

## SECTION 9

### SAFETY

#### 9-1. General.

a. An acceptable safety standard is guided by a well planned and conscientiously applied program for policing hazardous conditions and controlling personal acts which might result in accidents. The resident engineer takes an aggressive, sincere interest in the safety program, making it clear to resident office personnel and representatives of contractor that the accident prevention clause of the specifications carries the same weight and is given the same strict attention as all of the other provisions of the contract. Safety is a "critical" job requirement for both merit pay and GPAS personnel having safety responsibilities.

b. Construction Safety Requirements. Contractors are obligated by the terms of their contract to protect the lives and health of persons exposed to their operations and to safeguard property and equipment from accidental loss or destruction. All work will be performed in accordance with the safety and health provisions of the contract, EM 385-1-1 (US Army Corps of Engineers Safety and Health Requirements Manual), and federal, state, and local codes and standards.

c. Accident Prevention and Construction Projects. In addition to being a contract requirement, a well planned and conscientiously applied accident prevention program is essential to the efficiency, quality, and scheduling of work and the minimization of costs. To ensure that the accident prevention program meets these intents, the resident engineer and his staff must take a sincere, aggressive interest in obtaining the maximum effectiveness and benefit from the contractor and the contractor's accident prevention plan. Paramount to achieving this is the resident engineer's involvement and confidence in, visible support for, and enforcement of the contractor's accident prevention plan. The methods a contractor uses in satisfying safety requirements are immaterial as long as the requirements are met. The contractor shall have the option of selecting any technique or method as long as the RE is assured that it will produce the desired results. Effective application of the Corps' construction safety and health program requires follow-up by Corps supervisors and inspectors to ensure that the contractor is fulfilling the contractual obligations in accordance with the contractor's accident prevention plan and any agreements reached at the preconstruction safety conference.

9-2. **Responsibilities.**

a. Contracting Officer. The contracting officer, the ACO and/or the COR are responsible for ensuring contractor compliance with contractual safety and health requirements. This, in turn, entails a responsibility for familiarization with applicable safety requirements, standards, and codes; the ability to assist the contractor in analysis and resolution of safety and health problems; and the ability to conduct any necessary inspections of the work conditions and procedures. Resident engineers are also responsible for providing a safe and healthful work environment for their employees. This responsibility includes, among others, providing appropriate job safety and health training, conducting safety and health surveys of work facilities and operations, providing personnel with protective equipment and ensuring its use, and ensuring personnel are provided the medical surveillance appropriate for their work exposure.

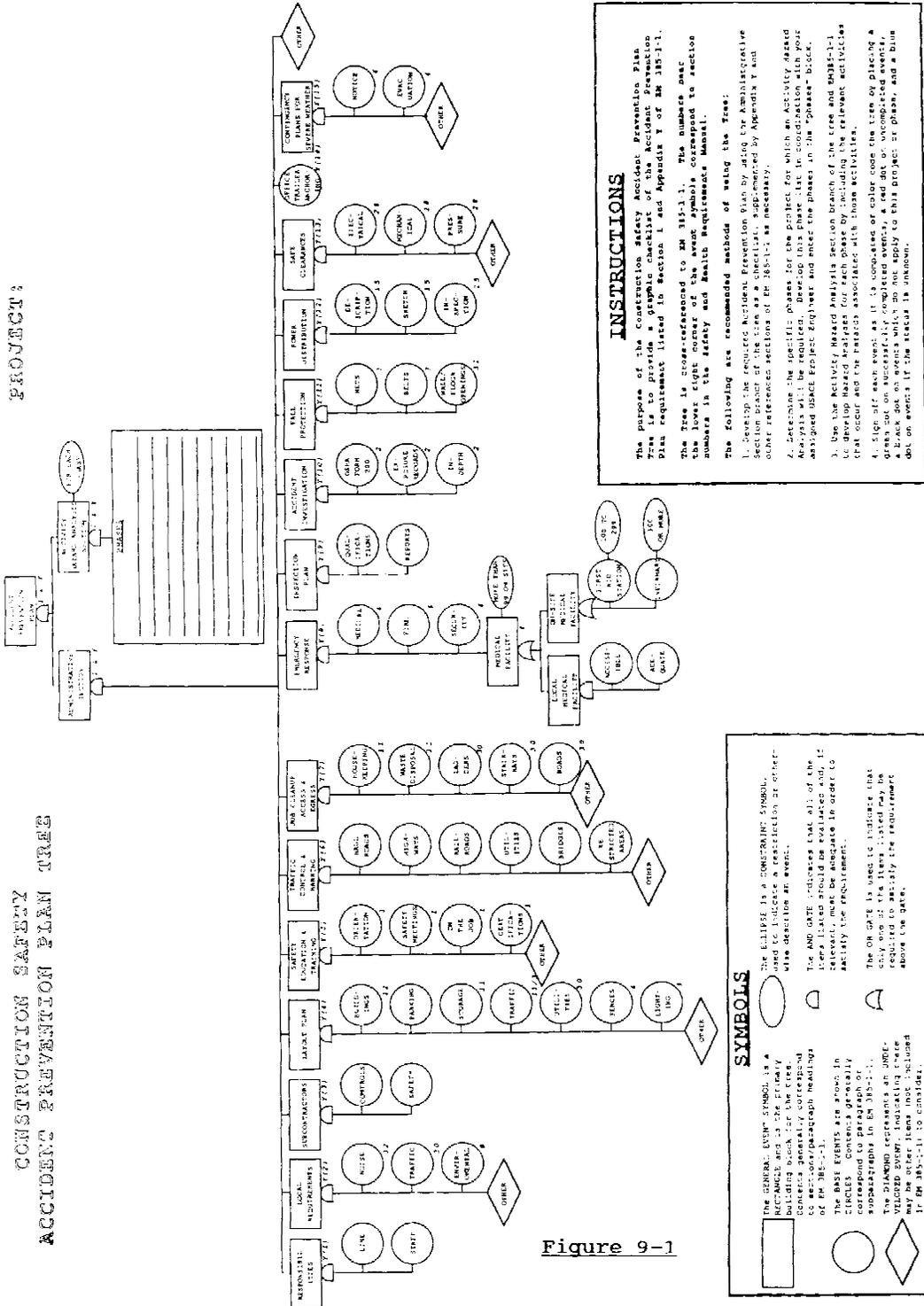
b. Contractor. The contractor is obligated by the terms of the contract to protect the lives and health of persons exposed to contractor operations and to safeguard property and equipment from loss or destruction. Contractor operating methods must include applicable provisions of the contract and EM 385-1-1. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out.

c. Safety and Occupational Health Office. The safety and occupational health office shall evaluate the resident engineer's implementation of both their, and their contractor's, safety and health responsibilities. This may include, but is not limited to, reviewing accident prevention plans for quality and completeness; attending preconstruction safety conferences, as requested and as scheduling will permit; reviewing minutes of preconstruction safety conferences; and conducting periodic safety surveys of field offices and their activities. The safety and occupational health office shall provide technical and managerial guidance and expertise concerning safety and occupational health issues. This guidance includes training and motivation techniques, interpretation of programmatic and technical requirements, analysis of accident trends, and reviewing accident prevention plans and activity hazard analyses for projects involving unusual hazards.

9-3. **Accident Prevention Plans.**

a. Contractor notification. Upon award of contract, a letter is written to the contractor calling attention to the contract clause entitled "Accident Prevention," which requires the contractor to develop an accident prevention plan. This letter shall also be used to inform the contractor of their obligation to meet with representatives of the contracting officer, prior to the commencement of work, and discuss and develop mutual understandings concerning the contractor's accident prevention plan and to provide guidance on the preparation of the contract accident prevention plan, activity hazard analyses, and accident investigation and reporting.

b. Accident prevention plans. Contractors are required to submit, to the ACO prior to the preconstruction safety conference, their written plan for effectuating the provisions of the contract clause entitled "Accident Prevention." Accident prevention plans will be enforced as part of the contract. Accident prevention plans are administrative documents and, as such, should address general safety and health requirements. EM 385-1-1 outlines the minimum requirements for an acceptable accident prevention plan. Figure 9-1 on the following page provides further guidance in developing the accident prevention plan.



c. The resident engineer shall review the contractor's plan to determine whether it meets the intent of the accident prevention clause of the contract and EM 385-1-1. (The accident prevention plan also enables the ACO/COR to evaluate the contractor's concept of safety.) Deficiencies in the plan will be brought to the attention of the contractor at the preconstruction conference, and the contractor shall revise the plan to correct the deficiencies and re-submit it to the Re for acceptance. If the RE again finds deficiencies in the plan, these deficiencies will be discussed and resolved at the preconstruction safety conference. It is important to note that the Corps does not approve the contractor's accident prevention plan. The Corps reviews and comments on a contractor's accident prevention plan and accepts the plan when it meets the requirements of the contract provisions.

d. Copies of the accepted plan will be maintained at the Re's office and at the job site. The original copy of the accepted plan, along with the letter of acceptance, will be forwarded to the FOA safety and occupational health office for review and then to the official contract file. The safety and occupational health office will monitor the quality of the resident engineer's processing and acceptance of accident prevention plans for purposes of evaluating the implementation of this requirement and provide assistance as necessary.

e. The contractor's accident prevention plan shall be reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original accident prevention plan shall be incorporated in the plan as they are discovered.

#### **9-4. Preconstruction Safety Conferences.**

Preconstruction safety conferences provide a forum for government and contractor personnel to become acquainted and explain the functions and operating procedures of their respective organizations and to reach mutual understandings relative to the administration of the overall project accident prevention plan before the initiation of work. The conference will be attended by those who have a responsibility or significant role in accident prevention on the project. The preconstruction safety conference will often be the first exposure of a contractor to the Corps construction safety and health program and should be approached as such. The conference should be used as an orientation to this program; unless proven otherwise, it should not be assumed that the contractor is familiar with the Corps construction safety and health program and its requirements and procedures.

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a. A conference agenda will be developed to fit the particular problems at hand. Items typically included in the discussion are listed in Table 9-1 below.

**Table 9-1. RECOMMENDED AGENDA FOR  
PRECONSTRUCTION SAFETY CONFERENCES.**

1. Discussion of the purpose and benefits of Corps construction safety and health program and contractor's accident prevention plan.
2. Review of the accident prevention clause of the contract and any other contractual safety and health clauses, EM 385-1-1, and other applicable safety and health codes and standards.
3. Review of any local safety and health requirements.
4. Review of any other special requirements particular to the contract at hand.
5. Review of the contractor's accident prevention plan, its deficiencies, and the corrections needed to bring it to an acceptable level.
6. Review of the contractor's list of anticipated phases of work requiring an activity hazard analysis.
7. Review of accident investigation and report requirements, including the submission of worker exposure reports.
8. Discussion of the contractor's proposals of controlling and coordinating the work of subcontractors.

b. As noted above, the conference will be used to discuss and resolve deficiencies in the contractor's accident prevention plan. The agreements reached at the preconstruction safety conference shall become a matter of record and shall be included as amendments to the contractor's accident prevention plan.

c. Minutes of the conference, including agreements reached and a record of attendance, shall be maintained. Copies of the minutes shall be forwarded to the safety and occupational health office for review and then forwarded to the official contract file. A copy of the minutes will also be provided to the contractor.

9-5. **Activity Hazard Analysis.**

The activity hazard analysis is a systematic, dynamic, documented analysis of proposed job activities for the purpose of identifying potential hazards and developing procedures which will be used to control or remove those hazards. Activity hazard analyses, carefully planned, thorough, and enforced, are the primary tool for achieving a safe and healthful project.

a. An analysis will be developed by the contractor for every operation involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform work. The analysis must identify and evaluate hazards and outline the proposed methods and techniques for the safe completion of each phase of work. Work will not proceed on a phase of work until the activity hazard analysis for that phase has been found acceptable by the contracting officer's representative.

b. To prevent misunderstanding, the contractor shall submit a list of those phases of work requiring an activity hazard analysis either along with the accident prevention plan or during the preconstruction safety conference. This list will be reviewed at the conference and an agreement will be reached between the contractor and the contracting officer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of activity hazard analyses should be established to preclude project delays. The activity hazard analysis list will be reviewed periodically (it is recommended that, at the minimum, the list be reviewed at the monthly contractor supervisory safety meeting) and updated as necessary when procedures, scheduling), or hazards change.

c. The acceptable activity hazards analysis shall be reviewed with all affected employees at the preparatory inspection of the phase of work for which it was developed and at weekly tool box safety meetings. The analysis should be utilized during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

d. Activity hazard analyses should be updated as necessary to provide an effective response to changing work conditions and activities.

9-6. **Compliance Inspections.**

The contracting officer's representative will ensure that inspections are made, as necessary but not less than once daily, to check the contractors compliance with the requirements contained in the contract, the accident prevention plan, and activity hazard analyses. The COR will also ensure that contractor personnel are conducting inspections, at least once daily, for the contractor's and subcontractor's compliance with these requirements. Inspections will be documented, preferably on the inspectors daily report, and will identify all observed deficiencies, the actions required to correct the deficiencies, and will be followed-up to ensure correction of the deficiencies. All deficiencies of the contract safety and health requirements will be brought to the attention of the contractor for prompt correction. The following guidelines are recommended for gaining compliance with safety and health requirements.

a. The contractor or their representative will be informed of the deficiency and, based on the severity of the deficiency, instructed to correct the deficiency within a reasonable, yet prudent, period of time.

b. If the contractor declines to correct the deficiency within the allotted time, the COR will remind the contractor of the contractual obligation to correct unsafe and unhealthful conditions associated with their activities and their own requirements for the correction of deficiencies (as outlined in the accident prevention plan).

c. If the contractor continues their refusal or is slow in correcting the deficiency, the contracting officer's representative shall issue an order stopping that part of the work affected by the hazard until satisfactory corrective action has been taken by the contractor. The contractor shall be informed, in writing, of the extent of the stoppage, the date and hour the work stopped, the reason for the action, and the conditions under which the work may again proceed and an accurate record shall be maintained on all personnel, material, and equipment affected by the work stoppage. All of the above actions shall be fully and factually documented in the daily quality assurance report.

d. If there are deficiencies of a repetitive (recurring) nature, the contracting officer's representative will remind the contractor of the contractual obligation to correct unsafe and unhealthful conditions and maintain the workplace in a safe and healthful manner.

e. If a contractor supervisory-level employee allows a willful violation of EM 385-1-1, the employee will be reminded of the contract requirement providing for the discharge of reckless employees.

9-7. **Unsafe Practices.**

a. Reckless behavior or disregard of safety and health requirements will not be tolerated and will not exist on Corps projects. If any contractor employee endangers their now life, the lives of others, or property by disregard of safety and health requirements, the contractor shall be informed of the employee and his unacceptable attitude towards accident prevention, reminded of the contract requirement providing for the discharge of such employees, and instructed to immediately resolve the problem. This action will be documented in the daily quality assurance report.

b. If, after notifying a contractor of a reckless employee; the employee continues to disregard safety requirements, the contractor will be requested to remove the employee from the project or place the employee on work wher his actions will not constitute a hazard. This action will also be documented in the daily quality assurance report.

c. The choice a contractor makes between removing the employee or placing him on work where their actions will not constitute a hazard will depend on the contractor's approach for the fair handling of reckless employees. In some cases a single reckless act may warrant termination; in other cases the employee may be warned in writing, temporarily removed from the jobsite, or some otherwise reprimanded.

d. Imminent Danger Situations. When an imminent danger condition or practice is observed, the following steps will be taken:

(1) The inspector or construction representative will instruct the contractor to immediately remove workers from the area of danger or to desist from the dangerous operation or practice.

(2) If a representative of the contractor is not at the site, the inspector or construction representative will order the workers to remove themselves from the dangerous location or to cease the dangerous operation or practice.

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(3) The construction representative will ensure that the work is not resumed in the area of danger and that workers will not be involved in the operations or practices until recommendations for corrections have been fully complied with.

(4) Employees creating imminent danger situations through their reckless behavior shall be handled in accordance with paragraph 9-7a and 9-7b, above.

9-8. **Employee Safety and Health Training.**

a. Government.

(1) Indoctrination. All employees shall be provided initial safety and health indoctrination and continuing safety training to enable them to perform their work in a safe manner. Indoctrination and training shall be based on the appropriate district or division level safety and occupational health program.

(2) Tool Box Safety Meetings. Contracting officer's representatives shall establish procedures for and conduct monthly safety meetings to provide safety training and motivation to their employees. The minutes of these safety meetings shall be recorded and maintained.

b. Contractor.

(1) Indoctrination. Every contractor and subcontractor employee shall be provided initial safety and health indoctrination and continuing safety training to enable them to perform their work in a safe manner. Indoctrination and training shall be based on the contractor's accident prevention plan and shall cover, but not limited to, subjects specified in EM 385-1-1.

(2) Tool Box Safety Meetings. In accordance with requirements of EM 385-1-1, the contractor and subcontractors shall conduct safety and health meetings monthly for supervisors and weekly for workers. These meetings shall include a review of past activities, discussion of plans for new or changed operations, a review of pertinent aspects of applicable activity hazard analyses (by trade), the establishment of safe working procedures for anticipated hazards, and provide pertinent safety and health training. (Corps inspectors and construction representatives are encouraged to attend these meetings on a frequent basis.)

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The contractor shall provide an outlined report (including date, attendance, and subjects discussed) of each meeting to the contracting officer's representative who will review the reports for the content and effectiveness of the meetings.

**9-9. General Procedures.**

a. Equipment Inspection and Testing. Before heavy equipment and floating plant are put into operation at the job site, the contracting officer's representative shall be notified so that joint inspections by the contractor and the contracting officer's representative and performance testing of the equipment can be made. All equipment and tests shall be documented and copies of the documented reports maintained at the project site and at the resident engineer's office. Defective equipment will not be operated until all deficiencies are corrected and the equipment meets inspection and testing requirements.

b. Waivers to Safety Standards. EM 385-1-1, division/district-level accident prevention policies, contractual safety and health provisions, and other guidance issued by higher authority are applicable to all work performed by contract. Compliance is essential. However, in circumstances where compliance with a specific safety standard is not attainable, a waiver, providing equal or greater protection than that of the non-attainable standard, will be requested. Waiver requests will be conducted in accordance with division level policy. Waivers must be fully documented, stating which requirement is to be waived, what conditions necessitate the waiver, and how protection, equal to or greater than the intent of the requirement, will be provided.

c. Local Safety and Occupational Health Programs. All area, resident, and project offices are encouraged to develop local safety and health programs which provide for the protection of both government and contractor employees and property and members of the public exposed to Corps and contractor activities. It is recommended that local safety and occupational health programs be derived from requirements of their district safety and occupational health program integrated with local needs, priorities, and procedures.

d. Housekeeping. Good housekeeping is an indispensable part of any construction program. It reduces accident potential, stimulates employee morale, and facilitates productivity. Resident engineers will insist that contractors keep construction and storage areas free from the accumulation of material or rubbish, as required by EM 385-1-1.

e. Personal Protective Clothing and Equipment. Personal protective equipment shall be used as required to reduce exposure to acceptable limits. All users of protective equipment shall be trained in and knowledgeable of the use and limitations and the inspection, testing, and maintenance of the equipment. When employees provide their own equipment the employer is responsible for assuring its adequacy in protecting against the hazard, its condition and state of repair.

f. Protection of the Public. Contractors are required to protect the public from hazards from their operations. Such protection shall include, but is not limited to, appropriate project fencing, excavation barricading, night lighting of areas not fenced off from the public but with public exposure, diversion of public access from hazardous areas, and warning and signaling systems.

9-10. **Accident Investigation and Reporting.**

a. In addition to OSHA requirements, contractors are required to report all accidents which are incidental to work performed under the contract and result in the following:

(1) Fatalities.

(2) Lost-time injuries and occupational illnesses (including permanent total, permanent partial, or temporary total disabling injuries).

(3) Damage to property, materials, supplies, and equipment costing \$1,000 or more.

b. Accidents will be reported to the contracting officer's representative in accordance with the requirements, and within the time frames, of division or district policy and as specified at the preconstruction safety conference. (Accident report forms, with instructions for preparation and submittal, will be furnished to contractors at the preconstruction conference.) The contracting officer's representative will review all accident reports submitted by contractors to determine that the causes indicated on the reports are correct and that corrective measures to reduce the likelihood of future occurrences are effective. Contracting officer's representatives will conduct follow-up investigations to determine if the corrective actions have been implemented and, if so, their effectiveness.

c. To ensure the thoroughness of the contractor's accident reporting, it is recommended that Contracting officer's representatives periodically review the contractor's OSHA required log of recordable occupational injuries and illnesses for the project. Accidents which are documented on the log but have not been reported to the Corps shall be brought to the contractor's attention and the contractor reminded to immediately report the accident.

9-11. **Compliance with Federal, State, and Local Regulations.**

Compliance with federal, state, and local safety and health regulations is required under the "Permits and Responsibilities" clause of the contract. The ACO cooperates with state forces in requiring observance of state laws and regulations, including environmental pollution control and OSHA (federal or state) regulations, but will not intercede or interfere in OSHA's inspection of USACE contractors.

9-12. **Hazardous Materials.**

a. Federal OSHA 29 CFR 1926.59 requires that construction contractors provide a Hazard Communication Program to their employees who may be exposed to hazardous substances on the jobsite. Similarly, the COE has such a program for its employees and a standardized Hazard Communication Training package is available from your local FOA Safety Officer. The training program consists of 7 modules on VHS tapes with a student handbook. The training program takes about 4 hours and is mandatory for all COE employees who may be exposed to hazardous substances. The COE Safety and Health Requirements Manual EM 385-1-1, contains requirements for construction contractors to submit material safety data sheets for hazardous substances used on the jobsite. The material safety data sheets should be submitted to the ACO/COR on the jobsite.

b. ER 385-1-92, Safety and Occupational Health Document Requirements for Hazardous Waste Site Remedial Actions, prescribes the responsibilities and establishes procedures for developing the site safety plans and related safety and occupational health documents required when performing hazardous waste site remedial actions.

c. The resident engineer should be aware that there are strict OSHA and EPA regulations affecting exposure to asbestos materials and how it is to be treated when encountered on the construction site. OSHA Asbestos Standards (29 CFR 1910.1001 and 29 CFR 1926.58 regulate employee exposure standards.

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**Safety Terminology:**

Accident prevention plan - the written plan which addresses the prime contractor's accident prevention policy and procedures and responsibilities for complying with Corps of Engineers' contractual safety and health requirements. Applies to all prime and sub-contractor employees on the project for which it was developed.

Activity hazard analysis - systematic analysis of a work activity to determine the hazards of the activity and the methods to be utilized in the control of those hazards.

Contractor - unless specifically referred to as prime contractor, this term also includes subcontractors.

Imminent danger - a condition of practice which could reasonably be expected to cause death or serious physical harm immediately or before the hazard would be corrected through normal procedures.

OSHA - The federal Occupational Safety and Health Administration. In states with an approved state occupational safety and health plan, the term "OSHA" also refers to the state occupational safety and health administration.

Preconstruction safety conference - a conference, held before initiation of construction activities, between Corps and contractor management and supervisory personnel having a responsibility or significant role in accident prevention on the project. The intent of the conference is for the Corps and contractor to reach mutual agreement on the Corps' contractual safety and health requirements and the contractors accident prevention plan.

Reckless behavior - irresponsible, rash behavior disregarding the consequences of such actions.

Tool box safety meetings - periodic meetings for discussion of past, current, and future work activities, the hazards of those activities, and the methods to control those hazards and for presentation of safety and health training and promotion.

Willful violation - a safety and health requirement violation where the contractor knows the condition or practice is hazardous and does not make a reasonable effort to eliminate the condition. (Deliberate, voluntary, or intentional as distinguished from inadvertent, accidental, or ordinarily negligent.)