

SAFETY AND ENVIRONMENTAL REQUIREMENTS

1 GENERAL

1.1 CONTRACTOR'S RESPONSIBILITY FOR PROJECT SAFETY AND ENVIRONMENTAL PROTECTION

- 1.1.1 The Contractor recognizes the importance of performing the work in a safe and responsible manner to prevent damage, injury, or loss to individuals, the environment, and the work itself, including materials and equipment incorporated into the work or stored on-site or off-site. Contractor assumes responsibility for implementing and monitoring all Environment, Safety and Health (ESH) precautions and programs related to the performance of the work.
- 1.1.2 The Contractor and subcontractors shall comply with all legal and SDSTA-specific reporting requirements relating to ESH set forth in the contract documents. The Contractor will verbally notify of any injury, loss, damage, or accident arising from the work to Project Manager and to the SDSTA ESH Safety Representative (ESH Safety Rep), to the extent mandated by legal requirements, to all government or quasi-government authorities having jurisdiction over safety-related matters involving the project or the work. All persons injured while working at SURF will be immediately evaluated, and treated as necessary, by a medical professional before returning to work. Contractor and its subcontractors will immediately report to the Project Manager all spills of a regulated substance of one gallon or greater, and all other significant impacts to the environment (soil, water, air) in performance of the work. Contractor will also immediately notify the Project Manager of any failure to comply with state and federal environmental laws, rules, and regulations.
- 1.1.3 The Contractor's responsibility for ESH under this specification is not intended in any way to relieve subcontractors and sub-subcontractors of their own contractual and legal obligations and responsibilities.
- 1.1.4 The Contractor is responsible for screening all subcontractors with respect to safety and to adopt a safety selection process consistent with requirements defined herein. In addition, Contractor is responsible for flowing down all ESH requirements of the Contract to its subcontractors, including monitoring and enforcing compliance.

1.2 ESH REQUIREMENTS AND COORDINATION

- 1.2.1 Safety and protection of the environment are of the utmost concern on this contract. Safety in this context refers to the health and safety of people and the protection of the environment. Nothing contained herein relieves the Contractor from complying with all applicable standards and regulations found in 29 CFR Part 1926 (OSHA construction standard), 40 CFR (Federal environmental regulations, and Part 74 of the Administrative Rules of South Dakota (State environmental regulations), where applicable. Site specific safety requirements are defined in the SDSTA ESH Manual located at: <https://www.sanfordlab.org/esh>. Mine Safety and Health Administration (MSHA) compliance may be acceptable, where applicable.
- 1.2.2 The Contractor will address the safety requirements defined herein and in the SDSTA ESH Manual. Contractor costs associated with the implementation of the requirements

will be borne by the Contractor. Safety deficiencies discovered after the award will be remedied at no cost to SDSTA and may at the Contracting Officer's discretion be deducted from the contract amount.

- 1.2.3 The Contractor shall have a designated Safety Representative (SR), approved by SDSTA, present on the Project at all times when work is physically being performed. The SR may have other minor duties, but the position's primary role is to oversee safety of the worksite and work being performed by the Contractor, as well as that of its subcontractors. [The superintendent or qualified designee may act as the SR.] (Depending on the scope, size, or complexity of the project, a full time SR may not be required. Consult with ESH to make this determination and substitute alternate verbiage as needed.) If shift work will be utilized, the Contractor must have a SR for each shift. In the case of shift work, the Contractor will designate one SR as the lead for the project. The training requirements for the second SR are the same as the lead and are as follows:
- The SR shall have underground safety experience and training (e.g., MSHA part 48) when applicable.
 - The SR shall be certified in CPR, AED, and First Aid.
 - The SR is responsible for administering the Contractor's ESH program.
 - The SR will escort the ESH Safety Rep on a monthly ESH site visit.
 - The SR will provide training to all employees working on their behalf in regard to oil pollution prevention, solid and hazardous waste management, and storm water management, if applicable.
 - The Contractor will supply a weekly ESH report to the ESH Safety Rep, detailing any ESH related items.
- 1.2.4 The Contractor shall have at least one individual certified in CPR, AED, and First Aid onsite at all times.
- 1.2.5 The Contractor is responsible for identifying the need for Qualified and/or Competent Persons for specific tasks as defined in 29 CFR 1926.
- 1.2.6 The Contractor must have a documented Site-Specific Environment, Safety and Health Program/Plan in place and accepted by SDSTA before work will be authorized to start. This program must be consistent with the requirements in the SDSTA ESH Manual. The program will be based on the hazards inherent to the Means and Methods adopted by the Contractor and its associated work environment. The scope of work will dictate the required program elements for this contract. Program elements may include those listed on the ESH Manual of the SURF website at <https://www.sanfordlab.org/esh>.
- If the Contractor chooses to adopt one or more specific elements of the SDSTA ESH program, it must adopt that element in its entirety.
- 1.2.7 The Contractor is expected to follow a work planning and controls process that is aligned with the SDSTA. (See SURF website ESH Manual at <https://www.sanfordlab.org/esh>.) The work planning and controls process must be conducted and documented prior to the start of work in the form of a Job Hazards Analysis (JHA). A JHA, developed by the SR, approved by the Project Manager and ESH Safety Rep. The JHA will be reviewed with the individual(s) expected to perform the work prior to work starting on a specified task. The SR is expected to review all JHAs.

Copies of JHA(s) must be present at the location where work is being performed and accessible to the individuals performing the work and to SDSTA representatives.

- 1.2.8 The Contractor will conduct a daily crew work planning meeting (tailgate/toolbox talk), including, when necessary, subcontractor employees, prior to the beginning of each shift. This talk will include the plan of work for the day, a review of hazards and potential regulatory issues, inspection/removal of loose puncture hazards as part of a general daily cleanup requirement of the work area, and the review of applicable JHAs. These documented talks will be submitted to the Project Manager or uploaded to a designated electronic database at the end of each day, or by the end of the work week.
- 1.2.9 The Contractor is responsible for assuring that all Contractor employee safety training is completed in compliance with SDSTA guidelines, standards, and associated regulations. The following training is required for all Contractor personnel before they start work:
 - Sanford Underground Research Facility (SURF) Surface and/or Underground Orientation Training, if onsite for less than 40 hours in a 12-month period
 - Cultural Awareness video
 - Any specific equipment training (e.g.: crane operator)
 - Site specific training for environmental compliance (e.g.: spill prevention, Hazmat, storm water, etc.)For contractor personnel working on-site more than 40 hours in a 12-month period, the following training is required:
 - General Safety Basic Training (Surface and/or Underground)
- 1.2.10 The Contractor must have an individual trained and qualified as a SURF Guide for each area that the Contractor will be working. The Guide must be onsite with the workers at all times. Refer to ESH-(1000-S)-73189 Facility Access Standard or the SURF Training Department for Contractor Guide training.
- 1.2.11 The Contractor shall provide all common Personal Protective Equipment (PPE) required for the work (hard hats, safety toe boots, safety glasses with side shields, hi-visibility clothing and required fall protection equipment including suspension trauma straps, and full body harness (ANSI A10.14 approved). All contractor personnel shall follow the ESH-(7000-S)-71493 PPE Standard and supporting documents.
 - Unique PPE required for aerial lift equipment:
 - Anyone working from an aerial lift must wear a personal fall restraint system or SRL following manufacturer's recommendations.
 - Fall protection must be attached to the manufacturer's designated anchor point.
 - Unique PPE required for any underground work [will be provided by SDSTA for the duration of the project and] at a minimum includes:
 - W65 Self Rescuers (must be maintained according to MSHA requirements) (always required when working underground)
 - Gas Tester(s) (M40M or equivalent)
 - Cap lamps
- 1.2.12 Smoking, use of tobacco products, including vapor, alcohol, controlled substances, or weapons are not allowed within the boundaries of SURF. All property owned and operated by the SDSTA is designated as tobacco and vapor-free. This applies to all areas of the surface and the underground. The Contractor shall manage and maintain a drug

and alcohol policy that aligns with that of SDSTA written policy and procedures. The ESH department review of this document may be required.

- 1.2.13 If SDSTA perceives the Contractor has created or is exposed to an imminent danger, unacceptable risk, or a non-compliance situation, SDSTA will stop work until safe conditions are re-established. Such work stoppages will be at the expense of the Contractor and will not add time to the completion date of the contract. All personnel have the right and responsibility to authorize a stop work onsite whenever encountering an unsafe condition or act. Refer to the ESH-(2000-S)-202124 Stop Work Standard.
- 1.2.14 In the event of an incident, Contractor will notify the Project Manager and/or ESH Safety Rep immediately and never later than the end of shift on the day of incident. Contractor shall complete the ESH-(3000-F)-173324 First Report form and submit to the Project Manager or ESH Safety Rep. Contractor shall conduct an incident investigation in accordance with the SDSTA Standard. The investigation will include preparing a written report summarizing the results of the investigation, corrective actions taken to prevent a reoccurrence, and any lessons learned. SDSTA may at its discretion participate in and facilitate the incident investigation. Time and expense incurred by Contractor performing an incident investigation will be at the Contractor's expense.
- 1.2.15 The Contractor may, with SDSTA written permission, operate SURF-owned equipment. The Incidental Operator must first meet SDSTA requirements for the operation of said equipment. The Contractor shall regularly inspect, test, and calibrate as necessary all equipment, machinery, tools, or other items furnished by SDSTA that are employed in Contractor's work. Contractor shall take reasonable precautions to avoid damage to facility structures and utilities. If apparent defects are found in SDSTA-provided materials or equipment, defective equipment shall be taken out of service and Contractor shall promptly notify the Project Manager of such defect(s) in writing. Contractor provided equipment shall be inspected and maintained prior to arriving on-site and before each use. Failure of Contractor-provided equipment shall not be entitled to any compensation for downtime or delays or schedule extensions.
- 1.2.16 When working in the headframes, the Contractor will maintain six-foot distance away from an open shaft hole when the cage gate is open or have 100% tied-off (Fall Arrest) protection.
- 1.2.17 The Contractor acknowledges that periodic evacuation drills and exercises are required by SDSTA to validate the adequacy and effectiveness of the ESH-(6000-S)-185207 Emergency Management Standard. Contractor also recognizes that such drills and exercises enhance its employees' understanding of Emergency Management Standard. Contractor agrees to participate in quarterly evacuation drills, which may or may not be scheduled in advance, during the term of this contract. It is understood that Contractor will not be entitled to any additional compensation for participating in these evacuation drills or exercises.
- 1.2.18 The Contractor agrees to assess whether Contractor's employees have the physical, mental, and emotional capacity to perform assigned tasks competently and in a manner that does not unreasonably threaten safety, health, or property, including participation in emergency procedures applicable to Contractor's work location. The ESH-(2000-S)-15209 Fatigue Management Standard regulates the impacts of fatigue for safety, health,

and productivity onsite. Refer to the SURF website ESH Manual at <https://www.sanfordlab.org/esh> for further information.

1.2.19 The Contractor shall follow use of ladders and shall meet the requirements of OSHA 1926.1053 (Subpart X) and OSHA 1910.23 (Subpart D). Prior to using a ladder, the following shall be considered:

- Alternative methods, such as platform/podium ladder, scaffolding, scissor lift, or aerial lift.
- Fall protection is required when working from a standard ladder at a height greater than four feet.
- Fall protection is required when working from the platform of a three-sided podium ladder at a height greater than six feet.

- Additional fall protection is not required when working from a four-sided podium ladder.

For further information on the ESH-(7000-S)-73415 Fall Protection and Prevention Standard,

refer to the SURF website ESH Manual at <https://www.sanfordlab.org/esh>.

1.2.20 The Contractor shall manage all waste, both solid and hazardous, as well as all obsolete, expired, or unused materials procured by the Contractor, including the cost of disposal. The Contractor shall manage and dispose of all wastes generated in compliance with all applicable state and federal laws and regulations. The Contractor shall minimize, to the extent practical, the generation and accumulation of waste during the lifespan of the project. Waste shall not be allowed to accumulate to the point of becoming a threat to the environment (air, land, water) and must not be stored on the ground for longer than a single work shift. Where large amounts of waste are anticipated, a roll off bin should be used. When a roll off bin is not used, wastes must be removed from the work site on a regular basis.

All clean-up and disposal costs associated with Contractor spills or equipment leaks of environmentally regulated substances in the performance of their work are the responsibility of the Contractor. Spills and leaks must be cleaned up immediately, and leaks must be repaired to prevent further environmental contamination.

If the Contractor will be disturbing one or more acres, it is the responsibility of the Contractor to obtain a South Dakota Stormwater Construction Permit and to comply with that permit, including the installation and maintenance of stormwater pollution controls. Stormwater flowing off the work site must be clean, with no visible sheen or solids. Any existing stormwater pollution controls that are altered during Contractor activities must be returned to full operating condition as soon as possible.

Work that results in the storage of petroleum products (55 gallons or greater in a single container) or the installation of oil-filled operational equipment with a volume of 55 gallons or greater must be reported to the Environmental Department, and secondary containment must be installed.

Visible air emissions occurring from roads, stockpiles, conveyors, etc. used during Contractor work must be controlled by the Contractor.

1.2.21 All chemicals to be used at SURF must be pre-approved by SDSTA and Safety Data Sheets (SDS) must be maintained by the Contractor and be readily available to workers on site.

- 1.2.22 Flammables (defined in 30 CFR Part §57.4460 Storage of flammable liquids underground) are not allowed underground. Flammables used on the surface are to be stored in engineered flammable cabinets or in containers with a minimum one-hour fire resistance.
- 1.2.23 Combustibles in the underground work areas shall be managed as per 30 CFR Part 57.4104 -57.4531, as applicable.
- 1.2.24 Tier 4 engines are required at SURF for underground use. Lower Tier 3 equipment may be allowed underground but only with SDSTA permission. All underground diesel equipment must be approved by SDSTA prior to usage.
- 1.2.25 SDSTA reserves the right to restrict or deny access of any Contractor employee to the work location.
- 1.2.26 The Contractor shall report the hours worked on site by Contractor's employees on a monthly basis to the Project Manager named in the contract. Hours shall be emailed to the Project Manager no later than the 3rd day of the month for hours worked the previous month.