be exposed (e.g., site characterization data, as-built drawings, structural analyses, and pertinent Safety Analysis Report information).
 - (c) Reviews the scope of all construction projects and provides a recommendation to the project manager in cases where it is felt that the size, complexity, or expected OSH hazards of a project warrants requiring dedicated construction contractor OSH personnel on the construction worksite.
 - (d) Conducts a prework safety meeting with the construction contractor to review project safety and health program requirements with the construction contractor prior to allowing work to commence on the worksite. This meeting may be conducted concurrently with other prework meetings addressing other aspects of project performance.
 - (e) Reviews and approves project safety and health plan and preliminary hazard analysis prior to allowing work to commence on the project worksite.
 - (f) Reviews and approves the activity hazard analysis for each project phase prior to allowing work to commence on that project phase.
 - (g) Evaluates the effectiveness of the construction contractor's safety and health program throughout the life of the project, requires revisions of the project safety and health plan when needed, and approves revisions to the plan.
 - (h) Fully documents all formal contract actions (e.g., mandated work stoppages, removal of incompetent or

careless personnel, withholding or payment) taken to enforce construction contractor compliance with project safety and health requirements. This documentation shall provide a comprehensive summary of the events leading to the contract action including a description of the noncomplying work activity or condition, the method, date, and time of notification to contractor, the contractor's response, and a description of previous similar instances of noncompliance with contract safety and health requirements.

10. PROGRAM REQUIREMENTS. The construction contractor shall establish and maintain a program to protect the safety and health of all persons on the construction worksite to include his or her employees, employees of other contractors or subcontractors, visitors and the public. This program also shall protect against damage to property, materials, supplies, and equipment and prevent unnecessary work interruptions. The program shall ensure compliance by the construction contractor and all worksite subcontractors with the safety and health standards prescribed in the construction project acquisition documents. In order to prevent duplication of requirements and documentation (e.g., Hazard Analyses, Training, Site-Specific Safety and Health Plan) on construction projects that fall within the scope of the OSHA Standard for Hazardous Waste Operations and Emergency Response, Title 29 CFR 1910.120, the project safety and health program requirements of this Order need not duplicate those required by the standard (refer to Title 29 CFR 1910.120(b)).

a. Program Implementation.

- (1) The construction contractor shall designate in writing the construction superintendent who is assigned full responsibility and authority for implementing the construction contractor's OSH program. A copy of the written designation shall be provided to the construction manager. This designation shall also include any individual(s) having authority to act for the construction contractor during the absence of the construction superintendent.
- (2) The construction superintendent or other duly designated contractor representative must be present on the worksite during the performance of any project work activities (refer to FAR 36.506 for fixed-price construction and FAR 36.519 for cost reimbursement construction).
- (3) In no case shall the requirement for or the presence of dedicated project OSH personnel relieve the construction superintendent of full and complete responsibility for compliance with all project OSH requirements.
- (4) The construction contractor is responsible for ensuring compliance by all project subcontractors with project safety and health requirements. The construction contractor is further responsible for coordinating with project subcontractors and other site contractors (i.e., the host or RCM and their subcontractors) those OSH program elements addressing worksite hazards to which employees of other contractors may be exposed.

b. Hazard Analyses. The construction contractor shall evaluate the work associated with each project phase to identify specific hazards to which worksite employees and other worksite personnel may potentially be exposed and to identify appropriate control measures. The construction contractor shall accomplish this through the performance of preliminary and activity hazard analyses as outlined below. For hazards common to multiple phases of the construction project, these hazards and their control measures may

be identified and addressed in the worksite safety and health orientation and omitted from the required activity hazard analysis for each affected project phase. For any project phase where the preliminary hazard analysis fulfills all requirements for the activity hazard analysis, additional analysis need not be performed. A preliminary hazard analysis fulfilling the requirements given below may be performed by the construction manager and provided to the construction contractor in the construction project acquisition documents.

(1) Preliminary Hazard Analysis (PHA). Prior to commencement of work on a construction project, the construction contractor shall prepare and have approved by the construction manager a PHA for the construction project. The PHA shall:

- (a) Identify the anticipated construction phases involved in the construction project.
- (b) Identify the types of hazards associated with each anticipated phase of the project as well as potential control measures and programs necessary to protect employees and others at the worksite.
- (c) Identify the phases of the project for which DOE-prescribed OSH standards or the construction project acquisition documents require that protective measures be designed, inspected, or approved by a Professional Engineer or other competent person.

(2) Activity Hazard Analysis (AHA). Prior to commencement of work on any phase of the project, the construction contractor shall prepare and have approved by the construction manager a detailed AHA. For any project phase where the PHA is intended to fulfill the requirement for an AHA, the construction contractor shall make note of this intent on the PHA and shall submit the annotated PHA to the construction manager for approval. The number of phases for which an AHA is required is not limited to those addressed in the PHA in that the actual number of phases may differ from the anticipated number due to variations in subcontractors, construction operations, or job sequence. The AHA shall expand upon the PHA by:

- (a) Identifying the specific hazards, including the use or presence of any hazardous chemicals, associated with each activity to be performed in that phase of work as well as the actual corrective measures planned to control these hazards.
- (b) Including drawings and/or other documentation for all protective measures for which the construction project acquisition documents or applicable OSH standards prescribe preparation by a Professional Engineer or other competent person.
- (c) Designating and identifying the qualifications of the competent person or Professional Engineer that will conduct inspections where required by DOE-prescribed OSH standards or construction project acquisition documents.

c. Training. The construction contractor shall ensure that each employee entering the worksite has, through experience, training and, where required, certification, the skills and knowledge necessary to safely perform his or her assigned tasks. In addition, the contractor shall ensure that each employee receives initial worksite safety and health orientation and continued safety

and health training addressing the hazards associated with the work and the measures necessary to control or eliminate the hazards.

(1) Worksite Safety and Health Orientation.

(a) Each employee shall receive an initial safety and health orientation prior to performing any work on the project worksite. The construction manager shall ensure that proper local coordination has been performed for issues that may impact the facility host, the RCM, or any other contractors. The orientation shall address, at a minimum, the following points:

- (1) Employee rights and responsibilities.
- (2) Construction contractor responsibilities.
- (3) Use and maintenance of required personnel protective equipment.
- (4) Disciplinary procedures.
- (5) Alcohol and drug abuse policy.
- (6) First aid and medical facilities.
- (7) General project hazards and the applicable policies and procedures for addressing these hazards.
- (8) Hazard recognition and procedures for reporting or correcting unsafe conditions or practices.
- (9) Procedures for reporting accidents and incidents.
- (10) Fire prevention and control.
- (11) Emergency response procedures to include local warning and evacuation systems.
- (12) Hazard communication program (refer to 29 CFR 1926.59).
- (13) Access to employee exposure monitoring data and medical records.
- (14) Location of and access to approved project safety and health plan.
- (15) Host OSH programs or procedures applicable to the project (e.g., confined space, lock out/tag out).

(b) Contractors with a continual onsite presence or with multiple projects utilizing the same work force may provide a general orientation on the items above prior to commencing work on the employee's first onsite project and at least annually thereafter. Orientation on items that vary from project to project shall be provided for each project.

(2) Prephase Training. Prior to commencing any phase of work, the construction contractor shall review the approved AHA for that phase with all employees on the affected work crew and provide training to ensure that all employees understand the potential hazards and the required protective measures. A copy of each phase's AHA shall be annotated with the name, signature, and date of attendance of all workers who have attended the

pre-phase training. The construction contractor shall provide advance notice to the construction manager for all prephase training sessions. Further prephase training sessions shall be conducted for new employees on the work crew, under changing site conditions, or at the discretion of the construction manager to reinforce project safety and health requirements.

- (3) "Tool Box" Safety and Health Training. The construction contractor shall conduct informal "tool box" safety and health training sessions at least weekly for all employees on the worksite. Depending on the size and nature of the project, this may be accomplished in single or multiple sessions and may address different topics for different work crews. Outlines of all "tool box" training sessions shall be prepared by the construction contractor and annotated with the date, time, and names of all employees in attendance.
 - (4) Training Records. The construction contractor shall ensure that records of all required training are maintained and made available, upon request, to the construction manager, project manager and other personnel with assigned oversight responsibilities.
- d. Reporting, Recordkeeping, and Accident Investigation. The construction contractor shall comply with reporting, recordkeeping, and accident investigation requirements prescribed in the construction project acquisition documents.
- e. Project Safety and Health Plan.
- (1) The construction contractor shall prepare a written project safety and health plan which:
 - (a) Includes the construction contractor's proposal for implementing this Order's program requirements.
 - (b) Identifies the proposed construction superintendent and other construction contractor personnel to be assigned OSH duties on the worksite, their qualifications, and their respective duties. The project safety and health plan shall also identify any other individual(s) the construction contractor proposes to authorize to act during periods of construction superintendent absence.
 - (c) Includes a detailed outline of the proposed employee worksite safety and health orientation.
 - (2) The approved project safety and health plan shall be maintained on the worksite and shall be made available upon request to the construction manager, project manager, worksite employees, employee representatives, and other personnel with assigned oversight responsibilities.

11. INSPECTIONS AND HAZARD ABATEMENT.

- a. Construction Contractor. During periods of active construction, the construction contractor shall conduct daily inspections of the worksite to identify hazards and instances of noncompliance with project safety and health requirements. Records shall be kept of all daily inspections. These records shall note all observed hazards and the corrective actions taken.
- b. Construction Manager. The construction manager shall conduct worksite safety and health inspections on at least a weekly basis.

The construction manager's attendance, findings, and directed hazard abatement actions shall be documented in both the construction contractor's and the construction manager's project inspection records. The construction manager shall immediately investigate hazards for which correction is outside the project scope and notify in writing the responsible authority of his findings, to include a description of interim control measures in place. The construction manager shall develop and maintain a system to track the status of all hazards for which corrective action is not immediate or falls outside of the project scope. On DOE prime construction contracts for which a DOE official is the construction manager, a firm or individual independent of the construction contractor may be designated to perform the weekly worksite inspections and associated duties.

- c. Project Manager. The project manager shall conduct inspections of all construction projects exceeding \$500,000 on at least a monthly basis during periods of active construction. For projects under \$500,000, the project manager shall develop and implement an inspection schedule which ensures that a representative sample of ongoing construction projects is inspected on at least a monthly basis. The objective of these inspections shall be to assess the effectiveness of the construction manager's supervision of construction contractor safety and health performance. This shall be achieved both through a walk-around inspection of the worksite and through a review of the project safety and health plan and other safety and health program documentation. Findings of these inspections shall be documented in the project files.
- d. Corrective Action. The construction contractor shall take immediate corrective action to eliminate or control all identified hazards. In cases where immediate corrective action is not possible or responsibility for abatement falls outside the scope of the project, the construction contractor shall:
 - (1) Immediately ensure all affected employees are aware of the hazard and its location.
 - (2) Immediately post warning signs at the location of the hazard describing the nature of the hazard.
 - (3) Implement further interim control measures, as needed, to protect his/her employees from the identified hazards and secure construction manager approval for continued use of the employed measures.
 - (4) Notify the construction manager of the location and description of the hazard. Where responsibility for abatement falls outside the project scope, the construction manager shall immediately notify the authority responsible for hazard abatement in the affected facility. Corrective action for such hazards shall be performed in accordance with the hazard abatement methodology prescribed in DOE Order 5483.1A.

REFERENCES

- 1. DOE 5483.1A, OCCUPATIONAL SAFETY AND HEALTH PROGRAM FOR DOE CONTRACTOR EMPLOYEES AT GOVERNMENT-OWNED CONTRACTOR-OPERATED FACILITIES, 6-22-83, which establishes requirements and procedures to assure that DOE contractor employees at Government- owned contractor-operated facilities are provided occupational safety and health protection consistent with that provided to private industry employees.
- 2. 29 CFR 1910.120, which provides the Occupational Safety and Health Administration (OSHA) standard for hazardous waste operations and

Administration (OSHA), Standard for hazardous waste operations and emergency response.

3. 29 CFR 1926.14, which prescribes that construction safety standards apply to the construction portions of Federal contracts for mixed performance (e.g., a contract for both manufacturing and construction services).
4. 29 CFR 1926.59, HAZARD COMMUNICATION, which provides the OSHA standard for the evaluation of and the protection from hazardous chemicals.
5. 40 U.S.C. 276a-276a-7, DAVIS-BACON ACT, provides for the payment of minimum prevailing wage rates on federally funded construction contracts in excess of \$2,000.
6. FEDERAL ACQUISITION REGULATION (FAR), Part 36, Construction and Architect Engineer Contracts, prescribes policies and procedures peculiar to contracting for construction and architect engineer services.
7. FAR, Part 42, prescribes policies and procedures for performing contract administration functions.

DEFINITIONS

1. CONSTRUCTION is any combination of erection, installation, assembly, demolition, or fabrication activities involved to create a new facility or to alter, add to, rehabilitate, dismantle, or remove an existing facility. It also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction, demolition, and excavation activities conducted as part of environmental restoration or remediation efforts. This does not involve the manufacture, production, finishing, construction, alteration, repair, processing or assembling of items categorized as personal property (refer to FAR 36.102).
2. CONSTRUCTION CONTRACTOR is the contractor or subcontractor who has been awarded the contract to perform all construction activities described in the construction project acquisition documents. For the purposes of this Order, this may be the host contractor, the Resident Construction Management Contractor (RCM), a subcontractor to either the host or RCM, or a DOE prime construction contractor.
3. CONSTRUCTION MANAGER is the individual or firm responsible to DOE for the supervision and administration of a construction project to ensure the construction contractor's compliance with requirements set forth in the construction project acquisition documents. For projects performed under a direct contract with DOE, the construction manager shall be the Contracting Officer or his duly designated representative. For projects performed by host or RCM subcontractors, the construction manager is the host or RCM, respectively. For projects performed by host or RCM in-house forces, the host or RCM is both the construction contractor and the construction manager. In such cases, the responsibilities and duties of the construction manager and construction contractor prescribed within this Order shall not be duplicated.
4. CONSTRUCTION PROJECT is the full scope of activities required on the construction worksite to fulfill the requirements of the construction project acquisition documents. Construction projects also include those construction activities performed in support of or as part of maintenance, manufacturing, decontamination and decommissioning (D&D), or environmental restoration or remediation efforts (refer to Title 29 CFR 1926.14). For application of the \$500,000 threshold, construction project costs are limited to those incurred by the construction contractor to fulfill the requirements of the construction project

acquisition documents and do not include design, supervision, or administrative costs incurred by the construction manager or project manager. In cases where multiple solicitations are used to perform construction on or of a facility, those services described within each solicitation shall be deemed a project for the purposes of application of the construction safety and health program requirements of this Order.

5. CONSTRUCTION SUPERINTENDENT is the individual designated by the construction contractor as responsible for the performance of all aspects of the work described in the project documents including implementation of the project OSH program. He shall have full authority to act for the Construction Contractor.
6. CONSTRUCTION PROJECT ACQUISITION DOCUMENTS are the documents by which construction services to be procured are described and solicited. These include the request for proposal or the invitation for bids, the plans and specifications and other standards referenced therein, work orders, or other requisitions for construction services.
7. CONSTRUCTION WORKSITE is the area within the limits necessary to perform the work described in the construction project acquisition documents. It includes the facility being constructed or renovated along with all necessary staging and storage areas as well as adjacent areas subject to project hazards.
8. HOST is the contractor with the primary landlord responsibility at a DOE sponsored facility.
9. PROJECT MANAGER is the DOE official responsible for assuring that all project activities are carried out in compliance with Federal, State, and local regulations, laws, and standards for protection of the safety and health of employees and the public. For construction activities without an assigned project manager, use of the term project manager within this Order refers to the Head of the responsible DOE Field Organization or his or her designee.
10. PROJECT PHASE is a separately definable portion of a project involving a type of work presenting hazards not experienced in previous project operations or an operation performed by a different subcontractor.
11. RESIDENT CONSTRUCTION MANAGEMENT CONTRACTOR (RCM) is a prime contractor hired by DOE to perform a variety of construction management services on a DOE sponsored facility for a long-term basis. These services may include engineering design, construction management, and construction with in-house forces. For the purposes of this Order, this definition shall also apply to a prime contractor hired specifically to perform environmental restoration activities on DOE facilities (i.e., an Environmental Restoration Management Contractor (ERMC)).