

Subcontractor Guidance for Preparing Contract-Specific Safety Plans

Prepared by Sandia National Laboratories Procurement and ES&H Departments

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INTRODUCTION

Subcontractors working at Sandia National Laboratories Sandia, are required under the subcontract to provide a safety plan specific to the pending scope of work. Sandia personnel review and approve the safety plan prior to awarding the subcontract. A safety plan is not required for minimal or nonhazardous functional work and the work environment neither has hazards present nor any identified safety concerns, such as attending meetings, consulting, training, computer programming, or performing office-type work. Otherwise, **a safety plan is required for any activity-level work** such as installation, service, repair, calibration, and construction-like work. Work locale includes Sandia proper, Albuquerque, NM and also includes subcontracted work at off-site locations under Sandia's control.* The term "onsite" includes all Sandia controlled premises.

Subcontractors: Use this document as a guide for preparing a safety plan.

SUMMARY OF WORK

Include the following in the summary of work:

- Work location
- Estimated start date
- Subcontractor's safety officer name and phone number
- Description of the work with emphasis on the hazards anticipated to be encountered (**Note:** The scope of work from the initial work request may be cut and pasted here.)
- Discussion of how the work will be paused if unintended factors arise

EMERGENCY ACTIONS

Include the following information to be used during emergency actions:

- Onsite subcontractor point of contact and phone number for event or injury notification
- Subcontractor home office contact name and phone number
- Description of the circumstances during which the subcontractor would "Stop-Work" to protect workers and how restarting would take place. Include:
 - work that is onsite, or
 - work not on Sandia controlled premises
- Description of emergency equipment and personal protective equipment (PPE) to be used (if any)

Note: In the event of an accident or other safety incident, the on-site subcontractor point of contact shall notify the Sandia Delegated Representative (SDR) immediately after taking emergency or nonemergency action. For medical, fire, or hazardous material spill assistance, dial 911 on a Sandia land line or (505) 844-0911 on a mobile phone. When offsite, call 911, follow host site requirements and notify SDR to inform of event as soon as safe to do so.

HAZARD IDENTIFICATION

The SDR has identified local hazards in the statement of work and will review these prior to startup. Along with these identified hazards, **use the following list of regulations as a guide** to identify additional hazards that are perceived to be part of the work proposed.

Safety Hazard Element

- 29 CFR 1910, *Occupational Safety and Health Standards*
- 1910 Subpart D, *Walking-Working Surfaces*

- [1910.12, Construction Work](#)
- [1910.23, Ladders](#)
- [1910.28, Duty to Have Fall Protection and Falling Object Protection](#)
- [1910.29, Fall Protection Systems and Falling Object Protection-Criteria and Practices](#)
- [1910.38, Emergency Action Plans](#)
- [1910.39, Fire Prevention Plans](#)
- [1910 Subpart F, Powered Platforms, Manlifts, Vehicle-Mounted Work Platforms](#)
- [1910.94, Ventilation](#)
- [1910.95, Occupational Noise Exposure](#)
- [1910.97, Nonionizing Radiation](#)
- [1910 Subpart H, Hazardous Materials](#)
- [1910.101, Compressed Gases \(General Requirements\)](#)
- [1910.133, Eye and Face Protection](#)
- [1910.134, Respiratory Protection](#)
- [1910.135, Head Protection](#)
- [1910.136, Foot Protection](#)
- [1910.137, Electrical Protective Equipment](#)
- [1910.138, Hand Protection](#)
- [1910.140, Personal Fall Protection Systems](#)
- [1910.146, Permit-Required Confined Spaces](#)
- [1910.147, The Control of Hazardous Energy \(Lockout/Tagout\)](#)
- [1910.178, Powered Industrial Trucks](#)
- [1910 Subpart O, Machinery and Machine Guarding](#)
- [1910 Subpart P, Hand and Portable Powered Tools and Other Hand-Held Equipment](#)
- [1910.242, Hand and Portable Powered Tools and Equipment, General](#)
- [1910 Subpart Q, Welding, Cutting and Brazing](#)
- [1910 Subpart S, Electrical](#)
- [1910.1000, Air Contaminants](#)
- [1910.1096, Ionizing Radiation](#)
- [1910.1200, Hazard Communication](#)
- 29 CFR 1926, *Safety and Health Regulations*
 - [1926, Subpart M, Fall Protection](#)
 - [1926, Subpart R, Hoisting and Rigging](#)
- Others:
 - National Fire Protection Association (NFPA) codes and standards (if applicable, per 10 CFR 851 comply with 70, *National Electrical Code* (2017) and 70E, *Standard for Electrical Safety in the Workplace* (2015) required onsite or DOE-owned site)
 - American Society for Testing and Materials (ASTM)
 - American Society of Mechanical Engineers (ASME) (if applicable, per 10 CFR 851 comply with specific Boilers and Pressure Vessel Codes and B31 codes for Pressure Piping required onsite or DOE-owned site)

- [American National Standards Institute](#) (ANSI) standards (if applicable, per 10 CFR 851 comply with Z88.2, *American National Standard Practices for Respiratory Protection* (2015); Z136.1, *Safe Use of Lasers* (2014); and Z49.1, *Safety in Welding, Cutting, and Allied Processes* (2012) are required onsite or DOE-owned site)
- [American Conference of Governmental Industrial Hygienists](#) (ACGIH), *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices* (2016) (if applicable, per 10 CFR 851 is required when the threshold is more protective than permissible exposure limits in 29 CFR 1910/1926 are required onsite or DOE-owned site. When used as exposure limit must comply with other provisions of any applicable expanded health standard in 29 CFR 1910/1926)
- [10 CFR 850, Chronic Beryllium Disease Prevention Program](#) (if applicable, required onsite or DOE-owned site)
- [10 CFR 851, Worker Safety and Health Program](#) (if applicable, required onsite or DOE-owned site)

HAZARD CONTROLS

Describe how work hazards will be controlled. These controls must be in compliance with 29 CFR 1910, General Industry and 29 CFR 1926, Construction and 10 CFR 851 regulations requiring compliance with specific OSHA standards as well as industry consensus codes and standards.

Identify engineering controls, administrative controls, and personal protective equipment (PPE) that will be used.

Describe the types of PPE that will be worn during work, e.g. hard hats, safety glasses, steel-toed shoes, or ear muffs.

Example:

- **Work task:** Troubleshoot electrical outage in Acme Machine.
- **Hazards:** Live parts at 110 V, 15 amps. Possible shock or electrocution if contacted. Sharp edges in machine.
- **Controls:** Deenergize the machine; disengaging the breaker at the wall. Apply LOTO to ensure no start up. Verify that no electricity is present at the point of work location. Wear cut-resistant gloves to protect from sharp edges.

Historical injury data demonstrates that the following safety elements should be emphasized. Review these elements to determine if they are components of the requested work when creating a safety plan. Any of these safety elements that are not applicable to the statement of work may be disregarded.

Fall Protection

- **Scaffold safety:** If scaffolding will be used during work, demonstrate compliance with [29 CFR 1910.28](#), “[Duty to Have Fall Protection and Falling Object Protection](#).”
- **Ladder safety:** If ladders will be used during work, demonstrate compliance with [29 CFR 1910.23](#), “[Ladders](#).” Pre-use inspections are required.
- **Elevated work areas for general industry:** If work will be conducted at heights above 4 feet, demonstrate compliance with [29 CFR 1910](#). If work will be within 6 feet of a leading edge, include a fall prevention plan (e.g., tie offs, harnesses, lanyards, and/or temporary guard rails).
- **Elevated work areas for construction industry:** If work will be conducted at heights at or above 6 feet, demonstrate compliance with [29 CFR 1926, Subpart M](#), “[Fall Protection](#)” (e.g., tie offs, harnesses, lanyards, temporary guard rails, and/or barriers).

Electrical Safety

If electrical work will be required, demonstrate compliance with [29 CFR 1910, Subpart S, “Electrical,” which incorporates the NFPA 70E \(2004\) standard](#). When on onsite, demonstrate compliance with [NFPA 70E \(2015\)](#). Provide qualifications and training records for workers. Include the requirement for conducting a shock and arc flash risk assessment for all energized work activities.

(Note: Zero-energy verification and voltage measuring is considered energized work.) Consider:

- Zero-energy verifications
- Approach boundaries to energized conductors or circuits
- Arc flash and arc blast
- PPE appropriate to the task

Note: Any worker receiving an electrical shock onsite, no matter how minor, must go to the Sandia medical clinic for observation and/or treatment.

Lockout/Tagout

If lockout/tagout (LOTO) methods will be required during work, demonstrate compliance with [29 CFR 1910.147, “The Control of Hazardous Energy \(Lockout/Tagout\).”](#)

- Submit a LOTO procedure. This may be added as an addendum.
- Submit evidence that workers are trained in LOTO methods (e.g., a training record or certificate).
- Include the names of the worker who will shut down or reenergize equipment and monitor work boundaries.

Explosives Safety

If work will involve explosives, the SDR will supply contact information for Sandia’s explosives safety experts to collaborate on this portion of the safety plan.

Machine Guarding and Hand Tools

If machine guarding or hand tools will be used to perform work, demonstrate compliance with [29 CFR 1910, Subpart O, “Machinery and Machine Guarding.”](#)

Material Handling: Cranes, Hoists, Rigging Equipment, and Forklifts

If cranes or other applicable equipment to perform hoisting and rigging will be used during work, demonstrate compliance with [29 CFR 1926.753, “Hoisting and Rigging.”](#) Identify the competent person who will be doing inspections. A specific lift plan may be requested for certain lifts.

Pressure Safety

If work will be on or around pressure systems, demonstrate compliance with [ASME Section VIII of the *Code for Design and Construction of Unfired Pressure Vessels*, ASME B31.1-2016, “Power Piping,” and Compressed Gas Association Pamphlet P-1, *Safe Handling and Storage of Compressed Gas Cylinders*](#). A pressure safety data package likely will be required to commence work.

Welding and Hot Work

If work will include welding or any other type of hot work, demonstrate compliance with [29 CFR 1910, Subpart Q, “Welding, Cutting and Brazing.”](#) A hot work permit may be requested in accordance with Sandia Fire Protection protocols.

Industrial Hygiene

Consider and discuss the following industrial hygiene issues as applicable:

- Hearing protection
- Chemical use and exposure
- Splash gear (e.g., gloves and face shields)
- Respirators
- Repetitive motion or ergonomics

Note: The SDR can supply industrial hygiene personnel contact information for assistance.

Radiation

If work will involve x-ray technology, radioactive sources, or a radiation-posted area, provide a state or Nuclear Regulatory Commission license for work on federal property. The SDR will clarify radiation requirements prior to commencing work.

- Notify Kirtland Air Force Base before bringing a radioactive source on base.

Note: Sandia personnel may provide dosimetry, surveys, and radioactive material shipping for subcontractors with licenses if needed. Offsite work will require coordination with Sandia for appropriate planning.

ENVIRONMENTAL IMPACTS

Disclose any air emissions, hazardous waste, wastewater disposal, or other environmental impacts that will result from the work. The SDR can collaborate with Sandia's environmental compliance team for assistance.

TRAINING AND QUALIFICATIONS

Sandia will request procedures, training records, or certifications for specific kinds of work.

Examples of such requests may include:

- Electrician license
- Crane operator certification
- LOTO procedure and training records
- Confined space supervisor identification
- COVID-19 prevention procedures

Note: These documents, when required, will be requested in the statement of work or by the SDR.

WORK PARTICIPANTS

List the names of the workers who will perform the work. It is understood that personnel may change prior to work starting; the list may be edited before the onset of work.

BEFORE WORK BEGINS

Sandia personnel must approve the safety plan prior to awarding a contract. The subcontractor may be contacted to clarify safety plan elements. All subcontractors must take a Sandia safety awareness training course, ESH100, *ES&H Awareness*. This is available online or the SDR can provide it. This training takes about 30 minutes.

PRE-JOB BRIEFINGS

Sandia requires that one of its employees conduct a pre-job briefing (i.e., a toolbox or tailgate meeting) prior to the start of work. This briefing will include the scope of work, work safety, emergency considerations, schedules, and points of contact. Most pre-job briefings include a review of the subcontractor's safety plan.

During a pre-job briefing, the SDR will inform the subcontractor of evacuation alarms, assembly areas, and protocols. For offsite work, the subcontractor will coordinate with Sandia on conduct of pre-job briefing.

DAILY OBSERVATIONS

The SDR, or designee, will conduct a daily walk-through of the work area. For offsite work, the subcontractor will coordinate with Sandia on conduct of observations. Sandia personnel and the subcontractor may ask questions of each other at these times. Sandia personnel will do all they can to support subcontractor safety and health.

** The Sandia facility is onsite at a DOE-owned site and requirements of 10 CFR 851, Worker Safety and Health Program apply to the work. Sandia personnel also conduct operations on DOE-approved lease sites or lands withdrawn by or permitted to DOE and designated for Sandia National Laboratories which are considered onsite, as on Sandia-controlled premises, and 10 CFR 851 regulations apply to the work. Finally, Sandia personnel conduct operations offsite, i.e., off Sandia-controlled premises, and applicable safety regulations are dependent on the site jurisdiction, e.g., industrial sites comply with Occupational Safety and Health Administration (OSHA) regulations. Accordingly, other DOE sites are offsite but adhere to applying their own 10 CFR 851 program approved by the local Department of Energy field office.*