

SUPPLEMENTAL CONDITIONS
Construction (CON 09/09)

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1. GENERAL

1.1 Work is located at the Y-12 National Security Complex (Y-12), a government-owned facility, managed by B&W, Y-12 L.L.C. (Company), for the Department of Energy (DOE), in Oak Ridge, Tennessee. Work consists of providing trained and qualified personnel, supervision, materials, tools, equipment, and services (except that specified to be furnished or performed by others) sufficient to perform the work required by the Subcontract.

1.2 RESERVED

1.3 Normal construction work hours are 7:00 a.m. – 5:30 p.m., Monday through Thursday. Seller requests for training, badges, vehicle access, and permits, and the processing of submittals are to be performed during normal construction work hours. The Company will process Seller requests during normal work hours.

1.4 Seller shall obtain approval from the Company to perform work at Y-12 outside the normal construction work hours at least two (2) workdays in advance. Seller shall use the Overtime Request form.

1.5 The Company observes the following holidays on an annual basis. Seller shall not schedule work on observed holidays without prior Company approval.

1. New Year's Day
2. Martin Luther King, Jr. Birthday
3. Good Friday (Standard Day Off)
4. Memorial Day
5. Independence Day
6. Companion Day with Independence Day
7. Labor Day
8. Thanksgiving Day
9. Day after Thanksgiving Day (Standard Day Off)
10. Christmas Day
11. Companion Day (Normally Christmas Eve)

1.6 The Seller shall submit certified payrolls for all work covered by the Davis-Bacon Act. Submit certified payrolls to the Company Subcontract Technical Representative (STR), for information, within 7 calendar days after each payroll period ends.

1.7 A pre-construction meeting will be held and pre-mobilization submittals stuated "Work May Proceed" prior to the Company issuing a Notice-to-Proceed with Seller's subcontracted work. Seller and their lower-tier subcontractor supervisory personnel shall attend. The meeting will be at Y-12 at a mutually agreed to date and time. Seller shall present their organization; work, quality and other plans; and environmental, safety, and health (ES&H) compliance plan to the Company to demonstrate Seller readiness to execute work in accordance with the Subcontract. In addition, an Operational Safety Board (OSB) meeting will be held for "Work Start Authorization." Upon request, Seller shall present work execution readiness.

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- 1.8 Seller shall designate an Authorized Representative with full responsibility to act for and commit the Seller and lower-tier Subcontractors. The Authorized Representative shall be the Company's primary point of contact with the Seller. The Seller shall notify the Company a minimum of four workdays in advance of any changes to the Authorized Representative or Company-designated "Key Personnel" whenever they become unavailable for performance of work under this Subcontract. Seller shall make every effort to replace such employees with employees of comparable abilities and qualifications who are satisfactory to the Company. If the key person is being reassigned within the Sellers organization rather than employment being terminated, the key person must remain on the job until a replacement is accepted by the Company and is available to begin work at the site, unless otherwise approved by the Company.
- 1.9 Seller shall maintain a list of personnel employed, including lower-tier subcontractors, for performance of the subcontracted work. Seller shall notify the Company of changes relating to all Seller's and lower-tier subcontractor personnel when personnel are terminated, reassigned off site, have resigned, are on extended absence, etc. Include the name of the individual and badge number. Refer to "General Terms and Condition" clause "DOE Security Badges and Clearance Requirements." Timely notification is required to facilitate resolution of contract compliance and release of final payment for badge returns, dosimeter returns, bioassay submissions, and return of Company-furnished items.
- 1.10 Progress meetings and Coordination meetings will be held weekly with the Seller. Seller Authorized Representative shall attend and arrange to have appropriate lower-tier subcontractors at these meetings. Seller and lower-tier subcontractors' attendance at these meetings is inclusive in the cost of the work and will not be reimbursed separately. The Authorized Representative shall have the authority to make cost, schedule, and other commitments for their principals and initiate actions responsive to items discussed at the meetings. Items of discussion will include:
- A. Safety
 - B. Security
 - C. Work schedules and progress
 - D. Resolution of problems and action items
 - E. *Requests for Information, Construction STR Change Notices, and Requests for Equitable Adjustments*
 - F. Administrative matters and procedures
 - G. Submittal and materials delivery status
 - H. Quality Assurance and nonconforming work items
- 1.11 A Safety and Information meeting will be held monthly with the Seller. Seller's Authorized Representative shall attend and arrange to have appropriate lower-tier subcontractors at these meetings. Topics of discussion will include environmental, safety, health, training, security, and general business.
- 1.12 The Seller shall perform work in compliance with specifications, drawings, drawing notes, and vendor requirements. Seller shall perform work in a skillful, safe, and workman-like manner. The Company may require, in writing that the Seller remove from Y-12 any Seller or lower-tier subcontractor employee the Company deems incompetent, careless, or otherwise objectionable.
- 1.13 Seller personnel, including those of their lower-tier subcontractors, shall fully cooperate with employees of the Company and other Company subcontractors. Do not commit or permit any act that will interfere with the performance of work by others.

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- 1.14 The Company STR may issue a *Construction STR Change Notice* to: (1) notify the Seller of changes; (2) request a proposal for a change, or (3) provide limited authorization to proceed with a change within the general scope of the subcontract. Seller shall respond in accordance with instructions on the *Construction STR Change Notice*.
- 1.15 The Company may direct the use of a *Daily Summary of Force Account Work* for change work performed by the Seller that allows for the Seller's accumulation of costs as incurred with concurrent approval by the STR. The Seller shall submit the completed form to the STR at the end of each day worked.
- 1.16 The Seller shall utilize a *Request for Information (RFI)* for a Seller-initiated technical question such as:
- A. Clarification of technical documents
 - B. Discovery of a conflict, ambiguity, error, or omission
 - C. Request an alternate/substitute to a prescribed method
- NOTE 1: Neither the RFI or RFI response is a Company authorization to modify the agreement in any particulars nor supplement any other portion of the agreement.
- NOTE 2: Seller shall maintain an RFI status log and make it available to the Company upon request.
- NOTE 3: An RFI response may identify a change and if so, the Seller shall not proceed with the change until authorized by a Company-issued *Construction STR Change Notice* or *Subcontract Modification*. No compensation will be awarded to the Seller where work proceeded without Company authorization.
- NOTE 4: Seller shall address a letter to the Company Subcontract Administrator providing notification of any request for compensable schedule impact due to an RFI response.
- 1.17 The Seller shall notify the Company when work is complete and ready for the Company's inspection and acceptance by submitting a *Request for Inspection of Completed Work* to the STR. The request may be for work completed in part or as a whole to recognize contractual milestone completion dates.
- 1.18 Company-furnished items/services depend on the scope of the Seller's work and may include:
- A. Backflow preventer for hydrant water use not to exceed one per Subcontract.
 - B. Dosimetry for access to the Protected Area (PA), radiological work and Criticality Accident Alarm System (CAAS) areas
 - C. Emergency ambulance and fire fighting response
 - D. Sanitary trash dumpsters, recycle paper and cardboard dumpsters
 - E. Construction radios for emergency notifications
 - F. Security radios for subcontractor-furnished escorts
 - G. PPE and respirators for radiological work
 - H. Calibration services for Equipment / Instruments to be installed in Facilities

NOTE: Seller shall coordinate requests for Company-furnished items with the STR at least eight (8) workdays in advance. Obtain emergency ambulance and fire fighting response by contacting Plant Shift Superintendent (PSS) at 574-7172, dialing 911 from a plant phone or calling PSS using Company radio.

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- 1.19 Seller's employees entering the PA shall wear a Personal Nuclear Accident Dosimeter (PNAD) or Thermoluminescent Dosimeter (TLD). PNADs are available at portal checkpoints. Seller shall ensure PNADs are returned at the completion of the work. PNADs are not included in an annual radiation monitoring report.
- 1.20 The Seller shall maintain a copy of Company-approved subcontract submittals and a copy of the Subcontract, complete with drawings and specification, at the work site and available to Seller and Company personnel.
- 1.21 The Seller shall comply with Y-12 Smoking Policy. The Company will designate and post smoking area for existing trailers, buildings, and structures. The Seller shall designate and post smoking areas for the Seller's construction laydown and storage areas and temporary trailers/facilities located at Y-12 complex. Designated smoking areas shall have a boundary barrier, butt receptacle and "Smoking Area" posting.
- 1.22 The Seller shall comply with Y-12 Motor Vehicle Policy. The Company will monitor Seller's compliance and forward non-compliance observations to the Seller for action. Seller shall ensure compliance of Seller personnel including taking disciplinary action on those individuals violating the policy.

2. OPERATING FACILITIES

- 2.1 Facilities may be in operation during the Seller's work. The Company will coordinate operating Facilities' activities and the Seller's work. Seller shall request permission from the Company eight (8) workdays in advance of need to work in an operating area and receive authorization from the STR before starting such work. Seller shall protect Company equipment, tools, materials, and facilities during execution of work and is responsible for repair of damages.
- 2.2 Means of egress components and exit discharge areas shall remain operable and shall not be obstructed by construction activities or laydown areas. Blocking or wedging of exit or fire doors is not permitted. Exit doors must swing fully open with a single-handed push. Where the Work Plan requires disabling an exit or fire door, the Seller shall provide signage with exit instructions.
- A. Do not remove or paint over UL/FM or similar labels on fire doors.
- 2.3 Seller representative shall attend daily "Plan of the Day" (POD) meetings conducted by the Company as required by the Facility hosting the work. Seller shall complete the host Facility "Plan of the Day" form and provide a daily Work Plan that identifies work activities for the following day.
- A. "Work Start Authorization" shall be obtained from the Company's Facility Shift Supervisor prior to initiating each shift's work activities and prior to resuming work activities after a Company-directed work stoppage or suspension.
- 2.4 Seller shall provide and document a daily pre-job brief with employees and visitors prior to beginning each shift's work activities or when conditions change, and for others reporting after the start of shift work activities. Perform and document a follow-up brief at the end of each shift and note feedback and any unusual events occurring that shift. Sign-in sheets for the job briefs shall be submitted to the STR on the next workday. Pre-job brief shall include:

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- Scope of work,
 - Hazards and controls associated with the work. Reference the applicable parts of the *Activity Hazard Analysis (AHA)*,
 - Redlines or revisions to the AHA,
 - Training requirements,
 - Any particular security, radiological, or environmental concerns/conditions,
 - Tools, materials, and equipment needed,
 - Hold or witness points for quality, safety, etc.,
 - Identification of manufacturers' material installation and equipment operating instructions,
 - Work Permit requirements (Radiological, Excavation, Hot Work, etc.), and
 - Feedback from the crew to ascertain that they understand the briefing or to add/share information.
- 2.5 Seller shall submit requests for system outages a minimum of eight (8) workdays in advance of need. Requests shall include detailed activities and schedule durations for the work to be performed during the outage. The Company will coordinate an outage schedule. Hold outages to a minimum in number and duration. Seller shall identify critical outages on the schedule submitted to the Company.
- 2.6 The Company will provide *Excavation/Penetration Permits, Radiological Work Permits, Hot Work Permits, Confined Space Permits* (for existing confined spaces), and authorizations for Storm and Sanitary Water Discharge (per regulatory permits), Asbestos Removal and Building Demolition.
- A. Seller shall request Company-provided *Excavation/Penetration Permits* sixteen (16) workdays prior to need and Asbestos Removal and Building Demolition Authorization twenty (20) workdays prior to need and other permits/authorizations four (4) workdays prior to need. *Excavation/Penetration Permits* expire 60 calendar days after issue date on the permit unless work has started.
- B. Company-provided *Excavation Permit* does not relieve the Seller of responsibility to contact and comply with the Tennessee One-Call System prior to excavation.
- C. An *Excavation Permit* is required for excavation work activities, except for the following:
1. Work associated with the maintenance, removal, and/or replacement of pavement and sidewalks not in excess of their thickness.
 2. Maintenance replacement of the same location, depth, and size as the items being replaced (i.e. sign post, poles, etc.).
 3. Earth/rock excavations, twelve (12) inches or less in depth, with a surface area not in excess of twenty-five (25) square feet using hand-held tools, excluding jackhammers.
- D. A *Penetration Permit* is required for all penetrations in walls, floors, ceilings and roofs except for the following conditions:
- a. Where the wall penetrations are less than eight (8) inches in any direction, the Seller shall obtain a review from Company Fire Protection Engineer and a scan of the penetration area for energized electrical.

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3. WORK PLANNING AND CONTROL

3.1 Seller shall submit a *Work Plan* and obtain Company approval before the Company issues a Notice-to-Proceed (NTP) to the Seller for mobilization and other Y-12 work activities. The *Work Plan* shall include:

A. Technical approach including:

1. Work sequence schedule,
2. Planned resource utilization (labor, equipment, lower-tier subcontractors),
3. Work location(s),
4. Recognize “Work Start Authorization” (Building/Zone – Operations Safety Board),
5. Required permit(s),
6. Requests for outages and/or Company services, and
7. Incorporation of Lessons Learned;

B. Quality Assurance approach including:

1. Assigned quality grade level for work
2. Defined Inspection Packages,
3. Identified witness and hold points,
4. Material procurement compliance,
5. Training compliance, including trained Competent person(s) and qualified inspectors,
6. Measuring and test equipment control, and
7. Assessments;

C. Security requirements including:

1. Escort packages, and
2. Use of computers and other wireless signal devices requiring *Telecommunication Plan (TP)*;

D. Assignment of responsibilities, including accident/incident response;

E. Environmental Safety and Health oversight and compliance including:

1. Best Management Practices/Storm Water Pollution Prevention, and
2. Discharges to the storm or sanitary systems;

F. Vehicle and/or pedestrian traffic control;

G. Waste Management Plan;

H. Sampling and Analysis;

I. Special Process Control including:

1. Welding, including rod control,
2. Hoisting and rigging, including identifying lift plans, competent person rigger, crane owner and operator, and rigging equipment control.
3. Identification of personal safety systems,
4. Electrical hazard evaluations,
5. Use of respirators,
6. Use of negative air machines, and
7. Radiological source control;

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- J. Material storage and control approach including:
1. Material assignment schedule,
 2. Material delivery, receipt inspection and non-conforming material handling,
 3. Manufactures storage requirements and special instructions,
 4. Inventory control,
 5. Hazardous materials and maximum allowable quantities, and
 6. Maintenance of warranty;

K. Submittals;

L. Test and Start-up approach include test scope;

M. Turn-Over approach including:

1. Request for final inspection for areas, rooms and/or systems,
2. Configuration control of turned over items (as-constructed drawings/specifications),and
3. Warranty(s).

3.2 Seller is responsible for initial acceptance and to ensure work is executed in compliance with the subcontract documents.

A. Inspection Package(s) (IP) shall be prepared where the subcontract technical documents require verification, inspection and/or testing. IP(s) shall be used by the Seller to document compliance. Seller shall prepare IP(s) and provide an information copy to the Company prior to initiating work defined by the IP. The Seller's QA/QC Manager is responsible for the administering and maintaining the IP(s). Upon finalizing the execution of the IP, Seller shall submit finalized IP to the Company for information. IP Control log shall be made available to the Company upon request.

1. Inspection Package's shall include as a minimum:

- a) Table of contents with revision number and date,
- b) Current design document(s),
- c) Design change documents (redlines, RFI's, changes, etc.),
- d) Applicable Inspection Procedure(s)/checklist(s) and/or Test Plans used to document acceptance inspections and testing to the current standards, design documents and changes. Seller and lower-tier subcontractors shall use existing Company inspection checklists (Construction Work Process (CWP) Procedures) or provide inspection procedures acceptable to the Company.
- e) Final IP(s) shall include:
 - 1) As-constructed design documents,
 - 2) Inspection Record(s),
 - 3) Test Records with Measuring and Testing Equipment (M&TE) identification and calibration due date for traceability, and
 - 4) Operation manuals, data sheets and other pertinent material information (e.g. Heat Numbers, Lot Numbers, material receiving reports and Non-Conformance Reports).

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2. IP Requirements:
 - a) Unique number shall be assigned to each IP,
 - b) Control Log shall be maintained containing:
 - 1) the IP number,
 - 2) issued date and subsequent revision dates,
 - 3) dates IP relinquished for inspection and name of inspector(s), and
 - 4) date IP finalized;
 - c) Pre-work, revision, and final IP(s) shall be signed and dated by Seller's QA/QC Manager for accuracy and completeness,
 - d) IP shall be controlled and accounted for at all times (this can be by a sign-out log or other controls),
 - e) IP may contain copies of document except all inspection/test records are to be original signed version in the finalized IP, and
 - f) Inspections shall be performed by the Seller unless otherwise specified.

Note: Multiple IPs may be generated to simplify inspections and complexity in completing Tasks within the scope of work. Traceability shall be maintained for a single task having multiple IPs (e.g. IP for steel frame erection, IP for steel frame ground meggar test and IP for steel frame base plate grouting shall be traceable to each other.).

3.3 The Seller shall submit a Daily Report to the Company no later than the next workday. The Daily Report shall include:

1. Subcontract Number and Subcontractor name,
2. Project Name,
3. Number of employees of Seller and its subcontractors and hours worked, identified by craft including non-manual supervision,
4. Equipment Make and Model on site and the condition of the equipment and hours worked or on standby,
5. Names of visitors,
6. Description of work, including tests, or inspections performed, and witness/hold points met,
7. Environmental, Health and Safety observations and incident,
8. Special comments (e.g. competent person input, delays, disruptions, critiques),
9. Seller Authorized Representative or designee signature,
10. Weather conditions and temperature,
11. Date,
12. Event(s)/Condition(s) Reported, and
13. Attachments.

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4. TRAINING

- 4.1 Company will provide instruction at no cost to the Seller, for *General Employee Training* (GET) and other Company compliance-related training. Seller shall bear all other costs associated with having its employees attend the required training (e.g. employee pay, travel, meals, lodging, etc.).
- A. Seller may request the training record for Seller's employees completing Company-furnished training.
 - B. Seller shall notify the STR of employee furloughs or terminations to allow the Company to inactivate those training records.
- 4.2 Supplemental Conditions, Attachment 1, *Training Requirements* identifies Y-12 Complex and task-specific training required for Seller personnel and lower-tier subcontractors. Complete and submit the *Request for Y-12 National Security Complex Training* form to STR to request Company-provided training. Revision to task-specific documents (e.g. AHAs, plans) requires re-training. The Seller is responsible for providing personnel who are trained and qualified in the skill of their craft, discipline, or specialty. Seller is responsible for providing its personnel any/all non-Y-12 specific training required to keep its personnel current as required by Federal and State laws codes and standards or required for the employee to be able to perform the work assigned by the Seller. Seller shall document training and provide records to the Company upon request.
- 4.3 Seller shall ensure employees are trained in the use of tools and equipment appropriate to the task and the installation of materials and equipment in accordance with manufactures' instructions. When unique or special tools or equipment are required, the Seller shall have manufacturer or vendor manuals available on site and ensure users are trained on safe operation. Seller shall maintain a copy of manufacturers' installation instructions and train workers prior to the installation of the material or equipment. Seller shall document employee training and provide records to the Company upon request.
- 4.4 Seller shall identify training and/or awareness measures to ensure all employees are made aware of the potential environmental impacts of their work and the controls (e.g., procedures, Best Management Practices (BMPs), engineering controls) in place to minimize or eliminate negative impacts, and the potential environmental consequences of departure from specified procedures.

5. MATERIAL DELIVERY, STORAGE & HANDLING

- 5.1 Promptly place orders for equipment, materials, and services to complete the work. Provide delivery schedules for critical items into the Seller's schedule.
- A. For items requiring Company approval of submittal, do not order item until Company provides acceptance.
- 5.2 Seller shall notify the Company of changes in deliveries or circumstances that affect timely delivery of equipment, materials, and services. Seller requests for an extension of time because of late delivery of equipment, material, or services shall be submitted to the Company in writing and accompanied by documentation showing the Seller's efforts to obtain timely delivery. Time extensions to the schedule require Company approval.

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- 5.3 Seller is responsible for all costs related to the acquisition and care of all Seller-purchased equipment and materials. Deliver materials in a new condition and unload, handle, protect and maintain according to manufacture's instructions during storage and installation to maintain the condition until turnover to the Company. Report any damage to the Company and obtain Company approval for the corrective measure. Damaged materials shall be replaced or repaired at the Seller's expense, including expediting expenses.
- 5.4 All bills of lading for deliveries shall be addressed to the Seller and state the specific delivery location and point of contact. The STR is available to assist with delivery coordination.

NOTE: The Company will not accept deliveries for the Seller.

- 5.5 Seller shall comply with manufacturer instructions and requirements for handling and storing of material and equipment and maintain a record of compliance (i.e. shaft rotations, conditioned space, etc). Seller shall protect materials and equipment from moisture, dust, and damage, including conditioned storage when required. Seller shall store materials and equipment to prevent damage to the environment and comply with Federal and State regulations. Seller shall provide records to the Company upon request.
- 5.6 Seller-purchased materials specified by Configuration Control Equipment Data Sheets (CCEDS) shall have a receipt inspection upon delivery and be secured and tracked until installed per specification Division 1 requirements. Seller shall establish and maintain a Material Control Plan for CCEDS materials/items in accordance with the Technical Specification or Scope of Work requirements. The Material Control Plan shall include, but not be limited to the following:
- A. Material Receipt and Installation Log
 - B. Materials placed in secure (locked) storage with a Key Control Log until installation
 - C. Material Expiration Log for materials having a finite shelf life
 - D. Removal of non-conforming materials/items
- 5.7 Identify materials delivered to Y-12 with a weather-resistant tag or label with Seller's name and contact, subcontract number, and contents.
- 5.8 Only materials and equipment used in the performance of this Subcontract may be stored at Y-12 Complex. The Seller shall be responsible for all loss, destruction, or damage to Seller material (including work in progress). Limit lay down and storage to areas designated by the Company. Seller is responsible for maintaining good housekeeping in storage and laydown areas and shall immediately correct deficiencies noted by the Company.
- 5.9 Excess material and equipment, which is government property, shall be returned to the Company for disposition, all other excess material and equipment shall be removed from the Y-12 Complex after obtaining RADCON release.
- 5.10 Seller is responsible for protection and maintenance of Government-Furnished Equipment/Material (GFE) that has been placed in the Seller's care. Damaged GFE shall be repaired or replaced at the Seller's expense, including all associated expenses.

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6. SCHEDULE

- 6.1 Seller shall submit their Schedule with Resource Profile and Cost Loading to the Company STR within eight (8) workdays after Notice of Award and obtain approval of the schedule prior to receiving a Notice-to-Proceed from the Company. The approved initial Schedule is the baseline schedule.
- A. The Schedule shall include the Seller's work activity sequence in sufficient detail to provide:
1. Assurance that it encompasses the entire scope of the subcontract
 2. A basis for the Company's internal planning activities
 3. Allowance for uncertainties of weather: The basis of rain, temperature, rain days, etc., will be the data from the National Climatic Data Center for Oak Ridge, Tennessee (www.NCDC.NOAA.gov). Weather conditions that lie within 30 year historical norms as measured by the National Climatic Data Center for Oak Ridge, Tennessee, shall not be considered an excusable delay.
- B. The Company's review and acceptance of the Seller's baseline Schedule is for conformance to the Subcontract requirements only. The Seller is responsible for the schedule logic, reasonableness and feasibility; activity selections and durations; and cost and resource loading. "Cost" is defined as the approved schedule of values, the sum of which shall equal the total Subcontract Amount.
1. Changes to the accepted schedule sequence shall be discussed with the Company and may require a revised baseline Schedule to be submitted by the Seller for acceptance by the Company.
 2. The Seller may submit revisions to the baseline Schedule in the form of fragmentary networks (fragments) to the Company for acceptance. The changes shall be clearly defined.
- C. The Schedule shall be developed utilizing any of the Primavera Project Planner suite of scheduling software products. The submittals and weekly updates shall include an electronic copy saved as P6 format.
- D. The Schedule shall be a Critical Path Method (CPM) Schedule presented in graphic format and updated weekly. Weekly schedule updates shall show both the baseline Schedule and current status on activities, costs, and resources. Seller shall provide copies of the Schedule updates and a 3 week look-ahead schedule for the Progress Meetings.
- E. The Seller shall obtain acceptance of the baseline Schedule before submitting the first *Application for Payment*. Company acceptance of subsequent revisions to the baseline Schedule (re-baselining) is also required prior to approval of *Applications for Payment*.
- F. If the Seller falls behind the accepted Schedule, risking completion of the subcontract period of performance, the Seller shall, without additional cost to the Company, take such steps as necessary to regain schedule.
1. The Company may require the Seller to submit a recovery plan and a schedule in the same format as the original schedule.

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2. Upon the Company's determination that the Seller is not executing the work with such diligence to ensure completion within the subcontract period of performance, the Company may, **in addition to any other remedy**, perform or have the work performed by others on behalf of the Seller and deduct the cost incurred from the subcontract value.

6.2 Schedule Format and Content

- A. The Schedule shall be a CPM in Precedence Diagramming Method (PDM) format.
- B. The Schedule shall be time-scaled and show bars for activity current status and target dates from the baseline Schedule.
- C. The Schedule, as a minimum, shall include the following critical milestone dates:
 1. "Notice-of-Award Issue" (Day 1 on the Schedule)
 2. "Notice-to-Proceed Issue"
 3. Other milestone dates specified in the Subcontract
 4. "Construction Complete"; logically tied to demobilization
 5. "Subcontract Completion Date"; constrained to a fixed date
- D. The Schedule shall show:
 1. Activity Number
 2. Activity Description
 3. Activity Original Duration
 4. Activity Remaining Duration
 5. Current Early Start or Actual Start of the activity
 6. Current Early Finish or Actual Finish of the activity
 7. Activity Total Float
 8. Activity Percent complete
 9. Activity Target Early Start
 10. Activity Target Early Finish
 11. Variance Target Early Finish/Start
- E. The Seller's Schedule activities, resources, and costs shall be coded as directed by the Company. The Company will provide an electronic file of a P6 Shell and Work Breakdown Structure (WBS). The P6 Shell is a template that contains Subcontract-specific and Company's standard WBS, activity code dictionaries, and resource codes. The Seller shall use the Company-provided P6 Shell and WBS. The Seller shall modify (add to) the Company-provided P6 Shell to facilitate Seller work activities, cost, labor, and material/equipment quantities.
- F. The Schedule level of detail shall be sufficient to provide the Company with an adequate level of information concerning training, field mobilization, submittals, procurement, and delivery of equipment, equipment installations, lockout/tagouts, outages, work activities, test and checkout activities, final cleanup and demobilization, and documentation for turnover.
 1. Activity selection shall define discreet elements of work, whose duration shall not exceed 21 calendar days unless approved by the Company.
- G. The critical path shall be clearly defined on the Schedule.

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- H. The Schedule shall not contain negative relationship lags and/or negative activity durations.
 - I. Total float is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, for each activity in the Schedule. The float is owned neither by the Company nor by the Seller.
- 6.3 Extensions of time to the Subcontract period of performance shall be granted only via Subcontract Modification.
- A. In the event the Company changes the Subcontract period of performance, the Seller shall submit a revised baseline Schedule to the Company for acceptance within eight (8) workdays after receipt of the Subcontract Modification, changing the period of performance,.
 - B. Extensions of time to the Subcontract Completion Date will be granted only to the extent that activities adjusted due to a Subcontract Modification or delays affect the Seller's critical path and Subcontract Completion Date.
- 6.4 Seller shall submit for Company approval a Resource Profile and Cost Loading integrated with the baseline Schedule within eight (8) workdays after Notice of Award and obtain approval prior to *Application for Payments*.
- A. The Seller shall compile the Resource Profile and Cost Loading utilizing the Company provided P6 Shell. Each schedule activity shall be resource and cost loaded.
 - B. The Seller shall provide a total period and cumulative resource and cost information monthly for the entire duration of the subcontract, upon Company request.
 - C. When the baseline Schedule is revised and/or the Subcontract Modification significantly alters the scope of work, a revised Resource Profile and/or Cost Loading shall be submitted to the Company for approval. Only Subcontract Modifications that have been authorized and approved by the Company shall be included in the revisions to the Resource Profile and Cost Loading. The revision from the Subcontract Modification shall be a unique entry following the original format (Labor, Material, etc.).
 - D. Seller shall provide a Schedule of Values from the baseline Schedule cost loading and correlate schedule activities with the respective Subcontract Pay Items. The cumulative cost load from schedule activities shall not exceed the value of the respective Subcontract Pay Item. The total of the Schedule of Values shall equal the Subcontract value.

7. EARNED VALUE

- 7.1 Seller shall prepare a Schedule of Values to allocate the Subcontract pricing to work activities on the Seller's Schedule when the Subcontract Measurement for Payment allows for interim payments to the Subcontract Pay Item(s). The Schedule of Values will be used by the Company as the basis for approving *Applications for Payment*. Submission as follows:
- A. Prepare a Schedule of Values correlated to work breakdown identified in Seller's schedule.

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- B. Submit to the STR for approval within two (2) weeks after approval of Seller's **baseline** schedule.
- C. Update and resubmit with each revision to the Subcontract Pay Item(s).
- D. Submit approved Schedule of Values with *Application for Payment* to show payment request for work completed.
- E. Forms and Content
 - 1. Provide a breakdown of the price in enough detail for evaluation of progress reporting and *Applications for Payment*.
 - 2. Provide a separate item in the *Schedule of Values* where *Applications for Payment* includes materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Furnish evidence that the Seller has acquired title to such material and that the material will be used to perform the work.
 - b. Include evidence of insurance or bonded warehousing for off-site storage
 - 3. Temporary facilities and other distributable cost items that are not direct cost of actual work-in-place may be either shown as separate items in the Schedule of Values or distributed as general overhead expense.
 - 4. Include preparatory work, overhead, and profit in the items to which they apply. Do not state as separate items. State the cost of bonds in a separate line item.

7.2 **Payments for work progress** will be made in accordance with the **Subcontract Measurement for Payment** provision in the Subcontract Pricing Section **or where none are provided follow the General Terms and Conditions** clause on Payments. **Submit Application for Payment as follows:**

A. **Computation** for Payment

- 1. Compute progress payments on a basis of complete work for each item in the approved Schedule of Values or Subcontract Measurement of Payment section. Payment will not be made for any item of completed work until requisite documentation verifying completion is submitted to and accepted by the Company.

B. Submittal of *Application for Payment*

- 1. A person authorized to sign legal documents on behalf of the Seller shall execute the *Application for Payment*.
- 2. Entries shall match data on the Schedule of Values **or Subcontract Pricing Section**.
- 3. Submit an *Application for Payment* with documentation and records required to verify acceptable completion of items of work.
- 4. Seller shall submit each *Application for Payment* to the Company STR, Subcontract Administrator (SA), and Accounts Payable.
- 5. The date for submittal of each **Application for Payment** is the third Wednesday of each month.

C. Submittal of **Final** *Application for Payment*

- 1. Upon completion of the work, submit an *Application for Payment* marked as "Final."
- 2. Provide a signed *Release and Certificate of Final Payment* form with the **Final Application for Payment**.

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3. Prior to submission of **Final** *Application for Payment*, Seller shall request from the STR information concerning any outstanding contract compliance items; including removal of excess material and equipment, outstanding submittals and certified payrolls, return of badges, vehicle passes and dosimetry, bioassay samples **submittal**, or **return of** Company-furnished items. Failure to resolve could delay approval of **Final** *Application for Payment*.

D. Approval of *Application for Payment*

1. The Company will review the *Application for Payment* and make payment after verifying accuracy and completeness. Company will notify Seller of disapproved *Applications for Payment* for correction and resubmittal.

8. FORMS

- 8.1 The Company forms are available through the Company Procurement Public Web Site at url address: http://www.Y-12.doe.gov/procurement-ext/library/art_forms.html

- A. *Asbestos Waste Shipment Record* (UCN-17379A)
- B. ***Beryllium Work Plan*** (UCN-21324)
- C. *Construction STR Change Notice* (UCN-21329)
- D. ***Construction Safety Checklist***(CFN 0131)
- E. *Daily Summary of Backcharge Work*
- F. *Daily Summary of Force Account Work*
- G. *Homeland Security Presidential Directive HSPD-12 Badge Request Form* (UCN-21519)
- H. *Individual Accident/Incident Report, DOE F 5484.3*
- I. *Overtime Request*
- J. *Release and Certificate of Final Payment*
- K. *Request for Information*
- L. *Request for Inspection of Completed Work*
- M. ***Request for Landfill Disposal*** (UCN-21941)
- N. *Request for Y-12 National Security Complex Training* (UCN-21364)
- O. *Request for Y-12 National Security Complex Vehicle Pass* (UCN-23155)
- P. ***Shipping Plan for Radioactive Material*** (UCN-21822)
- Q. *Subcontractor Request for Y-12 National Security Complex Temporary Access and Vehicle Pass* (UCN-21354)
- R. *Subcontract Safety Performance Report* (UCN-21439)
- S. *Subcontractor Hazardous Materials Inventory Report* (UCN-21445)
- T. *Submittal Transmittal Form*(CFN 0095)
- U. *Telecommunications Proposal* (UCN-16020A)
- V. ***Waste Container Log*** (UCN-21482)
- W. ***Waste Container Preparation and Filling Instruction/Checklist Drum*** (UCN-21741)
- X. ***Waste Container Preparation and Filling Instruction/Checklist Sealand*** (UCN-21670)
- Y. ***Waste Container Preparation and Filling Instruction /Checklist ST-90 Box*** (UCN-21668)

Note 1. Forms are available in hard copy and electronic format from the STR.

Note 2. Forms referenced are to be submitted to the STR.

Note 3. Escort Package (UCN 17629) form is not posted on the Company Procurement Public web site. It is available in hard copy from the Company.

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9. TEMPORARY FACILITIES AND WORK AREA CONTROLS

9.1 The following regulatory requirements are incorporated by reference:

- A. NFPA 70-, *National Electrical Code (NEC)*.
- B. NFPA 241, *Standard for Safeguarding Construction, Alterations and Demolition Operations*.
- C. NFPA 501A, *Standard for Fire Safety Criteria for Manufactured Home Installation, Sites, and Communities*.
- D. ANSI D 6.1, *Manual on Uniform Traffic Control Devices for Streets and Highways*.
- E. ANSI A225.1, *Anchor and support requirements*.
- F. MUTCO Part 5, *Manual of Uniform Traffic Control Devices*
- G. *International Building Code*.
- H. TN 1200-5, *Rules of the Tennessee Department of Health and Department of Environment and Conservation, Division of Water Supply*.
- I. 29 CFR Part 1926 Subpart G, *Signs, Signals, and Barricades*

9.2 Temporary Utilities/Company-Furnished Facilities

- A. Seller shall provide temporary lines and equipment to existing Y-12 electric and water utilities. The Seller is responsible for installing, maintaining, and repairing temporary lines and distribution equipment. Tie-ins and disconnecting to Y-12 utilities will be performed by the Company. Provide material and equipment in place and ready for tie-in. Remove temporary utilities upon completion of the work and after final disconnect.
 - 1. If Company electric power is not available, Seller shall provide portable power, as required. Provide Ground Fault Circuit Interrupters for temporary electrical lines. Perform temporary electrical work in accordance with NFPA 70 (NEC) requirements. If portable power requires a ground rod, an excavation/penetration permit is required if existing ground is not available.
 - 2. The Company will provide a water source at existing locations. Company-installed backflow preventers are required on all hydrants. The Seller is responsible for providing distribution line (e.g., hoses, nozzle), from the backflow preventer/water source to the work area. Seller shall provide booster pump(s) as necessary. The Seller shall provide portable water holding tanks with discharge pumps or mobile water tanker where Company does not provide a water source convenient to the Seller's work area.
 - 3. Discharge into Y-12 storm or sanitary sewer in accordance with regulatory permit(s). Coordinate with STR to obtain Company authorization prior to water discharges.
 - 4. Hard-wired telephone service is available through the Service Provider to the Y-12 Complex. . The Seller is responsible for providing telephone service. Cordless telephones are prohibited.
 - 5. Provide chemical toilet facilities and maintain them in a safe and sanitary condition.
 - 6. Seller consumption of Company-provided electrical and water is at no cost to the Seller.
 - 7. Seller's electrical installation for temporary facilities shall pass an inspection by the Y-12 Authority Having Jurisdiction (AHJ) before tie-in to the Y12 power distribution system or connection to a portable generator greater than 5KW.
 - 8. The Company can not be held liable by Seller for delays in completing temporary utility tie-ins nor for interruptions to Company provided temporary utilities. Interruptions in Company provided temporary utilities are not grounds for a delay in the Seller's construction schedule.

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9.3 Protection of the Work Area

- A. Seller shall provide flagging, signs, and barricades for storage areas and construction work areas and shall comply with 29 CFR 1926, Subpart G. Barrier fence shall be 48” high, orange plastic, Vallen Safety, catalog number FNC-450 or equal. Remove temporary fencing, barriers, barricades, and signs upon work completion. No post shall be installed **at a depth** greater than 12” without an excavation/penetration permit.
- B. Post a sign providing Seller's name, key personnel name(s) and telephone number(s), Company STR name and telephone number(s), and Subcontract title and number at **prominent location for** each work area, temporary facility, and storage area. Include contact information for off-shift and weekend hours.
- C. Traffic and Pedestrian Control
 - 1. Notify STR eight (8) workdays in advance of road closing needed to perform work.
 - 2. Develop a Traffic Control Plan to identify Seller traffic routes, road closures, lane closures, or potential impediments to Company emergency vehicle traffic. Submit Plan to the Company, for approval, eight (8) workdays prior to implementation. Company approval is required prior to implementation of the Plan.
 - 3. Provide traffic control that conforms to ANSI D 6.1 **and MUTCO Part 5.**
 - 4. Provide and maintain pedestrian walkways and building access to the greatest extent possible. The area shall be flagged with orange plastic barrier fencing and applicable signs.
 - 5. Provide structurally sound walkways over open excavations.
 - 6. Provide adequate concrete barricades at open trenches adjacent to vehicle traffic. **Substitutes for concrete barriers require Company approval.**
 - 7. Provide ramping and protection for hoses and cords that cross pedestrian walkways or roads acceptable to the Company. Seller shall inspect and repair ramping and protection daily.

9.4 Temporary Facilities

- A. **Temporary structures and uses shall conform to the International Building Code.** Temporary facilities include office trailers, change facilities, **structures** and other facilities that will be removed upon completion of the work. Company approval is required prior to the Seller setting up any temporary facilities.
- B. Maximum height for temporary facilities is 30 feet.**
- C. Locate temporary facilities a minimum of 35 feet from existing buildings.
- D. Provide a platform, stairs, and handrails at each exterior door. Steps shall have a non-skid surface.
- E. Anchor and support the trailer in accordance with ANSI A225.1 and NFPA 501A. An Excavation Permit is required prior to driving anchors or ground rods **at a depth greater than 12 inches.**
- F. Provide and maintain portable fire extinguishers that are clearly identified.

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9.5 Fire Protection

- A. Temporary facilities, structures and material storage areas shall comply with requirements identified in Supplemental Conditions, Part 12, Environmental Safety and Health – Fire Protection.

10. WASTE MANAGEMENT

10.1 Planning

- A. Seller shall submit for Company approval a Waste Management Plan (WMP) identifying each waste stream, and provide the details for the characterization, packaging and labeling, accumulation and storage, disposition, security requirements, and existing approved waste profiles for each waste stream.

- B. The following regulatory requirements are incorporated by reference:

1. 29 CFR 1910.145, OSHA, *Specification for Accident Prevention Signs and Tags*
2. 40 CFR 261, EPA, *Identification and Listing of Hazardous Waste*
3. 40 CFR 262, EPA, *Standards Applicable to Generators of Hazardous Waste*
4. 40 CFR 279, EPA, *Standards for the Management of Used Oils*
5. 40 CFR 761, EPA, *PCB Manufacturing, Processing, Distribution in Commerce, and Use Prohibition*
6. 49 CFR 171, EPA, *General Information, Regulations, and Definitions*
7. 49 CFR 172, DOT, *Hazardous Material Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information and Training*
8. 49 CFR 173, DOT, *Shippers-General; Requirements for Shipments and Packaging*
9. TDEC 1200-1-11, *Hazardous Waste*
10. DOE Order, DOE O 435.1, *Radioactive Waste Management*

10.2 Storage and Handling

- A. Ensure sufficient quantities of dumpsters or containers are available.
- B. Inspect dumpsters and containers to ensure they contain only proper materials. Notify the STR if unauthorized waste is found.
- C. Store waste at a staging area until Company approval is obtained for removal from the work area.
- D. Refer to Material Disposition Table, herein, to identify Company-provided containers for waste material storage and transportation of items for disposition by the Company.
- E. Seller shall secure unattended containers which contain waste to prevent unauthorized dumping of material into the waste container. Seller is responsible to verify contents of waste container. Verification of waste containers packaged inside the Protected Area or Limited Area shall be by Q-cleared individuals. Company may request Seller to develop a Waste Container Security Plan.

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10.3 Waste Identification and Labeling

- A. The Company's *Request For Landfill Disposal*, UCN 21941, is required to be completed before wastes may be removed from the work area for disposal at the Y12 Landfill. The Seller shall prepare the form, sign as the "Generator", and submit to the Company. The Company will then sign the form as the "Verification Officer" and "Derivative Classifier." The Y-12 Landfill requires the Seller to submit and obtain their approval letter of the completed form UCN 21941 six (6) workdays prior to need, before they will accept the waste for disposal.
- B. The Seller shall complete and submit to the Company the *Asbestos Waste Shipment Record* (UCN 17379A) before asbestos waste is removed from the work area. The Company will provide an Asbestos Work Authorization Number upon the Seller's request.
- C. The Seller shall label the waste package containers with assistance from the Company.
 - 1. Company RADCON will survey and analyze the waste material, verify that the waste meets the Y-12 Landfill radiological acceptance criteria, and issue a green tag before the Seller begins transferring waste for packaging, transportation, storage, and/or disposal.
- D. Labels for wrapped or drummed asbestos waste shall be red, black, and white and conform to 29 CFR 1910.145. Label bags, containers, or wrapped material in accordance with 49 CFR 171 and 172 including the name of the waste generator and the location where the waste was generated. Non-friable asbestos waste shall be labeled as such.
- E. After receipt of the Y12 Landfill Approval letter, Seller shall provide a minimum of one (1) workday advance notice to the STR before removal of waste from the work area.

10.4 Waste Segregation

- A. Segregate wastes by type (e.g., recyclable, hazardous, special, spoils, sanitary waste, and construction debris).
- B. The Company will assist in identifying waste type, packaging, labeling, marking, and storage requirements.
- C. The Seller shall initiate the request for special waste disposal at the Y-12 Landfill through the STR. Special Waste Permits that are required will be processed by the Company and can take up to 90 days to obtain.

10.5 Waste Handling

- A. Deliver the wastes to the appropriate Y-12 Landfill as identified in the attached *Material Disposition Table*
 - 1. Operating hours for Industrial Landfill V and the Spoils Area, and Construction Landfill VII are from 7:00 A.M until 3:45 P.M Monday through Thursday. Asbestos, Beryllium or any other special waste requiring separate special cell disposal and immediate cover need to be dumped by 3:15 P.M. Landfill VII operating hours are impacted by deliveries to Landfill V.

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2. Operating hours for Landfill IV are from 7:00 A.M until 3:45 P.M. Landfill IV is available only by advance request (1 working day). All special waste cell disposals require scheduling a minimum of one working day in advance of delivery. Friable asbestos and BCO are normally on Tuesday.
 3. Y-12 Landfill is closed on Fridays, Saturdays, Sundays, and Holidays. (Refer to Holiday schedule in Part 1 of Supplemental Conditions.)
 4. Seller shall provide a schedule for Y-12 Landfill waste shipments to the Company eight (8) workdays in advance of waste disposal.
 5. Seller should assume an average of 45 minutes from arrival to dumping at Y-12 Landfill for non-asbestos debris.
 6. Drivers shall stop at the Waste Acceptance Technicians (WAT) office and check-in. The WAT or designee will review the waste documents, inspect the incoming load and give the driver the approval to proceed as appropriate. Drivers shall follow this direction exactly. Once the incoming driver reaches the designated Landfill, look to the equipment operator for guidance on placement of the load for disposal.
 7. Smoking and other tobacco use is prohibited within the Y-12 Landfill offices.
 8. The use of cell phones while driving vehicles is prohibited at the Y-12 Landfill. Only Company approved cell phones may be used at the landfill since the landfill is located within the 229 boundary (Blue Line).
- B. For waste disposal at the Y-12 Landfill, reduce waste to a maximum length of eight feet. Pipe diameters shall not exceed twelve inches in diameter. Oversize waste previously approved for disposal requires a two (2) workday notification to the Y-12 Landfill.
- NOTE: Oversized waste may require a Special Waste Permit, Seller shall consult with the Company for determination.
- C. At the Y-12 Landfill, respiratory protection is required for workers who get outside the enclosed cab of a transportation vehicle hauling wastes or are within 100 feet of disposal activities identified by the Y-12 Landfill as a respiratory hazard (e.g. asbestos, beryllium, man-made fibers). All workers are required to wear hardhats, high visibility vests, safety glasses, and safety shoes while at the Y-12 Landfill and outside the enclosed cab of a transport vehicle.
- D. Asbestos waste shall be bagged at the removal area, moved to the designated cleaning area, and bagged again (double-bagged). Large pieces shall be wrapped with two (2) layers of 6-mil polyethylene sheeting. Vacuum and wet wipe before removing bagged or wrapped waste from the regulated area. Use of a Central Collection Point requires the Seller to cover the collection area with 6-mil poly, cover the stored bags of waste with 6-mil poly, flag off the area, and install warning signs. Non-friable Category 1 or 2 asbestos waste may be hauled and dumped from trucks. Provide identification as required by regulations for vehicles transporting asbestos-containing waste. Non-friable asbestos-containing material will be accepted on the same schedule as construction debris.
- E. Friable asbestos-containing material (ACM) insulation shall be properly packaged and labeled for delivery to Landfill V. Loose friable insulation will not be accepted for disposal. Deliver to Landfill V between the hours of 7:00 - 3:15 p.m., Tuesdays only. Seller should assume an average of 60 minutes from arrival to dumping at Y-12 Landfill V. Waste handling operation at Landfill V is suspended for a 30 minute period in the morning.

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- F. Radioactive hazardous waste as defined in 40 CFR 261, PCB waste as defined in 40 CFR 761, and free liquid wastes will not be accepted for disposal at Landfill V or VII.
- G. The Seller shall store, package, transport and dispose of hazardous and/or radioactive waste as follows:
1. Store hazardous waste as defined by RCRA and corresponding State of Tennessee regulations in a Company-approved 90-day Accumulation Area or Satellite Accumulation Area in accordance with TDEC 1200-1-11. Seller shall obtain Company approval for hazardous waste Accumulation Area prior to beginning waste storage or staging. Seller shall coordinate with the STR to register the Accumulation Area with the Company. RCRA hazardous waste generator training is required to operate RCRA 90-day Accumulation Area per 40 CFR 262.34 (a)(4).
 2. Transport RCRA waste to the location designated by the Company for storage and management.
 3. Store and package radioactive waste in Company-provided DOE-approved (e.g. 55-gallon drums, B-25 boxes) containers in accordance with DOE O 435.1. Seller shall coordinate with the STR to register Radioactive Materials Storage Area(s) (RMA) with the Company. Transportation and disposal will be by the Company.
 - a. When shipping radioactive material out of the Protective Area, prepare *Shipping Plan* (UCN-21822) for Company approval prior to transport.
 4. Store and package PCB materials in accordance with 40 CFR 761. Seller shall coordinate with the STR to register PCB Waste Storage Area(s) with the Company. Segregate wire from demolition debris and package as PCB waste if it is PCB contaminated. The Company will pick up the material at the work area.
- H. Waste Oil, Solvents, and Sludge
1. Package oil and solvents in DOT-specification 55 or 30-gallon polyethylene-lined bung top drums. Package sludge in DOT-approved open top drums with polyethylene lining. Leave 5 inches of headspace in each drum to allow for expansion of contents. Ensure drums are in good condition and free of dents, rust, corrosion, residue, and ensure drums are free of any labels identifying previous contents.
 2. Once the drums are filled, tighten the large bung with a bung wrench. For drums of waste oil and solvents, replace the smaller bung with a vent plug.
 3. After filling, wipe the exterior (sides and top) of drums clean of residue. Apply tag to the side of each drum. Tags shall be a Company-furnished *Hazardous Waste Identification* (UCN-2114A), for RCRA hazardous wastes, or a *Waste Identification* (UCN-2114B), for nonhazardous waste. Insert the tag in a self-adhesive vinyl envelope and attach to the side of the drum, near the top, and angle downward to keep out water. Mark the tag with permanent ink, and print all information, including the Seller's name and subcontract number. Dispose of wipes in accordance with applicable waste regulations.
 4. Segregate oil, solvent, and sludge waste by type, origin, and contaminants.
 5. If any packaging requirements are not met, the waste will not be accepted and transported by the Company.

10.6 Recycling

- A. The Seller shall make every effort to remove packing material prior to delivery of the material to the work area and recycle the material appropriately.

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- B. Y-12 recycling: Package and transport recyclable waste to designated locations.
1. Aluminum: Store cans in clear plastic bags for Company pick-up.
 2. Cardboard: Keep neatly stacked and dry. Transport to a Y-12 location designated by the Company.
 3. Scrap metal:
 - a. For small quantities, palletize and band material in lengths not to exceed 6 ft. Notify the Company for pick-up.
 - b. For larger quantities, the Company will provide and transport containers. Cut materials to lengths that will easily fit in the containers provided.
 4. Light bulbs: Unless directed otherwise by the Waste Management Plan:
 - a. Store light bulbs in a manner to prevent breakage.
 - b. Segregate broken bulbs from unbroken bulbs.
 - c. Package in structurally sound containers and keep containers neatly stacked, dry and out of the weather.
 - d. Label "Used Lamps."
 - e. Date the containers when the first lamp is placed inside.
 - f. Keep containers closed when not being filled.
 - g. Deliver to the Company in approved containers during building operating hours.
 5. Used oil: Unless directed otherwise by the Waste Management Plan:
 - a. Store and maintain used oils for recycle in accordance with 40 CFR 279 and EPA requirements.
 - b. The STR will designate a Y-12 location for oil collection and storage.
 6. Batteries
 - a. Segregate by type (i.e., NiCd, Lead Acid, Hg, etc.);
 - b. Tape terminals;
 - c. Obtain a Green Tag;
 - d. Place in structurally sound container;
 - e. Label "Batteries for Recycle;" and
 - f. Date the container.
 7. Plastic Drink Bottles:
 - a. Segregate from other wastes;
 - b. Collect them in clear plastic bags; and
 - c. Call Y12 Recycle coordinator for pick up.
 8. Circuit Boards:
 - a. Obtain a Green Tag;
 - b. Place in structurally sound container;
 - c. Label as "Circuit Boards for Recycle;" and
 - d. Call Y12 Recycle coordinator for pick up.
 9. Mercury Filled Equipment:
 - a. Obtain a Green Tag;
 - b. Place in plastic or metal container;
 - c. Label as "Mercury for Recycle;"
 - d. Date the container; and
 - e. Call Y12 Recycle coordinator for pick up.

10.7 Transportation

- A. Provide containment for spoils, waste, and salvageable materials during transport. Provide covers on open top containers and trucks.

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- B. Transport asbestos waste in accordance with 49 CFR 173.216. Line the truck cargo bed with two layers of 6-mil polyethylene if waste is not individually wrapped. Vehicles shall have valid DOT registration, and drivers shall have a valid Commercial Driver's License.
- C. Transport waste to designated Y-12 disposal facility utilizing shortest possible route.
- D. Dump trailers are prohibited from delivering waste to the Y-12 Landfill.

10.8 Waste Control

- A. Do not remove waste from Y-12 without prior approval by the Company.
- B. The Company is responsible for characterizing and certifying that waste is not volumetrically contaminated and does not exceed surface contamination values for release as non-radiological waste. Seller shall remove Company applied "Green Tag" on released non-radiological waste being disposed off-site after exiting Y-12.

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MATERIAL DISPOSITION TABLE			
WASTE MATERIAL	CONTAINER BY:	TRANSPORTATION BY:	DISPOSAL LOCATION
NON-RADIOACTIVE CONTAMINATION (GREEN RADCON TAG REQUIRED)			
Aerosol cans –empty	Seller	Seller	Industrial Landfill V
Aerosol cans – product remaining	Seller	Seller	Seller Supplied Facility
Asbestos-Containing Material (ACM)	Seller	Seller	Industrial Landfill V
<ul style="list-style-type: none"> Friable Non-friable construction debris 	Seller	Seller	Construction Landfill VII
Construction/Demolition debris – wood, sheet rock, roofing, incidental metals	Seller	Seller	Construction Landfill VII
Earthen materials (Spoils) – soil, brick, concrete, masonry materials, rock, asphalt	Seller	Seller	Industrial Landfill Spoil Area
Fluorescent bulbs	Company	Seller	Bldg. 9720-58 Recycle Center
Fluorescent light ballasts:			
<ul style="list-style-type: none"> Non-PCB (Leaking) 	Company	Company	Industrial Landfill V w/ special waste approval
<ul style="list-style-type: none"> Non-PCB (Non-Leaking) (Recycle) 	Company	Company	Bldg. 9720-58 Recycle Center
<ul style="list-style-type: none"> PCB 	Company	Company	Waste Accumulation Area or 9720-58 Recycle Center
Batteries			
<ul style="list-style-type: none"> Lead Acid / NiCd Mercury/Lithium/Silver Alkaline 	Seller Seller Seller	Company Company Seller	Bldg. 9720-58 Recycle Center Bldg. 9720-58 Recycle Center Construction Landfill VII
Glass	Seller	Seller	Industrial Landfill V
Gray water (i.e. shower & wash water)	Seller	Seller	Sanitary Sewer w/ Environmental Compliance Department approval
Incandescent bulbs	Company	Seller	Bldg. 9720-58 Recycle Center
Mercury (Switches & Batteries)	Company	Company	Waste Operations 90-Day Yard or 9720-58 Recycle Center
PCB-contaminated bulk product:			
<ul style="list-style-type: none"> PCB level <2 PPM PCB level ≥2 and <50 PPM 	Seller Seller	Seller Seller	Same as non-PCB Industrial Landfill V w/ special waste approval
<ul style="list-style-type: none"> PCB level ≥ 50 PPM 	Seller	Seller	Industrial Landfill V w/ special waste approval
<ul style="list-style-type: none"> PCB level ≥ 50 PPM (not suitable for landfill disposal) 	Company	Company	Waste Operations 90-Day Yard
<ul style="list-style-type: none"> Metals w/ PCB Paint < 50 PPM 	Seller	Seller	Company Approved Recycle Facility
<ul style="list-style-type: none"> Metals w/ PCB Paint ≥ 50 PPM 	Seller	Seller	Industrial Landfill V w/ special waste approval
<ul style="list-style-type: none"> Metals w/ PCB Oil contamination ≥ 50 PPM or 10ug/100cm 	Seller	Seller	Decontamination per 40 CFR 761 & disposed at Industrial Landfill V w/ special waste approval or recycle w/ Environmental Compliance Department approval
PCB Oily Rags and Wipes			
<ul style="list-style-type: none"> Chemicals 	Company	Company	Offsite Facility
Sanitary waste			

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MATERIAL DISPOSITION TABLE			
WASTE MATERIAL	CONTAINER BY:	TRANSPORTATION BY:	DISPOSAL LOCATION
<ul style="list-style-type: none"> • Plastic, Paper, Food waste • Portable Toilets and Holding Tanks 	Company	Company	Industrial Landfill V
	Seller	Seller	Commercial offsite disposal
Scrap metal, including lead	Company	Company	New Salvage Yard metal recycle area
Used oil:			
<ul style="list-style-type: none"> • No Rad Added Certification • PCB Oil • Detectable uranium (below yellow tag) 	Company	Company	Waste Operations 90-Day Yard
	Company	Company	Waste Operations 90-Day Yard
	Company	Company	Company Storage
Wiring (non-PCB, non-ACM)	Company	Company	Salvage Yard metal recycle area
Wood (unpainted, untreated, trees & vegetation)	Seller	Seller	Natural Resources Recovery at Solway
RADIOACTIVE-CONTAMINATED MATERIALS (Yellow RADCON Tag)			
ACM Materials	The Seller shall package radioactive contaminated wastes in Company-furnished DOT containers for transportation. The Company will transport radioactive contaminated waste.		
PCB Materials			
Construction Debris			
Roofing			
Scrap metal			
Wood			
Aerosol cans			
Light bulbs			

NOTE: Contact STR if materials not identified in this table are encountered during the performance of the work.

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11. RADIOLOGICAL CONTROL (RADCON)

11.1 The following regulatory requirements are incorporated by reference:

- A. American Standard for Testing and Materials (ASTM) D-2986-95a, Standard Practice for Evaluation of Air Assay Media by the Monodisperse DOP (Dioctyl Phthalate) Smoke Test.
- B. 10 CFR 835, Occupational Radiation Protection

11.2 Definitions

- A. Radiological Work Permit (RWP): A Company-issued permit (administrative control), used to maintain the radiological exposure of personnel as low as reasonably achievable.
- B. Surface Contamination: Unwanted radioactive material, which is deposited on the surfaces of structures, objects, or personnel.
- C. Radiological Buffer Area: An area established to provide a secondary boundary to minimize the spread of contamination and /or to limit external exposure.
- D. Radioactive Material Area: An area accessible to individuals, in which items or containers of radioactive material exist.
- E. Radiological Area: Area where radioactive contamination airborne radioactive material or radiation exists at levels where work controls are necessary.

11.3 Submittals

- A. Submit to Company STR for approval a list of personnel who have received Radiological (RAD) Worker training from a Company-approved training program. Provide employee's full name, job title, title of course(s), training date, and training organization. Include a copy of the training certificate(s). Successful completion of a written Company test, dress out, and practical exercise is required by the Company in addition to training.
- B. Radioactive Material License(s) for sources (e.g. soil density gauges, radiography).
- C. Radioactive Material License(s) for laboratories used to conduct geotechnical soils testing and analyses.
- D. Training documentation for source users (e.g. soil density gauges, radiography sources)
- E. Radioactive Source Request to include manufacturer's data, inspection, and maintenance documentation for radiological sources.

11.4 Delivery, Storage, and Handling

- A. Remove packaging to the maximum extent possible prior to transporting material into radiological areas or Radiological Buffer Areas established for contamination control.
- B. Minimize radiologically contaminated waste by segregating from non-contaminated waste.

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C. Material and Equipment Surveys

1. The Company will survey Seller's tools, material, and equipment upon arrival at Y-12 to ensure they meet the standards for radioactivity. Seller must clean equipment prior to arrival. Equipment shall not have a heavy layer of grease, dirt, or debris that may hinder the radiological surveys.
2. Upon completion of the work and prior to removing from radiological areas, Radiological Buffer Areas established for contamination control or Y-12, the Company will survey Seller's tools, materials, and equipment to ensure they have not become contaminated. If contamination is encountered, Seller shall perform decontamination under the Company direction. The Company will not decontaminate nor reimburse the Seller for tools or equipment valued at less than \$200 which became contaminated.
 - a) Items, which are releasable, will be green tagged; items not releasable will be yellow tagged by the Company.
 - b) If Seller elects to take possession of contaminated items, the Seller shall provide a copy of appropriate license(s) that authorizes them to possess such material, to the Company.

11.5 Materials and Equipment

A. Company-furnished items:

1. Coveralls, gloves, shoe covers, and other protective clothing needed to work in radiologically contaminated areas (excluding safety shoes, glasses, and hardhat);
2. Respirators and cartridges;
3. Storage containers for radiologically contaminated waste;
4. Radiation dosimeters;
5. Personnel monitoring station and equipment to perform required monitoring;
6. Change facilities including showers and lockers; and
7. Characterization of the work area.

B. Seller-furnished items:

1. Safety shoes (shoes cannot leave the radiological area until decontaminated);
2. Vacuum cleaners equipped with HEPA filters;
3. Portable electric hand tools equipped with HEPA filters; and
4. Industrial Safety Personal Protective Equipment (e.g. hardhats, glasses, welder aprons).
 - a) HEPA filters shall provide an efficiency of not less than 99.97% when challenged with 0.30-micrometer particle size aerosol.

- C. Take precautions to ensure equipment does not become contaminated (e.g., sleeve hoses, place plastic over surfaces, sequence work activities). Contaminated items cannot leave the radiologically controlled area.

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D. Radioactive Sources:

1. Seller shall submit a written request to the Company, for approval, a minimum of four (4) workdays before any exempt, non-exempt or licensed radioactive source is brought to Y-12, including sources used in radiography equipment and moisture density gauges. The request shall contain:
 - a) Description of source, including radionuclide(s), activity, and contact dose rate,
 - b) Manufacturer and unique identification number,
 - c) Current leak test report,
 - d) A copy of license(s) permits, operating procedures, and emergency procedures,
 - e) List of authorized users, training records, and contact phone number,
 - f) Storage location,
 - g) Date the source will be arriving and the date it is to leave Y-12,
 - h) Seller's Source Custodian and telephone number,
 - i) Subcontract number, and
 - j) A description of the work and how the source will be used.
2. The Company will provide a Source Custodian to act as a liaison between Seller and STR, and to ensure Company radioactive source control procedures are followed. Specific Y-12 procedures will be provided to the Seller as a part of the Company approval process.
3. While the source is at Y-12, it shall have inspection and maintenance performed as described in any license, procedure, or manufacturer's document, and the records shall be made available to the Company upon request.
4. Notify the Company STR, both verbally and in writing, when the source is brought to and removed from Y-12.

11.6 Radiological Work Preparation

- A. Work will be performed within the Y-12 Controlled Area as defined in 10 CFR 835, Occupational Radiation Protection.
- B. Radiological Worker Training:
 1. Personnel shall complete a 20-hour *Radiological Worker II Training Program* from a **Company approved program** and pass an examination (written test and dress-out practical exercise). Retraining is required every two (2) years.
- C. Radiological Monitoring
 1. A baseline bioassay sample is required for all Seller personnel prior to working in radiological areas governed by a RWP. An exit bioassay sample is required for those who participated in the bioassay program upon completion of the RWP work. Depending upon the RWP, bioassay sample could include urinalysis as well as fecal sampling. Seller shall request Company-provided bioassay labels one (1) week in advance of termination or completing RWP work. Seller is responsible for employees submittal of bioassay sample(s).
 2. The Company will notify the Seller if chest counting is required. Seller shall schedule chest counting four (4) workdays in advance. Counting will require two (2) hours per employee.

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3. Seller employees who enter radiological areas, Radiological Buffer Areas, or Radiological Material Areas will be issued dosimetry badges by the Company before the start of work. Wear dosimetry badges in plain view above the waist at all times while working in a radiological controlled area. Collect and return all issued Thermoluminescent Dosimeters (TLDs) to the STR at the end of the last workday of each calendar quarter, at which time new TLDs will be issued, and at the end of the RWP work. If any employee fails to return their TLD and/or provide a required bioassay sample, the Seller's *Application for Payment(s)* could be delayed and/or the employee's access may be restricted until the issue is resolved.
 4. The Company will maintain personnel exposure records for Seller employees working at Y-12.
 5. The Company will provide an annual radiation monitoring report to each Seller employee who received radiation exposure monitoring.
- D. *Radiological Work Permit (RWP)* The Seller shall request an RWP one (1) week before the scheduled work activity. The Seller's Work Plan and AHA shall accompany their request for an RWP. The RWP shall be posted at Boundary Control Stations/Access Points before access is permitted to the radiological area. The RWP will identify specific work requirements including work instructions, PPE, dosimetry, and training. Personnel entering the work area shall sign the RWP after having read and understood completely the RWP. Signing the RWP signifies that the person has read the RWP, understands its requirements, and agrees to follow the requirements. A Pre-Job Brief on the RWP and subsequent revisions shall be given to personnel prior to start of work for those signing onto the RWP. The Pre-Job Brief shall be documented. Equipment Testing
1. Equipment having a HEPA filter shall be tested in accordance with requirements identified in Supplemental Conditions, Part 12, Environmental, Safety and Health – Equipment and Tools.
- F. Radiological Area – Dress Out Not Required
1. Review radiological hazards as identified in the RWP with the Company.
 2. Maintain a log of personnel entering the radiological area, and if required by the RWP, record the entry and exit times.
 3. Eating, drinking, using tobacco or chewing gum is not allowed.
 4. Enter only to perform required work.
 5. Personnel monitoring is required before leaving the area.
- G. Radiological Area – Dress Out Required
1. Review radiological hazards as identified in the RWP with the Company.
 2. Maintain a log of personnel entering the radiological area, and if required by the RWP, record the entry and exit times.
 3. Eating, drinking, using tobacco or chewing gum is not allowed.
 4. Enter only to perform required work.
 5. Personnel monitoring is required before leaving the area.

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6. Wear PPE as required on the RWP, which typically includes:
 - a. No personal outer clothing,
 - b. Anti-C coveralls,
 - c. Shoe covers and booties,
 - d. Work boots (provided by Seller),
 - e. Surgeon gloves,
 - f. Anti-C gloves,
 - g. Hood,
 - h. Dedicated hardhat (provided by Seller), and
 - i. Respiratory protection for certain work activities.

H. Containment of Dust and Debris

1. The following is required for contaminated work areas:
 - a. Equip portable hand tools used to drill, cut, or otherwise disturb contaminated materials with a HEPA-filtered exhaust system. Implement dust-suppression techniques. Dry sweeping (using compressed air for cleaning or other dust-creating activities are prohibited).
 - c. Discard HEPA filters and respirator cartridges as contaminated waste.

11.7 Company-furnished RADCON Services:

- A. Radiological Work Permit (RWP),
- B. Radiological Control Technician(s),
- C. Radiological surveys and evaluations,
- D. Bioassay sampling,
- E. Air monitoring,
- F. Laundry service for PPE and cleaning service for Company-furnished respirators,
- G. Personnel exposure records,
- H. Survey and tagging of tools/equipment brought to and removed from Y-12, and
- I. Source custodian liaison for any radioactive source brought to Y-12.

11.8 Characterization During Demolition

- A. During demolition, previously inaccessible areas may be uncovered. Consistent with the AHA process, the Seller shall stop demolition and allow additional radiological characterization by the Company in areas where radiological contamination may be present.

11.9 Personnel Monitoring

- A. Each Seller worker exiting the radiological areas established for contamination control into a less restrictive area shall self-monitor. Monitoring requirements are provided during the Radiological Worker II Training. Follow posted instructions and utilize the Company-provided equipment.
 1. A whole body frisk requires an estimated time of 15 minutes.
 2. A hand and foot frisk requires an estimated time of 5 minutes.

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- B. Contamination is not expected to be found during monitoring. If contamination is found, remain at the monitoring station and notify the Company RADCON technician for further instructions. Decontamination must be completed before exiting the monitoring station. After being allowed to exit the radiological area, notify the STR about the occurrence, in accordance with Supplemental Conditions, Part 12, Environmental, Safety and Health-Reporting.

11.10 Respiratory Protection

- A. The Company will provide respiratory protection for work under an RWP. The RWP and Company monitoring will determine when respiratory protection is required. Seller personnel wearing Company-respirators shall be Company trained and fit tested.

12. ENVIRONMENTAL, SAFETY AND HEALTH (ES&H)

12.1 Overview

- A. Seller shall perform work in a manner that provides safe working conditions and protects workers' health, minimizes potential risk, protects the public and the environment, prevents pollution, complies with applicable regulations, and continuously seeks opportunities to improve performance.
- B. Seller shall comply with 10 CFR 851, Worker Safety and Health Program. Sellers at any tier are subject to civil penalties for failure to comply with applicable 10 CFR 851, Worker Safety and Health Program requirements.
- C. Seller shall establish and submit a written description of a medical program and provide the Company with the Seller's principal medical provider. Seller shall provide a program under the direction of a licensed physician meeting the credentials required by 10 CFR 851 Appendix A.8(b) and personnel providing health services meeting the credentials required by 10 CFR 851 Appendix A.8(c). The Seller's occupational medicine program contents will be based on the Seller's scope of work and associated hazards.
- D. Seller shall institute the Company *Safety Incentive for Construction Subcontracts* outlined in Attachment 2. Any alternate worker safety incentive plan proposed by the Seller requires submittal to the Company for approval. Company will not approve safety incentive plans solely based on Recordable Incident Rates or Lost Workday Cases.
 - 1. The Company will provide a Pay Item for implementation of the *Safety Incentive for Construction Subcontracts*. Where Pay Item has not been established, the Seller is free to select and implement worker safety incentive plan without Company authorization, copy of the plan shall be provided to the Company upon request.

12.2 Integrated Safety Management (ISM)

- A. Seller shall use ISM per Department of Energy Acquisition Regulation, DEAR 970.5223-1, Integration of environment, safety, and health into work planning and execution to establish a systematic approach to incorporate ES&H requirements into all work. For the purpose of ISM, the term "safety" encompasses environmental protection, safety and health, and includes pollution prevention, waste minimization, and resource conservation. ES&H management activities shall include the five core functions.

- 1. Define the Scope of Work.

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2. Analyze the Hazards and Risks.
3. Develop and implement hazard controls.
4. Perform work within the controls.
5. Provide feedback and continuous improvement.

- B. Seller shall incorporate the five core ISM functions into the Seller's ES&H Program and the Activity Hazards Analysis (AHA). The order of precedence of hazard controls is (1) substituting less hazardous processes, materials, or equipment; (2) engineering controls; (3) administrative controls; and (4) personal protective equipment (PPE).

12.3 Clean Water Compliance

- A. Best Management Practices (BMP) plan is required for all construction and demolition work and shall comply with environmental requirements that protect water and with 40 CFR 122.22(k) and the Y-12 National Pollutants Discharge Elimination System (NPDES) permit. Additionally, the BMP shall be submitted to the STR for approval (the BMP may be a section in the ES&H Plan) and, as applicable, incorporate storm water pollution prevention measures. The BMP shall consider the following:

1. Work area(s) shall be maintained in a neat and orderly condition.
2. Plug all drain openings inside the building being demolished before contaminants are removed and demolition begins. Safeguard building floor drains adjacent to work areas from debris.
3. Cover storm drains adjacent to the work area with filter fabric or other appropriate materials to protect storm drains from debris and sediment generated by work activities.
4. Implement and maintain erosion controls (e.g., straw bales, silt fence, sandbags) and stabilize bare soil areas within the work area.
5. Cover contaminated waste stockpiles to protect against migration from wind and storm water.
6. Protect raw materials and new supplies from storm water and high winds.
7. Identify potential sources of storm water pollution and inspect them periodically (e.g., transformers, generators, equipment, etc.) and correct any deficiencies.
8. After removal of the demolition debris and/or completion of construction activities, remove sediment, paint chips, and other wastes that have been collected near drains and erosion control devices.
9. Immediately report leaks or spills to the Y-12 Plant Shift Superintendent (PSS) office and to the STR (Refer to Reporting Section in Part 12). The Seller shall maintain a container marked "Spill Kit" with absorbent materials and other controls consistent with the hazardous materials present at the work area to assist in spill control.
10. Train workers in the proper implementation of the BMP controls. Reference Attachment 1, Training Requirements.
11. Provide secondary containment for stored hazardous or regulated liquids and solid items that may contain these liquids (e.g., batteries, motors).
 - a) Secondary containment should be set up on level ground and be able to hold 100% of the volume of the largest container or 10% of the total volume of all the containers which ever is larger.
 - b) Secondary containment shall be leak tight and compatible with the contents of the containers.
 - c) A minimum of 20 mil plastic shall be used when half pipe berm and plastic liner is used for secondary containment. Berm shall have 6" height or higher.
 - d) A 6oz. or more geotextile mat shall be used under the plastic liner.

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12. Equipment with free oils or oil residue that could become mobile if exposed to rain water should be wrapped in plastic if stored outside.
 13. Equipment and/or material with metal dust, loose rust, metal cuttings and/or other pollutants which are to be stored outside shall have the pollutants removed and/or be wrapped/covered (plastic wrap) in a manner to prevent dissemination of the pollutants into the environment.
- B. Water discharge authorization shall be obtained from the Company prior to discharging water to the storm or sanitary sewer system, unless specifically permitted.
 - C. Where work area involves disturbance of one (1) acre or more, Seller shall employ Competent Person to ensure compliance with provision of TDEC General Storm Water Permit. Competent Person shall have completed eight (8) hour Tennessee Erosion Prevention and Sediment Control Training and Certification Program for construction sites.

12.4 Orientation

- A. Before starting work, provide an orientation of the Workplace Substance Abuse Program, ES&H Program, the work-specific ES&H Plan and other plans, Hazard Communication, Hazardous Materials Information System(HMIS), and AHA to on-site employees. Seller shall document orientation and provide records to the Company upon request.
- B. Inform workers of their rights and responsibilities, including posting the DOE Worker Protection Poster (DOE Form 5483.1, Occupational Safety and Health Protection) at visible and prominent locations to inform on-site employees of the reporting process.
- C. Stop/Suspend Work Authority:
 1. Ensure that all workers are informed to stop/suspend work, without reprisal by management or co-workers, when a situation exists which will place them, their co-worker(s), or the environment in imminent danger. The Seller is responsible for costs incurred when either the Seller or the Company stops or suspends work under this provision. The Seller shall not be entitled to an adjustment under the Suspension of Work clause in the General Terms and Conditions.
 - a. "Stop Work" is defined as stopping the task or activity that poses imminent danger to human health and/or the environment. The resolution of a "Stop Work" requires the Seller to write a corrective action plan and submit it to the Company for approval. Resumption of work requires Company authorization.
 - b. "Suspend Work" is defined as temporarily interrupting a specific activity that could pose an unsafe situation to human health or the environment. The resolution of a "Suspend Work" requires authorization from the STR. The Seller's Safety Representative shall ensure that resolution of the issue(s) has occurred and the work can be performed safely.

NOTE: These provisions do not modify or alter any provisions in the *General Terms and Conditions*.

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12.5 Qualifications

- A. Qualified Competent Persons (e.g., scaffolding, excavation, lead, asbestos work) shall be identified by the Seller in ES&H Plan or permits. Seller shall identify Competent Person, TDEC-certified for erosion prevention and sediment control for ground disturbance of one (1) acre or more in size. Competent persons shall remain on site when work requiring their review is in progress.
- B. Seller shall designate an electrical **inspector**, qualified in accordance with NFPA 70 and 70E, to ensure compliance for all electrical work.
- C. Certify by name that workers and competed person are qualified and maintain training records and certifications. Seller shall provide copies of records and certifications to the Company upon request. Supervisor personnel shall receive the same training as the workers being supervised.

12.6 Regulatory Requirements

- A. The following regulatory requirements are incorporated by reference and do not release Seller of all other applicable regulatory requirements:
 - 1. 10 CFR Part 830, Nuclear Safety Management.
 - 2. 10 CFR Part 835, Occupational Radiation Protection.
 - 3. 10 CFR Part 850, Chronic Beryllium Disease Prevention Program, Final Rule
 - 4. 10 CFR Part 851, Worker Safety and Health Program.
 - 5. 10 CFR 851, *Worker Safety and Health Program*, including Appendix A, Subparts 2 and 3, “Fire Protection” and “Explosives Safety”, respectively;
 - 6. 29 CFR Part 1904, Recording and Reporting Occupational Injuries and Illnesses.
 - 7. 29 CFR Part 1910, Occupational Safety and Health Standards, including referenced codes and standards.
 - 8. 29 CFR Part 1910.134, Respiratory Protection.
 - 9. 29 CFR Part 1910.145, Specification for Accident Prevention Signs and Tags.
 - 10. 29 CFR Part 1910.146, Permit-Required Confined Spaces.
 - 11. 29 CFR Part 1910.147, The Control of Hazardous Energy (Lockout/Tagout).
 - 12. 29 CFR Part 1910.269, Electric Power, Generation, Transmission, and Distribution.
 - 13. 29 CFR Part 1910.333, Working On or Near Exposed De-energized Parts.
 - 14. 29 CFR Part 1910.1200, Hazard Communication.
 - 15. 29 CFR 1910 Subpart E, Exit Routes, Emergency Action Plans, and Fire Prevention Plans
 - 16. 29 CFR 1910 Subpart F, Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms.
 - 17. 29 CFR 1910 Subpart H, Hazardous Materials
 - 18. 29 CFR 1910 Subpart J, General Environmental Controls
 - 19. 29 CFR 1910 Subpart L, Fire Protection
 - 20. 29 CFR 1910 Subpart N, Materials and Storage
 - 21. 29 CFR 1910 Subpart P, Hand and Portable Powered Tools and Other Hand-Held Equipment
 - 22. 29 CFR 1910 Subpart Q, Welding, Cutting, and Brazing
 - 23. 29 CFR 1910 Subpart S, Electrical
 - 24. 29 CFR Part 1926, Safety and Health Regulations for Construction, including referenced codes and standards.
 - 25. 29 CFR Part 1926.23, First Aid and Medical Attention.

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26. 29 CFR Part 1926.55, Gases, Vapors, Fumes, Dusts, and Mists.
27. 29 CFR Part 1926.62, *Lead*.
28. 29 CFR Part 1926.101, *Hearing Protection*.
29. 29 CFR Part 1926.1101, Asbestos Standard.
30. 29 CFR Part 1926.1126, *Chromium VI*
31. 29 CFR Part 1926 Subpart C, General Safety and Health Provisions
32. 29 CFR Part 1926 Subpart D, Occupational Health and Environmental Controls
33. 29 CFR Part 1926 Subpart E, Personal Protective and Life-Saving Equipment
34. 29 CFR Part 1926 Subpart F, Fire Protection and Prevention
35. 29 CFR Part 1926 Subpart H, Materials Handling, Storage, Use, and Disposal.
36. 29 CFR Part 1926 Subpart I, *Tools-Hand and Power*
37. 29 CFR Part 1926 Subpart J, *Welding and Cutting*
38. 29 CFR Part 1926 Subpart K, *Electrical*.
39. 29 CFR Part 1926 Subpart L, *Scaffolding*.
40. 29 CFR Part 1926 Subpart M, Fall Protection
41. 29 CFR Part 1926 Subpart N, Cranes, Derricks, Hoists, Elevators, and Conveyors.
42. 29 CFR Part 1926 Subpart P, *Excavations*.
43. 29 CFR Part 1926 Subpart T, *Demolition*
44. 29 CFR Part 1926 Subpart Z, Toxic and Hazardous Substances.
45. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Subpart A - General Provisions, and Subpart M - National Emission Standards for Asbestos.
46. 40 CFR Part 82, Protection of Stratospheric Ozone.
47. 49 CFR Part 106-180, Hazardous Materials Transportation Regulations.
48. 49 CFR Part 325-399, Federal Motor Carrier Safety Regulations.
49. 40 CFR Part 763, Asbestos Hazard Emergency Response Act.
50. TN 1200-1-20, Rules of the Tennessee Department of Health and Department of Environment and Conservation, Asbestos Accreditation Requirements.
51. TN 1200-3, Rules of the Tennessee Department of Health and Department of Environment and Conservation, Division of Air Pollution.
52. TN 1200-4, Rules of the Tennessee Department of Health and Tennessee Department of Environment and Conservation, Division of Water Pollution Control.
53. TN 1200-4-10, Rules of the Tennessee Department of Health and Tennessee Department of Environment and Conservation, National Pollutant Discharge Elimination System (NPDES) General Permits.
54. Tennessee Code Annotated Title 4, Chap. 3, Part 14, Titles 62 and 63.
55. American Conference of Government Industrial Hygienists (ACGIH) 0022, Threshold Limit Values (TLV) for Chemical Substances and Physical Agents, and Biological Exposure Indices (BEI).
56. ANSI B30 Series, Safety Standards for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks and Slings.
57. ANSI B56 Series, Safety Standards for Powered Industrial Trucks.
58. ANSI CGA G7.1, Commodity Specification for Air.
59. ANSI Z49.1, Safety in Welding, cutting and Allied Processes.
60. ANSI Z87, Practice for Occupational and Educational Eye and Face Protection.
61. ANSI Z88.2, Respiratory Protection.
62. ANSI Z88.6, Respiratory Protection – Respirator Use – Physical Qualifications for Personnel.
63. ANSI Z88.10, Respirator Fit Test Methods.
64. ANSI Z89.1, Protective Headwear for Industrial Workers.
65. ANSI Z117.1, Safety Requirements for Confined Space.

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66. ANSI Z359.1, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
 67. ASME B30.5 Mobile and Locomotive Crane
 68. ASME B30.23 Personnel Lifting Systems
 69. ASME B30.26 Rigging Hardware
 70. ASME N510-1989 Testing of Nuclear Air Treatment Systems.
 71. ASTM D2986 Method for Evaluation of Air Assay Media by the Monodisperse DOP Smoke Test.
 72. ASTM D3659, Standard Test Method for Flammability of Apparel Fabrics by Semi-Restraint Method.
 73. ASTM F887, Standard Specifications for Personal Climbing Equipment
 74. ASTM F1506, Standard Performance Specification for Flame Resistant Textile Materials for Wearing Apparel for Use by Electrical Workers Exposed to Momentary Electric Arc and Related Thermal Hazards.
 75. ASTM-F2412, Standard Test Methods for Foot Protection and ASTM-F2413 Standard Specification for Performance Requirements for Foot Protection.
 76. DEAR 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution.
 77. DOE Order 420.1B, *Facility Safety*;
 78. FMCSR, Federal Motor Carrier Safety Regulations
 79. National Fire Protection Association (NFPA) Codes and Standards
 80. NFPA 1, *Uniform Fire Code*
 81. NFPA 70, National Electrical Code
 82. NFPA 70E, Standard for Electrical Safety in the Workplace.
 83. NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*
 84. NFPA 701, Methods of Flame Propagation of Textiles and Films to Protect Personnel and Property During Spark or Flame Producing Work
 85. NIOSH 582 *Sampling and Evaluating Airborne Asbestos Dust*.
 86. NIOSH Method 7400 from the NIOSH Manual of Analytical Methods.
- B. Some of the requirements listed or contained elsewhere in the Supplemental Conditions are more restrictive for construction activities (e.g., American Conference of Government Industrial Hygienists (ACGIH), Threshold Limit Values (TLV) for Chemical Substances and Physical Agents and Biological Exposure Indices (BEI) and ANSI Z88.2, Respiratory Protection). The Seller is responsible to execute the more restrictive requirements.

12.7 Submittals

- A. Prior to the start of work, submit the following for Company approval. The Company will consider Sellers request to omit submittals, which are not pertinent, based on hazards that will not be encountered and Seller's methods of accomplishments.
1. Corporate ES&H Program,
 2. ES&H Plan,
 3. AHA,
 4. Personal Safety Systems,
 5. Lift and Haul Plan and Hazard Evaluation for Personnel Safety Systems supporting calculations,
 6. Pre-lift Safety Checklist,
 7. Crane Operator qualifications & training,
 8. Competent Person Rigger Qualifications and Training,

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9. ES&H Representative's qualifications,
 10. Electrical Safety Program (Installation and Maintenance Operations),
 11. Asbestos Work Plan,
 12. Lead Compliance Plan,
 13. Request(s) not to use respirators,
 14. Request(s) not to use engineering controls,
 15. Confined Space Program,
 16. Lockout/Tagout Program,
 17. Hearing Conservation Program,
 18. Thermal Stress Program,
 19. Fall Protection Plan(s),
 20. Clean Water Compliance BMP Plan,
 21. Mercury and PCB Compliance Plan,
 22. Abrasive Blasting Plan,
 23. HEPA filter manufacturer's certification,
 24. HEPA filter DOP test results for HEPA vacuums and negative air machines, and
 25. Beryllium Implementation Plan
- B. Submit the following to the Company, as applicable, for information:
1. Medical program and principal medical provider,
 2. List of Personnel Safety Systems,
 3. Rigging Hardware Certificate of Compliance and Proof Test Record,
 4. Subcontractor Hazardous Materials Inventory Report before delivery of hazardous materials to Y-12, monthly while such materials are at Y-12, and submit a final (negative) report when work is complete and materials have been removed from Y-12,
 5. Material Safety Data Sheets (MSDS),
 6. Copy of Seller's license for Asbestos Abatement, and
 7. Notification of Asbestos Demolition or Renovation (NoDR) information for abatement and demolition.
- C. Submit the following to the Company, as requested:
1. List of persons performing specialized work,
 2. OSHA 300 Log,
 3. Seller Employee Training Records and Certifications,
 4. Records related to asbestos work activities,
 5. Records related to Personnel Safety Systems,
 6. Testing laboratory proof of compliance with OSHA requirements regarding NIOSH training and testing methods,
 7. Air monitoring test results and analysis,
 8. Noise monitoring data and exposure assessment,
 9. List of all equipment that exceeds 85dBA noise exposure (either continuous or impulse/impact noise),
 10. Exposure assessment for dust producing concrete work when respiratory protection is not required,
 11. Documentation from licensed medical provider of suitability to perform confined space work,
 12. Fire Prevention Inspection Records, and
 13. Records related to Beryllium work activities.

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D. By the 3rd workday of each month, submit the following to the Company for the prior month (regardless of any accidents or incidents):

1. *Subcontractor Safety Performance Report* (UCN-21439)

12.8 ES&H Program

A. Corporate ES&H Program shall include:

1. Seller's Corporate ES&H requirements, and
2. Activity Hazard Identification and Analysis process.

B. ES&H Plan: Seller shall address subcontract-specific details as they relate to their Corporate ES&H Program.

1. Describe how the Seller's ES&H Program will be implemented to include:
 - a) ES&H requirements incorporated into management and work practices;
 - b) Seller roles and responsibilities for compliance with ES&H requirements, including means for ensuring supervisors, the ES&H Representative, and workers analyze the work to define hazards, and how responsibility will be assigned to lower-tier subcontractors;
 - c) Methods to ensure personnel have the requisite knowledge, training, certification, and skills to discharge ES&H responsibilities;
 - d) Methods to maintain employee ES&H awareness and involvement, including employee's rights and obligation to report unsafe work conditions, express ES&H-related concerns without reprisal;
 - e) Methods to ensure employees understand hazards, how to eliminate or reduce associated risks, and how to use worker feedback and involvement;
 - f) Methods to ensure workers have the requisite knowledge, training, certification and skill to perform work activities and operate equipment/tools;
 - g) Seller programs, requirements, and procedures for confined space work, fall protection, respiratory protection, PPE, hazard communication, noise exposure, thermal stress, machine guarding, lockout-tagout, hoisting and rigging, excavation/penetration work, hot work, emergencies, first aid and other work activities;
 - h) Processes to inspect, certify, maintain, and repair equipment and tools, including emergency equipment. Method to control the usability status of equipment/tools;
 - i) Employee disciplinary program for violations of ES&H requirements;
 - j) Seller ES&H self-assessment and safety inspection processes, including sampling and monitoring;
 - k) Investigation procedures for accidents, injuries, noncompliances, deficiencies, releases, spills, and near misses;
 - l) ES&H document and record management;
 - m) ES&H reporting requirements;
 - n) Use of National Association of Demolition Subcontractors Demolition Safety Manual as guidance for good practices on demolition projects;
 - o) Incorporate text that addresses policy, goals and objectives, ISMS, and employee involvement to incorporate general awareness of the subcontractor to basic environmental responsibility;
 - p) Implementing changes to the ES&H Plan; and
 - q) Securing and preserving the scene when accidents, injuries, spills, fires, near misses, or other abnormal events occur. Obtaining personnel statements and determining a chronology of events.

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2. Company approval of the ES&H Plan is required prior to the start of work. Changes to the ES&H Plan require Company approval prior to starting work covered by the changes.
- C. Activity Hazards Analysis (AHA)
1. Define the work activities, identify the associated hazards that could adversely affect health, safety, or the environment, and define specific actions to eliminate or minimize the risks involved. The AHA shall include controls for job hazards and characterization data and address permit requirements, training, engineering and administrative controls, and PPE. Revise the AHA, and re-submit to the Company for approval, when the work activities or conditions change to the extent that different or additional hazards may be present.
 2. Company characterization data is provided in the *EXHIBITS* section of the subcontract. Seller shall use this documentation to assist in developing the AHA, as well as additional characterization data obtained by Seller.
 3. Identify hold points in the AHA for evaluating permit requirement with requirements listed in AHA. Discrepancies shall be resolved prior to initiating permitted activities.
 4. Seller shall ensure hazards and controls for lower-tier subcontractor activities are addressed.
 5. The AHA and any revisions shall be signed by the Seller prior to performing the work activity, certifying that the AHA has been reviewed, and AHA requirements will be met. The AHA and subsequent revisions shall have an issue date on the cover page.

D. Personnel Safety Systems

1. Provide a list of new or first time activities or atypical processes, operations or systems requiring personnel safety systems to the Company for information. New or first time activities or atypical processes, operations or systems that involve personnel safety systems are defined as a process, operation, system or equipment that is not specifically addressed under OSHA Construction Standards 29 CFR 1926, OSHA General Industry Standards 29 CFR 1910, or a National Consensus Standards. If no activities, processes, operations or systems apply then indicate "NONE" on the submitted list.
2. Subject Matter Expert (SME) shall be engaged in preparing the Hazard Evaluation and Risk Assessment and identifying controls, hold or witness points to mitigate the hazard for new or first time activities or atypical processes, operations or systems. Submit Hazard Evaluation including mitigating controls for Company acceptance. Examples include but are not limited to: Engineered work platforms or other system designs, construction aids, shop built equipment, proprietary specialty operations or processes, hot tap operations, specialty LO/TO processes, etc.
3. Seller shall provide, upon Company request, supporting calculations, tests, SME evaluation, proprietary information, etc. for use by the Company on new or first time activities or atypical processes, operations or systems.

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12.9 ES&H Representative

- A. Designate an ES&H Representative for oversight and implementation of the ES&H requirements. The ES&H Representative is subject to Company approval and shall be on site at all times when work is being performed. Unless Company approves otherwise, the Seller's ES&H Representative shall have no other job responsibilities. The Company may request to interview the prospective ES&H Representative in advance of Company approval.
- B. The ES&H Representative shall possess a combination of education, training, and experience sufficient to implement the Seller's ES&H Plan. The minimum qualifications are:
1. Four-year technical degree in an ES&H Discipline plus a minimum of three (3) years safety and health experience in related construction work environment. Subject to the Company's approval, Seller may substitute work experience for the technical degree.
 2. Thirty (30) hour Occupational Safety and Health Standards in the Construction Industry training course (OTI 510) or equivalent.
 3. Understanding of Tennessee Department of Environment and Conservation (TDEC) General Storm Water Permit or equivalent requirements.
 4. Provide three (3) professional references that have first hand knowledge of the candidate's safety and health experience that the Company may contact.
- C. The ES&H Representative shall have the following responsibilities:
1. Meet with Company prior to start of on-site work to establish evacuation instructions, site access control, fire protection, spill response and control, emergency management, medical and drug testing, and reporting.
 2. Perform daily ES&H inspections.
 - a) Ensure stop or suspend work deficiencies are corrected and work start authorization received before resumption of work.
 - b) Ensure barriers and postings are adequate and in place.
 3. Conduct and document daily ES&H briefings (at beginning and end of each work shift) with workers to discuss the day's tasks, hazards, relevant ES&H topics, and follow-up to obtain feedback.
 4. Maintain documentation of inspections, briefings, and meetings.
 5. Conduct a weekly safety meeting with workers.
 6. Ensure workers review and sign off as having read and understood the Seller's AHA and Company's RWP for the work being performed before entering the work area.
 7. Ensure workers have reviewed permits for the work being performed before beginning permitted work.
 8. Serve as the Seller's point of contact for ES&H concerns.
 9. Administer the ES&H Plan including any changes.
 10. Review and analyze injury and illness reports and investigate accidents.
 11. Participate in ES&H-related investigations, approve corrective actions, and maintain records.
 12. Ensure housekeeping is maintained and work and laydown areas are kept clean, free of tripping hazards, pathways remain open, fire prevention is implemented, and storm water pollution prevention controls are maintained.
 13. Post all ES&H-related permits in a designated area at the work area.
 14. Initiate timely corrective actions to deficiencies identified by self-assessments, inspections, investigations, or Company oversight.

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15. Review training records and ensure individual's training and certifications are current to meet job requirements.
16. Ensure environmental compliance requirements are met and environmental inspections are completed and documented in a timely manner.
17. Ensure monitoring is performed and maintain current exposure assessments for noise, thermal stress, hazardous chemical and physical agents, as applicable.
18. Maintain Hazardous Material Inventory Report (HMIR) and Material Safety Data Sheets (MSDS) for products being stored or in use. and
19. Ensure sub-tier subcontract personnel work safely by coordinating briefings, training, and oversight activities needed.

12.10 First Aid

- A. Maintain a minimum of one person certified to administer first aid and cardiopulmonary resuscitation (CPR) on-site when work is being performed. Maintain first aid log for purpose of injury trending and replenishing first aid supplies.
- B. Provide first aid supplies and fire extinguishing equipment in accordance with 29 CFR 1926.23 and 29 CFR 1926, Subpart F.
- C. Notify Company immediately of injury requiring first aid.

12.11 Reporting

- A. Notify the STR of employees that are "Declared Pregnant Workers" per 10 CFR 835.
- B. Event/Condition Reporting
 1. Seller shall report any actual or potentially adverse event/condition to the STR immediately (within 15 minutes) upon identification (e.g., pipe break, valve failure, loss of power, environmental spill, fire, overheating equipment, any as-found state which may have adverse safety, health, quality, security, operational or environmental implications.).
 2. Included in the immediate notification to the STR are those events/conditions impacting the Company in the following categories:
 - a) Operational Emergencies (Impact to the Y-12 Complex);
 - b) Personnel Safety and Health (First aid, occupational illness/injury, fire/explosion, hazardous energy control);
 - c) Nuclear Safety Basis (Impact to Technical Safety Requirements; or nuclear criticality);
 - d) Facility Status (Degradation of a Structure, System, or Component; Identification of suspect counterfeit or defective items/materials);
 - e) Environmental (Release or impact to ecological and cultural resources);
 - f) Contamination/Radiation Control (Loss of control of radioactive material or spread of radioactive contamination, Radiation exposure or personnel contamination);
 - g) Nuclear Explosive Safety;
 - h) Transportation (Release or incident involving hazardous material, including radioactive material, during transportation or packaging);
 - i) Noncompliance Notifications (Any enforcement action or written notification from an outside regulatory agency); and/or
 - j) Management Concerns/Issues.

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3. Seller shall initiate, as appropriate, actions necessary to mitigate or control the event/condition. Secure the scene to protect relevant evidence and information for any subsequent investigation. Provide preliminary information on the event/condition to the STR.
 4. Seller shall provide follow-up notifications to the STR if the event/condition worsens, becomes an emergency or as requested.
 5. Seller shall conduct an investigation and provide to the STR records pertinent to the event/condition, such as personal statements, chronology, fact sheets, root cause analysis results, and other pertinent documents.
 - a) Personal statements and draft chronology are due within 1 workday of the event/condition identification unless requested otherwise.
 - b) Documents submitted shall contain sufficient detail to enable the Company to assess the significance, consequences, or implications of the event/condition, and to allow evaluation of the controls/mitigation being proposed or employed.
 6. The Company may elect to conduct a critique of the event/condition; the Seller shall participate in the critique providing documents from investigation results and complete the assigned corrective actions within the Seller's control. The Seller is accountable for costs incurred due to event /conditions caused by the Seller. Cost include those incurred by the Seller and may include Company incurred costs.
- C. Submit completed DOE F 5484.3 *Individual Accident/Incident Report* within two workdays of a vehicle/property damage, or recordable or lost time accident or injury. The block entitled "Organization Name" shall list Seller's name; the block entitled "Department, Division, or ID Code" shall list the Subcontract number. Provide supporting documentation to the STR as soon as available.
- D. Promptly report suspected employee exposure to contaminants exceeding ES&H requirements, and sampling and monitoring results exceeding ES&H thresholds to the STR or Company Safety Representative.

12.12 Personal Protective Equipment (PPE)

- A. Provide PPE in accordance with 29 CFR 1926, Subpart E and the following:
1. All persons accessing a construction area shall wear hard hats in accordance with ANSI Z89.1 and safety glasses with rigid side shields in accordance with ANSI Z87.1.
 2. Safe and appropriate footwear is required for Seller's employees, lower-tier subcontractor, and visitors.
 - a) Safety-toe work boots in accordance with ASTM-F2412 and ASTM-F2413 are required for persons involved in work activities or entering areas posted accordingly.
 - b) Appropriate footwear for office, shower, non-construction and otherwise posted areas include shoes with.
 - Closed toes and heels or heel supports (sling backs)
 - Low heels that provide good ankle support and stability (heels 3" or less in height and heel base width 1" minimum and sole thickness less than 1")
 - Non-skid soles
 - Shower shoes are acceptable while showering, participating in lung counter monitoring, or when otherwise required. Molded /plastic "gummy shoes" and flip flops/beach shoes are otherwise inappropriate.
 3. Additional PPE shall be used as required by the AHA.

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12.13 Occupational Health Protection Threshold Exposure Limits

- A. Limit exposure to chemical substances, physical agents, and biological hazards to the permissible exposure limits of 29 CFR 1926, Safety and Health Regulations for Construction.
- B. The ACGIH *Threshold Limit Values (TLV) for Chemical Substances and Physical Agents and Biological Exposure Indices, (BEI)* exposure limits are to be administered per the "Policy Statement on the Uses of TLVs and BEIs" when threshold limit values are lower (more protective) than OSHA *Permissible Exposure Limits (PELs)*.
 - 1. When ACGIH TLVs are used as exposure limits, Seller shall nonetheless comply with the other provisions of any applicable OSHA-expanded health standard.

12.14 Hazard Communication (HazCom)

- A. Pursuant to 29 CFR 1910.1200, the Seller shall make MSDSs for hazardous substances present at the work or laydown areas available.
- B. Submit a copy of MSDS sheets to the Company prior to delivery of hazardous material to Y-12, maintain a copy of the MSDS sheets at the work area accessible to all workers, and submit the *Subcontractor Hazardous Materials Inventory Report (HMIR)* (UCN-21445) to the Company at the beginning of work, then monthly, and when work at Y-12 is complete.
 - 1. The Company may restrict the amount of chemical product(s) at Y-12. Chemical or other hazardous substances banned by a Federal or Tennessee State regulatory agency shall not be brought to Y-12. Asbestos, polychlorinated biphenyls (PCBs), and banned chlorofluorocarbons are prohibited. Aerosol cans shall be incorporated in the HMIR and managed in accordance with Waste Management requirements.
- C. The Company will provide the Seller MSDS for existing Y-12 hazardous substances upon request. The Seller can access an on-line database of hazardous substances at Y-12 to obtain MSDS.
- D. Hazardous material transferred or shipped to a Facility or area under control of a *Facility Safety Basis* shall receive Company Facility Operation Manager or designee approval prior to initiating transfer/shipment. The Company may restrict the hazardous material quantities to maintain quantities within the *Facility Safety Basis* Maximum Anticipated Quantities (MAQ).
- E. Seller's employees shall attend Company Hazard Recognition Training.

12.15 Excavations

- A. Seller's competent person shall be on-site during excavation work inside trenches greater than 4 feet deep.
- B. Submit shoring calculations to the Company for information and perform excavations per 29 CFR 1926, Subpart P.

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- C. Control dust emissions in accordance with TN 1200-3. Limit use of water to prevent erosion and run-off into storm drains.
- D. Oak Ridge Reservation is a CERCLA site listed on the National Priority List (NPL). Seller shall not perform excavations or disturb any area on the Y-12 Complex without approval of the Company.
- E. The generation of excess soil from excavation shall be minimized and managed to prevent migration from the work area.
- F. Seller shall notify STR two (2) workdays prior to any excavation activities for RadCon support.
- G. No excavations shall be performed greater than 12 inches in depth or greater than 25 square feet in surface area without an *Excavation Permit*.
- H. Excavation material stockpiles shall be kept 2 feet or more from edge of excavations.

12.16 Confined Space

- A. Perform work in accordance with 29 CFR 1910.146.
 - 1. For confined space entrants, attendants and air monitoring personnel, Seller shall provide medical surveillance documentation of their physicals and psychological suitability to do confined space work in accordance with ANSI Z117.1, *Safety Requirements for Confined Spaces*.
- B. Submit Seller Confined Space Program for Company approval or adopt Company program and complete Company training.
- C. Confined space entrants shall wear a rescue harness with lifeline, except when use increases the risk or does not contribute to the rescue.
- D. Excavations greater than 4 feet deep and welding in a confined space shall be evaluated by the Seller for risk classification.
- E. A Company-issued permit is required for existing Company confined spaces. The Seller shall implement a Confined Space Program for confined spaces created during their work. Submit requests for Company permits four (4) workdays in advance of need.

12.17 Lockout/Tagout

- A. A *Lockout/Tagout Permit* is required before performing work on energized equipment, near overhead lines, or excavating near underground utilities where an energized source exists.
- B. Submit Seller Lockout/Tagout Program for Company approval or adopt Company program and complete Company training.
- C. Hazardous energy sources may need to be de-energized and locked out before the Seller can begin certain work. Seller shall provide a procedure to perform work involving hazardous energy sources.

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- D. Perform lockout/tagout in accordance with 29 CFR 1910.269, *Electric Power Generation, Transmission, and Distribution*, and 29 CFR 1910.333, *Working On Or Near Exposed De-energized Parts*, and/or 29 CFR 1910.147, *The Control of Hazardous Energy (Lockout/Tagout)*.
- E. The Company will perform the initial lockout/tagout of existing Y-12 systems and equipment, or issue the permit for electrical distribution systems or equipment and will remove the final lock or tag, respectively. A four (4) workday notice is required for the Company to perform the initial lockout/tagout. The Seller shall implement its lockout/tagout procedure and install a secondary lock on Company (Construction set) lock box. Seller shall complete their work and remove all locks prior to the Company removing the final lock/tag.
1. Lockout/tagout permit is not required where energy source has been air gapped. Seller shall verify condition.
 2. Seller shall confirm absence of energy on lockout/tagout system/components prior to commencing work.
 3. Seller may perform lockout/tagout of the energy source beyond the secondary of the transformer without Company authorization when using Seller's Lockout/Tagout Program approved by the Company.
- F. All 3rd party utility outages shall be coordinated with the Company before Seller contact utility owner. Seller shall coordinate LO/TO with the utility owner.

12.18 Hoisting and Rigging

- A. Seller shall perform hoisting and rigging activities (H/R) and certify that equipment meets minimum criteria in accordance with 29 CFR 1910 Subpart N, 29 CFR 1926 Subparts H and N, and the ANSI B30 and ANSI B56 Series.
- B. In addition to paragraph 12.18 (A) above, Seller shall implement and follow the Company Management Requirements procedures listed below. The applicable revisions are the one in effect at the time of award.
1. *Hoisting and Rigging Operations*, Y17-64-314,
 2. *Construction Crane Use and Operation*, Y17-64-315,
 3. *Qualification of Construction Crane and Equipment Operators*, Y17-64-316,
 4. *Qualification of Construction Competent Person Riggers*, Y17-64-317,
 5. *Control of Hoisting/Rigging Equipment*, Y-17-64-318,
- C. Company procedures referenced above define the standard work processes that will be used for planning and executing heavy hauling, rigging, and lifting work performed by construction personnel on the Y-12 National Security Complex site to include that work performed by Company construction subcontractors. Note that these procedures include H/R activities performed using powered lifting equipment such as cranes, forklifts, excavators and similar equipment when used with attachments for lifting, etc. and hoisting and rigging operations by hand utilizing come-a-longs, chain falls, jacks, winches, etc. These procedures also define the roles and responsibilities of Company and Seller personnel that plan, direct, supervise and execute hoisting and rigging activities:
1. The Seller shall prepare lift/haul plans as applicable, furnish all required lifting equipment, rigging, hardware, etc., perform and document required inspections, maintain control of H/R equipment and hardware, and provide all supervision and

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- labor to include Competent Person Rigger(s) (CPR) and equipment operators meeting the qualifications required by the Company. Additionally, the Seller shall perform those functions and roles identified in the procedures as being the responsibility of the Superintendent and Project Rigging Engineer (PRE).
2. Seller H/R programs and procedures used on site in the performance of work on this subcontract shall incorporate Company requirements.
 3. The Company will provide guidance and direction for lift classification, review and approve lift and haul plans prepared by the Seller, provide Company required training, testing and approval for CPR's, review/approve operator qualifications and administer Company required written or oral and practical tests, and perform oversight of Seller planning and execution of H/R activities. Coordination of H/R activities between the Seller and the Company Representatives will be through the Company Subcontract Technical Representative (STR).
- D. Seller is directed to the referenced procedures for specific requirements. The following includes a listing, not necessarily complete, of major elements contained within the referenced Company Procedures:
1. All Seller H/R and heavy hauling operations must be reviewed and approved by the Company for lift classification. Lift classifications include Critical Lift, Engineered Lift and Ordinary Lift. See Appendix A, Y-17-64-314.
 2. Company procedures apply to all H/R activities, including hoisting and rigging operations by hand utilizing come-a-longs, chain falls, jacks, winches, etc.
 3. Where applicable, the Seller shall prepare and submit haul/lift plans and Hoisting and Rigging Electrical Hazard Evaluation to the Company for approval. Seller shall complete a Pre-Lift Safety Checklist and conduct a Pre-Lift Brief for all lifts utilizing a crane or other lifting equipment in a similar manner. See Y17-64-314.
 4. Seller Crane operations must comply with requirements of Y17-64-315. Refer to Section C, Mobile Cranes-Subcontractor.
 5. All Seller operators of cranes, forklifts, and related equipment shall meet Company required pre-requisite qualifications and pass a Company administered written or oral exam and practical test. See Appendix B, Y17-64-316. A written or oral competency exam is not required for forklift operations. Operators qualified under the Company exam and practical shall requalify every 3 years, or upon unsatisfactory performance or a change in equipment.
 6. All Rigging activities must be supervised by a Seller Competent Person Rigger (CPR) and be included in the pre-job brief. CPR must be present when H/R activities are being performed. CPR shall meet all Company pre-requisite qualifications and training and pass a Company administered written and practical exam. See Y17-64-317. An annual refresher is required to maintain CPR qualifications.
 7. Seller control, inspection and testing of H/R equipment, slings and hardware shall meet requirements of Y17-64-318. Inspection and testing of H/R equipment includes, as applicable, annual, periodic and prior to use (daily). H/R equipment shall be inspected for suspect/counterfeit items in accordance with DOE requirements. Items found defective shall be promptly tagged out and secured to prevent further use. H/R hardware brought on site shall be maintained in a controlled access storage area while not in use and Seller shall maintain an inventory of H/R equipment on site. Documentation of inspections shall be maintained and made available to the Company upon request. Certificate of Compliance and documentation of Proof Test for H/R hardware shall be provided to the Company prior to use of hardware.
 8. Seller shall utilize Company provided forms unless otherwise approved by the Company.

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- E. When plastic wrapped contaminated equipment requires hoisting and rigging (including forklift handling) or securing for transportation (on- or off-site), hoisting/rigging and load-securing activities shall be performed under a plan of work that has been submitted by the Seller and approved by the Company. The plan shall address the hazard controls to be employed in order to comply with contamination control requirements and ensure safe hoisting/rigging/load-securing of contaminated items.

12.19 Lead

- A. Perform work on lead-containing materials in accordance with 29 CFR 1926.62.
- B. Before starting work involving lead materials, submit for Company approval, a Lead Compliance Plan.
- C. Engineering controls (e.g., wet methods, vacuum power tools, ventilation and containment structures) are mandatory regardless of PPE used.
- D. All painted surfaces at Y-12 are suspect for lead-containing paint.
- E. The Seller's Competent Person shall be on-site during work activities involving lead materials.
- F. Before generating a waste stream containing lead, ensure waste **accumulation** area is established.

12.20 **Mercury** and PCBs

- A. Low levels of mercury and PCBs are detectable in the soil and building materials/components in some areas of Y-12. When the Seller's work activities create a potential for exposure to mercury or PCB's the Seller's ES&H Plan shall describe how worker exposure monitoring for these constituents will be addressed, and how compliance with applicable **mercury and** PCB regulations will be achieved. Painted surfaces at Y-12 are suspect for Polychlorinated Biphenyl (PCB) containing paint. Before starting work involving PCB materials, submit for Company approval, a PCB Compliance Plan. Hot work is prohibited prior to removal of the PCB coating on PCB coated surfaces. Before generating a waste stream containing **mercury and** PCB's, ensure waste **accumulation** area is established. Refrigerants
- A. The Seller shall comply with 40 CFR 82 and State regulations when handling or dispositioning equipment containing refrigerant. Only trained and certified personnel shall breach a system containing refrigerants. Seller shall provide record of training or certificate upon Company request.
- B. If equipment containing refrigerant is removed from Y-12 by the Seller for reuse, Seller shall follow the requirements of 40 CFR 82 and State regulations after removal. The Seller shall indicate in the Work Plan, Waste Management Plan or by letter the final disposition for the equipment. The Seller shall indicate in the document the equipment and the associated refrigerant is not intended for immediate disposal or resale. The Seller shall have written notice from the Company transferring responsibility for the equipment still containing refrigerant prior to being removed from Y-12. The equipment should also have a label attached by the Company indicating the presence of refrigerant. Unless

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otherwise specified, the Seller shall not remove equipment containing refrigerant from Y-12 for the sole purpose of the recovery of the refrigerant.

1. The Seller shall notify the Company twelve (12) workdays prior to the disposal of equipment that contains refrigerant. The Company will recover the refrigerant from the equipment prior to the Seller dispositioning the equipment. The Company will attach a label indicating removal of refrigerant from the equipment.

12.22 Electrical

- A. Seller shall submit Electrical Safety Program for Company approval for the electrical installation and maintenance operations in accordance with 29 CFR 1910, 29 CFR 1926, Subpart K, the *National Electrical Code* (NFPA 70) and *Standard for Electrical Safety in the Workplace* (NFPA 70E). Seller's qualified electrical inspector shall complete compliance inspections prior to requesting Company AHJ electrical inspection and receipt of the work.
- B. Seller shall provide ground fault circuit interrupter protection for cord sets, receptacles, and electrical tools including connections to generators and equipment connected by cord and plug for use by workers.
- C. Electrical equipment shall be listed, labeled, and approved by a Nationally Recognized Testing Laboratory (NRTL) for intended purpose, or inspected and approved for use, by the Seller's electrical AHJ in accordance with and as described in NFPA 70 & 70E, or equivalent.
- D. Seller shall provide the PPE for electrical installation, voltage checks, testing and maintenance operations in accordance with 29 CFR 1910, 29 CFR 1926, National Electrical Code, and (NFPA 70E). Company will supply electrical work protective clothing where needed in radiological controlled areas.
 1. Clothing and PPE for confirmation of isolation (absence of voltage checks):
 - a) Less than 300 volts
 - 1) 100% long-sleeve cotton coveralls, 100% long-sleeve cotton shirt and pants,
 - 2) long-sleeve scrubs or RAD coveralls,
 - 3) safety glasses with side shields,
 - 4) leather shoes,
 - 5) insulated gloves with protectors, and
 - 6) insulated tools;
 - b) Greater than 300 volts but less than 600 volts
 - 1) 100% cotton coveralls worn under electrical flame-resistant (FR) coveralls (marked on back with ATPV 7), or electrical FR pants and shirt (marked on back with ATPV 11), or electrical RAD FR coveralls (marked on back with ATPV 11),
NOTE: 100% cotton, wool or silk, non-synthetic material or FR shall be worn under FR clothing.
 - 2) leather shoes,
 - 3) safety glasses with side shield,
 - 4) electrical rated FR face shield,
 - 5) insulated gloves with protectors, and
 - 6) insulated tools.

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12.23 Hot Work

- A. Obtain a *Hot Work Permit* through the STR before performing any flame or spark producing work. Return expired *Hot Work Permit* to the Company STR or Issuing Authority.
 - 1. Seller's individual supervising Hot Work activities shall complete Company-provided training for Issuing Authority/Service Supervisor (IA/SS) for Welding and Burning.
- B. Perform welding, burning, and hot work in accordance with 29 CFR 1926, Subpart J, and ANSI Z 49.1. **Before initiating hot work, remove:**
 - 1. Combustibles within 35 feet or provide non-combustible cover, and
 - 2. Flammable liquids within 50 feet.
- C. Use fire retardant, plastic/fabric tarpaulins, tested in accordance with NFPA 701, *Methods of Flame Propagation of Textiles and Films to Protect Personnel and Property During Spark or Flame Producing Work*. Framing material used to support such coverings shall be non-combustible. FR clothing shall conform to ASTM D 3659 and ASTM F 1506. Spark or flame producing activities that requires fall protection (e.g., body harness) shall conform to ANSI Z359.1, and ASTM F887-04.
- D. Provide a dedicated, trained fire watch during, and for a minimum of 30 minutes after, spark/flame producing work. **Torch applied roofing operations requires the fire watch during and for a minimum of 2 hours after, spark/flame producing work.** Fire watches shall attend Company-provided training, maintain proximity necessary to observe the safety of the person(s) performing the hot work, and be able to respond in case of an emergency.
- E. Determine the location of the nearest operating fire alarm pull station and Y-12 telephone or Y-12 communication radio.
- F. Use dust-reducing methods, such as vacuuming, wetting, or building an enclosure during cutting or grinding operations.
- G. Comply with the requirements of 29 CFR 1926.62 when drilling, cutting, grinding, or welding existing painted surfaces.
- H. Comply with the requirements of 29 CFR 1926, Subpart J and 29 CFR 1926.1126 when welding, cutting, grinding, or heating galvanized or stainless steel.
- I. Provide point source exhaust ventilation when welding stainless steel material and alloys.
- J. Ensure AHA contains analysis of welding, cutting, and grinding using clothing ignition risk factors. In determining the need for PPE for flame and thermal hazards the following risk factors shall be considered:
 - 1. Amount and duration of open flame, sparks, molten by-products.
 - 2. Potential for accidental contact with direct flame or hot surfaces.
 - 3. Position/proximity of worker relative to flames, sparks, or molten by-products.
 - 4. Risk factors created by PPE worn, such as heat stress, physical and psychological stress, impaired vision, mobility, and communications.

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5. Risk factors shall be identified and controlled or eliminated through engineering and administrative controls. Where the risk factors cannot be eliminated or controlled, PPE is required. If clothing ignition hazards still exist, FR protective clothing shall be used as secondary protection. Leathers such as gauntlets, aprons, and similar protective items shall be used for primary protection, when clothing ignition hazards are identified through the hazards analysis process.
- K. Personnel performing welding, cutting, grinding, and hot work (including fire watch personnel and proximate workers) in a radiologically controlled area shall wear FR PPE and outer FR-treated anti-contamination clothing.
- L. Thoriated tungsten electrodes used in tungsten inert gas welding are restricted from use unless approved otherwise by the Company. Where authorized for use, a Radiological Work Permit and Radiological Worker II Training is required.

12.24 Asbestos Demolition or Renovation

- A. Seller shall possess a Tennessee General License for Asbestos Abatement to perform asbestos work and be accredited per the requirements of Tennessee Rule 1200-01-20. All asbestos workers and asbestos supervisors shall be trained via a Tennessee accredited training provider and shall be individually accredited per 1200-01-20. Perform work in accordance with 29 CFR 1926.1101, *Asbestos*, and 40 CFR Part 61, Subpart M, *National Emission Standard for Asbestos*, and TN 1200-3-11 and 1200-01-20.
 1. For asbestos abatement renovations less than 160 square feet or less than 260 linear feet, including incidental work disturbing asbestos-containing material (ACM), Seller shall request an Asbestos Removal Authorization (ARA) from the Company three (3) workdays in advance of need.
 2. For demolition of a structure, regardless if asbestos is present or for renovations involving the abatement of greater than 160 square feet or 260 linear feet the Seller shall request a Notification of Asbestos Demolition or Renovation (NoDR) at least twenty (20) workdays in advance of work start.
 3. Seller shall submit an Asbestos Work Plan (AWP) and AHA for Company approval.
 - a) Seller shall prepare a Work Plan that meets the requirements of 29 CFR 1926.1101, *Asbestos*, specifically Items (g) and (h), and shall submit it to Company to review before starting Work. If Seller chooses to use alternative work practices and methods for the removal of thermal system insulation (TSI) and/or surfacing asbestos containing material (ACM) or presumed materials (PACM), the decision shall be certified in writing by a certified industrial hygienist or licensed professional engineer who is an accredited (per the State of Tennessee) project designer. Any project related activities that employ alternative work practices and methods shall meet the requirements in 29 CFR 1926.1101(g)(6). The plans detailing compliance and alternative methods must be reviewed by Company before any work with ACM or PACM is to begin.
 - 1) Any negative exposure assessments (NEA) developed by the Seller shall be submitted to and reviewed by the Company prior to making any applicable work practices changes related to using NEAs. Approval by Company does not constitute permission to negate other applicable requirements of federal, state, or local asbestos regulations.
- B. The Company will notify the State of Tennessee of the required NoDR. The Seller shall provide the following information to the STR for the NoDR:

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1. Name, address, contact person, and phone number of the abatement licensee and waste transporter,
 2. Approximate amount of ACM,
 3. Initial exposure assessment,
 4. Scheduled dates for removal,
 5. Description of work methods,
 6. Intention to leave any non-friable ACM in place during demolition, and
 7. Waste disposal site.
- C. The AWP shall identify specific work requirements, **monitoring**, PPE, and training. The Seller's Competent Person shall brief and oversee the personnel entering the work area and enforce all requirements. The Competent Person shall maintain an entry/exit log for regulated areas.
1. **Seller shall make available, within 24 hours and upon written request from Company, any records concerning asbestos handling, including but not limited to, entry/exit logs, exposure records and training records, in a manner that does not breach confidentiality, as described in 29 CFR 1926.33 "Access to Employee Exposure and Medical Records."**
- D. The AWP shall specifically require the following:
1. Workers shall wear respirators when doffing protective clothing.
 2. Provide workers with disposable coveralls, head and foot coverings, gloves, and eye protection for Class I-IV activities. Workers shall wear protective clothing when performing asbestos work or when friable asbestos is present. Gloves are required when handling broken or loose pieces of non-friable asbestos.
 3. Establish the regulated area prior to pre-cleaning activities, enclosure construction, or other activities that could disturb the ACM.
 4. **Where feasible, a 50-ft perimeter shall be established around the work area. Only those individuals engaged in the asbestos removal process and having the appropriate training are permitted within the work area. The perimeter shall be delineated with construction fences or other Company-approved barriers and shall have asbestos warning signs affixed at a minimum of approximately 50-ft intervals along the perimeter barrier. Such barriers and signs shall remain until deemed unnecessary by Company. Otherwise** flag off entrances and approaches to the area with barrier tape (Asbestos-Danger) and signs.
 5. Monitor personnel and area when there is not a "negative exposure assessment" (include initial exposure assessment with the AWP).
 6. Use portable hand tools equipped with a HEPA filtered exhaust ventilation to drill, cut, or otherwise disturb ACM.
 7. Mandatory use of wet method for abatement unless otherwise approved by the Company.
 8. Filter water from the abatement work through a 5-micrometer filter system before discharging to a Company-designated sewer.
 9. Provide a two-foot square viewing window (plexiglas) in enclosures approximately five feet above ground level at a location designated by the STR.
 10. Provide a negative pressure air-filter system with a minimum of one air change every fifteen minutes (4 per hour) at a minimum of 0.02 column inches of water pressure differential relative to outside pressure. System shall operate continuously (24 hours a day) until final clearance is approved. Air leaving the system shall be vented to the outside unless otherwise approved by the Company.
 11. Provide a decon unit with shower contiguous to the work area. Use of a remote decon unit shall be approved in advance by the Company. Workers shall not remove

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respirators until in the shower. Any glove bag ACM removal of greater than 25 linear feet requires a decon unit. Shower wastewater filter system requires Company approval. Discharge of wastewater into the storm or sanitary sewer system requires Company authorization. Seller shall allow four (4) workdays for Company authorization.

12. Remove Cat I and II (non-friable) ACM which can become friable as a result of work activity, excluding roof coating and paint, unless specified otherwise.
13. Regarding the removal of asbestos material from outdoor sources, Seller shall, as applicable, secure doors, windows, or other openings (such as ventilation units for buildings) with a minimum of 4-mil-thick plastic if outdoor work is within 100 ft of such areas.

E. Personnel Monitoring:

1. Class I activities shall be monitored daily whenever work is being performed. Monitor 25% of each group of representative workers entering the regulated area for excursion and permissible exposure limits.
2. Class II and III activities shall be monitored for three days with a reduction to one day per week if results remain below the Permissible Exposure Limit (PEL).
3. Submit test results to Company for information.

F. Area Monitoring:

1. Conduct daily monitoring for the full work shift inside the negative pressure enclosure.
2. Take at least four samples per 5,000 square feet of enclosure and three samples outside the enclosure. For each waste load out, take additional sample at that location outside the enclosure.
3. Conduct daily full shift monitoring for negative pressure glove bag or mini-enclosure operations. Collect three samples inside the regulated area and three samples outside the regulated area inside the protection zone.
4. Class II and III activities shall be monitored daily for the full shift. Collect three samples inside the regulated area and if located outside of a building one sample upwind and two downwind.
5. After abatement, area must pass a visual inspection, review, and analysis of clearance samples by Seller's Competent Person per 29 CFR 1926.1101.
6. Submit test results to Company for information

G. .Engineering controls are mandatory, regardless of PPE used.

H. Material used for abatement shall equal:

1. Poly used for enclosures shall have a flame spread index of five and a smoke development index of 30-110 in accordance with UL Test 723.
2. Surfactant or amended water shall be specifically manufactured for use in ACM abatement.
3. Company approval is required for use of wood enclosure. If approved, wood shall be treated with fire retardant.
4. Bags for disposal shall be 6-mil polyethylene with preprinted markings in accordance with 29 CFR 1926.1101(k) (8) (iii) and 49 CFR 172.
5. Equipment having HEPA filter shall be tested in accordance with requirements identified in Supplemental Conditions, 12.32, Equipment, and Tools.

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- I. Seller personnel working with ACM shall be approved for respiratory protection, enrolled in medical surveillance, and shall have received the appropriate level of asbestos training.
 1. Medical evaluation and enrollment in a surveillance program is mandatory before granting access to regulated areas.
 - a) Upon request from the Company, Seller shall provide examining physician's documentation acknowledging that information stated in 29 CFR 1926.1101(m)(3) has been received.
- J. Seller shall employ an independent testing laboratory to perform air monitoring and testing. Air monitoring will be performed per the requirements identified in 29 CFR 1926.1101 Appendix A, Appendix B, the most current version of OSHA method ID-160, or the most current version of NIOSH Method 7400.
 1. Personnel performing air monitoring during abatement activities or for the purpose of final clearance shall be accredited per the Tennessee accreditation requirements for Project Monitors.
 2. Seller shall provide to Company documentation of successful completion of the NIOSH 582 course, Tennessee Project Monitor accreditation, and a written air monitoring plan upon request.
- K. Personnel performing analysis of airborne asbestos samples shall complete the NIOSH 582 Course. All samples will be analyzed per 29 CFR 1926.1101 Appendix B or the most current version of NIOSH Method 7400. Personnel performing analysis of airborne asbestos samples shall be included in the AIHA Proficiency Analytical Testing Program.
- L. Seller shall post sampling results at the work area immediately after obtaining the results but no later than 48 hours after samples were taken. The Seller's Competent Person shall evaluate sample results and initiate any corrective actions. If results exceed the prevalent background level (cannot be > PEL 0.1 f/cc), immediately stop work, extend the boundaries of the regulated area, and notify the STR. Do not continue work until work methods are changed to remediate the problem. Within eight hours of receipt of results exceeding the background level, provide the Company a report describing the problem and the corrective actions taken.
- M. All insulated materials and /or those materials suspected of containing asbestos must be treated as such until conclusive characterization data has been received and/or an Asbestos Competent Person has inspected the material and through expert knowledge determines the material is free of all asbestos. Materials of concern include but are not limited to; all insulating material, floor tile, ceiling tiles, drywall, siding materials, glues, roof flashing, caulk, and window glazing compound.

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12.25 Hearing Protection

- A. Seller shall develop and implement a Hearing Conservation Program meeting ACGIH TLVs and BEI current publication guidelines. Sellers Hearing Conservation Program shall be submitted for Company approval. The program shall include audiometric testing when sound levels exceed ACGIH limits.
- B. The Seller shall ensure that unprotected noise exposure shall not exceed an 8-hour time-weighted average of 85 dBA using a 3dB exchange rate. This applies to the total duration of exposure per workday (8 hours) regardless of whether it is one continuous exposure or a number of short exposures (refer to current ACGIH TLVs for noise). Continuous noise exposure shall not exceed 115dBA or impulse/impact noise exceeding 140dB (peak sound pressure level).
- C. When employees are subjected to sound levels exceeding the ACGIH TLVs for noise, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels below the TLVs, personal protective equipment as required in 29 CFR 1926.101 shall be provided by the Seller and used to reduce sound levels below these TLVs.
- D. The Seller shall determine the boundaries where continuous or intermittent noise is expected to exceed the ACGIH TLVs for noise. The Seller shall enforce the use of hearing protection within those identified boundaries.
- E. The Seller shall maintain current documented exposure assessments for employees performing tasks where sound levels exceed 85dBA and hearing protection is not required.
- F. The Seller shall maintain a list of equipment that exceeds 85dBA noise exposure (either continuous or impulse/impact noise).

12.26 Fall Protection

- A. Seller shall perform all work activities requiring fall protection in accordance with 29 CFR Part 1926 Subpart M. The Seller shall submit a Fall Protection Plan(s) for Company approval, which provides for roof work activities, leading edge work, safety net systems, warning line systems and controlled access zones as applicable.
- B. All manufactured equipment utilized for fall protection shall be rated, inspected, and properly implemented in practice.

12.27 Thermal Stress

- A. Seller shall develop and implement a Thermal Stress Program that meets the guidelines in the most recent ACGIH TLV publication, as applicable. Sellers Thermal Stress Program shall be submitted for Company approval.
- B. Seller shall maintain documented assessments for employees performing tasks. Assessments shall be available to the Company upon request.

12.28 Explosives

- A. Use of explosives is prohibited at Y-12.

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12.29 Cranes And High Profile Equipment

- A. In addition to the requirements identified in 29 CFR 1926, the following is required:
1. During hazard evaluation, determine grounding requirements for overhead work in proximity to energized lines and for underground work having the potential to come into contact with energized lines.
 2. When moving equipment, the booms or masts shall be in a retracted traveling position, and a flagman donned in contrasting color vest that is reflective shall be assigned to direct movement and prevent contact with objects on the ground or overhead.
 3. Verify roadway clearances before work start, equipment movement, and after significant weather events. Contact the STR to verify clearances through security portals and other Y-12 width and height restrictions.
 4. Seller's ES&H Representative shall be present when equipment is moved from one location to another, and when equipment is near energized electrical conductors or equipment.

12.30 Transportation

- A. Flammable liquid tank trucks, refueling vehicles, and other vehicles transporting flammable liquids or gases shall comply with 49 CFR 382.399.
- B. All transportation of materials, including waste, shall be performed in compliance with applicable Federal (49 CFR Parts 106 – 180 and 325 – 399) and State of Tennessee requirements. Seller shall demonstrate:
1. Commercial vehicle operators are properly licensed, medically certified, and participate in Workplace Substance Abuse Program.
 2. Commercial vehicles have a current annual inspection and are in compliance with the *Federal Motor Carrier Safety Regulations* (FMCSR).
 3. Seller has sufficient liability insurance as outlined in the FMCSR.
 4. Seller employees engaged in hazardous materials transportation activities receive the requisite training.
 5. Loads being transported do not exceed transport vehicle manufacturer's rated capacity and are properly secured.

12.31 Evacuation

- A. Observe and participate in notices to evacuate the work area. The Company will establish requirements for evacuation of work-area personnel, as needed, to a designated assembly area. The Seller must account for all personnel on-site at the time of an evacuation.
- B. Before evacuating the work area, shut down equipment or make conditions safe unless doing so endangers personnel.
- C. Perform evacuation in accordance with Company public address announcements and/or STR instructions.

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12.32 Equipment and Tools

- A. Tools and equipment brought to Y-12 shall be used only for the purpose for which they are designed and comply with 29 CFR 1926, Subpart I. Tools and equipment shall be inspected (or certified, such as lift slings) and determined to be adequate for the use intended. Conduct routine inspections to ensure repairs and maintenance are completed to keep items ready and compliant. Defective or otherwise unsafe items shall be tagged "Do Not Use" and immediately removed from the work area to a secure place to prevent inadvertent use. Re-inspect repaired items before reuse. Any deficiencies noted on an inspection record (e.g., small leaks, worn parts) shall be evaluated to ensure its safe operating condition. The evaluation and its resolution shall be documented on the inspection record prior to use. Hand and portable powered tools and other hand held equipment shall comply with 29 CFR 1910, Subpart P.
- B. Modifications, replacement parts, or repairs of equipment shall maintain at least the same factor of safety as the original equipment. The manufacturer shall authorize modifications in writing.
- C. Submit for information, upon Company request, and maintain a comprehensive log of each power tool and piece of equipment at Y-12.
- D. The Seller's ES&H Program shall require that each employee and all lower-tier subcontract employees be briefed on the safe operation of each power tool and piece of equipment that is used by the employee. The briefing shall also include reviewing the vendor-supplied operation and instruction manual for any special conditions or safety warnings. Submit for information, upon Company request, a list of employees who have been briefed.
- E. Maintain an on-site file of the operation and instruction manuals for each power tool and equipment. Manuals shall be available for review by the Seller's workforce.
- F. Equipment having a HEPA filter requires DOP testing in accordance with ASTM D-2986 and ASME N510 or an equivalent testing approved by the Company before use. Re-testing is required when:
 - 1. HEPA filters are replaced.
 - 2. Negative-air machines (NAMs) with HEPA filters are relocated or moved which could impact performance of the unit. NAM's shall always be re-tested whenever relocated using motorized equipment unless otherwise approved by the Company.
- G. Inspect negative-air machines (NAM) and HEPA vacuums at the initial set-up and at the beginning of each day to ensure the units' seals are not broken and no damage to unit, which would compromise the equipment's function.
 - 1. Negative-air machines are to be DOP tested when they are set into place.
 - 2. Seller to arrange for the Company's Asbestos Coordinator or their designee to inspect all HEPA vacuums and negative-air machines before they are used to ensure receipt of specified testing.
 - 3. Seller's Competent Person shall be responsible for determining if retesting is necessary after any movement / relocation of negative-air machines by means other than motorized equipment. Company reserves the right to require Seller retesting.
 - 4. Provide manufacturer's certification for HEPA filters used at Y-12 for HEPA Vacuums and NAMs to the Company for review, prior to use.

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5. Provide copies of DOP testing results for HEPA Vacuums and NAMs to the Company, for review, prior to use.

12.33 Scaffolds and Aerial Devices

A. Scaffolds

1. Use metal planking for all scaffolding. Pressure treated fire retardant lumber painted with a clear **intumescent** paint may be used where metal scaffolding is inappropriate and only when specifically approved by the Company. Wood platforms shall not be covered with opaque finishes, except that platform edges may be covered or marked for identification.
2. Provide a trained Competent Person to inspect and sign off on scaffold erection prior to use.
3. Scaffold users shall be trained in Scaffold User and Fall Protection.
4. Seller shall comply with 29 CFR 1926, Subpart L.

B. Aerial Devices

1. Provide a certification that aerial devices used meet the minimum criteria as specified in the following documents and will remain compliant during the course of the work. Seller shall submit certification prior to use.
 - a) 29 CFR 1910, Subpart F
 - b) 29 CFR 1926, Subpart L
2. Perform routine and pre-use inspections of aerial devices
3. Provide maintenance and inspection reports containing the date and signature of a qualified inspector or agency for each aerial device to the company upon request.
4. Seller's aerial device operators shall be trained and fully qualified. Qualifications shall include, but not limited to physical abilities, knowledge, and skill proficiency based on job functions. Provide evidence of operator training and qualifications to the Company upon request. Company reserves the right to subject Seller's aerial device operators to performance-based verification of minimum equipment operation knowledge and skill levels.

12.34 Concrete

- A. Activities that generate concrete silica dust require appropriate engineering controls (wet methods) or PPE to prevent employee exposure to silica above limits identified in 29 CFR 1926 Subpart Z or the ACGIH TLVs, whichever is lower. Wet methods are recommended to reduce the amount of dust generated.
1. Respirator protection is required when performing dust-producing concrete work unless there is a documented exposure assessment for similar work, which the Company has accepted.

12.35 Respiratory Protection

- A. Perform work in accordance with ANSI Z88.2-1992, *Practices for Respiratory Protection*, and OSHA 29 CFR 1910.134, *Respiratory Protection*, and any substance-specific regulation (e.g. 1926.1101, Asbestos).

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- B. Limit exposure to toxic and hazardous substances to the permissible exposure limits (PELs) of 29 CFR 1926, Subpart Z or TLVs of the ACGIH, which ever is more protective.
- C. Provide respirators and cartridges that are NIOSH approved.
 - 1. Seller's shall maintain manufacturer's approved respirator configuration. Cartridges, air line-hoses, regulators, and other parts are specifically listed as elements that constitute manufacturer's approved configuration.
 - 2. Modifications to respirators or their parts are prohibited.
- D. Provide compressed breathing air when required to provide adequate protection factor. Submit data to the Company demonstrating the air quality meets the ANSI/CGA G7.1 requirements for Grade D breathing air. If the Company furnishes supplied-air respirator equipment and compressed breathing air, allow a thirty (30) day time period from when the Company is notified.
- E. Air-purifying respirators (APR) shall not be worn in oxygen deficient or immediately dangerous to life or health (IDLH) environments.
- F. Seller shall provide optical corrections when needed.
- G. Required records.
 - 1. Maintain respirator protection records in accordance with ANSI Z88.2, ANSI Z 88.6, ANSI Z88.10, and 29 CFR 1910.134 to include:
 - a) Inspection – Inspection dates, findings, and remedial actions for respirators;
 - b) Training – Type of training received, type of respirator equipment, manufacturer of respirator, names and dates of persons trained;
 - c) Fit Testing;
 - d) Medical Surveillance;
 - e) Program Appraisal – Annual Respiratory Protection Program evaluation, findings, outcomes, and actions; and
 - f) Program Surveillance – Spot checks of operations where respirators are in use and findings, outcomes, and actions.
- H. Company-furnished respirators
 - 1. For work in radiological areas, Company will furnish respirators, cartridges, fit testing, and appropriate training for Company-furnished respirators (e.g. Mine Safety Appliance (MSA) Ultra Twin Hycar Rubber respirators, 3M-APR only, or equivalent.) Seller shall bear all other costs associated with its employee's use of Company-furnished respirators (e.g., time for training, medicals, fit-test, checkout, returns).
 - 2. Work-specific respirator training (may be accomplished through toolbox meeting) will be provided on storing, controlling, and preparing respirators for laundry prior to use of Company-furnished respirators.
 - 3. Seller shall designate an individual to receive Company-supervisor training for the daily storage and checkout of Company-furnished respirators.
- I. Inspection
 - 1. Inspect respirator before use to ensure integrity and function.

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2. Inspect respirators stored for emergency or rescue use monthly.

J. Pre-requisites

1. A medical evaluation and physician's approval is required. The medical evaluation and physician's approval shall be in accordance with ANSI Z88.6, *American National Standard for Respiratory Protection-Respirator Use-Physical Qualifications for Personnel* and 29 CFR 1910.134 (e), *Medical Evaluation* and shall be updated annually.
2. The employee shall complete training that conforms to ANSI Z88.2(8), *Training*, and 29 CFR 1910.134(k) *Training and Information*, and the requirements listed:
 - a) Respirator protection and the criteria for selecting a particular type respirator and filter cartridge;
 - b) Agent for which the respirator was selected;
 - c) Engineering controls and when they are used;
 - d) Characterization;
 - e) Emergency situations;
 - f) Practical exercises to inspect, don, wear, and doff the respirator;
 - g) Clearing the respirator with a positive and negative pressure check;
 - h) Maintenance, storage, recycle, and disposal instructions;
 - i) Instructions for Company-furnished respirators; and
 - j) Regulatory requirements for respirator use.

NOTE: Update training annually, except where a particular substance requires training that is more frequent.

3. Seller employee shall receive a quantitative fit test in accordance with ANSI Z88.10, *Respirator Fit Test Methods* and 29 CFR 1910.134 (f), *Fit Testing*. Perform fit testing for initial fitting and update annually, except where a particular substance requires more frequent fit testing. Workers wearing Company-furnished respirators shall be fit tested by the Company.
4. Assigned protection factors are as noted in the following Table 1, *Respirator Assigned Protection Factors*.

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TABLE 1

RESPIRATOR ASSIGNED PROTECTION FACTORS

<u>RESPIRATOR TYPE</u>	<u>ASSIGNED PROTECTION FACTOR</u>
Tight-fitting, half-face, air-purifying	10
Tight-fitting, full-face, air-purifying	50
PAPR* with loose-fitting face piece (6 CFM minimum)	25
PAPR with half-face mask (4 CFM minimum)	50
PAPR – Hood or helmet (6 CFM minimum)	25 / 1000 **
Continuous flow atmosphere supplying airline Hood or helmet (including abrasive blasting helmets)	25 / 1000 **
PAPR with tight-fitting full-face mask (4 CFM Minimum)	1000
Air line, tight-fitting half-face mask, continuous flow	50
Air line, tight-fitting half-face mask, pressure demand	50
Air line, tight-fitting full-face mask, continuous flow	1000
Air line, tight-fitting full-face mask, pressure demand	1,000 ***
Air line with loose fitting hood continuous flow	25
Self-contained breathing apparatus, pressure demand	10,000 ***

NOTE: This is a guide and may not reflect the current NIOSH-assigned protection factors and other OSHA substance-specific standards. Whenever there is a conflict, the most stringent assigned protection factor shall be used.

*PAPR - Powered air-purifying respirator.

** The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an Assigned Protection Factor (APF) of 1000. Without such performance testing data, all other PAPRS and atmosphere supplying respirators with helmet or hood are to be treated as loose-fitting face piece respirators and receive an APF of 25.

*** Self-contained breathing apparatus, pressure demand mode, or air line, tight-fitting full-face mask, pressure demand mode with auxiliary self-contained air supply may be used for immediately dangerous to life or health (IDLH) atmospheres..

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K. Application

1. Single-use of respirators (one don and doff cycle) is required in radiological areas when prescribed by Company RADCON due to expected levels of airborne radioactivity during the work.
2. The Seller may obtain a waiver from the single-use of respirators from the Company. The Seller may then approve the reuse of respirators for workers provided good work practices are followed to ensure the unit remains serviceable and uncontaminated. Upon removal, the respirator wearer shall place the respirator in a clean plastic bag and store it in a secure location accessible only to the wearer. The Seller shall provide materials for cleaning and disinfecting the respirator to the wearer.
3. Seller shall monitor proper use of respirators.

12.36 Abrasive Blasting/Sand Blasting

- A. Seller shall submit an Abrasive/Sand Blasting Plan for Company approval 16 workdays (prior to abrasive blasting (using sand or other abrasive material). The Abrasive Blasting Plan shall include consideration of other methods of accomplishment, engineering controls, hazard analysis, and PPE. This Plan shall also address environmental protection controls unless specifically covered in the ES&H Plan

12.37 Fire Protection

- A. Seller shall comply with the DOE Order 420.1 requirements to minimize:

1. Occurrence of a fire or related event;
2. Fires that cause an unacceptable onsite or offsite release of hazardous or radiological material that could impact the health and safety of employees, the public, or the environment;
3. Unacceptable interruption of vital DOE programs as a result of a fire and related hazards;
4. Property loss from fire exceeding limits established by DOE; and
5. Fire damage to critical process controls and systems, structures and components

- B. The Seller shall meet the requirements of NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*, 29 CFR 1910, *Occupational Safety and Health Standards* and 29 CFR 1926, *Safety and Health Regulation for Construction*, as applicable to fire protection, explosion, Life Safety and Fire Protection Operations emergency response. As a minimum the fire prevention activities shall include the following:

1. Implementation and documentation of a weekly self-inspection program with records maintained. Any deficient conditions identified during self-inspections shall be documented and tracked until corrected; Submit records to the Company upon request.
2. Maintaining access to the site for emergency response vehicles;
3. Using noncombustible panels or flame-resistant tarpaulins or equivalent material approved by the Company for temporary enclosures;

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4. Controlling the use of ordinary combustible materials (e.g., wood, paper, plastics, etc.), including transient combustibles, such that their accumulation does not present an unacceptable increase in the fire risk to facilities or personnel. Combustible materials are limited to the quantity required for current needs and are appropriately separated from ignition sources;
5. Storage of Class I and II flammable/combustible liquids shall not exceed 60 gal within 50 ft of the structure. At point of final use, these liquids shall be kept in approved safety containers;
6. Collecting, storing and disposing of combustible waste and/or refuse to prevent unsafe conditions.
 - a) Maintain a housekeeping effort to avoid accumulation or storage of combustible waste inside or adjacent to buildings being constructed.
 - b) Small, office-type receptacles for combustible waste and receptacles of 40 gal. capacity and smaller need not be metal and do not require self-closing lids when used in non-construction activity areas.
 - c) UL listed/FM approved metal receptacles with self-closing lids are used for collection of flammable or combustible liquid soaked clothing, rags, or waste.
 - d) To facilitate the ALARA (as low as reasonably achievable) concept in rad-controlled areas, combustible waste (other than oil-soaked waste) may be collected in receptacles constructed of combustible materials (e.g., plastic bags supported by open metal frames).
7. Minimizing temporary storage of combustible construction or packing materials in unprotected structures under construction or alteration;
8. Maintaining a minimum distance of 30 feet for yard storage of combustible construction materials from the structure under construction or alteration;
9. Where automatic sprinkler protection is to be provided, placing it in service as soon as possible and prior to building occupancy;
10. Installing electrical wiring and equipment for light, heat or power purposed per the requirements of NFPA 70, *National Electrical Code*. The electrical distribution for each temporary structure shall be arranged such that the energy can be shut off by a single switch readily identified for that purpose;
11. Keeping electrical switchgear rooms free of transient combustibles and combustible storage;
12. Using plastic sheeting, blotter paper, etc. for contamination control listed by an approved NRTL for compliance with the requirements of NFPA 701, *Standard Methods of Fire Tests for Flame-Resistant Textiles and Films*;
13. Limiting the use of plastic pallets to products listed by an approved NRTL. In addition, use of plastic pallets shall be approved by the Company on a case-by-case basis and shall be in accordance with restrictions of the FHA and DSA, as applicable; and
14. Restricting use or storage of combustible pallets inside buildings in areas without automatic sprinkler protection, unless approved otherwise by the Company;
 - a) Idle combustible pallets inside buildings are not stacked more than 6 feet high. Each pile of no more than four stacks of pallets is separated from other pallet piles by at least 8 ft of clear space. (Note: Compliance is also required with the individual requirements for specific buildings which may be more restrictive.)

C Fire Barrier

1. Passive fire protection features shall not be disturbed without Company approval. Passive fire protection features include fire barriers (walls, floors, roofs, and ceilings), fire door and fire window assemblies, fire dampers, fire stops at penetrations, and structural fireproofing materials/assemblies.

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D Temporary Facilities

1. Temporary structures, partitions, or enclosures shall comply with the following:
 - a) Framing and/or scaffolding material shall be noncombustible, or shall consist of pressure treated fire retardant lumber listed by an approved NRTL, or shall consist of lumber painted with a clear intumescent paint listed by an approved NRTL, unless other approved by the Company.
 - b) Plastic sheeting material or fabric used for protective coverings, partitions or enclosures shall be fire retardant material listed by an approved NRTL for compliance with the requirements of NFPA 701, *Standard Methods of Fire Tests for Flame-Resistant Textiles and Films*.
 - c) Where automatic sprinkler protection, means of egress, and/or emergency lighting is impaired, notify the Company for determination on the need for an interim Compensatory Measure, and
 - d) All temporary structures or enclosures shall be provided with an appropriate number, type and size of portable fire extinguishers per the applicable requirements of NFPA 10, *Standard for Portable Fire Extinguishers*.
2. Requirements for Temporary Enclosures
 - a) Temporary enclosures erected within a facility shall not be supported by piping arrangements designed for automatic sprinkler systems and other fire protection equipment and do not interfere with or block their ability to function as designed;
 - b) Combustible materials are not stored within the enclosure;
 - c) Flammable and/or combustible liquids are kept to an absolute minimum and are stored in and dispensed from UL listed/FM approved safety cans;
 - d) Combustible materials that are used in the enclosure operations (e.g., rags, paper products, etc.) are removed from the enclosure immediately after use or transported and stored in approved metal containers with lids. Combustible waste is removed from the enclosure after each work shift;
 - e) Exits are kept unobstructed at all times; and
 - f) If enclosure is to be utilized as a Fabrication area with welding/hotwork, area must be permitted as a Fixed Weld Shop.
3. Requirements for Tents
 - a) Large tents (designed for use by 10 or more persons) shall be considered acceptable for temporary use where the tent fabric has been manufactured to comply with the flame retardant requirements of Title 19 of the State of California Code of Regulations. Each section of top and sidewall in large tents shall have a durable label permanently affixed to indicate that the fabric has been approved and listed by the California State Fire Marshal.
 - b) Tents erected for long term use (7 days or longer) shall require written approval by the Company and shall be manufactured and arranged to comply with the requirements identified in both NFPA 101, *Life Safety Code*, and the Standard Fire Prevention code, edition as adopted by the State of Tennessee. Tent fabric shall be manufactured to comply with the requirements for flame resistance as directed in NFPA 701, *Standard Methods for Fire Tests for Flame Propagation of Textiles and Films*.
 - c) Deviations from the above requirements shall be approved in writing by the Company.

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E Operational Fires

1. Operational Fires are restricted unless written approval is granted by the Y-12 Area Office of DOE/NNSA. The request for such approval shall be processed through the Company.
 - a) Operational Fires are considered fires in open pits; fires for burning debris resulting from land-clearing activities for new structures and road construction; and the open burning of non-contaminated, chemically untreated, wooden construction waste, wooden pallets, and cleared brush/stumps not associated with actions designed to mitigate potential wildland fires.

F Fire Patrols

1. Seller-furnished fire patrols shall be instituted, where required by the Company, to increase the level of protection within an area because of ongoing activities, or lack of impaired fire protection measures (passive or active).
2. Personnel performing fire patrol duties shall be designated and instructed in the following subjects.
 - a) Basic fire recognition and fire hazard identification;
 - b) Identification of Class A, B, C, and D type fires;
 - c) Use of the various types of portable fire extinguishers available; and
 - d) Proper procedure for sounding the fire alarm and notifying the facility building manager/operations manager.This is documented via completion of General Employee Training and the required reading on the Use of Portable Fire Extinguishers.
3. Fire patrol personnel shall have no other duties that would interfere with their ability to monitor the facility/area or immediately sound the alarm should a fire start. Fire Patrols shall ensure that all affected areas of the facility are checked for fires, including locked areas. Fire Patrols shall patrol their assigned area on a Company-designated frequency and maintain a log documenting time of completion of each scheduled route. Documentation of fire patrol activities shall be submitted to the Company.

G Storage in Flammable Liquid Cabinets

1. Seller's flammable liquid storage cabinets require Company authorization for quantity, type and location.
 - a) Not more than 120 gallons of Class I, II and III liquids shall be stored in a single cabinet. Of this total, not more than 60 gallons may be of Class I or II liquids;
2. Flammable liquid storage cabinets shall be grounded if flammable liquids are dispensed or transferred from a conductive container located in the cabinet to another conductive container. Bonding shall be provided between the containers;
3. When a flammable liquid cabinet is used indoors, the vent opening shall be sealed with a properly fitted bung(s). If a cabinet is vented, it must be vented directly to the outside, by a method approved for the individual cabinet by the Company.
4. Original plastic shipping containers are acceptable for storage of flammable and combustible liquids in an approved flammable liquid storage cabinet;
5. Aerosol containers with flammable/combustible propellants or contents shall be stored in flammable liquid cabinets, unless required for immediate use; and
6. Flammable liquid cabinets shall not be used for storage of liquid, solid, or gaseous oxidizing materials, organic peroxide formulation, flammable compressed gas cylinders, or explosives.

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H. Portable Heaters

1. Temporary heating equipment shall be listed by a NRTL and shall be installed, used, and maintained per the manufacturer's instructions and the following requirements;
 - a) Any deviation from the criteria of this section shall require prior written approval from the Company.
2. Requirements for Portable Electric Heaters
 - a) Portable electric heater's power cord shall be examined for defects prior to use. If a defect or evidence of equipment damage is identified, the heater shall be immediately removed from service;
 - b) Small portable electric heaters shall be directly plugged into an outlet. Heaters shall not be plugged into a power strip or connected via an extension cord. Seller shall shutoff the unit and disconnect the power cord when leaving unoccupied the space being heated;
 - c) Combustible materials, including the building structure, interior finish materials (excluding flooring), and building contents, shall be maintained at least 3 feet away from the face of a small heater; and
 - d) The use of a large portable electric heater (above 110/120 volt) inside a facility shall be permitted only after Company written approval is obtained. Company approval will document any special conditions related to heater use, including heater location, clearance to combustibles, and requirements for personnel attendance;
3. Requirements for Portable Heating Devices, Liquid and Gaseous-fired
 - a) Gasoline-fired heaters and solid-fuel fired heaters are prohibited;
 - b) Gaseous-fired heaters are certified by the American Gas Association (AGA), as applicable;
 - c) Fuel for approved liquid and gaseous-fired heaters is stored and handled per the requirements of NFPA 30, Flammable and Combustible Liquids Code, and NFPA 58, Liquefied Petroleum Gas Code;
 - d) Where patio style gaseous-fired heaters are used outdoors, a minimum of 3 feet of clearance is maintained between the front of the radiant panel and combustibles;
 - e) Fuel-fired heaters are located outside buildings with the heat being ducted inside, unless otherwise approved in writing by the Company;
 - f) Fuel-burning space heaters are shut off whenever the space is unattended;
 - g) A space being heated by a fuel-burning heater has sufficient fresh air both to support combustion and to maintain breathing air quality;
 - h) When used inside, fuel-burning space heaters are only permitted in sprinklered buildings, the only exception being noncombustible buildings with noncombustible contents. This type of heater is prohibited in a building where flammable or combustible liquids are used or stored; and
 - i) Indoor use of liquid (other than gasoline) or gaseous-fired heaters is permitted for temporary use under the following conditions:
 - 1) In buildings under construction or undergoing repairs or modifications;
 - 2) As temporary heat in noncombustible industrial occupancies;
 - 3) In other buildings for temporary emergency heating purposes, if necessary to prevent damage to the building or contents;
 - 4) Adequate ventilation is maintained both to ensure support of combustion and to maintain breathing air quality;
 - 5) A continuous fire watch is provided for the duration of the heater's use; and

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- 6) Combustible materials, including the building structure and interior finish materials, are maintained at least 5 feet away from the heat-producing sides of the heater.

I Hazardous Materials Transportation

1. Vehicles shall be bonded and grounded during loading and unloading of flammable liquids;
2. Vehicles used for transportation of flammable/combustible materials shall be designated as "No Smoking Areas";
3. Transportation vehicles shall be provided with at least one 20-B:C rated fire extinguisher. Two 10-B:C rated fire extinguishers or one 2A-20-B:C rated fire extinguisher may also be used.

J Tar Kettles for Roofing Activities

1. The tar kettle setup location requires Company approval, and shall be located no closer than 25 feet from any building or 10 feet from a required means of egress unless approved otherwise. Remove vegetation or other combustibles from within 10 ft. of the kettle (including beneath the unit) or cover with a fire retardant blanket or tarp material;
2. Compressed gas fuel cylinders for tar kettles shall be limited to a maximum capacity of 100 lb. each. Extra cylinders, other than the cylinder(s) in active use, shall be stored at least 50 feet from buildings. Total fuel supply for roofing operations, including extra cylinders, shall be limited to a one day supply at the Y-12 site. Gas cylinders shall be properly secured at all times;
3. Material laydown areas for work materials such as roofing felt and insulation board shall be located at least 25 feet from buildings except for a 1-day supply;
4. Demolition debris, including mops and cloths, shall be removed from the work area at the end of each day's work and stored at least 25 feet from buildings;
5. Roofing operations, including tar kettles, shall be under constant attendance while tar kettle burners are operating. The attendant shall be within 25 ft. of the tar kettle at all times and is knowledgeable of the operations, equipment, and its hazards;
6. Motorized vehicles shall be detached and relocated from the tar kettle prior to lighting the burners;
7. The appropriate number and type of portable fire extinguishers shall be in the work area and near the tar kettle. As a minimum, two approved fire extinguishers rated for 4A:40B:C shall be maintained within 25 ft. of the tar kettle and at least one such extinguisher is provided in the vicinity of the roof work area;
8. The vicinity of roofing operations shall be flagged, and exposed combustibles removed or protected;
9. Prior to beginning roofing activities, exit routes shall be verified to be accessible and each crew member shall be made aware of the means of egress available for use during an emergency, portable fire extinguishers shall be available and ready for use, and personnel are familiar with means to summon emergency equipment;
10. Materials susceptible to spontaneous ignition, such as oily rags and used mop heads, shall be stored in listed noncombustible containers when not in use;
11. In special cases, the Company may determine that roofing activities are "hot work." Seller's fire watchers may be required on the underside of combustible roofs, as defined by the Company;

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12. Tar kettles shall have a working visible temperature gauge that indicates the temperature of the material being heated. Where required for safe operation and in conformance with the vendor/manufacturer's instructions, temperature probes or sensors shall be in place and operational and check valves between the burner and the fuel source shall be in place; and
13. Where used, tar pumps and piping shall be properly supported and stabilized to prevent falling.

K Stock Storage Over 12 Feet High:

1. Prior to any stock storage in excess of 12 feet on pallets stacked in piles, or 12 feet on pallets placed on racks, or 15 feet without pallets, obtain written approval from the Company. Stockpiles of uncontainerized soil and aggregate material with a natural angle of repose are exempt.

12.38 Beryllium

- A. The Seller shall comply with 10 CFR 850 *Chronic Beryllium Disease Prevention Program*. Work will be performed under the Y-12 Chronic Beryllium Disease Prevention Program. Key elements of the Program include
 - medical surveillance,
 - hazard assessment,
 - establishing beryllium regulated area,
- B. The Seller shall submit for Company approval, an implementing Work Plan describing methods used to control exposures to PELs. Subsequent to the Work Plan approval, the Company will prepare and issue a *Beryllium Work Plan (BWP)* (UCN- 21324) to the Seller.
- C. The Seller employees performing beryllium work at Y-12 Complex are subject to Company approval and shall:
 1. Attend the Company-provided Beryllium Worker Training.
 2. Be enrolled in Seller provided medical surveillance program compliant with 10 CFR 850 *Chronic Beryllium Control Program*.
 3. Provide current respirator fit test and training records,
 4. Provide the following medical information:
medical history, physical exam results, chest X-ray written interpretation, beryllium lymphocyte proliferation test results, spirometry report, other pertinent lab studies (i.e. blood chemistry, CBC, etc.), Medical Program Clearance form (signed medical opinion).
- D. Seller shall provide temporary facilities for break room, restroom, change area, and shower activities. Setup temporary facilities in Company designated area as close as possible but outside the beryllium area.
- E. The Seller shall provide work related clothing, including modesty garments suitable for travel from the subcontractor's changing and showering facility to the point for donning the disposable coveralls at the boundary of the beryllium area. The Seller shall provide laundry service for its employee modesty garments, towels, wash cloths, etc.
 1. Each visit to the beryllium area requires a one piece disposable coverall with integral hood and booties, full face respirator, gloves, and disposable shoe covers. All items selected by the Seller shall be approved by Company.

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- a) The one piece disposable coveralls with integral hood and booties shall have welded seams,
 - b) Respirators shall be full face MSA, North, or 3M with P100 filters for one time use, unless approved otherwise by the Company. Respirators shall be discarded after each visit to the beryllium area.
 - c) Gloves shall consist of two pairs of disposable nitrile or latex gloves, and
 - d) Disposable shoe scuffs shall be worn over the Tyvek suits.
- Note: Leather gloves can be used over the nitrile or latex gloves during activities which could tear nitrile or latex gloves. These leather gloves can be left in the beryllium area and reused.
- F. Seller's equipment and tools require survey by the Company for both radiological and beryllium contamination prior to delivery to and exit from the work area. Seller is responsible for decontamination.
- G. Company will perform personnel and area monitoring which includes, TLDs, personnel air monitors, pumps, and breathing zone monitors. Company will provide results to the Seller. If airborne readings exceed the PEL, a review of the data will occur with the Seller for action. The review outcome will be to reduce exposure levels by improving work methods and techniques, ensuring cleaning methods are adequate, and/or increasing worker understanding of protective measures.
- H. The Seller shall package waste and maintain a complete inventory of all containerized waste. A *Waste Container Log* (UCN-21482), a detailed inventory, and a *Waste Container Preparation and Filling Instructions/Checklist* (UCN-21668 for a ST-90 Box, UCN-21670 for a Sealand Container, and UCN-21741 for a drum) shall be completed for each container.
1. The Company will supply containers and labels needed for the waste removed.
 - a) The beryllium label "Notice of Release to General Public on Non-Beryllium Area" shall be attached to the outside of containers, plastic bags, or equipment and other items when smears are $> \text{ or } = 0.01\text{ug}/100\text{cm}^2$ and $< 0.2\text{ug}/100\text{cm}^2$. Surface contamination shall be $< 0.2\text{ug}/100\text{cm}^2$ for free release to the public and general plant areas.
 - b) The beryllium label "Danger, Contains Beryllium" shall be attached to the outside of containers and plastic bags with equipment and other labels when: (1) smear results are $> \text{ or } = 0.2\text{ug}/100\text{cm}^2$, (2) contamination levels are unknown, (3) waiting for smear results, and (4) are beryllium-containing materials.
 2. Seller shall secure unattended containers which contain waste to prevent unauthorized dumping of material into the waste container while in their custody. Seller is responsible for verification of waste materials placed in containers and double wrapped or bagged items removed from the work area.
 3. The Company RADCON will survey the waste material to determine radiological conditions before the Seller begins packaging waste for transportation and disposal.
 4. Bagged items [suitable for disposal by bagging] or personnel protective equipment [PPE doffed as waste after every entry into the beryllium area], shall be packaged by the Seller in a minimum of 0.006 inch thick plastic bag which has been evacuated using a HEPA portable vacuum and "J" tied using duct tape. The first bag is then placed into a second 0.006 inch thick, clean plastic bag at the boundary. The second bag will also be evacuated and "J" tied. Both bags shall have beryllium labels applied.
 5. Beryllium-labeled containers require Company authorization prior to removal from the beryllium buffer area.

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13. SECURITY

13.1 General

A. Individuals requiring access to Y-12 shall provide a valid government issued photo identification and an original proof of United States citizenship. Valid forms of proof of United States citizenship are:

1. Birth certificate (certified copy issued by city/county/state government with raised and/or colored official seal – hospital records are not acceptable);
2. Certificate of Naturalization [Immigration and Naturalization Services (INS) Form N-550 or N-570];
3. Certificate of United States Citizenship issued by Immigration and Naturalization Services (INS Form N-560 or N-561);
4. Report of Birth Abroad of a Citizen of the United States of America (Form FS-240);
5. United States passport, active or expired (provided the expired passport photo still represents current likeness of individual).

NOTE: **Visitor access does not require proof of citizenship.** Access to Y-12 will be denied or delayed for others requesting photo badge until proof of citizenship is provided. Access for foreign nationals shall be approved through the Y-12 Foreign National Visit and Assignment Process.

B If delivery, service, or vendor personnel do not possess requisite proof of citizenship, the Company may authorize restricted access with an escort. Seller shall provide an escort to accompany them while at Y-12. Such escorts shall be appropriately cleared, photo badged, complete a brief *Overview of Responsibilities*, and be dedicated solely to escort duties.

C All personnel with access to subcontract drawings and specifications shall be U.S. citizens unless the Company grants specific approval for foreign nationals in writing.

D **All packages briefcases, bags, etc. brought into the Y-12 Complex shall be marked with owners' name, organization/company and phone number. They must not be left unattended. Prohibited, controlled, restricted and unauthorized items are identified in the following Table.**

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Table of Prohibited, Controlled, Restricted, and Unauthorized Items
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Prohibited Articles	Property Protection Areas	Limited Areas	Protected Areas/MAAs/ Exclusion areas
1. Dangerous weapons Includes any instrument or materials likely to produce substantial injury to persons or damage to persons or property	Protective Force, Federal Office, Law Enforcement or military issued weapons only. Federal Officer, Law Enforcement and military issued weapons require prior NNSA AMSS approval.	Protective Force, Federal Office or Law Enforcement weapons only. Federal Officer or Law Enforcement issued weapons require prior NNSA AMSS approval.	Same as Limited Areas
2. Other Weapons For example: Pellet guns, switchblade knives, knives with blades exceeding 3 inches in length, blackjacks, brass knuckles, archery equipment, stun guns, mace, and pepper spray	Knives exceeding 3 inches in length that are necessary in performance of duty may be authorized by the AMSS and require Special Authorization, otherwise not allowed.	Same as Property Protection Areas	Not allowed.
3. Explosives	Privately owned explosives are not allowed. Delivery of Government owned explosives must be approved through NNSA AMSS	Not allowed	Mission essential only with prior coordination through NNSA AMSS
4. Any item prohibited by law	Not allowed	Not allowed	Not allowed
5. Controlled Substances	Illegal drugs and associated paraphernalia are not allowed	Not allowed	Not allowed
6. Ammunitions	Protective Force or mission essential ammunitions only with prior NNSA AMSS coordination. Privately owned ammunitions are not allowed.	Same as Property Protection Areas.	Same as Property Protection Areas.
7. Incendiary Devices	A limited number of road flares may be considered part of a vehicles emergency inventory.	Not allowed except in government vehicles.	Not allowed except in government vehicles.
8. Cell phones	Use and presence of Government issued cell phones are allowed. Privately owned cell phones are not allowed inside the PPA except when secured in vehicle. Personal cell phones may not be used inside buildings within the 229 boundary, but may be used in offsite facilities if there are no limited or exclusion areas within the building.	Government issued cell phones may be present; however use is not allowed and batteries must be removed. Privately owned cell phones not allowed. All cell phones prohibited in classified conference rooms.	Government issued cell phones may be present; however use is not allowed and batteries must be removed. Privately owned cell phones not allowed. All cell phones prohibited in classified conference rooms.

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Table of Prohibited, Controlled, Restricted, and Unauthorized Items
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Controlled Articles	Property Protection Areas	Limited Areas	Protected Area/MAAs/Exclusion Areas
9. Cameras	Government cameras by special permit authorization. Privately owned cameras in personal vehicles may not be used.	Government cameras by special permit authorization.	Government cameras by special permit authorization.
10. PDAs, two-way radios and two-way pagers	Government issued two-way radios, PDAs (e.g. BlackBerry, Trio) and pagers are allowed. Privately owned two-way radios, two way pagers, are not allowed. Non-government issued Blackberry or PDA is authorized in a PPA where the building is located outside the Y-12 security fence and there is no limited, exclusion, or protected area within the same building.	Government issued pagers and two way radios are allowed. Government issued PDAs (e.g. BlackBerry, Trio) are allowed with battery out, use is prohibited unless authorized via Telecommunications Proposal. Personal one way pagers are allowed.	Same as Limited Areas.
11. Computers and Associated Media	Government computers are allowed. Privately owned computers are not allowed. Personally owned electronic media or other non-government media (except for commercially produced music cds or media that is part of a Y-12 contractual relationship) and other storage devices (e.g. thumb drives, MP3s) are not allowed. Y-12 data cannot be stored on non-government media. Storage of these devices in personal vehicles is allowed.	Same as Property Protection Areas.	Same as Property Protection Areas
12. Recorders.	By special authorization only. Privately owned recorders are not allowed.	Same as Property Protection Areas	Same as Property Protection Areas with prior AMSS approval
13. Binoculars	By Special Authorization only. Privately owned binoculars are not allowed.	Same as Property Protection Areas.	Same as Property Protection Areas.
14. Optical Devices.	By Special Authorization only. Privately owned optical devices are not allowed.	Same as Property Protection Areas.	Same as Property Protection Areas.
15. Alcohol	Alcohol is not allowed.	Not allowed	Not allowed.
16. Chemical irritants	Limited to less than 2 ounces in size.	Same as Property Protection Areas	Not allowed
17. Pets and Animals	Not allowed	Not allowed	Not allowed.

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- E Use of Business Class Radios (Not issued by Company) requires completion of a *Telecommunication Proposal* (UCN-16020A) and Company and DOE approval before use at Y-12.
1. Seller shall assign a qualified individual to monitor the business class radios during work activity and notify the PSS in case of an emergency.
 2. Seller shall submit a valid Federal Communication Commission license to operate in this geographical area to the Company for information.
- F Non-DOE issued and unapproved Seller cell phones within the boundaries of Y-12 shall be turned-off and left in the private vehicle parked in General Plant areas or placed in Company-designated temporary storage.
1. Cell phones with camera or web enabled recording capabilities are prohibited.
- G Cell phones are only allowed in the General Plant and Property Protection Area and require completion of a *Telecommunications Proposal* and Company and DOE approval before use at Y-12.
1. Cordless phones are prohibited.
 2. Use of Seller's cell phones are permitted without prior approval only on Bear Creek Road and designated public parking areas outside of the Y-12 security fence.
 3. Violators of the cell phone policies are subject to disciplinary action, which may include denied access to the site and loss of badge.
- H Any device with infrared or wireless capability, requires completing of *Telecommunication Proposal* and Company and DOE approval for use before brought to Y-12. Devices such as surveying equipment and ground penetration devices which utilize wireless capabilities require an approved *Telecommunications Proposal* prior to being brought on site at Y-12.
- J Request Company approval two (2) workdays prior to needing Portal access during off-shift hours.
- K All Seller vehicles and personnel are subject to a search when entering or exiting Y-12. Cargo configuration for trailers entering Y-12 shall conform to Y-12 Security vehicle-loading requirements (refer to the Company Procurement Public Web Site).
- L Seller shall not bring Seller owned computing devices (laptops, desktops, PDA's, printers, etc) into Y-12 without prior written approval from the Company. Computing equipment must be provided by Y-12 with network connections to Y-12 provided by Y-12 at Seller expense. Seller business operations on Y-12 computers and networks are limited to the minimum required to support the subcontract. Seller communications and activities on computers will be monitored.
- M Seller computing equipment specific to an individual task (such as equipment calibration, system certification, etc.) requires Company approval prior to being brought on site. Seller's equipment is subject to review prior to entering the site and prior to leaving the site. Equipment must remain in the possession of a B&W Y-12 Q-cleared employee if the equipment enters a Limited Security Area, Exclusion Area, Protected Area, or Material Access Area. Removal of equipment from the site in any case requires a separate approval for re-admittance of the equipment to the site.

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13.2 Site Access

A. General Plant Area Access

1. General Plant Area – Areas and buildings located outside the Property Protected Area but inside the Y-12 security portals manned by Security Police Officers. The General Plant Area is between Portals 20 (West) and 23 (East) and between the north and south 229 Boundary lines.
 - a) Workers accessing the General Plant Area do not require a security clearance.
 - b) Portal 20 maintains a restricted time schedule; therefore, access and egress from the west end of Bear Creek Road requires coordination through the STR for use outside normal construction working hours.
2. Company STR office buildings are off Bear Creek Road on Old Bear Creek Road.
3. For access, the Seller shall complete and submit a Homeland Security Presidential Directive (HSPD-12) Badge Request form to the STR to obtain photo badge for Seller's employees and lower-tier subcontractors.
 - a) Request for visitor badge, Bear Creek Road and vehicle passes shall be submitted to the STR using the Subcontractor Request for Y-12 National Security Complex Temporary Access and Vehicle Pass form.
 - b) Seller shall allow two (2) workdays notice for badge request processing.
 - c) Seller's photo badges require validation quarterly. The Seller is to provide the STR a list of names with badge numbers for validation. Failure to submit may result in restricted access.
4. Pick up for photo badges and temporary passes or visitor badges is at New Hope Visitors Center on Scarboro Road in Oak Ridge, Monday – Thursday, 6:30AM – 4:00PM. Photo identification (e.g. driver license) and original proof of US Citizenship must be presented to pick-up badge.
5. General Employee Training (GET) and a Security Briefing provided by the Company are required for all Seller personnel requesting a photo badge. No specific training is required for a temporary Bear Creek Road pass.
6. Seller personnel shall present their badge or temporary pass to Security when entering Y-12. Badges shall be prominently displayed above the waist on outermost clothing at all times while at Y-12. Badges shall be removed from view upon exiting Y-12 and shall be maintained in a secure place.
7. All photo badges issued to the Seller are government property. The Seller shall notify the Company and return photo badges to the STR within one (1) workday of expiration of the Subcontract, termination of the employee, or when access to Y-12 is no longer needed.
 - a) Persons holding L or Q clearances are required to attend a 30-minute debriefing. Debriefings shall be scheduled through the STR three (3) workdays in advance of requirement.
 - b) Persons holding L or Q clearances are subject to random drug tests within 1.5 hours of notification of the individual by the Company. Individual must report to Y-12 Medical within 1.5 hours of notification. Failure to report for testing within the required time will be treated as a positive result.
8. Seller shall brief their personnel, vendors, suppliers, and delivery transporters on the presence of vehicle height restrictors at both entrances to Y-12 on Bear Creek Road. Seller is responsible for damages resulting from their personnel or their lower-tier subcontractor personnel accidentally striking the vehicle height restrictors.

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B. Limited Security Area (LSA) Access

1. Limited Security Area (LSA) – Security areas in which an individual’s mere presence may result in access to classified matter. Personnel clearance requirements are posted at the entrance to the LSA.
2. Seller personnel requiring entry to the LSA shall submit their personal information (name, badge number, and date of birth) to the STR a minimum of two (2) workdays prior to requirement.
 - a) Seller’s personnel not meeting the clearance requirements of the LSA require Q-cleared escort and area posting that identifies uncleared personnel are in the area.
3. All personal items shall be placed in a clear plastic bag, which allows a thorough inspection of the items. Lunch bags and enclosed containers will require opening for inspection.
4. Uncleared drivers will require a 1:1 Q-cleared escort for deliveries. Only the uncleared driver with escort can enter and exit with the vehicle. Seller shall provide a vehicle for the escort if escort cannot ride in the delivery vehicle.
5. Lock all vehicles, equipment, and toolboxes when unattended and at the end of each workday.
6. Do not leave keys in the ignition of unattended vehicles and equipment. Keys may be confiscated by Security resulting in work delays. Such delays are at the expense of the Seller.
7. Coordinate access to all LSAs with the Company STR.

C. Exclusion Area (EA) Access

1. Exclusion Area (EA) – Security areas designated for the protection of classified matter and special nuclear materials.
2. Seller’s Q-cleared personnel requiring entry to the EA shall submit their personal information (name, badge number, and date of birth) to the STR a minimum of four (4) workdays prior to need to enter. An Escort Package is required for personnel without a Q-clearance.
3. All personal items shall be placed in a clear plastic bag, which allows a thorough inspection of the items. Lunch bags and enclosed containers will require opening for inspection.
4. Entry prior to 7:00 a.m. by escorted uncleared workers is not authorized unless the Company grants prior approval.
5. All vehicles and their contents are subject to a comprehensive search by Security.
6. Allow up to one hour for processing of deliveries into the EA.
7. Seller delivery trucks and other service trucks shall enter the EA through Portal 13 and have a valid vehicle pass. Supplies must be loaded in a manner to allow inspection of all contents. Loading shall allow a clear aisle for a walking inspection around the materials. Deliveries not loaded to allow inspection shall be off-loaded for inspection at the Seller’s expense.
8. Uncleared drivers will require a 1:1 Q-cleared escort for deliveries. Only the uncleared driver with escort can enter and exit with the vehicle. Seller shall provide a vehicle for the escort if escort cannot ride in the delivery vehicle.
9. Lock all vehicles, equipment, and toolboxes when unattended and at the end of each workday.
10. Do not leave keys in the ignition of unattended vehicles and equipment. Keys may be confiscated by Security resulting in work delays. Such delays are at the expense of the Seller.

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11. Uncleared heavy equipment operators shall be under continual surveillance of a Q-cleared escort. Heavy equipment shall not be staged or used within 50 feet of the security fence without prior Company approval. Special procedures shall be followed when using boom type equipment within 50 feet of the security fence.
12. While in the EA, breaks and lunches shall be held at the work area. Seller shall provide a suitable area for breaks and lunch and portable restroom facilities.

D. Property Protection Area (PPA) Access

1. Property Protection Area (PPA) – Area established to protect government property against damage, destruction, or theft.
2. Access to the PPA requires a photo badge or a temporary visitor badge.
3. For access, the Seller shall complete and submit a Subcontractor Request for Y-12 National Security Complex Access and Badge form to STR for badges and/or passes. Seller shall allow two (2) workdays notice for badge request processing.
4. Vehicle access to the PPA requires a vehicle pass. The Seller shall complete and submit a Subcontractor Request for Y-12 National Security Complex Vehicle Pass form to STR a minimum of two (2) workdays prior to the requirement.
5. Insurance certificates for vehicles shall be provided to the Company upon request.
6. Other Vehicle Requirements:
 - a) Seller's vehicles shall prominently display two Seller identification signs (one on each front door).
 - b) Seller's vehicles and equipment are subject to a security search when entering and exiting Y-12. Containers, boxes, and compartments shall be fully accessible. Expect 20 minutes on average for inspection.
 - c) Vehicle operators and passengers shall comply with all State of Tennessee Motor Vehicle Laws and Regulations including, but not limited to, the use of seat belts.
 - d) The Company will designate Seller vehicle parking. Seller shall furnish on-site transportation of their personnel within the PPA.
7. A K-9 security checkpoint is located at the east entrance lot north of Portal 13. All deliveries are required to enter the K-9 inspection area. Arrange cargo so that K-9s and Security personnel can access the loads for inspection. Expect 30 minutes on average for inspection. Large loads may require unloading and reloading for inspection. After inspection, delivery vehicles will enter Y-12 along routes designated by the Company. Deliveries through the West End on Bear Creek Road **require Company authorization and shall** be scheduled through the STR a minimum of 1 workday in advance.
8. Maintain a 20-foot wide clear zone along security fences. If work is to be performed within the 20-foot clear zone, provide two (2) workdays advance notice and receive approval from the Company.

E. Protected Area (PA) Access

1. Protected Area (PA) – Area within the PPA that protects special material requiring Q-clearance for entry or Q-cleared escorts for uncleared workers.
2. Seller's Q-cleared personnel requiring entry to the PA shall submit their personal information (name, badge number, and date of birth) to the STR a minimum of two (2) workdays prior to requirement. An Escort Agreement is required for personnel without a Q-clearance. All personnel entering the PA must have set up a PIN and biometrics at the Visitor's Center prior to entry.

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3. Allow 30 minutes on average per person or escorted group (up to five uncleared) for each entry into the PA and 20 minutes on average per person or escorted group for each exit from the PA. Each person will receive a detailed search when entering and exiting the PA. Seller shall utilize Portal 33 for PA entry and exit during normal work hours, unless Company STR authorizes another portal.
4. Only hand carried items that will clear the metal detector or that can be visually inspected are allowed. Seller shall require that personnel minimize personal items carried into the PA. Items such as coins, keys, billfolds, and foil wrappers can cause delays at the entry portal. All personal items shall be placed in a clear plastic bag, which allows a thorough inspection of the items. Lunch bags and enclosed containers will require opening for inspection. Items that cannot clear the metal detector and/or sealed (not allowing internal inspection) are not authorized through the entrance Portal. Personnel will be allowed up to three attempts to clear the portal before being sent to the back of the line. Company is not responsible for delays caused by Seller's personnel unable to clear the metal detector.
5. Entry prior to 7:00 a.m. by escorted uncleared workers is not authorized unless the Company grants prior approval.
6. To minimize the number of vehicle entries the Seller shall arrange transportation (shuttle van) to remain within the PA as required for its workers. Deliveries shall be combined at the Seller lay-down yard or other suitable area outside the PA to minimize entries. Emergency entries must be arranged through the STR. The Company does not guarantee Seller entries in excess of one entry per workday.
7. All vehicles and their contents are subject to a comprehensive search by Security.
8. Allow up to one hour for processing of deliveries into the PA.
9. Seller delivery trucks and other service trucks shall enter the PA through Portal 33. Supplies shall be loaded in a manner to allow inspection of all contents. Loading shall allow a clear aisle for a walking inspection around the materials. Deliveries not loaded to allow inspection shall be off-loaded for inspection at the Seller's expense.
10. Uncleared drivers will require a 1:1 Q-cleared escort for deliveries. Only the uncleared driver with escort can enter and exit with the vehicle. Seller shall provide a vehicle for the escort if escort cannot ride in the delivery vehicle.
11. For dump trucks hauling debris out of the PA, special requirements may be necessary due to the presence of radiation monitors. Coordinate the hauling of debris through the STR two (2) workdays prior to need. Delivery of concrete and gravel into PA shall be coordinated through the STR a minimum of two (2) workdays prior to required date.
12. Water trucks shall enter empty and be filled at the designated fill point within the PA. Provide a (3) three day notice prior to required entry.
13. Bed-mounted fuel tanks are prohibited in the PA.
14. Seller shall allow for eight crew hours lost time per month for security lock downs and other emergency drills and notifications (A crew hour is defined as the total of all hours from workers and equipment within the PA). During a lock down work inside a building or outside within a controlled work area may continue unless directed to stop by Security. Work outside, other than a controlled work area, shall cease and await instruction from Security. Workers in transit should stop and obey all instructions from Security.
15. Lock all vehicles, equipment, and toolboxes when unattended and at the end of each workday.
16. Do not leave keys in the ignition of unattended vehicles and equipment. Keys may be confiscated by Security resulting in work delays. Such delays are at the expense of the Seller.

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17. Uncleared heavy equipment operators shall be under continual surveillance of a Q-cleared escort. Heavy equipment shall not be staged or used within 50 feet of the security fence without prior Company approval. Special Company process shall be followed when using boom type equipment within 50 feet of the security fence.
18. Minimize deliveries into and out of the PA. Special arrangements can be made to expedite entry of time sensitive or other special materials if the Seller makes the required arrangement through the STR a minimum of two (2) workdays prior to need.
19. While in the PA, breaks and lunches shall be held at the work area. Seller shall provide a suitable area for breaks and lunch and portable restroom facilities.
20. Any Seller-provided trailer in the PA shall be setup and ready for use (including power) four (4) workdays prior to use.
21. Maintain a 50-foot wide clear zone along security fences. If work is to be performed within the 50-foot clear zone, provide three (3) workdays advance notice and receive approval from the Company.

13.3 Escort Requirements

- A. This section includes specific requirements for Seller-furnished escorts to accompany uncleared construction workers in the PA, EA, and Limited Security Areas.
- B. All escorts shall hold a current DOE Q-clearance and be badged at Y-12. Clearances held at other DOE sites may be extended to Y-12.
- C. Copies of the handbook entitled *Handbook for Escorting Uncleared Construction Workers* will be provided to the Seller upon request to the STR. Each escort shall be provided a copy of the "Handbook" and return a receipt acknowledgement to the STR that the escort has read and understands the requirements addressed in the "Handbook." The "Handbook" is stamped "Official Use Only" and shall be kept in a secure location when not in use.
- D. Perform periodic checks of escort program and solicit feedback from the Company to incorporate lessons learned. Incorporate escort operations into Work Plan, AHA, and project-specific ES&H Plan, as required, to integrate the escort as a part of the overall work.
- E. Provide sufficient escorts for the performance of the work. Seller-provided escorts shall have no other job responsibilities. Unless otherwise specified in the Escort Package (EP) or Security Plan, provide one Q-cleared escort for a maximum of five uncleared workers. The escort shall maintain eyesight on the uncleared workers. Splitting the crew (five) of uncleared workers into visually separated areas would require additional escorts or specific Company approval. Examples of crew escort requirements are:
 1. If any uncleared worker in the group exits the PA, then all shall exit unless an additional escort accompanies the uncleared worker to the exit portal.
 2. An uncleared superintendent, ES&H Representative, or other supervision moving around the work area shall be in visible proximity to their assigned escort. If working and moving about individually, each requires an assigned escort.
 3. An uncleared photo badged truck driver hauling materials into and out of the PA shall be escorted from the PA entrance Portal to the work area and back to the exit Portal.
 4. One assigned escort can escort an uncleared heavy equipment operator, an uncleared spotter, and an uncleared laborer providing dust suppression as long as they are all in visible proximity to their escort.

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5. An uncleared worker who leaves his crew to retrieve tools or equipment requires escorting by another assigned escort if he leaves visual proximity of the crew escort.
 6. Crews with both Q-cleared and uncleared workers can be used but the uncleared workers shall be escorted by an assigned escort who has no other duties.
- F. In addition to the training requirements for Seller personnel, Seller escorts shall complete Y-12 Plant Escort Training.
- G. Seller escorts shall comply with Subcontract requirements including, but not limited to, ES&H, RadCon, and respiratory protection. Escorts shall have completed all training as required by the AHA, work permits, and other instructions.
- H. Seller escorts shall read, understand, and comply with the *Handbook for Escorting Uncleared Construction Workers*. Each escort shall maintain a copy of the Handbook and Escort Agreement on their person at all times while performing escort duties.
- I. Immediately after award, Seller shall participate in planning activities and provide a proposed *Escort Package* (EP) to the STR for review. Such activities could include a walk-down of the work area access route, meeting(s) with Company Physical Security Officials (PSO) and Facility Operation Manager (FOM) (if applicable), initiation of a draft EP and a work-specific Security Plan (if applicable) for review by the STR, FOM and PSO. Allow twelve (12) workdays for approval of the EP upon submission to the STR.
- J. Seller shall ensure the accuracy and the completeness of information on the EP. Information about the work area, route of ingress and egress, and all other information must be complete in specific detail. The STR will assist the Seller in the completion of the EA, but the Seller retains responsibility for the information provided. Q-cleared workers shall only be listed on the EP if they are serving as an escort. Delays resulting from the Seller providing inaccurate information are the responsibility of the Seller.
- K. Review accuracy of the EPs on a daily basis. Immediately submit to the STR any required changes to a standing escort agreement, including all personnel changes. Allow up to eight (8) workdays for approval of a revised EP.
- L. In the event information in the *Handbook for Escorting Uncleared Construction Workers* conflicts with information in the EP and/or Security Plan, the information in the EP or Security Plan takes precedence.
- M. Unless otherwise authorized in the EP or Security Plan, Seller escort(s) shall maintain visible observation of their uncleared personnel at all times.
- N. Seller shall develop a Security Plan, when required, with detailed directions for escort operations. Security Plan shall be approved by the Company and attached to the EP.
- O. Escort Operations
1. Upon receipt of an approved EP, Seller shall perform the following:
 - a) Verify all information is accurate.
 - b) Provide each escort a copy of the EP and a handbook (*Handbook for Escorting Uncleared Construction Workers*). The EP must include the Escort Agreement Organization (EAO) approval cover sheet (e-mail).
 - c) Hold a pre-job brief to include a walk down of the ingress and egress route.

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- d) Ensure each escort understands their responsibilities.
 - e) Seller escorts and uncleared workers shall be identified as such by utilizing a visible method as detailed in the handbook, EP, or as otherwise approved by the Company.
 - f) Request through the STR a Company “green card” for each uncleared worker listed on the EP. Green cards are required unless waived by the Company.
2. For LSA, EA, and PA access comply with the following:
- a) Escort shall brief uncleared workers on prohibited items and ensure they do not take such items to the entry portal. Cell Phones, two-way pagers, Seller radios, recording devices, and Personal Data Assistants (PDA) are prohibited in the PA. Recordable media is not permitted in the PA. This would include writeable CDs, music CDs, floppy disc, computer drives of any type, etc.
 - b) When escorting with a one Q-cleared to five uncleared ratio, escort will pick up a security radio at a location designated by the Company.
 - c) Entry prior to 7:00AM is not authorized unless coordinated in advance by the STR.
- P. At work completion, Seller shall complete the disposition of all matters related to Seller escort personnel including return of photo badges and “green cards,” return of dosimeters, radios and other Company-furnished items.
- Q. Failure of the Seller’s escorts to comply with escorting requirements could result in a security infraction issued to an escort. Depending on the security infraction, the escort could be barred from Y-12 while clearance status is evaluated, and could result in the permanent loss of their Q-clearance.

13.4 Information Security

- A. Personnel issued Unclassified Controlled Nuclear Information (UCNI) and Official Use Only (OUO) shall complete the requisite briefing provided by the STR, a Y-12 Information Security Officer, or designee.
- B. Seller personnel completing the required briefing may issue UCNI/OUO documents to lower tier subcontractors and/or suppliers providing such parties are given the same requisite briefing by the Seller. The Seller shall be responsible for the control of the UCNI and OUO documents and is not relieved of this obligation for documents provided to others.
- C. Seller is responsible for:
 - 1. Protect UCNI and OUO information to which they have access or custody.
 - 2. No UCNI or OUO information is released without review for release restrictions.
 - 3. Provisions of these requirements flow down to lower-tier subcontractors and suppliers.
 - 4. Access to UCNI and OUO information is granted only to persons with a need-to-know.
 - 5. Owners of data are responsible for recognizing the sensitivity of information before it is used, processed, or stored on an information system and for ensuring the system is certified for the information.
 - 6. Notifications of security breaches or deviations from expectations shall be reported to the STR. The Seller shall cooperate with the Construction Division Security Officer (DSO) investigation. The Seller is responsible for costs incurred because of Incidents of Security Concerns (IOSC). Cost include those incurred by the Seller and may include Company incurred costs.

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D. Definitions:

1. Access authorization—An administrative determination that an individual is eligible for access to unclassified sensitive matter.
2. Automated Information System (AIS)—An assembly of computer equipment, facilities, personnel, software, and procedures configured for sorting, calculating, computing, summarizing, storing, and retrieving data and information.
3. AIS Equipment—All computer equipment, peripherals, software, data, networks, and facilities.
4. AIS security incident—A failure to comply with AIS security requirements, which results in attempted, suspected, or actual compromise of unclassified sensitive information.
5. AIS Security Plan—A document that describes the protection of sensitive AIS against unauthorized disclosure, modification, or destruction of the system or data, and denial of service to process data, including physical, personnel, administrative, telecommunications, hardware, and software security features.
6. AIS storage media—A means used by AIS systems to convey or store information.
7. Computer Security Officer (CSO)—Seller person(s) responsible for the implementation of their AIS Security Plan.
8. Information Security (INFOSEC)—A system of administrative policies and procedures for identifying, controlling, and protecting from unauthorized disclosure, information for which protection has been authorized.
9. Information Security Officer (ISO)—Seller person(s) responsible for the implementation of requirements to avoid unauthorized disclosure of information.
10. Infraction—A knowing, willful, or negligent action contrary to the requirements for information security.
11. Label—The marking of an item of information to reflect the sensitive information (e.g., UCNI, OOU).
12. Need-to-Know—A determination by an authorized person having responsibility for sensitive information that a prospective recipient requires access to information in order to perform official, approved, authorized tasks or services.
13. Official Use Only (OOU)—Unclassified sensitive, but otherwise uncontrolled, information which may be exempt from public release under the Freedom of Information Act (FOIA).
14. Security plan—A document that describes the protection of the facility and its assets.
15. Unclassified—The designation for information, a document, or material that has been determined not to be classified or that has been declassified by proper authority.
16. Unclassified Controlled Nuclear Information (UCNI)—certain unclassified government information prohibited from unauthorized dissemination.
17. Personally Identifiable Information (PII) – Any information collected or maintained by Y-12 about an individual, including, but not limited to, education, financial transactions, medical history and criminal or employment history, and information that can be used to distinguish or trace an individual's identity such as an individual's name in conjunction with Social Security Number, date and place of birth, mother's maiden name, biometric data, and including any other personal information that is linked or linkable to a specific individual.

E. Regulatory requirements

1. The following regulatory requirements are incorporated by reference:
 - a) Atomic Energy Act (Sects. 142 & 148)
 - b) Freedom of Information Act

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- c) 10 CFR 1017, Identifications and Protection of Unclassified Controlled Nuclear Information.
- d) DOE O 470.1, Safeguards and Security Program
- e) DOE O 471.1, Identification and Protection of Unclassified Controlled Nuclear Information
- f) DOE O 206.1, Department of Energy Privacy Program
- g) DOE/NNSA NAP 14.2-C, NNSA certification and Accreditation (C&A) Process for Information Systems

F. Training requirements

- 1. Seller personnel responsible for safeguarding UCNI information shall be briefed by the Company on proper handling and storage requirements.
- 2. The Seller shall be responsible for briefing additional personnel who will have access to UCNI and OUO information on the proper handling and storage.

G. Document & Media Requirements

- 1. All communications between the Seller and the Company, or between the Seller and its lower-tier subcontractors/suppliers conveying UCNI labeled information, shall be by approved carriers (e.g., Express, Certified, or Registered Mail) or a commercial carrier that uses a signature service.
- 2. No electronic transmissions (e.g., fax, computer) of UCNI information will be allowed unless formally pre-approved by the Company
- 3. Fax transmissions of OUO should be protected by encryption. Unencrypted fax transmissions are permissible provided:
 - a) It is preceded by a telephone call to the recipient so that he or she can control the document when it is received or respond to the sender that the facsimile was not received as expected, and
 - b) The sender is assured by the recipient that the facsimile is, and will be, only in the possession of an individual who has the proper need-to-know and is a U.S. citizen. Although not required, it is encouraged that the sender obtains a positive response from the recipient that the fax was received as expected.
- 4. All computers at Seller facilities shall be certified by the Company to process UCNI and OUO information and shall operate in compliance with a Company-approved AIS Security Plan. The Company shall approve the area where the AIS equipment is located. Seller shall submit a request for a certification inspection by the Company.
- 5. If Seller desires to establish a secure document room, submit a request to the Company for a certification inspection. Once the room is certified, UCNI and OUO documents may be displayed as long as the room is locked when unattended.
- 6. OUO and UCNI documents shall be kept in a secure place at all times. The Seller shall be responsible for control of documents issued to them by the Company. Further issuance of documents to lower tier subcontractors and/or suppliers does not relieve the Seller of this responsibility.
- 7. If required, the Seller shall install encryption software in compliance with Company instructions.
- 8. Computer systems and media containing UCNI and OUO information at the Seller's facility and at lower-tier subcontractors' facilities shall be dedicated to this work unless otherwise approved by the Company. UCNI and OUO information requires removable media unless prior approval by the Company is obtained through a written AIS Security Plan. All media, including CDs, DVDs, thumb-drives, hard-drives, etc., shall be encrypted utilizing Company approved encryption methods in compliance with FIPS 140.2 Level 1 or greater standards.

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9. The Company will certify the AIS equipment and its' physical location at the Seller facility and at associated lower-tier subcontractors' facilities. Seller shall schedule certification visit through the Company a minimum of ten (10) workdays prior to need.
10. The Company will perform regular and unannounced assessments relative to approved information, computer, and physical security plans.
11. Modifications to the Seller's AIS and/or Security Plans shall be presented to the Company before implementation. The Company will approve and/or certify the modification before the Seller implements the modification.
12. The Seller shall return all UCNI and OUO electronic data, hard copies, materials and data media upon subcontract completion unless directed otherwise by the Company. When lower-tier subcontractors and suppliers have completed their work, the associated electronic data, hard copies, materials and data media shall be forwarded to the Seller for disposition in accordance with Company direction.
13. The computers associated with UCNI and OUO work will be decertified by the Company upon subcontract completion or sooner if the Seller indicates they are no longer required for the work.

H. Seller Information Security Officer (ISO) responsibilities:

1. Representing the Seller/lower-tier subcontractors concerning Information Security (INFOSEC) issues.
2. Ensuring implementation of, and compliance with, all INFOSEC requirements.
3. Reporting INFOSEC-related incidents to the Company and participating in the inquiry of incidents.
4. Performing an annual INFOSEC self-assessment.
5. Determining INFOSEC training needs and ensuring training is conducted in a timely manner.
6. Disseminating periodic INFOSEC awareness material to employees who have responsibilities that include protection and control of sensitive information.
7. Attending meetings and training sessions as requested by the Company.

NOTE: Company will classify and mark documents. Seller shall protect at the highest level marked on any documents contained in the Subcontract Documents.

I. UCNI Access

1. UCNI Access Requirements — Access to UCNI shall be provided only to those authorized for routine access. Routine access refers to the normal exchange of UCNI during the conduct of official business and allows for further dissemination of UCNI if the requirements in Item (b.) below are met.
 - a) Authorized individual—An authorized individual, who may be the originator or possessor of UCNI, may grant routine access to UCNI to another person eligible for routine access to UCNI (see Item b below) by giving that person UCNI documents and providing assurance that the individual is briefed in the handling of UCNI. No security clearance is required. The recipient of the UCNI documents becomes an authorized individual for that specific UCNI.
 - b) Eligibility for routine access—to be granted routine access to UCNI, a person must “need to know” the specific UCNI in the performance of official duties. In addition to the need-to-know requirement, the person must be a U.S. citizen. Non-U.S. citizens (i.e., foreign nationals) are *not* allowed any access, casual or otherwise, to UCNI information or media.

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- c) Dissemination limitations—an authorized individual may disseminate UCNI only to a person who is eligible for routine access to UCNI and is briefed to handle UCNI. The Company will provide initial briefing to Seller personnel in the handling of UCNI documents and the Seller shall brief lower tier subcontractors and suppliers in the handling of UCNI documents.

J. OUO Access

1. A person accessing OUO documents shall be a U.S. citizen. If a foreign national has a “need to know” OUO information, the Seller shall obtain approval from the Company before supplying this information.

K. Paper Documents, Materials, and Equipment

1. Store UCNI and OUO to preclude unauthorized viewing and disclosure. If an area is neither controlled nor guarded, UCNI and OUO documents, material, or equipment shall be stored in a locked container or locked room, which has been certified by the Company, to which only individuals authorized for routine access to UCNI or OUO have entry.
2. Reproduction of UCNI/OUO shall be limited to the minimum number of copies necessary to carry out official duties. Reproduced copies shall be protected in the same manner as the original document. Copy machine malfunctions shall be cleared with all paper paths checked for UCNI/OUO material. Completion of reproduction shall be followed by processing three blank sheets through equipment. Reproduction of UCNI and OUO shall not be performed on digital equipment, including digital copiers, without prior approval of the Company. The Company shall approve reproduction of UCNI and OUO material by a commercial reproduction provider not wholly owned by the Seller prior to reproduction.
3. Transmission of UCNI or OUO matter shall be by means that preclude unauthorized disclosure or dissemination.
4. The following applies to documents transmitted outside an approved facility:
 - a) Documents marked as UCNI or OUO shall be packaged in a single, opaque envelope or wrapping. The envelope shall be sealed and marked TO BE OPENED BY ADDRESSEE ONLY.
 - b) Any of the following U.S. mail methods may be used: Express, Certified, or Registered Mail.
 - c) Any commercial carrier using a signature service may be used.
 - d) An authorized individual may hand carry the matter as long as he/she can control access.
5. The following applies to matter transmitted within an approved facility:
 - a) A standard distribution envelope, such as the U.S. Government Messenger Envelope or equivalent, may be used.
 - b) An authorized individual may hand carry the matter as long as he/she can control access.

L. Destruction

1. At a minimum, UCNI and OUO matter shall be destroyed by using shredders or cross cut shredders that result in particles of no more than ¼-inch wide strips. Strips shall be randomly mixed prior to disposal. UCNI and OUO matter may also be returned to the Company for destruction.

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NOTE: Provide written notification to the STR stating what documents the Seller destroyed. UCNI and OUO documents shall be returned to the Company unless prior approval for destruction is obtained from the Company.

M. Infractions and Incidents

1. Failure to comply with requirements specified herein may result in a security infraction.
2. Any person who violates applicable civil law under Atomic Energy Act provisions is subject to civil penalties or may face criminal prosecution.

N. Computer Security - If the Seller uses an Automated Information System (AIS) with UCNI/OUO documents, Seller Computer Security Officer (CSO) is responsible for:

1. Ensuring the implementation of, and compliance with the AIS Security Plan.
2. Representing the Seller/lower tier Subcontractors for computer security issues.
3. Coordinating general AIS security briefings.
4. Reporting AIS-related security incidents to the Company and participating in the inquiry of incidents.
5. Coordinating the certification of computer systems processing UCNI or OUO information with the Company.
6. Ensuring that the AIS system described by the AIS Security Plan has been certified prior to use.
7. Taking immediate action to resolve AIS security deficiencies.

O. Important Information

1. Only locations that meet the security requirements will be permitted to process UCNI or OUO information and shall be approved by the Company.
2. The AIS Security Plan serves as the formal security record of the system. An AIS Security Plan shall be prepared for each system that processes UCNI or OUO information.
3. A risk assessment shall be performed by the Seller in conjunction with the Company to document any threats, concerns, and vulnerabilities that may exist related to their computer systems.
4. An AIS processing UCNI/OUO information shall be re-certified by the Company every three (3) years or when changes occur that affect the security posture of the system. A configuration modification of hardware, system software, or layered products may be cause for recertification of a system. The Company must approve modifications that change the security posture of a system prior to implementation.

P. UCNI/OUO AIS Resources and Information

1. It is the responsibility of the Seller to know and provide the degree of protection required for a type of information being processed.
2. All computer security incidents involving UCNI or OUO information or AIS resources shall be reported to the Company, including:
 - a) Fraudulent action involving AIS.
 - b) Processing of information without an approved Security Plan.
 - c) Leaving a session active while not properly protected (e.g., unattended, unsupervised).
 - d) Unauthorized testing of a certified AIS.

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- e) Printer ribbons, cards, diskettes, hardcopy output, and/or magnetic media left unattended (not properly physically protected).
 - f) Disclosure of sensitive information (e.g., failure to protect data files properly).
 - g) Hackers/crackers or other unauthorized access attempts.
 - h) Release of Y-12 Personally Identifiable Information (PII) must be reported to the Y-12 Plant Shift Superintendent (PSS) at 865-574-7172 within 10 minutes of recognition of the release.
 - i) Release or failure to protect UCNI or OUO must be reported to the Y-12 PSS at 865-574-7172 or to the Y-12 STR or Computer Security officer upon recognition of the incident.
3. System hardware components shall be marked to indicate the most restrictive category of information processed, as directed by the Company. Labels shall be placed on central processing units (CPUs), video display units, printers, disk drives, and any other input/output devices except keyboards, speakers, and mouse(s).
 4. AIS equipment shall be **decertified** of all UCNI/OUO information before connecting to a network or computer system of a lower category or before equipment is removed from service.
 5. All voice and electronic data transmissions of sensitive information (UCNI) shall be over secure telephone unit (STU III) or approved encrypted communication links. Applications utilized across Internet or distribution of sensitive information over Internet is not permitted unless through encryption (i.e., Entrust **or Company approved encryption**) and then only after certification by the Company. When new computing systems or networks are connected to existing approved networks, they shall be documented and approved by the Company before connection and use.
 6. OUO voice and data transmissions shall only be conducted using landline phones. Cellular and cordless phones shall not be used.
 7. Access controls shall be used to prevent unauthorized access to information.
- Q. Physical Security
1. AIS processing UCNI **or OUO** information require a combination of physical controls and administrative controls. The location of each multi-user system shall be reviewed and approved by the Company.
 2. Company will certify physical controls including rooms. Physical controls and administrative controls will prevent surreptitious entry.
- R. Personal Workstations
1. For personal workstations, the primary security feature is physical access control for the information. Access to the computer may be further restricted by the hardware and software controls as follows:
 - a) In offices with lockable doors and immune to surreptitious entry, no hardware security devices are required as long as the room is locked when unattended.
 - b) In open offices and where there is not a common need-to-know of all information, appropriate protective measures (e.g., UCNI **and OUO** workstations require chassis locks, keyboard locks, or approved hardware password devices) are required as directed by the Company.
- S. Output Devices
1. The monitor, printer, and any other output device of an AIS processing UCNI/OUO information shall be positioned to prevent casual viewing by unauthorized personnel.

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Attachment 1

TRAINING REQUIREMENTS

MODULE TITLE	DURATION	FREQUENCY	PROVIDED BY
GENERAL EMPLOYEE TRAINING (GET)			
Basic General Employee Training	4 hours	Every 2 years	Company
Oak Ridge Reservation (ORR) Employee Emergency Plan	½ hour	Once	Company
Annual Security Briefing	½ hour	Every Year	Company
Fire Extinguisher Required Read	½ hour	Every Year	Company
Hazard Recognition Training	½ hour	Once	Company
INDUSTRIAL HYGIENE AND HEALTH			
Initial Hearing Conservation Program			Seller
Hearing Conservation Program Refresher			Seller
American Red Cross – Cardio Pulmonary Resuscitation (CPR)			Seller
American Red Cross – Standard First Aid			Seller
Hazard Communication			Seller
Lead Worker Protection			Seller
Hazardous Waste Operations and Emergency Response Initial Training (HAZWOPER)	40 hours	Once	Seller
HAZWOPER Refresher Training	8 hours	Every 3 years	Seller
HAZWOPER Supervisor Training	8 hours		Seller
Asbestos Abatement Worker Initial Training	32 hours	Once	Seller
Asbestos Abatement Worker Refresher Training	8 hours		Seller
Asbestos Abatement Supervisor Initial Training	40 hours	Once	Seller
Asbestos Abatement Supervisor Refresher Training	8 hours		Seller
Confined Space Supervisor (when working under Company's Program)	2 hours	Once	Company
Confined Space Supervisor Training (when using Company approved Seller program)	2 hours	Once	Seller
Beryllium Worker Training	4 hour	Every 2 years	Company
INDUSTRIAL SAFETY			
Authorized Entrant/Attendant for Confined Space Entry (When using Company approved Seller program)			Seller
Authorized Entrant/Attendant for Confined Space Entry (When using Company program)	3 hours	Once	Company
Lockout/Tag-out Initial Training (when working under Company approved Seller's Program)			Seller
Lockout/Tag-out Training (when working under Company's Program)	8 hours	Once	Company
Lockout/Tag-out Training Refresher (when working under Company's Program)	2 hours	Every year	Company
Fall Protection & Prevention Safety Awareness Training	2 hours	Once	Company
Fire Watch Training	3 hours	Every year	Company
Issuing Authority/Service Supervisor (IA/SS) for Welding & Burning (required for Hot Work and Excavation Permits)	2 hours	Once	Company
Scaffold User Training	3 hours	Once	Company/Seller
Electrical Safety Program			Seller
Ladder Training			Seller
MOBILE EQUIPMENT/HOISTING AND RIGGING			
Basic Hoisting and Lifting Safe Operations			Seller
Mobile Crane Training			Seller
Competent Person Rigger	2 day	Annual	Company
Aerial Lift Safety Qualification/Re-qualification			Seller
PERSONAL PROTECTIVE EQUIPMENT			
PPE Awareness and Proper Use (Prior to use)			Seller

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TRAINING REQUIREMENTS (Continued)

TRAINING REQUIREMENTS (Continued)			
RAD WORKER			
Rad Worker II (if applicable to specific task) Note: Seller may arrange training through BJC. Test and practical is only with the Company	20 hours	Every 2 years	Company or BJC
Personal Radiation Dosimeter Instrument (PRDI) Required Read	1 hour	Once	Company
MODULE TITLE	DURATION	FREQUENCY	PROVIDED BY
RESPIRATORY PROTECTION (PPE)			
Basic Respirator Training (when wearing Company-furnished Respirator)	2-1/2 hr-Class 2-hour Fit Test	Every year	Company
Basic Respirator Training and Fit Test (only required if wearing Seller-furnished Respirator)			Seller
Respirator Fit-Test (when wearing Company-furnished Respirator)	1 hour	Every year	Company
Supplied Air Respirator Training	3 hours	Once	Company
SECURITY			
Comprehensive Security Briefing (only required for L or Q cleared)	1 hour	Once	Company
Annual Security Refresher Briefing	½ hour	Every year	Company
UCNI/OUO Information Training	1-1/2 hour	Once	Company/Seller
Y-12 Plant Escort Training, Required Read or class room (retraining required for revisions)	1 hour	Initial and Revisions	Company
CT 401 Security Escort Training (when escorting uncleared personnel into an area with Classified Systems/Computers)	2 hour	Annual	Company
Overview for Escorting of Delivery, Service, or Vendor personnel	¼ hour	Each occurrence	Company
CONDUCT OF OPERATIONS (CONOPS)			
Facility Specific CONOPS Training (if applicable to specific task)	4 hours	Once	Company
Safety Basis 202 (work inside Protected Area)	2 hours	Every Two Years	Company
TRANSPORTATION SAFETY			
Federal Motor Carrier Safety Regulations			Seller
FMCSR Refresher			Seller
DOT Regulations for Material of Trade			Seller
Secure Load and Tie Down			Seller
MEDICAL ENROLLMENTS			
Confined Space			Seller
Asbestos			Seller
Hearing Conservation			Seller
Mobile Equipment Operator			Seller
Respirator Wearer			Seller
Thermal Stress			Seller
DOT			Seller
HAZWOPER			Seller
SELLER-SPECIFIC TRAINING			
Environmental, Safety and Health (ES&H) Program		As Required	Seller
ES&H Plan		As Required	Seller
Quality Assurance Plan		As Required	Seller
Work Plan and other Plans		As Required	Seller
Activity Hazards Analysis (AHA)		As Required	Seller
Workplace Substance Abuse Program		As Required	Seller

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Safety Incentive for Construction Subcontracts
Attachment 2

The Safety Incentive clause provides a focus for the Seller toward the Company's "Target Zero" worker accidents and injuries.

The Seller shall include in their pricing a Safety Incentive amount as a lump sum value equal to \$0.15 per **craft** man-hour estimated in their proposal. The Seller shall track and obtain Company confirmation of the actual **craft** man-hours worked by calendar month. When the Seller determines that the criteria has been satisfied as described below, a request shall be made to the Company to confirm that the criteria has been met and a description shall be furnished of the incentive to be supplied to the workers with an estimated amount. The Seller shall submit a request monthly for a proportional amount of the lump sum Pay Item when the Seller obtains a score of 70% or more on the Safety Incentive described here-in for a given calendar month. The proportional amount requested monthly is calculated by multiplying \$0.15 by the actual number of **craft** straight time man-hours worked during the month but not exceeding the proposal man-hours.

General Rules:

1. As described above Seller will only be authorized to invoice the accrued amount, but this does not limit the Seller from spending their own funds.
2. This Safety Incentive is not intended to restrict and/or replace any other safety program currently offered by the Seller.
3. The total maximum allowable amount to be authorized on any one project is the initial amount agreed upon at the award of the subcontract, plus modifications for any changes requiring additional **craft** labor.
4. The amount will not increase if more **craft** labor hours are worked than originally estimated on the base scope.
5. If less **craft** hours are worked than estimated, the Seller will be allowed to request the balance of the funding for the final incentive.
6. Seller must supply all receipts to STR for validation of actual costs. Only actual costs will be reimbursed, no additional mark-ups will be allowed.
7. See payment section of subcontract for payment terms.

The Safety Incentive is made up of six (6) Categories containing a total of 18 actions. One point could be earned for each action noted below totaling 18 points. The scoring is inclusive of actions taken by the Seller and onsite sub-tier subcontractors. The Seller shall provide relevant records to support the Seller's monthly score to the STR. The STR concurrence is required prior to Seller invoice.

I) Safety Awareness Team(SAT)

1. Establish a Safety Awareness Team (recommend team member rotation).
2. Perform and document regular safety surveillance of work areas (perform at an effective frequency; document positive and negative observations, and recommend using a checklist to assist in surveillances).
3. Document actions/barriers discovered and resolved; timely follow-up of open actions.
4. Maintain a visible Safety Bulletin Board or displays of safety awareness information (post work-site challenges to encourage safe work practices; updated regularly)

II) Safety Meetings/Pre-Job Briefs

5. Employees attend a weekly safety meeting, safety meeting agenda prepared and pertinent to the work.
6. Craft share a safety minute or a related work experience at the safety meeting.
7. Sub-tier subcontractor(s) attend at least one (1) of the safety meetings in a month.
8. Lesson Learned from incidents and injuries are included in the safety meeting.
9. Daily pre-job briefs for all work activities include pertinent AHA hazards and controls.

SUPPLEMENTAL CONDITIONS
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III) Feedback for Improvement

10. Document safety feedback (including Seller and sub-tier post-job briefs).
11. Develop lessons learned from feedback, incidents, injuries, near misses, and occurrences.
12. Track feedback, resolution, and provide timely response to originator.

IV) Sub-tier Subcontractor Integration

13. Use sub-tier subcontractor on Safety Awareness Team.
14. Incorporate sub-tier subcontractor participation and feedback in the Seller's safety meeting.

V) Safety Training/Awareness

15. Employees are current in training requirements.
16. Instill safety awareness and reinforce safe work behaviors

VI) Management Involvement

17. Corporate Safety Representative or Senior Manager participates in one (1) safety meeting or safety walk down per month.
18. Corporate Safety Representative or Senior Manager evaluates timeliness of actions taken on documented employee feedback on a monthly basis.

The Safety Incentive is intended to be awarded on a monthly basis and to benefit all **craft** workers as well sub-tiers and all those associated with the project. Luncheons, flashlights, hats or other recognition rewards may be obtained with incentive funds.. Funds not earned in a month will carry over for use in subsequent months.

If the subcontract is terminated / completed, the funds not expended on safety incentives will be deducted from the subcontract value.