
Chapter 4

Construction Safety and Health

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645.0400 Introduction

Worker safety and health is the number one priority on all construction jobsites, regardless of whether or not the personnel are U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) employees, the public, or contractors. The importance of safety cannot be overstated or over-emphasized. Safety should be a constant concern on construction projects, beginning with the preconstruction meeting and continuing throughout the project life. The actions taken by NRCS personnel can have a positive impact on project safety.

Chapter 4 covers the role of NRCS quality assurance (QA) inspectors in monitoring and documenting construction safety and health issues. The QA inspector's roles and responsibilities concerning safety will depend on the type of contract. The responsibilities of the contractor are explained. The authority of NRCS personnel to take corrective action and the action to be taken to address safety and health issues are described. Safety requirements that govern safety and health on NRCS work are reviewed along with specific sampling and testing requirements necessary to ensure compliance with the requirements. And finally, the records and reports for documenting safety and health issues are presented.

645.0401 Safety in construction activities

The Occupational Safety and Health Administration (OSHA) is the regulating agency that enforces the law as it relates to the safety and health of America's workers. OSHA is charged with making sure that, "No contractor (or employer) shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health or safety."

OSHA regulations have been codified in Title 29 of the Code of Federal Regulations (CFR) and are based on the Williams-Steiger Act. Construction safety regulations are covered in Chapter XVII, OSHA, Parts 1903, 1904, 1910, and 1926. The most important parts with which a QA inspector should be familiar are OSHA Parts 1910 and 1926. The basics of what is covered in these parts and subparts are covered later in this chapter.

Note that OSHA regulations apply to all employers. OSHA Part 1975.4 (a) defines an employer as anyone with one or more employees and is, therefore, covered by the OSHA regulations. In addition, OSHA Part 1975.4 (b)(2) states that any person engaged in an agricultural activity employing one or more employees comes within the definition of an employer under the Act and, therefore, is covered by its provisions. However, members of the immediate family of the farm employer are not regarded as employees for the purposes of this definition. This should not infer that NRCS personnel are not to be concerned about the safety of a person(s) not classified as an employee for the purpose of this definition.

QA inspectors must be familiar with OSHA regulations. The NRCS must comply with OSHA regulations for its own employees, including the use of personal protective equipment. The contractor must also comply with OSHA regulations.

645.0402 Responsibility and authority

(a) Contractor responsibilities

The contractor is responsible for overseeing and ensuring that safe and healthy conditions prevail on the jobsite and that jobsite conditions and work practices meet the required standards for safety and health. The contractor must also:

- comply with all applicable requirements of OSHA, and in particular OSHA Parts 1910 and 1926
- provide education and training in safety and health for employees
- furnish first aid and medical attention for those injured on the jobsite
- keep records of accidents and injuries
- submit required accident and injury reports

The contractor is responsible for keeping unauthorized persons away from hazardous activities on the jobsite. If the contractor allows visitors on the jobsite, they must be supplied with hard hats and other required and appropriate protective equipment to protect them from safety and health hazards on the jobsite. The movement of visitors around the jobsite must be restricted as necessary to ensure their safety.

(b) General responsibilities of NRCS personnel

NRCS personnel are to verify that the contractor and landowner fulfill their safety responsibilities. NRCS personnel must know the applicable safety and health regulations, and they must be aware of their contractual duties and responsibilities regarding safety on the jobsite. For instance, a QA inspector is responsible for verifying safety regulations are met for a Federal contract. However, a contracting local organization (CLO) contract may or may not assign the NRCS the responsibility for safety.

The Construction Safety Checklist (provided in the appendix A) has been prepared as a guideline for conducting safety inspections. Some inspections and tests must be made several times during the course of the work. Problems shall be corrected and the facts documented in the job diary. Some items may not be listed on the checklist, and some listed may not apply to every project. The checklist shall be filed with the contract records.

The NRCS has adopted language and provisions to supplement the OSHA safety and health regulations. This supplement entitled “NRCS Supplement to OSHA Parts 1910 and 1926” (hereafter referred to as the “NRCS Supplement”) is included in NRCS construction contracts and most CLO contracts.

Whenever the NRCS Supplement is included in a contract, NRCS personnel must verify that prior to the start of the work the contractor is aware of NRCS Supplement requirements. NRCS personnel are to review all safety and health requirements with the contractor before the work begins. For Federal contracts, this is usually done at the preconstruction (postaward) conference. Specific safety issues are addressed during the performance of the work as needed to ensure that the required standards of safety and health are being followed. Hard hats are required on all NRCS sites under Federal contract to serve both as head protection and as a reminder that safety is the number one priority on the jobsite.

For non-Federal construction contracts, NRCS personnel should address safety and health issues with the local sponsor or owner and the contractor prior to the start of work and as the work progresses. Especially on CLO construction contracts, the party responsible for checking safety compliance must be clearly established in the contract and/or agreement. Generally, in such agreements, the local sponsor will have the responsibility for safety. However, in some agreements the NRCS may be responsible for checking safety compliance. Both the owner and the contractor must be aware of their responsibility to ensure that required standards of safety and health are adhered to at all times during the performance of the work. All parties shall review applicable specific sections of OSHA to be aware of the governing regulations. As a minimum, all parties involved in the day-to-day activities on the jobsite must be aware of first aid provisions and know

where to quickly find local phone numbers for emergency services.

An NRCS employee involved in a project where someone is injured could be named as a defendant in a tort claim regardless of the employee's level of liability. Tort claims are claims against an entity by an injured person for the purpose of recovering damages. Individuals operating responsibly within the scope of their job and within their delegated contractual authority are typically absolved, by their employer, of claims against them. NRCS personnel need to understand their responsibility and authority concerning safety and health and to conduct themselves responsibly within their authority to help prevent accidents and to be absolved from such claims. Although the contracting officer (CO) is ultimately responsible for ensuring the contractor's compliance with applicable safety and health regulations and standards per the contract clauses, it is the QA inspector who is generally at the jobsite and acts as the eyes and ears of the CO.

Coordination with other agencies

On any work in which the NRCS cooperates, there may be other Federal or State agencies involved in addition to the NRCS that have standards and enforcement responsibilities in safety and health. There may be inspectors from other agencies on the job who also have compliance authority and responsibility. However, the NRCS is to carry out its responsibility and not rely on others. The NRCS cooperates with other agencies so that the total effort is effective.

(c) NRCS responsibilities and authority by contract type

All construction activities that involve payment for materials or services are performed under a contract. Regardless of contract type or size of job, workers' protection from the hazards associated with construction is a priority. There are, however, variations in the way safety and health issues are addressed from one contract type to the other.

NRCS participation in conservation work is carried out under several types of working relationships, generally culminating in some type of non-Federal contract. NRCS responsibility for ensuring compliance with safety and health standards and regulations may be different depending on the contract, grant, or agree-

ment used to formalize each relationship. Although the NRCS may not dictate the inclusion or language of safety-related contract clauses in non-Federal contracts, it is still the responsibility of the contractor (or landowner acting as contractor) to comply with OSHA standards and regulations. OSHA compliance must be made clear to all participants—the owner, contractor, and NRCS personnel. Safety and health on the jobsite is the highest priority regardless of contract type or size.

(1) Safety in Federal contracts

Federal construction contracts—Federal construction contracts contain Federal Acquisition Regulation (FAR) clause 52.236–13, entitled “Accident Prevention,” which requires the contractor to comply with OSHA Parts 1910 and 1926. NRCS contracts also contain the NRCS Supplement to OSHA Parts 1910 and 1926.

For Federal contracts, the CO has authority on all matters pertaining to the contract. However, NRCS COs often delegate authority to the contracting officer's technical representative (COTR) and the QA inspector to stop work whenever there is a significant safety violation. This delegation of authority is accomplished by including the following or similar language in the appointment letters to the COTR and the government QA inspector:

“You are authorized to notify the Contractor orally, with written confirmation, to take immediate corrective action to correct any condition which poses a serious or imminent danger to the health or safety of the public and/or government personnel. See FAR 52.236–13(d). If after this notice the Contractor fails or refuses to promptly take the required corrective action, you are authorized to issue an order suspending all or part of the work, as appropriate, until satisfactory corrective action has been taken. You are to keep the Contracting Officer informed, on a daily basis, of actions taken and the Contractor's response. The Contracting officer will issue resume orders upon completion of satisfactory corrective action.”

Federal contracts require the contractor to file a safety and health plan prior to starting work. The plan shall include provisions for frequent safety inspections or audits conducted by a competent person. These in-

spections/audits shall be documented in writing and made available on request to the CO or COTR and include the name of the inspector, the date, and all findings. The safety plan must also include how safety and health issues and deficiencies shall be identified and corrected. Issues and deficiencies shall be tracked. Information such as the date a deficiency was identified, the nature of the deficiency, the person responsible for correcting the deficiency, and the projected resolution date must be included.

In addition, if Construction Specification 94, Contractor Quality Control (CQC) is included in the contract, the CQC staff, as part of their CQC responsibilities shall conduct and document daily safety and occupational health inspections in their daily quality control (QC) logs.

If a safety violation is noted on a jobsite, the QA inspector shall first inform the contractor's CQC staff and supervisory staff (project manager or superintendent) of the violation. The QA inspector must then monitor whether the violation has been addressed and corrected. If it is a significant safety violation, the contractor shall immediately stop all work related to the violation and take corrective action. Other safety violations may not require immediate work stoppage, but it is incumbent upon the contractor to take immediate action to correct any known safety violation. If the contractor fails to take corrective action within a reasonable time, the QA inspector should elevate the concern to the COTR, government representative (GR), or CO. All activity related to any safety violation shall be well documented in the job diary.

(2) Safety in non-Federal contracts

Contracting local organization (CLO) contracts—When a local sponsor awards and administers a contract for construction, it is known as a CLO contract. CLO contracts shall contain safety clauses and are subject to all applicable OSHA regulations regarding safety and health. If agreed to by the local sponsor, the CLO contract will contain the NRCS Supplement to OSHA. NRCS policy states that the NRCS cannot dictate the use of additional safety and health standards such as those contained in the NRCS Supplement. If the NRCS is assigned the responsibility to provide quality assurance inspection, then the NRCS QA inspector will be present on the jobsite throughout the construction period and must check the jobsite to

verify strict compliance with all applicable safety and health regulations.

(3) Safety in other contract types

Contracts are legal agreements between two entities and may be written or oral. Frequently, work performed by conservation contractors for individual landowners involves oral contracts or the written contracts have very little safety language specific to the job at hand. Even though these contracts contain no explicit safety clauses, they are still governed by the industry standards detailed in OSHA standards. All work conducted as part of these contracts must abide by the regulations set forth by OSHA and applicable local and State regulations.

On contracts such as those between an individual owner and a contractor, the owner has authority on all matters pertaining to the contract. NRCS personnel providing assistance have no authority to stop work or take other corrective action to address safety concerns directly to the contractor. This does not mean that NRCS personnel cannot take action to address safety concerns, only that the authority to direct the contractor is held solely by the owner. NRCS personnel shall inform the contractor of the safety concern and also notify the landowner so that corrective action will be taken. If the contractor does not address the concern and the landowner fails to take action to have the safety deficiency corrected, NRCS personnel shall inform the landowner that Federal assistance can be withdrawn for failure to comply with safety regulations.

NRCS personnel have an obligation to verify that all applicable standards of safety and health are being met regardless of the contract type or working relationship. It is the job of NRCS personnel to verify that these standards are made clear to all participants—the owner, the contractor, and NRCS personnel.

645.0403 Actions to correct safety violations

When trying to decide what action to take concerning safety violations, it helps to classify the violation as either a violation of a condition of the contract or a significant safety violation.

(a) Violation of a condition of the contract

A violation of a safety and health condition of the contract may exist without posing an immediate threat to the owner, the contractor, NRCS personnel, or the public. In this case, the violation may be a hard hat sign that does not meet the size requirement or other violation that is not an immediate threat to the owner, the contractor, the public, or NRCS personnel. While these violations must be corrected, they probably do not warrant shutting down the entire project. The contractor has a reasonable amount of time to correct the problem, generally 1 to 2 days. If a piece of equipment has a violation such as a nonaudible backup alarm, the equipment must be idled until it is fully compliant with all safety requirements.

For Federal contracts, work can be stopped on the project if the contractor fails to correct a violation of a condition within the given amount of time or repeatedly violates safety requirements that are not significant in themselves. In this case, the CO must be notified as the CO must issue the order to stop work in writing. Stop work authority is not normally delegated to the QA inspector for safety and health violations that are not of a significant nature. Written CO authorization is required before the work can resume.

For non-Federal contracts, NRCS employees must be familiar with the contract or agreement for a CLO contract, as well as applicable safety and health standards and endeavor to verify that they are clear to all participants. Violations should be reported to the local sponsor or the contractor, depending on the terms of the contract/agreement. For contracts between landowners and contractors, the QA inspector will inform the landowner and contractor when violations occur. Document any conversations with local sponsors,

landowners or contractors concerning violations of the safety standards. If the landowner and contractor choose to ignore the safety standards or warnings of safety violations, the QA inspector shall elevate their concerns to their supervisor.

(b) Significant safety violations

Significant safety violations are generally violations of a condition of the contract and violations of laws and regulations or a disregard for safety and health standards that lead to conditions that cause an imminent danger of serious injury or loss of life of anyone—the owner, contractor personnel, NRCS personnel, or the public. Examples of significant safety violations include but are not limited to: laborers working in a deep trench without shoring, working on scaffolding or other heights without appropriate fall protection, incorrect handling of crane loads, or a worker in danger of being struck by an object or equipment. NRCS personnel must take immediate action to address significant violations.

When faced with significant safety violations on a Federal contract, one or more of the following actions must be taken:

- Immediately inform the contractor's supervisory staff of the violation.
- If stop work authority has been delegated and the contractor fails to immediately correct the problem, stop the work on all or part of the project.
- If stop work authority has not been delegated and the contractor fails to immediately correct the problem, immediately contact the COTR. If the COTR is not available, contact the CO or anyone else in a position of authority and request assistance.
- Always document actions, including those of the contractor, in the job diary and provide photographic documentation if at all possible.

When faced with significant safety violations on a non-Federal contract, one or more of the following actions must be taken:

- Contact the GR or local sponsor safety representative on a CLO construction contract. If

the representative is not on site, ask the GR to immediately report the violation to the sponsor and the contractor's supervisory staff.

- On a contract between a contractor and a landowner, immediately inform both the contractor and the owner of the safety violation. If the contractor fails to immediately correct the problem, recommend to the landowner to stop construction operations until the problem is corrected.
- If the landowner does not stop operations and the contractor continues working with serious noncompliance, the QA inspector should document the facts in the job diary, elevate the issue to their supervisor, and leave the jobsite. The appropriate NRCS official should then inform the landowner that NRCS funding will be withdrawn.
- If the owner cannot be contacted and the contractor continues working with serious noncompliance, the QA inspector can call the local law enforcement authorities.
- Always document the facts, including the actions of the landowner and contractor, in writing. Provide photographic documentation if possible.
- For non-Federal contracts, if the contractor continued working with significant safety violations, the QA inspector should consult with their supervisor or GR, as applicable, concerning sending the documentation to OSHA.

645.0404 Safety requirements

One commonality between all construction contracts in the United States is that they are governed by OSHA regulations. In addition to the OSHA regulations, most CLO construction contracts and all Federal construction contracts contain the NRCS Supplement. These OSHA regulations and the NRCS Supplement define the standards of safety and health for NRCS construction work.

There may be State and local laws or regulations governing safety and health that meet or exceed the minimum standards set forth by OSHA. Whenever there is a conflict between OSHA regulations, the NRCS Supplement to OSHA and State and local laws, the regulation or law that is most stringent takes precedence.

(a) Occupational Safety and Health Administration regulations

NRCS personnel must ensure that the applicable requirements of OSHA Parts 1910 and 1926 are made clear to the owner, the contractor, and other NRCS personnel, and that work is performed in strict compliance with these and other applicable standards and regulations. OSHA regulations are available via the Internet.

(1) OSHA Part 1910

OSHA Part 1910 provides safety and health regulations for general industry. The section applicable specifically to construction is 1910.12—Construction Work. Part of what is covered in 1910.12 is:

- reference to Part 1926 being applicable to construction operations
- statement that each employer shall protect the employment and places of employment of each of his employees engaged in construction work by complying with the appropriate standards in Part 1926
- definition of “construction work,” which is work for construction, alteration, and/or repair, including painting and decorating

(2) OSHA Part 1926

OSHA Part 1926 provides safety and health regulations for the construction industry. Part 1926 is divided into 26 subparts lettered from A through Z. Several of the subparts have additional information about the standards. Also, OSHA has eTools that are “stand-alone,” interactive, Web-based training tools on construction topics. They are highly illustrated and use graphical menus, as well as expert system modules. These modules enable the user to answer questions and receive reliable advice on how OSHA regulations apply to their work site.

Subpart A—General

Subpart A explains the purpose, scope, and applicable policies of OSHA Part 1926. This subpart continues with a description of variances, inspections, and rules or guidelines used throughout the construction regulations. Right of entry is addressed in some detail.

Subpart B—General Interpretations

Subpart B applies to construction work conducted under contract to all government agencies and contains an explanation of when and how construction health and safety standards apply.

Subpart C—General Safety and Health Provisions

Subpart C covers a myriad of general safety and health provisions. This subpart requires the contractor to have a safety and health program (accident prevention program). It also requires inspections of jobsites by competent persons. Other standards cover first aid, housekeeping, illumination, fire protection and prevention, sanitation, egress, personal protective equipment, and emergency plans.

Subpart D—Occupational Health and Environmental Controls

Subpart D standards cover medical services and making a medical professional available to workers, and sanitation, which covers availability of adequate toilet and washing facilities for workers. Requirements on dealing with harmful substances are also addressed.

Subpart E—Personal Protective and Life Saving Equipment

Subpart E standards cover the various types of personal protective equipment (PPE) for the construction work being performed. The standards cover the

requirements for provision, training and maintenance of PPE.

Subpart F—Fire Protection and Prevention

Subpart F is concerned with fire protection, fire prevention, flammable and combustible liquids, liquid petroleum, and temporary heating devices. A fire protection program should be part of their safety and health program if there is fire potential.

Subpart G—Signs, Signals, and Barricades

Subpart G provides the standards for signs when hazards or specific information is needed by workers and others to warn them when they are in close proximity to hazards. Signs and symbols required by Subpart G shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.

Subpart H—Materials Handling, Storage, Use, and Disposal

Subpart H standards detail the storage of materials and how to stack, rack, and secure them against falling or sliding. The subpart also addresses the rigging and disposal of materials in a safe manner.

Subpart I—Tools—Hand and Power

Subpart I standards are dedicated to the safe use of both power and hand tools, including both employer and employee-owned tools.

Subpart J—Welding and Cutting

Subpart J standards cover the procedures and precautions associated with gas welding, cutting, arc welding, fire prevention, compressed gas cylinders, and welding materials. Special attention is given to transporting, moving, and storing of compressed gas cylinders, as well as the ancillary equipment used for welding such as hoses, torches, and regulators.

Subpart K—Electrical

Subpart K standards regulate the installation and use of electrical power on construction work sites, including both permanent and temporary power.

Subpart L—Scaffolds

Subpart L standards cover scaffolds, including strength capacities for scaffolds and components, platform specifications, and guardrail and toe board requirements, including the height at which fall protection is required.

Subpart M—Fall Protection

Subpart M standards detail the installation, construction and proper use of fall protection. Fall protection is required for workers at a specific height above the ground, or less if there is an obvious danger at a lower height. The only allowable exception is if making an inspection, investigation, or assessment of a workplace prior to actual construction activities or after all work has been completed.

This regulation does not cover work related to scaffolds, cranes, derricks, steel work tunneling, power transmission, or stairways and ladders. Also, the need for overhead protection from falling objects is mandated.

Subpart N—Cranes, Derricks, Hoists, Elevators, and Conveyors

Subpart N provides standards for cranes, derricks, hoists, helicopters, conveyors, and aerial lifts.

Subpart O—Motor Vehicles, Mechanized Equipment, and Marine Operations

Subpart O standards cover vehicles that operate on non-highway related jobsites. Note that vehicles used to transport workers should have seat belts for each worker.

Subpart P—Excavations

Subpart P concerns open excavations, including trenches. Specific procedures for protecting workers at depths greater than 5 feet below the ground surface are provided. These requirements include protective systems for workers, locating and protecting underground utilities inspections by a competent person, potential for hazardous atmospheres in excavations, danger of water, and location of equipment, materials, and other structures adjacent to the excavation.

Excavation slope configurations and shoring requirements vary depending on the soil type.

The maximum allowable slope for a soil or rock deposit is determined from a table in Subpart P. When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a competent person shall determine the degree to which the actual slope must be reduced below the maximum allowable slope and shall assure that such reduction is achieved.

Configurations of sloping and benching systems for different types of soil shall be in compliance with the following figures taken from Subpart P of the OSHA regulations. All slopes shown below are in the horizontal to vertical ratio.

Subpart Q—Concrete and Masonry Construction

Subpart Q standards cover premature removal of formwork, failure to braced masonry walls, failure to support precast panels, inadvertent operation of equipment, and failure to guard reinforcing steel. The standard prescribes performance-oriented requirements.

Subpart R—Steel Erection

Subpart R contains the standards for structural steel assembly, bolting, riveting, fitting-up, and plumbing-up. This subpart also addressed the use of fall protection (safety nets) in steel erection.

Subpart S—Tunnels and Shafts, Caissons, Cofferdams, and Compressed Air

Subpart S standards apply to underground tunnels, shafts, chambers, and passageways, but not excavation/trenching operations or underground electrical lines, which are covered in Subparts P and V, respectively.

Subpart T—Demolition

Subpart T contains standards for activities associated with the demolition of structures.

Subpart U—Blasting and Use of Explosives

Subpart U standards cover requirements for personnel handling and using explosives, including storage, transportation, and loading drill holes.

Subpart V—Power Transmission and Distribution

Subpart V standards apply to electric transmission and distribution lines and equipment, both above- and underground.

Subpart W—Rollover Protective Structures; Overhead Protection

Subpart W covers rollover protective structures (ROPS) and overhead protection.

Subpart X—Stairways and Ladders

Subpart X standards apply to all stairways and ladders used in construction, alteration, repair, and demolition.

Subpart Y—Commercial Diving Operations

Subpart Y standards apply to dives and diving support operations which take place within all waters in the United States, trust territories, District of Columbia, Commonwealth of Puerto Rico, and other United States protected islands, etc.

Subpart Z—Toxic and Hazardous Substances

Subpart Z provides specific standards for a select group of toxic or hazardous chemicals. The regulations set specific exposure limits, detail acceptable work procedures, delineate workplace/environmental sampling requirements, set specific personal protective equipment requirements, and denote the need for regulated work areas.

(b) NRCS Supplement to OSHA Parts 1910 and 1926

The purpose for including the NRCS Supplement to OSHA Parts 1910 and 1926 in contracts is to require specific items that are not covered by OSHA or to emphasize specific safety requirements that are covered in OSHA Parts 1910 and 1926. The NRCS Supplement to OSHA is located in appendix F.

Topics included in the supplement are:

- Recording and Reporting Occupational Injuries and Illnesses
- Medical Services and First Aid
- Safety and Health Regulations for Construction
- Sanitation
- Personal Protective and Life Saving Equipment
- Scaffolds
- Cranes, Derricks, Hoists, Elevators, and Conveyors
- Motor Vehicles, Mechanized Equipment, and Marine Operations
- Rollover Protective Structures (ROPS)
- Ladders
- Physical Qualifications of Employees
- Jobsite Transportation Planning

645.0405 Construction Safety Checklist

The Construction Safety Checklist is included in appendix A to provide guidance for assessing the jobsite conditions and work practices with respect to safety and health. The checklist may not address all of the conditions that exist related to safety and health on construction sites. The checklist should be used for guidance only as the NRCS personnel examine the work and should not be relied upon as a comprehensive list of items to check. The QA inspector should also use their own experience and knowledge of construction site hazards for guidance on what to examine and look for during inspections.

The Construction Safety Checklist provides a guide to safety and health issues that may occur on construction sites. It includes references to the safety and health standards that apply to each checklist item. This checklist should be completed on a regular basis during the course of the project to ensure that minimum safety measures are maintained throughout the project. Completing the checklist involves a walk-through review of the project to examine the different work activities taking place.

The QA inspector should document when a safety checklist is completed and describe any actions taken to correct safety violations in the job diary. Safety checklists should be filed with other contract documents, and the results should be shared with the contractor's supervisory personnel.

645.0406 Sampling and testing

The safety and health provisions in OSHA Parts 1910 and 1926 contain sampling and testing criteria for assessing safety and health hazards. Standards related to hard hats, lanyards, gloves, and other personal protective equipment, for example, are required to meet specific American National Standards Institute (ANSI) standards. In addition, OSHA standards related to health hazards, such as exposure to dust, air contaminants, and loud noise, contain protocols for taking samples of the hazard on the jobsite and for analyzing the samples. Compliance with and/or performance of these sampling and testing criteria are the responsibility of the contractor. To monitor compliance, the QA inspector is encouraged to be familiar with the OSHA guidance on the type of sampling and testing required and the allowable exposure limits prescribed by OSHA.

The OSHA regulations allow contractors to employ safety measures that are different than those prescribed in the standards if the contractor can prove that the alternate measures provide the same level of protection as that prescribed in the regulations. Although this is allowable, the practice should be discouraged on NRCS projects. If alternative measures are proposed, QA inspectors and the project engineer must work with the contractor to develop an appropriate testing protocol and analysis procedure. The various subparts of the OSHA regulations provide guidance on the performance criteria to be met by different safety measures.

Heavy equipment

Heavy equipment must be in good working order and not present safety or health hazards to personnel on the jobsite. Heavy equipment shall meet the applicable minimum performance standards set forth in the Society of Automotive Engineers (SAE) Recommended Practices as required by OSHA Part 1926.602. The contractor shall provide documentation of SAE compliance. NRCS construction inspectors are not responsible for testing items such as brake performance on heavy equipment.

645.0407 Records and reports

The job diary is used to record the day-to-day activities related to construction safety. In addition to the official job diary, an accident investigation report should be completed and submitted. See [Title 110, General Manual \(GM\), Part 402](#) and [360–GM, Part 420](#) for guidance on reporting construction related accidents.

Provide records of safety and health hazards present on the jobsite and the actions taken to mitigate those hazards in the job diary. Documenting safety and health-related items is important, especially if legal proceedings take place in regards to an injury or fatality on the jobsite. If specific safety measures are included as line items in the contract (e.g., fall protection systems, or excavation shoring systems), record the type installed and estimated quantity in the job diary. Also record any good housekeeping practices undertaken by the contractor to ensure safe working conditions on the jobsite. Example entries from construction safety inspections are provided in a sample job diary entry in the appendix C.

The contractor is required by OSHA to keep records of injury or illness incidents that occur on a jobsite. The OSHA forms include:

- Form 300—Log of Work-Related Injuries and Illnesses
- Form 301—Injury and Illness Incident Report: includes more data about how the injury or illness occurred
- Form 300A—Summary of Work-Related Injuries and Illnesses: provides additional data to make it easier for employers to calculate incidence rates

Maximum flexibility has been provided so employers can keep all the information on computers at a central location or on alternative forms, as long as the information is compatible and the data can be produced when needed. The information documented includes a description of how the accident or illness exposure occurred, a listing of the objects or substances involved, and an indication of the nature of the injury or illness and the part or parts of the body affected.

In addition to any contractor's report, it is advisable that the quality assurance inspector prepare a detailed accident investigation report that provides more detailed information than that required by OSHA. Detailed information can then be examined in a variety of ways to identify trends or simply to find out the root causes of most of the injuries sustained by employees. In accordance with [110–GM, Part 402](#) and [360–GM, Part 420](#), examine every incident in which a worker could have been injured or property or equipment could have been damaged. Such near misses can serve as lessons learned for the contractor to change work practices before a serious accident actually occurs. The following information should be recorded on accident report forms and in the job diary:

- who was involved
- work activity taking place at the time of the incident
- nature of the incident (what happened)
- reason for the incident (why did it happen)
- what efforts should be undertaken to prevent the incident in the future

See [110–GM, Part 402](#) and [360–GM, Part 420](#) for agency requirements for recording and reporting accidents related to construction activities.

645.0408 References

- Reese, C.D., and J.V. Eidson. 1999. Handbook of OSHA Construction Safety and Health. CRC Press, LLC. Boca Raton, FL.
- U.S. Department of Labor, Occupational Safety and Health Administration. 2005. Available at <http://www.osha.gov/>. Accessed November 15, 2011.