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**UCOR Subcontractor Safety Manual,
Oak Ridge, Tennessee**

This document is approved for public release
per review by:

David Hamrin

UCOR Classification &
Information Control Office

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UCOR-5357/R1

**UCOR Subcontractor Safety Manual,
Oak Ridge, Tennessee**

Date Issued—March 2025

Prepared for the
U.S. Department of Energy
Oak Ridge Office of Environmental Management

United Cleanup Oak Ridge LLC
under contract 89303322DEM000067

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APPROVALS

UCOR Subcontractor Safety Manual, Oak Ridge, Tennessee	UCOR-5357/R1
	March 2025

USQD Review Determination	☒ USQD ☐ UCD ☐ CAT X ☐ Exempt (Select criteria 1–3 below.) USQD/UCD/CAT X No.: <u>PSW-MS-UCOR5357-2530</u>
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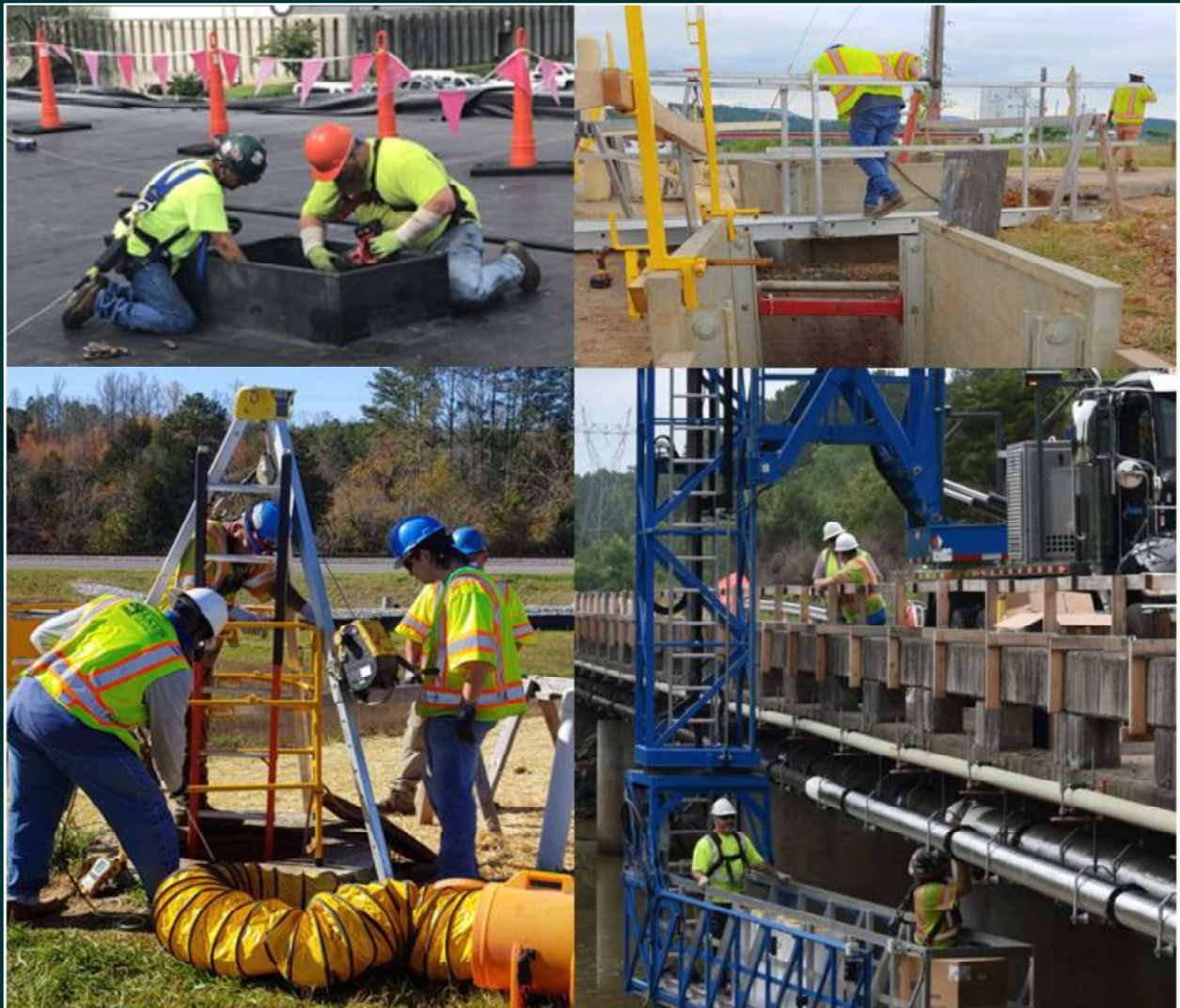
REVISION LOG

Revision number	Date	Description of changes	Sections or pages affected
0	March 2020	Initial release.	All
1	March 2025	Reordered and updated information to reflect revisions of procedures.	All

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UCOR Subcontractor Safety Manual

April 2025



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ACRONYMS

ACGIH	American Conference of Government Industrial Hygienists
ANSI	American National Standards Institute
ASTM	ASTM International
CFR	<i>Code of Federal Regulations</i>
CHE	construction heavy equipment
CMV	commercial motor vehicle
COC	certificate of conformance
CPR	Competent Person Rigger
DL	Designated Leader
DOE	U.S. Department of Energy
DOL	U.S. Department of Labor
EAHJ	Electrical Authority Having Jurisdiction
FM	facility manager
FPE	fire protection engineer
FPPP	Fall Prevention and Protection Program
FR	flame resistant
GFCI	ground-fault circuit interrupter
H&R	hoisting and rigging
HM	hazardous materials
HMIS	Hazardous Materials Information System
HWP	Hot Work Permit
IH	industrial hygiene
IHWP	Industrial Hygiene Work Permit
ISEA	International Safety Equipment Association
ISMS	Integrated Safety Management System
ISO	International Organization for Standardization
JPM	Job Performance Measure
LEARN	Local Education Administrative Requirements Network
LO/TO	lockout/tagout
NRR	Noise Reduction Rating
NRTL	Nationally Recognized Testing Laboratory
OCCMED	occupational medicine
OSHA	Occupational Safety and Health Administration
PAPR	powered air purifying respirator
PIC	person in charge
PPE	personal protective equipment
QEW	Qualified Electrical Worker
S&H	safety and health
SCC	Subcontract Coordinator
SCWE	Safety Conscious Work Environment
SDS	Safety Data Sheet
SME	subject matter expert
SRL	self-retracting lanyard
STR	Subcontract Technical Representative
UCOR	United Cleanup Oak Ridge LLC
VCES	Vehicle Construction/Equipment Spotter
VPP	Voluntary Protection Program

WLL	working load limit
WP	work package

1. PURPOSE

This manual is intended as a reference and resource for key elements related to the United Cleanup Oak Ridge LLC (UCOR) values, principles, policies, programs, procedures, and processes for ensuring project compliance and the safety and health (S&H) of Subcontractors. Not all S&H subject matter is covered in this manual; contract-specified documents and requirements supersede this reference and resource tool. Each Subcontractor is responsible for ensuring compliance with “all applicable requirements” that govern their work, including any consensus standards incorporated by reference in 10 *Code of Federal Regulations (CFR) Part 851, Worker Safety and Health Program*. If this manual does not contain information on a particular topic, the Subcontractor shall ensure the governing regulatory provisions or national consensus standards are implemented, as applicable. If there is conflict between requirements, the Subcontractor is to apply the most stringent standards unless otherwise directed. Subcontractors are always encouraged to apply best management practices when feasible.

UCOR promotes a Safety Conscious Work Environment (SCWE) to empower the worker to have a questioning attitude.



Safety Conscious Work Environment Policy Statement

March 2024

This policy establishes the commitment of the Department of Energy Oak Ridge Office of Environmental Management (OREM) and UCOR to foster and maintain a safety conscious work environment (SCWE) in all facilities and for all work. Safety includes protecting workers, the public, and the environment. This policy applies to all employees and contractors and is based on the following principles:

- Safety is a prerequisite for all work. Our expectation is that each employee goes home in the same condition in which he or she came to work. Our goal is zero injuries.
- All employees are encouraged and expected to promptly report all injuries, illnesses, and environmental incidents.
- All employees are encouraged and expected to have a questioning attitude and stop work if they feel a job cannot be done safely or the environment is threatened.
- All members of the OREM and UCOR leadership team, up to and including the OREM Manager and the UCOR President & Chief Executive Officer, have an open-door policy, especially pertaining to safety.
- Employees have, and are encouraged and expected to use, multiple venues to express safety concerns. These include, but are not limited to, their management chain and Employee Concerns.
- Employee involvement is the cornerstone of our safety culture and is essential to the successful implementation of the Integrated Safety Management System, Environmental Management System, Nuclear Safety, the Voluntary Protection Program, and other ESH&QA program elements.

Employees are encouraged to raise safety issues and concerns without fear of reprisal. The OREM/UCOR leadership team will address and resolve issues and concerns in a timely manner while exhibiting behaviors that foster employee confidence to raise concerns.

A handwritten signature in purple ink, appearing to read "KRueter", is written over a horizontal line.

Kenneth Rueter
President & Chief Executive Officer
UCOR

A handwritten signature in purple ink, appearing to read "John A. Mullis II", is written over a horizontal line.

John A. (Jay) Mullis II
Manager, DOE Oak Ridge
Office of Environmental Management

UCOR is a Voluntary Protection Program (VPP) Star site that demonstrates safety beyond compliance.



WHAT IS THE Voluntary Protection Program?

The purpose of the DOE Voluntary Protection Program (VPP) is to recognize contractors and their employees who have an excellent safety and health program that is backed by a stellar safety culture.

VPP is based on the following tenets: Management Leadership, Employee Involvement, Worksite Analysis, Hazard Prevention and Control, and Safety and Health Training.

Employee involvement is the cornerstone of VPP. VPP identifies opportunities for improvement and empowers employees to go beyond compliance. The primary benefit of VPP is enhancing UCOR's safety culture and ensuring that all employees go home safe and uninjured each day.



Be a VPP Star Performer on Team UCOR!



VPP Bill of Rights

As UCOR employees and subcontractors, we have the right and responsibility to:

- ★ Participate in the identification and resolution of safety and health concerns.
- ★ Report and/or suspend unsafe acts and conditions without fear of reprisal.
- ★ Be involved in and/or view the results of accident and incident investigations.
- ★ Be involved in creating a workplace that is free of injury and illness by actively caring for our own safety and the safety of our coworkers.

UCOR uses the Integrated Safety Management System (ISMS) to create a teaming relationship between management and the worker.



UCOR promotes physical, mental, and emotional wellness through the Mission Ready Program.



MISSION READY EMPLOYEES

are Prepared, Ready, & Able

(physically, mentally, emotionally) to complete their job tasks today.

GOAL: zero injuries and illnesses on the job

Physical Readiness



Fully able to do what is required physically (e.g., hear and see clearly, lift what you need to, manipulate equipment/computers that you have to use).



Making accommodations for the environment you will be working in (e.g., hat and sunscreen for heat, gloves and warm clothes for cold, rain gear, etc.).



Diet impacts you physically in a number of ways. A healthy diet provides energy you need to work at your best, helps you sleep better, and leads to longevity.



Adequate hydration is critical, especially if you work in the sun. Dehydration can cause you to feel tired, irritable, confused, and worse.



Stretched: when you are well stretched, your joints and muscles can work at top efficiency. Stretching enhances your flexibility and range of motion, reduces tension, improves your posture, and decreases risk of muscle injury.

Mental & Emotional Readiness



Your ability to concentrate on the task at hand and block out distractions. When stressful things happen, your focus can be affected. Tell your supervisor about that stress.



Stress affects you physically, mentally, and emotionally. Learn to recognize your stressors and ways to cope, like deep breathing, writing things down, and letting go of little things that overwhelm you.



Being present and fully engaged in what you are doing, being aware of the situation around you, and being able to control your reactions.



Having the skills and training to successfully do the task in front of you, whether that's operating heavy machinery, planning budgets, overseeing programs, or any of the other things we do at UCOR.

Overall Readiness



Getting plenty of sleep so that you are well-rested supports you in every way. The average adult needs 7 to 9 hours of sleep each night. When you don't get enough sleep, you can experience memory problems, depression, low energy, a weakened immune system, and much more.

Emergency Contact Information

After notification to 9-1-1/Y-12 OC/PSS/ORNL LSS/Control Point, contact UCOR ESWO: (865) 574-3282	
<i>Location</i>	<i>How to Report</i>
ETTP (Heritage Center) Radio (K PSS OPS)	• 9-1-1 (say you are trying to reach the City of Oak Ridge) • Activate a fire alarm pull box
Y-12 and ORRL Radio (Y PSS)	• (865) 574-7172 (Y-12 OC/PSS) • Activate a fire alarm pull box
ORNL Radio (X LSS)	• (865) 574-6606 (LSS) • Activate a fire alarm pull box
TWPC	• (865) 576-3969 (Control Point) during normal business hours • LSS at (865) 574-6606, 9-1-1 by landline or Emergency Call Box • Activate a fire alarm pull box
Bear Creek Valley (EMWMF) Radio (K PSS OPS)	• 9-1-1 (say you are trying to reach the City of Oak Ridge)
Leased Facilities (e.g., 90 & 100 Union Valley Rd, 701 Scarboro Rd, 105 Mitchell Rd)	• 9-1-1 (say you are trying to reach the City of Oak Ridge) • Activate a fire alarm pull box
Bldgs. 1916-T2 and 1916-T3	• 9-1-1 (say you are trying to reach the City of Oak Ridge) • Activate a fire alarm pull box • DOE OROC: (865) 576-1006

EMWMF = Environmental Management Waste Management Facility

ESWO = Emergency Services Watch Office

ETTP = East Tennessee Technology Park

LSS = Laboratory Shift Superintendent

OC = Y-12 Operations Center

ORRL = Oak Ridge Reservation Landfill

OROC = Oak Ridge Operations Center

PSS = Plant Shift Superintendent

TWPC = Transuranic Waste Processing Center

UCOR = United Cleanup Oak Ridge LLC

Y-12 = Y-12 National Security Complex

2. CONTRACTUAL FLOW-DOWN DOCUMENTS AND RESOURCES

The following are key documents and resources identified in the contract.

2.1 KEY DOCUMENTS AND RESOURCES

- PPD-EH-1745, *Worker Safety and Health Program*
- PROC-EH-2000, *General Safety Requirements*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*
- Exhibit A, *General Conditions*
- Exhibit B, *Special Conditions*
- Exhibit G, *Environmental Compliance and Protection, Radiation Protection, and Worker Safety and Health*
- Exhibit L, *Procedures*
- Exhibit M, *Training Matrix*
- Exhibit I, *Submittals*
- UCOR Subcontracting webpage—<https://ucor.com/subcontractors/>

2.2 U.S. DEPARTMENT OF ENERGY (DOE)

- 10 CFR Part 851, *Worker Safety and Health Program*
- DOE *Worker Safety and Health Program (10 CFR 851/DOE O 440.1B)* webpage
— <https://www.energy.gov/ehss/worker-safety-and-health-program-10-cfr-851>

2.3 SAFETY CULTURE

- DOE ISMS—<http://intranet.ettp.gov/isms/>
- UCOR is a DOE VPP Site—<http://intranet.ettp.gov/vpp/>
- Safety is a Prerequisite to Everything We Do—<http://intranet.ettp.gov/safetyculture/>
- Zero Accidents IS Possible
- Stop Work Authority
- Safety Conscious Work Environment (SCWE)—<http://intranet.ettp.gov/scwe/>
- Employee Concerns Program (ECP)—<http://intranet.ettp.gov/ERConcerns/eeconcerns.html>
- Employee Engagement
 - Local Safety Improvement Teams (LSITs)—file:///ettp.gov/Sharedfiles/ESH_Programs/LSIT/
 - Questioning Attitude (iQuestion) Program (iQP)—<http://intranet.ettp.gov/qattitude/iquestion.html>

2.4 SAFETY AND HEALTH COMPLIANCE AND VERIFICATION PLAN

A formal plan and documentation for ensuring compliance, to include:

- Assigned responsibility for various equipment/inspections and methods:
 - List of equipment type and responsible person/owner
 - Frequency of required inspection
 - Method and documentation of inspection (form, tag, identifying tape, etc.)
- Inventory of equipment/tools:
 - Power tools, electrical equipment, ladders, rigging, air compressor, safety equipment, etc.
 - Applicable user manuals
 - Documented review/training of employees
- Inspection documentation:
 - Forms, etc., that document the required inspections
- Safety and Health (S&H) Representative plans/schedules to verify inventories, inspections, and work activity compliance with requirements:
 - List of items and activities to verify and verification frequency for each item and activity
 - Documents guiding performance of observations
 - Other key items to evaluate:
 - Fit-for-duty limitations and safety advisories
 - Glove Matrix—<http://intranet.ettp.gov/ESHweb/esh.htm>
 - Cutting tool evaluation
 - Material handling ergonomic evaluation (Form-1170b, Ergonomics Evaluation Checklist [Industrial Ergonomics])

2.5 REQUIRED SUBMITTALS

- Occupational Medical (OCCMED) provider information
- S&H Compliance Verification and Inspection Plan
- Chemical Inventory (Form-1017, HMIS¹ Physical Inventory) and applicable Safety Data Sheets (SDSs)
- Monthly Injury/Illness Report
 - Required by the third working day of each month
- Other project-specific submittals identified per Exhibit I, Attachment A:
 - Form-3746, Fall Protection Plan
 - Construction/traffic control plan

¹Hazardous Materials Information System

3. MOBILIZATION

3.1 COMMUNICATION

- Know your location address and emergency contact number.
- Develop a project contact list (consider lanyard cards).
- Post a key personnel contact notification list.
- Sign up for the Mass Notification System for up-to-date information on site closures, weather, and related information:
 - https://sses-sp.ettp.gov/Shared%20Documents/MassNotificationSystem_email.pdf

3.2 DOE AND OTHER AGENCY BULLETIN BOARD POSTINGS

DOE, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor (DOL), etc.:

- UCOR Subcontracting webpage—<https://ucor.com/subcontractors/>
- DOL Workplace Posters—<https://www.dol.gov/general/topics/posters>

3.3 OCCUPATIONAL MEDICINE

- Exhibit A, *General Conditions*, GC-62, “Medical Surveillances and First Aid Facilities”
- PPD-MD-8003, *Occupational Medical Program*
- 10 *CFR* Part 851, App. A, *Worker Safety and Health Functional Areas*, Sect. 8, “Occupational Medicine”
- Subcontractor shall have an OCCMED provider and may choose the option to enter into a service agreement with UCOR Health Services (Form-2347, Service Agreement for Medical Services)
 - Premobilization submittal requirement for OCCMED information
- Pre-employment OCCMED fit-for-duty evaluation:
 - All key personnel and those performing physical work activities
 - Work activity specific (equipment operator, Hazardous Waste Operations and Emergency Response [HAZWOPER], respiratory, etc.)
 - Matrix of employee safety advisories and limitations
- Personal medical treatment and/or illness (POL-UCOR-308, *Returning to Work Safely*)
 - Surgery, including outpatient
 - Illness involving continuous absence from work of 40 hr or more

3.4 OCCUPATIONAL INJURY

- PROC-EH-2001, *Injury/Illness Reporting and Investigation*
- All potential injuries and first aids (including insect stings and ticks) require initial medical evaluation and review by an OCCMED provider. (Field first aid alone is not acceptable).
- Supervisor and/or safety shall transport injured employee (including insect stings and first aids).
- Initial evaluation (if nonemergency transport) should be performed by UCOR Health Services (per Workers Compensation Wrap-up Coverage for DOE 89303322DEM000067).
- UCOR Health Services will provide appropriate treatment, then advise and release for further evaluation/treatment by Subcontractor OCCMED provider.
- Prior to employee returning to a UCOR project, UCOR Health Services shall perform evaluation after release from Subcontractor OCCMED provider to confirm return-to-work status and any safety advisories and/or limitations.
- UCOR Safety Representative will lead, with Subcontractor assistance (Form-411, Injury/Illness Investigation Report).
- UCOR Case Management Team will coordinate with Subcontractor case manager for classification of injury and reporting requirements.

3.5 EVENT REPORTING

- Report all events, potential near misses, and upset conditions (no matter how minor) to the Subcontract Technical Representative (STR).
- Secure the scene.
- STR ensures UCOR Safety, Facility Manager (FM), and Project Manager (PM) are notified.

3.6 EMERGENCY PREPAREDNESS

- Contact numbers
- Local/nearest Local Emergency Plan and/or Emergency Action Plan
- Assembly points and safe shelters

3.7 SEVERE WEATHER

- Mass Notification System—https://sses-sp.ettp.gov/Shared%20Documents/MassNotificationSystem_email.pdf
- Emergency shelters
- Lightning and thunder protocols
- Wind speed information

- Snow and ice removal for safe access
- Contact for site closures

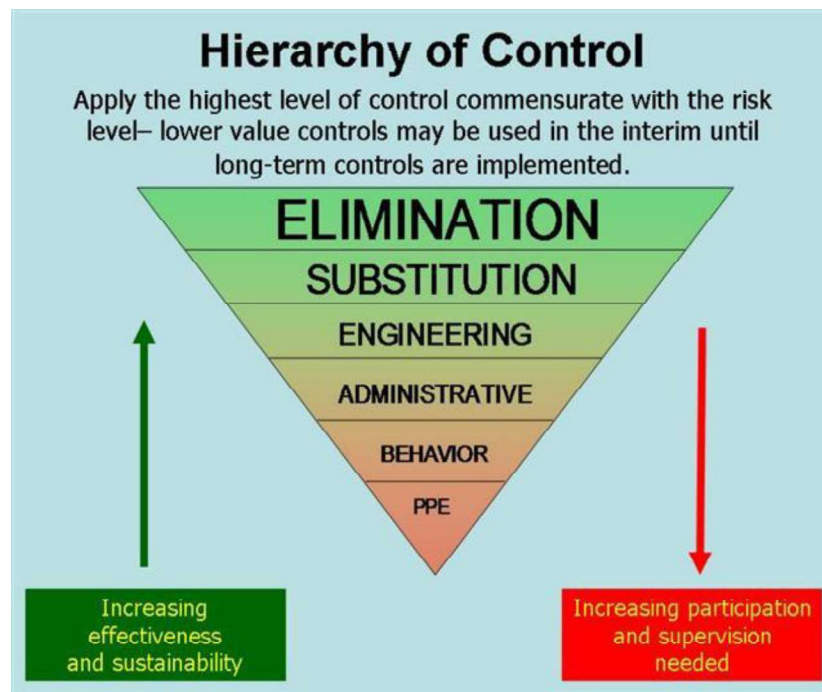
3.8 MOBILIZATION

- Vehicles
 - Seat belts and all traffic postings
 - Parking and access
- Sanitation
- Equipment inbound/outbound inspection
 - STR must be present during loading/unloading of heavy equipment
- Laydown
- Office/break trailers/inspection/readiness

3.9 EMPLOYEE ONBOARDING

- Badge, access card, and OCCMED evaluation
- Site-specific briefing
- Emergency contact information and response
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*
- UCOR-5357, *UCOR Subcontractor Safety Manual* (latest revision)
- DOE worker information postings
- Training Matrix
- Hazard communication (HAZCOM) and SDS
- Personal protective equipment (PPE)

3.10 HAZARD ANALYSIS AND HIERARCHY OF CONTROLS



3.11 PERFORMING WORK AND HAZARD ANALYSIS

- STR must confirm start work each day.
- Key personnel:
 - Approved Supervisor/Superintendent must be onsite at all times work is being performed.
 - Other required key personnel (S&H Representative) must be onsite, unless approved by the STR.
- Work control:
 - Approved work package (WP) required per PROC-FS-1001, *Integrated Work Control Program*.
 - Pre-job brief and/or Safety Task Analysis Risk Reduction Talk (STARRT) card (Form-856)

3.12 SIGNS, BARRICADES, AND OTHER POSTINGS

- PROC-EH-1013, *Accident Prevention Signs, Barricades, and Other Postings*
- Work zones shall be controlled.
- Construction sign/posting with contact information and access requirements

3.13 PEDESTRIAN SAFETY

- Safe access and parking lots
- Segregation from vehicles and heavy equipment

- Illumination
- Safe walkways
- Stairs and handrails
- Slip-resistant steps, floors, etc.
- Housekeeping

3.14 VEHICLE OPERATIONS

- PROC-EH-2020, *Safe Use of Vehicles*
 - Required for operating company/project-related vehicles on the project site for the performance of work (excluding general travel to/from project).
- Training required (refer to Training Matrix).
- 360-degree walkaround required prior to entering vehicle.
- Traffic cone required to be placed on driver side front or rear based on next intended move.
- Signal horn twice prior to first move.
- Use a Guide/Spotter, if available.
- No use of communication devices while operating.

3.15 SAFE CUTTING TOOLS

- PROC-EH-2000, *General Safety Requirements*
- Matrix of activities and approved cutting device(s)
- Safety-engineered cutting devices:
 - Concealed blade (e.g., Martor Secumax)
 - Auto-retracting blade independent of release mechanism (e.g., Martor Secupro 625)
 - Automatic blade guard (e.g., Olfa SK6)
- S&H Operations Manager approval required to use the following:
 - X-ACTO, utility, carpet, or box-cutter knives
 - Standard lock-back knives
 - Multiuse tools
- Personal knife/tool:
 - Prohibited in the performance of work.
 - Shall not enter the work area.
 - Only allowed to be kept in personal vehicle and/or with personal belongings in offices, lunchrooms, etc.
 - Only for personal use on personal time, e.g., preparing food.

- Two work-related events resulting in significant hand injuries were directly related to the use of a personal knife because the worker had it on their person in the work area.

3.16 HAND AND POWER TOOLS

- PROC-EH-2000, *General Safety Requirements*
- Inventory and manuals for all power tools
- Documentation of employee review of user manual(s)
- Training and authorization for higher risk tools (identified on Training Matrix)
 - Concrete cutting saws
 - Pneumatic compressors
 - Pipe threader, etc.
 - Unique/specialized equipment

3.17 ENVIRONMENTAL

- Spill kits shall be maintained and inspected.
- Storm Water Pollution Prevention Plan requires biweekly inspections at least 72 hr apart by a certified inspector with a current Tennessee Erosion Prevention and Sediment Control (TNEPSC) certification).
- Erosion prevention and sediment controls (EPSC) shall be used.

4. TECHNICAL REQUIREMENTS

4.1 EXHIBIT B, *SPECIAL CONDITIONS*, SC-23, “TRAINING”

The initial Contractor-provided Training Matrix identifies the CONTRACTOR provided training that is or may potentially be applicable for this scope of work. It may not be all inclusive and may vary based on the method of performance. SUBCONTRACTORS are responsible for demonstrating due diligence in identifying and ensuring each employee is trained to all regulatory, manufacturer, etc., requirements commensurate with their roles and responsibilities. SUBCONTRACTORS must request and be granted an equivalency or exception to obtain training from other sources. Training that CONTRACTOR does not provide will be evaluated on a case-by-case basis through the STR.

Job performance measures (JPMs) are required to be documented by the UCOR Training provider for the operation of all heavy equipment, spotting, etc.

Training/briefing on the use of power-operated hand tools shall be performed and documented by the Subcontractor.

Per OSHA, the employer is responsible for ensuring their employees are properly trained to be qualified to perform their responsible activities and operate all forms of equipment and machinery, as follows.

4.2 TITLE 29 *CFR* SECT. 1926.20(B)(4)

The employer shall permit only those employees qualified by training or experience to operate equipment and machinery.

4.2.1 Interpretation

Question (1): Are the training requirements in Sect. 1910.178(l) applicable to skid steer loaders used for earthmoving in construction? If not, what training requirements apply?

Answer: No; however, 29 *CFR* Sect. 1926.21(b)(2) states:

The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his [or her] work environment to control or eliminate any hazards or other exposure to illness or injury.

Therefore, under Sect. 1926.21(b)(2), the employer is required to train the skid steer operators so that they can recognize and avoid unsafe conditions. As a practical matter, such training needs to be comprehensive enough to ensure that the operator is fully capable of safely handling the equipment in the type of conditions they will encounter at the site. The amount of training necessary to fulfill the requirement may be reduced based on the extent to which the operator has acquired the necessary knowledge and skill from prior experience (see the answer to Question [2] below).

Question (2): Title 29 *CFR* Sect. 1926.20(b)(4) provides that only those who are qualified through training or “experience” are allowed to operate equipment. In this context, what does “experienced” mean? If a worker has operated the equipment a number of times in the past, does that automatically mean they are “experienced” for purposes of this requirement?

Answer: No. Title 29 *CFR* Sect. 1926.20(b)(4) states:

The employer shall permit only those employees **qualified by** training or experience to operate equipment and machinery. [Emphasis added.]

The term “experience” in this provision is used in conjunction with the term “qualified.” Where an operator, through prior experience, has acquired the knowledge and skill necessary to safely operate the equipment, the operator may be considered “qualified by...experience” for purposes of this provision. However, a history of having operated the equipment by itself does not necessarily mean that the operator knows how to safely and competently operate the equipment. The provision requires the operator to be “qualified.” If the worker has operated the machinery in the past but has not acquired the knowledge and skills necessary to safely operate the equipment, the experience is not sufficient to make the employee “qualified.”

4.3 TITLE 29 *CFR* SECT. 1926.20(F)(2)

4.3.1 Training

Standards in this part requiring training on hazards and related matters—such as standards requiring that employees receive training or that the employer train employees, provide training to employees, or institute or implement a training program—impose a separate compliance duty with respect to each employee covered by the requirement. The employer must train each affected employee in the manner required by the standard, and each failure to train an employee may be considered a separate violation.

Table 1. Example Training Matrix

Project Key Personnel Accountable for Training Matrix	Primary Responsible Person : Secondary Responsible Person:					Supervisor	Safety Rep	Journeyman Painter	Operator	Laborer
TRAINING MODULE - TITLE	APPLICABILITY & REFERENCE DOCUMENTS	Hours	Method	Required in months	CBT=\$15 Each Classroom \$ Up	Lee Bailey	Gordon Reynolds	Drew Wulff	Ezra Sheldon	Walsilek Martin
Access										
Site Specific and Site Safety Specific						7/18/2023	7/18/2023	7/18/2023	7/18/2023	7/18/2023
21221 - Parkworker or General Employee Training (GET) - Initial	Required for all employees working on site that exceed requirements of 29162. 28307 is the 2 year refresher for Parkworker/GET (21221)	1	CBT	24	\$0	4/3/2023	4/13/2023	3/29/2023	7/10/2023	7/18/2023
Supervisor/Task Lead										
31213 - Integrated Work Control for Supervisors/Task Leads	Required for Supervisors/Task Leads that are responsible for supervising work control documents and conducting pre-job briefs, etc. (PROC-FS-1001)	2	CBT	36	\$111.60	4/3/2023				
Electrical										
29291 - Electrical Safety for Non-Electrical Workers	Required for all employees except GEWs. (PPD-EH-2009)	0.5	CBT	36	\$37.20	4/3/2023	4/14/2023	3/30/2023	7/20/2023	
Lock Out/Tag Out										
31132 - Hazardous Energy Control for Authorized Employees	Required for GEW, instrument technicians, electricians, HVAC technicians who are responsible for installing, operating, maintaining, repairing, and testing utilization equipment operating at 50 V or more and, if working or supervising others under CONTRACTOR Lockout/Tagout Permit	3	CR	24	\$450	7/12/2023		7/12/2023		
21142 - Hazardous Energy Control for Service Supervisors & Issuing Authorities	Required for Supervisor/Task Lead with employees authorized and performing LOTO activities. (PROC-EH-2002)	4	CR	24	\$750	7/12/2023		7/12/2023		

4.4 COMPETENT PERSON DESIGNATION

4.4.1 Guidance Documents

- PROC-TC-0723, *Competent Person Designation*
- Form-2972, Competent Person Designation Form

4.4.2 General Requirements

- Experience and ability are the key aspects to determining true competency.
- Subcontractor's Supervisor/Manager and S&H Manager shall designate Competent Person using Form-2972.
 - UCOR STR and UCOR S&H Operations Manager will review and either accept or reject.
 - Upon acceptance, UCOR STR will sign the Form-2972 and submit it to the Local Education Administrative Requirements Network (LEARN).

4.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

4.5.1 Guidance Documents

- PROC-EH-2005, *Personal Protective Equipment*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*, pp. 35–39
- Other activity-specific procedures, manuals, etc.

NOTE 1: While PPE is the least preferred control, challenges to hazard assessment imposed by the dynamic nature of UCOR's decontamination and demolition scope often necessitate that PPE be prescribed as additional defense in depth.

NOTE 2: The preferred order for controlling hazards that cannot be substituted for or eliminated is engineered safeguards, administrative controls, then PPE (see also the diagram in Sect. 3.10). Implement controls to address additional hazards that may be introduced by the use of PPE (e.g., reduced dexterity, heat stress, impaired vision).

4.5.2 Training

- LEARN Module 21221, *Parkworker*
- LEARN Module 28392, *Personal Protective Equipment (wbt)*
- Specialized equipment (powered air purifying respirator [PAPR], fall protection, etc.)
- Specification sheets and/or user manuals readily available

4.5.3 General

- Head
 - Minimum of American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) Z89.1-2019, *American National Standard for Industrial Head Protection*, Type 1 for falling objects
 - Class E for electrical and Class G for low voltage up to 2200 V
 - Type 2 safety helmet with chin strap required for all elevated activities
 - Bump caps (Level 2) provide minimal protection for contact with stationary objects and are prohibited in areas with potential for falling objects.
 - Service life is based on condition, not age.
- Eyes and face
 - ANSI/ISEA Z87.1-2020, *Personal Eye & Face Protection*.
 - Face shield is secondary protection and requires safety glasses as primary.
 - Face shield for grinding, chop sawing, etc., and potential splash hazards (concrete)
 - Correct lens shade for ultraviolet radiation with welding and lasers
 - Correct impact rating for flying objects
- Hands
 - Expectation is a glove for all hands-on work.
 - Cut and puncture protection are primary concern.
 - Chemical protection is addressed through Form-3061, *Industrial Hygiene Work Permit (IHWP)*.
 - Must consult Glove Matrix to identify activity and approved glove.
- Feet
 - Sturdy, safety-toed work shoe meeting ASTM International (ASTM) F2413-18, *Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear*.
 - Required for chainsaw activities: ASTM F1818-15(2022), *Standard Specification for Foot Protection for Chainsaw Users*, Class 2 protection; and ASTM F1897-20, *Standard Specification for Leg Protection for Chain Saw Users*, chaps.
- Hearing
 - PROC-IH-5121, *Occupational Noise Exposure and Hearing Conservation*
 - Exposure of time-weighted average sound level (TWA) ≥ 85 dB
 - LEARN Module 26455, *Hearing Conservation*
 - Attenuation/protective factor for inserts is Noise Reduction Rating (NRR)-7
 - Earmuffs with inserts increase NRR by 5
- Respiratory
 - PPD-IH-5151, *Respiratory Protection Program*

- Hot work
 - PROC-FP-2008, *Hot Work*
 - Flame resistant (FR) clothing, meeting ASTM F1449-20, *Standard Guide for Industrial Laundering Care and Maintenance of Flame Resistant or Arc Rated Clothing*; and/or International Organization for Standardization (ISO) 2801:2017 *Clothing for protection against heat and flame—General recommendations for selection, care, and use of protective clothing*.
 - Standard welder's leather garments (such as chaps, sleeves, apron, etc.) are considered to be FR garments and meet the intent of PROC-FP-2008 as long as they cover all non-FR clothing.
 - Worn by both the individual performing work and the fire watch
- Other
 - Traffic flagger—Minimum ANSI/ISEA 107-2015, *American National Standard for High-Visibility Safety Apparel and Accessories*, Type R, Class 2 and Class 3 for low-visibility situations.
 - Around heavy equipment—ANSI Type R, Class 2
 - Electrical—See PPD-EH-2009, *Electrical Safety Program*
 - Over/near water—U.S. Coast Guard-approved life jacket or buoyant work vest

4.5.4 Fall Protection Equipment

- PPD-EH-2006, *Fall Prevention and Protection Program (FPPP)*
- Inventory with manuals
- Documented initial and periodic inspection by Fall Protection Competent Person.
 - Most manufacturers require a minimum interval of 12 months, with some required every 6 months (e.g., Guardian).
 - May be more frequent based on use, conditions, etc.
- Type 2 safety helmet with chin strap for all elevated work.
- Check with subject matter expert (SME) for recall list and manufacturer specific safety notices and advisories.

4.6 ELECTRICAL

4.6.1 Guidance Documents

- PPD-EH-2009, *Electrical Safety Program*
- PROC-EH-2000, *General Safety Requirements*
- PROC-EH-2002, *Hazardous Energy Control (Lockout/Tagout)*
- PROC-FO-1072, *Penetration Permitting*
- PROC-FO-3033, *Out of Commission Isolation Process for Structures, Systems, and Components*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

4.6.2 Training

- All non-Qualified Electrical Workers (QEW)—LEARN Module 29291, *Electrical Safety for the Non-Electrical Worker*
- Equipment Operators to operate electrical disconnects/breakers $\leq 600\text{V}$ —LEARN Module 31009, *Electrical Safety for Chemical Process Operators* (every 3 yr)
- QEW and Lineman—Identified in Exhibit M, *Training Matrix*
- SME approval required for training Exception and/or Equivalency.
- Report all potential electrical events, shocks, etc.
- All electrical shocks require medical evaluation except static shocks in non-powered installations.
- Never cross a Limited Approach Boundary (LAB).
- Equipment operations and transit near overhead (20 ft) utility lines follow PPD-EH-2009, Sect. 6.
 - Includes personnel, tools, equipment proximity during ladder, scaffold, and roofing activities.
 - Requires Form-3090, Overhead Utility Clearance Permit for Proximity to Overhead Lines.
- Non-Nationally Recognized Testing Laboratory (NRTL) equipment requires UCOR Electrical Authority Having Jurisdiction (EAHJ) approval.
- Damaged/unacceptable equipment must be tagged, controlled, and removed as soon as possible.

4.6.3 Primary, significant, or unique requirements

4.6.3.1 Inspections

- Inventory of all equipment
- Initial and periodic inspection and identification process

4.6.3.2 Extension Cords

- NRTL listed
- Rated for hard service and wet location (i.e., marked as type SOW, SOOW, STW, STOW, STOOW, SEW, SEOW, SEOOW, SJOW, SJOOW, SJTW, SJTOW, SJTOOW, SJEW, SJEOW, or SJEOOW)
- Protective cover required when placed through doors, windows, etc.
- Elevated when feasible
- No daisy chaining

4.6.3.3 Power Tools

- NRTL listed (charging stations for battery-powered)
- Double insulated for corded tools
- Inventory with user manual readily available
- Documented user training/briefing on tool manual

4.6.3.4 Ground Fault Circuit Interrupter (GFCI)

- Class A GFCI required for all portable equipment.
- Permanently installed GFCI receptacles require monthly testing and labeling.
- A tripped GFCI can only be reset one time; QEW required for further evaluation.
- Test portable GFCIs prior to use.

4.6.3.5 Lockout/Tagout (LO/TO)

- PROC-EH-2002
- Form-194, Lockout/Tagout Permit, required except for single source
 - Red locks or red label required
 - Name and badge number
 - Subcontractor Supervisor signs Sect. 8
- Single source—See section on single-source lockout
- Affected personnel—Briefing on procedure
- Authorized personnel—LEARN Module 31132, *Hazardous Energy Control for Authorized Employees*
- Supervisor—LEARN Module 31132 and Module 21142, *Hazardous Energy Control for Issuing Authorities, Supervisors, and FMs*
- VERIFICATION of zero energy is the most critical aspect
- Supervisor participates in Form-3418, LO/TO Walkdown Aid

4.6.3.6 Air Gapping

- Electrically removed from service by dismantling, cutting and/or disconnecting cable, removing buses, or other equivalent means of disconnecting circuitry such that power cannot be reintroduced inadvertently or easily without construction-type activities to restore power.
- Typically used to abandon electrical equipment and deactivate facilities, and does not require a LO/TO to remain in place after the establishment of the air gap.
- Pulling fuses, opening disconnect switches, racking out circuit breakers, or utilizing other operational activities and/or equipment features is not sufficient to be considered air gapped.

4.6.3.7 Portable Generators and Light Plants

- Currently approved models (consult STR)
- Require initial inspection and tag by the UCOR EAHJ

4.7 LADDERS

4.7.1 Guidance Documents

- PROC-FO-1015, *Scaffolds and Ladders*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

4.7.2 Training

- Ladder User—LEARN Module 29007, *Ladders*, or Module 28981, *Ladders & Scaffolds*
 - Retrain every 36 months
- SME approval required for training Exception and/or Equivalency
- Competent Person Designation—LEARN Module 31700, *Ladder Competent Person Designation*)
 - Required to perform the initial and quarterly inspection (inventory and tagging)
 - Module 29007 or Module 28981.
 - Subcontractor designates and UCOR STR reviews/approves on Form-2972, Competent Person Designation Form.

4.7.3 Primary, Significant, or Unique Requirements

4.7.3.1 Work from a Portable Ladder When No Other Method is Feasible

- Feasibility shall be driven by assessing total risk; not based on ease or convenience.
- S&H Representative required to evaluate and approve work performed from ladders.
 - See UCOR S&H for example risk evaluation documentation.
- Form-3745, Fall Hazard Survey, and Form-3746, Fall Protection Plan, may be required for work performed above 4 ft (general) or 6 ft (construction).

4.7.3.2 Types of Ladders

- Mobile stand, platform, podium, and cage ladders preferred as primary choice.
- Step ladders must be minimum ANSI Type 1A (300 lb), but consider Type 1AA for increased capacity up to 375 lb.
- Fiberglass required unless approved by S&H Representative.

4.7.3.3 General Requirements

- Ladder stands and platforms shall meet ANSI Accredited Standards Committee (ASC) A14.7-2006, *American National Standard for Mobile Ladder Stands and Mobile Ladder Stand Platforms*.
- Inventory to ensure initial and quarterly inspection
- All ladders will be secured by tying, blocking, etc., when feasible; otherwise, secured by a Spotter.
- Spotter required when work is performed using a standard step ladder.

- Potential for ladder or any item used while on the ladder within 20 ft of electrical power lines or conductors requires evaluation by the UCOR EAHJ.
- Hard hat required for spotter when work is performed above with overhead hazard.
- Ensure adequate falling object protection and work area control (consider deflection and bounce).
- Tethered tools and material.
- Type 2 safety helmet with chin strap is required for all elevated work activities.
- Fixed ladders must have a current inspection prior to use.
- Step ladders and platform ladders cannot exceed 12 ft.
- Straight ladders cannot exceed 20 ft.
- Extension ladders cannot exceed 36 ft.

4.8 SCAFFOLDS

4.8.1 Guidance Documents

- PROC-FO-1015, *Scaffolds and Ladders*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

4.8.2 Applicable Forms

- Form-3685, Scaffolding Plan Checklist

4.8.3 Training

- Scaffold User requires LEARN Module 28981, *Ladders & Scaffolds*.
- Erector/Disassembler requires Module 28981; Module 29024, *Scaffold Erector*; and Fall Protection Training
 - OR trained on the specific type of scaffold to be constructed (e.g., Baker scaffold)
 - Requires SME approval

Note: SME approval required for training Exception and/or Equivalency.

- Competent Person Designation—LEARN Module 31701, *Scaffolds Competent Person Designation*
 - Required to perform inspection and tagging
 - Oversee erecting and disassembly activities
 - Requires Module 29024 or alternative approved by the SME
 - Subcontractor designates and UCOR Subcontract Coordinator (SCC)/STR reviews/approves on Form-2972

4.8.4 General Requirements

- Certificate of conformance (COC) is required from the supplier attesting to NOT having suspect/counterfeit items per DOE G 414.1-3, *Suspect/Counterfeit Items Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements*, and DOE O 414.1B, *Quality Assurance*.
- Manufacturer instructions are required for the specific type of scaffolding used.
- Form-3685 is required for any scaffold activity.
- Mobile scaffolds, Baker scaffold, etc., are equal to and shall comply with the scaffold requirements.
- Fall protection will be utilized by scaffold erectors during erection or dismantling activities when both of the following apply:
 1. Working at elevations greater than 10 ft with a fall potential hazard.
 2. The use of such protection does not create a greater hazard as determined by the Fall Protection Competent Person.
- Self-closing gates at access points are the expectation and are to be used when feasible.
- SME approval required in writing to mix/mingle parts and types of scaffolding.
- Toe boards required for all scaffolds and screens should be considered for higher-elevated activities.
- Ensure adequate falling object protection and work area control (consider deflection and bounce)
- Cross bracing cannot serve as both the mid and top guardrail.
- Platforms and planks:
 - Platforms shall not deflect more than 1/60 of the span when loaded at the center point.
 - Wood products stamping/labeling:
 - “Scaffold Plank” or similar verbiage
 - Manufacturing or regrading mill ID number
 - Species
 - Moisture content level
 - Technical grade name (e.g., D165, 171A, 171B)
 - Third-party inspection agency

4.9 FALL PREVENTION AND PROTECTION

4.9.1 Guidance Documents

- PPD-EH-2006, *Fall Prevention and Protection Program*
- PROC-EH-2006, *Fall Prevention and Protection*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

4.9.2 Applicable Forms

- Form-3745, Fall Hazard Survey

- Form-3746, Fall Protection Plan
- Form-3747, Fall Protection Permit

4.9.3 UCOR and DOE Expectations

- When it comes to protecting personnel when a fall hazard is present, UCOR understands that 100% is an industry best management practice, as well as a DOE expectation.
- UCOR's FPPP invokes precautionary measures to protect the S&H of all workers potentially exposed to fall hazards.
 - Implicit to this fall protection approach is the requirement that workers be protected using effective fall prevention and protection controls when working at heights in any situation that presents a foreseeable exposure to a fall hazard.
- Safety monitors, fall protection plans, designated areas, controlled access zones, spotters and/or similar systems that do not provide a physical means of protection are the least preferred methods and not recommended.

4.9.4 Training and Qualifications

Table 2. LEARN modules per position—Fall Prevention and Protection

	34503 Fall protection authorized person	34507 Authorized person refresher (2 yr)	34506 Fall protection competent person	34508 Competent person refresher (2 yr)	31890 Competent person designation
Authorized Person	X	X			
Competent Person			X	X	X
Safety Monitor			X	X	X

- SME approval required for training exception and/or equivalency.
- See Exhibit M, *Training Matrix*, for other approved training providers.
- Competent Person
 - Subcontractor designates and UCOR STR reviews with UCOR S&H Operations Manager and approves on Form-2972.
 - LEARN Module 31890, *Competent Person Fall Protection Designation*.

4.9.5 Primary, Significant, or Unique Requirements

4.9.5.1 General Requirements

- Primary fall prevention (guardrails, hole covers, etc.) is the expectation and feasible unless documented fall hazard survey determines otherwise.

- Fall hazard survey, fall protection plan, and fall protection permit required for most elevated work activities.
- Self-closing gates are the expectation at elevated access points.
- Active fall protection equipment (only when passive prevention is not feasible) is applied in the following hierarchy:
 - Fall restraint
 - Fall arrest
- Self-retracting lanyards (SRLs) shall be Class 2 meeting ANSI/ASSP Z359.14-2021, *Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems*.
- Hoisting and rigging (H&R) equipment used for fall protection shall be newly purchased, proof tested, and tagged to identify only for fall protection.
- Warning line and monitor requires high level of justification.
- Type 2 safety helmet with chin strap required for all elevated work activities.
- Mitigating falling object hazards:
 - Tethering of tools/materials
 - Screens/netting
 - Barricades with adequate consideration for deflection distance

4.9.5.2 Mobile Elevating Work Platforms (MEWPs)

- Restraint configured lanyards preferred before selecting SRL (6-ft shock-absorbing lanyards are prohibited).
- Fall protection plan required for using aerial lift anchor point while working outside of platform.

4.9.5.3 Excavations/Trenches

- Depth of 6 ft or more requires evaluation by S&H Representative.
- Prevention by sloping, guardrails, etc., required when feasible.
- If prevention not feasible, boundary postings requiring personal fall restraint or arrest.

4.9.5.4 Recalls

- Consult UCOR SME for recall list and manufacturer specific safety notices and advisories.

4.10 MOBILE ELEVATING WORK PLATFORMS

4.10.1 Guidance Documents

- PROC-FO-3036, *Mobile Elevating Work Platform Operation*
- PPD-FO-1037, *Construction and Heavy Equipment Program*
- PROC-FO-1039, *Construction Equipment Inspection and Maintenance Program*

- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

4.10.2 Applicable Forms

- Form-897, Mobile Elevating Work Platform Daily Checklist and Safety Inspection Form
- Form-3090, Overhead Utility Clearance Permit for Proximity to Overhead Lines

4.10.3 Training and Qualifications

Table 3. LEARN modules per position—Mobile Elevating Work Platforms

	26415* MEWP Classroom	31605 or 31767 MEWP JPM	31674 Scissor lift JPM	34503 Fall protection	31136** Spotter classroom	32093 Spotter MEWP JPM
Supervisor	X				X	
Operator	X	X	X	X		
Occupant				X		
Spotter					X	X

*Most Union/Vendor training can be approved by the UCOR Construction Heavy Equipment (CHE) SME.

**Building Trades Laborer's Union training for Spotter is an approved Equivalent for the classroom fundamentals.

***Supervisor can be granted equivalency for 26415 upon review and approval by the CHE SME.

NOTE: In emergencies, the Operator will brief Occupant and Spotter on basic operation of controls.

4.10.4 Primary, Significant, or Unique Requirements

4.10.4.1 Aerial Lift Operator Card Required

AERIAL LIFT OPERATOR CARD	Authorized Equipment	Exp. Date
<i>This is to certify that:</i> Travis S. Watson <i>is qualified and has met the training requirements of UCOR PROC-FO-3036</i> If MEWP (26415) is current, check back of card for Authorized Equipment Qualification MEWP (26415) Expires: Badge: 712478	Lift Boom(31605)	not qualified
	Scissor(31674)	not qualified
	Lift Bucket(31675)	not qualified
	SP Boom(31767)	not qualified
	Fall Prevention(28824/31284)	09/07/26

4.10.4.2 Inspections

- Inbound by UCOR qualified inspector (STR)
- Daily on Form-897 or SME-approved equivalent

4.10.4.3 Operations

- Retractable lanyard or restraint configured lanyard (no 6-ft shock-absorbing lanyards).
- Form-3090 when potential for overhead utilities within 20 ft

- Fall protection plan for using aerial lift anchor point while working outside of basket
- Occupant and spotter must be proficient in operating controls for an emergency event.
- Ensure weight of personnel, PPE, and other equipment does not exceed platform load limits.
- Ensure adequate boundaries and controls for potential falling material/equipment hazards.

4.10.4.4 Environmental

- Ensure preventive measures are in place for potential hydraulic/oil leaks into nearby storm drains and waterways.

4.11 VEHICLE/CONSTRUCTION EQUIPMENT SPOTTER (VCES)

4.11.1 Guidance Documents

- PROC-FO-1073, *Vehicle/Construction Equipment Spotter*

4.11.2 Training and Qualifications

Required for both Spotter and Supervisor.

Table 4. LEARN modules per position—Vehicle/Construction Equipment Spotter

	Construction & commercial vehicles	Forklifts & telescopic handlers	Mobile elevated work platforms	Earth moving equipment
Supervisor & Spotter	31136 Vehicle/Construction Equipment Spotter			
Spotter	32089 JPM	32090 JPM Forklift 32091 JPM Telehandler	32093 JPM	32092 JPM

Note 1: Building Trades Laborer's Union training for Spotter is an approved Equivalent for classroom fundamentals.

Note 2: Supervisors who have documented extensive experience may be granted an exception if approved by the CHE SME.

4.11.3 Primary, Significant, or Unique Requirements

4.11.3.1 Spotter Card

AUTHORIZED SPOTTER CARD	
<i>This is to certify that:</i> Travis S. Watson	
<i>is qualified and authorized to perform designated Spotter duties IAW PROC-FO-1073.</i>	
If VCES Training (31136 or equiv) is current, check back of card for Category Qualification	
VCES Training (31136 or equiv) Expires:	Badge: 712478

Category	Exp. Date
Vehicle(32089)	not qualified
Tele-handler(32090)	not qualified
Forklift(32091)	not qualified
EME(32092)	not qualified
MEWP(32093)	not qualified

4.11.3.2 Situations Where a Spotter is Required

NOTE: This list is not exclusive.

- Operator view is limited/obstructed.
- Staged commercial motor vehicle (CMV) is required to reverse.
- Congested area/interferences within 1.5 times the length of the equipment.
- Loading/unloading operations
- Hazardous materials (HM)
- Personnel in the work zone or potential entry due to uncontrolled access.

4.11.3.3 General Requirements

- Form-3500, Vehicle/Construction Equipment Spotter Checklist, is to be completed by the Spotter for each unique task.
- Verify the work zone and establish control of the area.
- During operations, CMVs shall use a “Do Not Operate” lanyard system or place a traffic cone in front of the vehicle so that it can be seen when the driver is seated in the cab. Spotter will remove the cone after confirmation that path is clear.
- CMV drivers shall activate the horn prior to any movement.
- Use equipment blind spot diagrams when available.
- Follow Workplace Substance Abuse Program (WSAP) requirements for the whole VCES team (VCES and Operator/Driver).
- Unless medical attention is required, personnel involved (Supervisor, Operator, VCES, and/or witnesses) are to remain at incident location until released by the FM with input from the Construction Heavy Equipment (CHE) SME.

4.12 FORKLIFTS AND TELESCOPIC HANDLERS

4.12.1 Guidance Documents

- PROC-FO-1040, *Lift Truck Operation*
- PPD-FO-1037, *Construction and Heavy Equipment Program*
- PROC-FO-1039, *Construction Equipment Inspection and Maintenance Program*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

4.12.2 Training and Qualifications

Table 5. LEARN modules per position—Forklifts and Telescopic Handlers

	26416 Forklift classroom	31396 Forklift JPM	25836 Telescopic classroom	31398 Telescopic JPM	31136 Spotter classroom	32090 Spotter JPM forklift	32091 Spotter JPM telescopic
Operator	X	X	X	X			
Supervisor	X		X				
Spotter					X	X	X

NOTE 1: Union/vendor training can be approved by the CHE SME.

NOTE 2: Supervisors who have documented extensive experience may be granted an exception if approved by the CHE SME.

4.12.3 Primary, Significant, or Unique Requirements

4.12.3.1 Forklift Operator Card Required

FORKLIFT OPERATOR CARD	Authorized Equipment	Exp. Date
This is to certify that: Travis S. Watson <i>is qualified and has met the training requirements of UCOR PROC-FO-1040</i> If Forklift Classroom (26416) is current, check back of card for Authorized Equipment Qualification Forklift Classroom (26416) Expires: Badge: 712478	Forklift JPM(31396)	not qualified
	Telehandler Initial(25836)	not qualified
	Telehandler JPM(31398)	not qualified
	Dump Box(32233)	not qualified
	Boom Pole(32232)	not qualified
	Drum Handler(32335)	not qualified
	Lifting Beams(32234)	not qualified
	Motorized PalletJack(31935)	not qualified

4.12.3.2 Forms and Checklists

- Inbound by UCOR qualified inspector (STR)
- Daily on Form-925, Fork Lift Daily Checklist and Safety Inspection Form, or SME-approved equivalent
- Form-1022, Structural and Mechanical Forklift Attachment & Fork Pocket Mounted Device Inspection Checklist
- Form-3419, Lift Truck Pre-lift Checklist

- Form-3425, Field Calculation for Unknown Material Weight
- Form-3090, Overhead Utility Clearance Permit for Proximity to Overhead Lines, used when potential for overhead utilities within 20 ft

4.12.3.3 Attachments

- Mast attachments (side-shift, rotator, larger forks, etc.) shall be identified on the lift truck data plate.
- Temporary (fork-mounted) attachments shall have legible identification plate and load chart.
- Attachments involving H&R fall under PROC-FO-1008, *Hoisting and Rigging Operations*.

4.12.3.4 Other Heavy Equipment Using Fork Attachments

- Must be approved by the UCOR CHE SME.
- Lift truck training per this procedure is not required.
- JPM on “other” equipment must include use of fork attachments.
- Form-3419 is required.

4.12.3.5 Vendors Operating Lift Trucks to Off-Load Materials/Equipment

- Provide proof of training from their employer.
- Show proof of daily inspection
- UCOR Inbound/Outbound Equipment Inspector (STR) must be present.

4.12.3.6 Environmental

- Ensure preventive measures are in place for potential hydraulic/oil leaks into nearby storm drains and waterways.

4.12.3.7 Other

- No free rigging directly from fork tines.

4.13 EARTH MOVING EQUIPMENT

4.13.1 Guidance Documents

- PROC-FO-3034, *Earth Moving Equipment Operation*
- PPD-FO-1037, *Construction and Heavy Equipment Program*
- PROC-FO-1039, *Construction Equipment Inspection and Maintenance Program*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

4.13.2 Training and JPMs

- Union operators meet the initial qualification and other/vendor provided training requires approval by the UCOR CHE SME.
- JPMs required every 3 yr.
- Supervisors who have documented extensive experience may be granted an exception if approved by the CHE SME.

Table 6. LEARN modules per position—Earth Moving Equipment

LEARN Module	Course
17123	<i>Job Performance Measure for Backhoe Operators</i>
17119	<i>Job Performance Measure for Skidsteer Operators</i>
17127	<i>Job Performance Measure for Grader Operators</i>
31944	<i>Job Performance Measure for Excavator</i>
17124	<i>Job Performance Measure for Front-End Loader Operators</i>
31602	<i>Job Performance Measure for Scraper Operators</i>
17122	<i>Job Performance Measure for Dozer Operators</i>
17126	<i>Job Performance Measure for Roller/Compactor Operators</i>
—	Nonstandard Equipment (paver, pump truck, etc.)

4.13.2.1 Earth Moving Equipment Operator Card Required

EARTH MOVING EQUIPMENT OPERATOR CARD <i>This is to certify that:</i> Travis S. Watson <i>is qualified and has met the training requirements of UCOR PROC-FO-3034</i> Check Back of Card for Authorized Equipment Qualification Badge: 712478	Authorized Equipment	Exp. Date
	Excavator(31944)	not qualified
	Skid Steer(17119)	not qualified
	Back Hoe(17123)	not qualified
	Dozer(17122)	not qualified
	Front End(17124)	not qualified
	Roller(17126)	not qualified
	Gradall(17127)	not qualified
	Scraper(31602)	not qualified
	Farm Tractor(31673)	not qualified

4.13.2.2 Forms and Checklists

- Inbound by UCOR qualified inspector (STR)
- Daily on Form-832, Equipment Daily Checklist and Safety Inspection Form, or SME-approved equivalent
- Form-3090, Overhead Utility Clearance Permit for Proximity to Overhead Lines, when potential for overhead utilities within 20 ft

4.13.2.3 Using Fork Attachments

- Must be approved by the UCOR CHE SME.
- Forklift training is not required.
- JPM on equipment must include use of fork attachments.
- Form-3419, Lift Truck Pre-Lift Checklist, is required.

4.13.2.4 Hoisting and Rigging Activities

- Requires approval from UCOR H&R SME and notification prior to performing.

- In accordance with manufacturer's manual and working load limit (WLL).
- Attachment points are:
 - Installed/approved by the manufacturer.
 - Rated WLLs available to the Competent Person Rigger.
 - Proof test reports, COC, and included on the annual inspection report.
- No free rigging from fork tines.

4.13.2.5 Environmental

- Ensure preventive measures are in place for potential hydraulic/oil leaks into nearby storm drains and waterways.

4.13.2.6 Well Drilling Operations

- See PROC-FO-3035, *Well Drilling Operations*

4.14 EXCAVATIONS AND TRENCHING

4.14.1 Guidance Documents

- PROC-FO-3034, *Earth Moving Equipment Operation* (safety associated with working in/near)
- PROC-FO-1004, *Excavation/Trenching Permitting*
- PROC-FO-3037, *Ground Penetration Permitting*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*, p. 42
- 29 CFR Part 1926, *Safety and Health Regulations for Construction*, Subpart P, *Evacuations*

4.14.2 Training

- LEARN Module 31888, *Excavation Safety Awareness*, when within 6 ft of excavation 4 ft deep or more.
- Competent Person classroom at the Association of General Contractors, United Rentals, or other instruction approved by the UCOR Excavation/Penetration SME.
- Competent Person Designation—LEARN Module 31703, *Excavation and Trenching Competent Person Designation*
 - PROC-FO-3034
 - Designated by subcontractor and reviewed/accepted by UCOR SCC/STR

COMPETENT PERSON EXCAVATION CARD (CPE)	
This is to certify that: Travis S. Watson is qualified and has met the training requirements of PROC-FO-3034 and PROC-TC-0723. Check Back of Card for Required Training Expires: 03/30/2025 Badge: 712478	
Required Training	Exp. Date
CPE Class/Refresher(29083/32218)	03/30/25
Excavation Safety(31888)	not qualified
CPE Designation(31703)	not qualified

- Not required under the following conditions:
 - Personnel will not be entering
 - Drilling/boring activities—See PROC-FO-3037
- Completes Form-913, Competent Person Excavation Safety Checklist, daily and continuously evaluates with changing conditions
- Required to be present at all times when work is taking place in excavations 4 ft or more
- No other duties unless approved by the UCOR S&H Operations Manager

4.14.3 Primary, Significant, or Unique Requirements

4.14.3.1 Operations and Permits

- Form-147, Excavation/Trenching Permit (ETP)
- Operator and Supervisor complete Form-3445, Excavation Operator Pre-Dig Checklist

4.14.3.2 Trench Boxes/Shields

- Certification and installation documents required

4.14.3.3 Fall prevention guardrails where feasible

4.14.4 Fall Prevention and Protection

- Depth of 6 ft or more requires evaluation by S&H Representative. (See PPD-FO-2006, *Fall Prevention and Protection Program*, Sect. G, “Evacuations”)
- Prevention by sloping, guardrails, etc., required when feasible
- If prevention not feasible, barricade boundary requiring personal fall restraint or arrest

4.15 HOISTING, RIGGING, AND CRANES

4.15.1 Guidance Documents

- PPD-FO-1037, *Construction and Heavy Equipment Program*
- PROC-FO-1008, *Hoisting and Rigging Operations*

- PROC-FO-1009, *Qualification and Performance as Competent Person Rigger and Crane Signal Person*
- PROC-FO-1037, *Hoisting and Rigging Hardware Inspection, Testing, and Purchases*
- PROC-FO-1039, *Construction Equipment Inspection and Maintenance Program*
- PROC-FO-1041, *Crane Operator Certification/Qualification*

4.15.2 Training and Qualifications

Table 7. LEARN modules per position—Hoisting and rigging

	*CPR Initial 28847 annual 29268	31233 Signal person	31702 CPR designation	CPR Card	31274 Rigging inspector
Person In Charge	X	X	X	X	
Designated Leader	X	X	X	X	
Competent Person Rigger	X	X	X	X	
Signal Person	X	X	X	X	
Hoisting & Rigging Qualified Inspector	X	X	X	X	X

*Local Union 384 Rigger Training Program shall receive credit for LEARN Module 28847, *Competent Person Rigger Initial*.

CPR = Competent Person Rigger

COMPETENT PERSON RIGGER CARD (CPR) <i>This is to certify that:</i> Travis S. Watson <i>is qualified and has met the training requirements of PROC-FO-1008 and PROC-FO-1009.</i> Check Back of Card for Required Training Expires: not qualified Badge: 712478	Required Training	Exp. Date
	Signal Person(31233)	not qualified
	Annual Refresher(29268)	not qualified
	PIC Designation(32281)	not qualified

Table 8. LEARN modules per position—Cranes

	31254 Certified Operator Core	32173 Mobile Crane Practical Test JPM	17111 Mobile Crane Qualification	Medical Exam	31657 Truck Mounted Crane JPM	34743 Operator Designation
Mobile Crane	See Note 1		See Note 2	X		See Note 3
Truck Mounted					X	X

Note 1: Subcontractor operators shall have a current physical and be in possession of a current and valid certification from one of the following entities:

- National Commission for the Certification of Crane Operators (NCCCO)
- International Union of Operating Engineers, Local 917, Knoxville, Tennessee

Note 2: If work will be monitored by the UCOR H&R SME or designee, then the operator will not be tested or certified by the UCOR procedure. JPMs will be conducted during mobilization and setup.

Note 3: Not required for Subcontractor. Certification card in Note 1 is equivalent.

- UCOR H&R SME approval is required for training Exception and/or Equivalency.

MOBILE CRANE OPERATOR	Authorized Equipment	Exp. Date
<i>This is to certify that:</i> Travis S. Watson <i>is qualified to operate the listed mobile crane(s) per the training requirements of PROC-FO-1041, Crane Operator Certification/Qualification</i> Check Back of Card for Authorized Equipment Expires: not qualified Badge: 712478	RTC80110(32135)	not qualified
	RTC8050(32136)	not qualified
	RT880E(32137)	not qualified
	CCD5515(32138)	not qualified
	HSP8015(32139)	not qualified
	SC/Vendor(32140)	not qualified

4.15.3 Primary, Significant, or Unique Requirements

4.15.3.1 Forms and Checklists

- Annual (inbound) by UCOR qualified inspector (STR)
- Form-834, Monthly Crane and Wire Rope Inspection Form
- Form-899, United Cleanup Oak Ridge LLC (UCOR)/Subcontractor Lift Plan
- Form-928, Daily/Monthly Crane Checklist and Safety Inspection Form
- Form-971, Hoisting and Rigging Checklist
- Form-1601, Daily Overhead Crane/Hoist Checklist and Safety Inspection Form
- Form-2218, Annual-Overhead-Crane/Monorail Inspection Checklist Form
- Form-3143, Pre-Engineered/Critical Lift Classification Worksheet
- Form-3090, Overhead Utility Clearance Permit for Proximity to Overhead Lines
- Forms 957–970 and various other equipment-specific inspection checklists/criteria

4.15.3.2 Roles and Responsibilities

- UCOR H&R SME
 - Ultimate authority
 - Approves all lift plans
 - Determines all lift classifications for subcontractors
- UCOR Rigging Engineers
 - Assists in determination of lift classification
 - Develops lift plans
 - Assists UCOR Project Rigging Coordinator with procuring equipment
- Person In Charge (PIC)
 - Responsible for execution of critical lifts
 - Ensures all forms are completed and placed in the WP
- Designated Leader (DL)
 - Ordinary Lift classification per Form-971
 - Responsible for execution of pre-engineered and ordinary lifts
 - Ensures all forms are completed and placed in the WP
- Competent Person Rigger (CPR)
 - Follows instructions of PIC or DL
 - Oversees all H&R operations, inspections, and installation of equipment
 - Qualified Crane Signal Person
 - Dedicated Spotter for work around power lines
- Qualified Rigging Inspector
 - Approved by the UCOR H&R SME
 - Performs annual inspections of H&R equipment
- Dedicated Spotter for potential within 20 ft of overhead lines
 - Must be a CPR
 - Shall have no other duties
 - Must have direct communication channel with the operator
- Certified Crane Operators
 - Ultimate responsibility for the safe operation of crane activities
 - Ensures all crane inspections are performed

NOTE: Rigging may be performed by an individual other than a CPR only if the CPR is present to approve.

4.15.3.3 Lift Classifications—UCOR H&R SME Shall Determine for Subcontractors

- Mast attachments (side-shift, rotator, larger forks, etc.) shall be identified on the lift truck data plate.
- Temporary (fork-mounted) attachments shall have legible identification plate and load chart.
- Attachments involving H&R are within the purview of under PROC-FO-1008.

4.15.3.4 Other Requirements

- UCOR H&R SME shall be notified prior to performing H&R activities.
- It is permissible for a PIC or DL to serve in conjunction with other roles such as the CPR.
- Ensure entire work area is controlled.
- Fall/shadow zone is equal to or greater than the height of the object and shall only be entered for hooking/unhooking.
- Load positioning should be performed with tag lines and tools, not by hand.
- Hoists (scaffold hoists, etc.) require UCOR H&R SME evaluation and approval.

4.15.3.5 Other Heavy Equipment Used for H&R Activities

- Requires consultation with UCOR H&R SME and notification prior to performing
- In accordance with manufacturer's manual and WLL
- Attachment points are:
 - Installed/approved by the manufacturer
 - Rated WLLs available to the CPR
 - Proof test reports, COC, and inspected on the annual inspection report
- Requires Form-971

4.15.3.6 Environmental

- Ensure preventive measures are in place for potential hydraulic fluid/oil leaks into nearby storm drains and waterways.

4.16 FIRE PREVENTION

4.16.1 Guidance Documents

- PPD-FP-2001, *Fire Protection Program Description*
- PROC-FP-2001, *Fire Protection Program Procedure*
- PROC-FP-2003, *Fire Extinguisher Inspection and Maintenance*
- PROC-FP-2006, *UCOR Program for Controlling Combustibles and Ignition Sources*
- PROC-FP-2008, *Hot Work*
- UCOR-4087/R4, *Safety and Health Handbook, Oak Ridge, Tennessee*

Note: Fire Protection Engineer (FPE) for the Project Should be Consulted FREQUENTLY

4.16.2 Primary, Significant, or Unique Requirements

4.16.2.1 Access/Egress

- Maintain clear paths at all times.
- Do not store combustible materials under stairs or in stairwells.

4.16.2.2 Fire Extinguishers

- Inventory and monthly inspection
- Position in designated locations that are properly secured, visible, and readily accessible.
- Immediately replace if taken out of service or used.
- Annual maintenance and 5-yr hydrostatic test

4.16.2.3 Controlling Combustibles and Ignition Sources

- Housekeeping—Housekeeping—Housekeeping
- Combustible waste stored in metal drum, box, etc.
- UCOR FPE evaluation of flammable/combustible liquid storage
- Oil rags (spontaneous ignition) stored in appropriate, listed disposal container
- Designated smoking areas and receptacles
- Storage cabinets and flammable liquid containers NRTL-listed
- All gas cylinders secured.

4.16.2.4 Refueling

- Portable tanks
 - Ensure nearby facility requirements will not be violated
 - Portable tanks a minimum of 50 ft from building
 - Double wall containment
 - Tank bonding
 - Portable fire extinguisher minimum 2A 40BC
 - NRTL-listed pump
 - Tanks shall be equipped with overflow warning and shutoff device
 - Must be placarded in compliance with National Fire Protection Association (NFPA) 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*, including hazard diamond
 - 50 ft No Smoking and Open Flame sign

- Truck-mounted tanks
 - NRTL-listed or U.S. Department of Transportation (DOT)-compliant, and NRTL-listed pump
 - Maximum capacity of 110 gal
 - Grounded to vehicle body
 - 50 ft No Smoking and Open Flame sign
 - Portable fire extinguisher minimum 5A 40BC
 - All equipment shut off and secured from movement
 - Continuously monitored
- Type II safety fuel cans
 - 6 gal max, NRTL listed
 - Leak-tight and self-closing spout
 - Equipment shut off and allowed to cool prior to refueling

4.16.2.5 Hot Work

- Any flame- or spark-producing activity requires a permit (unless waived by FPE).
 - Includes hand torches (Bernzomatic, etc.)
 - FPE to evaluate heat producing activities
 - Integral burners with paving machines, etc., do not require a Form-149, Hot Work Permit (HWP).
 - Heat producing seam welders for geomembranes, pipes, etc., do not require an HWP.
- Welding, torch cutting, grinding, etc.
 - Respiratory protection required in most cases and evaluated per IHWP by UCOR Industrial Hygiene (IH).
 - Contract will state if UCOR or Subcontractor to provide respirators.
 - UCOR normally provides IH monitoring.
 - Ensure correct lens shade.
 - FR clothing meeting ASTM F1449-20 and/or ISO 2801.
 - Evaluate proper undergarments, cold weather jacket liners, etc.
 - Ensure good condition (fraying, laundering, etc.)
 - Standard welder's leather garments (such as chaps, sleeves, apron, etc.) are considered to be FR garments and meet the intent of PROC-FP-2008 as long as they cover all non-FR clothing.
 - Both the individual performing and the fire watch (unless noted on the permit)
 - Training
 - Supervisor required to take LEARN Module 11655, *Hotwork Issuing Authority/Supervisor Training*.
 - LEARN Module 23129, *Fire Watch*, annual classroom

- LEARN Module 23290, *Fire Ext. Practical*, or Module 29019, *Fire Watch & Practical (Vendor)*, annual on-the-job training (OJT)
- Several workers on recent UCOR projects have been burned by radiant heat.

4.17 INDUSTRIAL HYGIENE

4.17.1 Guidance Documents and Resources

- PPD-IH-3345, *Chemical Safety Management Program*
- PPD-IH-5133, *Ergonomics Program*
- PPD-IH-5140, *Hazard Communication*
- PPD-IH-5151, *Respiratory Protection Program*
- PPD-IH-5205, *Airborne Silica Hazard Assessment and Control*
- PPD-IH-5418, *Industrial Hygiene Program*
- PROC-IH-5121, *Occupational Noise Exposure and Hearing Conservation*
- PROC-IH-5134, *Temperature Extremes*
- PROC-IH-5138, *Confined Space Entry*
- PROC-IH-5177, *Asbestos and Other Fibrous Materials*
- PROC-IH-5181, *Hazardous Materials Information System*
- PROC-IH-5206, *Generation and Use of Industrial Hygiene Work Permits*
- UCOR-4087/R4, *Safety and Health Handbook*, Oak Ridge, Tennessee
- OSHA, American Conference of Governmental Industrial Hygienists (ACGIH), National Institute for Occupational Safety and Health (NIOSH), etc.

4.17.2 Primary, Significant, or Unique Requirements

4.17.2.1 Expectations

- UCOR's goal is to apply as low as reasonably achievable (ALARA) practices to all potential exposures.
- All chemicals are evaluated for their hazards, health effects, and exposure potentials by professionals using the IHWP process and the evaluation is integrated into the work control.
- Hierarchy of controls is strictly followed (see also the diagram in Sect. 3.10):
 - Eliminate
 - Substitute
 - Engineer
 - Administrative
 - PPE

- IH monitoring is the expectation, not the exception.
 - Documented training/JPM on equipment

4.17.2.2 General Approach and Responsibilities

- Subcontractor will provide a designated Competent Person on Form-2972.
 - Silica, asbestos, lead, and cadmium
- Subcontractor is responsible for medical surveillance using their chosen OCCMED provider.
- UCOR will perform the IHWP.
- UCOR will provide IH monitoring in most cases.
- UCOR will provide respiratory protection in some cases.

4.17.2.3 Main Areas of Emphasis

- Heat stress
 - PROC-IH-5134
 - LEARN Module 31736, *UCOR Heat Stress Briefing*
 - ACGIH
 - UCOR work/rest regimen
 - Physiological monitoring and Form-1165, HEART Card
- Ergonomics
 - PPD-IH-5133
 - 30 lb is the trigger for evaluation by Safety/IH
 - Matrix/inventory on weight of materials/items and method of handling
- Silica
 - PPD-IH-5205
 - Requires Silica Competent Person:
 - LEARN Module 308, *Respirator*
 - LEARN Module 31835, *Silica Hazard Awareness*
 - LEARN Module 31836, *Silica Competent Person Designation*
 - Worker requires LEARN Module 31835
 - Drilling, sawing, grinding, etc.
 - Engineered tools with dust capture
 - Shrouds, covers, and water for dust suppression
 - Most drilling does not require respiratory protection

- Grout mixing, etc.
 - Less than 1 hr—Use filtering facepiece (dust mask)
- Volatile organic compounds
- Welding and aggressive cutting
 - Welding requires respiratory protection

4.17.2.4 Confined Space

- PROC-IH-5138
- Form-1237, Confined Space Evaluation Checklist (for any created spaces, i.e., manholes)
- Form-783, Confined Space Entry Permit (CSEP)
- Evaluate equipment (vaults, manholes, etc.) for proper posting
- Training
 - LEARN Module 1550, *Confined Space Entrant/Attendant*
 - LEARN Module 1551, *Confined Space for Supervisors*

4.17.2.5 Respiratory

- PPD-IH-5151, *Respiratory Protection Program*
- OCCMED evaluation, model specific fit test for tight-fitting respirator, LEARN Module 308, and specific module for PAPR
- Medical approval card with identified fit test for specific tight-fitting respirator,
- PAPR approval card

UCOR Respiratory Protection Training Card		Travis S. Watson 712478	
Course	Compl Date	Exp Date	
Respirator(308)	12/01/22	12/01/23	
Versaflo PAPR(31678)	10/17/16	EXPIRED	
Powerflow PAPR(34452)			
Cougar SCBA(TBD)			
TWPC Airline(TBD)			
TWPC Pureflo PAPR(34477)			

For more information, see UCOR PPD-IH-5151
Respiratory Protection Issuer Verify:

- Training
- Medical Approval and
- Fit Test (only for tight fitting facepiece)

User Responsibility:

- Inspection
- Use
- Decontamination/Sanitization
- Storage
- Tag out defective respiratory protection

Verifier: _____ Date: 10/04/23

Travis WATSON Badge: 712478

- Filtering facepieces (dust masks)
 - Voluntary use requires (LEARN Module 31297, *Voluntary Use of Filtering Facepiece Respirator*)
 - Mandatory use
 - Stringent assessment requirements by IH
 - Requires medical evaluation, respirator fit testing, and training

4.17.2.6 Hearing Conservation

- PROC-IH-5121, *Occupational Noise Exposure and Hearing Conservation*
- LEARN Module 26455, *Hearing Conservation*

4.17.2.7 Eye Wash

- PROC-EH-2012, *Emergency Showers and Eyewash Equipment*
- Emergency showers and/or eyewash equipment shall be required where the eyes or body of any person could be exposed to injurious corrosive materials, such as any of the following conditions:
 - Acidic ($\text{pH} \leq 2$) or caustic ($\text{pH} \geq 12.5$) chemicals are used, stored, or handled (and the possibility of spillage exists)
 - A condition, activity, and/or SDS evaluated by the project IH or Safety representative to require an emergency shower or eyewash
 - Battery handling and charging stations
- Full eyewash station is rarely required.
- Emergency eyewash bottles normally are sufficient for immediate response until professional medical assistance is provided or transport to UCOR Health Services.

4.17.2.8 HM

- SDS required to be submitted for all chemicals before bringing on site.
- HM Control Area and inventory on Form-1017, HMIS Physical Inventory, is required if chemicals do not leave site each day.
- HM Custodian and Alternate designated for each Control Area.

5. REFERENCES

5.1 NON-UCOR SOURCES

10 CFR Part 851. *Worker Safety and Health Program*, Washington, D.C.

———29 CFR Part 1926. *Safety and Health Regulations for Construction*.

ANSI/ASSP Z359.14-2021. *Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems*, American National Standards Institute, Washington, D.C.

———ANSI/ISEA 107-2015. *American National Standard for High-Visibility Safety Apparel and Accessories*, 2015.

———ANSI/ISEA Z87.1-2020. *Current Standard for Safety Glasses*, 2020.

———ANSI/ISEA Z89.1-2014 (R2019). *American National Standard for Industrial Head Protection*, 2019.

———ANSI-ASC A14.7-2006. *American National Standard for Mobile Ladder Stands and Mobile Ladder Stand Platforms*, 2006.

ASTM F1818-15(2022). *Standard Specification for Foot Protection for Chainsaw Users*, 2022, ASTM International, West Conshohocken, PA.

———ASTM F1449-20. *Standard Guide for Industrial Laundering Care and Maintenance of Flame Resistant or Arc Rated Clothing*, updated May 6, 2020.

———ASTM F1897-20. *Standard Specification for Leg Protection for Chain Saw Users*, 2020.

———ASTM F2413-18. *Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear*, updated Jul 03, 2024.

DOE G 414.1-3, Chg 2 (Admin Chg). *Suspect/Counterfeit Items Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements, and DOE O 414.1B, Quality Assurance*, 2011 (confirmed 2013), U.S. Department of Energy, Washington, D.C.

ISO/TR 2801:2007. *Clothing for protection against heat and flame — General recommendations for selection, care and use of protective clothing*, 2007 (confirmed 2017), International Organization for Standardization, Geneva, Switzerland.

NFPA 704. *Standard System for the Identification of the Hazards of Materials for Emergency Response*, [2022] National Fire Protection Association, Quincy, MA.

5.2 UCOR DOCUMENTS

All references are to the latest revision except as noted.

Form-147. Excavation/Trenching Permit (ETP)

Form-194. Lockout/Tagout Permit

Form-783. Confined Space Entry Permit (CSEP)

Form-832. Equipment Daily Checklist and Safety Inspection Form

Form-834. Monthly Crane and Wire Rope Inspection Form

Form-856. STARRT Card

Form-897. Mobile Elevating Work Platform Daily Checklist and Safety Inspection Form

Form-899. United Cleanup Oak Ridge LLC (UCOR)/Subcontractor Lift Plan

Form-913. Competent Person Excavation Safety Checklist

Form-925. Fork Lift Daily Checklist and Safety Inspection Form

Form-928. Daily/Monthly Crane Checklist and Safety Inspection Form

Form-971. Hoisting and Rigging Checklist

Form-1017. HMIS Physical Inventory

Form-1022. Structural and Mechanical Forklift Attachment & Fork Pocket Mounted Device Inspection Checklist

Form-1165. HEART Card

Form-1170b. Ergonomics Evaluation Checklist (Industrial Ergonomics)

Form-1237. Confined Space Evaluation Checklist

Form-1601. Daily Overhead Crane/Hoist Checklist and Safety Inspection Form

Form-2218. Annual-Overhead-Crane/Monorail Inspection Checklist Form

Form-2972. Competent Person Designation Form

Form-3061. Industrial Hygiene Work Permit

Form-3090. Overhead Utility Clearance Permit for Proximity to Overhead Lines

Form-3143. Pre-Engineered/Critical Lift Classification Worksheet

Form-3418. LO/TO Walkdown Aid

Form-3419. Lift Truck Pre-lift Checklist

Form-3425. Field Calculation for Unknown Material Weight

Form-3445. Excavation Operator Pre-Dig Checklist

Form-3500. Vehicle/Construction Equipment Spotter Checklist

Form-3685. Scaffolding Plan Checklist

Form-3745. Fall Hazard Survey

Form-3746. Fall Protection Plan

Form-3747. Fall Protection Permit

POL-UCOR-308. *Returning to Work Safely*

PPD-EH-1745. *Worker Safety and Health Program*

PPD-EH-2006. *Fall Prevention and Protection Program*

PPD-EH-2009. *Electrical Safety Program*

PPD-FO-1037. *Construction and Heavy Equipment Program*

PPD-FP-2001. *Fire Protection Program Description*

PPD-IH-3345. *Chemical Safety Management Program*

PPD-IH-5133. *Ergonomics Program*

PPD-IH-5140. *Hazard Communication*

PPD-IH-5151. *Respiratory Protection Program*

PPD-IH-5151. *Respiratory Protection Program*

PPD-IH-5151. *Respiratory Protection Program*

PPD-IH-5205. *Airborne Silica Hazard Assessment and Control*

PPD-IH-5418. *Industrial Hygiene Program*

PPD-MD-8003. *Occupational Medical Program*

PROC-EH-1013. *Accident Prevention Signs, Barricades, and Other Postings*

PROC-EH-2000. *General Safety Requirements*

PROC-EH-2001. *Injury/Illness Reporting and Investigation*

PROC-EH-2002. *Hazardous Energy Control (Lockout/Tagout)*

PROC-EH-2005. *Personal Protective Equipment*

PROC-EH-2012. *Emergency Showers and Eyewash Equipment*

PROC-EH-2020. *Safe Use of Vehicles*

PROC-FO-1004. *Excavation/Trenching Permitting*

PROC-FO-1008. *Hoisting and Rigging Operations*

PROC-FO-1009. *Qualification and Performance as Competent Person Rigger and Crane Signal Person*

PROC-FO-1015. *Scaffolds and Ladders*

PROC-FO-1037. *Hoisting and Rigging Hardware Inspection, Testing, and Purchases*

PROC-FO-1039. *Construction Equipment Inspection and Maintenance Program*

PROC-FO-1040. *Lift Truck Operation*

PROC-FO-1041. *Crane Operator Certification/Qualification*

PROC-FO-1072. *Penetration Permitting*

PROC-FO-1073. *Vehicle/Construction Equipment Spotter*

PROC-FO-2006. *Fall Prevention and Protection Program*

PROC-FO-3033. *Out of Commission Isolation Process for Structures, Systems, and Components*

PROC-FO-3034. *Earth Moving Equipment Operation*

PROC-FO-3035. *Well Drilling Operations*

PROC-FO-3036. *Mobile Elevating Work Platform Operation*

PROC-FO-3037. *Ground Penetration Permitting*

PROC-FP-2001. *Fire Protection Program Procedure*

PROC-FP-2003. *Fire Extinguisher Inspection and Maintenance*

PROC-FP-2006. *UCOR Program for Controlling Combustibles and Ignition Sources*

PROC-FP-2008. *Hot Work*

PROC-FS-1001. *Integrated Work Control Program*

PROC-IH-5121. *Occupational Noise Exposure and Hearing Conservation*

PROC-IH-5134. *Temperature Extremes*

PROC-IH-5138. *Confined Space Entry*

PROC-IH-5177. *Asbestos and Other Fibrous Materials*

PROC-IH-5181. *Hazardous Materials Information System*

PROC-IH-5206. *Generation and Use of Industrial Hygiene Work Permits*

PROC-TC-0723. *Competent Person Designation*

UCOR-4087/R4. *Safety and Health Handbook*, Oak Ridge, Tennessee, July 2023.

5.2.1 LEARN Modules

All references are to the latest revision except as noted.

Module 308. *Respirator*

Module 11655. *Hotwork Issuing Authority/Supervisor Training*

Module 1550. *Confined Space Entrant/Attendant*

Module 1551. *Confined Space for Supervisors*

Module 17111. *Mobile Crane Qualification*

Module 17119. *Job Performance Measure for Skidsteer Operators*

Module 17122. *Job Performance Measure for Dozer Operators*

Module 17123. *Job Performance Measure for Backhoe Operators*

Module 17124. *Job Performance Measure for Front-End Loader Operators*

Module 17126. *Job Performance Measure for Roller/Compactor Operators*

Module 17127. *Job Performance Measure for Grader Operators*

Module 21221. *Parkworker*

Module 21142. *Hazardous Energy Control for Issuing Authorities, Supervisors, and FMs*

Module 23129. *Fire Watch*

Module 23290. *Fire Ext. Practical*

Module 26455. *Hearing Conservation*

Module 28392. *Personal Protective Equipment (wbt)*

Module 28847. *Competent Person Rigger Initial*

Module 28981. *Ladders & Scaffolds*

Module 29007. *Ladders*

Module 29019. *Fire Watch & Practical (Vendor)*

Module 29024. *Scaffold Erector*

Module 29077, Rev. 4. *Certified Crane Operator Site Specific & Competency Check (Inactive)*, 2020

Module 29268. *Competent Person Rigger Annual*

Module 29291. *Electrical Safety for the Non-Electrical Worker*

Module 31009. *Electrical Safety for Chemical Process Operators*

Module 31132. *Hazardous Energy Control for Authorized Employees*

Module 31233. *Signal Person Training*

Module 31254. *Certified Crane Operator Core*

Module 31274. *Certified Rigging Inspector*

Module 31297. *Voluntary Use of Filtering Facepiece Respirator*

Module 31602. *Job Performance Measure for Scraper Operators*

Module 31657. *Job Performance Measure for Truck-Mounted Crane Operators*

Module 31700. *Ladder Competent Person Designation*

Module 31702. *Competent Person Rigger Designation*

Module 31703. *Excavation and Trenching Competent Person Designation*

Module 31736. *UCOR Heat Stress Briefing*

Module 31835. *Silica Hazard Awareness*

Module 31836. *Silica Competent Person Designation*

Module 31888. *Excavation Safety Awareness*

Module 31890. *Competent Person Fall Protection Designation*

Module 31934, Rev. 1. *Equipment Operator Designation (Inactive)*, 2019

Module 31944. *Job Performance Measure for Excavator*

Module 34743. *Designation of Qualified Equipment Operators* (

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[illegible]

UCOR-5357/R1

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File—DMC—RC

From: [Hallman, Micah \(MHD\)](#)
To: [Hall, Ashley M \(AR4\)](#)
Cc: [Owens, Jennifer W \(JLW\)](#)
Subject: RE: UCOR-5357/R1 Record Copy File
Date: Tuesday, March 25, 2025 1:16:33 PM
Attachments: [UCOR-5357_R1_sig.pdf](#)
[image001.png](#)

This one should have all the signatures now. Please let me know if I've missed anything else.

Thanks,
Micah

From: Hall, Ashley M (AR4) <Ashley.Hall@orcc.doe.gov>
Sent: Tuesday, March 25, 2025 9:35 AM
To: Hallman, Micah (MHD) <Micah.Hallman@orcc.doe.gov>
Cc: Owens, Jennifer W (JLW) <Jennifer.Owens@orcc.doe.gov>
Subject: FW: UCOR-5357/R1 Record Copy File

So this one doesn't have the USQD signature or the Exhibit L signature.

Thanks,

Ashley Hall
Records Specialist/DMC Lead
Office: 865-574-6764
Ashley.Hall@orcc.doe.gov



From: Hallman, Micah (MHD) <Micah.Hallman@orcc.doe.gov>
Sent: Monday, March 24, 2025 1:56 PM
To: ETPP DMC <ETPPDMC@orcc.doe.gov>
Cc: UCOR-Editing <UCOR-Editing@orcc.doe.gov>
Subject: UCOR-5357/R1 Record Copy File

Hi Ashley,

Attached is the final record copy document package for UCOR-5357/R1.

Please let me know if you need anything else.

Thanks,

Micah Hallman, PhD

she/her/hers

Technical Editing Services

Technical Writer/Editor

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