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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 BWXT Y-12 (Company), for the Department of Energy (DOE), in Oak Ridge, Tennessee. Work consists of furnishing labor, supervision, materials, tools, equipment, and services (except that specified to be furnished or performed by others) to perform the task required by the Subcontract.
- 1.2 The Seller shall furnish sufficient trained and qualified personnel, construction materials, equipment, and shall work such hours, including additional shifts and overtime, as may be necessary to maintain construction progress in accordance with the accepted construction schedule.
- 1.3 Normal Construction work hours are 7:00 a.m. 5:30 p.m., Monday through Thursday. Requests for training, badges, and vehicle access, and the processing of submittals will generally be performed during normal Construction work hours.
- 1.4 Seller shall perform Davis-Bacon Act covered work. Seller shall sign and comply with the *Construction Labor Agreement* (CLA) for all work.
- 1.5 Company observed holidays are issued as Addendums to the CLA on an annual basis. Work should not be scheduled on observed holidays.
- 1.6 The Seller shall submit certified payrolls for all work governed by the Davis-Bacon Act. Submit certified payrolls to the STR, for information, within 7 days after each payroll period ends.
- 1.7 A pre-construction meeting will be held prior to the Company issuing a Notice-to-Proceed with Seller's fieldwork. Seller and their lower-tier subcontractor supervision personnel shall attend. The Seller and Company will mutually agree upon date, time, and location. Seller shall present their organization, work plans, environmental, safety, and health (ES&H) compliance to Company to demonstrate Seller readiness to execute work in accordance with the subcontract.
- 1.8 Provide a designated Representative with full authority to manage the work. Designate the Representative at award and submit any change to the Company Subcontract Technical Representative (STR) in writing. Seller Representative shall have full responsibility to act for and commit for the Seller and lower-tier Subcontractors.
- 1.9 Notify the Company STR of changes relating to Seller personnel and/or lower tier subcontractor personnel when personnel are terminated, reassigned off site, resign, extended absence, etc. Include the name of the individual and badge number. Timely notification will facilitate resolution of contract compliance items related to badge returns, dosimeter returns, bioassay submissions, or return of Company-furnished items.

- 1.10 Progress meetings and Coordination meetings will be held weekly with the Seller. Seller designated Representative shall attend and arrange to have appropriate lower-tier subcontractors at these meetings. Designated Representatives 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 and security
  - B. Work schedules and progress
  - C. Resolution of problems
  - D. Requests for information, change notices, and requests for equitable adjustments
  - E. Administrative matters and procedures
  - F. Submittal and materials delivery status
- 1.11 Safety and Information meetings will be held monthly with the Seller. Seller designated 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 Seller must obtain approval from the Company at least two (2) working days in advance to perform work at Y-12 outside the normal Construction work hours. Seller shall use the *Overtime Request* form.
- 1.13 All work under this Subcontract shall be performed in a skillful, safe, and workmanlike 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.
- 1.14 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.
- 1.15 Seller shall comply with 10 CFR 707, Workplace Substance Abuse Programs at DOE Sites, 2002. Seller's Substance Abuse Program shall be submitted for approval
  - A. A Substance Abuse Program is required per 707.2 (a) ii and iii.
  - B. Random drug testing is required per 707.7 (b) 3, and applies to truck drivers, equipment operators, safety and health representative, and personnel making critical decisions.
- 1.16 The Company STR may issue a Construction STR Subcontract 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 Subcontract Change Notice.
- 1.17 The Company STR may issue a *Daily Summary of Force Account Work* for work performed by the Seller that allows for the accumulation of costs as incurred with concurrent approval by the STR.

- 1.18 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 material or method.

NOTE: When a technical response represents a compensable change, the change will be authorized by a Subcontract Modification.

- 1.19 The Seller shall notify the Company that 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.
- 1.20 Company furnished items are as follows:
  - A. Backflow preventer for hydrant water use.
  - B. Dosimetry for radiological work.
  - C. Emergency ambulance and fire fighting response.
  - D. Sanitary trash dumpsters, recycle paper and cardboard dumpsters.

#### 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 will request permission from the Company in advance of need to work in an operating area and receive authorization from the STR before starting such work. Protect equipment, tools, materials, and Company facilities from damage during execution of work.
- 2.2 No blocking or wedging of fire doors is permitted. Door openings and surrounding areas must be kept clear and allow free operation of the door. Exit doors must swing fully open with a single-handed push. Do not remove or paint over UL/FM label on fire door.
- 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 will provide a daily Work Plan that identifies work activities for the following day.
- 2.4 Seller designated Representative shall provide and document a daily pre-job brief with employees and visitors prior to beginning each shift's work activities. Perform and document a follow-up at the end of the shift and note any unusual events occurring that day. Sign-in sheets for the pre-job brief shall be turned in to the STR on the next workday. Pre-job brief shall include Work Plan and Activity Hazard Analysis (AHA).
- 2.5 Seller shall submit requests for system outages a minimum of five (5) working days in advance of need. The Company will coordinate an outage schedule. Hold outages to a minimum in number and duration. Outages critical to the Seller's work schedule shall be detailed on the schedule submitted to the Company.
- 2.6 Company will perform lock out and tag out of all energized electrical and mechanical sources. Seller is responsible for checking all electrical and mechanical circuits and components for absence of energy prior to commencing work. Establish controls to protect workers from energized sources.

- 2.7 The Company will provide Excavation/Penetration Permits, Radiological Work Permits, Water Discharge Permits, Hot Work Permits, Confined Space Permits, (for existing confined spaces), and Asbestos Removal Authorization. Seller shall request Company-provided Excavation/Penetration Permits twenty (20) working days in advance of need and other permits five (5) working days in advance of need.
- 2.8 Control dust emissions during work. Seller shall prevent dust from migrating to areas adjacent to the work site. Limit use of water to prevent erosion. Provide hoods, enclosures or other methods of containment during sandblasting or similar operations.
- 2.9 Seller shall follow strict Facility requirements when work activities are near or produce noise in excess of 85dba. Seller shall provide noise monitoring and shall as a minimum:
  - A. Forecast high noise work on POD.
  - B. Stop work activities that produce noise in excess of 85dba until Facility-specific "high noise" compensatory measures are implemented.
  - C. Allow up to a ½ hour for Seller personnel to properly implement Facility specific compensatory measures.
- 2.10 Seller personnel shall not enter any area of the Facility posted with a red STOP SIGN without coordination through the Company Shift Supervisor. Locks on doors will be opened by the Company Shift Supervisor or designee.

#### 3. WORK PLANNINGAND EXECUTION

- 3.1. Submit a Work Plan for Company approval that includes:
  - A. Technical approach
  - B. Security requirements
  - C. Inspection and tests
  - D. Assignment of responsibilities
  - E. Safety and Health oversight and compliance
  - F. Equipment
  - G. Sampling and Analysis
  - H. Waste Management
  - I. Material Storage
  - J. Submittal and work sequence schedule
- 3.2 Submit a Daily Report to the Company that includes:
  - A. Subcontract Number
  - B. Project Name
  - C. Number of employees of Seller and its subcontractors
  - D. Equipment on site and the condition of the equipment
  - E. Names of visitors
  - F. Description of work, tests, or inspections performed
  - G. Safety observations/incident
  - H. General comments (e.g. delays or disruptions)
  - I. Seller Representative Signature.

#### 4. TRAINING

- 4.1 Company will provide instructions at no cost to the Seller, for *General Employee Training* (*GET*) and other Company compliance-related training. Seller shall bear all costs associated with required training.
- 4.2 Supplemental Conditions, Attachment 1, *Training Requirements* identifies Y-12 and task-specific training required for Seller personnel and lower-tier subcontractors. Seller is responsible for training required by Federal and State laws and method of accomplishment of the work. Complete and submit the *Request for Y-12 National Security Complex Training* form to STR to request Company training. Revision to task-specific documents (AHA's plans, etc.) requires training. Seller shall document training and provide records upon request by the Company.
- 4.3 Ensure all employees are trained in the use of all tools and equipment appropriate to the task. When unique or special tools or equipment is required, the Seller shall have manufacturer or vendor manuals available on site and ensure users are trained on safe operation. Employee training records shall be made available to the Company upon request.
- 4.4 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 the negative impacts, and the potential environmental consequences of departure from specified operating 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. For items requiring a submittal do not order until approval is provided by the Company.
- 5.2 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.
- 5.3 Seller is responsible for transportation of all Seller-purchased equipment and materials. Deliver materials in a new condition and unload, handle, and protect during storage and installation so as to maintain the condition until turnover to the Company. Report any damage to the Company. Damaged materials shall be replaced or repaired at the Seller's expense.
- 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.
- 5.5 Comply with manufacturer instructions and requirements for handling and storing of material and equipment. Protect materials and equipment from moisture, dust, and damage, including conditioned storage when required.

- 5.6 Materials purchased and specified by *Configuration Control Equipment Data Sheets* (CCEDS) shall have a receipt inspection upon delivery and be secured and tracked until installed per *Division 1, Quality Assurance.* A Material Receipt Log shall be maintained by Seller.
- 5.7 Items purchased by CCEDS shall be placed in secure (locked) storage with a key control log until installation.
- 5.8 Identify items delivered to Y-12 with a weather-resistant tag or label with Seller's name and contact, subcontract number, and contents.
- 5.9 Only materials and equipment used in the performance of this Subcontract may be stored at Y-12. 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. Maintain good housekeeping in storage areas.
- 5.10 Seller shall certify that equipment provided to the Company has been inspected and does not contain suspect/counterfeit fasteners. Seller shall complete the *Counterfeit/Suspect Fastener Certification* form and submit to the Company. SAE Grade 5, or 8.2 Fasteners or ASTM Grade A325 Fasteners identified on the *DOE Suspect Bolt Headmark List* are prohibited on site.
- 5.11 Dispose of excess material or equipment only with permission of the Company.

#### 6. PAYMENTS

- 6.1. Seller shall prepare a Schedule of Values to allocate the Subcontract price to various portions of the work when subcontract measurement for payment allows for interim payments to a pay item. 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.
  - B. Submit to the Company STR for approval within 2 weeks after approval of Seller's schedule.
  - C. Update and resubmit with each revision to the pay item.
  - D. Submit approved schedule of values with *Application for Payment* to show payment requested on work completed.
  - E. Format 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

### 6.2. Progress and Final Payment:

# A. Basis for Payment

- Compute progress payments on a basis of completed work for each item in the approved Schedule of Values or subcontract measurement for 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.
- 2. The date for submittal of each progress payment is the third Wednesday of each month.

# 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 measurement for payment.
- 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.

### C. Submittal of Application for Final 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 Application for Final Payment.
- 3. Prior to submission of Application for Final Payment, Seller shall request from the STR information concerning any outstanding contract compliance items; including outstanding submittals, certified payrolls, return of badges, dosimetry, bioassay samples, vehicle passes or other Company furnished items. Failure to resolve could delay approval of application for final payment.

#### D. Approval of Application for Payment

1. The Company will review the Application for Payment and make payment after verifying accuracy and completeness.

### 7. SCHEDULE

- 7.1. Seller shall submit their Schedule to the Company STR within two (2) weeks after award and obtain approval 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)
  - B. The Company's review and acceptance of the Seller's Schedule is for conformance to the Subcontract requirements only. The Seller is responsible for the logic, durations, and resource loading.

- C. The Schedule shall be presented in graphic format and updated weekly. Weekly updates shall show the baseline Schedule and current updated Schedule.
- D. Seller shall provide Schedule updates and 3-week look-ahead Schedules for progress meetings with the Company STR.
- E. The Seller shall obtain acceptance of the Schedule before submitting the first Application for Payment. Company acceptance of subsequent revisions to the Schedule 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.

NOTE: The Company can provide a Scheduler to assist the Seller in the development of the Seller's Schedule.

### 7.2. Format and Content

- A. The Schedule shall consist of a Network Logic Diagram with the following items, each compatible with the other and developed from the same basis:
  - 1. The Critical Path Method (CPM) Schedule shall be time-scaled.
    - a. Include the following minimum milestone dates:
      - 1) "Notice-of-Award Issued"
      - 2) "Notice-to-Proceed Issued"
      - 3) "Construction Complete"
      - 4) "Subcontract Complete"
    - b. The "Construction Complete" milestone shall be logically tied to demobilization. The "Subcontract Complete" milestone shall be constrained to a fixed date.
    - c. The Schedule shall be on 8-1/2" x 11" sized paper and include:
      - 1) Schedule Activity Number
      - 2) Schedule 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) Total Float
      - 8) Percent Complete
    - d. Changes to the accepted construction sequence shall be discussed with the Company and may require a revised Schedule to be submitted for approval, by the Seller, as directed by the Company.
    - e. The Seller may submit revisions to the Schedule in the form of fragmentary networks (fragnets) to the Company for acceptance. The changes shall be clearly identified.
    - f. The Seller shall furnish updated Schedules for the Progress Meetings
- 7.3. Extensions of time to the subcontract period of performance shall be granted only via a Subcontract Modification.
  - A. In the event the subcontract period of performance is changed by the Company, the Seller shall, within seven (7) calendar days after receipt of the Subcontract Modification, submit a revised Schedule to the Company for acceptance.

- 7.4. Seller shall submit a Resource Profile to the Company STR within two (2) weeks after award and obtain approval prior to Notice-to-Proceed from the Company.
  - A. Incorporate the following resource coding structure in the Schedule activities:

UBMSHS=Boilermakers UMWSHS=Millwrights UCFSHS=Cement Finishers UOPSHS=Operators UCPSHS=Carpenters UPFSHS=Pipe fitters UPTSHS=Painters UELSHS=Electricians UINSHS=Insulators URFSHS=Roofers UIWSHS=Ironworkers USPSHS=Sprinkler Fitters ULBSHS=Laborers USMSHS=Sheet metal Workers UMASHS=M asons UTDSHS=Truck drivers/Teamsters

- B. Provide total period and cumulative resource information for each month for the entire period of performance.
- C. At such time as the Schedule is revised and/or the scope of work is significantly altered by Subcontract Modification, a revised Resource Profile shall be submitted to the Company STR for acceptance. Only Modifications that have been authorized and approved by the Company shall be included in the revision to the Resource Profile. The Modification will be a unique entry following the original format.

#### 8. FORMS

- 8.1 The Company forms are available through the Company Procurement External Web Site at url address: http://www.Y-12.doe.gov/procurement-ext/library/art\_forms.html
  - A. Construction STR Change Notice (UCN-21329)
  - B. Counterfeit/Suspect Fastener Certification
  - C. Daily Summary of Backcharge Work
  - D. Daily Summary of Force Account Work
  - E. DOE's Suspect Bolt Headmark List
  - F. Individual Accident/Incident Report, DOE F 5484.3
  - G. Overtime Request
  - H. Release and Certificate of Final Payment
  - I. Request for Information
  - J. Request for Inspection of Completed Work
  - K. Request for Y-12 National Security Complex Training (UCN-21364)
  - L. Request for Y-12 National Security Complex Access and Badge (UCN-21354)
  - M. Request for Y-12 National Security Complex Vehicle Pass (UCN-23155)
  - N. Safety and Health
  - O. Subcontract Safety Performance Report (UCN-21439)
  - P. Submittal Form
  - Q. Subcontractor Hazardous Materials Inventory Report (UCN-21445)

### Notes:

- 1. Forms are available in hard copy and electronic format from the STR.
- 2. Forms referenced are to be submitted to the STR.

#### 9. TEMPORARY FACILITIES AND WORK AREA CONTROLS

#### 9.1 References

- A. NFPA 70-02, National Electrical Code (NEC).
- B. NFPA 501A, 1999, Standard for Fire Safety Criteria for Manufactured Home Installation, Sites, and Communities.
- C. ANSI D 6.1, Manual on Uniform Traffic Control Devices for Streets and Highways, 1988.
- D. ANSI A225.1, Anchor and support requirements.
- E. SBCCI, Southern Building Code Congress International, 1999.
- F. Standard Building Code, 1999.
- G. TN 1200-5, Rules of the Tennessee Department of Health and Department of Environment and Conservation, Division of Water Supply.

### 9.2 Temporary Utilities

- A. 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 disconnects 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.
  - 2. The Company will provide water source. 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 workstation. Seller shall provide booster pump(s) as necessary. The Seller shall provide portable water holding tanks with discharge pumps where Company does not provide a water source convenient to the Seller's work area.
  - 3. Discharge into Y-12 storm or sanitary sewer is by permit only. Coordinate with Company STR to obtain permit.
  - 4. Hard-wired telephone service is available through Qwest. The Seller is responsible for providing telephone service.
  - 5. Provide chemical toilet facilities and maintain them in a safe and sanitary condition.
  - 6. Electrical and water consumption is no cost to the Seller.

#### 9.3 Protection of the Work Area

- A. Provide flagging, signs, and barricades for job site storage areas and construction work areas. 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.
- B. Post a sign providing Seller's name, key personnel names and telephone numbers, Subcontract title and number at each work site, temporary facility, and storage area. Include contact information for off-shift and weekend hours.
- C. Traffic and Pedestrian Control
  - 1. Notify STR 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, one (1) week prior to implementation. Company approval is required prior to implementation of the plan.
- 3. Provide traffic control that conforms to ANSI D 6.1.
- 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.

# 9.4 Temporary Facilities

- A. Temporary facilities include office trailers, change facilities, 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. Locate temporary facilities a minimum of 35 feet clear of existing buildings.
- C. Provide a platform, stairs, and handrails at each exterior door. Steps shall have a non-skid surface.
- D. Anchor and support the trailer in accordance with ANSI A225.1 and NFPA 501A. An *Excavation Permit* must be furnished by the Company prior to driving anchors.
- E. Provide portable fire extinguishers that are clearly identified.

#### 10. WASTE MANAGEMENT

#### 10.1 References

- A. 40 CFR 261, EPA, Identification and Listing of Hazardous Waste
- B. 40 CFR 279, EPA, Standards for the Management of Used Oils
- C. 40 CFR 761, EPA, PCB Manufacturing, Processing, Distribution in Commerce, and Use Prohibition
- D. 49 CFR 172, DOT, Emergency Response Information and Training
- E. 49 CFR 173, DOT, Shippers-General; Requirements for Shipments and Packaging
- F. DOT, Hazardous Material Table, Special Provisions, Hazardous Materials Communications
- G. TDEC 1200-1-11, Hazardous Waste
- H. TDEC 1200-4, Water Pollution Control and Groundwater Protection
- I. TDEC 1200-1-7, Solid Waste Processing and Disposal
- J. DOE Order, DOE O 5400.5

# 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 site.

D. The Company will provide containers for storage and disposal of wastes to be transported by the Company, unless noted otherwise.

### 10.3 Waste Identification and Labeling

- A. The Company's UCN-2109 form is required to be completed before wastes may be removed from the work site. The Seller, with support from the Company, will prepare the form. The Y-12 landfill personnel will require the Seller to provide the approved UCN-2109 form before they accept the waste for disposal.
- B. The Seller shall label the waste package containers with support from the Company.
  - 1. Company RADCON will survey and analyze the waste material, verify that the waste meets the Y-12 Landfill acceptance criteria, and issue a green tag before the Seller begins transferring waste for packaging, transportation, storage, and/or disposal.
- C. 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 1171 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.
- D. Provide a minimum of one (1) working day advance notice before scheduled removal of waste from the work site.

### 10.4 Waste Segregation

- A. Segregate wastes by type (e.g., hazardous, special, spoils, sanitary waste, and construction debris).
- B. The Company will assist in identifying waste type, packaging, labeling, marking, and storage requirements.
- C. Special waste permits that may be required will be provided 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 Material Dispository, on weekdays between the hours of 7:30 11:00 a.m. and 11:30 a.m. 2:30 p.m. Additional hours may be scheduled through the STR.
- B. Waste must reduced to a maximum length of eight feet. Pipe diameters shall not exceed twelve inches in diameter. Oversize waste requires two (2) days notification to the landfill.
- C. At the landfill, respiratory protection is required for workers who get outside the enclosed cab of a transportation vehicle hauling wastes with respiratory hazards (e.g. asbestos, beryllium, man-made fibers). All workers are required to wear high visibility vests, safety glasses, and safety shoes at the landfill.
- 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, and 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.
- E. Friable insulation shall be properly packaged and labeled. Loose friable insulation will not be accepted for disposal. Deliver to Landfill V between the hours of 8:00 11:00 a.m. and 12:00 to 2:00 p.m., Tuesdays only.

- 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 Satellite Accumulation Area in accordance with TDEC 1200-1-11. Register the accumulation area with the STR.
  - 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. Transportation and disposal will be by the Company.
  - 4. Store and package PCB materials in accordance with 40 CFR 761. The Company will pick up the material at the work site. Segregate wire from demolition debris and package as PCB waste if it is PCB contaminated.
- 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 in. 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 UCN-2114A, *Hazardous Waste Identification* for RCRA hazardous wastes, or a UCN-2114B, *Waste Identification* 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.
  - 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 site and recycle the material appropriately.
- 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: Store light bulbs in a manner to prevent breakage. Segregate broken bulbs from unbroken bulbs. Package and deliver to the Company in approved storage containers.

5. Used oil: Store and maintain used oils for recycle in accordance with 40 CFR 279 and EPA requirements. The STR will designate a Y-12 location for oil collection and storage.

# 10.7 Transportation

- A. Provide containment for spoils, waste, and salvageable materials during transport. Provide covers on open top containers and trucks.
- B. Transport asbestos waste in accordance with 49 CFR 173.216. Line the truck cargo bed with 6-mil polyethylene. 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.

### 10.8 Waste Control

- A. Waste cannot be removed from Y-12 without prior approval of 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.

# MATERIAL DISPOSITION TABLE

WASTE MATERIAL	TRANSPORTATION	DISPOSAL LOCATION		
NON-RADIOACTIVE CONTAMINATION (GREEN RADCON TAG REQUIRED)				
Aerosol cans –empty	Seller	Industrial Landfill V		
Aerosol cans – product remaining	Company	Waste Operations 90-Day Yard		
Asbestos-Containing Material (ACM)		, , , , , , , , , , , , , , , , , , ,		
Friable	Seller	Industrial Landfill V		
Non-friable construction debris	Seller	Construction Landfill VII		
Construction/Demolition debris – wood,	Seller	Construction Landfill VII		
sheet rock, roofing, incidental metals				
Earthen materials (Spoils) – soil, brick,	Seller	Industrial Landfill Spoil Area		
concrete, masonry materials, rock, asphalt		_		
Fluorescent bulbs	Seller	Bldg. 9401-1 Lamp Recycle		
Fluorescent light ballasts:				
Non-PCB	Seller	Industrial Landfill V w/ special waste		
		approval or Waste Operations 90-Day		
• PCB	Company	Yard		
		Waste Operations 90-Day Yard		
Glass	Seller	Industrial Landfill V		
Gray water (i.e. shower & wash water)	N/A	Sanitary Sewer		
Incandescent bulbs	Seller	Bldg. 9729 Lamp Recycle		
Mercury	Company	Waste Operations 90-Day Yard		
PCB-contaminated solid materials:	1 ,	1		
• PCB level <2 PPM		Same as non-PCB		
• PCB level ≥2 and <50 PPM	Seller	Industrial Landfill V w/ special waste		
_		approval		
• PCB level ≥ 50 PPM	Company	Commercial PCB Recycle/Disposal		
Sanitary waste (plastic, paper, food waste)	Seller	Industrial Landfill V		
Scrap metal, including lead	Company	New Salvage Yard metal recycle area		
Used oil:				
No Rad Added Certification	Company	Waste Operations 90-Day Yard		
Detectable uranium (below yellow tag )	Company	Company Storage		
Wiring (non-PCB, non-ACM)	Company	Salvage Yard metal recycle area		
Wood (unpainted, untreated)	Seller	Y-12 Burn Area		
RADIOACTIVE-CONTAMINATED MATERIALS (Yellow RADCON Tag)				
ACM Materials	The Seller shall package radioactive contaminated wastes in			
Construction Debris	Company-furnished DOT containers for transportation. The			
Roofing	Company will transport radioactive contaminated waste.			
Scrap metal				
Wood				
Aerosol cans				
Light bulbs	1			
<u> </u>	1			

NOTE: Contact STR if other materials are encountered during the performance of the Work.

# 11. RADIATION CONTROL (RADCON)

#### 11.1 References

- 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 Area: Area where radioactive contamination (fixed or removable) 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 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 are required by the Company.
- B. *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.
- B. Minimize radiologically contaminated waste by segregating from non-contaminated waste.
- 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 Y-12, the Company will survey Seller's tools, materials, and equipment to ensure they have not become contaminated. If contamination is encountered, it will be decontaminated by the Company.
    - NOTE 1: Items, which are releasable, will be green tagged; items not releasable will be yellow tagged by the Company.
    - NOTE 2: 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 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.
- 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.

NOTE: 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 equipment cannot leave the radiologically controlled area.
- D. Radioactive Sources:
  - 1. Seller shall submit a written request to the Company, for approval, a minimum of three (3) working days 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.
    - 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, both verbally and written, 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 and pass an examination (written test and dress-out practical exercise). Retraining is required every two (2) years.
- C. Radio logical Monitoring
  - 1. A baseline bioassay sample is required for all Seller personnel prior to working in radiologically controlled 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. Schedule sampling one (1) week in advance. Sampling will require two (2) hours per employee. Bioassay (baseline and periodic) is only required if stated in the RWP.
  - 2. The Company will notify the Seller if chest counting is required. Seller shall schedule chest counting one (1) week in advance. Monitoring will require two (2) hours per employee.
  - 3. Seller employees who enter radiological areas or encounter radiological contamination 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 working day of each cale ndar quarter, at which time new TLDs will be issued, and at the end of the RWP work. Ensure Personal Nuclear Accident Dosimeters (PNADs) are returned at the completion of the 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 until the requirement is resolved.
  - 4. The Company is responsible for maintaining personnel exposure records for Seller employees.
  - 5. The Company will submit an annual radiation monitoring report to each Seller employee who received radiation exposure monitoring.
- D. Radiological Work Permit (RWP)
  - 1. 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.
  - 2. The RWP will identify specific work requirements including work instructions, PPE, dosimetry, and training. Personnel entering the work area shall sign the RWP accurately and completely. Signing the RWP signifies that the person has read the RWP, understands its requirements, and agrees to follow the requirements.
- E. 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 with Company radiological hazards as identified in the RWP.
  - 2. Maintain a log of personnel entering the radiological area, and if required by the RWP, record the entry and exit times.
  - 3. Radiological Area Dress Out Required

- 4. Review with Company radiological hazards as identified in the RWP.
- 5. Maintain a log of personnel entering the radio logical area, and if required by the RWP, record the entry and exit times.
- 6. Eating, drinking, using tobacco or chewing gum is not allowed.
- 7. Enter only to perform required work.
- 8. Personnel monitoring is required before leaving the area.
- 9. 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).
  - Respiratory protection for certain work activities.
- G. 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.
    - b. 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. Radiation Work Permit (RWP).
- B. Radiological Control Technician(s).
- C. Radiological surveys and evaluations.
- D. Bioassav sampling.
- E. Permits for removal of waste.
- F. Air monitoring.
- G. HEPA filter in-place testing.
- H. Laundry service for PPE and cleaning service for Company-furnished respirators.
- I. Decontamination services for tools, equipment, and personnel.
- J. Personnel exposure records.
- K. Survey of tools/equipment brought to and removed from Y-12.
- L. Escorted access to radiologically controlled areas on an as requested basis.
- M. Source custodian for any radioactive source that is 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. Changes from initial characterization will be provided by the Company.

### 11.9 Personnel Monitoring

- A. Each Seller worker exiting the radiological area into a less restrictive area shall self-monitor. Monitoring requirements are provided during the Rad Worker II Training. Follow posted instructions and utilize the Company equipment provided.
  - 1. A whole body frisk is required (estimated time is 15 minutes).
  - 2. A hand and foot frisk is required (estimated time is 15 minutes).
- 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.

### 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.

### 12. ENVIRONMENTAL, SAFETY AND HEALTH

#### 12.1 Overview

A. The Seller shall take all reasonable precautions in the performance of the work to protect the safety and health of its employees and Company's personnel, minimize danger to life and property, minimize environmental impacts, and comply with safety and health regulations and requirements.

### 12.2 Integrated Safety Management (ISM)

- A. Use ISM per DEAR 970.5204-2 to establish a systematic approach to incorporate ES&H requirements into all work. ES&H management activities shall include:
  - 1. Define the Scope of Work.
  - 2. Analyze the Hazards.
  - 3. Develop and implement hazard controls.
  - 4. Perform work within the controls.
  - 5. Provide feedback and continuous improvement.
- B. Incorporate these 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 Best Management Practices (BMP)

- A. A BMP will be required for all construction and demolition work to 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, and shall include:
  - 1. Plug all drain openings inside the building before contaminants are removed and before demolition begins.
  - 2. Cover storm drains adjacent to the work site with filter fabric or other appropriate materials to protect storm drains.

- 3. Cover contaminated wastes as they are removed and segregated to protect against wind and storm water.
- 4. After removal of the demolition debris and completion of construction, remove sediment, paint chips, and other wastes that have collected near drains.
- 5. Stabilize all bare soil areas at the work site.
- 6. Immediately report all leaks or spills to the STR and the Y-12 Plant Shift Superintendent (PSS) office. The Seller shall maintain a container marked "Spill Kit" with absorbent materials at the work site to assist in spill control.
- 7. Inform all workers of the controls to be implemented.

#### 12.4 Orientation

- A. Before starting work, provide an orientation of the ES&H Program, the work-specific ES&H Plans, and activity hazard analysis to on-site personnel.
- 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 employees of the reporting process.
- C. Stop 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.
    - "Stop Work" is defined as stopping the task or activity that poses imminent danger to human health and/or the environment.
    - "Suspend Work" is defined as temporarily interrupting a specific activity that could pose an unsafe situation to human health or the environment.

#### 12.5 Qualifications

- A. Qualified Competent Persons (e.g., scaffolding, excavation, asbestos work) shall be identified with ES&H permits. Competent persons shall remain on site when work requiring their review is in progress.
- B. Certify by name that workers and competent persons 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:
  - 1. 10 CFR Part 850, Chronic Beryllium Disease Prevention Program, Final Rule.
  - 2. 10 CFR Part 830, Nuclear Safety Management.
  - 3. 10 CFR Part 835, Occupational Radiation Protection.
  - 4. 29 CFR Part 1904, Recording and Reporting Occupational Injuries and Illnesses.
  - 5. 29 CFR Part 1910, *Occupational Safety and Health Standards*, including referenced codes and standards.
  - 6. 29 CFR Part 1910.134, Respiratory Protection.
  - 7. 29 CFR Part 1910.145, Specification for Accident Prevention Signs and Tags.
  - 8. 29 CFR Part 1910.146, Permit-Required Confined Spaces.
  - 9. 29 CFR Part 1910.147, The Control of Hazardous Energy (Lockout/Tagout).

- 10. 29 CFR Part 1910.1200, Hazard Communication.
- 11. 29 CFR Part 1926, *Safety and Health Regulations for Construction*, including referenced codes and standards.
- 12. 29 CFR Part 1926.23. First Aid and Medical Attention.
- 13. 29 CFR Part 1926.55, Gases, Vapors, Fumes, Dusts, and Mists.
- 14. 29 CFR Part 1926.62, Lead.
- 15. 29 CFR Part 1926.101, Hearing Protection.
- 16. 29 CFR Part 1926.1101, Asbestos Standard.
- 17. 40 CFR Part 61, *National Emission Standards for Hazardous Air Pollutants*, Subpart A *General Provisions*, and Subpart M *National Emission Standards for Asbestos*.
- 18. 40 CFR Part 82, Protection of Stratospheric Ozone.
- 19. 40 CFR Part 763, Asbestos Hazard Emergency Response Act.
- 20. 49 CFR Part 106-180, Hazardous Materials Transportation Regulations.
- 21. 49 CFR Part 325-399, Federal Motor Carrier Safety Regulations.
- 22. DEAR 970.5204-2, Integrated Safety Management.
- 23. TN 1200-4, Rules of the Tennessee Department of Health and Tennessee Department of Environment and Conservation, Division of Water Pollution Control.
- 24. 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.
- 25. TN 1200-3, Rules of the Tennessee Department of Health and Department of Environment and Conservation, Division of Air Pollution.
- 26. American Conference of Government Industrial Hygienists (ACGIH) 0022, Threshold Limit Values (TLV) for Chemical Substances and Physical Agents, and Biological Exposure Indices (BEI).
- 27. ASME B30 Series, Hoisting and Rigging.
- 28. ASME B56 Series, Industrial Trucks
- 29. ASME N510-1989 Testing of Nuclear Air Treatment Systems.
- 30. ASTM D-2986 Method for Evaluation of Air Assay Media by the Monodisperse DOP Smoke Test.
- 31. ANSI Z41, Personal Protection Protective Footwear.
- 32. ANSI Z87, Practice for Occupational and Educational Eye and Face Protection.
- 33. ANSI Z88.2, Respiratory Protection.
- 34. ANSI Z89.1, Protective Headwear for Industrial Workers.
- 35. CGA G7.1, Commodity Specification for Air.
- 36. NFPA 70E, National Electrical Code.
- 37. NIOSH 582 Sampling and Evaluating Airborne Asbestos Dust.
- 38. NIOSH Method 7400 from the NIOSH Manual of Analytical Methods.
- 39. Tennessee Code Annotated, Title 4, Chap. 3, Part 14, Titles 62 and 63.

#### 12.7 Submittals

- A. Prior to the start of work, submit the following to the Company, as applicable, for approval:
  - 1. Corporate ES&H Program
  - 2. ES&H Plan
  - 3. AHA
  - 4. Lift/Haul Plan
  - 5. Pre-lift Checklist
  - 6. Crane Operator qualifications & training

- 7. ES&H Representative's qualifications
- 8. Asbestos Work Plan
- 9. Lead Compliance Plan
- 10. Waivers(s) not to use respirators
- 11. Request(s) not to use engineering controls
- 12. Confined Space Program
- 13. Lockout/Tagout Program
- B. Submit the following to the Company, as applicable, for information:
  - 1. 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 at Y-12 is complete.
  - 2. Material Safety Data Sheets (MSDS).
  - 3. Copy of Seller's license for Asbestos Abatement.
  - 4. Abatement and Demolition (NoDR) information.
- 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. Testing laboratory proof of compliance with OSHA requirements regarding NIOSH training and testing methods.
  - 5. HEPA filter certification.
  - 6. HEPA filter DOP test results for HEPA vacuums and negative air machines.
  - 7. Air monitoring test results and analysis.
- D. By the 3<sup>rd</sup> working day of each month, submit the following to the Company for the prior month (regardless of any accidents or incidents):
  - 1. Subcontractor Safety Performance Report

### 12.8 ES&H Program

- A. Corporate ES&H Program shall include:
  - 1. Seller's Corporate ES&H requirements.
  - 2. Activity Hazard Identification and Analysis process.
- B. ES&H Plan:
  - 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, ES&H Representative, and workers analyze the work to define hazards, and how responsibility will be assigned to lower-tier subcontractors.
    - c. Methods for ensuring 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. Seller programs, requirements, and procedures for confined space work, fall protection, respiratory protection, PPE, hazard communication, noise, machine guarding, lockout-tagout, hoisting and rigging, excavation/penetration work, hot work, emergencies, first aid and other work activities.
- g. Processes to inspect, certify, maintain, and repair equipment and tools, including emergency equipment.
- h. Employee disciplinary program for violations of ES&H requirements.
- i. Seller ES&H self-assessment and safety inspection processes, including sampling and monitoring.
- j. Investigation procedures for accidents, injuries, noncompliances, deficiencies, releases, spills, and near misses.
- k. ES&H document and record management.
- 1. ES&H reporting requirements.
- m. Use of *National Association of Demolition Subcontractors Demolition Safety Manual* as guidance for good practices on demolition projects.
- Incorporate text that addresses policy, goals and objectives, ISMS, and employee involvement to incorporate general awareness of the subcontractor to basic environmental responsibility.
- o. Implementing changes to the ES&H Plan.
- 2. The Company must approve the ES&H Plan 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)

- 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, administrative controls, and PPE. Revise the AHA, and re-submit to the Company for approval, when the work activities or site 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 must have an issue date on the cover page.

# 12.9 ES&H Representative

A. Designate an ES&H Representative for oversight and implementation of the ES&H requirements. The ES&H Representative shall be on site at all times when work is being performed.

- 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 experience in related construction work environment. Subject to the Company's approval, Seller may substitute work experience for the technical degree.
  - 2. Thirty-two (32) hour Occupational Safety and Health Standards in the Construction Industry training course (OTI 510) or equivalent.
- 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 reporting.
  - 2. Perform daily inspections. Stop or suspend work until deficiency is corrected.
  - 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, and relevant ES&H topics.
  - 4. Maintain documentation of inspections, briefings, and meetings.
  - 5. Conduct a weekly ES&H meeting with workers.
  - 6. Ensure personnel review and sign off as having read and understood the Seller's AHA for the work being performed before entering the work site.
  - 7. Serve as the Seller's point of contact for ES&H concerns.
  - 8. Administer the ES&H Plan including any changes.
  - 9. Review and analyze injury and illness reports.
  - 10. Participate in ES&H-related investigations and approve corrective actions.
  - 11. Ensure housekeeping is maintained and work area is kept clean, free of tripping hazards, and pathways remain open.
  - 12. Post all ES&H-related permits in a designated area at the work site.
  - 13. Initiate timely corrective actions to deficiencies identified by self-assessments, inspections, investigations, or Company oversight.
  - 14. Review training records and ensure individual's training and certifications are current to meet job requirements.

#### 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.

#### 12.11 Reporting

- A. Notify the STR of employees that are "Declared Pregnant Workers" per 10 CFR 835.
- B. Notify the STR or approved Company representative immediately (within 15 minutes) after an event occurs involving OSHA recordable injuries and illnesses, releases or spills to the environment, potentially serious hazards to personnel, or other abnormal events.
  - NOTE: The Company reserves the right to acquire Seller's personnel statements and conduct critiques when investigating accidents, recordable injuries, occurrences, and/or near misses. The Seller is responsible for all related Seller costs for participating in such critiques.

- C. Submit DOE F 5484.3 *Individual Accident/Incident Report* within two working days of a 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 an approved Company 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. Safety-toe work boots in accordance with ANSI Z41.1 are required for persons involved in work activities.
  - 3. Class C full-body harness and twin shock-absorbing lanyards with double locking hook connections are required when the potential fall distance is 6 feet or greater.
  - 4. Additional PPE shall be used as required by the AHA.

# 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).

#### 12.14 Hazard Communication (HazCom)

- A. Pursuant to 29 CFR 1910.1200, MSDSs for hazardous substances present at the work site must be made available by the Seller.
- 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 site accessible to all employees, and submit the *Subcontractor Hazardous Materials Inventory Report* (UCN-21445) to the Company at the beginning of work, monthly, and when work at Y-12 is complete. NOTE: 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 are not allowed at Y-12 unless written permission is provided by the Company.
- C. Seller can obtain MSDS for existing Y-12 hazardous substances on the work site from Company STR upon request.

#### 12.15 Excavations

A. A 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.
- C. Control dust emissions in accordance with TN 1200-3. Limit use of water to prevent erosion and run-off into storm drains.

### 12.16 Confined Space

- A. Perform work in accordance with 29 CFR 1910.146.
- 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 five (5) working days 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.
- 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 Deenergized 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 five (5) working day 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.

### 12.18 Hoisting and Rigging

- A. Seller shall perform hoisting and rigging activities in accordance with 29 CFR 1926 Subparts H and N, and ANSI B 30 Series.
- B. Before starting work involving critical lifts, submit a Lift Plan based on work activities for approval by Company two (2) weeks in advance of need. Seller crane operator and rigging personnel will be subject to Company monitoring while performing work.

- C. Hoisting or rigging activities using powered industrial truck lifts, backhoes, and trackhoes are not permitted unless the manufacturer's documentation specifies the equipment is designed for that purpose and lifting limits are properly identified.
- D. SAE Grade 4, 8, or 8.2 fasteners or ASTM Grade A325 fasteners identified on the *DOE* Suspect Bolt Headmark List are prohibited at Y-12.
- E. Hoisting and rigging requirements:
  - 1. Seller shall describe how the work will be accomplished.
  - 2. Seller shall provide evidence that crane operators are qualified by one of the methods below to the type crane that will be operated:
    - a. Valid certification from the National Commission of Certification of Crane Operators (NCCCO).
    - b. Local Operating Engineers' (OE) union certification as evidenced by a card issued by Knoxville Building and Construction Trades Council (KBCTC)
       Operating Engineers' union that confirms the individual has met all requirements as established by the International Union of Operating Engineers.
    - c. In the absence of evidence of qualification of equipment operators, Seller equipment operators shall complete Company training (or an equivalent third party training) for the applicable type of equipment.
  - 3. Seller shall provide evidence that rigging personnel are qualified to perform work.
    - a. In the absence of evidence of rigger qualification, Seller riggers shall complete Company training (or an equivalent third party training) for the qualification.
  - 4. Seller shall provide a written detailed Lift Plan and supporting calculations for critical lifts as designated. Any of the following conditions will cause a lift to be designated as critical:
    - a. Lift exceeds 90% of crane's capacity
    - b. Any multiple-crane lift
    - c. Lift presents a potentially unacceptable risk of personnel injury or property damage
    - d. Lift could result in significant release of radioactivity, hazardous material or other undesirable conditions
    - e. Lift could cause undetectable damage resulting in further operational or safety problems
    - f. Any lift involving a complex rigging arrangement or that requires specialty rigging
    - g. Any lift that requires close tolerance maneuvering
    - h. Company classifies lift as critical due to sensitive or costly equipment
  - 5. Lift Plan shall include:
    - a. Description of item to be lifted, to include:
      - 1) Tag No.
      - 2) Name
      - 3) Weight
      - 4) Dimensions
      - 5) Width x height x length
      - 6) Unit
      - 7) Other pertinent information or special handling
      - 8) Include a vendor drawing that shows the center of gravity and recommended lift points and/or attached lifting devices.

#### b. Sketches

- 1) Sketch showing the position and travel path of hoisting equipment, lift crane, tailing crane, initial location of the item to be lifted, and the final "set" position of the lifted item.
- 2) Layout of the work area, including the location of all obstacles and potential interferences.
- 3) Locations of underground utilities that could affect the rigging work or that require special clearances or cribbing.
- c. Hoisting equipment to be used (e.g. cranes, poles), to include:
  - 1) Description of equipment
  - 2) Size or capacity
  - 3) Last inspected
- d. Rigging/below the hook equipment to be used (e.g. slings, spreader bars)
  - 1) Description of equipment
  - 2) Size or capacity
  - 3) Last inspected
- e. Lift characteristics
  - 1) Special soil preparations and crane mat requirements.
  - 2) Minimum clearances, turning radius, and clearance requirements from existing facilities, utilities, and overhead power lines.
  - 3) Communication method to be used by equipment operators and rigging crews during the lift.
  - 4) Written instructions on any special precautions that the work crew must be aware of prior to making the lift, (e.g. removal of temporary shipping skids prior to lifting)
  - 5) Any special considerations, such as the effect of wind on the ability of crews to safely complete the lift.
- f. Safety considerations
  - 1) List any special work permits required for the area
  - 2) Detail any required PPE
  - 3) Describe all flagging/barricading/signage required
  - 4) Key points to be covered in a safety briefing prior to the lift
  - 5) Obtain signatures from workers to verify reviewing the Lift Plan, attending a safety briefing and attending the pre-lift meeting.
- g. Soil conditions and site terrain to verify access for lifting equipment and to ensure stability at the bottom of the lift.
- h. Underground utilities at the lift location to avoid damage to existing utilities and to ensure adequate ground support.
- i. The location of overhead power lines to ensure required clearances are maintained during lifting operations.
- j. Lift equipment and rigging hardware requirements including the method of removal following execution of the work.
- k. Access of lift equipment into and out of the lift area. In some cases, assembly and disassembly of cranes or other equipment must be included in the planning process.
- 1. Whether spotters are required to ensure safe movements of the load
- m. Security considerations when lifts are to be performed in or near the Protected Area or sensitive process facilities
- n. The need for a contingency plan based on typical risk scenarios.

- 6. Seller shall submit a Pre-Lift Checklist, for all lifts, to the Company for information that documents:
  - a. The Operator has completed a daily inspection and all equipment and systems are in a satisfactory condition to perform the lift.
  - b. Lifting equipment is setup per the Lift Plan.
  - c. Verification and inspection of payload lift points.
  - d. Inspection of lifting equipment.
  - e. Inspection of payload for factors that may add to the total weight of the lift, such as ice or excess moisture.
  - f. Conduct a pre-lift briefing. Clear communications between the operator and the rigging crew shall be emphasized.
  - g. Evaluation of weather conditions to ensure the lift can be made safely.
  - h. Inspection of attachments and rigging equipment including lugs, slings, shackles, and spreader beams.
  - i. Tag lines are attached and used to control the load.
  - j. Temporary barricades are placed around the work area and adjacent work crews are notified of the work operation.
  - k. Removal of all lifting equipment after completion of the work.
- 7. Control of hoisting/rigging equipment requirements:
  - a. Submit a written procedure that describes how hoisting/rigging equipment is controlled.
  - b. Ensure a piece of hoisting/rigging equipment is clearly tagged with rated capacity and the date of the last inspection or inspection due date.
  - c. Have a program in place that requires:
    - 1) Inspection of all hoisting/rigging equipment prior to each use
    - 2) Hoisting/rigging equipment is maintained in good safe, working order

#### 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 to the Company, for approval, a Lead Compliance Plan.
- C. Engineering controls are mandatory regardless of PPE used.
- D. All painted surfaces at Y-12 are suspect for lead-containing paint.

### 12.20 Mercury and PCBs

A. Low levels of mercury and PCBs are detectable in the soil and buildings materials/components in some areas of Y-12. The Seller's ES&H Plan shall describe how worker exposure monitoring for these constituents will be addressed, when required.

# 12.21 Refrigeration Equipment

A. The Seller shall comply with 40 CFR 82 and State regulations when handling or dispositioning equipment containing refrigerant.

- B. If equipment containing refrigerant is removed from Y-12 by the Seller for reuse, Seller shall continue to follow the requirements of 40 CFR 82 and State regulations after removal. The Seller shall indicate in a written document (Work Plan or Waste Management Plan) the final disposition for equipment. The Seller shall indicate in the document the equipment and the associated refrigerant is not intended for immediate disposal, reuse, 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 otherwise specified the Seller is not allowed to remove equipment containing refrigerant from Y-12 for the sole purpose of the recovery of the refrigerant.
  - 1. The Seller shall notify the Company (fifteen) 15 working days prior to the disposal of equipment, that contains refrigerant. The Company shall 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 perform electrical installation and maintenance operations in accordance with 29 CFR 1910, 29 CFR 1926, the National Electrical Code, and (NFPA 70 & 70E).
- 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. Seller shall provide the proper PPE for electrical installation, voltage checks and maintenance operations in accordance with 29 CFR 1910, 29 CFR 1926, National Electrical Code, and (NFPA 70E).
  - 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
      - 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
        - 1. electrical FR pants and shirt (marked on back with ATPV 11), or
        - 2. 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
- 6) insulated tools

#### 12.23 Hot Work

- A. Obtain a *Hot Work Permit* from the STR before performing any flame or spark producing work.
- B. Perform welding, burning, and hot work in accordance with 29 CFR 1926, Subpart J, and ANSI Z 49.1.
- 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.
- D. Provide a dedicated, trained fire watch during, and for a minimum of 30 minutes after, all spark/flame producing work. Fire watches must 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.
- 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 1926.350-354 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 apply:
  - 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.
- K. 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.
- L. 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.

### 12.24 Demolition and Asbestos Renovation

A. Seller shall possess a *Tennessee General License for Asbestos Abatement* to perform asbestos work. Workers and Competent Person shall be registered in Tennessee or state recognized by Tennessee. Submit a copy of the license and training records to the Company. 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.

- 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 one (1) day 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 five (5) weeks in advance of work start.
- 3. Seller shall submit an Asbestos Work Plan and AHA to Company for approval.
- 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:
  - 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.
  - 7. Waste disposal site.
- C. The Asbestos Work Plan (AWP) shall identify specific work requirements, PPE, and training. The Seller's Competent Person will 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. Submit a copy of the log to the Company upon final clearance.
- 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. 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 floor 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 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 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.
- 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.

# 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 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. Use of wood for enclosure construction shall be approved by the Company. 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*, *Part 12*, *ES&H*, *Equipment*, *and Tools*.
- 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. Medical evaluation and enrollment in a surveillance program is mandatory before granting access to regulated areas. Seller shall provide examining physician's documentation acknowledging that information stated in 29 CFR 1926.1101(m) (3) be received.
- J. Seller shall employ an independent testing laboratory to perform monitoring and testing which complies with OSHA requirements regarding NIOSH training.
- K. Personnel performing air monitoring shall complete the NIOSH 582 course or provide information validating equivalent training or certification.

- L. Personnel performing analysis of airborne asbestos samples shall be included in the AIHA or the NIOSH/AIHA Proficiency Analytical Testing Program and have completed the NIOSH 582 course.
- M. Seller shall post sampling results at the work site 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.

# 12.25 Hearing Protection

- A. Seller shall develop and implement a continuous effective Hearing Conservation Program in accordance with 29 CFR 1926.101.
- B. Seller shall determine the boundaries where continuous or intermittent noise is expected to exceed 85 dBA and enforce the use of hearing protection within those boundaries.

#### 12.26 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.

### 12.27 Explosives

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

# 12.28 Cranes And High Profile Equipment

- A. In addition to the requirements identified in 29 CFR 1926, the following is required:
  - 1. Grounding is required where the possibility exists for accidental contact with energized electrical conductors or equipment (either above or below ground level). Ground the equipment using insulated 4/0 welding cable. If suitable ground is not available, obtain an *Excavation Permit* from the Company, and drive a ¾-inch diameter by 10-foot long copperweld type ground rod into the ground to provide the required ground connection.
  - 2. When moving equipment, the booms or masts shall be in a retracted traveling position and a flagman 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. Supervision shall be present when equipment is moved from one location to another, and when equipment is near energized electrical conductors or equipment.

### 12.29 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 and medically certified.
  - 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 manufacturers' rated capacity and are properly secured.

#### 12.30 Evacuation

- A. Observe and participate in notices to evacuate the work area. The Company will establish requirements for evacuation of work-site personnel, as needed, to a designated assembly area. All personnel on-site at the time of an evacuation must be accounted for by the Seller.
- 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.

### 12.31 Equipment And Tools

- A. Tools and equipment brought to Y-12 shall be used only for the purpose for which they are designed. Tools and equipment shall be inspected (or certified, such as lifting 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.
- 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 with HEPA filters are relocated or moved which could impact performance of the unit. Unit shall be re-tested regardless if relocated if using motorized equipment.
- 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 comprise 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. Company reserves the right to require Seller retesting.
  - 4. Provide manufacturers; certification for HEPA filters used at Y-12 for HEPA Vacuums and NAMs.
  - 5. Provide copies of DOP testing results for HEPA Vacuums and NAMs.

#### 12.32 Scaffolds

- A. 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.
- B. Provide a trained Competent Person to inspect and sign off on scaffold erection prior to use.

#### 12.33 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.

#### 12.34 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).
- B. Limit exposure to toxic and hazardous substances to the permissible exposure limits (PELs) of 29 CFR 1926, Subpart Z and TLVs are lower (more protective) than OSHA PELs.
- C. Provide respirators and cartridges that are NIOSH approved.
- 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 is required to furnish supplied-air respirator equipment and compressed breathing air, anticipate 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 as required.

### G. Required records:

- 1. Maintain respirator protection records in accordance with ANSI Z88.2 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.
  - 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, Seller will be provided Company-furnished respirators, cartridges, fit testing, and appropriate training for Mine Safety Appliance (MSA) Ultra Twin Hycar Rubber respirators or equivalent.
- 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-supplied respirators.

### I. Inspection

- 1. Inspect respirator before use to ensure integrity and function.
- 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 Z88.2 and shall be updated annually.
- 2. The employee shall complete training that conforms to ANSI Z88.2, 29 CFR 1910.134 and 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 provided respirators.
  - j. Regulatory requirements for respirator use.

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

3. Seller employee shall receive a quantitative fit test in accordance with ANSI Z88.2. Assigned protection factors shall be as noted in following Table 1, *Respirator Assigned Protection Factors*. Perform fit testing for initial fitting and update annually, except where a particular substance requires more frequent fit testing. Workers wearing respirators provided by the Company shall be fit tested by the Company.

### 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. Appropriate materials for cleaning and disinfecting the respirator shall be provided to the wearer.

# L. General requirements

- 1. Modifications to the respirator or its parts are prohibited.
- 2. The Seller shall monitor proper use of respirators.

### TABLE 1

### RESPIRATOR ASSIGNED PROTECTION FACTORS

RESPIRATOR TYPE	ASSIGNED PROTECTION FACTOR
Tight-fitting, half-face, air-purifying	10
Tight-fitting, full-face, air-purifying	50
PAPR* with loose-fitting face piece	25
PAPR with half-face mask (6 CFM to 15 CFM)	50
PAPR with tight-fitting full-face mask (6 CFM to 15 CFM)	50
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	50
Air line, tight-fitting full-face mask, pressure demand	1,000
Air line, tight-fitting full-face mask, pressure demand with egress bottle	IDLH** &>1,000
Air line with loose fitting hood continuous flow	25
Self-contained breathing apparatus, pressure demand	IDLH & >1,000

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.

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<sup>\*</sup>PAPR - Powered air-purifying respirator.

<sup>\*\*</sup>IDLH - Immediately dangerous to life or health.

#### 13. SECURITY

#### 13.1 General

- A. All individuals requiring access to Y-12 shall provide proof of United States citizenship in the form of:
  - 1. Birth Certificate (certified copy with raised and/or colored official seal).
  - 2. Certificate of Naturalization (INS Form N-550 or N-570).
  - 3. Certificate of US Citizenship issued by Immigration and Naturalization Service (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).

NOTE: Access to Y-12 will be denied or delayed until proof of citizenship is provided. Access for foreign nationals must 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, 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 specific approval for foreign nationals is granted in writing by the Company.
- D. Company Foreign Ownership, Control, or Influence (FOCI) approval of Seller is required.
- E. Nextel radio phones, two-way pagers, cameras, recording devices, personal data assistants, firearms, explosives/ explosive devices, and alcohol/drugs are prohibited.
- F. Use of construction radios require completion of a Telecommunication Proposal (UCN-16020A) and Company and DOE approval before brought to Y-12.
- G. Non-DOE issued and unapproved Seller cell phones within the boundaries of Y-12 shall be turned off and left in private vehicles in designated parking areas.
- H. Cell phones with camera, global positioning, or enabled recording capabilities are prohibited. 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 brought to Y-12. Cordless phones are prohibited.
- I. Wireless laptops, desktop computers, recordable media, portable electronic devices, any device with infrared or wireless capability, and any other wireless device require Company approval for use before brought to Y-12.
- J. Request Company approval two (2) working days 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 External Web Site).

#### 13.2 Site Access

#### A. General Plant Area Access

- 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. Workers accessing the General Plant Area do not require a security clearance.
- 2. Company office buildings are off Bear Creek Road onto Old Bear Creek Road.
- 3. For access, the Seller shall complete and submit a *Subcontractor Request for Y-12 National Security Complex Access and Badge* form to the STR for badges and/or passes. Seller shall allow two (2) working days notice for badge request processing.
- 4. The Seller can pick up temporary passes or visitor badges at the East End Visitors Center at 104 Union Valley Road in Oak Ridge, Monday Friday, 6:30AM 3:30PM or at the West End Visitors Center on Bear Creek Road, east of Tennessee Highway 95, Monday Friday, 7:00AM 1:00PM. The Seller shall coordinate through STR the desired pick-up location. Photo identification (e.g. driver license) 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) working day of expiration of the Subcontract, termination of the employee, or when access to Y-12 is no longer needed. Persons holding L or Q clearances are required to attend a 30-minute debriefing. Debriefings shall be scheduled through the STR three (3) working days in advance of requirement. Failure to return photo badges issued to the Seller and its lower tier subcontractors will result in a charge of \$500 per badge.
- 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.

### 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.
- 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) working days prior to requirement.
- 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 could be confiscated by Security resulting in work delays. Such delays would be 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 personnel requiring entry to the EA shall submit their personal information (name, badge number, and date of birth) to the STR a minimum of two (2) working days prior to requirement.
  - 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 prior approval is granted by the Company.
  - 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. 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 will 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 could be confiscated by Security resulting in work delays. Such delays would be at the expense of the Seller.
  - 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 must 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 site. 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) working days 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) working days 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 10-20 minutes 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. Seller vehicle parking will be designated by the Company. 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 15-30 minutes 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 must be scheduled through the STR.
- 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) working days 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 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) working days prior to requirement.
- 3. Allow 60 minutes per person or escorted group (up to five uncleared) for entry into and exit from the PA. Each person will receive a detailed search when entering and exiting the PA.
- 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, bi-folds, 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 are sealed (not allowing internal inspection) are not authorized through the entrance Portal.
- 5. Entry prior to 7:00 a.m. by escorted uncleared workers is not authorized unless prior approval is granted by the Company.
- 6. All vehicle entries require a vehicle pass (ticket). Tickets will be provided by the STR. Seller and its lower-tier Subcontractors will be limited on the number of vehicle entries. Seller shall arrange transportation 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 entries in excess of one entry per working day.
- 7. All vehicles and their contents are subject to a comprehensive search by Security.
- 8. Allow up to two hours for processing of deliveries into the PA.
- 9. Seller delivery trucks and other service trucks shall enter the PA through Portal 33. 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 will 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 three (3) working days prior to need. Delivery of concrete into PA shall be coordinated through the STR a minimum of three (3) working days 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. The use of bed mounted fuel tanks is prohibited.
- 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 total manhours plus total equipment hours). During a lock down work inside may continue unless directed to stop by Security. Work outside should cease and await instruction from Security. Workers in transit should immediately move to the nearest accessible indoor location.
- 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 could be confiscated by Security resulting in work delays. Such delays would be at the expense of the Seller.
- 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 procedures must 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 three (3) working days prior to need.
- 19. While in the PA, breaks and lunches shall be held at the work site. 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) one (1) week 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) working days 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 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 *Escort Guide-Guide for Escorting Uncleared Construction Workers*" will be provided to the Seller. Each escort shall be provided a copy of the handbook. The Handbook is stamped "Official Use Only." The Handbook shall be 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, QA Plan, 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 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 job site 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 site and back to the exit Portal.
  - 4. An uncleared heavy equipment operator, an uncleared spotter and an uncleared laborer providing dust suppression can be escorted by one assigned escort as long as they are all in visible proximity to their escort.
  - 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 *Escort Guide-Guide* for *Escorting Uncleared Construction Workers*. Each escort shall maintain a copy of the handbook on their person at all times while performing escort duties.
- I. Immediately after award, Seller shall participate in planning activities and provide a proposed *Visitor Request/Escort Agreement (EA)* to the STR for review. Such activities could include a walk-down of the worksite access route, meeting(s) with Company Physical Security Officials (PSO), initiation of a draft EA and a work-specific *Security Plan* (if applicable) for review by the STR and PSO. Allow ten (10) working days for approval of the EA upon submission to the STR.
- J. Seller shall ensure the accuracy and the completeness of information on the EA. Information about the work site, 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 EA 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 EAs on a daily basis. Immediately submit to the STR any required changes to a standing escort agreement, including all personnel changes. Allow up to ten (10) working days for approval of a revised EA.
- L. In the event information in the *Escort Guide* conflicts with information in the EA and/or Security Plan, the information in the EA or *Security Plan* takes precedence.

- M. Unless otherwise authorized in the EA or *Security Plan*, Seller escort(s) shall maintain visible observation of their uncleared personnel at all times.
- N. While in the PA and EA, breaks and lunches shall be held at the work site. Provide a suitable area for breaks and lunch and provide portable restroom facilities. S
- O. Seller shall develop a *Security Plan*, when required, with detailed directions for escort operations. *Security Plan* must be approved by the Company and attached to the EA.
- P. Escort Operations
  - 1. Upon receipt of an approved EA, Seller shall perform the following:
    - a. Verify all information is still accurate.
    - b. Provide each escort a copy of the EA and a handbook (*Escort Guide-Guide for Escorting Uncleared Construction Workers*). The EA 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.
    - 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, EA, or as otherwise approved by the Company.
    - f. Request through STR a Company "green card" for each uncleared worker listed on the EA. Green cards is 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 Portal 8.
    - c. Entry prior to 7:00AM is not authorized unless coordinated in advance by the STR.
- Q. 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.
- R. Failure to comply with escorting requirements by the Seller's escorts 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, which 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 or a Y-12 Information Security Officer.
- 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 or the Construction Division Security Officer (DSO).

#### 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, tele communications, 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, OUO).
- 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 (OUO)—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.

#### E. Regulatory requirements

- 1. The following regulatory requirements are incorporated by reference:
  - a. Atomic Energy Act (Sects. 142 & 148)
  - b. Freedom of Information Act
  - c. 10 CFR 1017, Identifications and Protection of Unclassified Controlled Nuclear Information.
  - d. DOE O 470.1, Safeguards and Security Program
  - e. DOE 0471.1, Identification and Protection of Unclassified Controlled Nuclear Information.

### 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 it's lower-tier subcontractors/suppliers conveying UCNI labeled information, shall to 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 or OUO information will be allowed unless formally pre-approved by the Company.
- 3. No transmissions via computer of OUO information will be allowed unless formally preapproved by the Company.
- 4. Fax transmissions of OUO should be protected by encryption. Unencrypted fax transmissions is 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.
- 5. All computers at Seller facilities shall be certified by the Company to process UCNI or OUO information and shall operate in compliance with a Company-approved *AIS Security Plan*. The area where the AIS equipment is located shall be approved by the Company. Seller shall submit a request for a certification inspection by the Company.
- 6. If Seller desires to establish a secure document room, submit a request to the Company for a certification inspection. Once the room is certified, OUO and UNCI documents may be displayed as long as the room is locked when unattended.
- 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.
- 8. If required, the Seller shall install encryption software in compliance with Company instructions.
- 9. Computer systems and media containing OUO or UCNI information at the Seller's facility and at lower-tier subcontractors' facilities shall be dedicated to this work. UCNI information requires removable media. In cases where OUO information is contained on removable media (e.g., removable hard drives), a machine may be used for other purposes; however, all media must be removable, including boot drives.

- 10. 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) working days prior to need.
- 11. The Company will perform regular and unannounced assessments relative to approved information, computer, and physical security plans.
- 12. 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.
- 13. The Seller shall return all UCNI and OUO electronic data and data media to the Company. An accountability of media and contents will be retained by the Seller and the Company. When lower-tier subcontractors and suppliers have completed their work, the associated data media and materials shall be forwarded to the Seller.
- 14. The computers associated with this work will be sanitized by the Company and will no longer be considered germane to the security concern.
- 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) must *not* have any access, casual or otherwise, to UCNI information or media.
  - 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 will 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 must obtain approval from the Company before supplying

### K. Paper Documents, Materials, and Equipment

- 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/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. Reproduction of UCNI material by a commercial reproduction provider not wholly owned by the Seller shall be approved by the Company 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 cross cut shredders that result in particles of no more than ¼-inch wide strips. UCNI and OUO matter may also be returned to the Company for destruction.

NOTE: Provide written notification to the STR stating what documents were destroyed by the Seller.

#### 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/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/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 information.
- 3. A risk assessment shall be performed by the Seller 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. Modifications that change the security posture of a system must be approved by the Company 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.
  - 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 properly protect data files).
  - g. Hackers/crackers or other unauthorized access attempts.
- 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 sanitized 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, OUO) 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) 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. Access controls shall be used to prevent unauthorized access to information.

### Q. Physical Security

- 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

- 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., 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.

#### TRAINING REQUIREMENTS **Provided Module Title** Duration Frequency by GENERAL EMPLOYEE TRAINING (GET) Basic General Employee Training 4 hours Every 2 Company years Oak Ridge Reservation (ORR) Employee Emergency Plan ½ hour Once Company Storm Water Pollution Prevention ½ hour Once Company Fire Extinguisher Required Read ½ hour Every Year Company Y-12 Fundamentals 2 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 Asbestos Worker and Competent Person Training Seller INDUSTRIAL SAFETY Authorized Entrant/Attendant for Confined Space Entry Seller (When using Company approved Seller program) Authorized Entrant/Attendant for Confined Space Entry 3 hours Once Company (When using Company program) Lockout/Tag-out Initial Training (when working under Seller's Program) Seller Lockout/Tag-out Training (when working under Company's Program) 8 hours Once Company Lockout/Tag-out Training (when working under Company's Program) 2 hours Every year Company Fall Protection & Prevention Safety Awareness Training 2 hours Once Company Note: Seller may arrange training through Knoxville Building and Construction Trades Council or Seller (KBCTC). Fire Watch Training 3 hours Every year Company Note: Seller may arrange training through KBCTC. or Seller MOBILE EQUIPMENT/HOISTING AND RIGGING Basic Hoisting and Lifting Safe Operations Seller Seller Mobile Crane Training Aerial Lift Safety Qualification/Re-qualification Seller PERSONAL PROTECTIVE EQUIPMENT PPE Awareness and Proper Use (Prior to use) Seller RAD WORKER Rad Worker II (if applicable to specific task) 20 hours Every 2 Company Note: Seller may arrange training through KBCTC. (only Company Approved Programs) or Seller years RESPIRATORY PROTECTION (PPE) **Basic Respirator Training** 2-1/2 hr-Class Company Every year (when wearing Company-furnished Respirator) 2 hour- Fit Test **Basic Respirator Training** Seller (only required if wearing Seller-furnished Respirator)

TRAINING REQUIREMENTS					
Module Title		Duration	Frequency	Provided by	
Supplied Air Respirator Training		3 hours	Once	Company	
Module Title	Duration	Frequency	Provided by		
SECURITY					
Comprehensive Security Briefing (only required for L or Q cleared)	1 hour	Once	Company		
Annual Security Refresher Briefing	½ hour	Every year	Company		
UNCI/OUO Information Training	1 ½ hours	Once	Company/Seller		
Y-12 Plant Escort Training	1 hour	Once	Company		
Computer Security Escort Training (When escorting uncleared personnel into an area with Classified Systems)	1 hour	Once	Company		
Overview for Escorting of Delivery, Service, or Vendor personnel	¼ hour	Each occurrence	Company		
CONDUCT OF OPERATIONS (CONOPS)					
Facility Specific CONOPS Training	4 hours	Once	Company		
Safety Basis 202 (work inside Protected Area)	2 hours	Once	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		
Respirator Fit -Test (when wearing Company-furnished respirator)	1 hour	Every year	Company		
SELLER-SPECIFIC TRAINING					
Environmental, Safety and Health (ES&H) Program		As Required	Seller		
ES&H Plan		As Required	Seller		
Work Plan and other Plans		As Required	Seller		
Activity Hazards Analysis (AHA)		As Required	Seller		