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Associate Laboratory Directorate for Environment, Safety, Health, Quality, Safeguards and Security

Exhibit F Resource Manual Attachment A - Clause-by-Clause Roles and Responsibilities for Subcontractors

OSH-ISH-Guide-025 (Rev 2)
Attachment A
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ATTACHMENT A – SUMMARY

This document is specific to work conducted on-site. That is to say DOE-owned or -leased property. It provides clause-by-clause details of the roles and responsibilities for each subcontractor requirement (i.e., touchpoints such as forms, attachments, authorizations, and submissions, approvals, etc.), and an expected path for coordination among the subcontractor, STR, and LANL ESH Representative(s) or named LANL SME/organization. Because of its unique and fundamental role in the Exhibit F process, Attachment F5-2, *FOD Site Hazard Analysis and Coordination Requirements*, has also been included in this section.

The term “LANL ESH Representative” is primarily used as a general term to indicate the individuals who will participate in the development and signing of the Exhibit F and provide field ESH oversight of subcontracted work. If a specific role or qualified individual is needed, that role/individual will be identified; otherwise, it will be the LANL ESH Representative(s) who completes the responsibilities listed under the LANL ESH Representative Duties section. Most LANL SMEs with responsibilities under the LANL ESH Representative, work as LANL Deployed ESH or OSH-ISH personnel, but not all (e.g., LANL Traffic Engineer).

Note: The hyperlinks in this document will function if user has access to LANL’s internal website.

Note: Some of the forms, submissions, authorizations presented below will have coordination requirements outside of what is documented below, which is written from an ESH-centric focus.

A.1.0 OVERVIEW OF EXHIBIT F ROLES AND RESPONSIBILITIES FOR CONTRACTORS

A.1.1 *Exhibit F – Clause: Attachment F5-2, FOD Site Hazard Analysis and Coordination Requirements*

Attachment F5-2 is referenced in clause F5.0 *Work Management*, and is a mandatory replacement for LANL Form 2101, *FOD Requirements and Approval for Entry and Area Hazards and Controls*. It identifies facility entry requirements, work control requirements, co-located hazards, site-specific hazards, and waste management and environmental conditions as they relate to the subcontract work.

It will be used for all high or moderate consequence subcontracted work. This includes greenfield projects. Without a completed and signed form from the FOD or authorized designee, work is not authorized to proceed.

The Requesting Organization ensures that all projects falling under a High/Moderate Consequence Exhibit F include an Attachment F5-2. The STR is responsible for convening, scheduling, and participating in the project scoping walk-down team or other meeting to complete the Attachment F5-2. The FOD Representative is the most knowledgeable of the hazards within their buildings and the surrounding environment and they play a fundamental role in communicating these hazards to the subcontracted workers that will eventually work in these locations. The FOD Representative shall participate in the hazard identification, communicate the area hazards to the IPT, and sign the Attachment F5-2. FOD Representatives are encouraged to take a lead role in completing the Attachment 5-2 (e.g., drafting initial answer). Also, the FOD Representative determines the Attachment F5-2 team members

Key Name Change: Attachment F5-2 was previously numbered Attachment F1-0. However, the attachment is one of the means to identify hazards—one of the core functions of Integrated Safety Management—captured in F5 Work Management (previously F20).

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necessary to adequately identify and address hazards and controls for the work location(s). These team members should include the Requester, Project Manager (if assigned), and Deployed and Core ESH Representatives supporting the project (i.e., Industrial Hygienist, Safety Representative, Environmental Professional, Waste Management Coordinator, Electrical Safety Officer, and Radiation Protection personnel as appropriate). For work in a research and development setting, the occupants should participate in providing information on co-located or room-specific hazards.

For construction-related projects, Deployed ESH personnel supporting Construction, Projects, and Craft Support (CPCS) shall be included in the walk-down team regardless of the work location. Additional SMEs can be included based on the nature and scope of work. While it may not be feasible to schedule a walk-down so that all team members can participate concurrently, all walk-down team members are expected to contribute to the completion of the Attachment F5-2. This does not replace the walk-down that occurs with the subcontractor after subcontract award (e.g., IWD controls verification). The completed form(s) will be included as part of the sourcing request. Also, the subcontractor will maintain a copy with the project's integrated work documents.

Forms, Attachments, Authorizations, and Submissions

- A. [Attachment F5-2, FOD Site Hazard Analysis and Coordination Requirements](#)

Subcontract Technical Representative Duties

- A. Coordinate the project walk-down or meeting to complete the [Attachment F5-2](#).
- B. If the work will occur in multiple locations, generate a separate walk-down/meeting and Attachment F5-2 for each location. In this context, each location means areas with distinct work area hazards and/or FOD coordination requirements. See exception detailed in P101-12, Section 3.1.1.a for select facility corrective and preventive maintenance subcontracts.
 - a. Obtain completed, signed copies of Attachment(s) F5-2 from the FOD Representative for the location(s), and provide signed copies of Attachment F5-2 to the walk-down/meeting participants.

LANL ESH Representative Duties

- A. Participate in the project walk-down or meeting to complete the [Attachment F5-2](#).
- B. While it is the responsibility of the STR to convene the walk-down team, the Deployed ESH Representative(s) supporting the location where work will occur, will assist the FOD and STR in determining the representation required for a given project. For example, new construction on a greenfield space may need only environmental requirements expertise to support the completion of Attachment F5-2.
- C. The Deployed ESH personnel supporting CPCS subcontract point of contact will participate in walk-downs or meetings for any construction-related work and contribute to the completion of the Attachment F5-2.
 - a. The Deployed CPCS ESH subcontract point of contact's role is to help ensure the team understands the construction aspects of work being requested, the Exhibit F requirements, and hazards the work might pose to the facility and tenants.

A.1.2 Exhibit F – Clause: Attachment F1.0 General Requirements

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This clause is present in every High/Moderate Consequence Exhibit F. It contains the primary references from DOE 10 CFR 851, Worker Safety and Health Program rule, as well as radiation protection and environmental mandates applicable to subcontracted work. It outlines the responsibilities of the subcontractor and the contractor, and provides the ESH foundation that must be followed for subcontracted work. This clause specifies the subcontractor is responsible for their work processes, employees, and lower-tier subcontractors while conducting work at LANL.

Forms, Attachments, Authorizations, and Submissions

None.

Subcontract Technical Representative Duties

None.

LANL ESH Representative Duties

None.

A.1.3 Exhibit F – Clause: F2.0 Subcontractor Site-Specific Environment, Safety, and Health Plan (SSESHP)

Subcontractors must provide a SSESHP to show how work will be done in a safe manner and to demonstrate an understanding of LANL and/or DOE requirements. The SSESHP details how the subcontractor addresses ESH requirements mandated within Exhibit F clauses for that subcontract. The SSESHP must be approved prior to issuing the Notice to Proceed, and any changes to the work scope or SSESHP content requires resubmission and re-approval.

Starting in 2022, LANL is providing subcontractors the option to adopt a Triad-provided partial SSESHP, which covers the majority, but not all of the Exhibit F clauses. Subcontractors are required to submit additional written plans on how they comply with those Exhibit F clauses in their subcontract that are not covered in Triad-provided partial SSESHP.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit a complete SSESHP to the STR.
- B. Subcontractor will resubmit the SSESHP, or applicable portion, any time a change is made.

Note: Between previous versions of in High/Moderate Consequence Exhibit F and the current version, High/Moderate Consequence Exhibit F (Rev 5), several ESH planning requirements shifted from subcontractors submitting written plans with the SSESHP to subcontractors submitting plans tailored to the task and/or facility (e.g., Fall Protection/Prevention – Elevated Work Surface Plan). LANL must approve the task- or facility-specific ESH plans prior to the subcontractor beginning work on that task. The clause will specify if the subcontractor is required to submit written plans as part of the SSESHP, as part of task-specific work planning, or both.

Subcontract Technical Representative Duties

- A. Receive and relay the SSESHP from the subcontractor to the LANL ESH Representative(s) who signed the Exhibit F for review and approval.

LANL ESH Representative Duties

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- A. Review the submitted SSESHP by comparing it to the partial SSESHP referenced above and the [SSESHP Evaluation Notes](#) posted under the tools section of the Exhibit F webpage.
Note: The partial SSESHP and SSESHP Evaluation Notes do not dictate a format, rather they highlight information LANL expects to see in the SSESHP.
- B. Collaborate with the STR in routing the SSESHP to all needed SMEs for review and approval (e.g., DEP supporting the project).
- C. If the SSESHP has missing, incorrect, or insufficient information, provide detailed comments to the STR on changes the subcontractor will need to make to meet requirements.
- D. Inform the STR when the plan is approved.

A.1.4 Exhibit F – Clause: F3.0 Subcontractor and Lower-Tier Subcontractor Minimum Performance Eligibility Factors

As part of the procurement pre-award stage, subcontractors submit their safety performance data in the form of [Attachment F3-2, Environment, Safety, and Health History Worksheet](#). This safety performance must be approved by LANL before the subcontract is awarded.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor submits [Attachment F3-2, Environment, Safety, and Health History Worksheet](#), and all supporting documentation (i.e., OSHA 300 and 300A forms, EMR letter from Workers Compensation Insurance Carrier) to ASM Procurement Specialist. Lower-tier subcontractors submit the same information as the prime subcontractor to STR.
 - a. If subcontractor environmental or safety performance rates exceed any of LANL’s ceiling rates, subcontractor must answer questions in Attachment F3-2 Exceedance Explanation and Mitigation Actions Form and submit form along with applicable supporting information.
- B. If a subcontractor’s or lower-tier subcontractor’s environmental and safety performance rates exceed any LANL ceiling rates by >175%, then the IPT may require subcontractor to create and submit a Safety Improvement and Sustainability Plan as part of the SSESHP. (This requirement may be subsumed by a process being stood up by ASM, which will take precedent over this requirement.) For lower-tier subcontractor exceedances, the prime subcontractor and the lower-tier subcontractor will jointly create and submit the Safety Improvement and Sustainability Plan.

Subcontract Technical Representative Duties

- A. Transmit [Attachment F3-2](#) and supporting information to the Deployed Industrial Hygiene/Safety professional supporting the Requester’s organization. That individual is authorized to review and approve subcontractor environmental and safety performance up to LANL’s ceiling rates.
- B. For subcontractors that have any rates above LANL ceilings, the STR along with the Requesting Organization’s Division Leader, Requesting Organization’s Group Leader (or Area Manager for ALDCP), and ESH Representative whose primary expertise is related to the exceedance, must all review information in subcontractor’s Attachment F3-2 Exceedance Explanation and Mitigation Actions Form and accept or reject the subcontractor. This review is documented on the Attachment F3-2 LANL Review and Approval sheet, which is an internal-use document only.

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Note: The [EPC-CP Deployed Environmental Professional Team Lead](#) will serve as the STR point of contact to identify the appropriate individual in the Environment and Waste Programs to evaluate environmental- or waste-related exceedances.

- C. If a Safety Improvement and Sustainability Plan is required of a subcontractor, the STR will periodically check and document subcontractor adherence to commitments in the plan as appropriate to the individual STR training and experience. The STR will incorporate results into the subcontractor performance measurement system for the project.

LANL ESH Representative Duties

- A. Deployed Industrial Hygiene/Safety professional supporting the Requester's organization will conduct the initial review of subcontractor [Attachment F3-2](#) information. [Guide to Reviewing Exhibit F Attachment F3-2 Submissions](#) provides step-by-step instructions.
- B. In the event a subcontractor exceeds any LANL environmental or safety performance ceiling rate, the STR will engage the ESH Representative whose primary expertise is related to the subcontractor exceedance(s) (e.g., Environmental Professional for EPA/NMED violations). The ESH Representative, along with the Requesting Organization's Division Leader, Requesting Organization's Group Leader (or Area Manager for ALDCP), and STR, will review Attachment F3-2 data and supporting information, to include the Exceedance Explanation and Mitigation Actions Form, and determine if they will accept or reject the subcontractor.
 - a. The [EPC-CP Deployed Environmental Professional Team Lead](#) will serve as the STR point of contact to identify the appropriate individual in the Environment and Waste Programs to evaluate environmental- or waste-related exceedances.
 - b. If additional information is needed from the subcontractor or lower-tier subcontractor, the ESH Representative will request information through the procurement specialist.
 - c. ESH Representative signs the Attachment F3-2 LANL Review and Approval sheet.

Note: If the subcontractor exceedance is related to DART or TRC rates, review the subcontractor OSHA 300 logs to make sure the problems and mitigations discussed in the Exceedance Explanation and Mitigation Actions Form align with the types of injuries and illnesses listed in the OSHA 300 logs.

Note: The Exhibit F Program Office is available to assist the Attachment F3-2 reviewers, especially in non-standard cases.

- C. Review the SSESHP to ensure the Safety Improvement and Sustainability Plan adequately addresses the issues and root causes that drove the environmental or safety performance rate exceedances. During the period of performance, periodically check and document subcontractor adherence to commitments in the Safety Improvement and Sustainability Plan, and feed results into the subcontractor performance measurement system for the project.

A.1.5 Exhibit F – Clause: F4.0 ESH Representative Duties and Responsibilities

This clause lists the requirements for subcontractor ESH representation. Subcontractors are expected to have a primary safety and/or environmental representative and additional personnel, as required, to fulfill 10 CFR 851-, OSHA-, EPA-, and LANL-required competent and/or qualified person roles.

Forms, Attachments, Authorizations, and Submissions

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- A. For primary safety and/or environmental representative (e.g., key personnel), subcontractor will submit to STR qualifications, which meet or exceed minimum qualifications established by LANL for the subcontract or task order. Reference Attachment F4-1, *Minimum Qualifications for Subcontractor Safety and Environmental Representatives*.
- B. For persons filling competent and/or qualified persons roles, subcontractor will designate these individuals and submit qualifications to STR.

Note: Subcontractor will provide qualifications for any backups or replacements, and LANL will approve prior to those individuals beginning on-site work.

Subcontract Technical Representative Duties

- A. Relay the subcontractor submitted qualifications safety, environmental, qualified, and/or competent persons to the LANL ESH Representative(s) who reviewed and signed the Exhibit F for review and approval.

LANL ESH Representative Duties

- A. Review the subcontractor-submitted qualifications for subcontractor safety and/or environmental representative against the minimum requirements established in the sourcing request. Reference Attachment F4-1, *Minimum Qualifications for Subcontractor Safety and Environmental Representatives*. Relay approval, feedback, and/or requests for additional information to STR.
- B. Review the subcontractor-submitted qualifications for qualified and/or competent persons. Contact the appropriate program lead as needed for guidance on qualified and/or competent persons. Relay approval, feedback, and/or requests for additional information to STR.

A.1.6 Exhibit F – Clause: F5.0 Work Management

This clause lays out the expectations for work control processes, including integrated work documents (IWD). Work management outlines the way subcontractors establish the lines of authority and communication from management to all workers; this includes lower-tier subcontractors.

The foundation of the IWD is the work management process five core functions, followed by subcontractor and LANL employees alike.

- Define the work
- Identify and analyze hazards
- Develop and implement hazard controls and preventive measures
- Perform work safely, securely, and in an environmentally responsible manner
- Provide feedback and strive for continuous improvement

Note: F5.0 states that IWD development is the responsibility of the subcontractor, but must be completed in coordination with LANL. However, several LANL organizations adopted a joint LANL-subcontractor IWD development process. Regardless of the development process, LANL must approve the IWD prior to the start of work.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit IWDs for work tasks, either via [Attachment F5-1, Sample Form 2100A Integrated Work Document](#), or in an alternate format. Note, there are no

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requirements for subcontractors to use Form 2100A. Using form 2100A could be less effective or more difficult to follow for workers who are accustomed to their company's format. However, an alternative format IWD must contain the elements listed in Attachment F5-1.

- a. Electrical tasks need to be completed per the [Guide for Electrical IWDs for Subcontractors](#).
- b. Subcontractor shall include [Attachment F5-2, FOD Site Hazard Analysis and Coordination Requirements](#) with the IWD.
- c. Subcontractor shall incorporate site-specific hazard and environmental information from a Permits Requirements Identification (PRID) review into the IWD.
- d. Subcontractor shall incorporate project mandatory hold points into the IWD.

Note: Subcontractor will sign the IWD prior to being submitted to the LANL for review and approval.

- e. Subcontractor will submit proposed IWD changes to STR for review and approval before working under revised IWD.
- B. Subcontractor's PIC and ESH Representative(s), and the LANL's STR, SMEs, ESH Representatives, and FOD (as necessary) will complete a field walk-down of the work activity, prior to starting work. This walk-down is performed to validate that the IWD tasks/steps and hazards are appropriately identified, and controls are in place.
- C. Subcontractor PIC will document performance of a daily pre-job briefing using [Attachment F5-3, IWD Validation and Release \(Form 2103A\)](#) in accordance with Exhibit F Section F5.2.5. This documentation must be available for review by LANL upon request.
- D. Subcontractor will attach the applicable hold point section of [Attachment F5-6, Subcontractor IWD Mandatory Hold Points](#), to the IWD.

Note: The work associated with the hold point must be evaluated and verified to meet the criteria prior to proceeding with the work task. These mandatory hold points must be incorporated into the applicable IWD step and clearly identified so all workers know to hold work until the hold point criteria can be verified. The subcontractor PIC is responsible for verifying that all conditions associated with the hold points are met, signing the hold point form, and releasing the work to be performed or resumed.

- E. Subcontractor will notify STR of any paused work activities. If the concern or issue that caused the work pause is resolved immediately, and to the mutual satisfaction of the workers involved, the subcontractor may proceed with work without the STR approval. For concerns or issues beyond those resolved immediately, the subcontractor will need STR approval before work can resume.
- F. Subcontractor will submit [Attachment F5-5, Stop-Work Action Worksheet \(Form 2181\)](#) for any stopped work activities.
- G. Subcontractor is encouraged to submit [Attachment F5-4, Integrated Work Document \(IWD\) Part 4, Feedback/Post Job Review \(Form 2104\)](#).

Subcontract Technical Representative Duties

- A. Receive IWDs from subcontractor and relay to signatories for approval.

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- B. When work is paused for an ESH concern and cannot be resolved immediately, relay pause to LANL ESH Representative(s). If the issue can be resolved immediately and to the satisfaction of the workers involved (e.g., a worker pausing work to have a peer put on safety glasses), the work may proceed without LANL approval. When work is paused for reasons other than an ESH concern, approve resolution before restart.

Note: STR will contact the appropriate FOD Duty Officer whenever work is paused or stopped, not including pauses resolved immediately as identified above.

- C. Relay stop work notification to LANL ESH Representative(s).

LANL ESH Representative Duties

- A. Review subcontractor IWDs and approve or provide feedback to STR.
- B. Participate in field walk-down to validate the IWD and that work controls are in place.
- C. Participate in resolution of ESH-related pause work or stop work situations.

A.1.7 Exhibit F – Clause: F6.0 Incident Reporting Requirements

The subcontractor must report and investigate accidents in accordance with 10 CFR 851, and immediately communicate any accidents that occur to the STR. This clause identifies several DOE-specific requirements subcontractors may not be aware of in a non-DOE setting.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must notify the STR verbally as soon as possible and in writing (no later than 24 hours) of any on-site event or condition meeting the following conditions:
 - a. Adversely affects LANL, the mission, personnel, the public, property, or environment
 - b. Employee injury/illness/first aid
 - c. Fire
 - d. Accident, incident, or near miss
 - e. Property damage to equipment, facilities, or motor vehicles
 - f. Non-compliance with safety, health or environmental requirements
 - g. Non-permitted releases to the environment; and/or
 - h. Any other unplanned event that may be viewed negatively by the public, LANL, or the government.
- B. Subcontractor must complete [Attachment F6-2a, DOE Individual Accident/Incident Report \(Form 5484.3\)](#) and [Attachment F6-2b, LANL Form 5484 Addendum](#) to LANL within 2-working days of any accident.
- C. Subcontractor must submit [Attachment F6-1, Weekly Productive Man-Hour Report](#) or report information via other mechanism directed by IPT (e.g., ALDCP).
- D. Subcontractor must provide a written notification to STR if any employee, including lower-tier subcontractor, is suspended or terminated for unsafe work acts resulting from work under the subcontract.

Subcontract Technical Representative Duties

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- A. Collaborate with LANL project team to ensure all appropriate LANL notifications occur.
- B. Provide copies of [DOE Form 5484.3](#) and [Form 5484 Addendum](#) to the LANL [Injury and Illness Program Lead](#).
- C. When subcontractors are required to provide injury and illness recordkeeping and reporting per [DOE 231.1B, Environment, Safety, and Health Reporting](#), Section 2a(1), (i.e., subcontractors with more than 11 employees or non-transient subcontractors), STR will provide monthly productive-man hour reports for these companies to the [OSH-ISH Injury and Illness Program Lead](#).
- D. Maintain in project files any written notice of subcontractor or lower-tier subcontractor termination.

LANL ESH Representative Duties

- A. [OSH-ISH Injury and Illness Program Lead](#) will process [DOE Form 5484.3](#), [Form 5484 Addendum](#), and productive man-hour reports per the OSH-ISH Injury and Illness Program requirements.
- B. For subcontractor companies subject to DOE 231.1B requirements, OSH-ISH Injury and Illness Program Lead will meet with subcontractor company representatives and STRs quarterly for a reconciliation meeting to ensure LANL and subcontractor injury and illness data align.

A.1.8 Exhibit F – Clause: F7.0 Safety and Environmental Performance Citation

The clause describes the Exhibit F mechanism for LANL to issue subcontractors a citation for safety or environmental violations.

Forms, Attachments, Authorizations, and Submissions

None initiated by subcontractor.

Subcontract Technical Representative Duties

- A. Issue Attachment F7-1, *Safety and Environmental Performance Citation*, to the subcontractor or lower-tier subcontractor for any of the following:
 - a. Repeated safety or environmental violations/non-compliances
 - b. Failure to abate any unsafe conditions
 - c. Serious/imminent danger safety concerns
 - d. Failure to report injury/incidents in a timely manner
 - e. Improper record keeping

LANL ESH Representative Duties

- A. LANL ESH Representative(s) or any other LANL ESH SME supporting the project will work through the STR when an ESH-related safety and environmental performance citation is warranted.

Note: LANL ESH Representative(s) and LANL ESH SME supporting the project are expected to issue citations for items listed below; however, they are not limited to the items listed below. Citations will be issued if the subcontractor:

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- Does not maintain or repair storm water controls (Best Management Practices)
- Fails to initiate stabilization within required permit timeframes
- Fails to install new storm water controls (Best Management Practices) when needed
- Engages in poor housekeeping of waste resulting in a violation of the SWPPP
- Continues to work when LANL decrees a pause or stop work
- Crosses a danger barrier without authorization
- Fails to follow set hold point for an activity
- Fails to perform a pre-job brief or share needed information with workers prior to the start of each task
- Fails to flow down requirements to lower-tier subcontractors
- Cuts trees and shrubs without a nest check between mid-May through the end of July
- Permits waste containers to be in poor condition, incompatible with the waste being stored, or improperly labeled
- Does not place waste containers in secondary containment (when required)
- Does not close waste containers except when adding, removing, or consolidating waste with the exception of properly managed and maintained containers holding concrete washout

A.1.9 Exhibit F – Clause: F8.0 Employee Training

The subcontractor must ensure that all subcontractor and lower-tier subcontractor workers are properly trained and qualified to perform all assigned tasks in accordance with the scope of work. This includes initial, periodic, and supplemental training.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must submit proof of training as required per direction in the subcontract SOW.

Subcontract Technical Representative Duties

- A. Identify training requirements and relay requirements to subcontractor.
 - a. The High/Moderate Consequence Exhibit F (Rev 5) contains a list of the training associated with each Exhibit F clause. This list contains the best and most up-to-date information for Exhibit F training requirements. STRs are expected to reference this list when creating clause-specific training requirements.

Note: Except for competent persons, qualified persons, and key personnel (i.e., subcontractor safety and/or environmental representatives) the training list states, “provide proof of training if requested by CONTRACTOR.” This does not preclude STRs from mandating copies of any or all training records. STRs are expected to follow their organization’s procedure for requiring subcontractor training records.

- B. Identify facility-specific training and relay required training to subcontractor to complete.
- C. If subcontractor seeks equivalency for LANL training, relay the training to the LANL ESH Representative(s) who signed the Exhibit F for review and approval.
 - a. This is not applicable for electrical safety training. See [F36.0 Electrical Safety](#).

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- D. Maintain copies of training records in subcontract file, and make information available to members of the LANL project team upon request.

- A. Provide guidance to STR on a case-by-case basis if subcontractor training or qualifications are acceptable.

A.1.10 Exhibit F – Clause: F9.0 ESH Inspections

Subcontractors are required to complete initial and periodic inspections of their work area to monitor compliance with ESH requirements, correct all identified issues, and provide documentation of these inspections to LANL. LANL employees (e.g., STRs, ESH Representatives, Project Managers, etc.) can perform announced and unannounced inspections. Subcontractors should capture in the IWD, provisions for safe access to LANL and subcontractor inspectors or visitors to the site.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit records of inspections to the STR.
 - a. Inspections may be completed using [Attachment F9-1, Samples of Inspection Checklist for Subcontractors](#).

Subcontract Technical Representative Duties

- A. Receive inspection reports from subcontractor or LANL ESH Representative(s) and maintain records in subcontract file.
- B. Provide copies of subcontractor's inspection records to LANL ESH Representatives.

LANL ESH Representative Duties

- A. Provide any LANL ESH Representative-led inspections summary reports to the STR, and work through STR to communicate findings to subcontractor.

A.1.11 Exhibit F – Clause: F10.0 Housekeeping

Subcontractors are expected to keep the work site free of recognized hazards, maintain basic housekeeping practices, and provide their employees clean, potable water. Unless specified in the subcontract that toilet facilities are provided when working outdoors, subcontractors are expected to provide and maintain their own sanitary toilet facilities for their employees.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor may use [Attachment F10-1, Safety/Housekeeping Inspection Checklist](#) to conduct housekeeping inspections.

Subcontract Technical Representative Duties

- A. Receive [Attachment F10-1](#) or other housekeeping-related inspection information from the subcontractor or ESH Representative, and maintain records in subcontract file.

LANL ESH Representative Duties

- A. If LANL ESH Representative conducts an inspection on subcontractor housekeeping activities, provide summary report or [Attachment F10-1](#) to STR.

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A.1.12 Exhibit F – Clause: F11.0 Emergency Preparedness Requirements

The subcontractor is expected to comply with LANL emergency response requirements, including following emergency-related protective measures and participating in any emergency response drills that may occur during work activities.

Forms, Attachments, Authorizations, and Submissions

None.

Subcontract Technical Representative Duties

None.

LANL ESH Representative Duties

None.

A.1.13 Exhibit F – Clause: F12.0 Occupational Health and First Aid

Subcontractors are required to have workers medically evaluated when workers are exposed to specific hazards at or above threshold levels. [Attachment 12-1, Medical Surveillance for Toxic and Hazardous Substance Requirements](#) provides a list of hazards requiring medical surveillance programs. Subcontractors are responsible to ensure workers are fit for duty in order to complete assigned tasks.

Forms, Attachments, Authorizations, and Submissions

- A. [Attachment 12-1, Medical Surveillance for Toxic and Hazardous Substance Requirements](#) is a resource to identify a list of hazards requiring medical surveillance programs.

Subcontract Technical Representative Duties

- B. If available, the STR should accompany a subcontractor worker to LANL's Occupational Health Clinic, especially if the subcontractor PIC is not on-site or the injured worker is the subcontractor PIC.

LANL ESH Representative Duties

Note: While there are no specific LANL ESH Representatives duties regarding F12.0, any member of the LANL project team can request records from subcontractors, which demonstrate the subcontractor having medical surveillance program requirements in place.

A.1.14 Exhibit F – Clause: F13.0 Fire Protection and Prevention

This clause defines fire protection and prevention measures subcontractors must take when working on site: Fire Protection and Prevention Plan, fire department vehicle access, temporary structures, and egress deficiencies.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit a Fire Protection and Prevention Plan specific to the work under the subcontract as part of the SSESHP.
- B. Subcontractor will communicate to the STR its intent of altering or impacting any code-required means of egress (e.g., blocking a corridor or stairwell) in a facility occupied by non-construction personnel. Subcontractor will also provide proposed compensatory measures such as removing non-construction personnel or an egress closure plan.

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- C. Subcontractor will communicate to STR plans to install temporary structures at a work location.
- D. Subcontractor will submit to STR a Fire Department Access Site Plan accounting for any changes during the work, including changes to pavement or access, laydown, equipment, trailers/transportainers and temporary structures.

Subcontract Technical Representative Duties

- E. Relay the SSESHP to the LANL ESH Representative(s) who reviewed and signed the Exhibit F for review and approval.
- F. Relay the subcontractor's intent to alter or impact the means of egress and proposed compensatory measures to [Fire Protection Group](#) Facility Services Team (the Authority Having Jurisdiction) for review and approval and/or feedback.
- G. STR or another member of the Integrated Project Team (IPT) will request for temporary siting of temporary structures in place six months or more through the Integrated Review Tool (IRT).

Note: Requirements regarding the construction of the temporary structure (e.g., sufficient egress, stair configuration, setback) are addressed outside of IRT, in accordance with the applicable administrative requirements of [LANL Engineering Standards, Chapter 16, IBC-GEN](#), Section 9.0 and Table IBC-GEN-3.

- H. STR or another member of the IPT will email [Fire Protection Group](#) Facility Services Team (the Authority Having Jurisdiction) the Fire Department Access Site Plan for review and approval and/or feedback.

LANL ESH Representative Duties

- I. Review the SSESHP to ensure Fire Protection and Prevention Plan requirements are captured adequately by comparing it to the partial SSESHP referenced in [Clause 2.0 Subcontractor SSESHP](#). Relay approval or feedback to STR.
- J. [Fire Protection Group](#) Facility Services Team reviews proposed compensatory measures for altered or impacted means of egress. Relays approval, feedback, and/or request for additional information to STR.
- K. Fire Protection Group Facility Services Team reviews proposed location of temporary structure through the IRT to ensure, among other things, fire department vehicle access. Relays approval, feedback, and/or request for additional information through the IRT.
- L. Fire Protection Group Facility Services Team reviews the Fire Department Access Site Plan. Relays approval, feedback, and/or request for additional information to STR and other members of the IPT.

A.1.15 Exhibit F – Clause: F14.0 Inclement Weather

This clause speaks to protective actions for lightning, high wind, heat-cold stress, snow, and icy conditions, and workers having access to adequate fluids to keep hydrated.

Forms, Attachments, Authorizations, and Submissions

None.

Subcontract Technical Representative Duties

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None.

LANL ESH Representative Duties

None.

A.1.16 Exhibit F – Clause: F15.0 Personal Protective Equipment

The subcontractor is expected to wear appropriate PPE for the work tasks.

Note: DOE mandates that welding PPE be certified as flame resistant to either ASTM F1506 and/or National Fire Protection Association (NFPA) 2112 standards. PPE manufacturers and/or distributors sometimes state their items are ASTM F1506 or NFPA 2112 “compliant.” This means the manufacturer’s claim indicates their PPE could pass the certification standard tests, but have not gone through the formal testing and certification process. “Compliant” does not meet DOE and LANL requirements. LANL developed a list of authorized, certified welding PPE for LANL workers, which is posted on the LANL [Welding](#) website. If interested, subcontractors can request a copy of the welding PPE list through their STR.

Forms, Attachments, Authorizations, and Submissions

None.

Subcontract Technical Representative Duties

None.

LANL ESH Representative Duties

None.

A.1.17 Exhibit F – Clause: F16.0 Tools and Equipment

LANL expects subcontractors to use tools and equipment in accordance with the manufacturer’s instructions, including use, maintenance, and inspections. This clause points out specific requirements subcontractors must follow when using tools and equipment at LANL. Depending on use, subcontractor HEPA filtration systems are to be tested and certified to DOE-STD-3020-2015 annually or biannually.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must submit to STR a request to LANL to have job-made tools evaluated. These tools must be approved in writing prior to use.
- B. Subcontractor must provide to STR certification records for any high-efficiency particulate air (HEPA) filtration systems for LANL review and approval prior to use. Systems will be tested to DOE-STD-3020-2015.
- C. Subcontractor must have a LANL [Electrical Safety Officer](#) (ESO) Authority Having Jurisdiction approve any electric tools using 60 Hz power that are not nationally recognized testing laboratory (NRTL)-listed prior to use. OSHA’s current list of NRTLs can be found at <https://www.osha.gov/dts/otpc/nrtl/nrtllist.html>.

Subcontract Technical Representative Duties

- A. Relay any request for job-made tool approval to the LANL ESH Representative who reviewed and signed the Exhibit F.

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- B. Relay any HEPA filtration certifications to the [OSH-ISH Ventilation Team](#) for review and approval. Note, if the subcontractor opts to have the OSH-ISH Ventilation Team test and certify their engineered ventilation controls, then facilitate coordination between the OSH-ISH Ventilation Team and the subcontractor.
- C. Relay approval requests for any non-NRTL listed electrical tools to the ESO supporting the project.

LANL ESH Representative Duties

- A. Evaluate job-made tools when requested. Provide written response to STR (email okay).
- B. Provide engineered ventilation controls certification information to the [OSH-ISH Ventilation Team](#) for review and approval.
- C. The ESO supporting the project will evaluate the subcontractor's request to use NRTL electrical equipment that has been modified, repaired, used outside its intended use, or is not NRTL listed. The ESO will evaluate the equipment and if approved will label the equipment and provide supporting documentation to the STR.

A.1.18 Exhibit F – Clause: F17.0 Pollution Prevention/Waste Minimization

This clause addresses expectations for subcontractors in minimizing both pollution and waste. To support this, LANL has multiple organizations that can assist with materials management to avoid abandoning materials over the course of subcontracted work.

Forms, Attachments, Authorizations, and Submissions

None.

Subcontract Technical Representative Duties

- A. Serve as a liaison between subcontractors and the organizations below to assist with materials management.
 - a. For difficult to remove materials, items, and equipment: Site Cleanup & Workplace Stewardship (the Site Cleanup Program): cleanupprogram@lanl.gov
 - b. For metals, wood waste, and recyclables: Materials Recycling Facility: 505-667-4190
 - c. For office furniture: Furniture Reuse: reuse@lanl.gov
 - d. For higher quality items that can be reused: Salvage: excess@lanl.gov.
 - e. For items that are labeled with a LANL barcode such as computer equipment: LANL Property: lanlproperty@lanl.gov, 505-665-3230
 - f. For supply and reuse of dirt/soil: Clean-Fill Management: ui-cleanfillyard@lanl.gov

LANL ESH Representative Duties

None.

A.1.19 Exhibit F – Clause: F18.0 Waste Management

This clause mandates subcontractors follow the direction of LANL's Waste Management Coordinators, as authorized by the STR and subcontract Waste Characterization Strategy Forms/Waste Certification Statements (WCSF/WCS) in order to implement [P409, LANL Waste Management](#).

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Note: Authorization for subcontractors to conduct waste management activities must be specified in the subcontract SOW. Specific language from [RD-P409-0900](#), *Subcontractor Waste Disposal Requirements*, Section 4.3, must be included in the SOW for the subcontractor to perform certain waste management activities. Personnel whose projects have a WCSF/WCS should ensure that WCSF/WCS language matches SOW language, which is one of the reasons STRs review WCSF/WCS drafts. Examples include:

- Subcontractor to provide waste containers
- Subcontractor to transport certain types of waste off-site
- Subcontractor to send recyclable materials to an appropriate facility
- Subcontractor to collect waste characterization samples
- Subcontractor to segregate waste types

Forms, Attachments, Authorizations, and Submissions

- A. LANL will provide a WCSF/WCS to the subcontractor, when required.

Note: LANL will determine if a WCSF is required; this will be specified in the Solid Waste Review section of the PRID. If a WCSF is not required, LANL will provide a WCS in lieu of the WCSF.

- B. LANL will provide waste characterization, packaging, storage, treatment, transportation and disposal for each potential waste stream, unless otherwise noted in SOW and the WCSF/WCS.
- C. Subcontractor will notify LANL STR and Waste Management Coordinator of any waste streams not identified in the WCSF/WCS.
- D. Subcontractor will submit a request to the STR for LANL [Waste Management Services \(WM-WMS\)](#) to approval subcontractor-provided waste containers, drums, packagings, bins, or similar items—that were not otherwise presented in the subcontract technical proposal—prior to use. Generally, this means the subcontractor will provide the following information, which the STR will forward to LANL Waste Management Services (WM-WMS) at wm-wms-all@lanl.gov:
- a. Number and type of waste containers to be used;
 - b. Type of container liners (if applicable);
 - c. DOT specification information; and
 - d. Any other information the subcontractor believes is relevant for WM-WMS to assess and approve the containers.
- E. Subcontractor will submit to the STR a request to leave or abandon any waste on-site for approval. This should include:
- a. The type of material to remain onsite;
 - b. Location of the material;
 - c. LANL individual who will accept responsibility for managing the material.
- F. Subcontractor will request through STR, LANL Waste Management Services' (WM-WMS) approval of transporter(s) and destination facilities—that were not otherwise presented in

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the subcontract technical proposal—when subcontractor provides waste or recyclable material transportation.

- a. For WM-WMS to approve the transporter, subcontractor must provide:
 - i. Verification of its license to haul such materials;
 - ii. Verification of its EPA Identification Number;
 - iii. Copy of its Hazardous Material Transportation Act (1974, 1984) (HMTA) / Department of Transportation (DOT) and state transportation compliance program;
 - iv. Copy of its EPA/state EPA manifest handling procedure;
 - v. Certification that there is no administration action or license revocation proceeding pending against it; and
 - vi. Copies of its land ban/pretreatment procedures, if applicable.
- b. For LANL Waste Management Services (WM-WMS) to approve the destination facility, subcontractor must provide:
 - i. Certification that the facility is licensed to receive the specific wastes to be transported there, including if applicable, a current RCRA permit;
 - ii. Written commitment from the facility verifying that it can and will accept the materials proposed for disposal at the facility;
 - iii. Notice of any restrictions of the disposal facility that may cause rejection of transported materials;
 - iv. Sampling and characterization of materials required prior to delivery of materials to the facility;
 - v. Restrictions on delivery schedules;
 - vi. Full disclosure and certification concerning any prior, existing, imminent, or pending enforcement or corrective action programs or listing on any applicable EPA or state list of violating facilities; and
 - vii. List of permit violations within last four years.
- c. Subcontractor will provide to STR weights and volumes of wastes or recyclable materials being removed from LANL for off-site disposal or recycling.

Note: LANL Waste Management Services (WM-WMS) will sign on-site and off-site shipping documents (e.g., bills of lading, Uniform Hazardous Waste Manifests).

Subcontract Technical Representative Duties

- A. Provide subcontractor with a copy of [P409, LANL Waste Management](#).
- B. Ensure a WCSF/WCS is provided to the subcontractor, if not already included in the sourcing request.
- C. Ensure the LANL Waste Management Coordinator is notified of waste streams not identified in the WCSF/WCS.
- D. Relay via email to LANL Waste Management Services (WM-WMS) information on waste containers subcontractors intend to use.

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- E. Relay request to leave or abandon waste on-site to LANL [Waste Management Programs \(EPC-WMP\)](#) at wmmanage@lanl.gov.
- F. Relay via email to LANL Waste Management Services (WM-WMS) information on transporters and destination facilities subcontractors intend to use for off-site disposal or recycling if transporters and destination facilities were not already approved by LANL Waste Management Services (WM-WMS) as part of the subcontract award process.
 - a. Relay to LANL Waste Management Services (WM-WMS) weights and volumes of wastes or recyclable materials being removed from LANL for off-site disposal or recycling.
- G. Initiate communications with project Waste Management Coordinator regarding waste shipping documents. (Shipping documents derive from instructions in the WCSF/WCS.) Decisions on how to proceed will be done on a case-by-case basis.
 - a. Serve as liaison between subcontractor and Waste Management Coordinator for document signatures and distribution of signed documents.

LANL ESH Representative Duties

- A. LANL Waste Management Coordinator will direct subcontractor (as authorized by the STR) in implementing the WCSF/WCS and [P409, LANL Waste Management](#).
- B. LANL Waste Management Coordinator will evaluate any new or unforeseen waste streams not identified in the WCSF/WCS and provide direction to both STR and subcontractor. This occurs in concert with the WCSF/WCS amendment from Waste Management Program (EPC-WMP).
- C. LANL Waste Management Services (WM-WMS) reviews subcontractor waste container information, and relays the approval and/or feedback to the STR.
- D. LANL Waste Management Services (WM-WMS) reviews subcontractor information on transporters and destination facilities subcontractors intend to use for off-site disposal or recycling, and relays the approval and/or feedback to the STR.
- E. If appropriate, LANL Waste Management Programs (EPC-WMP) will relay written approval or denial to the STR for the subcontractor's request to leave or abandon waste on-site.
- F. LANL Waste Management Coordinator will serve as a liaison between STR and LANL Waste Management Services (WM-WMS) on how to proceed with shipping documents.

A.1.20 Exhibit F – Clause: F19.0 Spill Prevention, Reporting, and Response

This clause addresses Best Management Practices for prevention, containment, notification, and remediation of any spill during subcontracted work.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will provide to STR an inventory of chemicals, petroleum, and other products to be brought on-site.
- B. Subcontractor will notify STR immediately of any of the following:
 - a. Any spills, leaks, pumping, pouring, discharging [including wastewater and potable water not otherwise covered under another plan (e.g., SWPPP)], emitting or dumping.
 - b. Any incident relative to material/waste handling, storage, transportation, spills, or disposal.

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- C. STR will provide all necessary forms to document spills for subcontractor to complete.

Note: In the event a spill occurs or chemical disposition is necessary, the subcontractor, STR, and/or LANL ESH Representative(s) will provide the project Waste Management Coordinators and LANL [Waste Generator Services \(WM-WGS\)](#) associated with the project with the applicable safety data sheets.

Subcontract Technical Representative Duties

- A. Work with the DEP and subcontractor to document spills and complete an [Attachment F19-1, EPC-CP Unplanned Release Report](#).
- B. Notify EPC-CP and Emergency Operations immediately of any spills or releases.
 - a. EPC-CP Spills Pager: 664-7722
 - b. Emergency Operations: 667-2400
- C. Work with the project DEP and [EPC-CP Spills SME](#) to ensure adequate remediation is completed by the subcontractor for any spill or release.

LANL ESH Representative Duties

- A. LANL DEP supporting the project will collaborate with the STR and [EPC-CP Spills SME](#) to support compliance and notification requirements: SPCC Plan, spill notification and remediation, etc.
- B. LANL EPC-CP Spills SME will evaluate spills and releases and complete any external reporting requirements. EPC-CP Spills SME will communicate remediation requirements to DEP and STR.

A.1.21 Exhibit F – Clause: F20.0 Radiation Protection

Subcontractors are required to comply with requirements in [P121, Radiation Protection](#), by following directions from LANL's Radiation Protection (RP) personnel through the STR. Requirements may include a range of control measures, including procedures, training, personal protective equipment, and work activity support/oversight by LANL RP. There are also authorization requirements for bringing a radioactive sealed source (RSS) or radiation generating device (RGD) on-site.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will work through the STR to ensure radiation protection requirements and support for the project are in place prior to beginning work.
- B. Subcontractor will complete [Attachment F20-1, Radioactive Sealed Source/Radiation Generating Device Authorization \(Form 2264\)](#), and submit to STR at least 48 hours prior to bringing a RSS or RGD on-site.

Subcontract Technical Representative Duties

- A. Contact the RP Manager supporting the project to coordinate radiation protection support, and relay support interactions and requirements to the subcontractor.
- B. Transmit [Form 2264](#) to LANL [RSS/RGD Control Office](#) at least 24 hours prior to subcontractor bringing RSS or RDG on-site.
- C. Provide subcontractor with a copy of [P121, Radiation Protection](#).

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LANL ESH Representative Duties

- A. LANL RP Manager supporting the project will determine necessary subcontractor requirements and LANL radiation protection support for the project and communicate these to the subcontractor via the STR.
- B. LANL [RSS/RGD Control Office](#) will review and approve Form 2264 or provide feedback, and transmit to the STR and the RP Manager supporting the project.

A.1.22 Exhibit F – Clause: F21.0 Exposure Assessment

This clause addresses requirements and expectations for subcontractors in evaluating their workers' exposure to chemical, biological, and physical workplace hazards. It details requirements for describing an exposure assessment process in the SSESHP, submitting task-specific Exposure Assessment Plans, providing results to LANL, and incorporating control measures into the IWD based on exposure monitoring results.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit to STR for review and approval by LANL, their written exposure assessment process as part of the SSESHP.
- B. Subcontractor will submit to STR for review and approval by LANL, all task-specific Exposure Assessment Plans as part of the task-specific work planning and hazard control documents (e.g., IWD, etc.).
- C. Subcontractor will provide copies of worker exposure monitoring results and any new exposure assessment within 5-business days after receiving final laboratory analytical data.

Subcontract Technical Representative Duties

- A. Relay SSESHP to LANL ESH Representative(s) who reviewed and signed the Exhibit F.
- B. Relay all task-specific Exposure Assessment Plans to LANL ESH Representative(s) who reviewed and signed the Exhibit F. These plans are reviewed and approved as part of the task-specific work planning and hazard control documents (e.g., IWD, etc.).
- C. Provide the exposure monitoring results to the Deployed Industrial Hygiene/Safety Professionals supporting the project.

LANL ESH Representative Duties

- A. Review the submitted SSESHP by comparing it to the [SSESHP Evaluation Notes](#) posted under the tools section of the Exhibit F webpage. Consult with the [OSH-ISH Exposure Assessment Program Lead](#) as needed. Relay approval or feedback to STR.

Note: The SSESHP Evaluation Notes do not dictate a format, rather it highlights information LANL expects to see in the SSESHP.

- B. Deployed Industrial Hygiene Professionals supporting the project will review the task-specific Exposure Assessment Plans. Consult with the OSH-ISH Exposure Assessment Program Lead as needed. Relay approval or feedback to STR. Relay approval or feedback to STR.
- C. Deployed Industrial Hygiene Professionals supporting the project will review exposure monitoring results to ensure they are within LANL acceptable limits. If not, work with

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subcontractor through the STR to evaluate worker protection control measures and update the work control documents, as needed. This may involve initiating work stoppage.

A.1.23 Exhibit F – Clause: F22.0 Respiratory Protection

When a subcontractor uses respirators as part of their hazard control processes, the subcontractor is expected to have a fully implemented respiratory protection program compliant with 29 CFR 1910.134 and ANSI Z88.2.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit a written respiratory protection program as part of the SSESHP.

Subcontract Technical Representative Duties

None.

LANL ESH Representative Duties

- A. Review the submitted Respiratory Protection portion of the SSESHP by comparing it to the [SSESHP Evaluation Notes](#) posted under the tools section of the Exhibit F webpage. Consult with the [OSH-ISH Respiratory Protection Program Lead](#) as needed. Relay approval or feedback to STR.

Note: The SSESHP Evaluation Notes do not dictate a format, rather it highlights information LANL expects to see in the SSESHP.

A.1.24 Exhibit F – Clause: F23.0 Chemical and Hazardous Materials Management

When subcontractors intend to bring hazardous chemicals to LANL, the chemicals first must be authorized by LANL prior to transporting on-site. Also, subcontractors are to maintain an inventory of chemicals and have a Hazard Communication Program.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit a Hazard Communication Program as part of the SSESHP.
- B. Subcontractor must submit safety data sheets for each hazardous chemical to be brought on-site to safetydatasheets@lanl.gov.
- C. Subcontractor must develop and maintain a comprehensive chemical inventory.
- D. Subcontractor must submit [Attachment F23-1, Environmental Reporting Data for EPA Annual Toxic Release Inventory Report](#) for any of the following:
 - a. Chemicals used on-site in excess of 100 pounds
 - b. Any quantities of asphalt, lead, or mercury

Subcontract Technical Representative Duties

- A. Relay the SSESHP to the LANL ESH Representative(s) who reviewed and signed the Exhibit F for review and approval.
- B. Relay safety data sheets received to safetydatasheets@lanl.gov. Additionally, STR should email safetydatasheets@lanl.gov to confirm receipt of safety data sheets that subcontractors may have emailed directly.
- C. Relay Attachment [Attachment F23-1](#) to airreview@lanl.gov.

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LANL ESH Representative Duties

- A. Review the submitted Hazard Communication Program portion of the SSESHP by comparing it to the [SSESHP Evaluation Notes](#) posted under the tools section of the Exhibit F webpage. Consult with the [OSH-ISH Chemical Safety Program Lead](#) as needed. Relay approval or feedback to STR.

Note: The SSESHP Evaluation Notes do not dictate a format, rather it highlights information LANL expects to see in the SSESHP.

- B. The OSH-ISH Chemical Safety Program Lead (chemsafety@lanl.gov) reviews the safety data sheets and authorizes subcontractors to bring those chemicals on-site. Route approval to the STR.
- C. The LANL [Air Quality Review](#) Team processes [Attachment F23-1](#) information per requirements, and provide any applicable follow-up information to the STR.

A.1.25 Exhibit F – Clause: F24.0 Beryllium Activities Not Involving Airborne Beryllium

This clause is for subcontract workers involved in beryllium-related activities that do not require enrollment into LANL's Beryllium Medical Surveillance Program.

Note: LANL's Occupational Safety and Health Division-level approval is required before a subcontractor is permitted to conduct work that requires subcontracted workers to be enrolled in LANL's Beryllium Medical Surveillance Program.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit records of workers' beryllium awareness-level or higher training as required by [P101-21, Chronic Beryllium Disease Prevention Program](#).
- B. Subcontractor will receive confirmation that activities associated with the scope of work are not anticipated to involve the generation of airborne beryllium as defined in [P101-21](#). This will occur through the STR with the Deployed Industrial Hygiene/Safety Professionals supporting the project. Note, if work activities change and airborne beryllium may be generated, the subcontractor must pause work and notify the STR.
- C. Subcontractor will notify the STR as soon as reasonably practicable of the subcontractor's designation of a beryllium area to secure and control an area in an emergency situation.

Subcontract Technical Representative Duties

- A. Provide the subcontractor with a copy of [P101-21, Chronic Beryllium Disease Prevention Program](#).
- B. Transmit the subcontractor's beryllium training records to the Deployed Industrial Hygiene/Safety Professionals supporting the project.
- C. Collaborate with the Deployed Industrial Hygiene/Safety Professionals supporting the project to provide the subcontractor with written confirmation that work activities are not expected to generate airborne beryllium.
- D. Contact the Deployed Industrial Hygiene/Safety Professional supporting the project if notified by the subcontractor that a work activity is changing or that a subcontractor had to designate a beryllium area.

LANL ESH Representative Duties

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- A. Deployed Industrial Hygiene/Safety Professionals supporting the project will review the subcontractor’s training records to ensure they meet requirements in [P101-21](#).
- B. Deployed Industrial Hygiene/Safety Professionals supporting the project will provide the STR written confirmation (e.g., email) that work activities are not expected to generate airborne beryllium.
 - a. Deployed Industrial Hygiene/Safety Professionals supporting the project will evaluate any new/changed work activities to confirm these activities are not expected to generate airborne beryllium and provide written confirmation to the STR.
 - b. Deployed Industrial Hygiene/Safety Professionals supporting the project will notify the [OSH-ISH Beryllium Program Lead](#) when notified by the STR of the subcontractor’s designation of a beryllium area to secure and control an area in an emergency situation. The Deployed Industrial Hygiene/Safety Professionals and OSH-ISH Beryllium Program Lead will determine a course of action and communicate this course of action to the subcontractor via the STR.

A.1.26 Exhibit F – Clause: F25.0 Biological Safety

The clause addresses biological safety requirements for several types of work where potential biological hazards exist.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit an Exposure Control Plan as part of the SSESHP when the work scope involves potential exposure to waste water, blood, sewage, other potentially infectious materials, wildlife, rodents, rodent droppings and nests.
- B. When bloodborne pathogen training is required (e.g., contact with blood or other potentially infectious materials), the subcontractor will either:
 - a. Submit subcontractor bloodborne pathogen training, via the STR, to the LANL [Biological Safety Officer](#) for review and approval; or
 - b. Request authorization from the LANL Biological Safety Officer, via the STR, to take LANL’s bloodborne pathogens course.
- C. Subcontractor must have programmatic or research work at Biosafety Level (BSL)-1 or BSL-2 laboratories approved by the LANL Institutional Biosafety Committee via the LANL Biological Safety Officer.

Subcontract Technical Representative Duties

- A. Liaise between the subcontractor and LANL [Biological Safety Officer](#) for the following:
 - a. Approval of subcontractor’s bloodborne pathogen training or approval for the subcontractor to take LANL’s bloodborne pathogen training.
 - b. Approval for subcontractor programmatic or research work at BSL-1 or BSL-2 laboratories.

LANL ESH Representative Duties

- A. Review the submitted Exposure Control Plan portion of the SSESHP by comparing it to the [SSESHP Evaluation Notes](#) posted under the tools section of the Exhibit F webpage. Consult with the [Biological Safety Officer](#) as needed. Relay approval or feedback to STR.

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Note: The SSESHP Evaluation Notes do not dictate a format, rather it highlights information LANL expects to see in the SSESHP.

- B. LANL Biological Safety Officer will review the subcontractor's bloodborne pathogen training and provide approval or feedback to the STR; or provide authorization for the subcontractor to take LANL bloodborne pathogen training, and communicate authorization to the STR.
- C. LANL Biological Safety Officer will ensure the LANL Institutional Biosafety Committee will evaluate and approve subcontractor programmatic or research work at BSL-1 or BSL-2 laboratories. Approval will be communicated to the STR.

A.1.27 Exhibit F – Clause: F26.0 Laser Safety

This clause mandates subcontractors implement a Laser Safety Program when using a Class 3B or Class 4 laser. Part of the Laser Safety Program includes having appropriate laser safety eyewear and skin protection for the work conducted. LANL can assist subcontractors by providing laser hazard evaluations and/or information on hazard controls for LANL-owned Class 3B or Class 4 lasers.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit a Laser Safety Program that meets the requirements of the American National Standards Institute (ANSI) Z136.1-2014, *Standard for Safe Use of Lasers*, as part of the SSESHP.

Subcontract Technical Representative Duties

- A. Request from LANL laser owner a copy of the laser hazard evaluation and/or IWD, if available, for the Class 3B or Class 4 laser. Provide to subcontractor for use in ensuring subcontractor workers have correct laser PPE.

LANL ESH Representative Duties

- A. Review the Laser Safety Program portion of the SSESHP by comparing it to the [SSESHP Evaluation Notes](#) posted under the tools section of the Exhibit F webpage. Consult with the [OSH-ISH Laser Safety Program Lead](#) or a project [Laser Safety Officer](#) as needed. Relay approval or feedback to STR.

Note: The SSESHP Evaluation Notes do not dictate a format, rather it highlights information LANL expects to see in the SSESHP.

A.1.28 Exhibit F – Clause: F27.0 Firearms Safety

The clause mandates subcontractors follow [P101-2, Non-Security Firearms Safety Program](#), when non-security firearms are used at LANL and prohibits security use of firearms except for by LANL-designated protective forces.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will meet with STR and the [OSH-ISH Non-Security Firearms Program Lead](#) to discuss and carry out requirements.

Subcontract Technical Representative Duties

- A. Liaise between the subcontractor and the [OSH-ISH Non-Security Firearms Program Lead](#).
- B. Provide the subcontractor with a copy of [P101-2, Non-Security Firearms Safety Program](#).

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LANL ESH Representative Duties

- A. [OSH-ISH Non-Security Firearms Program Lead](#) will assist the subcontractor as appropriate.

A.1.29 Exhibit F – Clause: F28.0 Explosives Storage/Use/Disposal

The clause addresses the expectation for subcontractors to follow the most current version of DOE-STD-1212, *Explosives Safety*, notification requirements, and Blasting Plan requirements.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must request authorization, via the STR, to use explosives or blasting agents to perform any part of the subcontracted work.
- B. Subcontractor will submit to the STR for LANL review and approval, a Blasting Plan as part of the task-specific work control and planning documents (e.g., IWD, etc.).

Subcontract Technical Representative Duties

- A. Communicate the subcontractor's request to use explosives or blasting agents to the [LANL Explosives Safety Authority Having Jurisdiction](#) and relay response to the subcontractor.
- B. Provide the subcontractor's Blasting Plan to the LANL Explosives Safety Authority Having Jurisdiction for review and approval.

LANL ESH Representative Duties

- A. [LANL Explosives Safety Authority Having Jurisdiction](#) will review the subcontractor's Blasting Plan, and relay the approval and/or feedback to the STR.
- B. LANL Explosives Safety Authority Having Jurisdiction will authorize subcontractor use of explosive or blasting agents and coordinate with the STR and Deployed ESH Representative(s) supporting the project to ensure explosive safety requirements are met.

A.1.30 Exhibit F – Clause: F29.0 Traffic and Pedestrian Control

This clause addresses requirements to ensure plans are developed and implemented for managing vehicle, bicycle, and pedestrian traffic throughout the lifecycle of a project. This applies to both roads as well as traffic paths around buildings.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit to STR a Traffic Control Plan for each phase of a multi-phase project and obtain approval from the LANL [Traffic Engineer](#) prior to starting work involving traffic control. Traffic Control Plans will meet the federal and state requirements including the Manual on Uniform Traffic Control Devices.
- B. Subcontractor will submit [Attachment F29-1, Requirements for Moving Heavy Equipment and Oversized Vehicles \(Form 2075\)](#) to the LANL Traffic Engineer, via the STR.
- C. Subcontractor will submit to STR a daily inspection log of actions to monitor temporary control zones.

Subcontract Technical Representative Duties

- A. Relay Traffic Control Plans to the LANL [Traffic Engineer](#).
- B. Forward [Form 2075](#) and daily inspection logs to the LANL Traffic Engineer.

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LANL ESH Representative Duties

- A. LANL [Traffic Engineer](#) will review the Traffic Control Plans and provide approval or feedback to STR.
- B. LANL Traffic Engineer will review [Form 2075](#) and provide approval or feedback to STR.
- C. LANL Traffic Engineer will review daily inspections logs and file as appropriate.

Note: LANL Traffic Engineers also conduct inspections of temporary traffic control devices. LANL and subcontractor inspections may drive changes to control device configurations. In these cases, the LANL Traffic Engineer will work with the subcontractor through the STR to identify needed changes. These changes will drive updates to the project Traffic Control Plan.

A.1.31 Exhibit F – Clause: F30.0 Motor Vehicles and Powered Industrial Equipment

This clause outlines the expectations for using LANL-owned or -leased motor vehicles, and LANL or subcontractor powered industrial equipment on-site. It also enables LANL to capture subcontractor equipment or processes that may affect LANL's Air Quality Permit.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must submit a Motor Vehicle Safety Program as part of the SSESHP.
- B. Subcontractor must submit [Attachment F30-1, Major Equipment Declaration](#) prior to placing any subcontractor-provided equipment in service at LANL.
- C. Subcontractor will complete [Major Equipment Declaration Form Safety Review Checklist](#) (pages 2 and 3 of Attachment F30-1).

Subcontract Technical Representative Duties

- A. Provide the [Attachment F30-1](#) to the subcontractor and have the subcontractor complete the *Safety Review Checklist*.
- B. Relay submitted permits and Attachment F30-1 to airreview@lanl.gov.

Note: The equipment list submitted with Attachment F30-1 is one of the key mechanisms for DEPs, [EPC-CP Spills SME](#), and STRs to determine if an equipment item has a repeat history of leaks.

LANL ESH Representative Duties

- A. Review the SSESHP to ensure Motor Vehicle Safety Program requirements are captured adequately by comparing it to the partial SSESHP referenced in [Clause 2.0 Subcontractor SSESHP](#). Relay approval or feedback to STR.
- B. The DEP will confer with the LANL [Air Quality Review](#) Team after they review [Attachment F30-1](#), and determine if any equipment needs air permitting or relocation notifications; provide feedback to STR as appropriate.

A.1.32 Exhibit F – Clause: F31.0 Mechanical Material Handling

This clause walks subcontractors through process of determining if work, using mechanical material handling (MMH) equipment, is for an Ordinary Load or a Critical Load. If activity is involves a Critical Load, then the clause mandates the development of a Critical Load Operational Plan.

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- A. Subcontractor provides STR with proposed determination of Ordinary Load or Critical Load for the MMH activity. Subcontractor can communicate the determination of Ordinary Load or Critical Load to the STR via an email that explains how the task, material to be moved, and answers to screening questions in F31.0 led to the selection of the load type.
- B. Prior to conducting MMH Critical Load tasks, subcontractor will develop a Critical Load Operations Plan with input from the STR and LANL MMH Coordinator, as appropriate. Subcontractor will submit the plan to the STR. The plan is incorporated into, or use a supplement to, the task IWD. As such, this is considered an update to the IWD and subcontractor will follow the IWD review and approval process.
- C. Subcontractors can use [Attachment F31-1, Critical Load Operational Plan Instructions and Sample Template](#) when developing the plan.

Subcontract Technical Representative Duties

- A. STR collaborates with applicable MMH Coordinator to provide input to subcontractor on the Critical Load Operations Plan.
- B. STR collaborates with applicable MMH Coordinator to provide subcontractor feedback, if any, on the Critical Load Operational Plan. Approval of the plan will occur through approving the updated IWD.

LANL ESH Representative Duties

- A. LANL MMH Coordinator will receive from STR, the subcontractor's determination of a MMH activity being an Ordinary Load or Critical Load. The MMH Coordinator will review determination and agree, or provide feedback to the STR.
- B. LANL MMH Coordinator will provide input to subcontractor, as appropriate, on the task Critical Load Operational Plan. MMH Coordinator will review and approve plan, or provide feedback to the STR.

A.1.33 Exhibit F – Clause: F32.0 Cranes and Material Handling Equipment

This clause presents the federal, American Society of Mechanical Engineers (ASME), and DOE standards that govern cranes, material handling, hoisting, and rigging operations at LANL. It covers qualifications and responsibilities for various roles; testing and inspecting; and requirements for ordinary, moderate risk, and critical lifts.

Note: Subcontractors are expected to classify the lift as critical or moderate/ordinary risk. This classification drives which set of subsequent requirements are needed.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will provide documentation of pre-shift, monthly, and annual inspections to the STR.
 - a. Subcontractors may use [Attachment F32-4, Mobile Crane Daily/Pre-Use Inspection Checklist \(Form 2211\)](#) and [Attachment F32-5, Monthly Mobile Crane Inspection Checklist \(Form 2212\)](#).
- B. Subcontractor will submit at contract closeout, unless requested earlier by LANL, rigging equipment inspection records.

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- C. Subcontractor will submit the names and qualifications of the workers filing the roles below as part of the lift plan for the scope of work.
 - a. Mobile crane operators
 - b. Mobile crane operators are also required to submit documentation showing how the operators meet the following requirements: 29 CFR 1926 Subpart CC, DOE Standard 1090-2011, operator training course for the type and classification of crane to be used, a current medical certificate, and State of New Mexico Mobile Crane Operator License.
 - c. Assembly/disassembly director, if applicable, as this is tailored for when a crane is broken down and reconfigured (e.g., a lattice boom).
 - d. Crane operator superintendent.
 - e. Hoisting and rigging PIC
 - f. Riggers
 - g. Signal persons
 - h. Incidental crane operators and riggers or qualified crane operators and riggers if using LANL stationary cranes, hoists, lifting devices, and rigging equipment
- D. If using special hoisting and rigging devices such as track-hoes with lifting attachments and forklifts with boom attachments, subcontractor will submit the following:
 - a. Past year's maintenance records on the subject equipment and attachment (annual inspection by a qualified person).
 - b. Documented training records of the operator on the specific equipment.
 - c. Equipment and lifting attachment owners' manuals/specifications to assure of capacity/application and manufacturer compatibility authorization that attachment can be used as an assembly.

Note: Subcontractor is to submit all training, licenses, certificates, inspections, qualifications, records, and other documents requested by LANL at least 2-working days prior to planned crane operations. Cranes and other material handling equipment may not be used before written approval from the LANL STR. This information is captured as part of the lift plan and approved when the lift plan is approved.
- E. Subcontractor will submit to the STR a Critical Lift Plan using [Attachment F32-2, Critical Lift Plan for Subcontractors \(Form 2210A\)](#), allowing at least 3-working days for LANL review and approval.
 - a. The Critical Lift Plan is to be approved by a designated LANL [Cranes, Hoisting, and Rigging qualified person](#), subcontractor qualified person, and subcontractor PIC.
 - b. The approved Critical Lift Plan must be at the lift site at the time of the lift.
 - c. If required by LANL as part of the Critical Lift Plan, the subcontractor will give the STR a 4-working day advance notice of critical lift occurring. In turn the STR will coordinate with a LANL Cranes, Hoisting, and Rigging qualified person to observe the lift.
- F. Subcontractor will submit to the STR a Moderate Lift Plan for moderate lifts using [Attachment F32-1, Ordinary/Moderate Risk Lift Procedure \(Form 1611A\)](#) allowing at least 3-working days for LANL review and approval.

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- a. The approved Ordinary/Moderate Risk Lift Procedure must be at the lift site at the time of the lift.
- G. Subcontractor will submit to the STR [Attachment F32-3, High Consequence Material Handling Activity \(Form 2041\)](#), when the lift is deemed high consequence per the criteria on Form 2041 and requirements of F32.0. For example, using a forklift with boom attachments.

Subcontract Technical Representative Duties

- A. Maintain electronic copies of pre-shift, monthly, and annual inspection records in project files.
- B. Maintain electronic copies of rigging inspection records in project files.
- C. Maintain electronic copies of documents related to special hoisting and rigging devices in project files.
- D. Coordinate transmission of the Critical Lift Plan to a LANL [Cranes, Hoisting, and Rigging qualified person](#) and other signatories for review and approval.
 - a. If required by LANL as part of the Critical Lift Plan, the STR will coordinate having a LANL qualified person present to observe the critical lift. Schedule the request at least 4-working days before lift.
- E. Provide the Moderate Lift Plan, and/or [Attachment F32-1, Ordinary/Moderate Risk Lift Procedure \(Form 1611A\)](#), to a LANL Cranes, Hoisting, and Rigging qualified person and to other signatories for review and approval.
- F. Provide [Attachment F32-3, High Consequence Material Handling Activity \(Form 2041\)](#) a LANL Cranes, Hoisting, and Rigging qualified person and other signatories for review and approval. Signatories include, but are not limited to the subcontractor PIC, LANL qualified person, and subcontractor qualified person.

LANL ESH Representative Duties

- A. The LANL [Cranes, Hoisting, and Rigging qualified person](#) will review, approve, or provide feedback on the items listed below to the STR and Deployed IH/S personnel, as appropriate.
 - a. Critical Lift Plan and supporting documentation
 - b. Moderate Risk Procedure
 - c. High Consequence Material Handling Activity
 - d. Documentation for special hoisting and rigging devices

Note: The LANL Cranes, Hoisting, and Rigging qualified person will observe critical lifts as needed.

A.1.34 Exhibit F – Clause: F33.0 Welding, Cutting, Brazing, and Grinding

When welding, cutting, brazing, and/or grinding operations occur, the subcontractor must comply with LANL procedures regarding site verification and fire prevention, as well as use appropriate PPE. This is relayed primarily through [Attachment 33-1, Spark or Flame-Producing Operations Permit \(Form 1563\)](#).

Forms, Attachments, Authorizations, and Submissions

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- A. Subcontractor must submit to STR [Form 1563](#) at least 2-working days prior to the start of associated work activities.

Subcontract Technical Representative Duties

- A. Relay [Form 1563](#) to the LANL [Fire Protection Group](#), to LANL IH/S representatives (Deployed or Core) supporting the project, and to other mandated signatories for review and approval.

LANL ESH Representative Duties

- A. The LANL [Fire Protection Group](#) and LANL IH/S representatives supporting the project review, sign, and route [Form 1563](#) to STR for additional signatures.

A.1.35 Exhibit F – Clause: F34.0 Penetrations Operations

This clause defines how LANL classifies penetrations, lays expectation for penetration inspections, and covers LANL-subcontractor coordination on penetration permits.

Forms, Attachments, Authorizations, and Submissions

- A. LANL will initiate the [Attachment 34-1, Penetration Permit \(Form 2074\)](#), and the LANL-subcontractor permit team will complete it. The LANL-subcontractor permit team consists of LANL's ESO, RLM, FOD (for Class 2 penetrations only), subcontractor PIC, and all workers associated with the penetration operation.
- B. If applicable, subcontractor must include Demolition of Conduit or Other Enclosed/Encased System hold points as part of the IWD. See F5.0 *Work Management*.

Subcontract Technical Representative Duties

- A. Liaise among the LANL-subcontractor Penetrations Permit team members.

LANL ESH Representative Duties

- A. The LANL [ESO](#) supporting the project will complete ESO portions of the permit and assist with penetration inspection and permit review as appropriate.

A.1.36 Exhibit F – Clause: F35.0 Lockout/Tagout

This clause addresses LANL's Lockout/Tagout Program requirements and coordination between the subcontractor and LANL.

Note: Except in rare ESO-authorized situations, subcontractors do not have the option of following their own lockout/tagout procedures. They must follow LANL's Lockout/Tagout Program requirements.

Note: There are multiple systems where it is important to include the correct LANL SME to identify hazardous energy sources that need lockout/tagout. The STR will work with the equipment owner-operator to identify appropriate SME involvement. This can include the Pressure Safety Officers, ESOs, Cognizant System Engineers, etc.

Forms, Attachments, Authorizations, and Submissions

- A. If the subcontractor is only providing advisory services, the subcontractor is required to assist LANL with identifying all hazardous energy sources.
 - a. If this is the case, no other clause requirements are applicable.

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- B. For both simple and complex lockouts, all Lockout/Tagout Authorized Workers associated with the task will walk-down the job and all will sign off on the Lockout/Tagout Pre-Job Walk-Down Checklist (RN101-3-01, *Interim Requirements for Hazardous Energy Identification and Control*, Attachment A until incorporated into P101-3, *Lockout/Tagout for Hazardous Energy Control*, Rev 11). The subcontractor will provide a copy of the signed checklist to the STR as the Lock Coordinators must see the signed document before they will provide a lock. Subcontractor keeps the signed checklists with the IWD.
 - a. Complex lockouts additionally require the LANL equipment owner-operator and the individual(s) who prepared the [Attachment F35-1, Lockout/Tagout Orders \(Form 2244\)](#), or detailed IWD (if used in lieu of the [Form 2244](#)) to participate in the walk-down and sign the checklist.

Note: The PIC may represent the preparer if both the PIC and the preparer have walked-down the job and discussed the details associated with how the procedure was developed.

Note: For a simple lockout, a LANL worker may serve as the second LO/TO Authorized Worker for the walk-down, sign the walk-checklist, and complete the peer check. For a complex lockout, a LANL worker may serve as the second LO/TO Authorized Worker for the walk-down, sign the walk-checklist, and complete the concurrent verification.
- C. The LANL [Lock Coordinator](#) will provide all locks and tags.
 - a. The Lock Coordinator enters the lockout/tagout information from Form 2244 into the LANL Lockout/Tagout database. Upon completion of the job, locks are returned to the Lock Coordinator and information is updated in the LANL Lockout/Tagout database.
- D. Subcontractor will complete Form 2244 prior to any associated work. Note, this is required for *complex lockouts*, but not *simple lockouts*. Conditions for a simple lockout will be written on the lockout/tagout tag.
 - a. Subcontractors are expected to keep a copy of Form 2244 with their work package.
- E. Subcontractor will work through STR to notify LANL equipment owner-operator prior to beginning a lockout or tagout.
- F. Subcontractor will submit [Attachment 35-2, Lockout/Tagout Partial Energization Plan \(Form 3058\)](#), for any of the activities below when a building is partially energized. Once approved, subcontractors are expected to keep a copy of [Form 3058](#) in their work package.
 - a. The commission of new facilities, electrical systems and distribution equipment; or
 - b. The construction or acceptance testing of new or extensively revised electrical systems.

Subcontract Technical Representative Duties

- A. Work with the appropriate LANL [Lock Coordinator](#) for the project.
- B. Provide a copy of [P101-3, Lockout/Tagout for Hazardous Energy Control](#) to the subcontractor.
- C. Provide a copy of [Form 2244](#) to the appropriate LANL Lock Coordinator for the project, and assist with the coordination of signatures when lockout/tagout is to be performed.
- D. Identify equipment operator-owner point of contact and provide their name to the subcontractor. The equipment operator-owner will notify affected workers before authorization for the lockout/tagout is granted. Upon completion of the task, but prior to

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removing lockout/tagout device(s), the equipment operator-owner will notify affected workers and authorization to reenergize is granted.

- E. Relay [Form 3058](#) to the LANL [Chief Electrical Inspector](#) for review.

LANL ESH Representative Duties

- A. The LANL [Lock Coordinator](#) will provide all locks and tags to the subcontractor and assist in the process according to LANL procedures.
- B. The LANL ESH Representative(s) will support the completion of [Form 2244](#) if involved in the lockout/tagout event.
- C. The LANL [Chief Electrical Inspector](#) will review [Form 3058](#) and relay approval or feedback to the STR.

A.1.37 Exhibit F – Clause: F36.0 Electrical Safety

This clause lays out subcontractor expectations to implement a comprehensive Electrical Safety Program, which includes requirements for using NRTL electrical equipment, training, and integrated work document development. This clause details situations when it is necessary to coordinate and receive approval from the LANL Authority Having Jurisdiction, ESO, or Chief Electrical Inspector.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will request, through the STR, LANL ESO approval to use NRTL electrical equipment that has been modified, repaired, used outside its intended use, or is not NRTL listed.
- B. Subcontractor will communicate to the STR any instance of a worker being subject to electric shock (other than static electricity) or possibly arc flash or burn to the skin or eyes from proximity to electrical discharge.

Note: LANL requires the worker be evaluated by medical personnel. The intent for the medical evaluation is to 1) have the worker obtain a baseline electrocardiogram if shock is suspected, and 2) ensure no further medical attention is needed.
- C. Subcontractor will document in IWD, the controls needed for electrical hazards based on the electrical risk assessment conducted per NFPA 70E. Subcontractors should use the [Guide for Electrical Subcontractors for Developing an Electrical IWD](#) to assist in the development of the electrical portion of the IWD.

Note: NFPA 70E electrical risk assessments are required for work on exposed electrical hazards or when the worker interacts with the equipment when conductors or circuit parts are not exposed, but an increased likelihood of injury from an exposure to an arc flash hazard, which includes activities such as zero energy checks, adjustments, troubleshooting, and maintaining and/or repairing electrical equipment.
- D. If the work involves working on exposed energized electrical conductors or circuit parts for which an electrically safe work condition has not been established, subcontractor will develop and submit to STR an [Attachment F36-1, Energized Electrical Work Permit \(Form 2195\)](#), as defined by [P101-13, Electrical Safety Program](#).

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- E. Subcontractor will submit to the STR an [Attachment F36-0, Electrical Training Documentation for Subcontractors](#), along with training materials to be evaluated if seeking approval for equivalency to LANL electrical safety training.
- F. Subcontractor will notify STR that a facility electrical installation is complete and request an Authorization to Energize.

Subcontract Technical Representative Duties

- A. Convey to the LANL [ESO supporting the project](#) any requests associated with NTRL/non-NTRL equipment.
- B. Communicate to the [Chief ESO](#) and FOD Duty Officer any instances of a worker being subjected to electrical shock, possible arc flash, or burn.
- C. Provide subcontractor a copy of the [Guide for Electrical Subcontractors for Developing an Electrical IWD](#) as appropriate. Route to the LANL ESO supporting the project the IWD for review and approval of the electrical safety portions.
- D. Route [Form 2195](#) to the appropriate ESO (specified in Form 2195) and LANL line management for review and approval.
- E. Send [Attachment F36-0](#) to the LANL [Chief ESO](#) or designee for review and approval.

Note: The Designation of Authority to Approve Equivalent Training for Electrical Subcontractors memo posted under the STR Toolbox on the [Electrical Safety Program](#) lists those at LANL who are ESO designees authorized to evaluate and approve equivalent training and documentation.

- F. Contact the LANL [Chief Electrical Inspector](#) to initiate the Authorization to Energize.

LANL ESH Representative Duties

- A. LANL [ESO supporting the project](#) will evaluate subcontractor's request to use NRTL electrical equipment, which has been modified, repaired, used outside its intended use, or is not NRTL listed. The ESO will evaluate the equipment and, if approved, will label the equipment and provide supporting documentation to the STR.
- B. LANL [Chief ESO](#) will follow up on worker shock and participate in an event learning.
- C. LANL ESO supporting the project will review the IWD and communicate feedback or approval to the STR.
- D. LANL ESO supporting the project will review [Form 2195](#) and provide to the STR either a signed permit or feedback.
- E. LANL Chief ESO or designee will review [Attachment F36-0](#) and communicate feedback or approval to the STR.
- F. LANL [Chief Electrical Inspector](#) completes the necessary documentation for the Authorization to Energize and relays this to the STR.

A.1.38 Exhibit F – Clause: F37.0 Fall Prevention/Protection

Fall prevention/protection is primarily governed by OSHA and ANSI requirements.

Forms, Attachments, Authorizations, and Submissions

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- A. Subcontractor will submit to STR a Fall Prevention/Protection – Elevated Work Surface Plan (EWSP) for review and approval as part of task-specific work planning and control documents. Subcontractors may use [Attachment F37-1, Fall Hazard Assessment Form](#), and [Attachment F37-2, Fall Arrest Rescue Plan Form](#), to meet the requirements of the Fall Prevention/Protection – EWSP.
- B. Subcontractor will submit to STR for review and approval by LANL, the names and qualifications of Fall Protection Competent Persons before these individuals start Fall Protection Competent Person work. Subcontractor will submit to STR for review and approval by LANL, the names and qualifications of individuals designated as a Qualified Person per ANSI/ASSP Z359.2-2017, *Minimum Requirements for a Comprehensive Managed Fall Protection Program*, before these individuals start Qualified Person work.
- C. Subcontractor must include Fall Protection Critical Safety Step Hold Point as part of the IWD. See F5.0 *Work Management*.

Subcontract Technical Representative Duties

- A. Ensure a LANL [Fall Protection Competent Person](#) reviews the Fall Prevention/Protection – EWSP. This plan is reviewed and approved as part of the task-specific work planning and hazard control documents (e.g., IWD, etc.).
- B. Relay names and qualifications of Fall Protection Competent Persons and/or Qualified Persons to LANL ESH Representative(s) who reviewed and signed the Exhibit F for review and approval.

LANL ESH Representative Duties

- A. A LANL [Fall Protection Competent Person](#) must approve of the Fall Prevention/Protection – EWSP. Relay approval and/or feedback to STR.
- B. Review qualifications of Fall Protection Competent Persons and/or Qualified Persons, consulting with [OSH-ISH Fall Protection Program Lead](#) as needed. Relay approval and/or feedback to the STR.

A.1.39 Exhibit F – Clause: F38.0 Scaffolding

Scaffolding mandates are primarily governed by OSHA requirements.

Forms, Attachments, Authorizations, and Submissions

- A. specific work planning and control documents.
- B. Subcontractor will submit to STR for review and approval by LANL, the names and qualifications of Scaffolding Competent Persons before these individuals start Scaffolding Competent Person work.
- C. Subcontractor must complete [Attachment F34-1, Penetration Permit \(Form 2074\)](#), if a scaffold will be secured to a facility.

Subcontract Technical Representative Duties

- A. Ensure a LANL [Fall Protection Competent Person](#) reviews the Scaffolding Plan.
- B. Relay names and qualifications of Scaffolding Competent Persons to LANL ESH Representative(s) who reviewed and signed the Exhibit F.
- C. Relay [Form 2074](#) to the LANL RLM, if their approval is required.

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LANL ESH Representative Duties

- A. A LANL [Fall Protection Competent Person](#) must approve of the Scaffolding Plan. Relay approval and/or feedback to STR.
- B. Review qualifications of Scaffolding Competent Persons, consulting with [OSH-ISH Fall Protection Program Lead](#) as needed. Relay approval and/or feedback to the STR.

A.1.40 Exhibit F – Clause: F39.0 Portable Ladders

Subcontractor must use portable ladders in accordance with manufacturer’s instructions and remove any defective equipment from service immediately.

Forms, Attachments, Authorizations, and Submissions

None.

Subcontract Technical Representative Duties

None.

LANL ESH Representative Duties

None.

A.1.41 Exhibit F – Clause: F40.0 Suspended Personnel Platforms

This clause outlines the need to justify use of a suspended personnel platform, the requirements for a Lift Plan, and design and build mandates.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must request authorization, via the STR, to use a suspended personnel platform.
- B. Subcontractor will submit a Lift Plan to the STR.

Subcontract Technical Representative Duties

- A. Communicate subcontractor’s request to use a suspended personnel platform to the LANL ESH Representative(s) and relay response to the subcontractor.
- B. Provide a Lift Plan to the LANL ESH Representative(s) for review and approval.

LANL ESH Representative Duties

- A. Review the Lift Plan, consulting with [OSH-ISH Hoisting and Rigging Program Lead](#) as needed. Relay approval and/or feedback to the STR.

A.1.42 Exhibit F – Clause: F41.0 Aerial Work Platforms

This clause lays out expectations for subcontractors to follow when using aerial work platforms.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must include Hold Point for Aerial Lifts as part of the IWD. See F5.0 *Work Management*.

Subcontract Technical Representative Duties

None.

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LANL ESH Representative Duties

None.

A.1.43 Exhibit F – Clause: F42.0 Barricades

This clause outlines subcontractor barricade use parameters and expectations.

Forms, Attachments, Authorizations, and Submissions

None.

Subcontract Technical Representative Duties

None.

LANL ESH Representative Duties

None.

A.1.44 Exhibit F – Clause: F43.0 Excavations and Trenching

This clause outlines specific mandates for excavation and trenching operations that include OSHA requirements as well as LANL policy, procedures, and permits. This clause also addresses potential cross-hazard situations: Consent Order Sites; unanticipated utilities, radiological liquid waste lines, and/or infrastructure; and discovery of cultural resources.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will request via the STR and Excavation/Fill/Soil Disturbance (EXID) Permit process, an EXID Permit allowing at least 7-working days before the start of any excavation or trenching operation to obtain the permit. Note, the subcontractor PIC or LANL PIC, alternate PIC and STR will sign and receive the permit via the Integrated Review Tool (IRT) once all reviewers approve the EXID and LANL has completed marking utility locations.
 - a. Subcontractor will keep copy of the EXID Permit, original request form and map, all SME comments, AutoCAD utility map, sketch of the area, and any other forms/approvals, detailed maps/sketches on-site in a readily accessible protective container or within the work package during any excavation activity.
- B. Subcontractor will submit to STR for review and approval by LANL, the names and qualifications of Excavations Competent Persons before these individuals start Excavations Competent Person work.
 - a. This individual may be the PIC.
- C. Subcontractor must include Excavation Hold Point as part of the IWD. See F5.0 *Work Management*.

Subcontract Technical Representative Duties

- A. Coordinate the EXID permit request to the [OSH-ISH Soil Disturbance Review Team](#) using LANL's IRT.

Note: During 2022, the coordination of EXID permit request will shift from the OSH-ISH Soil Disturbance Review Team to the Engineering Services Division.

- B. Relay names and qualifications of Excavations Competent Persons to LANL ESH Representative(s) who reviewed and signed the Exhibit F.

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- C. Provide written permission to subcontractor to commence any excavation, fill, soil disturbance or transfer, trenching work, or drilling activities.
- D. If STR is an EXID Requestor, PIC or Alternate PIC, (in support of a subcontractor) they must complete LANL Excavation/Fill/Soil Disturbance (EXID) Permit Process Using the EXID Request System (UTrain course #47420).

LANL ESH Representative Duties

- A. The [OSH-ISH Soil Disturbance Review Team](#) and other LANL SMEs provide comments, to include ESH requirements, and EXID permit to the PIC (may be subcontractor PIC or LANL PIC depending on the project) via the IRT.

Note: Engineering Services Utilities & Infrastructure (ES-UI) will provide an engineered drawing to the subcontractor showing the results of non-intrusive underground surveys, and identifying any underground interferences. This will be part of the EXID Permit package. Also, ES-UI will revalidate locate markings every 30 days or if the markings have been erased.

- B. Review qualifications of Excavations Competent Persons, consulting with OSH-ISH Soil Disturbance Review Team Lead as needed. Relay approval and/or feedback to the STR.

A.1.45 Exhibit F – Clause: F44.0 Pressure Safety

This clause addresses two aspects of pressure safety: subcontractors bringing and using compressed gas or compression devices on-site, and subcontract work involving the design, installation, test, or other aspect of pressure systems.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will request, through the STR, written authorization from the LANL ESH Representative(s) supporting the project to bring compressed gas or compression devices on-site.

Note: Subcontractors are subject to Department of Transportation (49 CFR) requirements when transporting gas cylinders.

- B. Subcontractor will submit a Gas Cylinder Use and Storage Procedure that meets the requirements of [P101-34, Pressure Safety](#), as part of the SSESHP.
- C. Subcontractor will obtain, through the STR and LANL Project Engineer supporting the project, the Laboratory Building Official's approval for subcontractor designs, installations, tests, or other specified deliverables associated with pressure systems. This information is submitted and managed through the LANL Document Control System.
- D. Subcontractor will receive approval, through the STR and LANL Project Engineer supporting the project, on the ASME code of record for all pressure vessels, boilers, air receivers, and supporting piping system. This is initiated in the project Requirements and Criteria Document. The ASME information is submitted and managed through the LANL Document Control System.
- E. Subcontractor will receive approval from the LANL [Chief Pressure Safety Officer](#) (or [designee](#)), via the STR, for piping field pressure testing procedures prior to starting testing.

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- F. Subcontractor procurements of relief devices and pressure vessels will be reviewed by the LANL Chief Pressure Safety Officer (or designee). This information is submitted and managed through the LANL Document Control System.

Subcontract Technical Representative Duties

- A. Transmit request to bring compressed gas or compression devices on-site to the LANL ESH Representative(s) supporting the project, and relay written authorization to the subcontractor.
- B. Coordinate approval with LANL Project Engineer supporting the project for subcontractor deliverables associated with new or modified pressure systems.
- C. Coordinate approval from LANL Project Engineer supporting the project, who will in turn, work with the appropriate Engineering SME for that ASME code of record.
- D. Transmit piping field pressure testing procedures to the LANL [Chief Pressure Safety Officer](#) (or [designee](#)) for approval.
- E. Relay subcontractor procurements for relief devices and pressure vessels, through LANL Document Control System, to the LANL Chief Pressure Safety Officer (or designee) for review.

Note: Any pressure-safety items subject to ASM Form 3041.00.0410, *Goods or Services Requiring Internal Review and Approval*, will need to be purchased following the procedures listed in FSD-PSP-101-34-004.r0, *Procurement of Pressure Safety Equipment*. STRs, Requesters, and Pressure Safety Officers play a role in helping to ensure the requirements are communicated to bidders in the sourcing request.

LANL ESH Representative Duties

- A. Review request to bring compressed gas or compression devices on-site and provide written authorization or feedback to the STR.
- B. Review the SSESHP to ensure Gas Cylinder Use and Storage Procedures are captured adequately by comparing it to the partial SSESHP referenced in [Clause 2.0 Subcontractor SSESHP](#). Relay approval or feedback to STR.
- C. The LANL Project Engineer supporting the project will review subcontractor deliverable associate with pressure systems and provide approval or feedback via the LANL Document Control System.
- D. The LANL Project Engineer supporting the project will work with appropriate Engineering SME to review proposed ASME code of record for pressure vessels, boilers, air receivers, and supporting piping systems, and provide approval or feedback via the LANL Document Control System.
- E. The LANL [Chief Pressure Safety Officer](#) or designee will review piping field pressure testing procedures, and provide approval or feedback to STR.
- F. The LANL Chief Pressure Safety Officer will review subcontractor procurements for relief devices and pressure vessels, and provide approval or feedback via the LANL Document Control System.

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This clause addresses a subcontractor's Confined Space Program requirements, coordination with LANL, and Confined Space Entry Permits. There are three scenarios for LANL-subcontractor confined space interactions.

1. GREENFIELD: A subcontractor enters a greenfield project and confined spaces are not yet turned over to LANL. The Subcontractor's Confined Space Program has primacy.
2. LANL WORKERS: A subcontractor enters a LANL-owned confined space with LANL workers. LANL's Confined Space Program has primacy, but subcontractors are expected to have their own Confined Space Program, which demonstrates that subcontract workers are qualified to conduct confined space work.
3. NO LANL WORKERS: A subcontractor enters a LANL-owned confined space without LANL workers. Subcontractor's Confined Space Program has primacy, except the subcontractor will follow LANL's confined space classification for LANL confined spaces.

Forms, Attachments, Authorizations, and Submissions

- A. GREENFIELD and NO LANL WORKERS: Subcontractor will submit a written Permit-Required Confined Space Program as part of the SSESHP.
 - a. This includes Rescue Procedures and Emergency Rescue Capabilities (e.g., proof of entry rescue training, personnel qualification, and equipment).

Note: LANL has approved Roco Rescue as the Laboratory's stand-by rescue service provider. If subcontractors would like to hire Roco Rescue to support rescue procedures and emergency rescue capabilities, the STR can provide contact information.
- B. GREENFIELD and NO LANL WORKERS: Subcontractor will submit to STR for review and approval by LANL, the names and qualifications of Confined Space Entrants, Attendants, and/or Entry Supervisors before these individuals start Confined Space work.
- C. LANL WORKERS: Subcontractor will submit a Confined Space Program to the STR.
- D. NO LANL WORKERS: Subcontractor may submit a request to have a confined space reclassified.

Subcontract Technical Representative Duties

- A. GREENFIELD and NO LANL WORKERS: Relay the Confined Space Entry Program and qualifications for the Confined Space Entrants, Attendants, and/or Entry Supervisors for review and approval to a LANL Qualified Industrial Hygiene/Safety Professional (QIHSP), or preferably, the [OSH-ISH Confined Space Program Lead](#).
- B. LANL WORKERS: Receive a copy of the LANL permit from LANL Entry Supervisor and provide a copy to the subcontractor.
- C. NO LANL WORKERS: Relay any confined space reclassification requests to LANL ESH Representative(s) for the FOD who is a qualified [confined space evaluator](#).
- D. NO LANL WORKERS: Contact the LANL ESH Representative(s) for the FOD where confined space is located to get a copy of the confined space evaluation for that space, if one was completed. STR will provide the evaluation to the subcontractor.

Note: Any person can download a completed confined space evaluation from the [Confined Space](#) website.

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LANL ESH Representative Duties

- A. The [OSH-ISH Confined Space Program Lead](#) or QIHSP reviews the subcontractor Confined Space Program and Confined Space Entrants, Attendants, and/or Entry Supervisors qualifications. Relay approval or feedback to STR.
- B. LANL WORKERS: LANL Entry Supervisor fills out a LANL permit and provides a copy to the STR to relay to the subcontractor.
- C. NO LANL WORKERS: LANL ESH Representative for the FOD, who is a qualified [confined space evaluator](#), reviews confined space reclassification requests and relays response to the STR.

A.1.47 Exhibit F – Clause: F46.0 Work within the Boundary of a Consent Order Site

This clause speaks to special requirements associated with working within the boundary of a Consent Order Site (i.e., Solid Waste Management Unit [SWMU] or Area of Concern [AOC]).

Forms, Attachments, Authorizations, and Submissions

- A. LANL will provide information to the subcontractor regarding potential contaminants present in the soil, and associated controls, through the STR and the Integrated Review Tool (i.e., PRID/EXID).

Subcontract Technical Representative Duties

- A. Provide subcontractor information regarding Consent Order Site impacts, potential contamination, hazards, and controls based on comments received during PRID/EXID review.
- B. Ensure a Storm Water Pollution Prevention Plan is in place, if applicable, prior to starting field work. See clause F48.0 *Storm Water Management*.
- C. The STR or PIC will communicate with ES-UI surveyors to mark boundaries of the Consent Order Site and sampling locations as necessary. An email link for the ES-UI surveyors is provided in the PRID/EXID under SWMUs or AOCs (Consent Order Sites, previously called PRS) comments.

LANL ESH Representative Duties

- A. LANL ES-UI surveyors will mark boundaries of the Consent Order Site and sampling locations upon request.

A.1.48 Exhibit F – Clause: F47.0 Wastewater Discharges

This clause addresses subcontractor requirements for wastewater discharge and management: New Mexico Environment Department (NMED) permits, discharge plan, capturing and holding wastewater, and discharging into LANL treatment facilities. The need for wastewater or groundwater discharge permits is identified through the PRID for the project.

Forms, Attachments, Authorizations, and Submissions

- A. LANL will provide a wastewater discharge permit or Notice of Intent (NOI) to discharge upon request.

Note: Subcontractor discharges could potentially affect LANL's discharge permits.

- B. LANL will obtain required permits for sanitary holding tanks and septic tank/leach field systems from NMED for subcontractor.

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- C. LANL will provide [P409-1, LANL Waste Acceptance Criteria](#) to subcontractor as a resource.

Note: Subcontractors are additionally expected to work under the project Waste Characterization Strategy Form/Waste Certification Statement requirements.

Subcontract Technical Representative Duties

- A. Ensure subcontractor has discharge permit, NOI, other permits, and a copy of [P409-1](#).

LANL ESH Representative Duties

- A. Through the DEP and Waste Management Coordinator supporting the project, the LANL [EPC-CP Water Quality Team](#) will provide any permit as necessary to the subcontractor through the STR.

A.1.49 Exhibit F – Clause: F48.0 Storm Water Management

This clause covers National Pollutant Discharge Elimination System (NPDES) permits; other regulatory drivers; notifications; Best Management Practices for storm water management, sediment, and erosion control; and stabilization measures.

Subcontractors understanding and complying with LANL Best Management Practices has been a challenge in the recent past. Key among these challenges are the subcontractor's timely implementation of corrective actions (i.e., within 24-hours of identification of condition), and incorrect/ineffective installation of storm water control measures.

Forms, Attachments, Authorizations, and Submissions

- A. LANL will provide the following items to the subcontractor to establish Best Management Practices for storm water management, sediment, and erosion control:
- [LANL Engineering Standards Manual, Chapter 3 Civil, Attachment 1, Storm Water Compliance and Design Requirements, VAR-10468](#) (ESM Chapter 3, Variance 10468).
Note: Details on how to obtain coverage and coordinate with EPC-CP on Storm Water Pollution Prevention Plan (SWPPP) development is contained in ESM Chapter 3, Variance 10468.
 - [LANL Storm Water Best Management Practices Manual](#), LA-UR-11-10371
- B. Subcontractor personnel will receive training on Construction General Permit (CGP) and/or Multi-Sector General Permit (MSGP) SWPPP prior to the start of on-site subcontractor activities.
- C. For activities subject to the NPDES CGP:
- LANL [EPC-CP Storm Water Permitting/Compliance Team](#) develops a CGP SWPPP initial draft, which is provided to all bidders as part of the sourcing request.
 - Subcontractor will provide to STR inputs per ESM Chapter 3, Variance 10468 for the purpose of collaborating with LANL to finalize the CGP SWPPP.
 - Subcontractor will receive an updated CGP SWPPP from STR for certification and implementation.
 - Subcontractor will submit to STR documentation that the Notice of Intent was submitted and approved by EPA. An approval email from EPA is considered acceptable documentation.

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- D. For activities subject to a NPDES MSGP, LANL will provide subcontractor with a copy of, or access to, the facility MSGP SWPPP.
 - a. Subcontractor will provide LANL with project information per ESM Chapter 3, Variance 10468 sufficient to amend the facility MSGP SWPPP.
 - b. LANL EPC-CP Storm Water Permitting/Compliance Team will brief subcontractor on the MSGP conditions requiring corrective action.
 - c. Subcontractor will notify the STR if they identify conditions requiring corrective action per the MSGP.
- E. For work within a watercourse, LANL will provide applicable 404 Permit and New Mexico Section 401 Water Quality Certification requirements. These requirements are identified through the LANL Integrated Review Tool.
- F. Subcontractor will submit to STR for review and approval by LANL, the names and qualifications of the person(s) designated as NPDES CGP/MSGP qualified person(s) who will provide oversight for execution of the storm water management, sediment, and erosion control, before person(s) commence oversight role.

Note: LANL considers person(s) to be qualified if they have any of the following: demonstrated project experience in the implementation of the NPDES CGP and knowledge in the principles and practices of sediment and erosion control and storm water management; a relevant professional certification (e.g., CISEC, CPESC); documentation of training courses related to NPDES CGP or MSGP implementation and the ability to assess site conditions and the effectiveness of control measures that could impact storm water quality.

Subcontract Technical Representative Duties

- A. As applicable, provide to the subcontractor the following items for subcontractors to establish their Best Management Practices for storm water management, sediment, and erosion control:
 - a. [LANL Engineering Standards Manual, Chapter 3 Civil, Attachment 1, Storm Water Compliance and Design Requirements, VAR-10468](#)
 - b. [LANL Storm Water Best Management Practices Manual](#), LA-UR-11-10371
- B. Contact LANL [EPC-CP Storm Water Permitting/Compliance Team](#) to request and schedule subcontractor CGP or MSGP SWPPP training prior to the start of on-site activities.
- C. For activities subject to the NPDES CGP:
 - a. As applicable, provide a copy of the draft CGP SWPPP to the ASM Procurement Specialist for inclusion in the sourcing request.
 - b. Relay to LANL EPC-CP Storm Water Permitting/Compliance Team subcontractor inputs submitted to finalize the CGP SWPPP. Once LANL EPC-CP Storm Water Permitting/Compliance Team updates the CGP SWPPP, provide copy of final plan to subcontractor.
 - c. Relay to LANL EPC-CP Storm Water Permitting/Compliance Team receipt of subcontractor documentation of the EPA's Notice of Intent approval.

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Note: STR may be responsible for certifying the NPDES CGP Stormwater Site Inspection Report.

- D. For activities subject to the NPDES MSGP:
 - a. Communicate subcontractor’s input used to, 1) amend the facility MSGP SWPPP, or 2) identify conditions requiring corrective action per the MSGP, to the LANL EPC-CP Storm Water Permitting/Compliance Team and the DEP supporting the project.
 - b. Provide amended copy (if applicable) or facility-specific MSGP SWPPP to subcontractor.
 - c. Communicate conditions requiring corrective action identified by the EPC-CP Storm Water Permitting/Compliance Team or DEP to the subcontractor for action
- E. For work within a watercourse (404/401 Permits):
 - a. Relay information requests from the LANL EPC-CP Storm Water Permitting/Compliance Team to the subcontractor and obtain subcontractor inputs to be used by LANL to prepare the pre-construction notification (submitted to the U.S Army Corps of Engineers [USACE] and the New Mexico Environmental Department) seeking permit authorization.
 - b. Provide subcontractor with the USACE permit authorization letter and instruct the subcontractor on the conditions contained in the permit and permit authorization.

Note: Notify the subcontractor that work within the watercourse cannot proceed until the USACE issues the permit authorization.

LANL ESH Representative Duties

- A. LANL [EPC-CP Storm Water Permitting/Compliance Team](#) will provide CGP and/or MSGP SWPPP training to subcontractor personnel.
- B. For activities subject to the NPDES CGP:
 - a. LANL EPC-CP Storm Water Permitting/Compliance Team will review subcontractor inputs for the CGP SWPPP, revise as appropriate, and provide updated copy to STR.
 - b. LANL EPC-CP Storm Water Permitting/Compliance Team will review subcontractor’s CGP EPA Notice of Intent approval and confirm approval for the purposes of LANL internal compliance requirements. Relay questions to STR, as needed.
- C. For activities subject to the NPDES MSGP:
 - a. LANL DEP supporting the project coordinates MSGP SWPPP modifications among the STR, subcontractor, and LANL EPC-CP Storm Water Permitting/Compliance Team. After modification, DEP provides amended MSGP SWPPP to STR who provides to subcontractor.
- D. LANL EPC-CP Storm Water Permitting/Compliance Team will review qualifications of NPDES CGP/MSGP qualified person(s) who will provide oversight for execution of the storm water management, sediment, and erosion control. Relay approval and/or feedback to the STR.

A.1.50 Exhibit F – Clause: F49.0 Air Quality

This clause covers subcontractor requirements for air quality permits and relocation notifications, and providing notice of equipment that may emit air pollutants while being used on-site at LANL, and requirements for open burning.

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Note: F13.0 *Fire Protection and Prevention* prohibits subcontractors authorizing open fires on the jobsite.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor must submit copies of all necessary air permits, relocation notices, or other NMED requirements to STR, and submit approved notification to NMED at least 10-working days before work begins.
- B. Subcontractor must submit [Attachment F30-1, Major Equipment Declaration](#) for any equipment that may emit air pollutants, not including motor vehicles or mobile construction equipment such as backhoes, front loaders, forklifts, etc.

Subcontract Technical Representative Duties

- A. Relay submitted permits and [Attachment F30-1](#) to airreview@lanl.gov for review.

LANL ESH Representative Duties

- A. The LANL [Air Quality Review](#) Team will review and approve all permits, and provide feedback as appropriate.
- B. The LANL Air Quality Review Team will review draft NMED notifications, and approve or provide feedback as appropriate.

A.1.51 Exhibit F – Clause: F50.0 Biological Resources Protection

This clause addresses subcontractors complying with work restrictions associated with biological resource protection.

Note: LANL's [Biological Resources Support Team](#) does not expect subcontractors to have the experience and knowledge to manage biological resource protection without help from LANL EPC-ES. However, the LANL [Biological Resources Support Team](#) does expect institutional project owners to use LANL's Integrated Review Tool (i.e., PRID and EXID), LANL Biological Resources SME work plan review, design requirements, and/or biological assessment requirements and conservation measures to identify requirements that need to be passed to subcontractors with the STR's assistance.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will incorporate into task-specific work planning and control documents (e.g., IWD, etc.) all biological resource protection work restrictions LANL identified for the scope of work.

Subcontract Technical Representative Duties

- A. Relay work restrictions to the subcontractor identified through LANL's work plan review, PRID comments, and/or EXID comments.
 - a. Assist subcontractors in connecting with LANL's [Biological Resources Support Team](#) whenever there are questions, help is needed, or reasons to err on the side of caution.

LANL ESH Representative Duties

- A. LANL ESH Representative(s) will confirm all work restrictions are captured in the task-specific work planning and control documents (e.g., IWD, etc.), contacting LANL [Biological Resources Support Team](#) as needed.

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Note: The DEP supporting the project and the Biological Resources Support Team are the best situated to confirm environmental-driven work restrictions are captured in the task-specific work planning and control documents.

- B. LANL Biological Resources Support team will provide support to the subcontractor in understanding and complying with biological resource protection measures via the STR.

A.1.52 Exhibit F – Clause: F51.0 Cultural Resources Protection

This clause addresses subcontractors complying with work restrictions associated with cultural resource protection.

Note: The LANL [Cultural Resources Support Team](#) does not expect subcontractors to have the experience and knowledge to manage cultural resource protection without help from the Team. However, the LANL Cultural Resources Support Team does expect institutional project owners to use LANL's Integrated Review Tool (i.e., EXID and PRID), LANL Cultural Resources SME work plan review, and/or design requirements to identify requirements that need to be passed to subcontractors through the STR.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will incorporate into task-specific work planning and control documents (e.g., IWD, etc.) all cultural resource protection work restrictions LANL identified for the scope of work.

Subcontract Technical Representative Duties

- A. Relay work restrictions to subcontractor identified through LANL work plan review, PRID comments, EXID comments, and/or design requirements.
 - a. Assist subcontractors in connecting with LANL [Cultural Resources Support Team](#) support whenever there are questions, help is needed, or reasons to err on the side of caution.

LANL ESH Representative Duties

- A. LANL ESH Representative(s) will confirm all work restrictions are captured in the task-specific work planning and control documents (e.g., IWD, etc.), contacting LANL [Cultural Resources Support Team](#) as needed.

Note: The DEP supporting the project and the LANL Cultural Resources Support Team are the best situated to confirm environmental-driven work restrictions are captured in the task-specific work planning and control documents.

- B. LANL Cultural Resources Support Team will provide support to the subcontractor via the STR in understanding and complying with cultural resource protection measures.

A.1.53 Exhibit F – Clause: F52.0 Pesticide and Herbicide Applications

Most pesticide applications at LANL are completed by LANL Roads and Grounds staff. If there is a need for a subcontractor to apply pesticides at LANL, this will be authorized prior to application.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit request to STR to apply pesticides.

Subcontract Technical Representative Duties

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- A. Coordinate with the DEP supporting the project and LANL [EPC-CP Water Quality Pesticide SME](#) to ensure pesticide applications meet applicable state and federal requirements.

LANL ESH Representative Duties

- A. LANL [EPC-CP Water Quality Pesticide SME](#) will review proposed pesticide application and work with the DEP and STR to fulfill applicable requirements.

A.1.54 Exhibit F – Clause: F53.0 Refrigerants

This clause addresses subcontractors providing services related to refrigerants or refrigeration appliances, and ensures compliance with EPA regulations by coordinating with LANL reporting requirements.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit to STR for review and approval by LANL, the EPA certification card of refrigeration equipment technicians before these individuals start work.
- B. Subcontractor will communicate to the STR the intent to install new equipment that uses flammable refrigerants.
- C. Subcontractor will fill out the [Attachment F53-2, LANL Refrigeration Appliance Inventory](#) (available in EDRMS) form when installing new refrigerant-containing equipment.
- D. Subcontractor will communicate with LANL [Meteorology and Air Quality Team](#) via the STR, refrigerant disposal or recycle plans. Note, all refrigerants intended to be sent off-site are to be offered to the Department of Defense prior to considering any other disposal or recycling options.

Note: This is coordinated through the LANL Meteorology and Air Quality Team.

- E. Subcontractor will complete [Attachment F53-1, LANL Refrigerant Service Record](#) form for each service, repair, maintenance or installation of refrigerant-containing equipment.

Subcontract Technical Representative Duties

- A. Provide LANL [Meteorology and Air Quality Team](#) EPA certifications for technicians prior to subcontractor technicians beginning work.
- B. Request authorization from refrig_approval@lanl.gov to purchase and/or install equipment with flammable refrigerants.
- C. Provide subcontractors with [Attachment F53-2](#) and [Attachment F53-1](#).
 - a. Forward completed forms to LANL's Meteorology and Air Quality Team at refrigerants@lanl.gov.
- D. Communicate with LANL Meteorology and Air Quality Team regarding subcontractor disposal/recycling plans for refrigerants.

LANL ESH Representative Duties

- A. LANL [Meteorology and Air Quality Team](#) will:
 - a. Provide approval of EPA-certified technicians and communicate approval to the STR.
 - b. Review requests to purchase and/or install equipment with flammable refrigerants and approve or provide feedback to STR.

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- c. Facilitate collection of refrigerants, which will be sent to the Department of Defense.
- d. Enter, track and file information from [Attachment F53-2](#).
- e. Enter, track and file information from [Attachment F53-1](#).

A.1.55 Exhibit F – Clause: F54.0 Aboveground Storage Tank

This clause outlines subcontractor coordination requirements with NMED Petroleum Storage Tank Bureau, 20.5 NMAC, 40 CFR 112, and EPC-CP when subcontractor work involves installation, replacement, repair, or modification of a LANL or subcontractor aboveground storage tank. These requirements may be applicable when subcontractors bring their own oil-filled equipment or oil tanks onsite.

Note: Depending on the location of work, quantity of LANL petroleum products at that location, and subcontractor plans for bringing their oil-filled equipment or tanks on-site, the subcontractor may fall under an existing LANL SPCC plan or may be required to collaborate with LANL [Aboveground Storage Tanks \(AST\) Team](#) and others to create a new Spill Prevention Control and Countermeasure (SPCC) plan. IRT/PRID and the AST Team can assist with the determination as well as if subcontractor will need to register their equipment with NMED.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit to the STR documentation of AST system registration with the NMED Petroleum Storage Tank Bureau (PSTB) when required by NMED.
- Note:** Subcontractor will keep NMED PSTB tank registration documentation; it is a record subject to inspection.
- B. If subcontractor work requires the development of a new SPCC plan, subcontractor will collaborate with LANL [AST Team](#), LANL DEPs, LANL Engineers, and others as needed to develop the SPCC plan.
 - C. Subcontractor will inform STR of intent to bring on-site, new oil-filled equipment or tanks ≥ 55 gallons.
 - A. Subcontractor will inform STR when they are removing an AST or other equipment subject to SPCC requirements no later than 7 days from the change.

Subcontract Technical Representative Duties

- A. Relay copy of NMED PSTB tank registration documentation to [AST Team](#).
- B. Contact AST Team to initiate collaboration between subcontractor and LANL on the development of SPCC plan.
- C. Contact AST Team to initiate SPCC plan or other changes associated with subcontractor intent to bring on-site new oil-filled equipment or tanks ≥ 55 gallons.
- D. Contact AST Team to inform them an AST or other oil-filled equipment subject to SPCC /NMED PSTB requirements is being removed from LANL.

LANL ESH Representative Duties

- A. LANL [AST Team](#) will review the NMED PSTB tank registration to verify compliance. Relays acceptance or feedback to STR.

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- B. LANL AST Team will assist in the development of the SPCC plan (if needed) and coordinate additional LANL reviews and signatures. LANL AST Team will provide STR a copy of the approved plan to provide to subcontractor.
- C. LANL AST Team will update applicable LANL SPCC plans when subcontractor brings new oil-filled equipment or tanks on-site, or equipment has been removed.

A.1.56 Exhibit F – Clause: F55.0 Demolition, Remodeling, or Renovation

This clause outlines requirements in several hazard areas when demolition, remodeling, or renovation work will be conducted: OSHA demolition and preparation operations requirements; fall protection system criteria and practices; helicopters, hoists, elevators, and conveyors; cranes and derricks; LANL waste management requirements; and NMED notifications.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit to the STR copies of notification forms/letters to the NMED Air Quality Bureau for any renovation that may disturb greater than threshold quantities of asbestos-containing material, all roofing work, and all demolition work requiring advanced notice to NMED Air Quality Bureau even if no asbestos is present. These documents are to be provided to the STR at least 15-working days before work begins.
- B. Subcontractor will submit approved notification to NMED at least 10-working days before work begins.

Subcontract Technical Representative Duties

- A. Relay submitted notification forms/letters to permits to airreview@lanl.gov.

LANL ESH Representative Duties

- A. LANL [Air Quality Review](#) Team will review the draft NMED notification, and approve or provide feedback to the STR, as appropriate.

A.1.57 Exhibit F – Clause: F56.0 Asbestos Abatement/Demolition/Roofing Work

This clause address two types of asbestos-related work: subcontractors working in areas where asbestos is located, but are not expected to disturb it, and asbestos abatement activities.

Forms, Attachments, Authorizations, and Submissions

- A. Subcontractor will submit to the STR:
 - a. Asbestos Abatement Plan that complies with the requirements on 29 CFR 1910.1001 and/or 29 CFR 1926.1101 as part of the SSESHP
 - b. Company abatement license
 - c. Names of workers who will do abatement, and their qualification/training/certificate records
 - d. Worker's written medical authorization to wear a respirator (most recent)
 - e. Personnel respirator fit test (most recent)
 - f. Inspector accreditation certificate and inspection report, if applicable
 - g. Designer accreditation certificate and designer report, if applicable

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- B. Subcontractor will submit all applicable NMED Air Quality Bureau notifications/forms to the STR at least 15-working days before work begins.
- C. Subcontractor will provide the STR with copies of the signed waste shipment records within 10-working days of waste shipment delivery.

Subcontract Technical Representative Duties

- A. Relay the Asbestos Abatement Plan and supporting documentation to the LANL ESH Representative(s) supporting the project for review and approval.
- B. Transmit copies of NMED Air Quality Bureau notifications/forms to LANL [Air Quality Review Team](#).
- C. Ensure LANL [Waste Management Services](#) (WM-WMS) has approved waste transporters, waste destination facility, and waste shipment documentation prior to shipment off-site. See F18 *Waste Management* for additional details.
- D. Provide copies of signed waste shipment records to LANL Waste Management Services (WM-WMS) at wms-all@lanl.gov.

LANL ESH Representative Duties

- A. Review the submitted SSESHP by comparing it to the [SSESHP Evaluation Notes](#) posted under the tools section of the Exhibit F webpage. Consult with the [OSH-ISH Asbestos Program Lead](#) as needed. Relay approval or feedback to STR.

Note: The SSESHP Evaluation Notes do not dictate a format, rather it highlights information LANL expects to see in the SSESHP.
- B. LANL [Air Quality Review Team](#) reviews the required information provided by subcontractor 15-working days before work starts, and provides feedback as appropriate. Then LANL (LOG-CS) or the subcontractor submits the 10 Day Notification to NMED Air Quality Bureau 10-working days before work begins.
- C. LANL [Waste Management Services](#) (WM-WMS) will review and approve waste transporters and waste destination facilities according to LANL procedures. Relay approval or feedback to STR as needed.
- D. LANL Waste Management Services (WM-WMS) will process signed waste shipment records according to LANL procedures.

A.2.0 DEFINITIONS AND ACRONYMS

A.2.1 Definitions

See LANL Definition of Terms.

LANL ESH Representative—The term is used to as a general term to indicate the individuals who will participate in the development and signing of the Exhibit F, along with subcontractor oversight over the course of work. *ESH Representative* includes at a minimum, Industrial Hygiene, Safety, and Environmental Professionals; Electrical Safety Officers, Radiation Protection, Waste Management and other ESH subject matter experts should be included as appropriate.

Potholing—The practice of digging a test hole to expose underground utilities to ascertain the horizontal and vertical location of the utility.

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A.2.2 Acronyms

See LANL [Acronym Master List](#).

AdSTR	Administrative Subcontract Technical Representative
AHJ	Authority Having Jurisdiction
ALDESHQSS	Associate Laboratory Directorate, Environment, Safety, Health, & Quality, Safeguards and Security
ANSI	American National Standards Institute
AOC	Area of Concern
ASM	Acquisition Services Management
ASME	American Society of Mechanical Engineers
AST	aboveground storage tank
BSL	Biosafety Level
CFR	Code of Federal Regulations
CPCS	Construction, Projects, and Crafts Support
CGP	Construction General Permit
DART	Days Away, Restricted, or Transferred
DEP	Deployed Environmental Professional
DOE	Department of Energy
EPA	Environmental Protection Agency
EPC-ES	Environmental Protection and Compliance-Environmental Stewardship
EPC-WMP	Environmental Protection and Compliance-Waste Management Programs
ESH	Environment, Safety and Health
ESO	Electrical Safety Officer
ES-UI	Engineering Services Utilities & Infrastructure
EWSP	Elevated Work Surface Plan
EXID	Excavation/Fill/Soil Disturbance
FOD	Facilities Operations Division
HCP	Hearing Conservation Program
HEPA	High-Efficiency Particulate Air
HVAC	Heating, Ventilation and Air Conditioning
IPT	Integrated Project Team
IRT	Integrated Review Tool
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
MSGP	Multi-Sector General Permit
MUTCD	Manual on Uniform Traffic Control Devices
NFPA	National Fire Protection Association
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System

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NOI	Notice of Intent
NRTL	Nationally Recognized Testing Laboratory
OSH-DS	Occupational Safety and Health-Deployed Services
OSH-ISH	Occupational Safety and Health-Industrial Safety and Hygiene
OSHA	Occupational Safety and Health Administration
PPE	personal protective equipment
PIC	Person in Charge
PRID	Permits Requirements Identification
RGD	Radiation Generating Device
RSS	Radioactive Sealed Source
SME	Subject Matter Expert
SPCC	Spill Prevention Control and Countermeasure
SSESH	Site-Specific Environment, Safety and Health Plan
STR	Subcontract Technical Representative
SWMU	Solid Waste Management Unit
SWPPP	Storm Water Pollution Prevention Plan
TCP	Traffic Control Plan
TRC	Total Recordable Cases
WCS	Waste Certification Statement
WCSF	Waste Characterization Strategy Form
WM-WGS	Waste Management-Waste Generator Services
WM-WMS	Waste Management-Waste Management Services